



# **TRBOnet Server and Dispatch Console**

Administrator's Guide

Version 4.8

World HQ

Neocom Software 8th Line 29, Vasilyevsky Island St. Petersburg, 199004, Russia US Office

Neocom Software 15200 Jog Road, Suite 202 Delray Beach, FL 33446, USA

Internet Email: info@trbonet.com SkypeID: trbonet WWW.TRBONET.COM

Telephone EMEA: +44 203 608 0598 Americas: +1 872 222 8726 APAC: +61 28 6078325



## **Notices**

This document is for informational purposes only. Neocom Software offers no warranties, express or implied, in this document.

Neocom and the Neocom logo, TRBOnet and the TRBOnet logo are either registered trademarks or trademarks of Neocom Software, Ltd.

MOTOROLA, MOTO, MOTOROLA SOLUTIONS and the Stylized M logo are trademarks or registered trademarks of Motorola Trademark Holdings, LLC.

Intellectual property rights protect the voice coding technology embodied in this product including patent rights, copyrights and trade secrets of Digital Voice Systems, Inc. This voice coding technology is licensed solely for use within this communications equipment. U.S. Pat. Nos. 6,199,037, 5,870,405, 5,754,974, 5,664,051, 5,630,011, 5,517,511, 5,491,772, 5,247,579, 5,226,108, 5,226,084, 5,216,747 and 5,081,681.

Microsoft, Windows, SQL Server and the .NET logo are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other jurisdictions.

Other product or company names mentioned herein may be trademarks of their respective owners.

© 2015 by Neocom Software, Ltd. All rights reserved.



# Contents

Introduction	1
About This Guide and Related Documentation	1
About TRBOnet	1
Contacts	1
Hardware and Software Requirements	2
System Architecture Overview	4
TRBOnet Server and Console	4
MOTOTRBO Radio Systems	4
TRBOnet RadioServer Installation	10
Installation Steps	10
TRBOnet RadioServer Configuration	11
License Information	11
Install TRBOnet RadioServer Service	16
Create TRBOnet RadioServer Database	16
Configure Network Parameters	20
Service Management	21
Advanced Settings	27
Local Agent	
Analog Control Stations	63
Remote Agents	65
Friendly Servers	67
External PBX Server	68
Data Sources	70
Email Settings	74
SMS Settings	77
Administrator Activity in the Dispatch Console	79
Dispatch Console Menu	79
Route Management	119
Radio Allocation	131
Beacons	



Administration	137
Configuring Job Ticketing	
Installing Web-Console	
Installing Web Console	
Web Console Setup	
APPENDIX A: SQL Server Edition Considerations	
APPENDIX B: Configure SQL Server 2012 for Local System Account During Setup	
Appendix C: Grant Sysadmin Role to Local System in SQL Server 2012	
Appendix D: Database and Audio Recordings Backup and Restore	
Backup Configuration	
Backup Database and Audio Recordings	
Restore Database	
Restore Audio Recordings	
Schedule Backups	
Appendix E: Swift.Tracker Option Board Configuration	
Option Board Support in Radio's Code plug	
Add TRBOnet Firmware in MOTOTRBO GOB Loader	
Enable Swift.Tracker in TRBOnet RadioServer	
Appendix F: SIP Setup for Motorola Phone System	
TRBOnet RadioServer Configuration	
Programming Radios	
Appendix G: NAI VOICE & DATA Support	
Software Requirements	
Hardware Requirements	
Voice and Data Flow 1	
Voice and Data Flow 2	
Single PC Installation	
Client-Server Installation	
IMPORTANT	
Limitations	
Radio Subscriber Configuration	
MNIS and DDMS Settings	



	DDMS Settings	.322
	ARS TRBOnet Settings	.323
	LCP Repeater Settings	.323
Арр	endix I: Backup Server	. 325
	TRBOnet Backup Server Configuration	.326
	Dispatch Console Configuration	.328
	Console Connection to Main and Backup Servers	. 329



# Introduction

## About This Guide and Related Documentation

This document is intended for MOTOTRBO radio network administrators in charge of the dispatch operations. It provides guidance on the installation, configuration and maintenance of **TRBOnet Server** and **Dispatch Console** applications.

## About TRBOnet

TRBOnet is a suite of professional applications for the MOTOTRBO digital two-way radio networks. TRBOnet manages voice, text and data communication paths to network endpoints and provides a unified graphical dispatcher workbench interface for all the messaging and workforce orchestration tasks.

## **Contacts**

Region	Phone	Email & Support
EMEA	+44 203 608 0598	<u>info@trbonet.com</u> – general and commercial inquiries
Americas	+1 872 22 28 726	<u>support@trbonet.com</u> – technical support
АРАС	+61 28 6078325	<u>http://kb.trbonet.com</u> — online knowledge base



# Hardware and Software Requirements

TRBOnet RadioServer/Agent with IP connection only						
Voice Channels	4	8	16	24	24+	
CPU	Intel Core i3	Intel Core i5	Intel Core i7, 4 Cores	Intel Core i7, 6 Cores	Contact	
Memory	2 GB	4 GB	4 GB	8 GB	technical	
HDD	300 MB for i	300 MB for installation files, +1 MB per 1 minute of voice recording support				
Sound Card	Νο					
Supported OS	Windows 7, Windows 8, Windows Server 2008, Windows Server 2012					
Software	.NET Framework 4.0, MS SQL Server 2008 Express Edition or higher					

TRBOnet RadioServer /Agent with Control Stations			
Control Stations	1 2+		
СРИ	Inte	el Core i5	
Memory		2 GB	
HDD	300 MB for installation files, +1 MB per 1 minute of voice recording		
Sound Card	Integrated sound card can be used.	Multi-channel Sound Card required. Recommended: 1. <u>M-Audio Delta 1010 LT</u> 2. <u>Roland OCTA CAPTURE Hi-SPEED USB</u> <u>Audio Capture</u>	
Additional Devices	Cable connector Motorola PMKN4016		
Supported OS	Windows 7, Windows 8		
Software	.NET Framework 4.0, MS SQL S	erver 2008 Express Edition or higher	

Dispatch Console		
CPU	Intel Core i3	



Memory	4 GB
HDD	70 MB for installation files
Sound Card	Yes
Display	1280x1024 minimal resolution, 1600x900 recommended resolution
Additional Devices	Speakers and microphone or headset. Imtradex devices are recommended.
Supported OS	Windows 7, Windows 8
Software	.NET Framework 4.0



# System Architecture Overview

## **TRBOnet Server and Console**

TRBOnet Dispatch Software is a PC-based voice-dispatch and AVL software application for the MOTOTRBO<sup>™</sup> Professional Digital Two-Way Radio System.

The software has client-server architecture: TRBOnet RadioServer runs as a Windows service on the server machine, stores data in MS SQL database and allows client connections from Web Console and Dispatch Console. In addition, remote software and/or hardware agents can be connected to provide voice and data from remote sites.



## **MOTOTRBO Radio Systems**

## Conventional

Conventional System is conventional two-way MOTOTRBO system that allows you to transmit Voice and Data via conventional channel. Radio groups and subscribers are assigned to a radio channel. Users can select the channel but not system.

## **IP Site Connect**

IPSC is a digital conventional two-way MOTOTRBO system that allows you to extend the area of your communication providing two wide area channels. It is possible to connect up to 15 repeaters (each geographical location of a repeater is called "site") to one system using IP connection. It allows you to broaden the



coverage zone for voice and data transmissions. The main objective of IPSC systems is to provide stable connection between subscribers and control centers regardless distance issues.



#### **Capacity Plus**

Capacity Plus is a digital trunk two-way MOTOTRBO system that allows you to accommodate the high volume communication. It is designed to organize stable connection in a few groups within one building or a set of buildings. This system type allows you to increase the number of channels for voice and data transmission between the subscribers and control centers. The subscribers are always automatically forwarded to a free channel. The main objective of Cap+ is to support more simultaneous voice and data transmissions within one capacious system.





#### **Linked Capacity Plus**

Linked Capacity Plus is a multi-site digital trunk two way MOTOTRBO system that enables you to accommodate the high volume and wide area communication that is required for your business allowing you to connect via IP up to 15 single Linked Capacity Plus sites located in one place or in separated territories. This system type allows you to broaden the coverage zone and the number of channels for voice and data transmission between the subscribers and control centers. The main objective of Linked Cap+ is to support more simultaneous voice and data transmissions regardless distance issues.





#### **Connect Plus**

Connect Plus is a multi-site digital trunk two-way MOTOTRBO system that enables you to accommodate the high volume, wide area communication that's required for your business allowing you to connect via IP multiple sites located in one place or in separated territories. This system type allows you to broaden the coverage zone and the number of channels for voice and data transmission between the subscribers and control centers. The subscribers are always automatically forwarded to the control channel. The main objective of Connect Plus is to support more simultaneous voice and data transmissions regardless distance issues and to provide more structural addressing of those transmissions provided by XRC and XRT controllers.





## **IP Backend Network Requirements**

Before planning any IP connected MOTOTRBO systems read System Planner (chapter "4.6.3.2 Characteristics of Backend Network" in November 2013 edition)

- Delay/Latency is characterized as the amount of time it takes for voice to leave the source repeater and reach the destination repeater. Delay should be less than 60 ms. It can be up to 90 ms, but requires changes in CPS for subscriber units and for repeaters.
- **Jitter** is the variation of packet inter-arrival time. It should be less than 60 ms.
- Packet Loss. In the case of voice, the ongoing call ends if six consecutive packets do not arrive within 60 ms. of their expected arrival time. In the case of data, the repeater waits for the expected number of packets (as per the data header) before ending the call.
- Bandwidth. Refer to System Planner for bandwidth calculations, but roughly, it requires 96 kbps for each repeater connection and should be summarized for all repeaters.

If the IP backend network does not satisfy MOTOTRBO requirements, it will degrade audio quality significantly up to dropped voice calls.



## Linked Capacity Plus Specific Requirements

- Proxy server The network cannot use a Proxy server that directs all IP devices to a home or logon page before they are allowed access to the WAN.
- Addresses and Ports A static IP Address and UDP Port for the master repeater must be made available to all peer devices on the Linked Capacity Plus system.
  - When a peer device registers with the master repeater, the network supplies the return IP address and UDP port of the peer device to the master repeater. The IP address and UDP port must then be made available to all other MOTOTRBO<sup>™</sup> LCP devices on the system.



## **TRBOnet RadioServer Installation**

**Note:** Administrative privileges are necessary to install TRBOnet RadioServer. The TRBOnet RadioServer Service must also be run under an account with the administrative privileges. If necessary, create a new administrative user account to run TRBOnet RadioServer Service.

## **Installation Steps**

Double-click the **TRBOnet Dispatch Software \_vX.X.exe** file to run the TRBOnet Dispatch Software setup.

Click Next > button to continue. Click «I accept the terms in the License Agreement».

Select installation type:

Choose the se	tup type that best suits your needs
1	<b>TRBOnet Dispatch Console</b> This is a dispatcher computer and only Dispatch Console must be installed
	TRBOnet <u>RadioServer and Dispatch Console</u> This is a RadioServer computer and you need to install RadioServer software and Dispatch Console
	Custom Allows users to choose which program features will be installed and where they will be installed.
leocom Software –	< Back Next > Cancel

- 1. Select **TRBOnet RadioServer** and **Dispatch Console** to install TRBOnet RadioServer and TRBOnet Dispatch Console.
- Click level button to continue the installation.
- 3. TRBOnet Dispatch Software is ready to install.
- 4. Click button to install the software.
- 5. After installation completes, click **Finish** button to exit the installation wizard.



# **TRBOnet RadioServer Configuration**

TRBOnet provides **TRBOnet RadioServer Configurator** tool to customize TRBOnet RadioServer parameters.

To open TRBOnet RadioServer Configurator do the following:



- Use shortcut on the desktop;
- or

•

- Go to Start menu and select for TRBOnet.Enterprise:
- ✓ All Programs/Neocom Software/TRBOnet.Enterprise/ TRBOnet RadioServer vX.X. For TRBOnet.Plus:
- ✓ All Programs/Neocom Software/TRBOnet.Plus/ TRBOnet RadioServer vX.X.

## **License Information**

To use TRBOnet Dispatch Software you need to purchase a license.

#### **License Types**

For TRBOnet Di	spatch Software	available 3 (t	ree) license types:
----------------	-----------------	----------------	---------------------

License Type	Demo	Trial	Commerce
Validity	2 months	By Request	According to Customer order
Quantity of Control Stations and Subscriber Units	2 Control Stations, 10 Subscriber Units	By Request	According to Customer order
Features	All features available	All requested features available	According to Customer order
How to obtain	Delivered with installation package. The default license when installing is Demo license.	Assigned to server Hardware ID. For more details on Hardware ID see the <u>article</u> .	Assigned to server Hardware ID. For more details on Hardware ID see the article. Assigned to Control Stations and/or Repeaters serial numbers from Control Station CodePlug (do not use serial



numbers marked on device body).

For more details on license and update contact our technical support info@trbonet.com

To see your license assigned to Hardware ID or Control Stations and/or Repeaters serial numbers open the INFO file delivered with license file in the Notepad:



1 – Your license assigned to the Hardware ID

2 - Your license assigned to Control Stations and/or Repeaters serial numbers.

#### Move TRBOnet Dispatch Software to Another Server PC

In case you need to use TRBOnet Dispatch Software on another server PC or you have reinstalled OS do the following:

 Your license assigned to Hardware ID. Send old license file and new Hardware ID to TRBOnet technical support (<u>info@trbonet.com</u>). See the <u>article</u> to obtain new Hardware ID.

**Note:** Hardware ID is a unique PC ID, based on CPU and OS data, so you cannot use TRBOnet Dispatch Software on another server by copying license file from one PC to another.

2. Your license assigned to Control Stations serial numbers. You can move TRBOnet Dispatch Software to another PC using the same Control Stations and Repeaters. In case you are going to use another devices send old license file and new Control Stations serial numbers from Control Station CodePlug



to TRBOnet technical support (<u>info@trbonet.com</u>). Do not use serial numbers marked on device body.

#### **Use Spare Repeater**

In case you are going to use spare repeaters, e.g. to replace a broken repeater you need to mention it when purchasing a license.

E.g. you have 3 repeaters to use with TRBOnet Dispatch Software and 1 spare repeater.

Mention repeaters limitations: 3 and send to technical support 4 repeaters serial numbers (including spare repeater serial number).

#### **Dispatch Connections Limitations**

When purchasing a license mention a number of Dispatch Connections you are going to use.

Dispatch Connections number consists from:

- 1. Dispatch Consoles number;
- 2. Web Consoles number;
- 3. API Connections number.

E.g. if you are going to use 5 Dispatch Consoles and 3 Web Consoles you should mention 8 (5+3) Dispatch Connections when purchasing a license.

For more details on license and update contact our technical support info@trbonet.com.

#### **License Manager**

Go to License Manager to see a current license details or to update a license:

Configuration		License
Configuration Slot #1 Slot #2 Slot #2 Controller #1 Controller #1 Analog Control Stations Remote Agents Remote Agents Friendly Servers Comports Comports Comports Comports Comports Smp SMS SMS	• E	License License is valid License ID: 0b0604ee-e78c-4c16-8460-15ceb8224777 Hardware ID: 181E-2728-E182-5A35-44AE License generated by: s.kononov License generated by: s.kononov License generation date: 5/20/2014 The Update subscription is active up to: 5/12/2015 Product: TRBOnet_PLUS (4.4.0.302) License for: Demo Version Active instance: [Default] Licensed instance: [Default] Licensed instance: [Default] Demo License Expiration date: 7/18/2014 Server limitations Server hardware keys: Any Remote Agent connections: 0 Agent limitations Agent hardware keys: Any Number of master radios or master repeaters: 2
	Ļ	License Manager Send Email Copy to Clipboard
Set Defaults		Apply OK Cancel



Before start to work, check that your license is not expired. If you have a commercial license or would like to update you current license with extended demo license you can update it.

Configuration License . License is valid License ID: 0b0604ee-e78c-4c16-8460-15ceb8224777 CII Local Slots Hardware ID: 181E-2728-E1B2-5A35-44AE XRT Controller #1 License generated by: s.kononov License generation date: 5/20/2014 💶 Audio Paths The Update subscription is active up to: 5/12/2015 Product: TRBOnet\_PLUS (4.4.0.302) 💼 Analog Control Stations Remote Agents License for: Demo Version Friendly Servers Active instance: [Default] Licensed instance: [Default] 🔞 Internal PBX Server \overline External PBX Server Demo License ↓ Data Sources Expiration date: 7/18/2014 COM ports Server limitations TCP/IP Server hardware keys: Any 🔀 Email Ξ Remote Agent connections: 0 Pop3 Agent limitations .swi Smtp Agent hardware keys: An Number of master radies SMS s or master repeaters: 2 - SMS • License Manager Send Email Copy to Clipboard Set Defaults Apply OK Cancel -

To update current license use **License Manager** in **License** node of left tree:

License Manager allows updating a license:

E License Manager	×
License information License Manager allows renewing the license	
The license is required for this software product	
If you already have the license file then click Next To purchase the software or get a demo license contact us at:	
info@trbonet.com	
< Back Next > Car	ncel

Browse license file to update:



E License Manager	X
Select license file License Manager allows view	ing the type and parameters of your license
License file:	
License is valid License ID: fa32377f-f644-4ac( Hardware ID: 3CA3-52FB-700B License generated by: s.konone License generation date: 12.07 The Update subscription is activ Product: TRBOnet_Enterprise ( License for: Demo Version	)-9d7d-bc7d345782ec -95D5-F6D8 >v .2013 re up to: 12.07.2016 4.0.0.138)
Expiration date: 26.09.2013	
	< Back Next > Cancel

Browse to a new license file and complete the wizard.

Note: delete all previous licenses files before using.



## Install TRBOnet RadioServer Service

Select **Service** in the navigation tree:

Configuration	Service
Service Network Database Service Management Advanced settings	111 The server Windows Service is not installed. Once configuring is completed, it is strongly recommended to run server as a Windows Service, because it provides additional stability and reliability and allows to start server automatically after computer reboot.
Local Agent	Service logon type: O Logon as Local System (Recommended)
Repeater #1	User name: testsql2\ivan2
Slot #1	Install Service
Analog Control Stations	Real View log entries
Friendly Servers Set Defaults	Apply OK Cancel

TRBOnet Dispatch Software allows two types of accounts to run service:

**Local System (1)** - system account with local system administrator privileges to run the service as Windows service (Recommended);

User - account created manually to run the service as Windows service. Should be able to run services in Windows OS, to have read and write access to **Neocom** Software folders in "%ProgramFiles%" and "%ProgramData%" folders. Required in following cases:

- 1. Active Directory Domain network is used and current Windows user is not allowed to use **Local System** account to launch services on the local PC according to domain policy.
- 2. MS SQL Server is installed on the remote PC and **Windows Authentication** is required to connect to database.

Select logon type and click «Install Service» button (2).

Then click «Start Service» button.

## Create TRBOnet RadioServer Database

Select Database in the navigation tree:



Configuration	Database	
💣 Service 🔺		
Network		(local)\SQLEXPRESS +
Database		TRBOnet -
🔅 Service Management		IAE and a sure
X Advanced settings		• • • • • • • • • • • • • • • • • • •
Map Servers for Seocoding	Login:	
. Local Agent	Password:	
MOTOTRBO		
😳 Services	Specify the path	for database archives
Repeater #1	Daths	C:\TPBOpetRackup\DataBase
X Advanced settings	Paul:	c. (Roone watchp (patabase
Privacy	Use custom folde	r for audio files
<b>III</b> Slot #1	Path	L:\TBBOnetBackup\Audio
<b>III</b> Slot #2	- dan	h. (
Local Slots		
Controller #1	Test Conn	ection
Audio Paths	Upgrade Da	atabase
Analog Control Stations	Create Da	tabase
Remote Agents		
Friendly Servers		
Set Defaults		Apply OK Cancel

Specify the following parameters:

- SQL Server specify SQL Server name and instance ((local)\SQLEXPRESS instance is set by default);
- Database specify database name (TRBOnet is set by default);
- Authentication select Windows or SQL Server Authentication See <u>Database</u> <u>Authentication</u> section
- Specify Login and Password for SQL Server Authentication;
- Select custom folder for database archives (e. g. C:\TRBOnetBackup\DB);
- Select custom folder for audio files (e. g. . C:\TRBOnetBackup\Audio).

**Note:** When paths for database archives and custom folder for audio files are not specified, TRBOnet RadioServeruses default paths. For TRBOnet.Enterprise use the following default path:

**%ProgramData%\Neocom Software\TRBOnet.Enterprise\Backups** - default path for database archives.

**%ProgramData%\Neocom Software\TRBOnet.Enterprise\Audio** - default path for audio.

For TRBOnet.Plus use the following default path:

**%ProgramData%\Neocom Software\TRBOnet.Plus\Backups** - default path for database archives.

%ProgramData%\Neocom Software\TRBOnet.Plus\Audio - default path for audio.





#### **Database Authentication**

To connect to SQL Server using **Windows Authentication** is recommended when SQL Server is installed on the local PC:

Configuration		Database
💣 Service		
S Network		(local)\SQLEXPRESS +
Database		TRBOnet
Service Management		
X Advanced settings		vvindows 🗸
Map Servers for Geocoding		Login: Windows
Local Agent	Ε	SQL Server
MOTOTRBO		
Services		Specify the path for database archives
Repeater #1		Dathy CuITEROpetBackup/DataRase
Advanced settings		Path: C. (Robolietbackup patabase
Privacy	-	Use custom folder for audio files
<b>III</b> Slot #1		Path: C:\TRBOnetBackun\Audio
<b>III</b> Slot #2		
EI3 Local Slots		
Controller #1		Test Connection
Audio Paths		Upgrade Database
Analog Control Stations		Create Database
Remote Agents		
Friendly Servers	-	
Set Defaults		Apply OK Cancel

To provide access privilege for TRBOnet RadioServer to connect to SQL Server create an account with **sysadmin** privileges.

During the installation process, MS SQL Server 2008 automatically assigns **sysadmin** privileges to **NT Authority\SYSTEM** account.

In case of MS SQL Server 2012 add **NT Authority\SYSTEM** account in the Administrators list during the installation process. As soon as DB owner privileges are required to work with TRBOnet Database, you need to grant **sysadmin** role to a **Local System** account. To configure MS SQL Server 2012 during installation see Appendix B. To configure preinstalled MS SQL Server 2012 see Appendix C.



To connect to SQL Server using **SQL Server Authentication** is recommended when SQL Server is installed on the remote PC:

Configuration	Database
💣 Service 🔺	
S Network	(local)\SQLEXPRESS +
Database	TRBOnet
Service Management	
X Advanced settings	SQL Server +
Map Servers for Geocoding	Login: sa
Local Agent	Pessword: *****
MOTOTRBO	
Services	Specify the path for database archives
Repeater #1	
X Advanced settings	Path: C:\TROUTEBackup patabase
Privacy	☑ Use custom folder for audio files
<b>III</b> Slot #1	Pathy C:\TRBOpetBackup\Audio
<b>III</b> Slot #2	
Local Slots	
XRT Controller #1	Test Connection
Audio Paths	Upgrade Database
Analog Control Stations	Create Database
📑 Remote Agents	Ci cate batabase
Friendly Servers	
Set Defaults	Apply OK Cancel

To connect to SQL Server using **SQL Server Authentication** create SQL Login with **sysadmin** privileges in SQL Server in use. For detailed instruction how to create SQL Login please follow official manual tab: <u>http://technet.microsoft.com/en-us/library/aa337562.aspx</u>



## **Configure Network Parameters**

To configure network parameters select **Network** in the navigation tree:

Configuration		Network		
💣 Service				_
S Network		Command port:	4021 🇘	
Database		VoIP first port:	4022 2	]
Service Management		Vot0	Ten	]
💥 Advanced settings		VOIP protocol:	ψ	]
Geocoding Servers		VoIP network interface:	System Default 🔹 🕫	
Local Agent	Ξ	Use broadcast mode for audio		
MOTOTRBO		Provident and	-	1
Services		Broadcast port:	5000 -	]
Repeater #1		Use proxy server		
X Advanced settings		Configure		
Privacy		Encrypt data over network		
<b>III</b> Slot #1		Make this Server as redundant		
<b>III</b> Slot #2				1
Local Slots		Mode:	Active -	]
Analog Control Stations		Main Server IP Address:		]
🔂 Remote Agents		Main Conver Ports	4021	1
Friendly Servers		Main Server Port.	1021	]
Thternal PBX Server	Ŧ		Test	
Set Defaults			Apply OK	Cancel

Configure the following parameters:

- Command port port to connect by Dispatch Console. Specify command port (4021 set by default);
- VolP first port port for audio communication. Specify VolP first port (4022 set by default). Each additional Dispatch Console will create connection to next port;
- VolP protocol select VolP protocol type (TCP set by default);
  - All TCP will be used first, if not possible UDP will be used;
  - **TCP** slower, but more stable;
  - UDP faster, packets can be dropped, some providers drop UDP packets.
- VolP network interface specify VolP network interface in the dropdown list.
   Click 🗢 button to refresh the list of network interfaces;
- Use broadcast mode for audio select this option to optimize voice transmitting quality and minimize transmission delay (Port 5000 set by default). When broadcast mode is set, Dispatch Console cannot be run on the same machine with TRBOnet RadioServer;
- Use proxy server select to enable Proxy Sever service in TRBOnet Dispatch Software to access Internet.



Click **«Configure»** button to set the alternative server settings:

Configure the proxy server			
🔽 Use an a	lternate server		
Settings			
Address:	177.71.134.70		
Port:	3128		
Authenticat	tion		
🔽 Use au	thentication		
Login:	User		
Password:	•••••		
	OK Cancel		

- Use an alternate server select to enable a proxy server;
- Settings specify the alternate server address and port;

#### Authentication

- Use authentication select to use individual login and password to connect to the alternate server.
- Click **«OK»** to add the proxy server.
- Encrypt data over network select this option to provide higher security of data transferred between TRBOnet Agent and TRBOnet RadioServer. It is recommended to use this option when connection between the elements is carried out via the Internet or other public networks.
- Make this Server as a redundant for more details on Backup Server see <u>Appendix I: Backup Server</u>.

## **Service Management**

Service management allows managing ARS, location and telemetry services.



Configuration	Service Management	
🛷 Service 🛛		
S Network	Automatic "Check Radio" service	
Database	Auto request presence timeout: 5 ‡ minutes	
Service Management	ARS refresh interval:	
💥 Advanced settings 📐		
Map Servers for Geocoding	Ignore unregistered Radios	
Local Agent	Location service	
MOTOTRBO		
🗘 Services	Enable GPS trigger	
Repeater #1	GPS Update Interval: 30 \$ seconds	
X Advanced settings	Requested GPS Data: Latitude, Longitude, Precisio	- 🗉
Privacy	Show Advanced Parameters	
<b>III</b> Slot #1		
<b>I</b> Slot #2	l elemetry service	
Local Slots	Request for the status of GPIO when a subscriber unit is powere	d on
Controller #1	Text Messaging service	
Audio Paths		
Analog Control Stations	Text Message Format: Sender and Text	
Remote Agents	Custom Format: {Sender} {Text}	
Friendly Servers	Indeercontice	
M Internal PBX Server		
Content PBX Server	Remove offline radios from an Indoor map	
₩ Data Sources		
Set Defaults	Apply OK C	ancel

## To configure services select **Service management** in the navigation tree:

Configure the following parameters:

# Automatic "Check Radio" Service

Parameter		Description	
	This parameter is a software feature, not native MOTOTRBO <sup>™</sup> ARS. Select the time interval to check Subscriber Unit for inactivity regularly. Radio is considered inactive (or offline) if it does not send GPS, Text, ARS, or Voice messages. If you do not have a dedicated channel for data revert, use the following table		
	Number of	ARS request presence timeout	
Auto request presence timeout	subscribers	(minutes)	
	up to 10	5	
	10 to 20	9	
	20 to 30	13	
	30 to 40	17	
	40 to 50	21	



	For radio networks of over 50 subscriber radios set the Auto request presence timeout as 120 minutes.
ARS refresh timeout	It is recommended to use 30 minutes value. This parameter defines how frequently subscriber unit will send ARS packet.
Ignore unregistered radio units	Unregistered radio units will be ignored and will not appear in Dispatch Console.

#### **Location Service**

Parameter	Description		
Enable GPS trigger	Check to use GPS Positioning. It is a common parameter for all radios.		
	Specify default time interval for Subscriber Unit to send GPS data packets. If you have only one channel and do not use revert GPS channel use the following table:		
	Number of subscribers	GPS polling interval (seconds)	
	up to 10	21	
GPS Update Interval	10 to 20	42	
	20 to 30	63	
	30 to 40	84	
	40 to 50	105	
	50 to 60	126	
	60 to 70	147	
	70 to 80	168	
	80 to 90	189	
	90 to 100	210	
Request GPS data	Select the data to request in the dropdown list.		

#### System Planner Window

System Planner allows to calculate the values of Window Size and available Number of Updates for a radio per minute. Select GPS data to retrieve, **"Compressed UDP Header"** and **"Enhanced Privacy"** options values from a code plug of subscriber units and System Planner will automatically calculate Window Size to specify in code plugs of repeaters, control stations and subscriber radios:



GPS System Planner			<b>-X</b>
Requested GPS Data:			
🔽 Latitude			
✓ Longitude			
Altitude			=
Date Date			
V Precision			-
Enhanced GPS Calc	ulator		
Compressed UDP Header			
Enhanced Privacy			
Window Reservation:	90% -		
Window Size:	6		
Number of GPS Packages:	150 per Minute per Slot		
		OK Car	ncel

- Select data what are supposed to be requested in the Requested GPS data field;
- Compressed UDP header enabling this feature reduces delays in over the air data transmissions. Use this option for all radios (recommended);
- Enhanced privacy select if Enhanced Privacy is used on a channel;
- Window reservation window reservation parameter from repeater's code plug. Select window reservation in the dropdown list (45, 60, 75 and 90% available);
- Window size calculated "Window Size" parameter for code plugs of repeaters, control stations and subscriber Units;
- Number of updates the number of updates per minute per slot available for each radio.
- Click «OK» to close the window.

**Note:** GPS System Planner is intended for calculations only, to specify parameters in code plug of MOTOTRBO repeaters or radios. It does not affect the system.

#### **Advanced GPS Parameters**

Click «Show Advanced Parameters» button to view advanced GPS options:



Configuration	Service Management
🔗 Service	
S Network	Automatic "Check Radio" service
Database	Auto request presence timeout: 5 ‡ minutes
🔅 Service Management	APS refrech interval:
💥 Advanced setting	
Map Servers for Geocoding	Ignore unregistered Radios
Local Agent	Location service
Services	Enable GPS trigger
Repeater #1	GPS Update Interval: 30 🗘 seconds
	Requested GPS Data:
	Show Advanced Parameters
<b>III</b> Slot #1	
<b>III</b> Slot #2	Telemetry service
Local Slots	Request for the status of GPIO when a subscriber unit is powered on
Controller #1	Taut Managing anning
Audio Paths	Text messaging service
Analog Control Stations	Text Message Format: Sender and Text
Remote Agents	Custom Format: {Sender} {Text}
Friendly Servers	
10 Internal PBX Server	Indoor service
📸 External PBX Server 👻	Remove offline radios from an Indoor map
Set Defaults	Apply OK Cancel

Advanced GPS parameters window appears:

Configuration	Service Management	
🗬 Service		*
S Network	Automatic "Check Radio" se	rvice
Database	Auto request presence timeout:	5  \$ minutes
🔅 Service Management	ARS refresh interval	0 minutes
X Advanced settings	rate renear interval	- · · · · · · · · · · · · · · · · · · ·
Map Servers for Geocoding	Ignore unregistered Radios	
🔒 Local Agent	Location comice	
MOTOTRBO		
Services	Enable GPS trigger	
Repeater #1	GPS Update Interval:	30 \$ seconds
	Requested GPS Data:	Latitude, Longitude, Pre 👻 🗐
	Hide Advanced Parameters	
<b>III</b> Slot #1		
<b>III</b> Slot #2	Use MapPoint location reso	olving
Local Slots	MapPoint Application ID:	MapPoint (Default)
Controller #1		Test
Audio Paths		
Analog Control Stations	Notify clients interval:	5 seconds
Remote Agents	GPS counting interval:	0    seconds
Friendly Servers	Relevant GPS accuracy:	25 * meters
10 Internal PBX Server	relevant of b decardey.	
S External PBX Server	Auto correct GPS errors	
ψ Data Sources	Configure	
COM ports	Send the latest GPS data t	n dispatchers on alert
	For the last:	10 🗘 minutes
www.Casta	O GPS points:	10 🌲
Simple Since		
	Telemetry service	
License	Request for the status of GPI	o when a subscriber unit is powered on 🚽
Set Defaults		Apply OK Cancel

Specify the following advanced GPS parameters:



- Use MapPoint location resolving (optionally) select this option to acquire street names from MapPoint and specify the MapPoint application ID.
   MapPoint is the third-party application to install on the server to transfer coordinates into text;
- MapPoint Application ID specify MapPoint Application ID. Click
   Test button to check the connection;
- Notify clients interval select interval of cumulative data package sending to Dispatch Console;
- GPS counting interval available for Tallysman Sprite only;
- Relevant GPS accuracy select Relevant GPS accuracy to ignore the coordinates with higher accuracy;
- Auto correct GPS errors check to detect and correct invalid GPS data.

Click «Configure» button to configure auto correct GPS errors parameters:

Automatic error correction	× )
Due to various factors the GPS receive location and speed. Automatic error co number of serial reports from GPS rece correcting the error data.	er can give incorrect information on rrection algorithm analizes a eiver and allows finding and
Parameters: The maximum available speed:	120 🗘 km/h
	OK Cancel

Select the maximum possible speed for your vehicles.

Click «OK» to save changes.

- Send the latest GPS data to dispatchers on alert the option makes radios to send last available GPS position by alert.
- When alert initiated the last X GPS positions will be displayed on a map in Dispatch console.
- For the last X minutes: GPS positions of the radio within last X minutes will be displayed;
- **GPS points**: specified number of last GPS positions will be displayed.



#### **Telemetry Service**

**Request for the status of GPIO when a subscriber unit is powered on** - check to enable server to request for the status of a subscriber's radio telemetry when a radio is powered on.

#### **Text Messaging Service**

**Text Messages format** – select text messages format in the dropdown list.

When «Custom» text messages format selected specify data for text messages.

#### **Indoor Service**

Remove offline radios from an Indoor map – select to hide offline radios on the 2D/3D floor plans.

## **Advanced Settings**

To specify advanced system settings go to Advanced Settings tab:

Configuration		Advanced settings	
💣 Service	•		
S Network		Language:	English 👻
Database		Logging level:	Normal
Service Management			
X Advanced settings		Audio Recording format:	PCMU/8000 -
Map Servers for Geocoding		Measurement system:	Metric -
Local Agent	=		
MOTOTRBO		Latitude/Longitudeformat:	Degrees, Minutes, Seconds 🔹
Services		TY Passive timeout	Unlimited hours
Repeater #1		ix russive encode.	
Advanced settings		Voice Mail timeout:	Unlimited - hours
		Text Message Passive timeout:	Unlimited    the hours
Slot #1	-1		
<b>III</b> Slot #2			
Local Slots			
Controller #1			
. Audio Paths			
Analog Control Stations			
Remote Agents			
Friendly Servers	-		
Set Defaults		Appl	y OK Cancel

Specify the following settings:

- Language select TRBOnet RadioServer Configurator interface language in the dropdown list;
- Logging level select logging level in the dropdown list. Determines the amount of data stored in the System Log. This information is used by technical support for troubleshooting, therefore it is recommended to keep the value unchanged;



- Audio Recording format select Audio Recording format in the dropdown list;
- Measurement system select Metric or American system in the dropdown list;
- Latitude/longitude format select Latitude/longitude format in the dropdown list;
- TX Passive timeout select timeout in the dropdown list (unlimited value recommended);
- Voice Mail timeout select timeout in the dropdown list (unlimited value recommended);
- Text Message Passive timeout select timeout in the dropdown list (unlimited value recommended).

#### **Map Servers for Geocoding**

Geocoding server resolves GPS coordinates to street names and address for reports and other needs, for example in "GPS activity for period" reports. Online geocoding services can be used like Google or Nominatim, but they are not for free or limited by amount or requests. Also, custom geocoding server can be configured.

You can configure geocoding servers in three ways depending on server/console PC Internet access and your local geocoding server settings:

- Dispatcher has Internet access and/or server PC has no Internet access. Dispatcher can connect to preconfigured (Google and Nominatim) and/or local corporate geocoding servers via Dispatch Console.
- Server PC has Internet access and/or Dispatcher has no Internet access. Dispatcher can connect to preconfigured (Google and Nominatim) and/or local corporate geocoding servers via Server PC (follow the prompts below).
- 3. Your own local geocoding server in the local network. You can configure data resolving both in the Server Configurator and in the Dispatch Console.

Go to **Servers for Geocoding** in the Navigation Tree to receive GPS data from online or local geocoding servers:



Configuration	Map Servers for Geocoding
	Use MapPoint location resolving MapPoint Application ID: MapPoint (Default) Test
Local Agent MOTOTRBO Services Repeater #1 Advanced settings Privacy Slot #1 Slot #2 Local Slots Remote Agents Friendly Servers Thremal PBX Server Advanced settings External PBX Server	Server Name Google Nominatim MyGeocodingServer Add Delete Request address when GPS coordinates has been received
Set Defaults	Apply OK Cancel

**Google** and **Nominatim** geocoding servers are pre-configured and not available to delete.

Map Server for Ge	ocoding 🔀
Server Name:	MyGeocodingServer
Get address I	y coordinates
http://127.0.0.1/	reverse?format=xml⪫={lat}&lon={lon}&zoom=18&addressdetails=1
	Test
Get coordinat	es by address
http://127.0.0.1/	search?q={address}&format=xml
	Test
	OK Cancel

Click «Add» button to add your geocoding server:

- Server Name type in new geocoding server name;
- Get address by coordinates check the option to resolve GPS coordinates to street addresses.

Specify the new geocoding server address (e.g. <u>http://IP</u> <u>Address/lat={lat}&lon={lon}</u> or <u>http://mapserveraddress.com/lat={lat}&lon={lon}</u>;

**Note:** {lat}{lon} variables are necessary to input to allow TRBOnet Dispatch Software read radio GPS coordinates.



Click **Test** button to check the connection to a map server. Input any GPS coordinates to get resolved street address.

Get coordinates by address – select to resolve street addresses to GPS coordinates (e.g. for Search By Address feature).

**Note:** {address} variable is necessary to input to allow TRBOnet Dispatch Software search map objects by address.

Click **Test** button to check the connection to a geocoding server. Input any address to receive list of map objects with selected address.

Use buttons **Up** and **Down** to select the priority level for geocoding servers. When radio GPS data requested via geocoding servers added in Server Configurator, TRBOnet RadioServer requests GPS data from geocoding servers according to Priority level. The first geocoding server in the list has the highest priority level. In case the first geocoding server is unavailable, data comes from the second geocoding server in the list.

Administrator should check geocoding servers in the list to receive GPS data.

**Request address when GPS coordinates has been received** – select to resolve GPS coordinates to street addresses immediately by GPS event. Street addresses and GPS coordinates are stored in the TRBOnet database to optimize response time for any street addresses requests e.g. GPS reports and to reduce geocoding server load.

## Local Agent

Agent is the intermedium between Server (radio network) and IP network. Enable Local Agent to connect TRBOnet RadioServer to a radio system. Otherwise use remote agents

To enable Local Agent service select **Local Agent** in the navigation tree:


Configuration	Local Agent
Service  Network  Database  Service Management  Advanced settings  Map Servers for Geocoding  Local Agent  Cocal Agent  Cocal Agent  Advanced settings  Advanced settings  Cocal Agent  Coc	Enable local Agenti
Set Defaults	Apply OK Cancel

Select **MOTOTRBO** in the navigation tree to set ID radio network, ID radio groups and manage the list of control stations.

To enable MOTOTRBO services select **MOTOTRBO** in the navigation tree:

Configuration	MOTOTRBO		
🔗 Service 🔺			
S Network	Enable MOTOTRBO services		
Database	1		
Service Management	ID radio network(CAI):	12	* *
X Advanced settings	ID radio groups:	225	÷
Map Servers for Geocoding			
Local Agent	Registered MOTOTRBO System	15	
MOTOTRBO	Name	IP Address	Radio ID
Services	Repeater #1	10.10.110.206	64250
Repeater #1	Controller #1	192.168.0.250	64250
Advanced settings			
Slot #1			
XRT Controller #1			
Audio Paths			
Analog Control Stations			
Remote Agents			Tech
Friendly Servers 👻	Add Delete		Test
Set Defaults	Ap	ply OK	Cancel

#### Check Enable MOTOTRBO services.

Specify the following parameters:

- ID Radio network (CAI) The Common Air Interface (CAI) standard specifies the type and content of signals transmitted by compliant radios. Specify ID Radio network (CAI) (12 set by default);
- ID Radio groups specify ID radio groups (225 set by default).



**Note:** ID Radio network (CAI) and ID Radio groups should be the same with the radio system settings (radio code plug parameters).

Configure TRBOnet RadioServer radio network settings to match those of the Control Station according to the following correspondence table:

TRBOnet RadioServer	Motorola MOTOTRBO Radio
Radio Network ID	CAI Network
ID RadioGroup	CAI Group Network

#### **MOTOTRBO System Elements**

All Radio system elements based on MOTOTRBO services are represented in the table including its items (Control Station, Repeater, Remote Control Station etc.), IP Address and Radio ID (1):

Configuration	MOTOTE	RBO		
Service     Service     Network     Database	<b>V</b> E	nable MOTOTRBO services		
Service Management	ID ra	dio network(CAI):	12	÷
X Advanced settings	ID ra	idio groups:	225	÷
Map Servers for Geocoding				
	Reg	istered MOTOTRBO System	5	1
Service		Name	IP Address	Radio ID
	<ul><li>✓</li></ul>	Repeater #1	10.10.110.206	64250
Advanced settings	~	Controller #1	192.168.0.250	64250
Privacy				
<b>III</b> Slot #1				
<b>III</b> Slot #2		/ 1		
Local Slots				
Controller #1			1	
Audio Paths				2
Analog Control Stations				<b></b>
Eriendly Servers		Add Delete		Test
		Add Control Station		
Set Defaults	-	Add Repeater	OK	Cancel
	-	Add TRBOnet.Swift Agent		
	-	Add Friendly FS-1000 Statio	'n	
	-	Add XRC-9000 Controller		
	-	Add XRT-9000 Controller		
	-	Add SELEX Repeater		

To add an element in the system (Control Station, Repeater, Remote Control Station etc.) click Add button and select type of element in the dropdown list (2).

#### **Add a Control Station**

To add a Control Station go to **MOTOTRBO** in the navigation tree:



Â		BO			
	Enable MOTOTRBO services				
	ID	dia anti-	12	*	
	ID rac	dio network(CAI):	12	*	
	ID rad	dio groups:	225	* *	
	Dogi	stared MOTOTORO System	mc		
=	Keyn	Stered HOTOTRDO Syster	TD Address	Dedie ID	
	1	vame	10 10 110 205	64250	
		Ceptraller #1	102 168 0 250	64250	
		John Oller #1	192,100,0,250	04230	
-	/	Add Delete	<u> </u>	Test	
	-	Add Control Station			
	4	Add Repeater	ОК	Cancel	
	-	Add TRBOnet.Swift Agen	t		
		Add Friendly FS-1000 Stat	tion		
		Add Friendly FS-1000 Stat Add XRC-9000 Controller	tion		
	4 4 4	Add Friendly FS-1000 Stat Add XRC-9000 Controller Add XRT-9000 Controller	tion		
	E	ID rai	<ul> <li>ID radio network(CAI): ID radio groups:</li> <li>Registered MOTOTRBO System</li> <li>Name</li> <li>Repeater #1</li> <li>Controller #1</li> <li>Controller #1</li> <li>Add Delete</li> <li>Add Control Station</li> <li>Add Repeater</li> </ul>	ID radio network(CAI): 12 ID radio groups: 225 Registered MOTOTRBO Systems Name IP Address Controller #1 10.10.110.206 Controller #1 192.168.0.250 Add Delete Add Control Station Add Repeater OK	

Specify the following new radio parameters:

Configuration		Control Station #1	
🗬 Service			
🕤 Network		Name:	Control Station #1
Database		Radio ID:	64250 ‡
Service Management		TD Address	102 169 10 1
🔀 Advanced settings		IP Address:	192, 100, 10, 1 + 4
Map Servers for Geocoding		Mode:	Single station 👻
Local Agent	Ξ	System identifier:	department 1
MOTOTRBO			
Services		Use the radio for RX I	Data only(GPS Revert or Data Revert)
Repeater #1		Playback device:	Primary Sound Driver 👻 🕫
Advanced settings		Recorder device:	Primary Sound Capture Driver 🔹 🕏
Slot #1			
Control Station #1			
Advanced settings			
Analog Control Stations			
Remote Agents			
Friendly Servers	-		
Set Defaults			Apply OK Cancel

- **Name** specify Control Station name to display in the Dispatcher Console;
- **Radio ID** set an individual ID that uniquely identifies the radio. This ID is used by other calling radios when addressing the radio, for instance, when



making a private call or sending a text message. Specify Radio ID for the new Control Station (max value for Capacity Plus systems – 65535);

- IP Address select an IP Address of the new Control Station network interface;
- Mode select mode for the new Control Station in the dropdown list. For more details see <u>Control Station Connection Modes</u> below;
- System Identifier for Capacity Plus systems specify unique system identifier of the system for Control Stations and repeaters;
- Use the radio for RX data only this option configures the channel to receive only without any transmission capability.
- Playback device select the playback device connected to Control Station in the dropdown list;
- Recorder device select the recording device connected to Control Station in the dropdown list.

## **Control Station Connection Modes**

## Single Station

Single Station mode is simplest connection mode to receive and transmit Voice and Data via conventional channel using one Control Station at one frequency.



## Capacity Plus TRBOnet

Capacity Plus TRBOnet is a limited option. All voice and data are received via IP. At least one Control Station is required for outgoing voice and data session at a time.





The disadvantage of this system type is that Private Calls and SIP calls are not available.

# Capacity Plus MOTOTRBO

Capacity Plus MOTOTRBO is a digital trunking two-way MOTOTRBO system that allows you to accommodate the high volume communication. It is designed to organize stable connection in a few groups within one building or a set of buildings. This system type allows you to increase the number of channels for voice and data transmission between the subscribers and control centers. The subscribers are always automatically forwarded to a free channel. The main objective of Capacity Plus MOTOTRBO is to support more simultaneous voice and data transmissions within one capacious system.

In Capacity Plus MOTOTRBO mode you can configure voice and data control stations to transmit and receive data over the air as it is displayed in System Planner. Keep in mind, 2 data control stations are required per each data repeater – one per time slot. TRBOnet Dispatch Software provides you an option to utilize an IP connection to receive voice and data and get rid of data control stations.





# **IP Site Connect**

IPSC is a digital conventional two way MOTOTRBO system that allows you to extend the area of your communication providing 2 wide area channels. It is possible to connect up to 15 repeaters in one system using IP connection.

## **Radio Server Connection Modes**

- 1. TRBOnet RadioServer connects to a repeater with time slots in "IP Site Connect" mode. RadioServer can transmit and receive over IP.
- 2. TRBOnet RadioServer connects to a repeater without "IP Site Connect" for time slots. RadioServer can transmit over IP, but requires a control station to transmit. One control station per time slot.
- 3. TRBOnet RadioServer has no IP connection to repeater. To transmit and receive control station are required, one control station per time slot.





## **Common Channel**

Common Channel is the connection mode to receive and transmit Voice and Data via conventional channel using a number of long-distance Control Stations at one frequency. When subscriber initiates a Voice call the sound comes from one Control Station to provide radio coverage of larger areas.





### Add a MOTORBO Repeater

To add a repeater go to MOTOTRBO in the navigation tree:





Click Add

button and select **Add Repeater** in the navigation tree.

Configuration	Repeater #1			
🖗 Service 🔹				
🕤 Network	System Name:	IPSC #1		
Database	TRBOnet Peer ID:	100	1	
Service Management	Radio ID:	64250		
X Advanced settings		04230	<b>-</b>	
Map Servers for Geocoding	TRBOnet Local Port:	50000	÷	
Local Agent	Master Repeater Co	onnection Info:		
МОТОТКВО	Master IP Address:	10.10.110.206	-	
C Services	Master UDP Port:	50000	1	Test
Advanced settings	Authentication Key:			
Privacy	Sustem Turou	ID Site Connect		
<b>III</b> Slot #1	System Type:	IF Site Connect		
<b>III</b> Slot #2	System Identifier:			
Local Slots	Ilse NAT Voice			
Analog Control Stations	Use NAL Data (MNI)	and DDMS)		
Remote Agents		s and DDMS/		
Friendly Servers				
🔞 Internal PBX Server				
🐞 External PBX Server 🔹	•			
Set Defaults		Apply	ОК	Cance

Specify the following new repeater parameters:

- System Name specify a repeater's name in the system to display in Dispatch Console;
- TRBOnet Peer ID specify a unique Peer ID for TRBOnet RadioServer in radio system;
- **Radio ID** specify radio ID to display in the Dispatch Console;
- TRBOnet Local Port specify a local port of TRBOnet RadioServer to accept connections from a repeater. Use unique ports for each repeater connection if there are several repeaters connected;

#### **Master Repeater Connection info**

- Master IP Address specify Ethernet IP address of the repeater from its codeplug;
- Master UDP Port specify UDP port of Master repeater to connect. Click
   Test

button to check the connection to Master repeater. A window will appear. In case of success it should show firmware version and serial number of the repeater;

- Authentication Key specify the repeater's authentication key from code plug if it is used.
- System Type select system type in the dropdown list. Specify a unique System Identifier for a Capacity Plus system. Use the same System Identifier as for Control Station from the same system.



- Use NAI Voice select to connect to repeater via NAI (Network Application Interface) for Voice transfer. For more details on NAI see <u>Appendix G: NAI</u> <u>VOICE & DATA Support.</u>
- Use NAI Data (MNIS and DDMS) select to connect to repeater via NAI (Network Application Interface) for Data transfer. For more details on NAI see <u>Appendix G: NAI VOICE & DATA Support.</u>
  - MNIS MOTOTRBO Network Interface Service Windows application which acts as Voice and Data Gateway between the data applications and radio system. Voice and Data messages are routed through the MNIS.
  - **DDMS** Device Discovery and Mobility Service is the service to receive the data to a repeater. Available for Link Capacity Plus only.

### MNIS Data Service

Note: available when MNIS for data enabled on Repeater tab

**MNIS** – Motorola Network Interface is a service, which captures data from DDMS service and transfers the data to a radio server.

To enable MNIS data service select MNIS data service in the naviga	tion tree:
--	------------

Configuration	MNIS data service		
Service     Service     Database     Service Management	<ul> <li>Use MNIS data service</li> <li>Service is on a local h</li> </ul>	host	
Advanced settings	IP Address:	192.168.10.2 🝷 🕫	
Map Servers for Geocoding	Port:	5000 ‡	
🗔 Local Agent 😑			
MOTOTRBO			
Services			
IPSC #1			
Advanced settings			
MNIS data service			
DDMS service			
CI3 Local Slots			
Analog Control Stations			
Remote Agents			
😴 Friendly Servers 👻			
Set Defaults		Apply OK Cancel	

- Use MNIS data service check to enable MNIS data service;
- Service is on a local host check to use MNIS data service on the local PC;
- IP Address specify IP Address of the PC with MNIS service installed;
- **Port** the default value is 5000. You can select any free port on the Server PC.



## **DDMS Service**

Note: available when MNIS for data enabled on Repeater tab.

**DDMS** – Device Discovery and Mobility Service is the service to receive the data to a repeater. Available for Link Capacity Plus only.

To enable DDMS service select DDMS service in the navigation tree:

Configuration	DDMS service
Service Network Database Service Management Advanced settings Map Servers for Geocoding Local Agent MOTOTRBO Services IPSC #1 Advanced settings IPSC #1 Advanced settings IPSC #1 Advanced settings IPSC #1 IP	✓ Use DDMS service         Local port:       0         Service port:       3000         Service IP Address:       127.0.0.1
Set Defaults	Apply OK Cancel

- Use DDMS service check to enable DDMS service;
- Local Port local port of PC with TRBOnet Dispatch Software. Specify free port for DDMS service;
- Service port specify Service Port from DDMS service configuration (MOTOTRBO DDMS Administrative Client);
- Service IP Address specify IP Address of the PC with DDMS service installed.

#### **Repeater's Advanced Settings**

To configure Repeater's advanced settings select **Repeater** - **Advanced settings** in the navigation tree:



Configuration		Advanced settings						
💣 Service	*							
😚 Network		Voice Call Hang Time (ms):						
Database		Group Call:	3000	÷				
Service Management		Private Call:	4000					
Map Servers for Geocoding		Emergency Call:	4000	÷				
Local Agent	E	TV Decembles						
MOTOTRBO		IX Preamble:	120	÷				
Services		TX Timeout:	60	÷	seconds			
IPSC #1								
····X Advanced settings		Phone System: Motorola Phone System						
🔒 Privacy 🛛 🔪		Allow CSBK Data						
MNIS data service	-							
DDMS service	N							
<b>III</b> Slot #1								
<b>III</b> Slot #2								
Local Slots								
Analog Control Stations								
📷 Remote Agents								
Friendly Servers	Ŧ							
Set Defaults			Apply		OK Cancel			

Specify the following Repeater's Advanced Settings:

#### Voice Call Hang Time (ms):

- Group Call sets the duration during which a radio will talk back to a received Group Call or continue a transmitted Group Call. Specify Group Call Hang Time from the repeater code plug;
- Private Call sets the duration a radio keeps the Private Call setup after a user releases PTT button. This is to avoid setting up the call again each time a user presses PTT button to transmit. During this time, other radios can still transmit since the channel is essentially idle. After the hang timer expires, the radio transmits using the TX Contact Name specified for this channel in CPS. Specify Private Call Hang Time from code plug;
- Emergency Call sets the duration the repeater reserves the channel after the end of an emergency call transmission. During this time, only members of the Group that the channel is reserved for can transmit. Specify Emergency Call Hang Time from code plug;
- TX Preamble set TX Preamble (0 8640 ms. values are available, 120 is recommended value);
- TX Timeout voice session limit. When Dispatcher starts any Voice Session in the Dispatch Console, transmission will be interrupted after TX Timeout time count set in TRBOnet RadioServer Configurator.
- Phone system select a system to make a phone calls:
  - Mototrbo phone system is a special call type with parameters set in radio code plug (recommended). Mototrbo Phone system recommended for IP Site Connect mode to minimize Radio response time. For more details on



Motorola Radios programming see <u>Appendix F: SIP Setup for Motorola</u> <u>Phone System</u>;

 TRBOnet Phone System (TX Interrupt) is phone calls system based on Private Call type using TX Interrupt feature. Available for radios systems with control stations.

Note: Phone Interconnect feature for repeater is not required.

## Privacy

To set Privacy parameters select **Repeater** - **Privacy** in the navigation tree:

Configuration		Privacy					
🗬 Service							
S Network		Privacy	Туре	2:	Enhanced	-	
Database		Basic P	rivacy	/ Key ID:	1	÷	
Service Management		Enhan	od Al	aorithm:	AEC 2EC bit Logac		
X Advanced settings			.cu Ai	yonunn.	ALS 250 DILLEGAL	<u></u> *	
Geocoding Servers		Enhand	ed Pr	ivacy Keys:			
Local Agent	=	ID		Name		Value	
MOTOTRBO	-	1	÷				
Services							
Repeater #1							
Advanced settings							
Privacy							
EI3 Local Slots							
Analog Control Stations							
Remote Agents							
Friendly Servers							
Thernal PBX Server		A	dd	Remo	ve		
Advanced settinos	-						
Set Defaults					Apply	OK	Cancel

Specify the following Privacy parameters:

- Privacy Type select None / Basic / Enhanced Privacy.
- Basic Privacy Key ID available when Basic Privacy Type selected;
- Enhanced Algorithm select encryption type if you are going to use additional encryption. Available when Enhanced Privacy Type selected.

**Note:** For more details on ARC4 see <u>https://en.wikipedia.org/wiki/RC4</u> and for AES see <u>https://en.wikipedia.org/wiki/Advanced\_Encryption\_Standard</u> articles. For using these enhanced algorithms special license required.

• Enhanced Privacy Keys - available when Enhanced Privacy Type selected.

To add Enhanced Privacy Keys click Add button (1):



Configuration		Privacy	,				
🗬 Service							
S Network		Priva	су Тур	e:	Enhanced	•	
Database		Basic	Privac	y Key ID:	1		
Service Management		Enha	nced A	laorithm	AEC 2EC hit Logar		
🔀 Advanced settings			inceu A	igorium.	AES 256 DILLEGACY	<u></u>	
Geocoding Servers		Enha	nced Pi	rivacy Keys:			
Local Agent	=	ID		Name		Value	
MOTOTRBO	_	1	÷				
Services					R.		
Repeater #1					$\mathbf{N}$		
X Advanced settings					<b>1</b>		
					\ <u></u>		
Slot #1		-					
				1			
Local Slots							
Analog Control Stations			_ /	1			
Remote Agents							
Friendly Servers			*				
Internal PBX Server	-		Add	Remo	ove		
····· 🔁 Advanced settinds							
Set Defaults					Apply	OK	Cancel

Enhanced Privacy Key automatically added in the table (2).

Specify Enhanced Privacy Key **ID**, **Name** and **Value** in the table.

To remove Enhanced Privacy Key click

**Slots** 

Note: available for IPSC mode only!

To set repeater's slot parameters select **Repeater #X** \ **Slot #X** in the navigation tree:

button.



Specify the following slot parameters:



- Name specify slot's name in the system;
- Messaging Delay sets the inter-repeater and software messaging delay based on the IP network configuration. Select Messaging Delay type (Normal / High) in the dropdown list;
- **Use the slot for RX data only** this option configures the channel to receive only without any transmission capability.
- Use Privacy check to use Privacy for selected slot (available when Basic and Enhanced Privacy Types are selected in Repeater Privacy settings);
- Privacy Key select Privacy key in the dropdown list (available when Enhanced Privacy Type is selected in Repeater Privacy settings);
- Allow TX interrupt check to enable TX interrupt option for selected slot.

Note: Available when MNIS service disabled. See MNIS Data Service section.

- Always transmit when PTT is pressed ("Impolite" channel access) the radio will always transmit when the Push-to-Talk (PTT) button is pressed (not available in a Capacity Plus Personality channel).
- Data Call confirmed enables individual packets in data calls (ARS, GPS, and Text Message) on the current digital channel or personality to be confirmed.
   By default, data calls are unconfirmed.
- Private Call Confirmed sets Private calls on the current digital channel as confirmed. By default, Private calls are unconfirmed (disabled if RX Only is enabled.).
- Emergency Alarm Ack Determines if TRBOnet is allowed to acknowledge an emergency alarm.

## Local Slots

Note: available for IPSC mode only!

Voice or data are not being transmitted between sites in IPSC systems. Due to MOTOTRBO limitations TRBOnet RadioServer can receive only information from local slots, but cannot transmit by IP connection to such slots.

To operate with Local Slots select **Local Slots** in the navigation tree:



Configuration		Local S	lots			
💣 Service	*	Loa	d Deers Man			
S Network		LUG	u reels map			
Database			Name		Peer ID	Peer Slot
Service Management		<b>V</b>			1	Slot #1
🔀 Advanced settings					2	Slot #2 🗢
Map Servers for Geocoding						
Local Agent	=					
MOTOTRBO						
Services						
Privacy						
MNIS data service	-					
DDMS service						
<b>III</b> Slot #1						
<b>III</b> Slot #2						
Local Slots						
Analog Control Stations						
Remote Agents			Add Bema	¥0	ſ	Configure
Friendly Servers	-		Add	ve	l	configure
Set Defaults				Apply	ОК	Cancel

To add Local Slot in the system click Add button. Local Slot is added in the system.

- Specify new Local Slot name in the Name column to display in Dispatch Console;
- Specify Peer ID of the repeater in the Peer ID column;
- Select Peer Slot in the dropdown list in the **Peer Slot** column;
- Specify Radio ID in the Radio ID column for the slot. This ID is used by other calling radios when addressing the radio, for instance, when making a private call or sending a text message. Specify Radio ID for the new Control Station. Available values from 1 to 16448250.

To remove a Local Slot click Remove button.

## Audio Path

Note: available for Capacity Plus and Linked Capacity Plus modes!

Audio Paths are the talk paths of the system to make and receive Voice Calls, in general they are talk groups. TRBOnet requires registering all talk paths from Connect Plus system in its configuration. If talk paths is not registered, TRBOnet operator will not be able to receive and transmit to this talk groups.



Lonnguration		Audio	Paths				
Database	*	Loa	d Groups Map				
Service Management		-					-
Advanced settings			Name	Call Type		Group ID	
Map Servers for Geocoding		~		All Call			
Local Agent				Group Call		1	- ‡
MOTOTRBO							
Services							- 1
CapacityPlus #1							- 1
	Ξ						
							- 1
MNIS data service							- 1
DDMS service							
Audio Paths							
Analog Control States							
🔋 Remote Agents							- 1
Friendly Servers							- 1
👸 Internal PBX Server	•						- 1
External PBX Server							- 1
P Data Sources						- 0	=
	Ŧ		Add Delete			Configu	re
			ſ		011		

To add an Audio Path for repeater in Capacity Plus mode click

l button.

Add

New Audio Path appears in the table.

Check the box in the first table column to make and receive Voice Calls from selected subscriber.

- Name specify talk group name to display in the Dispatcher Console (Name column in the table);
- **Call Type** select Call Type for the talk group in the dropdown list (Broadcast/Group/Private).
- Group ID ID specify a radio ID of talk group to make a call to. Not applicable for private and broadcast calls.

To remove an Audio Path, click Delete button.

#### Add TRBOnet.Swift Agent

TRBOnet.Swift Agent functions as a gateway to receive and transmit voice and data.

To add TRBOnet.Swift Agent go to **MOTOTRBO** in the navigation tree:



Configuration		MOTOTRBO		
Database				
🔅 Service Management		Enable MOTOTRBO serv	vices	
💥 Advanced settings				
Map Servers for Geocoding		ID radio network(CAI):	12	÷
Local Agent		ID radio groups:	225	÷
MOTOTRBO				
Services				
IPSC #1	Ξ	Name	IP Address	Radio ID
X Advanced settings		V IPSC #1	10.10.110.2	06 64250
Privacy				
MNIS data service				
DDMS service				
Slot #1				
Slot #2				
Andra Castal Stations				
Analog Control Stations				,
Theray DBY Server			_	
Server	+	Add Delete		Test
	_	🚽 🚽 Add Control Statio	n 🦳	
Set Defaults		👍 Add Repeater		OK Cancel
		👍 Add TRBOnet.Swif	t Agent	
		👍 Add Friendly FS-10	00 Station	
		👍 Add XRC-9000 Cor	ntroller	
		👍 Add XRT-9000 Cor	ntroller	
		👍 Add SELEX Repeat	er	

Select Add TRBOnet.Swift Agent in the Dropdown list.

Configuration		TRBOnet.Swift Agent #1		
Database				
🔅 Service Management		Name:	TRBOnet.Swift Age	ent #1
💥 Advanced settings		Radio ID:	16448250	÷
Map Servers for Geocoding		ID Address	192 168 0 100	
Local Agent		IP Address;	192,108.0,100	
MOTOTRBO		Port:	8002	Test
Services	Ξ	Mode:	Single station	<b>.</b>
		Houer		
X Advanced settings		System identifier:	Department 2	
		Use the radio for RX I	Data only(GPS Rever	t or Data Revert)
MNIS data service			4000	
DDMS service	-	VoIP port:	4000	Ŧ
<b>III</b> Slot #1		Use RTP for trans	nit audio	
<b>III</b> Slot #2				
Local Slots				
TRBOnet.Swift Agent #1				
X Advanced settings				
💼 Analog Control Stations	Ŧ			
4 III >>				
Set Defaults			Apply	OK Cancel

New Swift Agent parameters window appears:

Specify the following new remote control station parameters:

 Name - specify Remote Control Station name to display in the Dispatcher Console;



- Radio ID Set an individual ID that uniquely identifies Swift Agent. This ID is used by other calling radios when addressing the radio, for instance, when making a private call or sending a text message. Specify Radio ID for the new Swift Agent (max value for Capacity Plus systems – 65535);
- IP Address select an IP Address of the new Swift Agent network interface;
- Port specify port to connect to the new Swift Agent (8002 set by default);
- Mode select mode for the new Swift Agent in the dropdown list;
- System Identifier for Capacity Plus systems specify unique system identifier of the system for Swift Agents, Control Stations and repeaters;
- Use the radio for RX data only this option configures the channel to receive only without any transmission capability.
- VoIP port Port for audio communication. Select VoIP port (8002 set by default);
- Use RTP for transmit audio check to use RTP protocol to transmit the audio.

### TRBOnet.Swift Agent's Advanced Settings

To configure TRBOnet.Swift Agent's advanced settings select **TRBOnet.Swift Agent**, **Advanced settings** in the navigation tree:

Configuration	Advanced settings
	Automatically reset alarm mode       Always transmit when the PTT is pressed ("Impolite" channel access)       TX Timeout:     60       Signaling System:     MDC-1200
Set Defaults	Apply OK Cancel

Specify the following advanced settings for Remote Control Station:

 Automatically reset alarm mode - Dispatcher can reset Alarm mode manually or using programmed button "Reset Alarm Mode" (set in Radio code plug).
 Automatically reset alarm mode option allows to reset Alarm mode automatically. It is recommended to enable this option;



- Always transmit when PTT is pressed ("Impolite" channel access) the radio will always transmit when the Push-to-Talk (PTT) button is pressed (not available in a Capacity Plus Personality channel).
- TX Timeout voice session limit. When Dispatcher starts any Voice Session in the Dispatch Console, TX will be interrupted after TX Timeout time count set in TRBOnet RadioServer Configurator.
- Signaling system select signaling system in the dropdown list.
  - **MDC 1200** signaling is a Motorola data system using audio frequency shift keying (ASFK) using a 1,200 baud data rate. A general option is to enable or disable an acknowledgement (ack) data packet.
  - SELECT 5 (5 Tone Signaling System). In the 5 Tone Signaling Systems, each radio has a unique numeric identity (e.g. 12345). To signal the number 12345, a sequence of 5 tones is sent. Sequences of audible tones of a very short duration are sent between radios. Most 5 tone sequences take less than half a second to send. Available for Private Call, Group Call, Emergency Call, status information.

## **Reserve** Agent

Reserve Agent is used when a connection to Main TRBOnet.Swift Agent is lost.

Configuration	Reserve Agent		
Database A Service Management	Use reserved TRBO	net.Swift Agent	
🔀 Advanced settings	IP Address:	192.168.0.100	*
Map Servers for Geocoding	Port	8002	1 Test
Local Agent	Porta		-
MOTOTRBO	VoIP port:	4000	* *
Services			
IPSC #1			
Advanced settings			
Privacy			
MNIS data service			
🏠 DDMS service			
Slot #1			
<b>III</b> Slot #2			
EII Local Slots			
TRBOnet.Swift Agent #1			
X Advanced settings			
Reserve Agent 🥌			
Analog Control Stations 👻			
4			
Set Defaults		Apply	OK Cancel

Go to **Reserve Agent** in the Navigation Tree to set connection parameters:

- IP Address input reserve agent IP address;
- Port input TRBOnet.Swift Agent's port for incoming connections, configured in TRBOnet.Swift Agent.

Click Test button to check the connection;



• VolP Port - Port for audio communication. Input VolP port (4000 set by default);

### Add XRC-9000 Controller

Connect Plus is a trunk system which consists of 50 sites numbers max. XRC 9000 - controller functions as site controller to provide free channel for Data transfer between sites and to manage data flow.

To add a XRC-9000 controller go to MOTOTRBO in the navigation tree:



Select Add XRC-9000 Controller in the dropdown list.

Specify the following new XRC-9000 controller parameters:



Configuration		Controller #1	
Database	*		
🔅 Service Management		Name:	Controller #1
Advanced settings		IP Address:	192.168.0.250 • Test
Local Agent		System identifier:	ConnectPlusTest
MOTOTRBO		Radio ID list:	105,111
Services			-Clear this field to view all radios
Mdvanced settings	=		-Zach entry is separated by a comma (, ) -A range expression must have the format: R1-R2
MNIS data service			
DDMS service			
<b>III</b> Slot #1			
Slot #2			
XRC Controllor #1			
Analog Control Stations			
Remote Agents			
Friendly Servers	Ŧ		
Set Defaults			Apply OK Cancel

- Name specify XRC-9000 Controller name to display in the Dispatcher Console;
- IP Address specify an IP Address of the new XRC-9000 Controller network interface. Click
   Test
   button to check the connection;
- System Identifier type in system identifier which should be the same through all controllers for the Connect Plus system;
- Radio ID list specify a list of radios to receive data from according to the following rules:
  - To receive the data from all radios in the system leave this field blank;
  - To receive the data from certain radios separate every Radio ID by comma, e.g. 105,106,111, etc.
  - To receive the data from radios range input Radio IDs according to the following example: 105-111.

Note: Input Radios IDs only, do not mention Radio Names or «Radio» word.

#### **Advanced Settings**

Configure XRC-9000 Controller advanced settings:



-		
Configuration		Advanced settings
Database		
Service Management		✓ Automatic Registration service (ARS)
🔀 Advanced settings		koos
Map Servers for Geocoding		- COOH
Local Agent		4005
		Location service (GPS)
Services		400.1
IPSC #1	Ξ	
Advanced settings		4001 -
Privacy		Text Messaging service (TMS)
MNIS data service		4007
DDMS service		
	U)	4007 -
Slot #2		64250 ‡
Ella Local Slots		
Controller #1		
Advanced settings		
Analog Control Stations		
Remote Agents		
Be menaly servers	-	
Set Defaults		Apply OK Cancel

**Automatic Registration service (ARS)** - provides an automated data application registration for the radio. When the radio powers up, the radio automatically registers with the server. This feature is used with data applications, i.e. any data traffic on this channel that is associated with an application server such as MOTOTRBO Text Messaging or MOTOTRBO Location Services. Enabled by default.

- Controller port specify controller's port for ARS service. 4005 set by default;
- Local port local port of PC with TRBOnet Dispatch Software. Specify free port for new XRC-9000 controller (4005 set by default);

Location service (GPS) - radio can send its coordinates when it is in Global Positioning coverage area. GPS settings can be configured in a radio code plug or on Service Management tab;

- Controller port specify controller's port for Location service. 4001 set by default;
- Local port local port of PC with TRBOnet Dispatch Software. Specify free port for new XRC-9000 controller (4001 set by default);

Text Messaging service (TMS) - service for text message transmission;

- Port select controller's port for Text Messaging service. 4007 set by default;
- Local port- local port of PC with TRBOnet Dispatch Software. Specify free port for new XRC-9000 controller (4001 set by default);

**Dispatcher ID** - Connect Plus trunk logic for subscriber radio resides in its Connect Plus Option Board. MOTOTRBO<sup>™</sup> Connect Plus Option Board programming software



is used for Connect Plus Option Board configuration. Type in Dispatcher ID from Connect Plus Option Board code plug. The Dispatcher ID should belong to TRBOnet RadioServer account in the Connect Plus system.

#### Add XRT-9000 Controller

To be able to work properly with TRBOnet RadioServer XRT9000 controller should be pre-configured, the detailed step-by step guide is available from Knowledge Base: "<u>How to setup XRT9000</u>"

XRT-9000 controller functions as a voice gateway connected to each XRC-9000 controller in the system.

Configuration		MOTOTR	BO		
Database	*				
Service Management		🔽 Er	nable MOTOTRBO services		
X Advanced settings					
Map Servers for Geocoding		ID ra	dio network(CAI):	12	÷
Local Agent		ID ra	dio groups:	225	÷
Services					
IPSC #1	=		Name	IP Address	Radio ID
Advanced settings			IPSC #1	10.10.110.206	64250
Privacy					
MNIS data service					
DDMS service					
<b>III</b> Slot #1					
<b>III</b> Slot #2					
Local Slots					
Analog Control Stations					
Remote Agents				/	
Friendly Servers					
Thernal PBX Server			Add Delete		Test
👸 External PBX Server	Ŧ		Add Control Station		
Set Defaults			Add Control Station	ОК	Cancel
		- +	Add Repeater		
		-	Add TRBOnet.Swift Agent		
		-	Add Friendly FS-1000 Statio	or	
		-	Add XRC-9000 Controller		
		4	Add XRT-9000 Controller		
		4	Add SELEX Repeater		

To add a XRT-9000 controller go to **MOTOTRBO** in the navigation tree:

Select Add XRT-9000 controller in the dropdown list.

Specify the following new XRT-9000 controller parameters:



Configuration		Controller #1	
Database			
🔅 Service Management		System Name:	ConnectPlus1
🔀 Advanced settings		Radio ID:	64250 ‡
Map Servers for Geocoding		Start Local Port:	10001
MOTOTRBO		XRT-9000 Controller	info:
Services		Controller IP Address:	192.168.0.250 -
IPSC #1	Ξ	Controller TCP Port:	10001 🛟 Test
Privacy		Authorization Type:	North America R 1.1 Basic 🔹
🌣 MNIS data service		User Name:	Admin
DDMS service		Password:	•••••
	۳	System Identifier:	ConnectPlus1
Local Slots			
ConnectPlus1	-		
Audio Paths			
Analog Control Stations			
🔂 Remote Agents			
🔂 Friendly Servers	Ŧ		
Set Defaults			Apply OK Cancel

**System Name** - specify XRT-9000 controller name to display in the Dispatcher Console;

**Start Local Port** - specify free local port of the PC with TRBOnet Dispatch Software installed

**XRT-9000 controller info** – specify XRT 9000 controller connection parameters:

**Controller IP Address** - specify an IP Address of the new XRT-9000 controller network interface;

**Radio ID** - set an individual virtual radio ID (max value for Capacity Plus systems – 65535). Virtual Radio ID required to do the following:

- Make all types of Voice Calls from XRT-9000 Controller to radios, Dispatchers and groups
- Send commands (e.g. Remote Monitor);

**Controller TCP Port** - port to transfer Data via TCP protocol. The default port of XRT9000 controller is 10001, can be differ in your installation. Click

Test button to check the connection;

Authorization Type - select Authorization Type in the dropdown list according to

your region;

User Name - type in User name from XRT-9000 controller's configuration;

Password - type in a password for user from XRT-9000 controller's configuration;



**Username & password** should belong to TRBOnet Connect Plus account and configured in Connect Plus, refer to the article above "How to setup XRT9000".

**System Identifier** - type in system identifier which should be the same through all controllers for the Connect Plus system;

## Audio Paths

Audio Paths are the talk paths of the system to make and receive Voice Calls, in general they are talk groups. TRBOnet requires registering all talk paths from Connect Plus system in its configuration. If talk paths is not registered, TRBOnet operator will not be able to receive and transmit to this talk groups.

To configure Audio Paths for XRT-9000 controller select **Audio Paths** in the navigation tree:



To add an Audio Path for XRT-9000 controller click button.

New Audio Path appears in the table.

Check the box in the first table column to make and receive Voice Calls from selected subscriber.

**Name** - specify talk group name to display in the Dispatcher Console (**Name** column in the table);

**Call Type** - select Call Type for the talk group in the dropdown list (Broadcast/Group/Private).



**Source ID** – indicates a radio ID of call initiator, in general will display TRBOnet's radio ID as a caller for group calls to subscriber. If TRBOnet has more than 1 radio ID in Connect Plus system (for different dispatchers, for example) talk paths should be registered for all of them.

**Group ID** – ID specify a radio ID of talk group to make a call to. Not applicable for private and broadcast calls.

To remove an Audio Path, click Delete button.

## Add a Selex Repeater

Selex repeater is configured as a Stand-Alone repeater which supports connections to MOTOTRBO<sup>™</sup> radios to transmit voice and data in digital, analog and mixed mode.

To add a Selex repeater go to MOTOTRBO in the navigation tree:

Configuration	MOTOTRBO
Service	
	Enable MOTOTRBO services
Service Management	ID radio network(CAI):
Advanced settings	10 and in accuracy 225 *
Map Servers for Geocoding	
Local Agent =	
	Name IP Address Radio ID
Services	▼ IPSC #1 10.10.110.206 64250
IPSC #1	
X Advanced settings	
Privacy 🔪	
MNIS data service	
DDMS service	
Slot #1	
SID Local Slata	
	Add Delete Test
	🖶 Add Control Station
Set Defaults	Add Repeater
	Add TRBOnet.Swift Agent
	Add Friendly ES-1000 Station
	Add XKC-9000 Controller
	Add XRT-9000 Controll r
	Add SELEX Repeater 🕨
[	
Add hutte	an and a last Add Cantur I Chattan in the maximum

Click button and select **Add Control Station** in the navigation tree.

Specify the following new Selex repeater parameters:



Configuration		Selex #1	
S Network	*		
Database		Name:	Selex #1
Service Management		Radio ID:	64250
X Advanced settings		Reporter Medau	Digital
Map Servers for Geocoding		Repeater mode.	oʻgitai i
Local Agent			
MOTOTRBO	Ξ		
Services			
Advanced settings			
Privacy			
MNIS data service			
DDMS service			
Slot #1			
	_		
Salay #1			
Advanced settings			
Slot #1			
Slot #2	-		
Set Defaults			Apply OK Cancel

Name - specify Selex repeater name to display in the Dispatcher Console;

**Radio ID** - set an individual ID that uniquely identifies the radio. This ID is used by other calling radios when addressing the radio, for instance, when making a private call or sending a text message. Specify Radio ID for the new Control Station (max value for Capacity Plus systems – 65535);

**Repeater mode** – select mode in the dropdown list (Digital/Analog/Mixed).

## Selex Repeater Advanced Settings

To configure Selex repeater advanced settings select **Selex repeater** - **Advanced settings** in the navigation tree:





Specify the following repeater's advanced settings:

- Keep Alive Interval time interval in seconds for TRBOnet RadioServe to check the connection to Selex repeater. Set Keep Alive Interval in seconds (10 is set by default);
- **TX Timeout** voice session limit. When Dispatcher starts any Voice Session in the Dispatch Console, TX will be interrupted after TX Timeout time count, set in TRBOnet RadioServer Configurator.

## Selex Repeater Slots

Selex repeater has two available slots (in **Digital** or **Mixed** mode) to transmit voice and data.

To configure Selex repeater slots select Slot (Slot #1/Slot #2) in the navigation tree:

Configuration	Slot #1
Network	♥ Slot #1
🔅 Service Management	Name: Slot#1
🔀 Advanced settings	TRBOnet IP Address: 10.10.101.170 - & Port: 6080 1
Map Servers for Geocoding	SELEX IP Address: 10.10.9.30 Port: 6080 1
. Local Agent	
MOTOTRBO	Test
Services	
	Use the getaway for RX Data only(GPS Revert or Data Revert)
	Use Encryption
Privacy	Always transmit when the PTT is pressed ("Impolite" channel access)
MNIS data service	Data Call Confirmed
DDMS service	Private Call Confirmed
<b>III</b> Slot #2	
Local Slots	
Selex #1	
Set Defaults	Apply OK Cancel

Specify the following slot parameters:

- Name specify slot's name in the system;
- TRBOnet IP Address specify PC with TRBOnet Dispatch Software IP Address.
   Specify available port of the PC;
- Selex IP Address specify an IP Address of Selex repeater (set in the repeater's configuration). Specify available port of the PC;
- Click Test button to check the connection.
- Use the gateway for RX data only (GPS Revert or Data Revert) this option configures the channel to receive data only without any transmission capability;
- Use Encryption check this option to encrypt voice and data traffic over IP.



- Always transmit when PTT is pressed ("Impolite" channel access) the radio will always transmit when the Push-to-Talk (PTT) button is pressed (not available in a Capacity Plus Personality channel);
- Private Call Confirmed sets Private calls on the current digital channel as confirmed. By default, Private calls are unconfirmed (disabled if RX Only is enabled).

## Analog Mode

To configure analog connection mode select Analog in the navigation tree:

Configuration	Analog
Configuration Map Servers for Geocoding Local Agent MOTOTRBO Services IPSC #1 Advanced settings Privacy MNIS data service DDMS service Slot #1 E	Analog          Image: Analogue repeater         Name: Analogue repeater         TRBOnet IP Address:         10.10.101.170 • ¢ Port:         SELEX IP Address:         10.10.9.30 • Port:         Example         Test         Use the getaway for RX Data only(GPS Revert or Data Revert)         Use Encryption
Privacy MNIS data service DDMS service DDMS service Slot #1 Slot #2 Clil Local Slots Selex #1 Advanced settings Analog Analog Control Stations	Test         Use the getaway for RX Data only(GPS Revert or Data Revert)         Use Encryption         Always transmit when the PTT is pressed ("Impolite" channel access)         Data Call Confirmed         Private Call Confirmed
Remote Agents     Friendly Servers     Internal PBX Server     External PBX Server     Set Defaults	Apply OK Caprel

Specify the following analog mode settings:

- Analog mode the checkbox is not available because analog mode is known to be present in the selected mode;
- Name specify Selex repeater in the analog mode name to display in the Dispatcher Console;
- TRBOnet IP Address specify PC with TRBOnet Dispatch Software IP Address.
   Specify available port of the PC (available when Selex repeater slots are disabled);
- Selex IP Address specify an IP Address of Selex repeater (set in the repeater's configuration). Specify available port of the PC (available when Selex repeater slots are disabled);
- Click Test button to check the connection.
- Use the gateway for RX data only the option is not available in the analog mode;
- Use Encryption check this option to encrypt voice and data traffic over IP;



- Always transmit when PTT is pressed ("Impolite" channel access) the radio will always transmit when the Push-to-Talk (PTT) button is pressed (not available in a Capacity Plus Personality channel);
- **Private Call Confirmed** the option is not available in the analog mode.

#### **Services**

🔆 TRBOnet Plus v4.4 / Server Configurator		
Configuration	Services	
💣 Service		
🕤 Network	Automatic Registration service (ARS)	
Database	Port: 4005 +	
Service Management		
X Advanced settings	V Telemetry service (TLM)	
Map Servers for Geocoding	Port: 4008	
Local Agent	Text Messaging service (TMS)	
	Port: 4007	
DEC #1		
	Cocation service (GPS)	
	Port: 4001	
MNIS data service	☑ Indoor service (K-TERM)	
DDMS service	Port: 3022	
	I allysman Sprite service	
EIJ Local Slots	4004	
Analog Control Stations	FS 5000 location service (GPS)	
📷 Remote Agents	4004	
Friendly Servers		
Thernal PBX Server	Swift.Tracker service	
🐞 External PBX Server	4004 ‡	
V Data Sources	Swift.Tracker service (GSM channel)	
	4090	
Email	1000 v	
Pop3	Extended Text Messaging service	
Smtp	4010 +	
SMS	V Telemetry service Novox	
SMS		
📮 License	8090	
	8091 ‡	
	G4S BS232 service	
	4004	
	Zebra printer service	
	4072	
	Configure	
Set Defaults	Apply OK	Cancel

You can configure services to use. Go to **Services** and check services that will be used:

 Automatic Registration Service (ARS) - provides an automated data application registration for the radio. When the radio powers up, the radio automatically registers with the server. This feature is used with data applications, i.e. any data traffic on this channel that is associated with an application server such as MOTOTRBO Text Messaging or MOTOTRBO Location Services.



- **Port** local port for ARS service. 4005 set by default;
- Telemetry service (TLM) the wireless transmission and reception of measured quantities for remotely monitoring environmental conditions or equipment parameters.
  - Port local port for telemetry service. 4008 set by default;
- Text Messaging service (TMS) service for text message transmission.
   Port local port for Text Messaging service. 4007 set by default;
- Location Service (GPS) radio can send its coordinates when it is in Global Positioning coverage area.
  - Port local port for Location service. 4001 set by default;
- Indoor Service (K-TERM) service for indoor positioning where satellite navigation is not available.
  - **Port** local port for Indoor service. 3022 set by default;
- **Tallysman Sprite service** service for autonomous event and aggregated event reporting to provide significant reduction in GPS data overhead.
  - **Port** local port for Tallysman Sprite service. 4004 set by default;
- **FS 5000 location service** GPS data package transmitting service. Uses FS5000 Option Board.
  - **Port** local port for FS 5000 location service. 4004 set by default;
- **Swift.Tracker service** service for coordinates and data package transmitting via radio channel using Swift.Tracker TR001.M1 device.
  - **Port** local port for Swift.Tracker service. 4004 set by default;
- Swift.Tracker service (GSM channel) service for coordinates and data package transmitting via radio channel and reserved GSM channel using Swift.Tracker TR001.M1 device.
  - **Port** local port for Swift.Tracker service. 4080 set by default;
- Extended Text Messages service a special function to send detailed preconfigured templates with the help of the special TRBOnet Dispatch Software application.
  - Port local port for Extended Text Messages service. 4080 set by default;
- Telemetry service NOVOX system of telemetry transducers to transmit telemetry data.
  - Requests port local port for requests. 8090 set by default;
  - **Events port** local port for events. 8091 set by default;
- G4S RS232 custom development;
- **Zebra printer service** service to print Job Tickets. Zebra printer connects to radio via Bluetooth. Radios should have Bluetooth technology maintenance.
  - **Port** local port for Zebra printer service. 4072 set by default;



## **Analog Control Stations**

TRBOnet Dispatch Software allows using Analog Radios as Control Stations.

To set Analog Control Stations parameters select Analog Stations in the navigation tree:



Check Enable Analog Control Stations to work with Analog Radios in the system.

## Add an Analog Control Station

To add an Analog Control Station, go to **Analog Control Stations** in the navigation tree:





Click

button to add an Analog Control Station.

Configuration		Control Station #1	
💣 Service			
S Network		Name:	Control Station #1
Database			
Service Management		Playback device:	Primary Sound Driver 👻 🕫
💥 Advanced settings		Recorder device:	Primary Sound Capture Driver 👻 🕫
Map Servers for Geocoding			
Local Agent	Ξ	Serial port:	COM1 -
MOTOTRBO		Always transmit when	the DTT is pressed ("Impelite" chapped access)
Services		Aiways u ansmit when	the PTT is pressed (impolite charmer access)
IPSC #1		TX Timeout:	60 🌲 seconds
X Advanced settings		Mic delay time:	0  milliseconds
Privacy		,,	<b>-</b>
MNIS data service			
DDMS service			
<b>III</b> Slot #1		Extended protocol:	None
Slot #2			
Local Slots			
Analog Control Stations			
Control Station #1			
Remote Agents	-		
Ent Eriondly Convora			
Set Defaults			Apply OK Cancel

Set new Analog Control Station parameters in the window:

- **Name** specify the name for new analog Control Station in the system;
- Playback device select the playback device connected to Control Station in the dropdown list;
- Recorder device select the recording device connected to Control Station in the dropdown list;
- Serial port the port should be set to the Analog Radio PINs to set the high signal level for PTT button. Select serial port in the dropdown list;
- Always transmit when PTT is pressed ("Impolite" channel access) the radio will always transmit when the Push-to-Talk (PTT) button is pressed (not available in a Capacity Plus Personality channel).
- **TX Timeout** voice session limit. When Dispatcher starts any Voice Session in the Dispatch Console, TX will be interrupted after TX Timeout time count set in TRBOnet RadioServer Configurator.
- Mic delay time specify delay time interval in milliseconds between PTT push and the moment voice communication starts;
- Extended protocol select None, if your radio does not support extended protocol. Select IC-F1721D v1.01 if the Radio supports the extended protocol.

## Serial Port

Note: Available when Extended protocol for Analog Control Station selected

To configure **Serial port** parameters select Serial Port in the Navigation tree:



Configuration	Serial Port		
Configuration Advanced settings Privacy Advanced settings Privacy Advanced settings Privacy Advanced settings Privacy Advanced settings Advanced settings Advanced settings Friendly Servers Friendly Server Advanced settings External PBX Server Advanced settings External PBX Server Advanced settings	Serial Port Baud Rate: Data Bits: Parity: Stop Bits: Handshake:	19200  8 None 1 None	
Set Defaults		Apply	OK Cancel

Specify the same Serial Port settings as settings of the device connected to the Serial Port.

## **Remote Agents**

Use Remote Agent to connect to Local Agent. Remote Agents is the hardware gateway to manage Control Stations' parameters.

To add a Remote Agents in the system select **Remote Agents** in the Navigation tree:

Configuration	Remote Agents	
X Advanced settings 🔺 	Registered remote Agents:	
Slot #1	Agent Name IP Address Port Reser	ved
<b>III</b> Slot #2	🔽 Remote Agent 1 10.10.101.170 4020 Yes	
Local Slots		
Analog Control Stations		
Remote Agents		
Friendly Servers		
1 Internal PBX Server		
🚰 External PBX Server 📃 🔪		
Advanced settings		
🖗 Data Sources		
COM ports		
TCP/IP		
🔀 Email		
Pop3		
Smtp		
SMS		
SMS		
📮 License	Add Edit Delete Tes	t

On the **Remote Agent** tab you can add/delete and edit remote agents in the system.

To add a Remote Agent, select **Remote Agent** in the Navigation tree:



Configuration	Remote Agents	
Advanced settings		
Privacy	Registered remote Agents:	
	Agent Name IP Address	Port Reserved
	Remote Agent 1 10.10.101.1	170 4020 Yes
Local Slots		
Analog Control Stations		
🔂 Remote Agents		
Friendly Servers		
🔞 Internal PBX Server		
🚳 External PBX Server		
Advanced settings		
🜵 Data Sources		
COM ports		
TCP/IP		
🔀 Email		
Pop3		
Smtp		
SMS		
SMS		
📮 License	Add Edit Delete	Test
Add		
Click 🖿 butt	n to add an agent in the syste	em.

button to add an agent in the system.

Set its parameters in the window:

Remote Agent	x
Agent Name:	Agent 1
IP Address:	10.10.101.170
Port:	4020 🗘 Test
Switch to the rese	erved agent if connection lost
IP Address:	10.10.101.140
Port:	4020 Cest
	OK Cancel

- **Agent Name** select the Name for new Remote Agent in the system;
- IP Address specify Remote Agent IP Address (each Remote Agent has its own IP Address);
- **Port** select free port on the local PC to connect to the Remote Agent;
- Test Click button to check the connection.
- Switch to the reserved agent if connection is lost check if you have a reserved agent in the system to connect to this one in case of connection lost:
- **IP Address** specify an IP Address of the reserved Remote Agent;
- **Port** select free port on the local PC to connect to the reserved Remote Agent.
- Test button to check the connection to the reserved Remote Click Agent.


Click «OK» to add a Remote Agent in the system.

## **Friendly Servers**

Friendly Servers are able to transmit voice over IP between dispatchers from different servers. Specify Friendly Servers to provide VoIP routing.

Go to Friendly Servers in the Navigation tree:

Configuration	F	riendly	/ Servers			
🔗 Service	<u> </u>					
S Network		Regi	stered Friendly Se	rvers:		
Database			Name		IP Address	Port
Service Management			ServerRegion1		10.10.101.167	4021
X Advanced settings			ServerRegion2		10, 10, 101, 198	4021
Map Servers for Geocoding						
Local Agent						
	=					
🗘 Services						
Repeater #1						
X Advanced settings						
Privacy						
Slot #1						
Slot #2						
Local Slots						
Analog Control Stations						
🔁 Remote Agents						
Friendly Servers						
🔞 Internal PBX Server						
🔞 External PBX Server		-	Add	Edit Delet	e	Test
12 Data Cources						
Set Defaults				Apply	ОК	Cancel

Click Add button to add servers.

Specify Friendly Servers' parameters:

Server			×
Name:	Server_region1		
IP Address:	10.10.101.167		
Port:	4021	÷	Test
	OK	Cancel	

- Name specify the Name for the Server in the system;
- IP Address specify an IP Address of the Server;
- **Port** specify a local free port on the PC to connect to Server.
- Click Test button to check the connection to the Server.
- Click «**OK**» button to add the Server

Check Friendly Servers in the system:





Check the box in the Servers' row to specify it as Friendly Servers.

Click Test button to check the connection.

## **External PBX Server**

Enable External PBX Server to use SIP Interconnect feature. The feature allows to make calls from radio to phone and vice versa. Dispatcher can make a call from Dispatch Console to phone and redirect a phone call to a subscriber radio.

To configure SIP Interconnect, select External PBX Server in the Navigation tree:

Configuration		External PBX Server
💣 Service	*	
S Network		✓ Use External PBX Server
Database		Provideraddress: vourprovider.com
Service Management		Provider address; you provider com
X Advanced settings		Provider port: 5060 C Test
Map Servers for Geocoding		Local IP: 127.0.0.1 * Ø Port: 5061
Local Agent	=	
MOTOTRBO	-	Dispatcher Center
Services		
Repeater #1		SIP ID: 57068
X Advanced settings		SIP user: User 123
Privacy		Password: *******
Audio Paths	-	
Analog Control Stations		Test Call
Remote Agents		
Friendly Servers		
Thernal PBX Server		
External PBX Server		
Advanced settings		
↓ Data Sources	Ξ.	
Set Defaults		Apply OK Cancel

Use External PBX Server – check to enable SIP Interconnect option;



- Provider address type in your provider address you are connected to (for more details contact your provider);
- **Provider port** 5060 set by default.

Click Test button to check the connection.

- Local IP type in your PC IP Address.
- **Port** specify free port on the local PC to make connections from;
- **Dispatcher Center** the information is afforded by the provider:
- SIP ID type in SIP ID associated with TRBOnet RadioServer to make and receive calls;
- SIP Name type in SIP Name afforded by provider when logon;
- **Password** the password for integration with Automatic Telephone Station.

Click	Test Call	to make a test call. Cannot be executed
Click —		to make a test call. Cannot be executed

when TRBOnet RadioServer Service is running, please stop the service for configuring and testing purposes.

## **Advanced Settings**

Configure External PBX advanced settings:

Configuration		Advanced settings	
MOTOTRBO	^	Packet time (ms):	<b>β</b> ο <b>‡</b>
Repeater #1 Advanced settings Advanced settings Slot #1 Slot #2 Clicit Slot s Apalog Control Stations		Used codecs: Registration Interval (sec): Do not register users on a P <u>Configure user's authorization</u>	PCMU,PCMA,G729,SPEEX,SPEEX,AMR 3600 BX server (SIP trunk)
Analog Control Stations     Remote Agents     Friendly Servers     Internal PBX Server     External PBX Server     Advanced settings	=		1
COM ports COM p	•		
Set Defaults			Apply OK Cancel

- Packet time specify the same value as in the phone system;
- **Used codecs** specify the same type as in the phone system;

**Note:** For more details on Phone System configuration see <u>Appendix F: SIP Setup for</u> <u>Motorola Phone System</u> section.



- Registration Interval (sec.) select time interval (in seconds) to check the radio status (online/offline etc.);
- Do not register users on a SIP server (SIP Trunk) radios will use SIP trunk system to get extensions. See the following <u>example</u> of SIP Trunk configuration for Asterix Free PBX;

Configure user's authorization (1) – setup user authorization for systems with enhanced authorization parameters. Recommended to use when Radio ID is equal to SIP ID. In case when Voice transmitted via Radio Channel, Radio ID is used. When voice transmitted via GSM channel, SIP ID is used:

21, 10	User Name
010101	User#1

Click «Add» button to set a new user authorization.

- SIP ID type in your SIP ID afforded by provider to make incoming phone call;
- User Name type in User Name afforded by provider when logon;

Click «OK» to add new user authorization.

## **Data Sources**

Data Sources feature allows receiving data from third-party devices and Applications.

TRBOnet Dispatch Software works with two data sources types:

- Physical or virtual devices connected via COM port
- PCs running third-party application connected via TCP/IP.

Go to **Data Sources** to allow TRBOnet Dispatch Software receiving data from a thirdparty application or device:



Configuration		Data Sources
MOTOTRBO	*	
Services		▼ Enable Data Sources
Repeater #1		
Advanced settings		
Privacy		
Slot #1		
Slot #2		
Apples Central Stations		
Therialy Server	=	
Revenue PBX Server		
Advanced settings		
↓ Data Sources ↓		
COM ports		
TCP/IP		
🔀 Email		
Pop3		
Smtp	_	
CMC	•	
Set Defaults		Apply OK Cancel

Check «Enable Data Sources» to enable the feature.

## **COM Ports**

Go to **COM Ports** to manage physical or virtual devices connected via COM port to TRBOnet RadioServer PC:

Configuration	C	OM po	rts						
MOTOTRBO	•								
Services			Name	Baud	Parity	Data Bits	Handshake	Stop Bits	Text En
Repeater #1			COM1	9600	None	8	None		ASCII
X Advanced settings			COM2	9600	None	8	None		ASCII
Slot #2									
Local Slots									
Analog Control Stations									
Remote Agents									
Friendly Servers									
Thernal PBX Server									
S External PBX Server									
Advanced settings									
♀ Data Sources				/					
COM ports									
TCP/IP			_ /						
Email L	-		1						
Pop3									
Smtp	-		Add	Dele	ete				Edit
eme									
Set Defaults							Apply	OK	Cancel
	but	ton	to ad	ld a	new de	vice.			

Configure new COM Port device:



COM Port	<b>—</b>
Serial port name:	COM1
Baud rate:	9600 🗸
Parity-checking protocol:	None 👻
Stop bits per byte:	1 -
Data bits per byte:	8 🔹
Handshaking protocol :	None 👻
Text Encoding:	ASCII 👻
	OK Cancel

- Serial port name specify a COM-port on the TRBOnet RadioServer PC where the device is connected to;
- Baud rate set the serial baud rate;
- Parity-checking protocol select one of the enumeration values, that represents the parity-checking protocol;
- Stop bits per byte select the standard number of stopbits per byte;
- **Data bits per byte** select the standard length of data bits per byte;
- Handshaking protocol select the handshaking protocol for serial port transmission of data;
- Text Encoding select Text Encoding type in the dropdown list.

**Note:** Text Encoding type selected in the Server Configurator and Text Encoding type on the connected application must be the same to avoid incorrect text displaying and incorrect data parsing.

Click «**OK**» to save settings and close dialog window.

**Note:** In case of COM Port connection third-party data message should consist one of the following end of line symbols: r n or #0D#0A or 0x0D 0x0A.

#### TCP/IP

Go TCP/IP for managing PCs connected via TCP/IP to TRBOnet RadioServer PC.

**Note:** When using TCP/IP connection all data will be transferred via UDP protocol only.



Configuration	TCP/IP						
MOTOTRBO							
Services		Name	Remote IP	Port	Mode	Encoding	
Repeater #1		Terminal 1		11003	Client		UTF8
		test		11002	Client		LITE8
🔒 Privacy		(COL		11002	Cherre		
Slot #1							
<b>III</b> Slot #2							
Local Slots							
Analog Control Stations							
📑 Remote Agents							
Friendly Servers							
Thernal PBX Server							
S External PBX Server							
Advanced settings							
♀ Data Sources		- 1					
COM ports							
TCP/IP							
		1					
Pop3			Delata				
SMCP Smtp		Add	Delete			Edi	
Set Defaults				App	ly	ОК	Cancel
[							

Add button (1) to add a new device connected via TCP/IP.

Configure new connection:

Click 🛄

External Connect	ion 💽
Name:	test
Mode:	Client (App connects to TRBOnet)
Remote IP:	
Port:	11002 🗘
Text Encoding:	UTF8 👻
	OK Cancel

- Name type in name for new TCP/IP connection;
- Mode select connection mode. The connection mode depends on application type installed on the connected PC:
  - An application can act as client (Client connection mode). In this case, application connects to TRBOnet RadioServer which sends the data to application.
  - An application can act as a server (Server connection mode). In this case, TRBOnet RadioServer accepts connection from application and receives the data.
- Remote IP (available for Server connection mode) type in an IP of the application server;



- Port in case of Client connection mode select free port of TRBOnet Server PC. In case of Server connection mode select port of PC where the third-party application installed.
- Text Encoding select Text Encoding type in the dropdown list.

**Note:** Text Encoding type selected in the Server Configurator and Text Encoding type on the connected application must be the same to avoid incorrect text displaying and incorrect data parsing.

## **Email Settings**

TRBOnet Dispatch Software allows emails processing:

1. Receive Emails from any mail servers and forward to a particular radio or talk group (POP3 Server);

2. Forward all Emails from radios to particular email address (SMTP Server).

Note: Microsoft Exchange Server can be used as SMTP and POP3 servers.

Go to Email to enable Email Server:



Check «Enable Email Server» to allow send and receive emails.

## **POP3 Server**

POP3 server is intended to synchronize **Incoming** emails folder you have on any mail server with your local PC. In case of using POP3 server all Incoming emails can be downloaded from a mail server on the local PC to forward as text messages to radios or talk groups.



Configuration		Pop3
MOTOTRBO		
Services		POP3 server host or IP 77.232.61.123
Repeater #1		This server requires a secure connection (SSL)
X Advanced settings		POP3 server port: 110
Privacy		
		Check for new messages
Slot #2		every: 60 🚔 seconds
Local Slots		
Analog Control Stations		Connect using
Remote Agents		Anonymous access
Totoroal DRY Servers	=	<ul> <li>Windows authentication</li> </ul>
R External DBY Server	-	Use POP3 user name and password
Data Sources		User name:
COM ports		Password:
TCP/IP		
Email		Check New Emails Now
Pop3		
smtp		
CMC	Ψ.	
Set Defaults		Apply OK Cancel

Go to **POP3** in the Navigation Tree to set Incoming email parameters:

Configure incoming email parameters:

- POP3 server hostname or IP Specify POP3 server host (e.g. pop.gmail.com for gmail) or IP (e.g. 77.232.61.123) to receive emails;
- This server requires a secure connection select to enable secure connection (use special port to connect a mail server);
- POP3 server port the default port is 110 for non-secured connections. Port value depends on mail system being used, e.g., for example GMail uses port 995 as we ass secured connection.
- Check for new messages every X seconds set the time interval to check for new emails;

## **Connect using**

- Anonymous access select to use an anonymous access to selected POP3 server;
- Windows authentication select to connect TRBOnet Service Windows Account, if it running under specific account;
- Use POP3 user name and password specify POP3 server credentials for the mailbox:
  - **User name** type in the POP3 server user name;
  - **Password –** type in the POP3 server password;
- Check New Emails Now click to synchronize Incoming mails folder and check new emails.



#### **SMTP Server**

SMTP Server is intended to send emails from users to mail servers and between mail servers for further delivery to the recipient. To receive emails you need to use POP3 server.

For example, Administrator enables email notifications from TRBOnet Dispatch Software to particular email users in case of Alarms on selected radios. At this case, radio sends alarm to TRBOnet RadioServer which converts alarm to text and forwards it as email to particular email addresses (e.g. <u>admin@yourcompany.com</u>).

Go to **SMTP** in the Navigation Tree to set email server parameters:

Configuration		Smtp		
Repeater #1	*			
X Advanced settings		Sender Email:	username@yourcompany@gmail.com	
Privacy		Server bost or ID:	emto vourcompany@email.com	
Audio Paths		Server hose of 1P.		
Analog Control Stations			This server requires a secure connection (SSL)	
Remote Agents		SMTP server port:	25	
Friendly Servers		Connectusing		
🔞 Internal PBX Server		Connect using		
🚰 External PBX Server		Anonymous access     Anonymous access		
Advanced settings		Windows authentication		
🖞 Data Sources		Use SMTP user name and password		
COM ports				
TCP/IP	Ξ	User name:	User 1	
🔀 Email		Password:	******	
Pop3				
Smtp			Send Test <u>M</u> essage	
NS SMS				
SMS				
📮 License				
	Ξ.			
Set Defaults			Apply OK Cancel	

Configure outgoing email parameters:

- Sender input email address to send test email to. Equal to field «From» when a user receives email;
- SMTP server host or IP Simple Mail Transfer Protocol is the protocol for email transmission via IP networks. server host (e.g. smtp.gmail.com for gmail) or IP (e.g. 77.232.61.123) to send emails;
- This server requires a secure connection (SSL) select to use a secure connection to selected SMTP server (use special port to connect a mail server);
- SMTP server port the default port is 25. Can be used in case server does not require secured connection. Port value depends on mail system you are using, e.g., for GMail SMTP server port is 465 with SSL;

#### Connect using



- Anonymous access select to use an anonymous access to connect SNMP server;
- Windows authentication select to connect with Windows authentication to connect SNMP server;
- Use SMTP user name and password select if you are going to connect to SMTP server using an existing user name and password;
- User name type in the SMTP user name;
- **Password** type in the SMTP password;
- «Send Test Message» click to send a test message from email address specified in «Sender» field to a selected email.

## **SMS Settings**

TRBOnet Dispatch Software allows SMS notifications to a cell phones in case of Alarm and other events (e.g. DTMF commands from radios, Telemetry, Radio State etc.) configured by Administrator.

Go to **SMS** in the Navigation Tree to enable SMS sending feature:



Check «Enable SMS» to allow send and receive SMS text messages.

Go to SMS (sub-node) to set SMS settings:



Configuration		SMS		
Repeater #1	^	Sender:	1	
Privacy		Connection to GSM via:	Vianett service (ht	tp://www.vianett.com)
Analog Control Stations		Vianett account:	login@yourcompar	ny.com
Remote Agents		Vianet password:	*****	
Friendly Servers		Send	Test MMS	Send Test SMS
S External PBX Server				
V Data Sources				
COM ports	_			
Email	=			
Рор3				
Smtp				
License				
Set Defaults	~		Apply	OK Cancel

- Sender deprecated. Do not use this field;
- **Connection to GSM via** select the type of connection:
  - Nokia mobile phone connected to TRBOnet Server PC. Select if you are going to send sms notifications via Nokia cell phone connected TRBOnet Server PC;
  - Vianett service select if you have an account on Vianett service. For more details on Vianett service visit official website: <u>http://www.vianett.com/;</u>
- Send Test MMS (for Vianett connection only) click to send a test MMS from Vianett account to recipient phone number.
- Send Test SMS (for Vianett connection only) click to send a test SMS from Vianett account to recipient phone number.



# Administrator Activity in the Dispatch Console

Particular features of TRBOnet software can be configured by Administrator in dispatch console after initial installation and configuration. Default Administrator credentials are "admin" for the login and "admin" for the password.

# **Dispatch Console Menu**

Dispatch Console menu allows to manage the main Dispatch Console options it can be found in the upper part of TRBOnet Dispatch Software Dispatch Console:



## File

Select **File Menu** to connect to another TRBOnet RadioServer or to use other credentials. Also, select to exit from TRBOnet Dispatch Console:



<u>F</u> ile <u>V</u> iew <u>M</u> ap <u>T</u> ools <u>H</u> elp		
Rau	Radio Interface	
	Radio Interface Recent Calls/Events	
	Active Calls Quick Commands	X
Online Dispatchers (2)	Configure	5
	TX Passive	
	A Record V File	
	To: Selected Control Stations	
	CrossPatch	
💰 12 📮 😒	PTT	5
	Broadcast Call   Drag and Drop Control Station hi to create new group	ere
	Series	
	Free channel	
Radio	Sender:	
GPS Positioning		
	RX / TX	
📅 Job Ticketing		
	Pacent Calle/Events	
Route Management	Recent Cats/Events	»
Taxt Massages	🖙 Playback 📷 Save 🖬 Pause 🤝 Clean 📚 Reload 📲 Filter by Radio 🚍 Grouping 🍸 Auto Filter 🎯 Default Setting:	• •
Text Pressages	Date V Control Station Sender Recipient Message Note	-
Reports and Statistics	X         26.02.2014 14:00:00         RadioServer         All         The Control Station for this operation is	_
	26.02.2014 13:00:00 RadioServer All The Control Station for this operation is	
Event Log	🔀 26.02.2014 12:00:00 RadioServer All The Control Station for this operation is	
	26.02.2014 11:00:00 RadioServer All The Control Station for this operation is	
1 Telemetry	26.02.2014 10:00:00 RadioServer All The Control Station for this operation is	-
	HI HI A Record 3 of 552 + H HI I	)
[ <sup>1</sup> ⑦] Radio Allocation	Recent Calls/Events Recent Calls Radio State Active Tasks Active Routes User Activity Map	

1. Connect to TRBOnet RadioServer.

Select File, Connect to RadioServer and set the connection parameters:

Connect to Radio Server	×
Connect to:	
Radio Server:	127.0.0.1
Port:	4021
Authentication:	
Authentication:	TRBOnet Authentication
User Name:	admin
Password:	*******
Connect on startup	
	OK Cancel

Connect to:

 RadioServer – select the TRBOnet RadioServer in the dropdown list or specify its IP Address;



 Port - specify a local port of TRBOnet RadioServer to accept connections from a repeater. Use unique ports for each repeater connection if there are several repeaters connected;

Authentication:

- Authentication select Authentication type in the dropdown list.
- Select TRBOnet Authentication to log on as User registered in TRBOnet Dispatch Software Users list.
- User Name specify User Name registered in TRBOnet Dispatch Software Users list;
- **Password** type in the individual password.

Select **Windows Authentication** to log on using the PC name. The system automatically shows the PC name as User Name.

For more details on Users with Windows Authentication, see <u>Dispatchers</u> section.

Note: The password not required when Windows Authentication used.

**Connect on startup** – select to launch Dispatch Console without typing User Name and Password.

## 2. Exit

Select File, Exit to exit the Dispatch Console



#### View

<u>F</u> ile <u>V</u> iew <u>M</u> ap <u>T</u> ools <u>H</u> elp		
Radio 🥄	Radio Interface	
	Radio Interface Recent Calls/Events	
	Active Calls	X Quick Commands X
Opling Diangthere (2)		Configure
Administrator		TX Passive X
😤 Dispatcher		▲ 🕒 Record 🔻 😰 File 💌
😑 📙 0 📃	Intercom	To: Selected Control Stations
🔊 📮 🕐		
💰 12 🗦 🕄		CrossPatch X
	Broadcast Call	Drag and Drop Control Station here
		to create new group
	Session:	
	Free channel	
Radio	Sender:	
GPS Positioning		
8-8	RX / TX	
3 Job Ticketing		_
	Recent Calls/Events	
Koute Management	🖗 Diauhach 🔲 Sauce III. Daures 🏈 Clean 🌾 Peleadi 🌾 Eilter Du D	adia 📃 Grauping 🏹 Auto Eilter 🏟 Default Settings 💙
Text Massages		
Text ressages	Date V Control Station Sender Recipient	Message Note
Reports and Statistics	26.02.2014 14:00:00 RadioServer All	The Control Station for this operation is
B Reports and Statistics	₩ 26.02.2014 13:00:00 RadioServer All	The Control Station for this operation is
Event Log	🔆 26.02.2014 12:00:00 RadioServer All	The Control Station for this operation is
	🔆 26.02.2014 11:00:00 RadioServer All	The Control Station for this operation is
A Telemetry	🔆 26.02.2014 10:00:00 RadioServer All	The Control Station for this operation is
	3 26 02 2014 9:00:00 RadioServer ΔI	The Control Station for this operation is
Radio Allocation		
	Recent Calls/Events Recent Calls Radio State Active Tasks Active Routes	User Activity Map
둸 127.0.0.1 🖓 🤦 Dispatcher 📑 Licer	sed to: Neocom Software Ltd	

## Select **View Menu** to customize TRBOnet Dispatch Software Dispatch Console:

Click «View» to open the Context Menu:



1. Show Navigation – select to display Navigation Tree.

**2.** Show modes – select modes in the list to display in the Dispatch Console.



**3. Configure Control Station Boxes** – select to configure the Boxes View. The default configuration displayed:

Туре	Name	View Mode	Available Calls		
Station	SIP Interconnect	Normal			
Station	Control Station #1	Normal	All		
Station	Remote Control Stati	Normal	All		
Station	Call #1	Minimized	All		
Station	Call #2	Normal			
Station	R1	Normal	All		
Station	Control Station #1	Normal	All		

- **Type** the Box type (e.g. Station) is displayed;
- Name specify the Name for selected box to display in the Dispatch Console;
- View Mode select the mode in the dropdown list:
  - **Invisible** the box will not be displayed in the Dispatch Console;
  - **Normal** the box will be displayed in Normal mode:

	Broadcast Call
	Session:
	Free channel
$\cap$	Sender:
I	

• **Minimized** – the box will be displayed in Minimized mode:



Note: put the mouse cursor on the Minimized box to see it in the Normal Mode.

- Available Calls select available Call types for the box:
  - o Select All to make all Call Types available for selected box;
  - Select **Broadcast** to make Broadcast Call available for selected box.



To create individual boxes configuration for **Group Calls** and **Broadcast Calls** click **«Create»** button:

onfigure Voi	ce Boxes			×
Name:	Radio Interface			
Numo.				
Туре	Name	View Mode	Available Calls	
Station	SIP Interconnect	Normal		
Station	Control Station #1	Normal	All	
Station	Remote Control Stati	Normal	All	
Station	Call #1	Minimized	All	
Station	Call #2	Normal		
Station	R1	Normal	All	
Station	Cont ol Station #1	Normal	All	
tual Channe	1		×	
Vame:	Group Call			
	C=II	Tarnet		
<ul> <li>Broadcas</li> </ul>	t Call (0) S	elect by Disparcher		
Group Ca	all 🔘 S	elected from list		
Private C	all		-	
Execute ca	Il on channele:		_	
Execute of the secute of the secure of th	call on all available channel	s		
Execute of the second secon	call only on selected channe	els		
Call : Call : Cont Cont R1 Remo	#1 #2 rol Station #1 rol Station #1 ote Control Station #1			

- Name check the Name box to specify the configuration name and type in the configuration name.
- **Call Type** select Call Type for new configuration.
- Call Target check «Select by Dispatcher» to allow the Dispatcher select the group or Selected from the list (to create the configuration for one selected group)

**Note:** Not available for Broadcast Call Mode.

• **Execute call on channels** – select all available channels or select channels in the list below to execute calls from these channels.



Note: Not available for Private Call Mode.

Click **«OK»** to create the configuration.

**4. Configure Active Calls panel** – select to configure call types and advanced settings for Active Calls panel:

**Call Types –** select call types to display in Active Calls panel:



Advanced – specify Advanced calls and channels settings:

Active Calls
Call Types Advanced
Show Visible Channels
Show Hidden Channels
Show Missed Calls
Display Time: 2000 😴 seconds
OK Cancel

Specify elements to display and display time.



<u>File V</u> iew <u>M</u> ap <u>T</u> ools <u>H</u> elp		
Radio	Radio Interface	
	Radio Interface Recent Calls/Events	
	Active Calls Quick Commands	<
Online Dispatchers (2)	Intercom	)
Administrator	PTT Dispatcher TX Descrive	Ś.
Dispatcher		2
	A Record V C File V	
	To: <u>Selected Control Stations</u>	٦,
	CrossPatch	<
	PTT Prevadenet Call	١.
	broducast call	
	Session:	2
	Broadcast Call	
Radio	Sender:	
	Dispatcher	
GPS Positioning		
Job Ticketing	RX / TX	
📝 Route Management	Recent Calls/Events	μ.
	🏟 Playback 📓 Save 📕 Pause 💞 Clean 🧐 Reload 📲 Filter By Radio 📑 Grouping 🍸 Auto Filter 🍥 Default Settings	» ▼
V Text Messages	Date  V Control Station Sender Recipient Message Note	•
<u>_</u>	26.02.2014 15:36:39 Intercom Dispatcher All Intercom Call: Dispatcher 'Dispatcher' ca	
Reports and Statistics	26.02.2014 15:00:00 RadioServer All The Control Station for this operation is	
(The summer sector)	26.02.2014 13:00:00     RadioServer All The Control Station for this operation is	
	* 26.02.2014 12:00:00 RadioServer All The Control Station for this operation is	
A Telemetry	🔀 26.02.2014 11:00:00 RadioServer All The Control Station for this operation is	
	№ 26,02,2014 10:00:00         RadioServer         ΔI         The Control Station for this operation is           ₩ 41 4         Record 5 of 553         ▶ ₩ ₩ 4	•
1 Radio Allocation	Percent Calle Fuents Recent Calls, Radio State, Active Tasks, Active Routes, Liser Activity, Man	
	Recent Calis/Events Recent Calis Radio State Reve Tasks Reve Routes User Activity Plap	

Active Calls panel is displayed in the upper part of the Dispatch Console:

5. Configure hotkeys – select to add hotkeys for actions with selected channels:

	PTT	Intercom	
	PTT	Repeater #1 Slot 1	
	PTT	Repeater #1 Slot 2	
	PTT	Firemen	
	PTT	Test Call	
Shift	Mute channels	Mute Mode	

 If you are going to configure PTT actions for PTT boxes click «Show all PTT Boxes» button and assign the hotkey or hotkeys combination. Double-click HotKey column and select hotkey(s) for the action.



2. If you are going to set specific actions for PTT boxes (e.g., Mute channels or set default PTT channels), click «**Create**» button:

Action			<b>×</b>
HotKey: Caption: Action: Channels:	Shift Mute Mode Mute channels		Configure
<ul> <li>Phone Interd</li> <li>Intercom</li> <li>Repeater #:</li> <li>Repeater #:</li> <li>Firemen</li> <li>Test Call</li> </ul>	connect L Slot 1 L Slot 2		
		0	K Cancel

- Hotkey click «Configure» button to set a key you want to assign for the selected action;
- **Caption** type in a caption to display in the Dispatch Console;
- Action select action in the dropdown list:
  - Default PTT channel selected PTT box functions as a default PTT channel;
  - Mute channels mutes selected PTT boxes;
  - **Unmute channels** unmutes selected PTT boxes;
- Voice from channels mutes voice from all PTT boxes except selected one(s).
- **Channels** check PTT boxes to assign the actions above.

To enable configured hotkeys displaying in Dispatch Console, select "**Show actions panel**" checkbox.

Click «**OK**» to save hotkeys configuration.



All hotkeys you have configured are displayed in the upper part of Dispatch Console:





Ele Yiew Map Look Help Radio Radio Interface Radio Interface Radio Interface #1 Recent Cals/Events di E h & X 7 Q Active Call Quick Commands X X Online Dispatchers (1) Configure 🙎 Administrator **TX Passive** X a | 45 R1 🥥 Record 💌 🖆 File 💌 Worker1 3 To: Selected Control Stations 3 n Tone Intercom • 0 Control Station #1 B Worker1 99 My Channel 1 Voice Message 🗉 🦲 New Radio Group 9 PTT РП ice Message • ٠ **Broadcast Call** 45 1 Worker1 B 🕑 Worker1 9 9 CrossPatch E \_\_\_\_ Radio Group\_region 45 Fine chare Free char Patch on Repeaters CrossPatch\_repeater RX / TX RX / TX Radio CrossPatch #1 R1 PTT GPS Positioning Recent Calls/Events G Job Ticketing 🕮 Playback 🔒 Save 💷 Pause 🥩 Clean 🍪 Reload 🦙 Filter By Radio 🗮 Grouping 🍸 Auto Filter 🚸 Default Settings 📴 Show Notes Date Reopient Message Note Ext. Note . IPSC #1 Slot 1 Radio 234 AV Route Management 17.10.2013 14:29:53 Radio 'Radio 234' calls group '45' (00:02) 17.10.2013 14:28:58 Control Statio... Radio 234 Al Broadcast call from dispatcher Radio 23. 🖂 Text Messages 17.10.2013 14:28:58 IPSC #1 Slot 1 Radio 234 45 Radio 'Radio 234' calls group '45' (00:01) 17. 10. 20 13 14:28:50 Control Statio... Radio 234 AL Broadcast call from dispatcher 'Radio 23., Reports and Statistics 17.10.2013 14:28:50
 17.10.2013 14:28:47 IPSC #1 Slot 1 Radio 234 45 Radio 'Radio 234' calls group '45' (00:02) Control Statio... Radio 234 Al Broadcast call from dispatcher Radio 23.. 2 17.10.2013 14:28:46 IPSC #1 Slot 1 Radio 234 45 Radio 'Radio 234' calls group '45' (00:01) Event Log 2 17. 10.2013 12:56:18 IPSC #1 Slot 1 Radio 234 Radio 'Radio 234' calls group '45' (00:01) 45 17.10.2013 12:55:53 IPSC #1 Slot 1 Radio 234 45 Radio 'Radio 234' calls group '45' (00:01) Radio Allocation 
 17, 10, 2013 12:00:26
 IPSC #1 Slot 1

 ## ## 4
 Record 16 of 263
 ## ## 4
 Radio 234 45 Radio 'Radio 234' calls group '45' (00:00) 1 administer Recent Cals/Events Reco ve Tasks Active Routes User Activity t Calls Radio Sta

**6. Add Radio Interface Tab** – select to add new Radio Interface Tab. Select new Radio Interface in the upper part of the **Calls Pane**:

## 6. Delete Radio Interface Tab – select to delete selected Radio Interface Tab.

Note: Default Radio Interface Tab is not available to delete.

#### 7. Saved Audio Files

This option allows to add configured Voice Messages on the Calls Pane to send it by clicking Voice Message box. To configure Voice Messages settings see <u>Tasks</u>, <u>Voice</u> <u>Message</u>



Go to View, Saved Audio Files to configure Voice Messages box:

Saved Audio Files					
4	🛚 Add 🗙 Remove	🍸 Filter 🛛 Hot Key			
	Filename	Description	Severity	Hot Key	Visibility
	Alarm Tone		Alarm		Hidden
Þ	Information Signal.mp3		Information		Button
	Warning Tone.mp3		Information		Panel
	Send			ОК	Cancel

Filename – specify the name of the message displayed on the Calls Pane;

**Description** – add the description for Voice Message;

Severity - select severity level in the dropdown list;

**Hot Key** – select the Voice Message and click in the **Hot Key** column. Then press **«Hot Key»** button:

Sav	Saved Audio Files						
4	🖶 Add 🗙 Remove 🛛 🍸 Filter   Hot Key						
Г	Filename	Description	Severity	Hot Key	Visibility		
	Voice Message	Voice Message	Warning	[-]	Panel		
	Alarm Tone		Alarm	[8]	Panel		
Þ	Information Signal.mp3		Information	[5]	Panel		
	Warning Tone.mp3		Information		Hidden		
	Send			ОК	Cancel		

When the informational message appears press any key on the keyboard to set it as **Hot Key** for selected Voice Message.

Visibility – select the Voice Message box view:



- Hidden select to hide the Voice Message box;
- Button select to display the Voice Message as a button (1);
- **Panel** select to display the Voice Message as a panel (2).

tadio Interface	Radio Interface #1 Recent	Cals/Events			
	A	tive Calls	X	Quick Commands	
				Confoure	
				TX Passive	
RL			1	🔐 Record 💌 🚺 File:	
				To: Selected Control Stati	ar
Intercom	. 0	Control Station #1		Alarm Lone	
		My Channel 1		O Voice Message	
PIT	Broadcast Call	45		Voice Message	
_	Session:	Session:		CrossPatch	
	Preie channel	Pree channel	2	Orag and Orop Control Ets here to gradie new group	0
0	Sender:	Serder:			
				Patch on Repeaters	
1		Card a		CrossPatch_repeaters	-
RX/TX		RX / TX		CrossPatch #1	

Click «**OK**» to add the Voice Message.

**8. /9. Large Control Station Boxes / Small Control Station Boxes –** select Control Station Boxes size.

**10. Show Active Calls Panel** – select to display Active Calls Panel in the Dispatch Console.

**11. Show Quick Commands Panel** – select to display Quick Commands Panel in the Dispatch Console.

**12. Show TX Passive Panel** – select to display TX Passive Panel in the Dispatch Console.

**13. Show CrossPatch Panel** – select to display CrossPatch Panel in the Dispatch Console.

**14. Show Extended Messages Tab** – select to display Extended Messages Tab in the Dispatch Console.





Go to **Extended Messages Tab** on the top of the **Calls Pane**:



## Map



Select GPS Positioning (1) in the Navigation Pane to enable Map Options:

Click «Map» button (2) to open the Map Options:



## 1 – Select Active Map

Click to select an active map a tab. Type in the **Caption** for the Map and select it in the list of available maps. User can add a custom map using its URL:



Caption: Available Maps				
Name	Path		State	
MAPNIK			OK OK	
TRANSPORT		Add Map		X
LANDSCAPE				
BING ROAD		Name:	region	
BING_AREA		UDL.	http://www.opopetro	stmap.org/ttmap_9/20.2276/ 104 7199
BING_HYBRID		URL.	Example: http://tile.o	penstreetmap.org/z//(x)/(y).png OK Cancel
Add	Remove		OK Cancel	Administrator' (00:02) 'Administrator' (00:02)
				inistrator' calls all dispatchers (00:03)

Click button, type in the **Name** for new map and specify the **URL**.

Type in map URL, as shown in the example below, in the URL field.

- **Z** zoom. Type in zoom value for the map.
- **X** coordinate in X direction.
- **Y** coordinate in Y direction.

Click **«OK»** to add a map.

**Note:** You can only select the map of the same format the current tab map is. For example, if You click **«Map»** button, **Select Active Map** in a tab with Open Street Map format map, the Select Map... window will display the available Open Street Map format maps. Thus, if you need to select another format map, use the **Map**, **Open Map** in **Tab** or the **Map**, **Open Map in Window** option.

## 2 - Save Online Map Data



Select the map region you need to save the map starting from and select Save online map data:

	_
Total files count:	24 435
Ready files:	2 216
Loaded files size:	4036,45 KB

Click **«Start**» button and wait for the system to save the files. The procedure may take several minutes.

**Note:** The system will cash the map «downwards» which means User will not be able to zoom out the selected region in offline mode. To zoom the offline map see the following <u>article</u>.

## 3 – Map Content

Select to specify the folder and settings to store Map Data:

Online Map	
Map cache	
Cache folde	er:
C:\Users\a	.volkova\AppData\Local\Microsoft\Windows\Temporary Internet Files
	Change
Update:	30 🔔 Day(s)
Map Type:	MAPNIK
	OK Cancel

- Cache folder click «Change» button to select the folder on the PC to store the Map Data;
- **Update** select data updating period;



Note: when «0» value selected, the map will not update.

 Map Type – select your Map type in the dropdown list. For more details on maps used in TBOnet Dispatch Software see <u>Map Types</u> page.

Click «OK» to save map cache settings.

## Map Types

#### Online maps:

- OpenStreetMaps free online map. Includes MAPNIK, CYCLE, TRANSPORT, LANDSCAPE and MAPQUEST subtypes. For more details on OpenStreetMaps visit official web site: <u>http://www.openstreetmap.org</u>
- Microsoft BING commercial maps from Microsoft. Includes BING\_ROAD, BING\_AREA and BING\_HYBRID subtypes. User can try BING Maps for 90 days and then get a Basic Key. Visit <u>http://msdn.microsoft.com/en-</u> <u>us/library/ff428642.aspx</u> to get a Basic Key.

#### **Offline Maps**

- TRBOmap internal map-making resource. User can customize a part of online maps according to requirements. For more details on map calibration go to TRBOnet knowledge base and read the following article: <u>http://kb.trbonet.com/public.pl?Action=PublicFAOZoom;ItemID=27</u>.
- TMap internal map-making resource. User can create an offline copy of online maps for selected region according to requirements. User can create a map using any picture via TRBOnet.Map Edit tool. Go to C:\Program Files\Neocom Software\TRBOnet Dispatch Software \TRBOnet.MapEdit.exe. For more details on map calibration go to TRBOnet knowledge base and read the following article:

http://kb.trbonet.com/public.pl?Action=PublicFAQZoom;ItemID=28.

- GIS Panorama offline Russian map. For more details visit the official web site: <u>http://www.gisinfo.ru/</u>
- Beacon 2D two-dimension offline map for Indoor positioning. User can create maps using Beacon2DMapGenerator tool. To get Beacon2DMapGenerator contact your local TRBOnet dealer.
- Beacon 3D tree-dimension map for Indoor positioning. User can use any dicectX(.x) files as map.
- MapLib map format free offline map. Requires a lot of internal memory. Requires Franson GpsTools. For more details on Franson GpsTools visit the official web site: <u>http://franson-gpstools.software.informer.com/2.3/</u>
- TatukGIS commercial offline map. For more details on TatukGIS visit the official web site: <u>http://www.tatukgis.com/</u>.



#### 4. Print

Select to print the region. Select printer and set its parameters. Click «OK» to print.

#### 5. Geocoding

Geocoding server resolves GPS coordinates to street names and address for reports and other needs, for example in "GPS activity for period" reports. Online geocoding services can be used like Google or Nominatim, but they are not for free or limited by amount or requests. Also, custom geocoding server can be configured.

You can configure geocoding servers in three ways depending on server/console PC Internet access and your local geocoding server settings:

- Dispatcher has Internet access and/or server PC has no Internet access. Dispatcher can connect to preconfigured (Google and Nominatim) and/or local corporate geocoding servers via Dispatch Console.
- Server PC has Internet access and/or Dispatcher has no Internet access. Dispatcher can connect to preconfigured (Google and Nominatim) and/or local corporate geocoding servers via Server PC (see <u>Map Servers for</u> <u>Geocoding</u> section).
- 3. Your own local geocoding server in the local network. You can configure data resolving both in the Server Configurator and in the Dispatch Console.

Select **Geocoding** to configure geocoding servers in the Dispatch Console:

Geoc	oding	<b>—</b> ×
	oad data from the TRBOnet server if local one	: is unachievable
	Server Name	
	Google	
	Nominatim	
	YourMapServerName	
	Add Delete	Up Down
	Default	OK Cancel

 Load data from the TRBOnet server if local one is unachievable – select to allow Dispatch Console resolve GPS data from Server PC.



Click \_\_\_\_\_Add \_\_\_\_ button to add your local geocoding server:

Map Server for G	eocoding		
Server Name:	MyGeocoding Server		
Server Hame.	ny decedaring our for		
🔽 Get address	by coordinates		
eq:http://127.0.0.1/reverse?format=xml⪫=⪫&lon=&lon&addressdetails=1			
	Test		
V Get coordina	ates by address		
http://127.0.0.1	/search?q={address}&format=xml		
	Test		
	OK Cancel		

- Server Name type in new geocoding server name;
- Get address by coordinates select to resolve GPS coordinates to street addresses.

Specify the geocoding server address (e.g. <u>http://IP Address/lat={lat}&lon={lon})</u> <u>http://mapserveraddress.com/lat={lat}&lon={lon});</u>

**Note:** {lat}{lon} variables are necessary to input to allow TRBOnet Dispatch Software read radio GPS coordinates.

Click Test button to check the connection to a map server. Input any GPS coordinates to receive street address details.

Get coordinates by address – select to resolve street addresses to GPS coordinates (e.g. for Search By Address feature).

**Note:** {address} variable is necessary to input to allow TRBOnet Dispatch Software search map objects by address.

Click Test button to check the connection to a geocoding server. Input any address to receive list of map objects with selected address.

Use buttons **Up** and **Down** to select the priority level for geocoding servers. When radio GPS data requested via geocoding servers added in Server Configurator, TRBOnet RadioServer requests GPS data from geocoding servers according to Priority level. The first geocoding server in the list has the highest priority level. In case the first geocoding server disabled, GPS data comes from the second geocoding server in the list.



Administrator should check geocoding servers in the list to receive GPS data.

 Request address when GPS coordinates has been received – select to resolve GPS coordinates to street addresses immediately when by GPS event. Street addresses and GPS coordinates are saved in the TRBOnet database to optimize response time for any street addresses requests e.g. GPS reports and reduce geocoding server load.

6. Open New Map in Tab – select to add the new tab with selected map displayed:

Map Type:	Online maps		
Caption:	New Map		
Available Maps			
Name	Path	Stat	te
MAPNIK		OK	
CYCLE		OK	
TRANSPORT		OK	[
LANDSCAPE		OK	
MAPQUEST		OK	
BING_ROAD		OK	[
BING_AREA		OK	[
BING_HYBRID		OK	[
مطط	Demoura		21

- Map Type select Map Type in the Dropdown List;
- Caption specify the caption for the new map. New Tab Name will be the same as Caption;

**7. Open New Map in Window** – select to open new Window with selected map displayed:

Select Map		<b>X</b>
Map Type:	Online maps	•
Caption:	New Map	
Available Maps		
Name	Path	State
MAPNIK		ОК
CYCLE		OK
TRANSPORT		ОК
LANDSCAPE		ОК
MAPQUEST		ОК
BING_ROAD		ОК
BING_AREA		ОК
BING_HYBRID		ОК
Add	Remove	OK Cancel

• Map Type – select Map Type in the Dropdown List;



- Caption specify the caption for the new map. New Tab Name will be the same as Caption;
- Available Maps select map in the table. User can add a map using its URL:

Add Map	×
Name:	New Map
URL:	http://www.openstreetmap.org/#map=9/39.2376/-104.7189
	Example: http://tile.openstreetmap.org/{z}/{x}/y}.png
	OK Cancel

Click \_\_\_\_\_Add \_\_\_\_ button, type in the Name for new map and specify the URL.

Click «**OK**» to open the window with new map.

**8. Google Earth** – TRBOnet Dispatch Software supports Google Earth service. Go to **Map**, **Google Earth** to open the application.

**Note:** Google Earth should be installed on the PC. For more details on working in Google Earth visit Google official website <u>http://www.google.co.uk/earth</u>

- **9. Delete Routes from Google Earth** select to delete all routes from Google Earth.
- **10.** Show Radios on Google Earth select radios type to display on Google Earth.



## Tools

<u>F</u> ile <u>V</u> iew <u>M</u> ap <u>T</u> ools <u>H</u> elp		
Radio 👌	Radio Interface	
	Radio Interface Radio Interface #1 Recent Calls/Events	
	Active Calls	Quick Commands
Online Dispatchers (2)		
Administrator		
Administrator		TX Passive X
		🥥 Record 🔻 😰 File 🔻
	Intercom	To: Selected Control Stations
		CrossPatch X
💰 12 📮 💟	PTT	
	Broadcast Call	to create new group
	Session:	
	Free channel	J _
📇 Radio	Sender:	
GPS Positioning		
9-0	RX / TX	
Job licketing		
Route Management	Recent Calls/Events	T
Note - Handychicht	🏟 Playback 📕 Save 🕕 Pause 🛷 Clean 🇐 Reload 🎢 Filter By Radio 🗮 Grouping	Y Auto Filter @ Default Settings *
Text Messages	Date V Control Station Sender Recipient Message	Note
	26.02.2014 15:36:39 Intercom Dispatcher All Intercom Call: Dispatch	her 'Dispatcher' ca
Reports and Statistics	🔀 26.02.2014 15:00:00 RadioServer All The Control Station for	r this operation is
	26.02.2014 14:00:00 RadioServer All The Control Station fo	r this operation is
Event Log	26.02.2014 13:00:00 RadioServer All The Control Station fo	r this operation is
	Zo.U2.2014 12:00:00     RadioServer All The Control Station fo     RadioServer All The Control Station fo	r this operation is
1 Telemetry	x colorized 11 tooloo Radioerver All The Control Station for the Control Stat	r this operation is
	H1 41 4 Record 5 of 553 + H H1 4	•
	Recent Calls/Events Recent Calls Radio State Active Tasks Active Routes User Activity Map	

Select **Tools Menu** to manage the Dispatch Console:







## **Event Log in Window**

🗵 Event Log					
Filter events	Talk Sessions				
All Messages Text Messages Sent Contained signals Sent commands Contained signals Sent commands Contained signals Sent commands Sent	Playback       Save       I         Date       V         01.10.2013       14:19:08         01.10.2013       14:15:48         22.08.2013       12:33:05         08.08.2013       17:43:52	Pause Vean S F Control Station Control Station #1 Control Station #1 Intercom Intercom	Reload Grouping Sender Administrator Administrator Administrator Administrator Administrator	Y Auto Filter Recipient All All All All All All	• • • • • • • • • • • • • • • • • • •
	Sender: Recipient:	Administrator All	Playt	Date: 08.08.2013 17:43:52	
	Intercom Call: Dispatcher 'Administrator' calls all dispatchers (00:01)				

Select to open the Event Log in the new Window:




# **Recent Calls/Events in Window**

Playback 📷 Save 👘	Pause 🤍 Cie	an 🥘 Keload		adio   🚟 Grouping 👕 Auto Filter 🤅	P Derault Setting	gs	•
Date V	7 Control Station	Sender	Recipient	Message	Note	Ext. Note	-
02.12.2013 16:00:03	Intercom	Administrator	All	Intercom Call: Dispatcher 'Administrato			_
02.12.2013 16:00:00		RadioServer	All	The Control Station for this operation i			
02.12.2013 15:59:48	Intercom	Administrator	All	Intercom Call: Dispatcher 'Administrato			
02.12.2013 15:51:29	Intercom	Administrator	All	Intercom Call: Dispatcher 'Administrato			
02.12.2013 15:00:00		RadioServer	All	The Control Station for this operation i			
02.12.2013 14:00:00		RadioServer	All	The Control Station for this operation i			
02.12.2013 13:00:00		RadioServer	All	The Control Station for this operation i			
02.12.2013 12:01:10	IPSC #1 Slot 1	Radio 777	Unknown gro	Radio 'Radio 777' calls group 'Unknown			
02.12.2013 12:00:47	IPSC #1 Slot 1	Radio 777	Unknown gro	Radio 'Radio 777' calls group 'Unknown			
02.12.2013 12:00:00		RadioServer	All	The Control Station for this operation i			
02.12.2013 11:53:49	IPSC #1 Slot 1	Radio 777	Unknown gro	Radio 'Radio 777' calls group 'Unknown			
02.12.2013 11:47:09	IPSC #1 Slot 1	Radio 777	Unknown gro	Radio 'Radio 777' calls group 'Unknown			
02.12.2013 11:46:15	IPSC #1 Slot 1	Radio 777	Unknown gro	Radio 'Radio 777' calls group 'Unknown			
2 02.12.2013 11:45:57	IPSC #1 Slot 1	Radio 777	Unknown gro	Radio 'Radio 777' calls group 'Unknown			
2 02.12.2013 11:35:54	IPSC #1 Slot 1	Radio 777	Unknown gro	Radio 'Radio 777' calls group 'Unknown			
02.12.2013 11:34:08	IPSC #1 Slot 1	Radio 777	Unknown gro	Radio 'Radio 777' calls group 'Unknown			
2 02.12.2013 11:34:00	IPSC #1 Slot 1	Radio 777	Unknown gro	Radio 'Radio 777' calls group 'Unknown			
02.12.2013 11:00:00		RadioServer	All	The Control Station for this operation i			
• • • • Record 13 of 409	► ₩ ₩ ₹					•	ſ
Sender: Recipient: Radio 'Radio 777' calls grou	Radio 777 Unknown group: : p 'Unknown group	1010 : 1010' (00:03)			Date: 02.12. Playback 🕞 Save	2013 11:46:15 Add Note	

Select to display recent calls and events in window:

Click "**Playback**" button to playback recorded calls;

Click "Save" button to save calls as audio files (\*.wav);

Notes can be added to the event, select event in the list and click "**Add Note**" button:

Note	-	×
test note		
		<b>v</b>
Add Extension	ОК	Cancel

Type in note text in the field.

Click "OK" to add a note.



# Job Ticketing Monitoring

Select to monitor all Job Tickets in the system, created by Dispatchers and assigned to Radios:



- 1 select time period to show Job Ticketing data;
- 2 monitor tasks created by Dispatchers;
- 3 monitor tasks, assigned to radios;

All tasks data is shown graphically and in the form of Status Diagram.

# **Telemetry Monitoring**

Select to monitor configured telemetry profiles in the separate window.



🔹 Swift. Tracker telemetry										
Show:	Show: Swift.Tracker telemetry 💌									
Radio	•	Alarm	12V	Pin1	Pin2	Pin3	Pin4	Pin5	Low Battery	Pin7
Radio 105		No Alarm	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF

To select Telemetry profile for displaying the data click "**Show**" button.

# Text Messages in Window

Select to open Text Messages dialog in the separate window:

	of Chan 🕐 Baland	
E III III IIII IIIIIIIIIIIIIIIIIIIIIII	Clean Reload 01.10.2013 15:50:51 Administrator to All test 01.10.2013 15:53:10 Administrator to All alarm	1.
	Recipient S Online Dispatchers	₹ Send

1 – User can see Online Dispatchers in the list;

**2** – Select the Recipient in the dropdown list. User can select all online Dispatchers, radio groups and radios registered in the system;

**3** – Type in Text Message in the field;

Click "Send" button to send the Text Message.

The text Message will be displayed in the field above.



## **Routes in Window**

Select to display Route Management page. *For more details on Route Management configuration* <u>see Route Management</u> *section*.

## **Terminate All Transmissions**

Select to terminate all Voice calls in the system. This action is a "hard" inquiry to stop all transmission in TRBOnet software and is intended to stop any "hanged" transmission in TRBOnet. If radio communication session does not allow to be interrupted on a repeater or base station it will be interrupted for radio, but for TRBOner software only.

## **Options**

Select to customize Console Settings.

## Sound

Go to Sound tab to configure Sound Notifications:

Options	×
Sound Map Coverage Map Hardware Advanced Volume Alarm	
Configure the Sound Notification	
Use Sound Notifications	
To configure the individual sounds notifications on every system event , choose event from the list and specify a demanded sound file or use a file by default	
🕘 Talk begin 🔺	
🕘 Talk end	
🕘 Line busy	
Ø Alarm or Emergency Call	
Ø Text message received	
Ø Information received	
🕺 Warning received	
Ø Alarm received	
🧐 System error	
Ø Alarm Tone	
Ø Private call from Radio Network to dispatcher	
Sound:	
(Sound by default)   Select	
Alarm or Emergency Call duration: 5 👻 seconds	
ОК Салсе	

 Use Sound Notifications – check this option to enable sound notifications in Dispatch Console.



Choose the event in the list and specify the sound.

#### Sound:

- Select **Sound by default** in the dropdown list to set the default sound for the event.
- Select **Disabled** to disable sound notification for the event.

Click button to listen to the current sound notification.

Click "**Select**" button to browse the sound on your PC.

 Alarm of Emergency Call duration – select time value in seconds for Alarm Tone when Emergency Call received.

# Мар

Go to Map tab to configure images on map:

Options	×
Sound Map Hardware Advanced Volume Alarm	
Configure the size of images that are shown on the map	
Map refresh interval: 30 (*) seconds	
Select the image size: 32 x 32 pixels	
Select the default image type:	
Show the direction of motion:	
The images below will be shown on the map: Radio is turned off:	
Radio is turned on, but GPS module does not	
Radio is turned on and GPS module works	
Radio transmits Emergency Call or sends Alarm	
OK Cancel	

- Map refresh interval type in time period to update map data;
- Select the image size in the dropdown list;
- Select the default image type in the dropdown list;
- Show the direction of motion select to monitor objects' motion.

# Coverage Map

TRBOnet Dispatch Software allows to see RSSI levels on a map



**RSSI** - received signal strength indicator. Measures radio signal loss from one map point to another.

RSSI map can be used by radio systems engineers to plan further radio network extension.

Go to **Coverage Map** tab to set signal strength levels (RSSI) displaying on map:

Options		<b>—</b>
Sound Map Coverage Draw in Dots Draw Coverage Zor 100  RSSI Zon	e Map Hardware Advanced	Volume Alarm
Value (dB) 🗸	Description	Color
-65	Good	YellowGreen
-80	Average	Orange 💌
-00	Bad	255, 0, 0
Add	elete	Default
		OK Cancel





**Draw in Dots** – select to display RSSI level on map as dots that represent coordinates points for more detailed data view:

**Draw Coverage Zone** – select to configure RSSI zone in meters and display on map average data of RSSI level GPS coordinates for more common data view:



Click "Add" button to add new RSSI level.

Set RSSI level parameters:

- Value the minimum level for the signal range (e.g., -65 means -65 and higher);
- Description input level name to display in the system;
- **Color** click to select the color for RSSI indicator on map.

To view RSSI levels on map go to **GPS Positioning** page and enable "**Coverage Map**" option on Map Tools panel.



Then set Start Date and End Date to display RSSI data.

## Hardware

Go to **Hardware** tab to configure USB devices, Proxy Server and active audio device options:

Options						
Sound Map Coverage Map Ha	dware Advanced Volume Alarm					
External hardware options. You can attach an additional equipment to control PTT button (footswitch, hand microphone, etc)						
Enable external hardware support	t					
Specify used serial port:	COM1 -					
	TRBOnet footswitch					
Enable USB device						
Device name:	· · · · · · · · · · · · · · · · · · ·					
PTT Button:	<b></b>					
Pressing indicator:						
VoIP first port:	4022					
Use proxy server Configure						
Configure audio devices:						
Playback device (Speaker):	Primary Sound Driver					
Recorder device (Mic):	Primary Sound Capture Driver 🔻					
	Configure					
	OK Cancel					

**Enable external hardware support** – select to use external hardware devices, e.g. mic connectors. Select a port where device is connected to.

 TRBOnet footswitch – select if you are going to use TRBOnet footswitch as PTT button.

**Enable USB device** – check to enable support USB devices (e.g. USB connected microphones).

Connect a microphone to PC via USB device. Go to <u>Options</u>, **Hardware**. Check **Enable USB Device**.

- Device name select microphone name in the dropdown list;
- PTT button all available PTT buttons are represented in the dropdown list. Select PTT button in the dropdown list and Press the PTT button on the microphone. When microphone PTT and PTT button in Dispatch Console are set up correctly, Pressing Indicator becomes green.



VolP first port - port for audio communication. Specify VolP first port (4022 set by default). Each additional Dispatch Console will create connection to next port;

**Use proxy server** – select to enable Proxy Sever service in TRBOnet Dispatch Software to access the Internet.

Proxy server can be used when a user's computer cannot be connected directly to the Internet, but there is another computer with Internet access in the network.

Click "Configure" button to set the alternative server settings:

Configure the	proxy server
👿 Use an a	Iternate server
Settings	
Address:	177.71.134.70
Port:	3128 🚔
Authenticat	tion
Login:	User
Password:	•••••
	OK Cancel

### **Configure audio devices**

- Playback device (Speaker) select the audio device for to play incoming voice messages and playback voice recordings in Dispatch Console;
- Recorder device (Mic) select the recording device where the microphone is connected.

**Note:** If Dispatch Console is running on the same PC with TRBOnet RadioServer connected to control stations via programming cable and sound card, playback and recorder devices cannot be the same for Dispatch Console and TRBOnet RadioServer.

Click "Configure" to set Recorder Device:

Configure Recorder	×
✓ Use frequency filter	
	0
0	4000
Min: 0 🔶 Max: 4000 🔶	
	. 1
OK Ca	ncel



**Use frequency filter** – select if you are going to configure mic. using frequency filter to reduce external noise level.

Set min. and max. values to set frequency range and click "OK" to save the settings.

# Advanced

Go to **Advanced** Tab to configure Dispatch Console Advanced settings:

Options 💌
Sound Map Coverage Map Hardware Advanced Volume Alarm
Advanced console options
Options PTT
Send Alert Tone on extern PTT
Use "Record Mode" on extern PTT
Suggest TX Passive if channel is busy or subscriber radio is offline
Enable "Short Press" PTT behaviour (Semi PTT)
✓ Use " <u>Space</u> " for press PTT
Options Voice
Mute voice from other dispatchers
Mute voice from private calls
Mute RX when transmit or record audio
Options View
Customize Radio's display text
Show extended notes
Display confirmation dialogs
Show incoming Text Messages in popup window
Minimize window on X-button click
Minimize window to voice panel
Measurement system: Metric   Coordinate system: Degrees, Minutes, Seconds   On Map
OK Cancel

#### **Options PTT**

- Send Alert Tone on extern PTT select to enable Alert Tone for all subscribers on a channel when Dispatcher presses PTT button;
- Use "Record Mode" on extern PTT check to record all voice transmissions from external PTT devices (palm mics, Footswitches etc.)
- Suggest TX Passive if channel is busy or subscriber radio is offline select to record a TX Passive Voice Message for a Radio channel is busy or subscriber is offline (see TX Passive configuration page);
- Enable "Short Press" PTT behavior (Semi PTT) select to start and finish Voice Calls by short PTT pressing instead of keeping PTT pressed during the whole Voice Call;
- Use "Space" for press PTT select to set a key for press PTT. Click the highlighted hot key link to set a key. When the informational message appears press any key on the keyboard to set it as PTT.



### **Options Voice**

- Mute voice from other Dispatchers select to mute all other Dispatchers' voice transmissions;
- Mute voice from Private Calls select to mute all Private Calls on the channel;
- Mute RX when transmit or record audio select to mute all Voice Notifications when Dispatcher transmits or records audio.

#### **Options View**

 Customize Radio display text – select to set a custom alias for Radio in the list of subscribers.

#### Click "**Customize**" button:

Display Formats	x
Radio display name:	
Worker 1	
Example: Worker1	
Allocated radio display name:	
Worker 1 (USER 1)	•••
Example: Worker1 (USER1)	
Allocated radio display name (the owner has more than one radio):	
Radio2 (USER 1)	
Example: Radio2 (USER1)	
Defaults OK Car	icel

- Radio display name specify a custom alias for selected radio;
- Allocated radio display name specify a custom alias for selected radio in the Allocation Console;
- Allocated radio display name (the owner has more than one radio) specify a custom alias for selected radio in the Allocation Console in case when user has more than one radio.

Click — button to add more information about Radio:

- **Radio Callsign** select to add a Radio Callsign;
- Radio Owner name select to add an Owner name;
- Radio ID select to add radio ID data;
- Active Channel select to add an Active Channel for Radio.

Click "Default" button to set default settings for Radio Display.

• Show Extended Nodes – select to enable Extended Nodes in the Dispatch Console.



Extended Nodes feature is intended to add predefined Extended Notes templates, the same as for Extended Messages, for selected calls and events.

E.g., Taxi Dispatcher needs to check clients' calls response period for the company internal monitoring of the employees. He can add a predefined template and check the time period. All Extended Notes are displayed in the Extended Notes column:

Date	7 Radio System	Sender	Recipient	Message	Ext. Note	Note
7/7/2014 3:49:56 AM		Radio 11	All	Geofencing Alarm [Dat		
7/7/2014 3:49:56 AM		Radio 11	All	Radio left allowed region		1 1
7/7/2014 3:47:52 AM	Repeater #1 Slot 1	Radio 105	Dispatcher	Administrator Accept		1
7/7/2014 3:41:24 AM	Repeater #1 Slot 1	RadioServer	Radio 105	Telemetry status cann		
7/7/2014 3:40:16 AM		Administrator	All	test		
7/7/2014 3:39:08 AM	Repeater #1 Slot 1	Radio 105	Unknown group: 1010	Radio 'Radio 105' calls	View	
P 7/7/2014 3:32:55 AM		Administrator	Radio 105	Dispatcher 'Administra		A
7/7/2014 3:18:43 AM		105	All	On Duty		2
7/7/2014 12:56:40 AM	Intercom	Dispatcher 1	All	Intercom Call: Dispatc		4
7/4/2014 4:01:35 AM	Intercom	Dispatcher 1	All	Intercom Call: Dispatc		
	Transmin (			********* ***#+ ******		

Click "Extended Notes" button (1) to fill the template;

Click "View" button (2) to see the Extended Note.

- Display confirmation dialogs select to enable dialogs to confirm Dispatcher actions with Confirmation dialogs required (e.g. send configured Voice Message from Dispatch Console);
- Show incoming Text Messages in popup window select to optimize incoming Text Messages view:

<u>File View Map Tools Help</u>			
Radio	Radio Interface		
🛍 🗄 h 🎄 🛠 🍸 🛇	Radio Interface Recent Calls/Events Mute Mode		Quick Commands
105     105     Radio 100100     Radio 100100     Radio 1010     Radio 1010     Radio 1010     Radio 105     Radio 105	Intercom		Configure TX Passive X Record V File V To: Selected Channels
Radio	Test Call		Cross Patch
GPS Positioning	Message 1 of 1		create new group
Job Ticketing	Recent Lall Text message		
😥 Route Management	Message: 7/7/2014 3:47 AM Date Administrator Accept	Grouping 🍟 Auto Filter 🍈 Default Settin Note	ngs Details Show Notes " Details
V Text Messages	⅔ 777/201-	y status cannot be recieved from	
Reports and Statistics	₹ 7/7/201- ⅔ 7/7/201-	idio 105' calls group 'Unknown gr er 'Administrator' has requested	Members: Radio 105
Event Log	☆ 7/7/201     □ Do not show this message next time       ↓ ///201-	Call: Dispatcher 'Dispatcher 1' ca	Members: Dispatcher 1
Telemetry	6/24/201 <<< Prev Next >> Close	Call: Dispatcher 'Dispatcher 1' ca Call: Dispatcher 'Administrator' c	Members: Dispatcher 1 Members: Administrator
Radio Allocation	Xe         6/24/2014 4:23:17 AM         Radio 105         All         On Duty           2         6/5/2014 7:36:14 AM         2         Unknown radil         Unknown grout         Radio 'Uk           W         4!         4         Record 10 (33         > He Heil 4         Record 10 (33         > Heil 4	iknown radio: 1212' calls group 'U	Members: Unknown radio
Administer	Recent Cals/Events Recent Cals Radio State Active Tasks Active Routes User Activi	ly Map	<u> </u>

 Minimize window on X-button click – select to use close-button to minimize Dispatch Console;



- Measurement system select Metric or American measurement system in the dropdown list.
- Coordinate system select coordinate system in the dropdown list. On Map
   select to display coordinates on the map.

## Volume

Go to **Volume** Tab to configure speakers and volume settings:

Options						×
Sound Map Coverage	Мар	Hardware	Advanced	Volume	Alarm	
Selected channel:				Def	aults	
Speaker:	Left	and Right			•	
Volume:	Θ		-0		+	
Unselected channel:				Def	faults	
Speaker:	Left	and Right			•	
Volume:	Θ		-0		$\oplus$	
Intercom:				Def	aults	
Speaker:	Left	and Right			•	
Volume:	Θ		-0		$\oplus$	
System sounds:				Def	aults	
Speaker:	Left	and Right			•	
Volume:	Θ		-0		÷	
SIP Interconnect:				Def	aults	
Speaker:	Left	and Right			•	
Volume:	Θ		0		$\oplus$	
				ОК	Ca	ncel

- Customize selected channel speakers and volume parameters;
- Customize unselected channel speakers and volume parameters. This option is intended for radio channels which are not selected in Dispatch Console. See the screenshot below:



<u>File View Map Tools H</u> elp		
Radio	Radio Interface	
	Radio Interface Radio Interface #1 Recent Calls/Events	
	Active Calls	X         Quick Commands         X
Online Dispatchers (2)		Configure
Administrator		TV Passivo V
Dispatcher		
		A Record V File V
	Intercom 📧 🕢	To: Selected Control Stations
		CrossPatch 🗙
	PTT Breadcast Call	E Drag and Drop Control Station here
		to create new group
	Session	
	Free channel	
Radio	Sender:	
and Ticketing	RX / TX	
		-
Route Management	Recent Calls/Events	
~	🔲 🗐 Playback 📓 Save 🛛 🛚 Pause 🛷 Clean 🍣 Reload 🛛 🌇 Filter By Radio 🛛 🚟 Groupir	ng 🍸 Auto Filter 🐵 Default Settings
V Text Messages	Date ∇ Control Station Sender Recipient Message	Note
	26.02.2014 15:36:39 Intercom Dispatcher All Intercom Call: Disp	oatcher 'Dispatcher' ca
Reports and Statistics	26.02.2014 15:00:00 RadioServer All The Control Statio	n for this operation is
(The survey of the second seco	26.02.2014 14:00:00 RadioServer All The Control Statio	n for this operation is
	26.02.2014 12:00:00 RadioServer All The Control Statio	n for this operation is
A Telemetry	🔆 26.02.2014 11:00:00 RadioServer All The Control Statio	n for this operation is
Ter. Thereity	26.02.2014 10:00:00     RadioServer ΔII     The Control Statio	n for this operation is
🔞 Radio Allocation	Decent Calle Kupete Decent Calle Dadio State Active Tacks Active Pourtes Licer Activity Mar	·
	Recent Calls/Events Recent Calls Radio State Active Tasks Active Routes User Activity Map	, ,

- Customize Intercom speakers and volume parameters. This option is intended for Intercom Voice session between Dispatchers;
- Customize system sounds speakers and volume parameters ;

To see the list of system sounds go to Options, Sound Tab.

 Customize SIP Interconnect speakers and volume parameters. This option is intended for SIP calls;



# Alarm

 Options

 Sound Mop Coverage Mop Hardware Advanced Volume Alarm

 Radio in alarm mode in new window
 Map: MAPNIK
 Select map

 Map: MAPNIK
 Select map

 Always show radio in alarm mode on map

 May Always show radio in alarm mode on map

 Map: Mapnik

 May show radio in alarm mode on map

Go to **Alarm** tab to configure radio in Alarm mode settings:

- Radio in alarm mode in new window select to display any radio in alarm mode in new window on the selected map type.
- Map in the field default map for radio is displayed. Click "Select map" button and specify a default map type for displaying radio in alarm mode;
- Always show radio in alarm mode on map select if you want offline radios in alarm mode to be displayed on selected map type anytime when an alarm from any radio comes.



**Note:** When **Always show radio in alarm mode on map** option selected, you cannot disable offline radios in alarm mode displaying on map:



Click "Default" button to reset settings to defaults.

Click "OK" to save modified Dispatch Console options.

## **Export/Import Options**

Dispatcher can export customer Dispatch Console settings (Volume level, UI view, hotkeys configuration, etc.) as .config file and save them to local PC or any selected external device.

Click "Export Options" and save settings to the selected directory.

If you are going to apply exported settings to another TRBOnet Dispatch Console, launch the console, go to "**Tools**" > "**Import Settings**" and select .config file with saved settings.

### Set Language

Select **Set Language** to change Dispatch Console's language:

Select Languag	e X
Language:	English
	OK Cancel

Select language in the dropdown list and click "OK".



The changes will apply with the next launch of console.

## **Change Password**

Select to change Dispatcher's password to access the Dispatch Console or create new password to connect to Dispatch Console:

Change Password	×
Change Pass	word
Old password:	•••••
<u>N</u> ew password:	•••••
<u>R</u> epeat password:	•••••
	OK Cancel

- Type in Old Password.
- Type in New Password and then confirm it in the field below.

Click "**OK**" to change the password.

### Help

- Send feedback click to see Neocom Software, Ltd. contact details.
- **About** click to see your TRBOnet Dispatch Software info.

# **Route Management**

Route Management feature allows create routs and assign to selected radio subscribers or dispatchers.



Eile Yiew Map Tools Help			
Route Management	Route Management		6
B = = = & X 7 S	Service inactive		
	Cal #2	■ 0 ▼ PSC #1 Slot 1 ■ ■ 0	
🖶 🧟 Online Dispatchers (1)	IPSC #1 Sict 2 (1) Selex #1 Analog		
Administrator	Start Create Edit Conv Delete	Grouping 7 Auto Filter C Default Settings	_
8 45 🤤	Name Route		
💰 🕑 Worker1 🗦 😒	Route 1 1500 17:00		
💰 Worker1 🧐	Point Point		
💰 🕑 Worker1 🗦 😵	\ <del>-</del>		
💰 🕑 Worker1 🗦 😵	\ \		
A (2) united (2) 43 (2)	÷		
Radio			
The second se			
GPS Positioning	1		
State Job Ticketing			
Route Management			
	HI HI 4 Record 1 of I + H HI +		
Text Messages	Active Routes		
Reports and Statistics	P Start Stop Edit Grouping Y Auto Filt	ter 🚳 Default Settings	
-	Route 1 15:00 17:00		
Event Log	Worker1		
	031212013 - Dispercier 1		
Telemetry			
Radio Allocation			
-			
Contraction Administer	HN 4N 4 Record 1 of 1 + 5P HN 4		
127.0.01 St 12 13 13 13 13 13	🚯 🥼 Warning! You are logged as Administrator	Licensed to: Neocom Software Ltd	

# To create a route go to **Route Management** page (1):



Name:       Test route         Description:       Test route         Route Points:       Service Rules:       Name       Time	te			
Description: Test route Route Points Service Rules   Notifications Nme Tme Nme Tm	Name:	Test route		
Rote Points       Service Rules       Notifications	Description:	Test route		
Name     Time	Route Points s	Service Rules Notifications		
Perte Lake Centre Reset 100 Courrent Reset 100 Cour	9.9	A	Name	Time
Create BEdt X Delete	Coursy Road 100	Pete Lake Coffee Lake Lake Lake Lave Lave Lave Lave Lave Lave Lave Lav	Long Lake Free as e: 95'4642.47'W	št 🗙 Delete

Click «Create» button (2) to create new route:

- Name specify a name to display in the route list;
- **Description** add a description for new route.

Click «GPS Points» button (1) to add points to selected map:

Select Map		<b>X</b>
Map Type:	Online maps	
Caption:		
Available Maps		
Name	Path	State
MAPNIK		ОК
CYCLE		ОК
TRANSPORT		ОК
LANDSCAPE		ОК
MAPQUEST		ОК
BING_ROAD		OK
BING_AREA		ОК
BING_HYBRID		ОК
new		ОК
Add	Remove	OK Cancel



Select map. For more details on map types see <u>Map Types</u> section.

Go to Route Points tab to set GPS Points, Beacons and Map Objects:

me:	Test route		
scription:	Test route		
in possible	cherte per la contraction de		
oute Points	service Rules   Notifications	in the second se	12
1.9.	A	Name	Time
1. 重、雪		4359	15:20
		4359	15:35
5 8		point 1	15:00
NDALE	Levelna <sub>Re</sub> Levelna <sub>Re</sub> BRENTWOOD Doint2 1550 SOUTHUCENT		
	Carriero St. BRENTWOOD Woodtern Dr	Courts Electric	¥ Datas
CAS PORTS	de bearvis In Gab Colerts	- Ficate - Cat	A Develop

Click «**Create**» button or double-click selected point on the map to create new route point:

Point properties	×
Name:	New Point
Location:	Latitude: 32°20'57,07"N; Longitude: 86°15'2 💌
Radius:	100 meters
Time:	15:50
Time delta:	5 minutes
	OK Cancel

- **Name** specify a name for new point to display on the map;
- Location in the location field administrator can see current GPS coordinates of new point;
- **Radius** specify radius to display new point on the map;
- **Time** specify time to service new point;



• Time delta – time inaccuracy to serve selected point.

Click «OK» to add new point.

Click «Beacons» (2) to add a beacon on the map.

**Note:** to enable **Indoor** feature make sure your license includes **Indoor Positioning** (see <u>License Information</u> page) and **Indoor Service** is selected in the list of available services (see <u>Services</u>

🖑 TRBOnet Plus v4.4 / Server Configu	ırator 💌	
Configuration	Services	
🔗 Service		
🕤 Network	Automatic Registration service (ARS)	
Database	Port: 4005	
Service Management		
Advanced settings	Telemetry service (TLM)	
Map Servers for Geocoding	Port: 4008	
Local Agent	Text Messaging service (TMS)	
MOTOTRBO	Port: 4007	
Services		
······································	Location service (GPS)	
	Port: 4001	
MNIS data service	Indoor service (K-TERM)	
DDMS service	Port: 3022	
□ Slot #1		
III Slot #2	Tallysman Sprite service	
Local Slots	4004 ‡	
Analog Control Stations	FS 5000 location service (GPS)	
Remote Agents	4004	
Friendly Servers	4004 *	
🐻 Internal PBX Server	Swift.Tracker service	
🚳 External PBX Server	4004	
↓ Data Sources	E Cuift Trades equica (CEM dapped)	
COM ports		
TCP/IP	4080	
Email	Extended Text Messaging service	
www.Smtp	4010	
SMS		
SMS	Telemetry service Novox	
	8090 ‡	
-	8091 🗘	
	C45 DS232 service	
	4004 🤤	
	V Zebra printer service	
	4072 ‡	
	Configure	
Set Defaults	Apply OK Cancel	



Name:	Test	oute			
Description:	Test	oute			
Day do Daindo L		lane and			
Route Ports	Service Rule	s Nooncadons		-	10-1
A30A				name	Ime
				4100	15:35
				noint I	15:00
				point 1	15:50
GPS Points	Calebraco	s Patien Objects		Greate 🕞	itit × Delete

Click «Map Objects» button to download created map objects list:

lame:	New route 1		
Description:	test		
Route Points	ervice Rules   Notifications		
Emergency		Name	Time
Fire departs	ent	Point 1	16:10
New Point		Point 2	16:20
Point		Emergency	16:30
Point 4		Point	16:40
		Point 4	16:50 🔶



Point properties	×
Name:	Emergency
Map Object:	Emergency
Radius:	100 meters
Time:	16:50
Time delta:	5 minutes
	OK Cancel

Double-click selected object in the list to modify its settings:

- **Name** specify a name for the object;
- Map Object select map object icon (type) in the dropdown list;
- **Radius** specify radius to display the point on the map;
- **Time** specify time to service the point;
- **Time delta** time inaccuracy to serve selected point.

Click «**OK**» to save map object parameters.

All map objects are displayed as points on the map.



Go to **Service Rules** tab to manage point service settings:

ute	
Name:	New route 1
Description:	test
Route Points Ser	vice Rules Notifications
Finish route:	automaticaly if all points are serviced
Set point as	serviced
C When radio	enter to the point area
Manually by     By condition	uspacter when radio is in the point area
	tically by receiving Text Marcage from a radio
Message	
Automa	tically by receiving Telemetry Command from a radio
VIO:	
Automa	tically by receiving DTMF command from subscriber
Comma	nd:
Set point in a	larm mode:
Automa	tically by receiving Text Message from a radio
Messag	e:
VIO:	
Comma	
	tically by receiving Emergency from subscriber
Emo Tu	
Ellig. (	
	OK Cancel

Finish route – specify parameters to mark the route as finished:

 Finish route automatically if all points are serviced – select to mark the route as finished when all points and objects are serviced.

**Set point as serviced** – select point service parameters:

- When radio enters to the point area select to mark point as serviced when radio becomes in the point radius;
- Manually by dispatcher select to allow dispatcher make point as serviced;
- By condition when radio is in the point area specify conditions to mark point as serviced:
  - Automatically by receiving Text Message from a radio select to mark the point serviced after dispatcher receives text message with specified text from radio subscriber;

Message - specify message text;

 Automatically by receiving Telemetry Command from a radio - select to mark the point serviced after dispatcher receives specified telemetry command from radio subscriber;

**VIO** – specify a VIO to send a telemetry command;



**Command** – specify a command for selected VIO;

 Automatically by receiving DTMF command from subscriber – select to mark the point as serviced after dispatcher receives DTMF command from radio subscriber;

**Command** – specify a command text.

**Set point in alarm mode** – select parameters to make the point in alarm mode:

- Automatically by receiving Text Message from a radio select to make the point in alarm mode after dispatcher receives text message with specified text from radio subscriber;
  - ✓ Message specify message text;
- Automatically by receiving Telemetry Command from a radio select to make the point in alarm mode after dispatcher receives specified telemetry command from radio subscriber;
  - ✓ VIO specify a VIO to send a telemetry command;
  - ✓ Command specify a command for selected VIO;
- Automatically by receiving DTMF command from subscriber select to make the point in alarm mode after dispatcher receives DTMF command from radio subscriber;
  - ✓ Command specify a command text;
- Automatically by receiving Emergency from subscriber select to make the point in alarm mode after dispatcher receives Emergency from radio subscriber;
  - ✓ **Emg. Type** specify an Emergency type in the dropdown list;



Go to **Notifications** tab to manage notifications to radio:

Route		×
Name:	New route 1	
Description:	test	
Route Points Servi	Rules Notifications	
You can use vai {RouteName},	ables in text message; PointName}, {PointTime}, {NextPointName}, {NextPointTime}	
Send a Text N	essage on route start	
Text Message	Start {RouteName}	
🗌 Send a Text M	essage on route finish	
Text Message		
Send a Text N	assage when approaching the service time	
Time before s	rvice: 5 minutes	
Text Message	Serve (Point 1) in {16, 10}	
Send a Text	Issage after service	() () () () () () () () () () () () () (
Text Message	The {PointName} is served. Next is {NextPointName} a	tt {NextPointTime}
For the last p	nt:  The {PointName} is served	
Send a Text N	essage if point is not serviced	
Text Message	The {Point 2} is not served	
🔽 Send a Text N	essage if point is in alarm mode	
Text Message	Alarm on {Point 3}	
		OK Cancel

**Note:** follow the predefined notifications templates. If text is not correct notifications will not be available.

- Send a Text Message on a route start select to inform radio subscriber about route start;
  - ✓ **Text Message** type in text message text to send to radio subscriber;
- Send a Text Message on a route finish select to inform radio subscriber about route finish;
  - ✓ **Text Message** type in text message text to send to radio subscriber;
- Send a Text Message when approaching the service time select to notify radio subscriber about point serve;
  - Time before service specify a time period in minutes before service time to send a text message;
  - ✓ **Text Message** type in text message text to send to radio subscriber;
- Send a Text Message if point is not serviced select to notify radio subscriber if the point is not serviced;
  - ✓ **Text Message** type in text message text to send to radio subscriber;



- Send a Text Message if point is in alarm mode select to notify radio subscriber if the point is in alarm mode;
  - ✓ **Text Message** type in text message text to send to radio subscriber;

Click **«OK»** to save settings.

New route is added in the route list (1):

voute management	Route Management	<u> </u>
1月月冬 火了 ②	Server methys   Control Station #1   Call #1  () 4   C	
0	Cal #2 · · · · C Dritecon 4 @ PSC #1Shr 2 · · · · · · · ·	
Online Dispat	TPSC # 1 Set 2 Setex #1 Analog	
Administra	📲 🕨 Start 🔜 Create 🟐 Edit 🔜 Copy 🖳 Delete 📲 Grouping 🍸 Auto Filter 🛸 Default Settings	
	Name Route	
U Workert W Wo	koute 1 2 2	
A D Workpert J D	Ford Parts 1640 1640 1650 1650	
Workert # B Q		
	Point 1 Point 2 Emergency Point 4 Emergency	
Radio		
	1	
GPS Positioning	N States and Stat	
G Job Ticketing		
G Job Ticketing		
Job Ticketing	Active Routes	
Job Ticketing     Route Hanagement     Text Messages	Active Routes	
Job Ticketing     Route Hanagement     Text Messages     Reports and Statistics	Active Routes  Start Stop Bild File Grouping Auto File Default Settings Name Route	3
Job Ticketing     Route Hanagement     Text Messages     Reports and Statistics	Active Routes  Start Stop Set Grouping Auto Filter Default Settings  Name Route Route 1 5500 17:00	
	Active Routes  Start Stop Letit Grouping Auto Filter Default Settings  Name Route Route 1 Stop 15:00 17:00 Worker1 St.22013 - Dispetcher 1 Point Point Point Route Route 1 Point Route Route 1 Point Route Route 1	
Job Ticketing   Route Planagement   Text Messages  Reports and Statistics   twent Log  Telemetry  Telemetry	Active Routes  Start Stop Defout Settings  Name Route	
	Active Routes  Start Stop Bill Grouping Auto Filter Default Settings  Name Route Point Default Settings Point Default Setti	

Click «Start» button (2) to start the route:

Start Route			×
Name:	New route 1		
Start Date:	03.12.2013		-
Route:	New route 1		•
	,	Create Route	Modify
Radio:	S Worker 1		<u> </u>
Radio Owner:			•
Dispatcher:	Dispatcher 1		•
		ОК	Cancel



- Name specify a name for Active route;
- **Start Date** select a date to start the route;
- Route select route to start in the dropdown list. Click «Create Route» button to create new route based on selected route. Click «Modify» button to modify selected route parameters.
- **Radio** select Radio to assign the route;
- Radio Owner select <u>Users</u> to assign the route;
- Dispatcher select a Dispatcher to monitor the route.

Note: do not select both: Radio and Radio Owner to prevent incorrect route running.

Click **«OK»** to start a route.

The route appears in the **Active Routes** list:

<u>File View Map Tools H</u> elp	
Route Management	Route Management
💼 🗄 😫 👶 🛠 🏹 😒	Service inactive
	Call #2 •) ● Intercom ● O IPSC #1 Slot 1 •) ● O
😑 🧏 Online Dispat	▼ IPSC #1 Slot 2 •)) • • • • • • • • • • • • • • • • •
🙎 Administra	🕨 Start 🛛 🔂 Create 📑 Edit 🔂 Copy 🛛 🔂 Delete 📑 Grouping 🍸 Auto Filter 🎯 Default Settings
🗆 🗹 📑 45 👘 📮	Name Route
🗹 💰 🏵 Worker1 🛛 🗖 💟	New route 1 16:10 16:20 16:30 16:40 16:50 16:50
💰 Worker1 🛛 🔎	test Point 1 Point 2 Emergency Point Point 4 Emergency
💰 🧭 Worker1 🏼 🗦 学 义	Route 1 15:00 17:00
💰 🧭 Worker1 🛛 🗦 💙	Point1 Point2
	New route 1 16:10 16:20 16:30 16:40 16:50 16:50
Radio	test Point 1 Point 2 Emergency Point Point 4 Emergency
GPS Positioning	
📅 Job Ticketing	
Route Management	
<b>-</b>	Image: Market and Market an
Reports and Statistics	Start Stop Edit Grouping Y Auto Filter W Default Settings
	Route 1 15:00 17:00
Event Log	Worker1 Sine steher 1 Print Pr
T-lunchu:	New route 1 16:10 16:20 16:30 16:50 16:50
	Worker1 (USER1)
Radio Allocation	
Administer	III         III         Record 2 of 2         III         IIII         IIII         IIIII         IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII
127.0.0.1 🎕 🕵 🕵 🔂 🔂	🎍 🥵 🔺 Warning! You are logged as Administrator 🛛 📑 Licensed to: Neocom Software Ltd

If the point is not served, it becomes red.

Click «Stop» button to replace active route in the Created routes list.



Administrator can see reports of finished routes. Go to **Reports and Statistics** (1) page and select **Common Reports** – **Finished Routes** (2):

and Statistics	Common reports				
Patch activity * reports reports	Steriozinactive S	Control Station #1	Call #1		internati
o discation o discation o discation o discation o discation bioleting biolet	Corry parameters / Finished Routes	11118820	+2+		
enent details summary	from 26.11.2013 0:00 to 03.12	2013 17:12	Red Date	Theory Times	Fisher
6	New route 1	NI	03.12.2013	03.12.2013 17:11:23	Not Serviced exists
ositioning	Route 1	Radio 2	03-12-2013	03.12.2013 17:05:13	Not Serviced exists
icketing • Hanagement Hessages					
rts and Statistics	1				
Log					
setry					
Allocation					

# **Radio Allocation**

Selected radio can be assigned in the system to selected employee registered in the system.

All available radios are disabled and an employee will need to type in username and password to take and enable selected radio. When an employee returns allocated radio it gets disabled again.

Go to Radio Allocation page (1) to assign radios to users:



Auto Autocation	Radio Allocation							
: 注意 & 🛠 🏹 🚳	3 1: Line free		Intercom		Firemen.		Department #	1
Donline Dispatcher.	Department #2		Base					
Administrator	📑 Take/Return Radio	Grouping	🍸 Auto Filter 🍥	Default Settings   Se	elect User: All Users		• >	< C
Q Dispatcher	Callsign	△ Taken by	User (	iroup	Vehicle Make	Plate N.	mber	Drivers
test group 1	<b>Ø</b> 0		b	ase				
S 2 7 Firemen S	(d) 105	2	1	remen				
9 B 0 B 2	(9) 113 (1) 113	5.1		epartment 1				
V (A) 105 E [S]	A 115			eparatient 2				
116	116		1	remen				
A 12	(d) 12		4					
GPS Positioning								
GPS Positioning								
GPS Positioning CPS Positionin								
CPS Positioning CPS Positioni								
CPS Positioning CPS Positioning Dob Ticketing CPS Route Hanagement CPT Text Messages CPR Reports and Statistics								
CPS Positioning CPS Positioni	1							
CPS Positioning CPS Positioni	1							

Select radio in the list and click «Take/Return Radio» button (2):

Take Radio	<b>—</b> ×—
Radio:	Radio 777
User:	User2 (Worker_bank)
Password:	*****
	Take Radio Cancel

- Radio select radio to allocate;
- User select User to allocate the radio. User should type in Dispatch Console or on the radio keyboard;
- Password User should type the password in Dispatch Console or on the radio keyboard.

**Note:** for more details on user access to Allocation Console see<u>Users</u> section.

Click «Take Radio» button to assign the radio to selected User.

Administrator can see reports of allocated radios. Go to **Reports and Statistics** (1) page and select **Common Reports** – **Radio Allocation** (2):



File View Map Iools Help							
Reports and Statistics	Common repo	orts	-		-		
CrossPatch activity	Service machive	•0	Control Station #1			Call #2 Selex #1 Analog	
Relaxables for period State of Radios User messages and notes Radio delocation Radio delocation Solo bicketing Finished Routes	Query parameter	s Finished Route	s Radio allocation	<u>*</u> ≣  <u>©</u> •≌•			
Radio	Ra	adio alloca	ation to 03.12.2013 17:51				
GPS Positioning	N1						_
Route Hanagement	De	vice name	User nome	Taken	Returned	Time of (	use
Text Hessages	NI	_	User 1	03.12.2013 13:56:05			
Reports and Statistics	*	1					
Telemetry	Tota	l time of use:				00:00:00	
Radio Allocation							

# Beacons

TRBOnet Dispatch Software provides the **Indoor Positioning** feature to monitor radio location inside building, where no GPS signal is available. The feature requires additional hardware (beacons spread around the building and option boards in radios). A subscriber will be displayed on indoor floor plan on exact beacon when the radio comes to the beacon's coverage area. The beacon icon on map notifies on the amount of radios that are currently in this beacon's coverage area (e.g. Room 1(3) - there are 3 radios in Room 1).

**Note:** to enable **Indoor** feature make sure your license includes **Indoor Positioning** (see <u>License Information</u> page) and **Indoor Service** is selected in the list of available services (see <u>Services</u>



onfiguration	Services
Service	
Network	Automatic Decistration service (ADS)
Database	Automauc Registration service (ARS)
Convice Management	Port: 4005
Advanced settings	Telemetry service (TLM)
Man Servers for Geocoding	Best: 4008 *
	Port:
	Text Messaging service (TMS)
Services	Port: 4007 🛟
Proc #1	
Advanced settings	Cocadon service (GPS)
	Port: 4001
MNIS data service	Indoor service (K-TERM)
DDMS service	Port: 3022
	· · · · · · · · · · · · · · · · · · ·
	Tallysman Sprite service
Local Slots	4004 ‡
🛛 💼 Analog Control Stations	FS 5000 location service (GPS)
Remote Agents	
Friendly Servers	4004 👻
Internal PBX Server	Swift.Tracker service
External PBX Server	4004
Data Sources	
📅 COM ports	Swift.Tracker service (GSM channel)
	4080 🗘
Email	Extended Text Messaging service
Pop3	
swip Smtp	4010 -
SMS	Telemetry service Novox
	8090 ‡
License	9001
	G4S RS232 service
	4004
	Zebra printer service
	4072
	Configure
	Contractor
Set Defaults	Apply OK Cascel
occocidanta	Apply OK Calife



neocom software

Eile Yiew Map Iools Help		
GPS Positioning	Map	Objects
Image: Contine Dispat.         2           Image: Contine Dispat.         2	Service Hactors  Servi	Becore     123     439     Map Regions     7 1     Map Regions     Map Regions
Worker1  Worker1  Worker1  Worker1  Worker1  Worker1  Worker1  Worker1  Worker1  Kado	Select Map Map Type: Beacon20 Caption: Available Maps Path City Inter (is an Around Content of Maps (Values Values Values Values Content of Maps (Values Values	
GPS Positioning 1 Dob Ticketing Route Hanagement Text Hessages	Recent G Types	U
Reports and Statistics	Last Cal V Sender	Amount of Calls Peatures
tvent Log		
Administer	Recent Calls/Events Recent Calls Radio State Active Tacks Active Routes: User Activity Beacons Beacons Events	

#### Go to GPS positioning (1), Map (2) and select Open map in tab:

Map Type – select Beacon 2D to enable 2D floor plan or Beacon 3D to enable 3D floor plan (3);

Click button (4) to add a map and select a map on your PC;

Click «**OK**» to add a map.



To add a beacon on selected floor plan click **«Set Location»** button (1) and specify new beacon properties (2):



Name – specify new beacon's name;

- Beacon ID select your beacon ID;
- **Description** add a description for selected beacon.

To edit beacon's parameters select beacon in «Objects» list:





Double-click selected beacon to edit parameters.

Note: for more details on beacons settings see the following article.

# Administration

Go to «Administer» section to set system elements and options.



#### **RadioServer**



Go to Administer (1), RadioServer (2) to see full system review:


### Database

File View Map Tools Help		
Administer	Database	
RadioServer	Intercom 🛛 🔹 🥥	Firemen     Image: Test Call       Repeater #1 Slot 1     Image: Test Call       Repeater #1 Slot 2     Image: Test Call
- Agr System Dridging - Drone Calls - Dronks Event/Alarm Management - Drotemetry	Backup Schedule      Database information     Server name:	(local)/SQLEXPRESS
Radio Groups Telemetry	Database name:	TRBOnet
Tamlata Maliar	Database version:	5/25/2014 2: 51:25 AM Microsoft SQL Server 2008 R2 (SP2) - 10.50.4000.0 (X64)
Hadio		Jun 28 2012 08:36:30 Copyright (2) Microsoft Corporation Express Edition with Advanced Services (64-bit) on Windows NT 6.1 <x64> (Build 7601: Service Pack 1) (Hypervisor)</x64>
GPS Positioning	Data size:	2.55 MB
Job Ticketing	Audio size:	0.00 KB
Route Management		
V Text Messages		
Reports and Statistics		
Event Log	2	
f Telemetry	1	
Radio Allocation		
Administer		

Go to Administer (1), Database (2) to see full database overview:

On the **Database** Pane Administrator can restore and backup Database and Audio Recordings.

For more details on backups see <u>Appendix D: Database and Audio Recordings</u> <u>Backup and Restore</u>

#### **Radio Systems**

All Radio Systems registered in the Server Configurator are represented on the Radio Systems Pane.



minister	Radio Systems	_		2
adioServer	Intercom	Firemen N. C.	Test Call	
tabase	Service inactive	Repeater #1 Slot 1 📧 📧 🥥	Repeater #1 Slot 2 0 0 0	
stems				
> 2	T Properties	10000		
< - L	System type	System ID	Caption	
• • •	Intercom		Intercom	
	Phone		Phone Interconnect	
	IP Site Connect		Repeater #1 Slot 1	
	IP Site Connect		Repeater #1 Slot 2	
é	Single Control Station		GSM Channel	
b Ticketing				
icketing e Management				
ing Nagement ages				
ement es Statistics				
) jement es Statistics				
ng agement iges d Statistics	1			
eting anagement and Statistics 2 2 2 2 3 2 3 2	1			

Go to Administer (1), Radio Systems (2) to see system elements' parameters:

Administrator can see the following Radio system parameters in the table:

- System Type the list or registered radio systems;
- **System ID** an unique System Identifier, configured in TRBOnet RadioServer configuration for repeater of controllers of a system;
- **Caption** channel type to transmit voice and data;

Click «**Reset**» button (3) to test the connection to system element.

### **Radio Systems Properties**

To see radio systems properties do the following:

- 1. Select radio system in the list and click «Properties» button (1);
- 2. Double-click selected radio system in the list;
- 3. Right-click the selected element at the bottom of Dispatch Console window (2):





<u>File View Map Tools H</u> elp					
Administer	Radio Systems				
RadioServer	Intercom •)	Firemen	•) 📢 🥥	Test Call	) 🔹 🖉
📋 Database	1: Line free	IPSC Slot 1	• 🔍 📢	IPSC Slot 2	) 📢 🥝
Radio Systems	IPSC 2 Slot 1	IPSC 2 Slot	2 🜒 📢 🧭	Repeater #3 Slot 1	•) • 0
	Repeater #3 Slot 2	Swift Agent	:#1 🔊 📢 🧭	Swift Agent #2	
- 🔐 Tasks	Swift Accest #2			Ewift Accest #E	
Event/Alarm Management	Switt Agent #5			Switt Agent #5	
Telemetry     Swift Tracker telemetry	Swift Agent #6	🔣 🖉 📄 Swift Agent	: #7 💿 📧 🥥	Swift Agent #8	) 🔹 🙆
Telemetry #1	Properties				
	System type	System ID		Caption	
	Intercom	System 15		Intercom	
Radio	/ Phone	-		Phone Interco	onnect
	J IP Site Connect	1		IPSC Slot 1	
GPS Positioning	J IP Site Connect			2	
	X IP Site Connect	•		IPSC 2 Slot 1	
🙀 Job Ticketing	X IP Site Connect			IPSC 2 Slot 2	
	X IP Site Connect			Repeater #3	Slot 1
😿 Route Management	X IP Site Connect			Repeater #3	Slot 2
~	X Single Control Station			Swift Agent #	¢1
🔀 Text Messages	X Single Control Station			Swift Agent #	ŧ2
~	X Single Control Station			Swift Agent #	#3
Reports and Statistics	X Single Control Station			Swift Agent #	±4
<b>7</b> 5	X Single Control Station			Swift Agent #	±5
Event Log	X Single Control Station			Swift Agent #	ŧ6
	X Single Control Station			Swift Agent #	\$7
Telemetry	X Single Control Station			Swift Agent #	#8
(m)	Single Control Station			GSM Channel	
Radio Allocation	10				
a durinintere	//				
Administer	🔫 🝕 🖣 Record 1 of 17 🕨	₩ 4			

Administrator can see Active and Inactive registered systems. In case you have more than 10 registered systems, systems are grouped and can be seen in the Dropdown list.

Common information for all system elements is listed below:

#### 1. Description tab

On the **Description** tab see the general info:



Repeater #1 Slot 2		×
Description Char	nnels Transmits	
System Type:	IP Site Connect	
System ID:		
Caption:	Repeater #1 Slot 2	
	OK Cano	el

- System Type system type for Repeater/digital or analogue mode for Control Station.
- For Repeater see <u>MOTOTRBO Radio Systems</u> page.
  - System ID an unique System Identifier, configured in TRBOnet RadioServer configuration for repeater of controllers of a system;
  - **Caption** input channel name.

# 2. Channels

On the **Channels** Page see channel properties:

2		×
Description Channels Transmits		
🚰 Properties 🦏 Control 🚔 Re	set	
Name	Voice	Data
🗸 Repeater #1 Slot 2	RX, TX	RX, TX
	ОК	Cancel
		·



Click «Properties» button to see repeater additional data:

Repeater #1 Slot 2					
Descripti	on Talk g	roups Vo	lume		
ID:		ed4df44d-	c73f-4bd4-b742-6f6f7b78ea04		
Name	: 1	Repeater #1 Slot 2			
Type:	i l	MOTOTRBO Repeater			
Mode	: [i	IP Site Con	nnect		
Conr	Connected				
Serial Number: 484TKS6604					
Firmware version: 2.20.10.0					
			OK Cancel		

- ID default registration number (manufacturer's number);
- **Name** system element's name in the system;
- **Type** system type for Repeater/digital or analogue mode for Control Station.
- For Repeater see MOTOTRBO Radio Systems page.
  - Mode system type for Repeater/connection mode for Control Station.
- For Repeater see <u>MOTOTRBO Radio Systems</u> page.
- For Control Station see <u>Control Station Connection Modes</u> page.

#### Connected

- Serial number default system element's serial number (manufacturer's number);
- Firmware Version current system element's firmware version.

Click «Reset» button to test the connection to system element.

**Note:** For a repeater: **«Reset**» button reconnects the repeater.

For Control Station: «Reset» button reloads the radio.

#### Talk groups (For Repeaters only)

On the Talk groups tab see selected Talk group info:



Description     Talk groups       Specify available talk groups       Image: specify availa
Specify available talk groups          Image: All Call         Image: Department 1         Image: Department 2
Image: All Call         Image: Department 1         Image: Department 1         Image: Department 2
Image: Constraint of the second se
Image: Department 1       Image: Department 2
Department 2
OK Cancel

Specify available Talk groups for the system element in the list of created Talk groups.

Selected Talk groups are available on **Radio** tab in the system element box in the dropdown list:

IPSC #1 S	ot 2 💿 剩 🕢
DTT	
PII	Broadcast Call 🔹
	Broadcast Call
	45
	Free channel
	Sender:
	· · · · · ·
RX/TX -	

**Note:** close TRBOnet RadioServer Configurator before applying system elements' settings.

#### Volume tab (for Repeaters only)

On the **Volume** tab see Volume settings for Repeater:



Repeater #1 Slot 2	
Description Talk groups Volume	
۲	۲
$\ominus$	Θ
RX <u>Reset</u>	TX <u>Reset</u>
Configure system volume	
	OK Cancel

- Specify RX and TX volume level for the Repeater using Volume control indicator.
- Click «Reset» button to set default volume level for RX or TX.
- Configure system volume check to save default volume settings for Voice transmissions from selected Repeater.

#### 3. Transmits tab

On the **Transmits** tab see the information about audio and data transmissions:

2	×
Description Channels Transmits	_
Record Audio	
OK Cancel	

• **Record audio** – check to enable audio recordings for selected repeater;



### System Bridging

TRBOnet Dispatch Software provides the **System Bridging** function. System Bridging allows configuring the network to redirect calls.

Administrator can create two types of System Bridging:

- 4. **System Bridging for Master Stations** allows connecting all types of Radios (analogue and digital radios, supports IP Site Connect, Capacity Plus, Linked Capacity Plus and Connect Plus modes).
- 5. **System Bridging for repeaters** allows connecting only repeaters in IP Site Connect mode.

Eile View Map Iools Help		
Administer	System Bridging	
RadioServer  Call License Database Radio Systems		
System Bridging	冯 Add 🚽 Edit 📝 Delete	
- Phone Calls 1	Type 🛆 Name	Δ
Tasks	Binary Patch     Binary Patch	
Telemetry	System Bridge System Bridge	
Radio Groups Telemetry		
Tools		
i i i i Temniste Maker	-	
Radio		
GPS Positioning		
Job Ticketing		
😥 Route Management		
Text Messages		
Reports and Statistics		
Event Log		
Telemetry	2	
Radio Allocation		
Administer	H H Record 1 of 2 > H H H 4	ž

Go to **Administer (1)**, **System Bridging (2)** to add a System Bridging in the system:

Click «Add» button to add a Cross Patch.

Select the System Bridging type in the dropdown list.



System Bridging for Master Radios:

System Bridge		<b>×</b>
Name: System Bridge#1		
Work Mode: Channels redirect	the calls to each other	•
PTT Button: Always Enabled		•
Channels Parameters		
Channels to redirect calls		
Radio System	Group	Mode
GSM Channel	<ul> <li>Any Groups</li> </ul>	Always
Repeater #1 Slot 1	Any Groups	Alway
Add X Delete	2	\3 / 4
		OK Cancel

- **Name** specify a name for System Bridging to display in Radio Interface;
- Work mode select work mode in the dropdown list. For more details on System Bridging for Master Radios types see <u>System Bridging Type</u> page;
- PTT Button set PTT on the System Bridging interface to be able to transmit voice or do not set only to hear the voice from other channel s. There are 3 options:
  - o Enable when System Bridging enabled
  - o Always enable
  - o Invisible
- On the «Control Stations» tab select Control Stations and its parameters for Cross Patch.
- Click «Add» button (1) to add a Radio in the list.
- In the «Control Station» column select a radio in the dropdown list (2);
- In the «Group» column select available group for the radio (3);
- In the «Mode» column select a mode for the Radio (4).
  - Select «Always» to enable System Bridging option always, regardless of radio status (online/offline).
  - Select «**ByRadio**» to enable System Bridging option on selected channel when there are online radios capable to receive Voice Calls from selected group.

On the «Parameters» tab specify call types for System Bridging:



System Bridge			×
Name:	System Bridge#1		
Work Mode:	Channels redirect the calls to e	each other	•
PTT Button:	Always Enabled		•
Channels Parar	neters		_
Specify call ty	pes for System Bridge:		
Voice Call		Text Message	
Check Radio		Telemetry	
Enable/Disable	e Radio	Location (GPS)	
Call Alert		User Data	
Emergency Al	ert		
		OK Cance	

Check call types to use in System Bridging mode.

Click **«OK»** to add the System Bridging for Master Radios.

The System Bridging is displayed in Radio Interface:

Eile View Map Lools Help					
Radio	Radio Interface				
💼 🗄 🕹 🛠 🍸 😒	Radio Interface Recent Calls/Events	Active Colle			
Conline Dispatchers (1)     Administrator     Department 1     Radio 105	Intercom Free channel	I Firem	en 🗐 📢 🍳 Free channel	Configure IX I Record To: Selecto Drag and D ured	Passive Passiv
Radio GPS Positioning	Test Call	Phone     2     3     4     5	Interconnect	E Patch on	Repeaters Patch
Job Ticketing	Repeater #1 Slot 1	Repea	ter #1 Slot 2 🗐 📢 🙆	System Repe #1 SI Any G	ater PTT
Route Management	Master Peer disconr	nected	Master Peer disconnected	- GSM Chan	nel 🗸
C Text Messages	Recent Calls/Events	lean 🌀 Reload   🌇 Fi	ter By Radio 📳 Grouping 🍸 Auto Filt	er 🍥 Default Set	ttings 🚰 Details 😤
Reports and Statistics	Date 🗸 Radio System	Sender Recipient	Message	Note	Details
Event Log	**         5/19/2014 4:45:39 AM           **         5/19/2014 4:44:32 AM           **         5/19/2014 4:39:35 AM	Administrator Radio 10 Administrator Radio 10 Administrator Radio 10	Dispatcher 'Administrator' has reques.     Dispatcher 'Administrator' has reques.     Dispatcher 'Administrator' has reques.     Dispatcher 'Administrator' has reques.	•	
Telemetry	⅔         5/19/2014 4:37:31 AM           ⅔         5/19/2014 4:35:12 AM	Administrator Radio 10 Administrator Radio 10	5 Dispatcher 'Administrator' has reques. 5 Dispatcher 'Administrator' has reques.	•	
Radio Allocation	X* 5/19/2014 4:34:53 AM	Administrator Radio 10	5 Dispatcher 'Administrator' has reques	•1	
administer	Recent Calls/Events Recent Calls Radio St	ate Active Tasks Active	Routes User Activity Map		



# System Bridging Types

1. Control stations redirect call to each other.

This is the most common type of System Bridging when data exchanges between the Control Stations set in the System Bridging settings. Thus, there is a common channel for all the subscribers of the specified control stations:

To create this mode of System Bridging add a System Bridging and set the Work Mode as **Control stations redirect the calls to each other**.



2. One control station redirects calls to many control stations.





To create this type of System Bridging add a System Bridging and set the Work Mode as **One control station redirects the calls to several Control stations**.

3. Many control stations redirect calls to one control station.





To create this type of System Bridging add a System Bridging and set the Work Mode as **Control stations redirect the calls to one control station**.

Binary Cross Patch	(IPSC Systems only)			×
Name:	Binary Patch#1			
Rules			1	
Rule 1 of 2	2	<b>\</b>	-	^
Slot: Slot 1	<b>1</b> 2	Voice	🗸 Data	
🗌 All Calls	Private Calls	🗹 Group Calls		
Groups: (All Gr	oups)	2		
Repeaters: (Al	Repeaters)	3		
Rule 2 of 2				~
Slot: Slot 2		Voice	🗌 Data	
🗹 All Calls	🗹 Private Calls	Group Calls		
Groups: (All Gr	oups)			
Repeaters: (Al	Repeaters)			
🖶 Add 🗙 Dele	te			
		ОК	Cance	

#### **Binary Patch:**

**Name** – specify a name for System Bridging to display in Radio Interface.

Rules – specify rules for System Bridging to redirect calls.



- 1 Check **Voice / Data** to transmit on the selected slot;
- 2 Select available **Call types**;
- 3 Select available **groups** for System Bridging in the dropdown list;

4 – Select available **repeaters** to redirect calls in new System Bridging in the dropdown list.

The System Bridging is displayed in Radio Interface:



**Note:** System Bridging can be created in Radio Interface. It is a temporary System Bridging; it will be deleted after reconnection to TRBOnet RadioServer or exit Dispatch Console.



### **Phone Calls**

		remen 🥂 🤫 😰	Test Call	
ic istems =	Service inactive	epeater #1 Slot 1 🛛 🕸 🚳	Repeater #1 Slot 2	
Dridging	Configure Calls SIP Extentions			
als				
arm Managament	Radio calls configuration			
ry	Allow subscribers to make outgoing calls:	Yes		
roups Telemetry	Allow to use DTMF:	Yes		
	Bacloward call to radio:	After establish call		
rista Makar	Initialize call to radio:	Start transmission		
	Send Text Message if cannot establish call:	Yes		
	DTMF Access code:	0		
loning	DTMF Deaccess code:	#		
	Configure			
eting	Landara and Landara and	3		
	Incoming calls configuration			
anagement	Call to Dispatch Center:	Redirect to dispatchers		
ssages	Unknown Call:	Dedine calls		
and get	Extention numbers (voice menu)			
and Statistics	Start call automaticaly:	Yes		
	Maximum number length:	Call Description		
g	0	Call dispatcher (any availab	c)	
	<number></number>	Call radio with Radio ID = <	Number>	
	Configure	4		
ation				

Go to Administer (1), Phone Calls (2) to configure incoming and outgoing SIP calls:

# Outgoing Calls Configuration

Click **«Configure**» button (3) to set Outgoing calls configuration parameters:

Radio calls configuration		×
Allow subscribers to make ou	utgoing calls	
Allow to use DTMF		
Allow to use Text Messag	ges	
Prefix:	sip:123	
Backward call to radio:	After establish call	-
Initialize call to radio:	Start transmission	-
Send Text Message if canno	t establish call	
DTMF Access code:	ol	
DTMF Deaccess code:	#	[
	OK	Cancel

 Allow subscribers to make outgoing calls – select to enable outgoing phone calls for subscribers;



- Allow to use DTMF check to allow radio subscribers to dial the phone number on the radio keyboard.
- Allow to use Text Messages select to enable Text Messages service in SIP Interconnect;
- Prefix a standard prefix for TMS Service (text messaging);
- Backward call to radio select mode to redirect phone call to radio in the dropdown list:
  - **After establish call** when a subscriber initiates a phone call to radio, the Dispatcher must answer the call, after that the phone call will be redirected to a radio;
  - **Before establish call** when a subscriber initiates a phone call it will be automatically redirected to a radio.
- Initialize call to radio select option to start a call to a radio.
  - Start Transmission select to start call to a radio automatically
  - Send Ringtone select to use beep tone until radio user presses PTT.
- Send text message if cannot establish call check if you want to receive text message when the channel is busy during a phone call;
- DTMF Access Code set DTMF Access Code «0»
- DTMF Deaccess Code set DTMF Deaccess Code «#».

# **Incoming Calls Configuration**

Click «**Configure**» button (4) to set Incoming calls configuration parameters:

Inc	Incoming calls configuration		
Call to Dispatch Center:		er: Redirect to dispatchers	•
Unknown Call:		Decline calls	-
	Extention number	s (voice menu)	
	🔽 Start call automati	caly	
	Max. number length:	Unlimited 🔶 Accept code: #	•
	Number	Call Description	
	0	Call dispatcher (any available)	
	<number></number>	Call radio with Radio ID = <number></number>	
	🛃 Add 📑 Edit 🛛	Delete	
		OK Cance	9



- **Call to Dispatch Center** select an option for input calls in the dropdown list:
  - **Decline calls** all input phone calls will be declined;
  - **Open Voice menu** when an input call starts the subscriber will hear Voice menu commands;
  - Redirect to dispatchers all input voice calls will be redirected to all dispatchers of the Dispatch center and any free dispatcher will answer the phone call.
- **Unknown Call** select mode to receive calls from unregistered subscribers:
  - **Decline Calls** select to cancel all calls from unregistered subscribers;
  - Use number as Radio ID select to allow system read unregistered number as Radio ID and start Private Call;
  - **Use number as Internal** select to allow system read unregistered number according to Voice Menu rules.

#### **Extension numbers (Voice menu)**

- Start call automatically select to search the number in the table automatically. When the option is disabled the subscriber must dial the number according to the following example: **0(phone number)#.** Character **#** used to search the phone number in the table.
- Max. number length specify a max. phone number characters.
- Accept Code used as handle to finish dialing number in Voice Menu.

All available numbers are listed in the table below (contact list) with number value and description.

Click «Add» button to add a number in the table.

To add a static number



Static number – numeric phone number:

Extension numb	er 🗾 🔀
Static num	ber
C Dynamic n	umber
Number:	123456789
Call Type:	Call group
Group:	45
Channel:	IPSC #1 Slot 1
	OK Cancel

- Number type in a phone number to add in the table (contact list);
- **Call Type** select a call type in the dropdown list;
- Dispatcher select a Dispatcher to make a phone call (for Dispatch Call).
   Radio select a radio to make a phone call (for Call Radio). Group select a group to make a phone call (for Group Call);
- Channel select a channel to make a phone call (available for Group Call only).

#### To add a Dynamic number

Dynamic number – phone number with selected prefix:

Extension number	er 🛛 🔍
C Static num	ber
Oynamic ni	umber
Prefix:	123456789
Call Type:	Call radio
Radio:	Detected by Radio ID
Channel:	<b></b>
	OK Cancel

- **Prefix** specify a prefix for phone calls to type in on the radio keyboard;
- **Call Type** select a call type in the dropdown list;



- Radio/Group call to make phone call to the selected radio/group the subscriber must type in radio ID/Group ID on the keyboard
- Channel select a channel to make a phone call (available for Group Call only).

#### **Tasks**

Note: after you have created a task you need to enable it:

<u>F</u> ile <u>V</u> iew <u>M</u> ap <u>T</u> ools <u>H</u> elp		
Administer	Tasks	9
RadioServer	✓ Intercom     ●●●●●       ●●●●     ●●●       ●●●     ●●●       ●●●     ●●●       ●●●     ●●●       ●●●     ●●●       ●●●     ●●●       ●●●     ●●●       ●●●     ●●●       ●●     ●●●       ●●     ●       ●●     ●       ●●     ●       ●●     ●       ●●     ●       ●●     ●       ●●     ●       ●●     ●       ●●     ●       ●●     ●       ●●     ●       ●●     ●       ●●     ●       ●●        <	
System Bridging	→ Add + → Edit     → Delete       Task Name	Δ
GPS Profile	Image: Construction of the second	
GPS Positioning	Image: Wight of the state o	
Job Ticketing		
Text Messages		
Event Log		
Telemetry		
Administer	K4 44 Record 9 of 9 ▶ ≫ ≫ 4	Þ

Put the checkbox in front of the task you want to enable.

### Agenda

Agenda is used to automatically send predefined messages to the radios. It may be used when you have any software receiving any messages but it is not able to send them to the subscribers. In this case TRBOnet Dispatch Software acts like an intermediary - it receives the messages from the folder and sends them to radios.



To enable the tasks	click «Add»	button (1)	), « <b>Agenda</b> »	(2):
---------------------	-------------	------------	----------------------	------

<u>File View Map Tools Help</u>		
Administer	Tasks	<b>S</b>
RadioServer     RadioServer     Josephane     Database     Radio Systems	Intercom         Image: Color         Image: Color	
Tools     Tools     Tools	Add     Image: Construction       Image: Construction     Image: Construction	Δ
Radio	Scheduled Task 2 SMS and Email notifications User Activity	
GPS Positioning		
Route Management         Text Messages		
Reports and Statistics		
Telemetry		
Administer		
A.	144 44 4 Record 2 of 7 + 1+ 1+ 141 4	

### Specify Agenda task settings:

genda	×
Task name: Agenda	
Settings	
Outgoing folder(on server):	
C:\Outgoing	
Incoming folder(on server):	
C:\Incoming files	
Wait for response(sec):	120
Text to confirm:	ОК
	OK Cancel

- **Task name** specify the name to the task;
- Outgoing folder (on server) specify the outgoing folder for the text message to be displayed in the Dispatch Console (e.g. C:\Outgoing);



- Incoming folder (on server) specify the incoming folder for the reports (e.g. C:\Incoming files);
- Wait for response specify the time interval for the response;
- **Text to confirm** specify the text to be sent by the subscribers after they receive the message.

# Audio Recorder for NetCRR

Audio recorder feature allows connect to audio recorder NetCRR Digital Call Recorder via IP.

For more details on NetCRR Digital Call Recorder read User Manual:



To enable the tasks click «Add» button (1), «Recorder» (2):



The feature allows replicating audio recordings to the recorder:

Audio Recorder	x
Task name: Audio Recorder	
Settings	
IP:	
Port: 9094	
Tart of Chappele	
OK Can	:el

- Task name specify a name for the task;
- **IP** type in recorder's IP;
- Port specify recorder's port.

Click «Test of channels» button to view all available channels on the recorder.

Click «OK» to add task.

### Import Beacon Data from DB «Firebird»

Import beacon data from DB «Firebird» option allows import beacon data from Firebird database to TRBOnet Dispatch Software database.

To enable the tasks click **«Add»** button (1), **«Import beacon data from DB «Firebird»** (2):



<u>F</u> ile <u>V</u> iew <u>M</u> ap <u>T</u> ools <u>H</u> elp		
Administer	Tasks	•
Telemetry #2	🛞 Service inactive 🔹 🕢 Control Station #1 🕘 ፋ 🖉 Remote Control Stat 🖏 🐗 Ø	
Telemetry #3		
Swift Configuration Tool		
Template Maker		
Disabled Radios	Add - Delete	
Users	Lone Worker	Δ
	3 Export Data	
Radio Groups	Scheduled Task	
Radios	Voice Message	
	Recorder	
Radio	Agenda	
GPS Positioning	SMS and Email notifications	
8-8	User Activity	
3 Job Ticketing	Voice Message	
	Voice Message	
Route Management		
Text Messages		
Reports and Statistics		
	-	
Event Log		
D zalamatan		
lelemetry		
Radio Allocation		
Administer		
	Imi     Imi     Record 6 of 11     Imi     Imi     Imi	Þ
🝈 127.0.0.1 🆓 🕵 🕵 🕵 🕵	🍰 😘 😘 🔂 ڬ 🛛 🕹 Warning! You are logged as Administrator 🛛 📑 Licensed to: Neocom Software Ltd	

**Settings** – set mail connection to Firebird DB parameters:

Import beacon data from DB "Fireb	ird"
Name: Import beacon da	ata from DB "Firebird"
Settings Import	
Server:	User: SYSDBA
Database path:	Password:
Port: 3050	Update (sec):
Test	
	OK Cancel

- **Name** specify a name for the task;
- Server select remote server or server on the local PC;
- **User** type in name of Firebird DB user;
- **Database path** specify Firebird DB path;
- Password specify a password to connect to Firebird DB (provided when logon);



- Port specify port to connect to Firebird DB;
- **Update (sec.)** specify update period for Firebird DB;

Click Test button to test the connection to Firebird DB.

#### Import – specify Import settings:

Settings Imp	Import beacon data from DB "Firebird"
Import da	ata from.
<the o<="" th=""><th>Idest Date Possible&gt;  Import</th></the>	Idest Date Possible>  Import
Delet	te old data
Report:	

- Import data from specify Firebird DB name;
- Click Import button to import data;
- Delete old data select to delete previous imported data from Firebird DB;
- **Report** in the «Report» field import report will be displayed.

Click «**OK**» to add the task.

# Export Data

TRBOnet Dispatch Software provides the Export Data function, which allows export data to an external database table.

To enable the tasks click «Add» button (1), «Export Data» (2):



<u>File View Map Tools Help</u>		
Administer	Tasks	<b>S</b>
RadioServer  RadioServer  RadioSystems		
System Bridging     Phone Calls     Tools     Tools     Tools	Add     • • • • Edit     Delete       Lone Worker     • • • • • • • • • • • • • • • • • • •	۵
Radio	SMS and Email notifications	
GPS Positioning		
Job Ticketing		
Route Management		
Text Messages		
Reports and Statistics		
Event Log		
A Telemetry		
E Radio Allocation		
Administer	114 4 4 Record 5 of 7 + 1+ 14 4	,

**Connection** – set the connection settings.

- Task name specify the name to the task;
- **Type** TRBOnet Dispatch Software allows export data for third-party systems using data export tasks. Select the type of data export in the dropdown list:
  - Export to database table. Allows setting export data to MS SQL Server tables. Specify connection to MS SQL Server parameters, database, base and table to export data.
  - **Export to Versa Trans.** Allows export data to data collection system Versa Trans via IP. For more details visit Versa Trans <u>official website</u>.
  - **Export to Google.** Allows export data to file (file format is KML). For more details visit the following <u>website</u>.
  - **Export to NMEA.** Allows export data to file (text file format, export format is NMEA 0183). For more details visit the following <u>website</u>
  - **Export to file.** Allows export data to text file.
- Data select the data to export in the dropdown list;



Export Data	×
Task name:	Export to database table - Location of radio
Type:	Export to database table
Data:	Location of radio
Connection Dat	a Scheduler Advanced
○ Default co ⓒ Specified (	nnection
Server name	(local)\SQLEXPRESS
Database nan	ne TRBOnet 💌
Windows a	authentication
User name	
User passwor	d
	OK Cancel

- Default connection select for default connection to SQL Server;
- Specified connection select to specify SQL Server and database;
- Server name specify SQL server name;
- Database name select a database from the list;
- Windows authentication select to use Windows authentication or unselect to use SQL Server authentication (SQL Server user name and password required).
- **Data** specify a table and data types for export:

Export Data					x
Task name:	ask name: Export to database table - Location of radio				
Type:	Export to da	tabase table			-
Data:	Location of r	adio			-
	, ,				
Connection Dat	ta Scheduler	Advanced			
Table:	[Export_Loc	ations]			
Column mapp	bing:		Create table	Load columns	list
Table column	ı	Data			•
Date		Location date			
Latitude		Latitude			
Longitude		Longitude			
Speed		Speed			
Direction		Direction			
Precision		Accuracy			
RadioID		Radio ID			•
			Oł	Ca	ncel



 Table – the name of the table to be exported into external database (by default the name of the table is created after you've specified it in Create table window).

Click **«Load columns list**» button to update the columns list in case you've made any changes in the table.

Click «Create table» button to add new table for data export:

Create	e table	x
	Create new table to Server: (local)\SQLE	export data (PRESS Database: TRBOnet
Tabl	le name: Export_	Locations
Colu	umn list:	
	Table column	Data 🔺
	Date	Location date
	Latitude	Latitude
	Longitude	Longitude
	Speed	Speed
	Direction	Direction
	Precision	Accuracy
	RadioID	Radio ID
	ID	Unique radio ID
	Name	Radio name
	ExportDate	Export date
	ales 1	ales 1
		OK Cancel

Select data to add in the table and to export.

• Scheduler – set schedule settings for data export:



Export Data	X
Task name:	Export to database table - Location of radio
Type:	Export to database table
Data:	Location of radio
Connection Data	B Scheduler Advanced
Days of week:	(All days)
Execute recur	rently with interval
Start time:	13:00
Stop time:	15:00
Repeat ever	y: 01:00:00 🔹
C Execute at pa	rticular time
	OK Cancel

- Days of week select days of week to export the data;
- **Execute recurrently with interval** select to set frequency of data export:
- Start time specify time to start data export;
- Stop time specify time to stop data export;
- Repeat every specify time period to export data;
- **Execute at particular time** select export time in columns of table below.
- **Advanced** specify advanced settings for location of the radio:



Export Data	X
Task name:	Export to database table - Location of radio
Type:	Export to database table
Data:	Location of radio
Connection Data Export only Export mode Always a Update of Update of	Advanced y changed data add new records existing and add new records existing records OK Cancel

- Export only changed data select to export only changed location of the radio data.
- **Export mode** select updating existing and new records files.

# Geofencing

Geofencing allows to control location and speed of radios respectively to manually specified regions on a map.

Geofencing monitoring consists of: manually configured regions and tasks. Regions specify where to use rules, tasks specify how to rules for the regions and radios.

To enable a Geofencing task, go to «Tasks» (1), «Geofencing» (2):



#### Administrator Activity in the Dispatch Console

<u>File View Map Tools Help</u>		
Administer	Tasks	5
RadioServer  RadioServer  RadioServer  RadioSystems	Intercom     01	
Phone Calls     Phone Calls     Tasks     Event/Alarm Management     Telemetry     Radio Groups Telemetry	Add      Edit     Celete     Task Name     Agenda     Geofencing     Geofencing     Geofencing     Det Idle Time	Δ
Tools     Tools     Radio	W Rodio Allocation (Sprite Founds)       Ø Scheduled Task       Ø S Scheduled Task	
GPS Positioning		
Koute Management		
Reports and Statistics		
Telemetry		
Administer	44 4 Record 2 of 7 5 35 36 4	k

# Administrator cans **add/disable/delete** rules for geofencing and edits current rules:

Geofencing and Speed Control			x	
Rules	General Scheduler Regions Ra	dios   Lone Worker		
✓ < rule name >				
<pre><rule name=""></rule></pre>	Name: < rule r	name >		
	Description:			
\4	Send Call Alert to a radio if t	he rule has been triggered		
	📝 Reset Alarm mode if the rule	e is not triggered		
	Speed and Idle Control			
	Control mode:	Control everywhere	-	
	Maximum Speed:	60 ‡ km/h		
	Maximum Idle Time:	90 🌲 seconds		
	📝 Activate Alarm mode if t	he rule has been triggered		
	Send Text Message to a	radio if the rule has been triggered		
	📝 Regions Control			
1 / 2	control mode:	Control leaving regions	-	
	🔽 Activate Alarm mide if t	ne rule has been triggered		
Send Text Message to a radio if the rule has been triggered				
Activate or Worker mode if the rule has been triggered				
Add Rule 🔻 Disable	Rule Delete Rule	OK Ca	ancel	



- Click «Add Rule» button (1) and select the appropriate rule in the dropdown list to add a rule in current geofencing configuration. New rule is displayed in the list of rules (4).
- Click «Disable rule» button (2) to disable selected rule.
- Click «Delete rule» button (3) to delete selected rule.

Variable settings for geofencing rules of event types (Map Region, Beacons, Radios and Lone Worker) are represented in the table below:

Event type	Tab Name	Parameters Description	
Common	General	• Name – specify the rule's name;	
Settings		<ul> <li>Description – add the rule's description;</li> </ul>	
	Scheduler	• Perform the rule on a schedule - click to start scheduler for geofencing	
		rules;	
		• Days of week - select the days to activate the geofencing rule;	
		• Start time - set the time to start the fulle,	
	Padios	• Stop time - set the time to stop the fute.	
	Raulus	• Only selected radios – select to apply this full of all faults,	
		Select all – click to select all radios in the list:	
		• <b>Deselect all</b> – click to deselect all radios in the list.	
		Regions Control – select to enable regions control;	
		• Control mode - select the control mode for regions in the dropdown list;	
		• Activate Alarm mode if the rule has been triggered – select to activate	
		Alarm mode in the Dispatch Console if Regions Control rule has been	
		triggered;	
		• Send Text Message to a radio if the rule has been triggered – select to	
		inform radio subscriber if Regions Control rule has been triggered;	
		Activate Lone worker if the rule has been triggered – allows	
		automatically activating a Lone worker policy for a radio in case of	
		Speed and Idle Control – select to enable speed and idle control:	
		<b>Control mode</b> – select the control mode for speed and idle control in the	
		drondown list:	
		• Maximum Speed – set the maximum speed for radio;	
		Maximum Idle Time – set the maximum idle time for radio;	
		• Activate Alarm mode if the rule has been triggered – select to activate	
		Alarm mode in the Dispatch Console if Speed and Idle Control rule has	
		been triggered;	
Map Region.	General	• Send Text Message to a radio if the rule has been triggered - select to	
Allows to		inform radio subscriber if Speed and Idle Control rule has been triggered;	
configure rules		Send Call Alert to a radio if the rule has been triggered – select to inform	
when radio(s) enters or leaves		radio subscriber if the rule has been triggered;	
		subscriber if the rule has not been triggered.	
region(s).		subschoel in the rate has not been triggered,	
- 5 (-).	Scheduler	See above	
		All regions – select to apply this rule for all regions;	
	Regions. Select	• Only selected regions – select to apply the rule for one or several	
	regions to apply	regions;	
	the rule	<ul> <li>Select all – click to select all regions in the list;</li> </ul>	
		• Deselect all – click to deselect all regions in the list.	
	Radios	See above	
	Lone Worker.	All Tasks – select to apply all tasks, configured by Administrator, when	
	Worker when the	the fute has been triggered;	
	worker when the		



	rule has been triggered	<b>Only selected tasks</b> – select to enable Lone Worker task, configured by Administrator when the rule has been triggered.
Beacons. Allows to configure rules when beacon (s) enters or leaves coverage zone	General	<ul> <li>Control mode:</li> <li>Control entering beacon coverage zone – select to enable the rule when a radio enters beacon coverage zone;</li> <li>Control leaving beacon coverage zone - select to enable the rule when a radio leaves beacon coverage zone;</li> <li>Activate Alarm mode if the rule has been triggered - select to activate Alarm mode in the Dispatch Console if Beacons rule has been triggered;</li> <li>Reset Alarm mode if the rule is not triggered – select to reset Alarm mode in the Dispatch Console automatically if the rule condition was not triggered (e.g., when «Control entering beacon coverage zone» selected and radio enters to the monitored coverage zone and then instantly leaves the zone, alarm mode in the Dispatch Console will be reseted automatically)</li> <li>Send Call Alert to a radio if the rule has been triggered – select to inform radio subscriber if Beacons rule has been triggered – select to inform radio subscriber if Beacons rule has been triggered – select to inform radio subscriber if the rule has been triggered – allows automatically activating a Lone Worker policy for a radio in case of entering or leaving beacon coverage zone. Select to enable this option.</li> </ul>
	Radios	See above
	Beacons. Enables rule for selected beacons	All Beacons – select to apply this rule for all beacons; Only selected beacons – select to apply the rule for one or several beacons.
	Lone Worker	See above.
Radios. Allows use radio(s)1 as a map region and monitor when another radio(s) enters or leaves radio's coverage zone	General	<ul> <li>Control mode:</li> <li>Control Entering Region – select to enable the rule when a radio enters the coverage zone associated with another radio;</li> <li>Control Leaving Regions - select to enable the rule when a radio leaves the coverage zone associated with another radio;</li> <li>Activate Alarm mode if the rule has been triggered - select to activate Alarm mode in the Dispatch Console if Radios rule has been triggered; Reset Alarm mode if the rule is not triggered – select to reset Alarm mode in the Dispatch Console automatically if the rule condition was not triggered (e.g., when «Control Entering Region» selected and radio enters to the monitored coverage zone and then instantly leaves the zone, alarm mode in the Dispatch Console will be reseted automatically)</li> <li>Send Text Message to a radio if the rule has been triggered – select to inform radio subscriber if Radios rule has been triggered – select to inform radio subscriber if the rule has been triggered – select to inform radio subscriber if the rule has been triggered – select to inform radio subscriber if the rule has been triggered in the distance between radios – select a distance in meters. When the distance less than selected value, the rule will be triggered according to settings above.</li> <li>Color of region – select radio coverage zone color.</li> </ul>
	Scheduler	See above
	Regions	Select radio coverage zones the rule is applied for.
	Radios	See above



Lone Worker. Allows configure		<ul> <li>Days of week - select the days to activate the Lone Worker rule;</li> <li>Start time - set the time to start the rule;</li> </ul>
scheduled Lone	General	• Stop time - set the time to stop the rule.
Worker task	Radios	See above
		Select all configured by Administrator Lone Worker tasks or several configured tasks.
	Lone Worker	When Lone Worker task is mentioned as «Disabled», Administrator should enable the task.

# Idle Time

Idle Time feature allows monitor vehicles idle time assigning Telemetry Commands on selected VIOs.

To enable the task go to «Tasks» (1), «Idle Time» (2):

<u>File View Map Tools Help</u>		
Administer	Tasks	<b>U</b>
RadioServer     Gata Server     Gata Database     Horis Parks	✓ Intercom         •0         €0         Fremen         •0         €0         Test Cal         •0         €0           Service inactive         €0         Repeater #1 Slot 1         •0         Repeater #1 Slot 2         •0         ●0	
Your System Dridging     Your System Dridging     Phone Cells     Tasks     Tosks     Crent/Alarm Management     Telemetry     Radio Groups Telemetry     Tools	Add - Dete       Task Name       Agenda       Mage Geofending       Dete       Radio Allocation (sorthe Forms)	Δ
Radio	Image: Solution of Scheduled Task     2       Image: SMS and Email notifications     2       Image: SMS and Email notifications     2       Image: SMS and Email notifications     2	
GPS Positioning		
Job Ticketing		
Text Messages		
Reports and Statistics		
Event Log		
Telemetry		
Administer	44 44 4 Record 3 of 7 > >> >>> 4	(F

Specify the telemetry to set the Idle Time:

 Idle Time
 X

 Start
 VIO:
 1 + Command: High

 Stop
 VIO:
 1 + Command: High

 OK
 Cancel

Start:



• Specify the telemetry **VIO** and **command** to start the Idle Time;

Stop:

• Specify the telemetry **VIO** and **command** to stop the Idle Time.

Administrator can see Idle Time reports and statistics.

Go to **«Reports and Statistics»** (1) and select **Idle Time summary** or Idle **Time detailed** (2) to see the common report about Idle Time:

Reports and Statistics       CPS reports         Wowment details       Image: Statistics         Movement details       Image: Statistics         With costain for period       Image: Statistics         Statistics       Image: Statistics         With costain for period       Image: Statistics         Statistics       Image: Statistics         With costain for period       Image: Statistics         Statistics       Image: Statistics         With costain for period       Image: Statistics         Image: CPS Positioning       Image: Statistics         Image: Reports and Statistics       Image: Statistics         Image: Reports and Statistics       Image: Statistics         Image: Reports and Statistics       Image: Statistics         Image: Report and Statistics       Image: Statistics         Image: Report and Statistics       Image: Statistics         Image: Report and Statistics       Ima	File View Map Tools Help		
Wovement details summary   Section are point of the base   Drive activity summary   Specify or point   Drive activity summary   Specify or point   Spec	Reports and Statistics	GPS reports	<b>L</b>
Stadio   Stadio   Speed for period   Stat Lobic:   Speed:	Movement details	Intércom     Intércom     Image: Comparison of the second description of the second des	
Start Date: \$522/2014 12:00 AM   Data Export End Date:   Data Export End Date:   Text Messages I   Reports and Statistics I	Drive activity summary	Query parameters           Idle time summary           Select data by period:	
iter:   Radio   GPS Positioning   iter:   Radio:   Not defined · · ·   Generate Report   Generate Report   Iter:   Radio:	Data Export	Start Date:         5/22/2014 12:00 AM         •           End Date: <maximum date="">         •           Speed:         1 - m/h         km/h</maximum>	
Image: Sob Ticketing     Image:	GPS Positioning	Filter:       Radio:         Not defined	
Text Messages   Reports and Statistics   Event Log   Telemetry   Radio Allocation	Bob Ticketing	Generate Report	
Event Log  Telemetry  Radio Allocation	Text Messages  Reports and Statistics	1	
(1) Radio Allocation	Event Log Telemetry		
Administer	Radio Allocation           Administer		

Note: specify speed accuracy value in «Speed» field.

### Lone Worker

The Lone Worker policy lets the Dispatcher set a time interval the communication with a subscriber is expected. For example, if a lone worker has not called the Dispatcher for 15 minutes, the radio receives a message and the Dispatcher receives an al arm signal.

To enable the task go to «Tasks» (1), «Lone Worker» (2):



<u>File View Map Tools Help</u>		
Administer	Tasks	6
RadioServer       Icense       Database       Radio Systems	Intercom     Inter	
System Dridging     Priore Colls     Tasks     Event/Alarm Management     Genetry     Radio Groups Telemetry     Tools     Tools	Add •	Δ
Radio	✓ Scheduled Task     2       ✓ Image: SMS and Email notifications     2       □ By User Activity     2	
Job Ticketing		
Text Messages		
Reports and Statistics		
Event Log		
P Telemetry		
Radio Allocation		
Administer	111 41 4 Record 1 of 8 + 1+ 111 4	

Task start – specify Lone Worker task start properties:

Lone Worker	×
<u>T</u> ask name:	Lone Worker
Task Start Condi	tions Task Stop
Manually (on	demand of dispatcher)
Automatically	by receiving Text Message from a radio
Message:	
Automatically	by receiving Telemetry Command from a radio
<u>v</u> IO:	1 <u>C</u> ommand: High level
Automatically	by receiving DTMF command from subscriber
Command:	
Send Text Me	essage to a radio
Message:	alarm
	OK Cancel

• Manually (on demand of Dispatcher) – select to start Lone Worker task manually;



- Automatically by receiving Text Message from a radio select to start Lone Worker task after receiving a message (specify the message text in the Message field);
- Automatically by receiving Telemetry Command from a radio select to start Lone Worker task after receiving telemetry. Specify VIOs (1 to 5) and the Command;
- Automatically by receiving DTMF command from subscriber select to start Lone Worker task after receiving a predefined DTMF command (specify the command in the Command field).

Lone Worker		×		
Task name:	one Worker			
Task Start Condition	ons Task Stop			
Radio has not bee	en transmitting during	30 📩 minutes		
Send a notifica	Send a notification to a radio to start transmitting			
Send notificati	on before	60 🔿 seconds		
Send Call A	lert to a radio			
Send Text	Message to a radio			
Message:				
		OK Cancel		

**Conditions** – specify alarm mode settings for Lone Worker:

- Radio has not been transmitting during ... minutes specify time period when radio do not transmit to enable Lone Worker policy;
- Send a notification to a radio to start transmitting select to send notification to a radio before triggering the policy when a subscriber has not transmitted during selected time period;
- **Send notification before** ... **seconds** set the time after the notification for the radio to respond before triggering the Lone Worker policy;
- Send Call Alert to a radio select to send a call alert to a radio in case the policy has been triggered;
- Send Text Message to a radio select to send a text message to a radio in case the policy has been triggered (specify the message text in the Message field).


Task stop - specify Lone Worker task stop properties:

Lone Worker	×
Task name:	Lone Worker
Task Start Cond	itions Task Stop
Manually (on	demand of dispatcher)
Automatically	y by receiving Text Message from a radio
Message:	test message
Automatically	y by receiving Telemetry Command from a radio
<u>V</u> IO:	1 <u>Command:</u> High level
Automatically	y by receiving DTMF command from subscriber
Command:	123456 #123456#
	-
Cond Tout M	
Send Text M	essage to a radio
Message:	
	OK Cancel
L	

- Manually (on demand of Dispatcher) select to stop Lone Worker task manually;
- Automatically by receiving Text Message from a radio select to stop Lone Worker task after receiving a message (specify the message text in the Message field);
- Automatically by receiving Telemetry Command from a radio select to stop Lone Worker task after receiving telemetry. Specify VIOs (1 to 5) and the Command;
- Automatically by receiving DTMF command from subscriber select to stop Lone Worker task after receiving a predefined DTMF command (specify the command in the Command field).

To enable Lone Worker feature for selected Radio go to **Radio** section (1), right-click selected radio (2) and select **Start Lone Worker** (3):



#### Administrator Activity in the Dispatch Console

adio	Radi	o Interface								
三百品 🤌	K Y 🕲 Rad	lio Interface Rec	ent Calls/Events	Extended	Messages		-			
💰 🕑 Worke				Active Calls			×	Quick Comn Configure TX Passi	ve (	
New Radio G	r1 Presence in Network Request Location	Service inactive. −*pil ≠2		Cal #1		n C (5)		Record  Record	file +	
Radio	Find on Google Earth Show Route on Google Earth Google Street View Yandex Street View	Intercom Bro	adcast Call	•				Voice Message CrossPal	tch	
Job Ticketi	Private Call Send Message Send Call	Sess Free	ion: : channel				. 7	Patch on Rep	eaters	5
Route Han	Remote Monitor (Open mic)	alls/Events								
- 1 8	Disable Radio	aack in Save	II Pause 🥩	Clean 🌀 Rel	oad 1 Fil	ter By Radio 📑 Groupin	ng 🍸 Aut	to Filter 🍈 D	efault Setting	s
Text Messa	Check Printer Availability		♥ Control St	Sender	Recipient	Message		Note	Ext. Note	
	Reset GPS Trigger	1.2013 14:00:00		RadioServer	Al	The Control Station for th	ns operat	-		
Reports an	Monitoring in New Window	1.2013 13:00:00		RadioServer	A	The Control Station for th	ns operat.			
	Specify Custom Icons	. 2013 12:00:00		RadioServer	41	The Control Station for the	is operat	-		
Event Log	VI01	2013 17:57		Test radio	Al	Stop Lone Worker	is operat			
	Set On Duty	1.2013 17:56:50	1	Test radio	Al	Lone Worker				
Telemetry	Set User Activity #1	1.2013 13 .0123		Test radio	AL	Stop Lone Worker				
		12 17 10.56		Test radio	Al	Lone Worker				
	Start Lone Worker	10 1/:49:30		19921 69919						

### To monitor Lone Worker task go to Active Tasks tab:

Eile View Map Iools Help				
Radio	Radio Interface	and the second second second second		
BEES XY Q	Radio Interface R	ecent Calls/Events Extended Messages		
		Active Calls	X Quick (	Commands 🛛 🗙 📩
🗉 🧖 Online Dispatch	3		Configure	
e Administrator				Providence (PE)
	±			Passive X
	Service inactive		A Record	d 🕶 💪 File 💌
Worker - C	Tester		= To: Select	ed Control Stations
(a) worker	U81 #2		Alarm Ic	ine di la constante di la cons
🙈 🕑 Worker1 🛛 📮 😴	G			oice Message
💰 🧭 Workert 🛛 📮 🔮	Intercom		Voice Mes	sage
(4) (A midned)				
Radio	PTI	roadcast Call 🔹	Cros	ssPatch 🗙 –
Test 1			Drag and D	Orop Control Station
GPS Positioning	Se	ssion:	There to	create new group
1×0	Fre	ee dhannel		
Job Ticketing			- Patch or	Repeaters -
Route Management	Active Tasks			1¥
Note Presidential	📕 Stop 🖷 Grouping	g 🍟 Auto Filter 🧼 Default Settings		
Text Messages	Task	Radio	State	
	Lone Worker	Worker 1	14:36	→ 15:06
Reports and Statistics	New route 1	Worker1 (USER.1)		
-				
Event Log				
1 Telemetry			A	
( The second sec				
Las Radio Allocation		a la		
Administer	144 44 4 Record 1 of 2	* 1* 1* 1		
4Co . Handred .	Recent Calls/Events Rec	cent Calls Radio State Active Tasks Active Routes U	Ser Activity	



To enable Lone Worker go to **GPS Positioning** section (1) and click **«Geofencing»** button (2):



Select Add Rule - Lone Worker (1):

Geofencing and Speed Control			×
Rules	General Radios Lone	Worker	
Rule 1			
✓ Lone Worker 1	Name:	Lone Worker 1	
	Description:	Department 1	
	Days of week:	Monday, Tuesday	•
	Start time:	4:00 AM	
	Stop Time:	12:00 AM	
Add Rule    Disable  Map Region	e Rule Delete	Rule	OK Cancel
🥯 Beacons			
😣 Radios			
🎦 Lone Worker			

Select Name for Lone Worker rule and add description.



- **Days of week** select the days to activate the Lone Worker rule;
- Start time set the time to start the rule;
- **Stop time** set the time to stop the rule.

Go to Radios tab and add radios to apply Lone Worker rule:

Geofencing and Speed Control	
Rules	General Radios Lone Worker
Rule 1	
Lone Worker 1	Select radios the rule is applied for:
	All radios
	Only selected radios
	Radios
	Radio 3737
	✓ Radio 3838
	Radio 3939
	Radio 4040
	Radio 4141
	Radio 4242
	✓ Radio 4343
	Radio 44
	Select All Deselect All
Add Rule	2 Kule Ukelete Rule UK Cancel

- All radios select to apply this rule for all radios;
- **Only selected radios** select to apply the rule for one or several radios;
- Select all click to select all radios in the list;
- **Deselect all** click to deselect all radios in the list.



Rules	General Radios Lone Worker
Rule #1	
Lone Worker Rule	Select the tasks to be executed when the rule is triggered
	🔿 All tasks
	Only selected tasks
	Lone Workers /
	Lone Worker (disabled)
	V Lone Worker 2
	Select All Decelect All
Add Rule 🔻 Disable	e Rule OK Cancel

Go to Lone Worker tab and select configured Lone Worker tasks:

Select all configured Lone Worker tasks or several configured tasks.

When Lone Worker task is mentioned as **«Disabled»**, enable the task on **Tasks** page.

### Radio Allocation (Sprite Forms)

This function is used for direct communication between the Dispatcher and the subscriber via special **Tallysman Option board** installed into the radio. Dispatcher and subscriber have special form templates. Dispatcher receives Duty ID of the subscriber with his template output form whereas the subscriber sends it using template input form. Radio name changes to its Duty ID.

**Note:** any activity may be decoded with its Duty ID so it is the way to communicate for Dispatcher and subscribers only.





To enable the task go to **«Tasks»** (1) , **«Radio Allocation (Sprite forms)»** (2):

<u>File View Map Tools Help</u>		
Administer	Tasks	
RadioServer	Intercom     Inter	
Phone Call     Phone Call     Phone Call     Tasks     Cvent/Alarm Management     Telemetry     Radio Groups Telemetry     X Tools	Image: Second	۵
Radio	Image: String	
GPS Positioning	User Activity	
🕁 Job Ticketing		
💓 Route Management		
Text Messages		
Reports and Statistics		
Event Log		
Telemetry		
E Radio Allocation		
Administer	144 44 Record 5 of 8 > 1 > 1 = 1 = 1	
🝈 127.0.0.1 🎯 🔂 🔂 🔔 🗘 Warr	ning! You are logged as Administrator 🔠 Licensed to: Neocom Software Ltd	

### Load the Sprite Form (output template) and select the Field Name:

Shift Radio Name (Sprit	te Form)	ē	X
Form Description:			
APP_VERSION1=0.1/ APP_VERSION2=1 DATE_MODIFIED=12 FORMATTED= 0203000FB98C0AF50 0FB00F50253686966 AS_ARRAY=0x02, 0x 0x4E, 0x5A, 0x20, 0x4 0x05, 0x00, 0x02, 0x8 0x68, 0x69, 0x66, 0x7 0x78, 0x1E METADATA=0008000 FORM_TITLE=NZ Bu FORM_TITLE=NZ Bu FORM_ID=2 FORM_REVISION=3 [Field Data #0] Promot="Shift number"	4 2/12/2012 8:21:05 a.m. 12FB004E5A204275730180000001061805000 74206E756D62657235AD781E 03, 0x00, 0x0F, 0xB9, 0x8C, 0x0A, 0xF5, 0x02 12, 0x75, 0x73, 0x01, 0x80, 0x00, 0x00, 0x01, 7, 0x68, 0xCE, 0x0F, 0x10, 0xFB, 0x00, 0xF5, 4, 0x20, 0x6E, 0x75, 0x6D, 0x62, 0x65, 0x72, 0000000000 s	)28768CE ;, 0xFB, 0x 0x06, 0x1 0x02, 0x5 0x35, 0x4	x0F1 000. ≡ 3. , , , , , , , , , , , , , , , , , , ,
Field Name:	Shift number		.oad
	OK	G	ancel



Click «OK» to add a Sprite Form.

## Scheduled Task

This function allows sending scheduled messages to radios.

To enable the tasks click **«Add**» button (1), **«Scheduled task**» (2):



Task name – specify a name for the task.

**Command** – specify a command for scheduled task.

Send text message - select to send text message to selected subscribers:



Scheduled Task	x
Task name:	Scheduled Task
Command Sche	duler
Command:	Send Text Message
Message:	alarm
Send to rad     Send to sub     Recipient     45     New Radio     Radio Grou	io group sscribed radio Group p_region 45
	OK Cancel

- Message type in message text;
- Select send options: send to radio group or send to subscribed radio.
- In the **«Recipient**» field specify radio group or radios to send text message.

Send Telemetry – select to receive scheduled telemetry from selected subscribers:

Sc	cheduled Task
	Task name: Scheduled Task
	Command Scheduler
	Command: Send Telemetry
	VIO: VIO 2  Command: Query state
	C Send to radio group
	Send to subscribed radio
	Recipient
	Vorker1
	Worker 1
	Worker 1
	<u> </u>
	OK Cancel

- Specify **VIO** and **Command** to receive telemetry from selected subscribers.
- Select send options: send to radio group or send to subscribed radio.
- In the **«Recipient**» field specify radio group or radios to receive telemetry data.

Request location - select to receive selected radios location data:



Scheduled Task		x
Task name:	Scheduled Task	
Command Sch	eduler	
Command:	Request Location	-
Recipient		
	OK Canc	el

• In the «Recipient» field specify radio group or radios to receive radio's location data.

Send voice message - select to send voice message to selected subscribers:

cheduled Task		X
Task name: Schedul	ed Task	
Command Scheduler		
Command: Send	Voice Message	•
Load from file           Record message           Playback message		
Call Type	∇ Channel	Call Target
Private Call	Auto Detect	Test radio 🔻
Broadcast Call	L Control Station #	1
Add × Remove	255	

- Load from file choose to load an existing file from your PC;
- Record Message choose to record new message;
- Playback message choose to playback an existing message.

Specify **call type**, **channel** and **call target** for voice message:

**Note:** to send a Voice Message to a subscriber from a phone book click  $\frac{1}{2}$  button in the Call Target column and select the contact in the phone book.



• **Impolite channel access** - the radio will always transmit when the Push-to-Talk (PTT) button is pressed (not available in a Capacity Plus Personality channel).

s	cheduled Task				×
	Task name: Schedu	iled Task			
	Command Scheduler				
	Start date:				•
	Stop date:				•
	Days of week:	(All days)			•
	• Execute recurrently v	with interval			
	Start time:	15:00	<b></b>		
	Stop time:	18:00	<u>+</u>		
	Repeat every:	01:00:00	<b>•</b>		
	C Execute at particular	time			
				ОК	Cancel

**Scheduler** – set scheduler parameters:

- Start date select a date to start the task;
- **Stop date** select a date to stop the task;
- Days of week select days of week to export the data;
- **Execute recurrently with interval** select to set frequency of data export:
- Start time specify time to start data export;
- Stop time specify time to stop data export;
- Repeat every specify time period to export data;
- **Execute at particular time** select export time in columns of table below.

#### SMS and Email Notifications

TRBOnet Dispatch Software allows manage text messages:

1. Send Text Messages from LAN to a particular radio or talk group (POP3 Server);

2. Forward all Text Messages from radios to base radio to particular email address (SMTP Server).

**Note:** Microsoft Exchange Server can be used as SMTP and POP3 servers. For more details on SMTP or POP3 servers ask your System Administrator.



dminister	Tasks	
RadioServer	Intercom     Il € 0     Firemen     Il € 0     Firemen     Il € 0     Test Col     Il € 0     Repeater #1 Slot 1     Il € 0     Repeater #1 Slot 2     Il € 0	
Radio Systems		
System Bridging	📑 Add 🔹 📴 Edit 📑 Delete	
Phone Calls	Task Name	
Event/AlamManagement	Apenda	
Telemetry	V Ing Geotenang	
Radio Groups Telemetry	V (g) Ide Ime	
🔀 Tools	Lone Worker	
Tamolate Maker	Radio Allocation (Sprite Forms)	
Radio	Mission SMS and Email notifications	
	□ 🔐 User Activity	
GPS Positioning	· · · · · · · · · · · · · · · · · · ·	
Job Ticketing		
Route Management		
Text Messages		
and the second second		
Reports and Statistics		
La contrator		
Event Log		
Talamata		
Telemetry		
Telemetry		
Telemetry Radio Allocation		
Telemetry Radio Allocation		

To enable the task go to **«Tasks»** (1), **«SMS and Email notifications»** (2):

### SMS settings - set parameters for SMS sending:

SMS and Email notifications	×
SMS settings Outgoing Email settings (SMTP) Incoming Email settings (POP3)	
Send SMS to recipients if ALARM has been activated	
Send MMS to recipients if ALARM has been activated	
Forward Text Messages to cell phone recipients	
Input messages (from radionetwork to dispatchers)	
Output messages (from dispatchers to radionetwork)	
ОК	Cancel



- Send SMS to recipients if ALARM has been activated select to send SMS in case of Alarm on the radio;
- Send MMS to recipients if ALARM has been activated select to send MMS in case of Alarm on the radio;

#### Forward Text Messages to cell phone recipients

- Input messages (from radio network to Dispatchers) select to forward incoming text messages to cell phone;
- **Output messages (from Dispatchers to radio network)** select to forward outgoing text messages to cell phone;

For more details on sms settings go to

#### Outgoing email settings (SMTP)

A radio sends text messages to base station. TRBOnet RadioServer forwards all text messages to a particular email address (e.g. <u>admin@yourcompany.com</u>). Administrator receives text messages from radios as regular emails.

Configure outgoing email parameters:

SMS and Email notifications
SMS settings Outgoing Email settings (SMTP) Incoming Email settings (POP3)
Send Email to recipients if ALARM has been activated
Forward Text Messages to email recipients
Input messages (from radionetwork to dispatchers)
Output messages (from dispatchers to radionetwork)
OK Cancel

 Send Email to recipients if ALARM has been activated – select to send Email in case of Alarm;



#### Forward Text Messages to email recipients

- Input messages (from radio network to Dispatchers) select to forward incoming text messages to Email address(es);
- Output messages (from Dispatchers to radio network) select to forward outgoing text messages to Email address(es);

#### Incoming email settings (POP3)

Sending emails to a dedicated email address (e.g. radioserver@yourcompany.com).

TRBOnet RadioServer connects to POP3 server, reads emails and sends text messages to radios or talk groups.

1. Create an email account on your email server.

2. Send an email to <u>radioserver@yourcompany.com</u>. In the **«Subject**» field type in **Radio ID**: XXX to send an email to selected radio or **Group ID**: XXX to send an email to selected radio group.

**Note:** If you did not specify the **«Subject**» of email properly or specify not existing **RadiolD**, you will see an appropriate notification in the Event Log of Dispatcher Console.



Configure incoming email parameters:

SMS and Email notifications	
SMS settings Outgoing Email settings (SMTP) Incoming Email settings (POP3)	
Forward incomming emails to radionetwork (from emailbox to radios)	
	OK Cancel

• Forward incoming emails to radio network (from email box to radios) – select to forward incoming emails to radio network;

# **User Activity**

The **User Activity** function allows the Dispatcher make lists of subscribers can be assigned to due to their activity.

For example, if a subscriber sends a message "**On duty**" or presses an exact preset telemetry button, this subscriber gets assigned to the "**On duty**" list in the Remote Dispatcher Console. The Dispatcher can also assign subscribers to lists manually.



Administer	Tasks	<u></u>
RadioServer -		
License		
U Database	Service nactive Repeater #1Stol 1 1 Repeater #1Stol 2 1 Repeater #1Stol 2	
System Dridging	🔁 Add - 📑 Edit 🔄 Delete	
- De Phone Calls	Task Name	Δ
Tasks 🔨 1	🗆 🗑 Agenda	
Event/Alarm Management -	🐱 🕍 Geofencing	
Telemetry	🖌 🎡 Ide Time	
Radio Groups Telemetry	V Stane Worker	
Tamplate Maker	🖌 🐼 Radio Allocation (Sprite Forms)	
	SMS and Email notifications	
Radio	Viser Activity	
Job Ticketing Koute Management Text Messages		
Reports and Statistics		
Cvent Log		
1 Telemetry		
Radio Allocation		

#### To enable the tasks go to «Tasks» (1), «User Activity» (2):

# Lists of radios – configure lists of radios parameters:

55 011	adios A	dvanced					
Na	me		Desc	ription			
🛞 Off	Duty						
🖲 On	Duty						
🛞 Use	er Activity	#1					
		Ad	id	Ē	Edit		Delete
						ОК	Cance



User Activity List Set	tings			
Name:	User Activity #1			
Description:				
Background:	S Violet			
Move a radio to th	is list if:			
Manually (on d	Manually (on demand of dispatcher)			
Automatically I	by receiving Text Message from a radio			
Message:				
Automatically	by receiving Telemetry Command from a radio			
<u>V</u> IO:	1 🔄 Command: High level			
Automatically	by receiving DTMF command from subscriber			
Command:				
	OK Cancel			

- Name specify a name for new user activity list;
- **Description** add a description for new user activity list;
- **Background** select the background color to display the subscribers assigned to the list;

Move a radio to this list if:

- Manually (on demand of Dispatcher) select to assign subscribers to the list manually;
- Automatically by receiving Text Message from a radio select to assign a radio to the list after receiving a message (specify the message text in the Message field);
- Automatically by receiving Telemetry Command from a radio select to assign a radio to the list after receiving telemetry. Specify VIOs (1 to 5) and the Command;
- Automatically by receiving DTMF command from subscriber to assign a radio to the list after receiving a predefined DTMF command (specify the command in the Command field).



To assign an offline subscriber to the default User Activity list, go to the **Advanced** tab:

User Activity
Lists of radios Advanced
Automatically set the default status for offline radios
Set the default status 10 🚔 minutes
OK Cancel

- Automatically set the default status for offline radios select to allow assign the default status for offline radios;
- Set the default status specify time period to set default status to a subscriber.

### Voice Message

The Voice Message allows automatically broadcasting a predefined Voice Message after receiving telemetry, a text message or a DTMF command.



To enable the tasks	; go to « <b>Tasks</b> » (1) ,	«Voice Message» (2):
---------------------	--------------------------------	----------------------

Administer	Tasks	<u></u>
RadioServer	Intercom	
License Database		
- La Radio Systems	V service nactive	
System Bridging	🛃 Add 🗸 🔂 Edit 🔤 Delete	
	Task Name	4
	🗆 🚝 Agenda	
Event/Alamatanagement	🔽 🉀 Geofencing	
Radio Groups Telemetry	🗹 💮 Ide Time	
E-X Tools	🗹 💁 Lone Worker	
Tamnista Makar	🗹 🍪 Radio Allocation (Sprite Forms)	
1.1 pada	🛃 🙀 SMS and Email notifications	
Kadio	🗹 灥 User Activity	
CDS Postilisation	V Voice Message	
- Grarostoning		
10b Ticketing		
<b>65</b>		
😥 Route Management		
C Text Messages		
Reports and Statistics		
Cvent Log		
Telemetry		
Radio Allocation		

Click **«Add**» button to add a voice message task. The user can have several Voice Message policies for different purposes. Specify the name of the policy in the **Task name** field and set the policy's parameters.



Voice Message	<b>— X —</b>					
Task name:	Voice Message					
Task Start Task	Process Task Stop Message Telemetry					
Manually (on	demand of dispatcher)					
Automatically	y by receiving Text Message from a radio					
Message:						
Automatically	y by receiving Telemetry Command from a radio					
<u>v</u> Io:	1 <u>Command:</u> High level					
Automatically	y by receiving DTMF command from subscriber					
Command:						
Automatically	/ by receiving Emergency from subscriber					
Emg. Type:	All					
<ul> <li>Activated by</li> </ul>	/ any radio					
Activated by	specific radios only					
Radio:	Worker1					
Send Text M	essage to a radio					
Message:	test message					
	OK Cancel					

**Task start** – set parameters to control the start of the policy:

- **Manually (on demand of the Dispatcher**) select to allow the Dispatcher start Voice Message manually;
- Automatically by receiving Text Message from a radio select to start Voice Message after receiving a message from a subscriber (specify the message text in the Message field);
- Automatically by receiving Telemetry Command from a radio select to start Voice Message after receiving telemetry: set the telemetry VIO (1 to 5) and the Command (High, Low or Pulse);
- Automatically by receiving DTMF command from subscriber select to start Voice Message after receiving a DTMF command from radio subscriber (specify the command in the Command field, e.g. 1221);
- Activated by any radio filter to receive data for enabling task. Select to receive data from any radio in the system;
- Activate by specific radios only filter to receive data for enabling task. Select to receive data from selected radios in the system;
- Send Text Message to a radio select to notify with a text message when Voice Message starts (specify the message text in the Message field);

Task Process – specify Voice Message transmitting parameters:



Voice Message
Task name: Voice Message
Task Start Task Process Task Stop Message Telemetry
C Send voice message once
Send voice message repeatable
Repeat Interval: 60 🚖 second(s)
Repeat Count: 10 📥
Impolite channel access
OK Cancel

- Send Voice Message once select to send voice message to a selected radio (s) once;
- Send Voice Message repeatable specify Repeat Interval and Repeat Count if you need to send Voice Message more than once;
- **Impolite channel access** the radio will always transmit when the Push-to-Talk (PTT) button is pressed (not available in a Capacity Plus Personality channel).

32



	• •		,
ĺ	Voice Message		
	Task name:	Voice Message	

**Task stop** – set parameters to control the stop of the policy:

Task name: Voice Message
Task Start Task Process Task Stop Message Telemetry
Manually (on demand of dispatcher)
Automatically by receiving Text Message from a radio
Message:
Automatically by receiving <u>Telemetry</u> Command from a radio
VIO: 1 Command: High level
Automatically by receiving DTMF command from subscriber
Command:
Send Text Message to a radio Message:
OK Cancel

- Manually (on demand of the Dispatcher) select to allow the Dispatcher stop Voice • Message manually;
- Automatically by receiving Text Message from a radio select to stop Voice Message after receiving a message from a subscriber (specify the message text in the Message field);
- Automatically by receiving Telemetry Command from a radio select to stop Voice Message after receiving telemetry: set the telemetry VIO (1 to 5) and the Command (High, Low or Pulse);
- Automatically by receiving DTMF command from subscriber select to stop Voice Message after receiving a DTMF command from radio subscriber (specify the command in the Command field e.g. 2112);
- Send Text Message to a radio select to notify with a message when Voice Message starts (specify the message text in the Message field).

**Message** – specify Voice Message file parameters:



Voice Message			
Task name: Voice Mes	sage		
Task Start Task Process T	ask Stop Message Tele	metry	
Load from file			
Record message			
Playback message			
Call Type	Channel	Call Target	
Group Call	낦 Call #1	Radio Group_region 45	
Broadcast Call	LI Control Station #1		
Phone Call	SIP Interconnect	Worker 45 ···	
Add X Remove			
	(	OK Cancel	

- Load from file choose to load an existing file from your PC;
- **Record Message** choose to record new message;
- **Playback message** choose to playback an existing message.

Specify **call type**, **channel** and **call target** for voice message:

**Note:** to send a Voice Message to a subscriber from a phone book click  $\frac{1}{2}$  button in the Call Target column and select the contact in the phone book.

**Telemetry** – set telemetry transmission options:



Task name: Voice Message
Task Start Task Process Task Stop Message Telemetry
Send Telemetry before starting task
VIO: 1 Command: High level
Send Telemetry after stopping task
VIO: 1 🚔 Command: Low level 💌
Recipient:
OK Cancel

- **Send telemetry before start task** select to send telemetry before voice message will be transmitted.
- Specify **VIO** and **Command** to send the telemetry.
- Send telemetry after stop task select to send telemetry after voice message will be transmitted.
- Specify **VIO** and **Command** to send the telemetry.
- **Recipient** select the radio to send the telemetry.

Click «**OK**» to save voice message policy settings.

# Scheduled Report

Scheduled Report task allows to reports on selected parameters and send these reports to selected email subscribers groups.

**Note:** Before configuring the task you need to create a number of email groups to send reports to. *For more detail on Email groups see <u>Email Groups</u> section.* 



<u>File View Map Tools H</u> elp	
Administer	Tasks
RadioServer  RadioServer  Database  Radio Systems  System Bridding	Intercom       ●       ●       Fremen       ●
Phone Calls Tasks Event/Asem Management Telemetry Radio Groups Telemetry	Image: Second
Radio	Scheduled Report     Forms)       Image: SMS and Email notifications       Image: SMS
GPS Positioning	
Route Management	
Reports and Statistics	
Event Log	
Radio Allocation	
Administer	III         III         IIII         IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII

Go to **Tasks (1)** > **Scheduled Report (2)** to configure report parameters:

Click **«Add**» button to add a scheduled report task. The user can have several Scheduled Report policies for different purposes.

Specify the name of the policy in the **Task name** field and set the policy's parameters.



Scheduled Report				
Task name: Voice Recording				
Report Scheduler				
System reports Registered Radios	Â	Select data by per	riod:	
GPS Status		Start Date:	10/14/2014 12:00 AM	
System Bridging activity		End Date:	<maximum date=""></maximum>	
Voice Recording		Filter:		
···· Messages for period		Call Type:	Intercom call, Phone Call, A 🔻	
State of Radios User messages and notes	Ξ	Radio System:	Selected items: 1	
Radio allocation		Members:	Selected items: 10 💌	
Radio disabling User connection history		Group:	All	
Telemetry		Logical Group:	All	
Radio Users by Channel Job ticketing Channe inh status		Radio ID (e.g. 22,33,	40-55,88):	
List Finished Routes		Find Text:		
Indoor reports				
Movement details Movement details summary		🗌 Hide zero length a	udio message	
Visited Beacons	-			
CDS reports				
			OK Cancel	

On the **"Report**" tab Administrator can select a Report type for Scheduled Report task.

Report details and filter might be different.

For more details on reports see User Guide "Reports and Statistic" section.

Go to "Schedule" tab to configure periodical report sending.

Example: security organization management needs to monitor employees' communications during the working day. The Management needs to receive the data for a 1 week, the organization working hours are from 10 AM to 8 PM (the report must include voice recording data for 8 working hours). Administrator created email group "**Managers**" to send reports.

On the screenshot below you can see required schedule settings for the monitoring:



Scheduled Report		×
Task name: Voice R	tecording	
Report Scheduler		
Start date:	21 October 2014	•
Stop date:	28 October 2014	•
Days of week:	Monday, Tuesday, Wednesday, Thursday, Friday	•
Interval:		
Start time:	8:00 PM (-)	
Email groups:		
	Terminal 2	
	Security	
L	ок	Cancel
		it.

• **Start date and stop date** – select the time period to generate reports and sent them to email group;

**Note:** Start date may be any date you want to start the task. Stop date must be later or equal the actual date.

- Days of week select days you want to generate reports;
- Interval > the last select time period (in minutes, hours, weeks, etc.) to collect the data.

**Note:** set "the last" period you want to receive reports for, the data beyond this time period will not be included in the report. E.g. you want to receive the data from 10 AM to 8 PM, so, "the last" interval is 8 hours.

- **Start time** select time to start report generating.
- Email groups select email groups in the list to send report to.

Click "OK" to save reports' settings.





The report displayed in the tasks list:

<u>File View Map Tools Help</u>		
Administer	Tasks	
RadioServer	Test Graqe	
Radio Systems     System Bridging     Phone Calls	a Add - Delete Iadk Name □ A Agenda W B Generada	Δ
Idaks     Event/Alarm Management     Light Telemetry     B Radio Groups Telemetry     Groups Telemetry	Image: Construction       Image: Constr	
GrS Profile	Image: SMS and Email notifications       Image: SMS an	
GPS Positioning		
Route Management		
Text Messages		
Reports and Statistics		
Fvent Log		
Telemetry		
Radio Allocation		
Administer	144 44 Record 9 of 9 + 10 114 4	E

Do not forget to enable the task – put the checkbox in front of scheduled report task you have already created.

There are three types of Scheduled reports statuses icons:

- Green active task. The task enabled (checked).
- Grey inactive task. The task disabled (unchecked).
- Red disabled task. Task period is up in the past.

#### **Event/Alarm Management**

**Event/Alarm Management** feature allows to create action rules for Alarms, Emails, Notifications, Text Messages to radios etc. When configured rule is accomplished, configured action starts.

For example, an external application sends text data which contains «alarm» text to TRBOnet software. «Alarm» text is configured as a rule to start voice messaging to selected recipients radios (e.g. firemen group) with predefined voice message (e.g. «Alarm in Sector N»). Finally, firemen group is notified about emergency condition.



Go to **Administer (1)**, **Event/Alarm Management (2)** to set Event/Alarm Management:

<u>File View Map Tools Help</u>		
Administer	Event/Alarm Management	<u></u>
Radio Systems		
Fvent/Alarm Management	Add 😼 Edit 📑 Create a Copy 🔂 Delete	
Telemetry	Name	۵
Radio Groups Telemetry	COM POrt Connection 1	
-X Tools -	External Network Connection 1	
Radio	3	
GPS Positioning		
🙀 Job Ticketing		
💓 Route Management		
V Text Messages		
Reports and Statistics		
Event Log		
1 Ielemetry	1	
Radio Allocation		
Administer 🦛	144 44 4 Record 1 of 3 9 7 7 7 14	

Click «Add» button (3) to add new Event/Alarm Management configuration.

Administrator can create a copy of existing Event/Alarm Management configuration. Select configuration in the list and click Create a Copy button. The system will create a copy with the same configuration parameters.



Go to **Source** page (1) and click button (2) to add new data source for the action:

Name	Event Source		
1	Event. Activated by an Activated by sp Pacilos: Text Contains:	Text Message Text Message Telemetry DTMF LCM Port External Network Connection Alarm Radio state	
2		OK Cancel	

**Event** – select event in the dropdown list to set it as a rule for an action (3).

Variable settings for event source see in the table below:

Event Type	Parameters Description
Text Message	<ul> <li>Activated by any radio – filter to receive text messages with predefined text from any radio in the system to enable the action;</li> <li>Activate by specific radios only - filter to receive text messages with predefined text from selected radios in the system to enable the action;</li> <li>Text Contains – specify the text or digits text messages from radios should contain to start an action, selected on Action page.</li> </ul>
Telemetry	<ul> <li>Activated by any radio – filter to receive telemetry data from any radio in the system to enable the action;</li> <li>Activate by specific radios only - filter to receive telemetry data from selected radios in the system to enable the action;</li> <li>VIO – select VIO to send telemetry;</li> <li>Command – specify a command for selected VIO.</li> </ul>
DTMF	<ul> <li>Activated by any radio – filter to receive DTMF command from any radio in the system to enable the action;</li> <li>Activate by specific radios only - filter to receive DTMF command from selected radios in the system to enable the action;</li> <li>Command – specify DTMF command to start an action.</li> </ul>
COM Port	<b>COM Port</b> – select COM Port connection configured in Server Configurator; <b>Regular Expression</b> – specify the text or digits the data from external application should contain to start an action, selected on <b>Action</b> page. For more details on regular expressions see <u>wiki</u> article.



External Network Connection	<b>Connection</b> – select connection configured in Server Configurator on <u>TCP/IP</u> page; <b>Regular Expression</b> – specify the text or digits the data from external application should contain to start an action, selected on <b>Action</b> page. For more details on regular expressions see <u>wiki</u> article.
Alarm	<ul> <li>Activated by any radio – filter to receive an alarm from any radio in the system to enable the action;</li> <li>Activate by specific radios only - filter to receive an alarm from selected radios in the system to enable the action;</li> <li>Alarm – select alarm type in the dropdown list.</li> <li>Emergency Alarm – alarm configured in radio Code Plug;</li> <li>Man Down – subscriber positioning monitoring;</li> <li>No Movement – subscriber movement monitoring;</li> <li>Crash Detect – subscriber speed and sudden stop monitoring;</li> <li>Geofencing - control location and speed of radios respectively to manually specified regions on a map.</li> </ul>
Radio State	<ul> <li>Activated by any radio – filter to receive radio state data from any radio in the system to enable the action;</li> <li>Activate by specific radios only - filter to receive radio state data from selected radios in the system to enable the action;</li> <li>Radio is detected as online – when radio state «Online» comes, the action starts;</li> <li>Radio is detected as offline - when radio state «Offline» comes, the action starts.</li> </ul>

**Note:** check the event you want to enable. In case no one event selected all configured events are disabled by default:

Event/Ala	rm Management		X
Name:	COM POrt Cor	noction 1	
Source	Location Action		
	Name	Description	
V	Text Message	Active Radios: All: Text: test:	
V	COM Port	Port: COM2; Text: alarm;	
	Add Edt	Delete	
			OK Cancel

Go to **Location** page (1) to set regions for the action. When Location rule enabled and a region is selected events, mentioned on **Source** page should take place in the selected region to start the action.

**Note:** when source event **COM Port** and/or **External Network Connection** selected, **Location** rule should not be used.



Event/Alarm Management
Name: External Matured Connection 1
Source Location Action
🗸 Enable 🚤
⊘ All Regions
Selected Regions
Region /
Test region
Select All Deselect All
OK Cancel
h.

Check **«Enable»** (2) to apply **Location** rule to the action.

- All Regions select to use Source Event rule in all map regions to start the action;
- **Selected Regions** select to use Source Event rule to start the action only in selected regions.

Go to **Action** page (1) to set actions for **Source Event** and **Location** rules. In the Actions list Administrator can add and configure action types to be started when rules, configured on Source and/or Location pages, will be accomplished.

Click Add button (2) to add an action:



Event/Alarm Management				23
Name: External Network	Connection 1			
Source Location Action	Action		<b>—</b>	7
Name	Action Type:	Alarm	•	
	Set alarm mode fo	the Email Job Ticket Notification Request Location		
	3	SMS System Bridging Telemetry		
		Text Message Text to Speech Voice Message		
2				
Add Edit			OK Cancel	

Action – select action type in the dropdown list (3).

Variable settings for the Actions see in the table below:

Action Type	Parameters Description
Alarm	Not applicable.
Email	<ul> <li>Recipients – select email recipients in the dropdown list;</li> <li>Text – type in email text to send to recipients;</li> <li>Variables – Administrator can add Variables to include in the email text:</li> <li>Radio ID – Radio ID data will be included in the email text</li> <li>Radio Name – Radio Name will be included in the email text</li> <li>Radio State on/off – Radio State data will be included in the email text</li> <li>Beacon Name – Beacon Name will be included in the email text (if beacons are used in the system)</li> <li>Alarm – Alarm Type will be included in the email text (available when Use</li> <li>MapPoint location resolving option selected for Enhanced GPS)</li> <li>Map Link – Link to radio current location on Google Maps will be included in the email text</li> <li>Region – region name will be included in the email text.</li> <li>Incoming Text Data – all incoming text data (e.g. COM port devices and External Network Connection data, text messages) will be included in the email text.</li> </ul>
Job Ticket	<b>Deadline</b> – select task end time; <b>Recipients</b> – Administrator can select radios or radio groups registered in the system;



	<b>Description</b> – add Job Ticket description; <b>Variables</b> – add variables to include in Job Ticket description.		
Notification	<ul> <li>Severity – select severity level in the dropdown list:</li> <li>Information – select to set low severity level</li> <li>Warning – select to set middle severity level</li> <li>Alarm – select to set high severity level.</li> <li>Text – add text in the notification to display in the Dispatch Console;</li> <li>Variables – add variables to include in Notification.</li> </ul>		
Request Location	Not applicable.		
SMS	<ul> <li>Recipients – select sms recipients in the dropdown list;</li> <li>Text – type in sms text to send to recipients;</li> <li>Variables – Administrator can add Variables to include in the sms text.</li> </ul>		
System Bridging	<ul> <li>Profiles – select System Bridging profile to activate/deactivate;</li> <li>Activate/deactivate – select action type for System Bridging pro file.</li> </ul>		
Telemetry	<ul> <li>VIO – select VIO to send telemetry;</li> <li>Command – specify a command for selected VIO;</li> <li>Recipients – select Radios or Radio Groups to send telemetry.</li> </ul>		
Text Message	<ul> <li>Recipients – select text message recipients in the dropdown list;</li> <li>Text Message – type in message text to send to recipients;</li> <li>Variables – Administrator can add Variables to include in the message text.</li> </ul>		
Text to Speech	Text to speech feature allows convert text to speech:          Action       Image: Text to Speech         Action       Image: Text to Speech         Image: Text to Speech       Image: Text Group         Image: Text Speech       Text Speech         Image: Text Speech       Text Speech		



	<b>Variables</b> - Administrator can add Variables to include in the message converted to
	speech.
Voice Message	Voice Messages – select recorded voice messages. For more details on Voice Messages
	see <u>Tasks</u> , Voice Message section.

**Note:** After configuring check rules you want to enable in the list. In case when no one rule is selected, the action will not be started:

<u>File View Map Tools H</u> elp		
Administer	Event/Alarm Management	<b>S</b>
- Hadio Systems ▲ - Age System Dridging - ≫ Phone Calls - ☆ Tasks	Intercom VICO Fremen VICO Test Group VICO	
Event/Alarm Management     Telemetry     Radio Groups Telemetry     GPS Profile     X Tools	Add  Edit Create a Copy  Except Delete  Name  COM Port Connection 1  External Network Connection 1  Test Alarm	Δ
Radio		
Job Ticketing		
Route Management           Text Messages		
Reports and Statistics		
Event Log		
Telemetry     Padia Allocation		
Administer	144 44 4 Record 1 of 3 F FF FR 4	,

# **Telemetry**

On the **«Telemetry**» page you can configure Telemetry.



<u>File View Map Lools Help</u>		
Administer	Telemetry configuration	6
RadioServer	Thercom 🔿 4100 Fremen 🗐 4100 Test Call 🗐 410	
Database     Adio Systems	Service inactive Repeater #1 Slot 1 Repeater #1 Slot 2 Repeater #1 Slot 2	
System Bridging     Broce Calls	🛃 Add 📴 Edit 🖳: Delete	
Tasks Event/Alarm Management Comment Radio Groups Telemetry Truck Radio	Auto refresh inputs: Disabled     Digital Inputs	
GPS Positioning	Not used	
🙀 Job Ticketing		
Route Management		
Text Messages		
Reports and Statistics		
Event Log		
1 Telemetry	1	
( Radio Allocation		
administer		
🔂 127.0.0.1 🍪 🔂 🔂 🔔 🔺 Warnin	g! You are logged as Administrator Licensed to: Neocom Software Ltd	

Go to Administer (1), Telemetry (2) to manage Telemetry properties:

# Radio Groups Telemetry

Go to «Radio Groups Telemetry» to manage telemetry profiles for radio groups:



dminister	Telemetry configuration	_
i RadiuServer - ि Ucense - j Database - सि Radio Systems - मैंग्रे System Bridging	Intercom el el O Fremen el el O Test Cal el el O     Service inactive el O Repeater #1 Sot 1 el EO Repeater #1 Sot 2 el el O     Edit	
Phone Calls Taks Taks Telemetry Kado Groups (elemetry Trule Radio Radio Radio Radio	Radio Groups Telemetry           Digital Outputs           ① VIO1: VIO1 (High level)           ① VIO2: VIO1 (High level)           ① VIO3: VIO3 (High level)           ① VIO4: VIO4 (High level)           ① VIO5: VIO5 (High level)	
GPS Positioning		
Route Management		
Text Messages		
Event Log		
Telemetry		
Radio Allocation		
Administer		

Click «Add» button to add a telemetry profile for Radio Groups:

Telemetry Profile		×
Telemetry type:	Mototrbo	•
Specify profile name:		
Telemetry #3		
	ОК	Cancel

Specify Telemetry Type for Radio groups:

- Mototrbo telemetry from Motorola devices.
- Novox telemetry from Novox devices connected to radio via COM port.
- Swift.Tracker telemetry from Swift.Tracker sensors. Swift.Tracker connects to radio over-the-air.
- **Sprite** telemetry from Sprite devices.

**Note:** Sprite telemetry profile can be read but not written.

Specify **profile name** to display in the Dispatch Console.

Click «**OK**» to add a telemetry profile.

Specify new telemetry profile settings.


lemetry #	3			×
Name:	Telemet	y #3		
Common	Digital Inputs	Digital Outputs		
VA	to request incu	it states		
Re	quest interval:	600	* second	
V To	ace digital input	s		
V Tr	ace analog inpu	ts		
Re	place state eve	ent to VIO events	5	
				OK Cancel

On the **Common** tab specify common settings for new profile:

- **Auto request input states** select to set time interval to request input data. Specify time period in seconds (600 seconds set by default);
- Trace digital inputs select to monitor digital inputs' damages;
- Trace analog inputs select to monitor analog inputs' damages;
- **Replace state event to VIO events** select to generate **VIO ON/OFF** event when the system compares the last and the current state of the VIO.

**Note:** Most of the policies are set to replace events, so it is recommended to enable this option.

On the **«Digital Inputs**» tab specify settings for digital inputs:



Telemetry #3		×				
Name:	Telemetry #3					
Common	Digital Inputs Digital Outputs					
ID	Name	Event				
VIO1	③ VIO1	High level				
VIO2	③ VIO2	High level				
Description	1					
ID:	VIO2					
Name:	VIO2					
Event:	High level 💌					
Severity:	🔔 Warning 📃 💌					
🗸 Display	/ as subscriber state					
Auto r	eset state					
Reque	Request location of subscriber     Apply					
Add	Remove					
		OK Cancel				

Click «Add» button to set VIO (Virtual Configured PIN):

- **ID** select VIO in the dropdown list to set its parameters;
- **Name** specify VIO name to display in the Dispatch Console;
- Event a filter for telemetry events. Select the signal level of VIO events in the dropdown list. When any event with selected signal level takes place on the selected VIO, the telemetry activates. The signal level must be the same in radio's code plug and in Telemetry configuration in TRBOnet. It is a programmable option that sets the pin's voltage level to High or Low in order to trigger a selected functionality;



• **Severity** – specify severity level for VIO event in the dropdown list. Selected icon will be displayed as VIO icon in the Dispatch Console:

dminister	Telemetry configuration	
- 🕁 Radio Systems - 崎 System Bridging - 🎲 Phone Calls - 🚰 Traks - 👼 Event/Alarm Management - 🕞 Telemetry	Intercom     Intercom	
Telemetry #1 Connecty #2 Telemetry #3 Radio Groups Telemetry Tools Tools Toolsta Maker	Auto refresh inputs: Disabled Digital Inputs M VIO1: VIO1 (High level) Digital Outputs Not used	
GPS Positioning		
Job Ticketing		
Route Management		
Text Messages		
Reports and Statistics		
Fvent Log		
Telemetry		
Radio Allocation		
Administer		

• **Display as the Subscriber state** – go to **Telemetry** page to see selected radio telemetry data:

Telemetry	Telemetry						
14 F 1 4 X 7 18	() farvice inactive		Control Station #1		Cal #1		
	Call #2	0	Driacom	• 3	Strist1	2.14.33	
🖉 🖉 Wartert 🔍 🕲	TTX: 41547		Select #1 Anning	- E a			
Watter1	and show						
A LE Wagert	Test radio		Posts.				
Watter1	Update a conditor	of causes	CH CH				
(A) Wanters	1221						
🐼 🕑 Warkert 🛛 📮 😒							
Det Orter and a Ba							
Radio							
GPS Positioning							
🚰 Job Ticketing							
Route Hanagement							
Text Messages							
😡 Reports and Statistics							
Event Log		-					
Telemetry							
Radio Allocation							
Administer							

- Auto reset state select to reset the telemetry VIO automatically;
- **Request location of subscriber** select to enable subscriber GPS positioning.



Click «Apply» button to apply settings to selected inputs.

On the **«Digital Outputs**» tab specify settings for digital outputs:

lemetry #3		×
Name:	Telemetry #3	
Common D	igital Inputs Digital Outputs	
ID	Name	Command
VIO1	VIO1	High level
VIO2	VIO2	Low level
VIO3	VIO3	High level
VIO4	VIO4	Toggle level
Description ID: Name: Command	VIO2	
	Low level	
Add	Low level	Apply

Click «Add» button to set VIO (Virtual Configured PIN):

- **ID** select VIO in the dropdown list to set its parameters;
- Name specify VIO name to display in the Dispatch Console;
- **Command** specify a command for selected VIO in the dropdown list.

Click **«Apply**» button to apply settings to selected inputs.



The profile is added in the navigation tree:

Administer	Telemetry configuration				<b>C</b>
Radio Systems	Intercom 🐠 📢 🧭	Hremen		Fest Cal	
- Dependence Calls	Service inactive	Repeater #1 Slot 1	[4][4][Q]	Repeater #1 Slot 2	
Event/Alarm Management	🔜 Add 🥪 Edit 🛛 🙀 Delete				
Todometry #1 Todometry #1 Todometry #2 Todometry #2 Todos Gragas Telemetry Tools Tools Tools Tools Tools Tools Tools Tools Tools Tools	Auto refresh inputs: Disabled Digital Inputs vio1: vio1 (High level) Digital Outputs Not used				
GPS Positioning					
📅 Job Ticketing					
Route Management					
Text Messages					
Reports and Statistics					
Event Log					
1 Telemetry					
Radio Allocation					
Administer					

🚯 127.0.0.1 🐞 📸 🔂 🔔 Warning! You are logged as Administrator 📃 Licensed to: Neocom Software Ltd

**Note:** For editing telemetry profile for Radio Groups only **«Digital Outputs»** tab available.

# Telemetry #N

Go to **Telemetry (1)**, **Telemetry #N (2)** to add and configure personal Telemetry profiles.

All telemetry profiles configured in the system are displayed in the Navigation Tree:



#### Administrator Activity in the Dispatch Console

Eile Yiew Map Tools Help	
Administer	Telemetry configuration
La Radio Systems - 분열· System Bridging - ② Phone Calls @ Tasks	Intercom         Image: Comment of the comment of
Event/Alarm Management Telemetry Cemetry #1 Cemetry #2 Radio Groups Telemetry Tonnsize Maker	Add Le Edit Le
GPS Positioning  GPS Positioning  Job Ticketing  Route Management	
Text Messages  Reports and Statistics	
Event Log	
Telemetry	
Administer	
127001 (	Incl You are logged as Administrator

To add and edit personal telemetry profiles follow the steps as described in Telemetrypage.

# **GPS** Profile

GPS Profile feature allows to configure different profiles of GPS update settings for built-in GPS receiver. GPS Profile overrides default GPS trigger configuration in RadioServer settings. For example, fire emergency service has a number of departments in a city and needs to monitor radio subscribers (firemen) current position. Administrator can create a number of separate GPS profiles with different GPS tracking settings for each department.

**Note:** GPS Profile feature available for MOTOTRBO Generation II radios, firmware version 2.4 or later.



Administer	GPS Profile		
] RadiuServer III Ucense ] Database III Radio Systems	E Intercom	0 <mark>Fremen at 0</mark> 0	Test Group
- Pgr System Bridging - Whene Calls W Taeks - Event/Alarm Management - Gij Telemetry	Add Le Edit Colete  Manual manage trigger:      GPS channel type:      Grantee strength	No Non-scheduled (Regular GPS over Voic	ce or Data Revert Channel)
Carls Profile	Penodc Trigger:     Distance Trigger:     Tolemetry Trigger:     Emergency Trigger:	Interval 30.0 sec No No	
GPS Positioning			
Route Management			
Text Messages			
Reports and Statistics			
Event Log			
Telemetry	1		
7 Radio Allocation			
Administer			

Go to Administer (1) GPS Profile to manage GPS Profiles:

There is a default GPS Profile which Administrator can use and edit.

Default GPS Profile settings are showed on the screenshot below:

<u>File V</u> iew <u>M</u> ap <u>T</u> ools <u>H</u> elp		
Administer	GPS Profile	
Tasks Event/Alarm Management Telemetry Radio Groups Telemetry GPS Profile Tools Swift Tracker Configuration Tool Swift Tracker Configuration Tool Templates Indoor 2D Map Converter Disabled Radios Dispatchers Email Groups	✓ Intercom     ✓ Intercom     ✓ I: Line free     ✓ I: Line free	Firemen       Test Group         No         Non-scheduled (Regular GPS over Voice or Data Revert Channel)         1 sec         Interval 30.0 sec         No         No

Administrator can:

- 1. Use default GPS profile;
- 2. Create a custom GPS profile: "Add" button;
- 3. Edit a profile: "**Edit**" button.



Note: For default profile Name and Description fields cannot be changed.

GPS Profile properties:

GPS Profile		×
Name:	Department 1	
Description:		*
		Ŧ
Manual manage trigg	er	
GPS channel type:	Non-scheduled (Regular GPS over Voice or Data Revert Channel)	•
Counting interval:	1 second	
Periodic trigger		
Teteruelu	20.0 <b>•</b> accord	
Distance bisson	second	
Distance trigger		
Distance:	1000 emeters	
Min. interval:	10 second	
Telemetry trigger		
Emergency trigger		
	OK Cance	el 🛛

- Name display name for configuration to specify later in radio properties;
- **Description** optional description for the profile;

Manual manage trigger – allows Dispatcher to start and stop GPS trigger manually.



To reset GPS trigger select Radio (1), go to Context Menu and select "Reset GPS trigger" option (2). These settings are temporary, after restarting RadioServer, GPS profile configuration selected in Radio Properties will be applied to a Radio.

• **Reset/Stop/Start GPS Trigger** – send appropriate command to the radio;

• **Change GPS Interval** – allows to change GPS trigger update interval..



- **GPS channel type** GPS data transfer channel type according to system settings (Radio and Repeater codeplugs configuration):
  - Non-scheduled channel is a channel with regular GPS (Enhanced GPS not supported);
  - Scheduled channel available when "Enhanced GPS" configured in the radio system;
  - Non-scheduled channel with CSBK allows using CSBK (Control Signaling Block) while decoding;
  - Scheduled with CSBK data is the channel with Enhanced GPS and with CSBK (Control Signaling Block) while decoding.

GPS update can be configured to override default settings from RadioServer configuration or Sprite options boards.

- **Counting Interval -** for radios with installed Sprite Option Boards.
- **Periodic Trigger** sets GPS trigger configuration for radios with built-in GPS receiver (*For more details see Location Service section*).
  - Interval GPS update interval in seconds;
- **Distance trigger** allows to get GPS updates by distance:
  - **Distance** radio will GPS updates if it exceeds specified distance from the last GPS point;
  - **Min. Interval** radio will send GPS updates if does not move within specified period of time in seconds..
- **Telemetry trigger** radio will send GPS updates triggered by Telemetry according to settings in codeplug.
- **Emergency Trigger** radio will send GPS updates triggered by Emergency according to in codeplug.

Click "OK" to save settings.

To apply new GPS Profile to a radio go to Administer (1) Radios (2):



#### Administrator Activity in the Dispatch Console

dminister	Registered ra	adio groups a	and radios					
Tools	▲ Intercom			n 🔊 🖷	0 lest	call 👘		
	Service inact	ve 🛋 🗹	Repeat	ter #1 Slot 1 😐 🖷	C Repe	ater #1 Slot 2	•0	
	Registered	Inregistered						
Email Groups	Add Group	🛃 Add 🔜 Add R	lange 📑 Edit	📑 Delete 📑 Gro	uping 🍸 Auto I	Filter @ Default S	ettings	
SMS Groups	Callsign	Δ Group	Radio ID	MDC / Select-5	Vehicle Make	Plate Number	Drivers	Swift License
Users	_ 🔘 Radio 100100	Department 1	100	0	1000			
Cal Groups 2	- Radio 1010	Department 1	10	0				
Radio Groups	Radio 105	All	105	0				
	* 🔘 Radio 11	Department 1	1	0				
	Radio 1111	Department 1	11	0				
Radio	Radio 1212	Department 1	12	0				
Transa and	Radio 1313	Department 1	13	0				
GPS Positioning	Radio 1414	Department 1	14	0				
and Televis	Radio 1515	Department 1	15	0				
Job licketing	Radio 1616	Department 1	16	0				
Pouto Management	Radio 1717	Department 1	17	0				
Koute Hanagement	Radio 1818	Department 1	18	0				
Levt Messages	Radio 1919	Department 1	19	0				
_ reactives ages	Radio 2020	Department 1	20	0				
Reports and Statistics	Radio 2121	Department 1	21	0				
,	Radio 22	Department 1	2	0				
Event Log	Radio 2222	Department 1	22	0				
	Radio 2323	Department 1	23	0				
Telemetry	Radio 2421	Department 1	21	0				
	Radio 2525	Department 1	25	0				
Radio Allocation	Radio 2626	Department 1	26	0				
	(R) Rodio 2727	Department 1	27	0				
Administer	- Radio 2828	Department 1	28	0				

Open Radio **Properties** to specify GPS Profile:

Radio Radio 22	×				
General Logical Grou	ps Extended devices Additional SIP Call				
Callsign:	Radio 22				
Radio ID:	2				
MDC / Select-5:	0 (HEX)				
Radio Groups:	Department 1				
Use icon:	R Bus				
	Ruitt in CDC angeium				
GPS Source:	Built-In GPS receiver				
GPS Profile:	Department 1				
	GPS Enabled				
Equipped with D	Display (for Text Messaging)				
Telemetry:	(Default)				
	OK Cancel				

Go to **General** page and select GPS Profile in the list.

Select the checkbox "GPS Enabled" to enable GPS trigger.

Unselect the checkbox "GPS Enabled" to disable GPS trigger.



**Note:** GPS Profile is only applicable when "Built-in GPS receiver" selected for GPS source.

## **Tools**

On the **«Tools**» page you can find some useful tools.

# Swift.Tracker Configuration Tool

In general, a MOTOTRBO<sup>™</sup> portable radio comes with a standard option board factory- installed to the radio.

Generic Option Board replaces this standard option board, new radio like XPR 7550 come with Generic Option Board already installed. Generic Option Board can be flashed with custom firmware to provide additional functionality: ManDown, No Movement, Crash Detect, Lone Worker and event-driven GPS functionality. Event-driven GPS feature allows to collect GPS data more frequently, store and forward GPS data by event, also it allows to collect and store GPS data while radio is out of radio coverage to request GPS data when comes back to radio coverage.

Go to Administer (1), Swift Configuration Tool (2) to manage Swift.Tracker settings:



Click «Add» button to add configuration for Swift Tracker.



- Name select name for configuration to apply it to radio or group of radios;
- **Description** add description for configuration;

Click «**Set Defaults**» button - select to enable default settings for GOB.

On «General» page set general settings for Swift Tracker:

ft Configurat	ion Tool	
Name:	Configuration 1	
Description:		
General G	PS Tracker Accelerometer Input Pins	
Module	89	
Enable	GPS Tracker	
Enable	"No Movement" Alarm	
Enable	"Man Down" Alarm	
Enable	"Crash Detect"	
6	-I D	
Benera	arried (see):	120
Number	renou (sec).	
Retry D		3 15
neuy D	ciay (SCC).	
Radio	Settings	
Network	k Radio ID (CAI ID):	13
Target F	Radio ID:	64250
Port:		4004
Automa	tically Switch to Revert Channel:	
Set Defa	ults	OK Cancel

#### Modules

- **Enable GPS Tracker** when GPS enabled radio sends data to TRBOnet RadioServer according individual GOB settings.
- Enable "No Movement" Alarm select to enable No Movement feature;
- Enable "Man Down" select to enable Man Down feature.

#### **General report**

- Report period (sec.) select time period for data transfer to the server;
- **Number of retries** specify the number of retries when data transfer is impossible. If the channel is busy data transfer to the server is priority and TX Interrupt feature will be enabled automatically;
- **Retry delay** select time period between data transfer retries.



### **Radio settings**

- Network radio ID (CAI ID) select your RadioServer PC network radio ID. ID=13 is a default value to route packet to RadioServer PC, value 12 will send packets to a control station.
- **Target Radio ID** select target radio ID for data transfer. In case of direct connection to repeater select the TRBOnet server ID (TRBOnet peer ID).
- **Port** select port for data transfer.

**Automatically Switch to Revert Channel** - select to transfer data via revert channel in automatically mode.

Note: if radio does not have a revert channel this option must be disabled.

Go t	to «GPS	Tracker	page»	to set	GPS	Tracker	settings:
------	---------	---------	-------	--------	-----	---------	-----------

ame:	Configuration 1		
escription:			
eneral G	PS Tracker Tasks Input Pins		
GORI	)ata Storage		
Save G	iPS data on passing distance every (m)	50	
	- D. I. I. D I		
Speed	g Data to Report		
Add Da	and Direction.	250	
Minimal	Direction Angle (°)	14	
Add Da	ata To Report every (sec):	6000	
<b>D</b>			
Report		120	
Passed	Distance is more than (m)	1000	
Speed	Exceeds (km/h)	120	
Stop/Id	lle Time is more than (sec)	300	
	ulta Emant I Tura		Canaal

#### **GOB** data Storage



• Save GPS data on passing distance every (m) - specify the distance. When the indicated distance is passed radio saves the data in Option Board memory but GPS data are not added in the report;

## Adding data to report

- Speed and Direction select to receive radio speed and direction data;
- Add data to report every (m) specify the distance. When indicated distance is passed radio adds data to the report. At this case the data is saved in the report to send the report according to selected time period (see **«Report Period »** option).

**Note:** Number value Add data to report every (m) must exceed number value Save GPS data on passing distance every (m).

- **Minimal direction angle** select minimal direction angle to add data to the report automatically (if the radio reverses the direction the current data is added to the report automatically and next data recording is started).
- Add data to report every (sec.) specify time period for the report. When the indicated time period is passed radio adds the data to the report.

### Report transmit conditions (custom report settings)

- Report period (sec.) set time period to send the report;
- **Passed distance is more than (m)** type in the distance. When the indicated distance is passed the Option Board sends the report.

**Note:** Number value **Add data to report every** (m) must exceed number value **Save GPS data on passing distance every** (m).

- **Speed exceeds** select speed. When current speed is more than the indicated one, radio sends data to the TRBOnet Dispatch Software server;
- **Stop/Idle Time is more than (sec.)** select stop/idle time. When stop/idle time is more than the indicated one radio sends data to TRBOnet RadioServer.



Go to **«Tasks»** page to set **Man Down**, **No Movement**, **Lone Worker** and **Crash Detect** settings:

me: Configuration 1		
scription:		
eneral GPS Tracker Tasks Input Pins		
General		n í
Activate the accelerometer on the radio switching on		
Disable alam by button click		
"Man Down" Settings		
Activation Angle (°):	60	
Pre-Alarm (1) Timeout (sec):	10	
Pre-Alarm Tone (1):	RingStyleTone1	
"No Movement" Settings		
Vibration Threshold (%)	15	
First Pre-Alarm Timeout (sec):	30	
First Pre-Alarm Tone:	RingStyleTone1	
c "Lone Worker" Settings		
Timeout (sec):	1800	
Pre-Alam Tone:	RingStyleTone5	
		J
Second Pre-Alarm Notification		n l
Timeout (sec)	5	
Pre-Alarm Tone:	Talk Prohibit 🔹	
Volume Level Increase (%):	50 👤	
Pre-Alarm Tone Duration (sec):	5	
"Crash Detect" Settings		
Crash Threshold (g):	8	
Movement Stop Timeout (sec):	10	
No Movement Timeout (sec):	15	
Emergency Call		í l
TRBOnet Emergency timeout (sec)	10	
MOTOTRBO Emergency timeout (sec)	10	
Sound notification after emergency call		
Timeout (sec):	0	
Tone:	RingStyleTone4	
		]

• Activate the accelerometer on the radio switching on - select to enable accelerometer;



• **Disable alarm by button click** – select to allow radio subscriber disable alarm notification by pressing any button on the radio.

### "Man Down" settings

- Activation angle select activation angle to enable Man Down feature;
- Pre-Alarm (1) Timeout (sec.) select time period preceding pre-alarm Tone 1;
- **Pre-Alarm tone (1)** select pre-alarm tone. All pre-alarm tones can be found in radio's code plug configuration.

### "No Movement" Settings

- Vibration Threshold (%) select max. vibration threshold for No Movement feature;
- Pre-Alarm Timeout (sec.) select time period preceding pre-alarm Tone 1;
- **Pre-Alarm tone** select pre-alarm tone. All pre-alarm tones can be found in radio's code plug configuration.

### «Lone Worker» Settings

- **Timeout (sec.)** select time period to enable Lone Worker alarm;
- **Pre-alarm tone** select pre-alarm tone. All pre-alarm tones can be found in radio's code plug configuration;

**Second Pre-Alarm Notification.** When pre-alarm tone (1) activates for **Man Down**, **No Movement** and **Lone Worker**, and there was no user's activity (the radio remains unchanged), the second pre-alarm tone activates:

- **Timeout (sec.)** select time period preceding pre-alarm Tone 2;
- **Pre-Alarm tone** select pre-alarm tone. All pre-alarm tones can be found in radio's code plug configuration;
- **Volume Level Increase (%)** select the percentage of the Volume Level Increase for prealarm Tone 2;
- **Pre-Alarm Duration (sec.)** select pre-alarm Tone 2 duration.

### «Crash Detect» Settings:

- **Crash Threshold (g)** select acceleration changing value to enable Crash Detect alarm notification;
- **Movement Stop Timeout** select the time period of movement stop to enable Crash Detect alarm notification;
- **No Movement Timeout** select the time period of the radio without any movement to enable Crash Detect alarm notification;



### **Emergency call**

- **TRBOnet Emergency Timeout (sec.)** select time period preceding emergency tone to the Dispatch Console for **Man Down**, **No Movement** and **Lone Worker** options;
- **MOTOTRBO Emergency timeout (sec.)** select time period preceding emergency tone to the Dispatch Console.

Note: MOTOTRBO Emergency Alarm should be set in Radio's code plug.

## Sound notification after emergency call

- **Timeout (sec.)** select time period to repeat the alarm notification. To stop the alarm notification Dispatcher should disable alarm notification;
- **Tone** select the notification tone. All tones can be found in radio's code plug configuration.

Click «Set defaults» button to apply default values.

Click «Import» button to import Swift .Tracker configuration from file.

Click **«Export**» button to save Swift .Tracker configuration as file to the PC.



me: Co	nfiguration 1			
scription:				
eneral GPS Tra	acker Tasks Input Pins			
Enabled		Disabled		
Pin 12V	Deferred -	Pin 12V	Deferred -	
Pin 1	Deferred -	Pin 1	Deferred -	
Pin 2	Deferred -	Pin 2	Deferred -	
Pin 3	Deferred -	Pin 3	Deferred -	
Pin 4	Deferred -	Pin 4	Deferred -	
Pin 5	Deferred -	Pin 5	Deferred -	
Pin 6	Deferred -	Pin 6	Deferred -	
Pin 7	Deferred -	Pin 7	Deferred -	
Pin 8	Deferred -	Pin 8	Deferred -	
Pin 9	Deferred -	Pin 9	Deferred -	
Pin 10	Deferred -	Pin 10	Deferred -	
Pin 11	Deferred -	Pin 11	Deferred -	
Pin 12	Deferred -	Pin 12	Deferred -	
Pin Ign	Deferred -	Pin Ign	Deferred -	

Go to «Input Pins» page to set the priority for Enabled/Disabled Pins:

Select programmed Pin in Enabled/Disabled Pins table.

Select data transmission priority for Pin:

- **Deferred** to send the data into current packet;
- In Memory to save the data in the GOB memory;
- **Immediately** transmission interrupt oriented. Select **Immediately** to transmit the data via free channel with radio channel priority;
- **Extremely** transmission via radio channel and GSM channel simultaneously.

The PIN options are model dependent. All available PINs for the radio can be programmed in Radio's codeplug configuration (See **Accessories**, **GPIO Physical PINs**)

**Note:** additional PINs are available when GSM Swift.Tracker connected only. For more details contact technical support.



Click «OK» to save the settings.

# Templates for Extended Messages

Template Maker can be used for Extended Messages and Extended Notes.

**Extended Messages** - is a special function allowing the users to send detailed preconfigured templates containing necessary information to each other with the help of the special TRBOnet Dispatch Software application.

This service was created especially f or the clients that need to use more detailed and structured messages for their work. If the standard messages are not enough to contain all the information you need to send you may use Extended Messages service.

Go to Administer (1), Template Maker (2) page to create new template:



Click «Add from file» button to add a template from file.

**Note:** before adding the template from file save created template to custom directory.

Select the directory you saved the template and click **«OK»** to add the file.





Click «Add» button to create new template:

1 – Specify new template name to display in the Dispatch Console;

2 – Select elements to add in new template. Drag and drop the selected element to the mail template field;

3 – Specify template size and background color;

4 – Click element on the template. On the left side of the template window displays selected element properties table.

Select property in the table and read the prompt at the bottom of the table.



Elements:         A Label and Textbox         O'CreckBox         Box         Combotionx         Terrylate 10:         actif2de:91a0/4340/9940-038c/3102dd         Genereate new         Box         Box         Combotionx         Terrylate size:         With:         Mult:         400         BackColor         BroderStyle         Fored 3D         CausesValidation         True         BackColor         BackColor         BroderStyle         Fored 3D         CausesValidation         True         BackColor         BackConor         BackC	Name: Test Template		
	Name: Test Template	Test Label Test message	Template ID.       act:1/2de:91a0-4340-9940-038c9/10/dd/ Generate new         AutoCompleteSource       None         BackColor       Window         BordeColor       Window         BordeColor       Window         BordeColor       Window         BordeColor       Window         BordeColor       Window         BordeColor       Window         CausesValidation       True         CharacterCasing       Nomal         ContextMeru3thp       Cursor         Cursor       IBeam         Dock       None         Enabled       True         P Fort       Microsoft Sans Serif; 8,25         FureColor       Window Text         HideSelection       True         IneMode       NoCentrol         D Location       79, 157         Margin       3; 3; 3; 3         MaxmumSize       0; 0         Multime       False         PasswortChar       ReadOnly         ReadOnly       False         PasswortChar       ReadOnly         Brase       None         StortCustSFrabled       True

How to add a text for selected element:

Click selected element on the template, e.g. textbox (1);

Go to element properties table and select **«Text**» field (2);

Type in text in the field.

Click **«OK»** to save the template.

Send template to radio:



Eile View Map Iools Help			
Text Messages	Text Messages		-
🖻 🗄 🗄 🔦 🏹 🧕	Service inactive	Station #1 m ( ) Call #1 m ( ) O	
2	Call #2		
🗉 🔏 Online Dispatcher (1)	PSC #1 Sot 2 4 0 Selex #	1 Analog Wiel S	
Administrator	Simple Extended		
B 🚺 45 🤤	New Messa	«	
💰 Worker1 🔇 😵		(d) N1 *	
🂰 🕑 Workert 🛛 📮 😵	-	Send to Radio	
💰 🕑 Workert 🛛 📮 😒	TestTemplate		
💰 🥑 Worker1 🛛 📮 😒	15		
A Church and and		2000 T	
Radio		Test Label	Ξ
GPS Positioning			
Sob Ticketing	10000		
😿 Route Management	1	Text message	
Text Messages			
Reports and Statistics		🕮 Playback 🛃 Save 🔢 Pause 🥩 Clean 🥘 Reload 📑 Grouping	30 •
		Date V C S R Message Note Ext. Note	*
Event Log	1	11.12.2013 15:31:31 IP Di 45 Dispatcher	-
Call and the	-/	11.12.2013 15:30:55 IP Di 45 Dispatcher	
1 Telemetry		- 🔆 11.12.2013 15:00:00 R All The Control	
Radio Allocation	Inbox (0)	2 11.12.2013 14:00:00 R Al The Control	
Las radio Allocation	Outbox (0)	11.12.2013 13:00:00 R, All The Control	
Administer	New Message	K IL IZ 2013 IZ 0000 K AN INE CONTON	•

Text Messages (1), View (2)

Select «Show Extended Messages» option.

Go to «Extended Messages» tab (3), New message (4).



Simple Extended		
New Message «	Send to Radio	*
1	Test Label	
	Text message	•
		-
	Image: Second	
	11.12.2013 15:31:13 IP Di 45 Dispatcher '	
	11.12.2013 15:30:55 IP Di 45 Dispatcher '	
Inhox (0)	11.12.2013 15:00:00         R         All         The Control	
	X*         11.12.2013 14:00:00         R         All         The Control           X*         11.12.2012 12:00:00         D         All         The Control	
Outbox (0)	No.         The Control           Image: State	
New Message	HI 41 4 Record 1 of 465 + + + HI 4	•

Select new message template in the list (1):

Select a radio in the dropdown list to send the template (2).

Click «Send to Radio» button to send the template to a radio.

# Indoor 2D Map Converter

TRBOnet Dispatch Software provides Map Converter to use custom images as Indoor 2D Floor plans. The tool allows to convert images to .bmap format supported as maps for Indoor Positioning.



Go to **Administer (1)**, **Tools**, **Indoor 2D Map Converter (2)** to convert selected images:

<u>File View Map Tools H</u> elp		
Administer	Indoor 2D Map Converter	5
Telemetry     Swift.Tracker telemetry     Genetry #1     Telemetry #2     Genetry #2	✓ Intercom     •) </th <th></th>	
Radio Groups Telemetry	Name: Floorplan 2  Image: C:\Users\van2\Desktop\polshi-na-russkom.jpg Directory: C:\Users\van2\Desktop\Indoor Maps	
Radio	Start	
GPS Positioning		
😼 Job Ticketing		
Route Management		
C Text Messages		
Reports and Statistics		
Event Log		
Telemetry	2	
Radio Allocation		
administer		

- Name select name for new Indoor 2D Map;
- **Image** select image on your PC. PNG, Jpeg, tiff, gif formats supported;
- **Directory** select directory to save converted Indoor 2D map.

Click «**Start**» button to convert the image.







Then select map type – Beacon 2D:

Select Map		<b>×</b>
Map Type: Caption: Available Maps Name	Online maps Online maps TRBOMap TMap GIS Panorama format Beacon2D Beacon3D	•
MAPNIK CYCLE TRANSPORT LANDSCAPE MAPQUEST BING_ROAD BING_ROAD BING_AREA BING_HYBRID	MapLib map format. Map projects saved in TatukGIS format	OK OK OK OK OK
Add	Remove	OK Cancel

Click Add button to add a new map and select map you have just converted. Click **«OK»** to open new Indoor map.



# **Disabled Radios**

TRBOnet Dispatch Software provides the **Stun Kill Passive** function – to disable a radio even a radio is offline. The system will disable an offline radio as soon as it gets available.

**Note:** Dispatcher can disable a radio when he has relevant Access Rights (for more details on adding and editing Dispatchers see <u>Dispatchers</u> section).

Go to Administer (1), Disabled Radios (2) to disable selected radio:

<u>File View Map Tools Help</u>		
Administer	Disabled Radios	6
Tools     Template Maker     Indoor 2D Map Converter     Disabled Radios		
Dispetchers Email Groups SMS Groups Users Logical Groups	Si Disable Radio     Radio       Radio     A       Disable date     Reason       Radio     105       5/29/2014 5:44 AM	
Radio Groups	3 \ 4	
Radio		
GPS Positioning		
Job Ticketing		
Route Management		
V Text Messages		
Reports and Statistics		
Event Log		
1 Telemetry		
Radio Allocation		
Administer	144 44 4 Record 1 of 1 1 10 10 10 4	ŕ

🚯 127.0.0.1 🍓 🕵 🥵 🔔 🙏 Warning! You are logged as Administrator 🛛 🛄 Licensed to: Neocom Software Ltd

Click «Disable Radio» button (3) to open the dialog window:

Disat	ole Radio		×
Radio: Reason: Test	Worker 1		•
		ок	Cancel



Select a Radio in the dropdown list and specify a reason to disable.

Click «OK» to disable a radio:

1	Message 1 of 1	
	Radio8 Disable Radio	
	The command has been executed.	
	The radio is offline. It will be disabled when switch online.	
	Do not show this message next time	
	<< Prev Next >> Close	

Selected Radio disabled.

The Radio is added in the Disabled Radios list and marked as Disabled (2) in Radio Interface (1):





Click «Enable Radio» button (4) to enable selected radio.

Select a Radio in the dropdown list and specify a reason to enable.

Click «OK» to enable a radio.

# **Dispatchers**

Administrator can add, edit and delete Dispatchers in the system.

Go to Administer (1), Dispatchers (2) to work with Dispatchers:

File View Map Tools Help					
Administer	Registered Dispa	tchers			<b>S</b>
Tools  Template Maker  Disabled Radios	Service inactive	Image: Second state     Image: Second state       Image: Second state     Image: Second state       Image: Second state     Image: Second state	N C C	Test Call Repeater #1 Slot 2	
Clina Goups 2 Clina Goups 2 Clina Goups Clina Goups Cl	Dispatcher 1 Dispatcher 2	A Display Name Dispatcher 1 Dispatcher 2		Description	
Radio					
Job Ticketing					
Text Messages					
Reports and Statistics					
Event Log	1				
1 Telemetry	1				
Radio Allocation					
Administer	HI 41 4 Record 1 of 2	F IF IH 1			IF.
🔂 127.0.0.1 🌚 🔂 🔂 🔂 🗛 Warnin	g! You are logged as Admini	strator 🔄 Licensed to: Neocom 🗄	Software Ltd		



Click **«Add**» button to add a Dispatcher. On the **«General**» page set general parameters for new Dispatcher:

Add/Edit User				×
General Access Rights A	vailable Control Stations	Available groups	Dispatch Call	
Authentication:	TRBOnet Authentication			-
User Name:	Dispatcher 1			
Password :	********			
Repeat password:	*****			
Display Name:	Dispatcher region 1			
Description:				
AvailableModes:	(All Modes)			<b>_</b>
Hide logon of this use	er from other users			
🔲 Allow this user to logi	in in several consoles at	the same time		
			ок с	ancel

On the «General» tab set general parameters for new Dispatcher:

### Authentication:

- Authentication select Authentication type in the dropdown list.
- Select TRBOnet Authentication to log on as User registered in TRBOnet Dispatch Software Users list.
- User Name specify User Name registered in TRBOnet Dispatch Software Users list;
- **Password** type in the individual password.

Select **Windows Authentication** to log on using the PC name. The system automatically shows the PC name as User Name.

Note: The password not required when Windows Authentication used.

Note: for more details on user access to Allocation Console see Users section.

- **Display Name** specify the name for new dispatcher to display in the Dispatch Console;
- Description add the description for new dispatcher;
- **Available modes** select available tabs of the Navigation Pane of the Dispatch Console for new Dispatcher;



- Hide logon of this user from other users check to make new Dispatcher invisible for other users;
- Allow this user to login in several consoles at the same time check to allow new dispatcher to use any number of Dispatch Consoles simultaneously.

On the **«Access Rights**» tab specify available options for new Dispatcher. Check options allowed to Dispatcher in the list of Access Rights:

Add/Edit User
General Access Rights Available Control Stations Available groups Dispatch Call
Image: Section of the section of th
<ul> <li>Allow to Lock/Unlockradios remotely (Kill Radio)</li> <li>Allow the Remote Monitoring of subscriber radios (Open Mic)</li> </ul>
Allow to reset Control Stations
✓ Allow to Enable/Disable Cross-Patch ✓ Allow to edit map objects
✓ Allow to reset GPS trigger
Allow to set location of radios manually         Image: Allow request location
☑ Allow to close map tabs
OK Cancel

On the **«Available Control Station**» tab specify Controls Station available for new Dispatcher:

dd/Edit	t Use	er	×
Gener	al	Access Rights Available Control Stations Available groups Dis	patch Call
$\bigcirc$	All C	ontrol Stations are available	
۲	Only	selected Control Stations are available	
		Control Station	TX
	☑	Call #1	
		Call #2	
	$\Box$	Control Station #1	
	◄	Control Station #1	
		IPSC #1 Slot 1	
	◄	IPSC #1 Slot 2	
	$\mathbf{V}$	R1	
		Remote Control Station #1	
		_	
			OK Cancel



- Select **All Control Stations are available** to make all Control Stations in the system available for new Dispatcher to transmit and receive Voice and Data;
- Select **Only selected Control Stations are available** to specify Control Stations for new Dispatcher in the list.

Check selected Control Station box in the left column to add the Control Station in the Radio interface for new Dispatcher. When the Control Station is not selected in the left column, it is not available for the Dispatcher.

Check selected Control Station box in the TX column to allow new Dispatcher make Voice Calls using the Control Station. When the Control Station is not selected in TX column, Dispatcher cannot use it to transmit voice and data.

A	dd/Edit U	ser				×
	General	Access Rights	Available Control Stations	Available groups	Dispatch Call	
	All	groups are avai	lable			
	On	ly selected grou	ıps are available			
	<b>V</b>	45   Broadcast Call				*
		New Radio Gro	pup			
						-
				C	ок	Cancel

On the **«Available groups**» tab specify group for new Dispatcher to work with:

- Select **All groups are available** to make all created groups of the system available for new Dispatcher;
- Select **Only selected groups are available** to specify groups for new Dispatcher in the list.

Check selected groups in the list to make it available for new Dispatcher.



On the **«Dispatch Call**» tab specify Dispatch Call and SIP call settings for new Dispatcher:

neral	Access Right	s Availah	le Control Stat	ions	Available group	Dispatch (	Call
🗸 Au	tomatically b	y receiving	g Text <u>M</u> essag	e from	a radio		
Me	ssa <u>q</u> e:	alarm					
V Au	tomatically b	y receiving	g <u>T</u> elemetry Co	mman	d from a radio		
VI	o: 🛛	1 🌲	Command:	High	level	-	
🔳 Au	tomatically b	y receiving	DTMF comma	nd fro	m subscriber		
Co	mmand:						
Phone	Number:						
Email:							
SIP C	all						
SIP ID	. [						
SIP N	ame:						
Passv	vord:						

- Automatically by receiving Text Message from a radio select to start Dispatch Call when radio sends text message with predefined text;
  - ✓ **Message** specify text message text
- Automatically by receiving Telemetry Command from a radio select to start Dispatch Call when radio sends predefined telemetry;
  - ✓ VIO select VIO to send telemetry;
  - ✓ Command specify a command for selected VIO;
- Automatically by receiving DTMF command from subscriber select to start Dispatch Call when radio sends DTMF command;
  - Command specify DTMF command;
- Phone number specify subscriber contact phone number (additional data);
- **Email** specify subscriber contact email (additional data);

### SIP Call

- **SIP ID** type in your SIP ID afforded by provider to make incoming phone call;
- **SIP Name** type in SIP Name afforded by provider when logon;
- **Password** the password for integration with Automatic Telephone Station.

# Email Groups

Email Groups are used in Event/Alarm Management and Job Tickets configuration to send emails to dedicated recipients groups.



Go to **Administer (1)**, **Email Groups (2)** to add/edit/delete email groups in the system:

Auminister	Email Groups				<b>E</b>
Tools     Tools     Indoor ZU Map Converter     Disabled Radios     Disabled Radios	Intercom Service inactive Add Fdit V	elete 🖉 Grou	Firemen Repeater #1 Slot 1 uping 7 Auto Filter @	Test Coll	
Email Groups	Group Name		on	Email List	
SMS Groups	Terminal 1			65@trbonet.com	
E Logical Groups	Terminal 2			75@trbonet.com	
Radio Groups					
Radios					
Radio					
GP5 Positioning					
🚰 Job Ticketing					
44					
Route Management					
Route Management					
Route Management         Text Messages         Reports and Statistics					
Image: Control of Contro					
	1 /				
	1				

Click Add button to create new email group:

Add/Edit Email Gr	oups	×
Name:	Terminal 1	
Description:	Region 1 Terminal 1	
Email list:	65@trbonet.com 66@trbonet.com 67@trbonet.com	
	Add Remove	
	OK Cancel	

• Name – type in name for new email group;



- **Description** add description for new email group;
- **Email list** add emails to include in the email group.

## SMS Groups

SMS Groups are used in Event/Alarm Management configuration to send sms to dedicated sms recipients groups.

Go to Administer (1), SMS Groups (2) to add/edit/delete SMS groups in the system:

Administer	Caller Groups				5
Administer Tools Tonols Deable Maker Doabled Radios Doabled Radios SMS Groups Multiple Groups Radio Groups Radio GPS Positioning Deable States Company States Radio Deable States Company States	Caller Groups	<ul> <li>N ■ O</li> <li>Fremen</li> <li>O Repeater #1</li> <li>Octete Grouping Y Auto F</li> <li>A Description</li> <li>Region 1 Department 3</li> </ul>	Slot 1 0 00	Test Call 0 € 0 Repeater #1 Slot 2 0 € 0 ngs Phone Numbers 7911945676 19045155046, 19045165046	
Image: Reports and Statistics         Image: Report and Statistics </th <th>1 Multi- Bernd 10(1)</th> <th>chalad sh</th> <th></th> <th></th> <th></th>	1 Multi- Bernd 10(1)	chalad sh			



Click	button to create new SMS group:	
Add/Edit SMS Groups	s	×
Name:	Department 3	
Description:	Region 1 Department 3	
Phone Numbers:	19045155046 19045165046 Add Remove	
	OK Cancel	_
		_

- **Name** type in name for SMS group;
- **Description** add description for new SMS group;
- **Phone Numbers** add phone numbers to include in the SMS group.



## **Users**

Administer	Users		_	_			
Tools	* Intercom		Firemen		Test Call	1.0	
Indoor 2D Map Converter	Service inact	ive 🔣 🎯	Repeater #1 Slot 1		Repeater #1 Slot 2		
Disabled Radios Dispatchers	Add De Edit	Delete Gro	uping 🍸 Auto Filter 💿	Default Setti	ngs		
Cmail Groups	Login	△ Name			Comment		
SMS Groups	User 1	User 1					
Users	user 2	User 2					
Radio Groups	-						
Radios							
-	12						
E Radio							
CDE Desitioning							
GPS Posicioning							
Job Ticketing							
Route Management							
Text Messages							
Reports and Statistics							
Event Log							
Telemetry	1						
Radio Allocation							

Go to Administer (1), Users (2) to add/edit/delete Users in the system:

Click «Add» button to add new User in the system:

On the **«General**» page set general parameters for new User:


Add/Edit User	x
General Radios Advance	d User Call
Specify user infor	mation
Login:	User 1
Password :	******
Repeat password:	******
Display Name:	User 1
Max radios count:	1
Description:	
	OK Cancel

- Login specify the login to logon in Dispatch Console;
- **Password** type in the individual password.
- **Display Name** specify a name for new user to display in the Dispatch Console;
- Max radios count select a number of radios available to use for new user
- **Description** add the description for new dispatcher;



On «Radios» tab set radios available for new user:

Add/Edit User	×
General Radios Advanced User Call	
Specify radios that the user can take	
C Allow all radios	
Only selected radios	
Callsign	Group
V 🐨 N1	45
Radio 2	New Radio Group
Radio8	45
H4 44 4 Record 3 of 3 > >> >> + 4	×
	OK Cancel

- Allow all radios select to allow to use all radios in the system;
- **Only selected radios** check to select available radios in the list for new user.



Add/Edit User			x				
General Radios Advanced	User Call						
Lock radio on return							
Allow DTMF managem	ent						
Take radio:	123456	#123456#					
Return radio:	654321	#654321#					
	,						
		ОКС	ancel				

On the **«Advanced**» tab specify lock radio and DTMF settings:

- Lock radio on return select to disable returned radio after typing «Return radio» message;
- Allow DTMF management select to set logon data for new user:
  - **Take radio** specify a DTMF commands for new User to type in on the radio keyboard when the User takes a radio;
  - **Return radio** specify a DTMF commands for new User to type in on the radio keyboard when the User returns a radio;



On the **«User Call**» tab specify SIP Call settings:

Add/Edit User	×
General Radios Ad	vanced User Call
Dhana Number	
Phone Number:	
Email:	testemaii@maii.com
SIP Call	
SIP ID:	123456
SIP Name:	SIP name 1
Password:	******
	OK Cancel

- Phone number specify additional contact information for user;
- Email specify an email of radio subscriber.

SIP Call - the information is afforded by the provider:

- **SIP ID** type in your SIP ID afforded by provider to make incoming phone call;
- SIP Name type in SIP Name afforded by provider when logon;
- **Password** the password for integration with Automatic Telephone Station.

#### Logical Groups

TRBOnet Dispatch Software allows adding custom logical groups in addition to radio groups. You can add groups and subgroups and assign subscriber to these groups.

Go to Administer (1), Logical groups (2) to work with Logical Groups:



File View Map Tools Help					
Administer	Logical Groups				<b>S</b>
Tools	Intercom   Intercom   Service inactive	Firemen		lest Call	
Disabled Radios     Dispatchers     Email Groups     SMS Groups	Add • Edit Delete		۵ Des	cription	
is Users i Logical Groups Radio Groups P Radios	E Contraction Cont				
Radio	Department 3				
GPS Positioning					
Job Ticketing           Image: State of the					
C Text Messages					
Reports and Statistics					
Event Log					
Telemetry	1,				
C Administra					
Administer			_		 

🔯 127.0.0.1 🍓 🥵 🥵 🙏 Warningl You are logged as Administrator 🛛 📑 Licensed to: Neocom Software Ltd

Click «Add» button to add a Logical Group.

Select **«Add as a Root**» to add a new logical group as a root folder.

Select **«Add**» to add a new logical subgroup in the selected root folder.

Specify settings for new logical group:



Group properties		×
Name:	Security	
Description:	Groups for departments	
	OK Canc	el

Specify the **Name** and **Description** for new group.

Click «**OK**» to add new logical group.

To add a Radio in logical group go to **«Radio»** page (1) and double-click selected radio (2) to open radio properties:



Elle View Map Iools Help			
Radio	Radio Interface		
自用目示 光子 2	Radio Interface Radio Interface #1 Recent Cals,Events Extended Messages		
	Active Calls	Quick Com	mands X
E 🧟 Online Dispatchers (1)		Contaire	
Administrator		TX Pass	ive 🔀
B 🚺 45 🗳		· Carata	
📣 🕑 Workert 🛛 🔮	Radio Radio 234 26 0	To: Selected Cont	noi Stations
🚓 Worker1 🔹	General Groups Optionboard Additional SP Call	Alarm Tone	
🔒 🕑 Worker1 🖓 😵	Name Description	6	
🗟 📙 New Radio Gro		Voice I	lessage
Workert 2 3	Department #2	Voice Message	
🖨 🕑 Workert 🔰 🗣 😒	- De Subgroup #1	CrossPa	tch 🗵
W 📙 Radio Group_region 45 🛛 📮		Dan and tran Co	and Station lines
		to criedle n	eni grolip
			$ \rightarrow$
		Patch on Repe	aters
		CrossPatch_m	epeaters
I make to		CrossPatch	#1
CTT NAME		RL	PTT
GPS Positioning		IPSC #1 Slot	1
1		Control State	n
B Job Ticketing			
(Martin and a state	Recent I.		
Koute Hanagement	2 Playt T Auto Fite	Default Settings	Show Notes.
Text Hessages	Data OK Cancel	Nibter	Est. Note *
	dapatcher Rado	54	
😪 Reports and Statistics	16.10.2013 15(4):11 PSC #150011 K800 943 45 K800 K800 543 Calls group 45 (X)     16.10.2013 15:40:45 Control Statio Bado 541 All Broadcast call from depatcher Radio	54	
-	2 16: 10: 2013 15: 40: 45 IPSC #1 Slot 1 Radio 543 45 Radio Radio 543' calls group '45' (00	:01)	
Event Log	16. 10. 2013 15:40:09 Control Statio Radio 543 All Broadcast call from dispatcher Radio	54	
( Patie Alleration	2 16. 10. 2013 15:40:09 IPSC #1 Slot 1 Radio 543 45 Radio Radio 543 Calls group '45' (00	:00)	
( ) Radio Maccadon	2 IS. 10.2013 IS:39:36 Control Statio Radio 543 All Broadcast call from dispatcher Radio and all Depend 135 of 118 and all d	54	-
administer	Recent Cale Durite Recent Cale Radio State Active Tasks Active Routes Line Article		1
IDE 127 MAL (0 13 13 13 13 13 13 13 13 13	😰 😳 🔚 warning: You are logged as Administrator 🔜 Licensed to: Neocom Software Ltd		

Go to «**Groups**» tab (3) and select a logical group for the radio.

To display logical groups enable Logical Group view:

Radio	Radio Interface
	Radio Interface Recent Cals/Events
Conline Dispetchers (1)	INTERCOM
Security	Service mactive 💽 🙆 Remote Control St
Department #1	Call#1 E R. Coll#2
Worker1	RL FIERO
Department #2	P
Subgroup #1	Control Station #1
	My Channel 1
	45 *
	Session
	Frée dwinnel
Radio	Sender:
GPS Positioning	RX / TX
10 Job Ticketing	



All created logical groups are displayed in the list of radios.

## **Radio Groups**

Go to **Administer (1)**, **Radio Group (2)** to add/edit/delete Radio Group in the system:

Administer	Radio Groups	-					<u></u>
Tools	* Intercom		Firemen		Test Call		
Indoor 2D Map Converter	Service inactive	•0 •	Repeater #1 Slot 1		Repeater #1 Slot 2		
- B Disabled Radios	🔂 Add 🔂 Edit	🖌 Delete 🛛 🚟 Grouping	g 🍸 Auto Filter 💮	Default Settin	igs		
- Email Groups	Name		A Radio ID		MD	(Hex)	
- JMS Groups	Department 1		2		0		
-m <sup>2</sup> Users	Department 1		1		0		
Logical Groups 2	Department 2		4		0		
Radios							
LL Padio							
Let Kallo							
GP5 Positioning							
Job Ticketing							
🕡 Route Management							
Mark Messages							
Reports and Statistics							
Event Log							
1 Telemetry	1						
Radio Allocation							
Administer							

Click «Add» button to add new radio group in the system:

Name:	Radio Group	
Group ID:	11 (*)	
MDC ID (Hex):	EEB 🚖	
Description:	Test Group	



- Name specify a name for new radio group in the system;
- Group ID ID used to identify messages transmitted to a group of radios;
- MDC ID (Hex) set an ID for MDC 1200 analog call member. This ID is used to identify • and communicate with a target radio or group of radios depending on the call type. For more details on MDC 1200 see http://en.wikipedia.org/wiki/MDC-1200;
- **Description** add a description for a radio group. •

### **Radios**

Go to Administer (1), Radios (2) to add/edit/delete Radios in the system:

Administer	Registered ra	adio groups a	nd radios						6
Tools	▲ Intercom		Firemer	n 🕘 🖷	0 lest	Call 🧃			
Indoor 2D Map Converter	Service inacti	ve 🛋 Ø	Repeat	er #1 Slot 1 🕠 🐗	C Repe	ater #1 Slot 2			
	Registered U	Inregistered	nge 📑 Edit	🛃 Delete   🐺 Gro	uping 🍸 Auto	Filter @ Default S	ettings		
SMS Groups	Callsign	∆ Group	Radio ID	MDC / Select-5	Vehicle Make	Plate Number	Drivers	Swift License	-
Users	_ Radio 100100	Department 1	100	0					
Elogical Groups 2	Radio 1010	Department 1	10	0					
Radios	Radio 105	All	105	0					
	TR Radio 11	Department 1	1	0					
Radio	Radio 1111	Department 1	11	0					_
	Radio 1212	Department 1	12	0					
GPS Positioning	Radio 1313	Department 1	13	0					
	Radio 1414	Department 1	14	0					
and a series of	Radio 1515	Department 1	15	0					
Job Ticketing	Radio 1616	Department 1	16	0					
Dauta Management	Radio 1717	Department 1	17	0					
Route Management	Radio 1818	Department 1	18	0					
V Laut Macroaat	Radio 1919	Department 1	19	0					
Text Plessages	Radio 2020	Department 1	20	0					
	Radio 2121	Department 1	21	0					
D Reports and Statistics	Radio 22	Department 1	2	0					
Frent Los	Radio 2222	Department 1	22	0					
Line Log	Radio 2323	Department 1	23	0					
A Telemetry	Radio 2424	Department 1	24	0					
[U] received y	Radio 2525	Department 1	25	0					
Radio Allocation	Radio 2620	Department 1	26	0					
	R Rodio 2727	Department 1	27	0					
Administer	Radio 2828	Department 1	28	0					-

Administrator can add new radio group or add new radio.



Click «Add Group» button to add new radio group:

Group Properties	×
Name:	Radio Group_region 45
Group ID:	45
MDC ID (Hex):	0
Description:	Regio 45 - test group
	OK Cancel

- Name specify a name for new radio group to display in the Dispatch Console;
- **Group ID** ID used to identify messages transmitted to a group of radios. Specify an ID for new radio group;
- MDC ID (Hex) set an ID for MDC 1200 analog call member. This ID is used to identify and communicate with a target radio or group of radios depending on the call type. For more details on MDC 1200 see <u>http://en.wikipedia.org/wiki/MDC-1200</u>;
- **Description** add the description for new dispatcher;

Click «Add» button to add new radio.



On the **Description** tab see the general info:

Radio Radio 22		<b>X</b>
General Logical G	ups Extended devices A	dditional SIP Call
	Dedie 22	
Callsign:	Radio 22	
Radio ID:	2	
MDC / Select-5:	0	(HEX)
Radio Groups:	Department 1	•
Use icon:	Bus	•
GPS Source:	Built-in GPS receiver	
CPS Profile:	Department 1	
di Strivile.		
Equipped wit	Display (for Text Messaging	1)
Telemetry:	(Default)	-
L		

- **Callsign** specify a callsign for new radio to display in the Dispatch Console;
- Radio ID specify a Radio ID. Sets an individual ID that uniquely identifies the Radio. This ID is used by other calling radios when addressing the radio, for instance, when making a private call or sending a text message;
- MDC/Select-5 for more details see «Signaling systems» on <u>TRBOnet.Swift Agent's</u> <u>Advanced Settings</u> page;
- Radio Group select the Radio group for new radio in the dropdown list;
- Use Icon select icon for a new radio in the dropdown list;
- **GPS Source** select the source to receive GPS data:
  - Not equipped with GPS receiver select in case radio cannot send GPS.
  - Built-in GPS receiver select in case radio has its own built-in GPS receiver to send GPS;
  - Swift.Tracker select in case radio sends GPS via Generic Option Board. For more details see <u>Tools</u> section > Swift Configuration Tool.
  - **Extended Devices** select in case Radio sends GPS data via an Extended Device (any third-party option board, e.g. TW25x or K-Term 42).
- GPS Profile select default or preconfigured GPS Profile in the list. For more details on GPS Profiles see <u>GPS Profile</u> section.
- Equipped with Display (for Text Messaging) select if new radio supports Text Messaging service (equipped with Display).



On the «Logical Groups» tab specify logical groups for a radio:

General       Logical Groups       Extended devices       Additional       SIP Call         Name       Description       Image: Control of the second	Radio Rad	lio 22					×
Name     Description       Image: Provide the second	General	Logical Groups	Extended devic	es Add	itional SIP Call		
Image: Constraint of the second se	Name			Descript	ion		
L       Image: Department 4         Image: Period Content 1         Image: Department 2         Image: Department 3		Region 2					
Regiont 1     Pepartment 1   Pepartment 2   Pepartment 3		📄 🗁 Department	t 4				
Department 1     Department 2     Department 3	i i 🗆 🗖	Regiont 1					
Department 2		📄 🗁 Department	t 1				
L Department 3		📄 🗁 Department	t 2				
	·	📄 🗁 Department	t 3				
OK Cancel					ОК	Cance	2

Select a logical group in the list of available groups.

For more information about logical groups see <u>Logical Groups</u> section.



On the **«Extended Devices**» page specify an Extended Device type:

**Device Type** – select the Option Board type in the dropdown list.



Note: available when editing a radio only!

- FS 5000 option board for FS 5000 location service GPS data package transmitting service.
- Indoor an Option Board for Indoor Service (K-TERM) service for indoor positioning where satellite navigation is not available.
- Tallysman Sprite TW 20x/15x an Option Board for Tallysman Sprite service service for autonomous event and aggregated event reporting to provide significant reduction in GPS data overhead.

Radio Radio 22				×
General Logical Groups	Extended devices	Additional SI	P Call	
Device Type	wift.Tracker te (45)	state of the acce	Check Write to Radio	
License Limit for TRBOnet Sv Limit for TRBOnet Sv Current License: 'No Movement', 'I GPS Tracker - Yei	vift 'No Movement', 'N vift GPS Tracker: 0 1an Down', 'Crash De	lan Down', 'Cras tect' - Yes	h Detect': 0	
Activate	Demo	Deactivat	e	
		OK	Canc	el

Extended Device page when Swift Tracker selected:

Click «Check» button to test the connection to Swift Tracker device.

- Configuration specify the configuration in the dropdown list. Click «Write to radio» to write the selected configuration to new radio. For more information about Swift Tracker configuration see <u>Tools</u> section.
- Reset the original state of accelerometer when a radio reloads after setting accelerometer parameters, radio's current position will be set as initial position for No Movement, Man Down and Crash Detect options;
- License in the «License» field see the License information and select the following options:
  - Activate a current license click «Activate» button to activate GPS Tracker and Swift No Movement, Man Down, Crash Detect features License files;



- Activate a demo-license click «Demo» button to activate GPS Tracker and Swift No Movement, Man Down, Crash Detect features License files for time period during an hour;
- Deactivate license click «Deactivate» button to deactivate GPS Tracker and Swift No Movement, Man Down, Crash Detect features License files.

On the **«Additional**» page specify further information about radio subscriber:

Radio Radio 22			<b></b>
General Logical Groups	Extended devices	Additional	SIP Call
	Name: Radio 22 Description: Test Radio		
Load Image Make:			
Plate Number:			
Pnone Number: Email:	+1 XXX XXX XX XX testemail@gmail.com	n	
			OK Cancel

- Name specify a name for radio subscriber;
- **Description** add a description for radio subscriber;
- Click «Load Image» button to assign a photo or image for radio subscriber.
- Make specify an additional information;
- **Plate number** specify an additional information;
- Phone number add a contact telephone number for radio subscriber;
- Email add an email address for radio subscriber.



Radio Radio 22	<b>•</b>
General Logical Groups	s Extended devices Additional SIP Call
SIP ID:	57068
SIP Name:	User 123
Password:	********
Block incoming ca	lls
Block outgoing ca	alls
	OK Cancel

On «**SIP Call**» page specify SIP Call settings for radio:

The information is afforded by the provider:

- **SIP ID** type in your SIP ID afforded by provider to make incoming phone call;
- **SIP Name** type in SIP Name afforded by provider when logon;
- **Password** the password for integration with PBX server.

## **Configuring Job Ticketing**

TRBOnet Dispatch Software provides **Job Ticketing** feature – the integrated ticketing system which allows Dispatchers to create, assign and track job tickets through the radio network.

**Note:** before using the feature make sure that your TRBOnet Dispatch Software license includes Job Ticketing.



Eile Yiew Map Iools Help										
Job Ticketing	Job Ticketi	ng								S
🖄 注目 🕹 🛠 🍸 🥸	Service mach	Ne 💌 Ø	Control Station	#1 1 1 1 1 1	Remote Control	Stat	Call #1			
	Cal #2		Intercom		a IPSC #1 Sot 1		▼ 1FSC #1.5	lot 2	140	
🗉 🧟 Online Dispatchers (1)	Job Ticketin	Statuses								_
Administrator	Add (F2)	Edit (F4) Assi	gn (F5) 🔚 Groupin	ng 🍸 Auto Filt	er 💮 Default Settings	Archive (F8	Cancel (F	9) Only m	vy tickets (F10)	
8 45 🗐 1	Status	10	Text	Radio	Specified End Time	Crea	ited By	Priority	Comment	
💰 🕑 Workert  😵	@ New	#A00003	[Medium] 123 [2 Dec	. 14	02.12.2013 14:08:2	0 Admi	ristrator	Medium		
🐼 Worker1 🧐										
🙈 🕑 Workert 🛛 🖵 💐										
🔊 🕑 Workert 🛛 📮 🧐										
Convind and										
LL Radio	1.1	/								
GPS Positioning	H + Record	110f1 + ++ ++ 4								
🚡 Job Ticketing	Processing task Status	a: ID	Text	tado Start 1	ime End	Time	Specified End	Time	Greate Pri	Comment
T Route Management	- Assigned	#A00001	tant [11:50] R	ladio 777			02.12.2013 1	1:50:22	Admin Me	
Text Hessages										
Reports and Statistics										
Event Log										
Telemetry										
Radio Allocation										
administer	H H A Record	110f1 + ++ ++ 4	1							(iii)
(5) 127.0.0.1 (8) (5) (5) (5) (5) (5) (5) (5) (5) (5) (5	🔓 🖾 🕹 Warn	ing! You are logged	as Administrator	Licensed to:	Neocom Software Ltd					

### Go to **Job Ticketing** page to manage Job Tickets:



keting Job Ticketing						
A XY S Serice Native	Control Station :	#1    <b>1</b>    <b>5</b>	Remote Control Stat	0	Cal #1	
Call #2	- (		SPSC #1 Skt 1	110	PSC #1 Skt 2	
line Dispatchers (1)	tatuses					
Administrator 🚽 🔂 Add 🌛 Edit 🗧	Delete					
Rame Name	0	escription		S	atus	
Worker1 C Accept				+	Accepted	
Worker1 C Done	1			4	Completed	
Worker1 🔤 🔮 Invrogress					Belected	
Worker1 9 9 23				4	Accepted	
Positioning Tacketing						
Positioning Tacketing # Management Hessages						
Positioning Dicketing a Management Messages orts and Statistics						
Positioning Excloring a Hanagement Hessages orts and Statistics t Log						
Positioning Ticketing a Hanagement Messages orts and Statistics tLog metry						
Positioning Tecketing a Hanagement Messages Ints and Statistics t Log metry o Allocation						



Click «Add» button to add Job Ticket status:

Job Ticket Status	×
Name:	Accept
Description:	test
Status:	+ Accepted
	OK Cancel

- Name specify a Job Ticket name to display in the system;
- **Description** specify a description for Job Ticket;
- Status select Job Ticket status in the dropdown list.

**Note:** specify a Job Ticket name according to the following compliance table (to make Job Tickets identified by radio):

Name
Accept
Done
InProgress
Reject

Click «**OK**» to add a status.



Eie View Map Jocis Help	
Job Ticketing	Job Ticketing
0 F 1 & X 7 Ø	Serves machine Control Station #1 Stamole Control Station
1	Caller
🗟 🧟 Online Dispatchers (1)	Job Ticketing Statues
Administrator	🔜 Add 💋 🖾 Edit (F4) 💷 Alogin (15) 🗮 Grouping 🍸 Auto Filter 🐵 Default Settings 📓 Archive (F9) 🙆 Cancel (F9) Only my tickets (F10)
a 45 🛛 🖓	Status ID Text Radio Specified End Time Created By Priority Convent
Workert G	e uen +wood homel 75 foren zum kennen en enternen enternen
Worker1 C	
A C Workert	
A.L. Pade	
GPS Positioning	an an + Record Lof L + an an +
🚰 Job Ticketing	Processing tasks: State III Task Barlo Start Time Peri Time Counted Peri Time Counted Peri Time Counted Peri Time
🕖 Route Hanagement	Assigned #400001 test [11:50] #ade 777 02.12.2013 11:50.22 #dmm., Me.
Text Hessages	
😝 Reports and Statistics	2
Event Log	4
Telemetry	
Radio Allocation	
Administer	He wild Record 10f1 + Wild -
127 A D 1 28 C 1 C 1 C 1 C 1 C 1 C 1 C 1 C 1 C 1 C	🔈 📩 🔥 🛋 Warning! You are logged as Administrator 📑 Licensed to: Neocom Software Ltd

Go to **Job Ticketing** tab to add a Job Ticket:

- 1 New tasks list;
- 2 Processing tasks list;

Click «Add» button (3) to create new task:

Job Ticket	×
Ticket ID:	#A00000
Templates:	<b></b>
Text:	123
	96
Deadline:	15 minutes 🔹
End Time:	7/4/2014 4:06 AM
	Notify on status changes
	Notify if ticket is not accepted by
	7/4/2014 4:01 AM
	Notification List
Priority:	High 👻
Comment:	Firemen
Preview	
Hide Advanced Optic	OK Cancel



- Ticket ID specify new Job Ticket ID to display in Dispatch Console;
- **Templates** select templates in the dropdown list to create new Job Ticket according to selected template.

Click 🦾 button to create	new template:
Message Templates	×
test template	
Include in message:	📝 Time
- Date	M TIME
	OK Cancel

Type in template text in the field.

Specify parameters to include in the template:

- **Priority** select to display task priority in the tasks list;
- **Date** select to display task end date in the tasks list;
- **Time** select to display task end time in the tasks list.

Click «OK» to save new template.

- **Text** type in message text in the field;
- **Deadline** select task end time;
- End time select time and date to finish the task.

Note: when end time selected, do not select deadline option.

- Notify on status changes select to send notifications to when Job Ticket status changes to Dispatchers, email and/or sms groups;
- Notify if ticket is not accepted by select to send notifications to Dispatchers, email and/or sms groups if radios does not accept Job Ticket at the time set in the field below.



• Notification List – open to select recipients for selected notifications:

Notification List	×
Dispatchers Email SMS	_
V Notify Dispatchers	
Dispatcher 1	
Dispatcher 2	
OK Cancel	

You can notify Dispatchers by Notifications in the Dispatch Console (check **Notify Dispatchers**), Email groups by sending emails to dedicated email groups (go to Email tab and check **Notify by Email**) and phone users by sending smsm to a dedicated sms groups (go to SMS tab and check **Notify by SMS**).

Then select Dispatchers/Email groups or SMS groups and click **«OK»** to save notification settings.

**Note:** In case you have selected "**Notify by Email**" you need to create email groups. *For more details on Email Groups see* <u>Email Groups</u> section.

- Priority select task priority in the dropdown list;
- Comment add a comment for new task;

Click «**Preview**» button to see new task preview.

Click «OK» to add new task.

Select the task in the list. Right-click the task and select «Assign» option:



Assign Job Ticket			×
Assign Job	Ticket		
Radio:	Worker 1 Worker 1 Worker 1 Worker 1		
		ОК	Cancel

Type in radio name in the **«Radio**» field to find and select a radio or select radio to assign the task in the list.

Click «**OK**» to assign the task to selected radio.

Selected radio will receive a task.

Radio subscriber should reply the task using **Quick reply** or **Reply** option.

**Note:** Task names should be created according to **Tasks name table** on page 218.

When radio subscriber replies a task, it will be replaced in the Processing tasks field.

Click **«Only my tickets**» button (4) to view tickets created under current administer account.



For Teas Web Toon	ant.		-								_	_
Job Ticketing 😫 E	vent Log in Windo	Nur	ng	_								5
自己自己 S P	ecent Calls/Events	in Window	ave -	Control Sta	tion #1	Renote Control 5	W-IAB	Cal #1				
5 10	ob Ticketing Monit	oring		- 115 Dimension	IN IS		1100	Page 416	loi z	<b>D</b>	ñ	
🗉 🧶 Online Disc 🚽 T	ext Messages in W	ndow	That say		12013		COLORED	- Hendeline		1.011.011.20		
Adminis P	outes in Window		E GALLED	Anim (PS)	ninn 📆 Auto Elle	n C Default Settings	Auchine (ER)	(7) Control II	Dake	ne tickets (F	Im	
T	erminate All Trans	missions	-	Test	Dade	Energian Bad Town	Creating (10)	and Ro.	Dramby I	ing denter ().		
(Alama B) O	ptions		2400003	Medual 123 12	Dec. 14	02.12.2013 1908:00	Adm	state	Nedage			
Workert 5	et Language			1								
A D Worker	hange Password											
(A) (P) Workert	9.0											
( Charling and	en ab la											
	and the second											
1.1												
Radio												
COS Destination	_											
GPS Positioning		H H A Record	dlofl F #	<b>H</b> 4								
CPS Positioning		Processing tas	dlofl <u>i</u> ) (*	<u>   </u>								
CPS Positioning		Processing tas	diofi <u>F</u> ik Anci 100	ini 4 Text	Radio Start T	ine End T	ine .	Specified End	Time	Create	Pri_ C	+ Convent
CPS Positioning		Processing tas Status Accigned	d 1 of 1 + 1+ ks: 20 m/00001	Text	Radio StartT Radio 777	ine End T	ine	Specified End 02.12.2013 1	Time 1:50:22	Oreste	Pri. C	• Convert
La Radio CPS Positioning Sob Tacketing Route Management		Processing tas Status Accepted Accepted	d 1 of 1 + 1+ ks: 20 #A00001 #A00004	Text Text [11:50] [Hgh] 123 [20.	Rado Start T Radio 777	ine End T	ee.	Specified End 02. 12. 2013 1 02. 12. 2013 1	Time 1:50:22 4:45:37	Create Admin	Pri ( Me High	+ Convent
La Radio CPS Positioning CPS P		Processing tas Status Assigned Assigned	d 1 of 1 (+) (#) ks: 20 #A30001 #A30001	Text text [1:50] [high] 123 [20.	Radio Start T Radio 777	ine End T	ine.	Specified End 02.12.2015 ( 02.12.2013 (	Time 1:50:22 4:45:37	Oreate Admini Admini	Pri ( Me High	+ Convert
La Radio CPS Positioning CPS P		In H I Recor Processing tas Status H Anagmed H Anagmed	d 1 of 1   +   +   4ks:   20   #400001   #400004	Text text [11:50] [Hgh] 123 [20.	Radio Start T Radio 777	ine End T	ie	Specified End 02 12 2015 1 02 12 2015 1	Time 6:50:22 4:45:37	Oreste Admini Admini	Pri. ( Marco High	+ Comment
CPS Positioning CPS Positioning CPS Positioning CPS Positioning CPS Route Hanagement CPS Text Hessages CPS Reports and Statistic	8	m +	dlefi                   10   #400004   #400004	Text text[11:50] [high] 123 [20.	Radio Start T Radio 777 Radio 777	ine End T	ire	Specified End 02 12 2015 02 12 2015 1	Time 1:50:22 4:45:37	Oreste Admin Admin	Pri ( Marrow High	+ Convent
La Radio CPS Positioning CPS Positioning CPS Positioning CPS Route Management CPS Text Messages CPS Reports and Statists	15	m +	d 1 of 1 F H ks: 20 #A00001 #A00004	Text Text (11:00) (Hgh) 123 (20.	Radio Start T Radio 777 Radio 777	ine End T	ire	Specified End 02 12 2015 02 12 2015	Time 1590122 4:45:37	Create Admit Admit	Pri ( Mar High	+ Coniment
Li Radio CPS Positioning CPS Positioning CPS Positioning CPS Route Management CPS Text Messages CPS Reports and Statists CPS Frent Log	8	in + + Alecon Processing tas Status + Adapted + Anagrad	d 1 of 1 F H ks: 20 #A00001 #A00004	Test Test [High] 123 [20.	Radio Start T Radio 777 Radio 777	ine End T	ec.	Speafled End 02 12 2015 02.12 2013 1	Time. 1590:22 4:45:37	Create Admit. Admit	Pri ( Man High	+ Comment
Li Radio CPS Positioning CPS Positioning CPS Positioning CPS Route Hanagement Text Hessages CPS Reports and Statistic Event Log Freeneby	8	an et i Rator Processing tas Status Apagned Assigned	d 1 of 1	rest test [11:50] [Hgh] 123 (20.	Radio Start T Radio 777 Radio 777	ine End T	ire	Specified End 62 12.2019 102.12.2013 (	Time 1:50:22 4:45:37	Greate Admin. Admin	Pri C	Comment
Li Rado CPS Positioning CPS Positioning CPS Positioning CPS Positioning CPS Positioning CPS Positioning CPS Position CPS P	65	Int 4 4 Recor Processing tas Status Ansigned Ansigned	diefi i i i i i i i i i i i i i i i i i i	Text text [1::50] [Hgh] 123 [20.	Radio Start T Radio 777 Radio 777	ine End T	erc	Specified End 82, 82, 8918 ( 82, 12, 2018 ( 92, 12, 2018 (	Tine.	Create Admit. Admit	Pri ( Marco High	+ Comment
Lini Radio CPS Positioning CPS Positioning CPS Positioning CPS Positioning CPS Positioning CPS Position CPS P	83	Int H I Racor Processing tas Status Assigned Assigned	d 1 ef 1               ks: 20 #400004 #400004	Text Text (10:50) (high) 223 (20.	Radio Start T Radio 777 Radio 777	ine End T	**	Specified End 82 12,2018 ( 02,12,2018 1	Time 199122 4:45:37	Greate Admit Admit	Pri ( Man High	+ Comment

Go to Tools – Job Ticketing Monitoring to see Job Ticket statistic diagram:

For more details go to <u>Tools</u> section.

#### 2. Job Ticketing monitoring.

To get a report go to Reports and Statistics (1) page and select Common Reports (2) - Job Ticketing (3):

nd Statistics Com	non reports			-		-		-		
atar ath activity 2 Data	Volé élective. Incodi	Control Control Control	Station #1		te Control Stat		n	Call #2	2.8	
pes for period of Radios entages and notes allocation disabling 3	ery parameters 3 ab t	• % III I		19.4.	•	-		_	_	
d Rautes orts ent details exit details	Job tick from 25.11.20	ceting 13 0:00 to 02.12.20	13 12:03							
	Subject.						Specified End	Dispatcher	Priority	
	#406001	test [11:50]	Radio 777	Assigned			02.12.2013 11:50:22	Administrator	Medium	
thering	#406662	[High] 123 [2 Dec. 16:13]	Radio 777	Accepted			02.12.2013 16:13:47	Administrator	High	
ketang										
lanagement										
estades	-									
and Statistics	1									
oğ										
try .										
llocation										
12										



# **Installing Web-Console**

Web console is a special interface to connect to a TRBOnet RadioServer and monitor subscriber radios using a regular web browser on any device. For more details on web console interface see **User Guide**, **«Web Console User Manual»** chapter.

# **Installing Web Console**

Go to Start/Control Panel/Programs and Features.

Click «Turn Windows features on» or «off» buttons.





### Go to Internet Information Services/World Wide Web Services/Application Development Features and select all:

😋 🗢 🗖 « All Control Pane	I Items 🕨 Programs and	I Features
Control Panel Home View installed updates Turn Windows features on or off	Uninstall or o To uninstall a pro Organize Name Google Chrome Microsoft ANET Fra Microsoft ANET Fra Microsoft NET Fra Microsoft SQL Sen Microsoft SQL Sen	Windows Features

Note: Make sure that Common HTTP Features - Static Content enabled.



Restart your PC.



#### Go to Start/All Programs/Accessories/ Command Prompt:



Go to Computer/Local Disk (C: )/ Windows/Microsoft.NET/Framework/v4.0.30319/aspnet\_regiis:

		(ed ) and and a manufacture of		- 1 × 11		_	-
Organize = 🖬 Open N	ew folde					三• 1	
Favorites		Name	Date modified	Туре	Size		
C Desktop		AppLaunch	18/03/2010 13:16	Application	104 KE		
Downloads		applaunch.exe	18/03/2010 05:02	XML Configuratio	1 KB		1.1
3 Recent Places		Aspnet	18/03/2010 00:28	XML Configuratio	I KB		3
		aspnet.mot	18/03/2010-00:28	MOF File	53 KB		
😝 Libraries	11	aspnet.mof.uninstall	18/03/2010 00:28	UNINSTALL File	1 KB		
Documents		aspnet_compiler	06/04/2011 17:16	Application	30 KB		
Music		aspnet_filter.dll	18/03/2010 16:47	Application extens	24 KB		
Pictures		aspnet_isapi.dll	18/03/2010 16:47	Application extens	14 KB		
Videos	1	Aspnet_perf.dll	18/03/2010 16:47	Application extens	30 KE		
		aspnet_pert.h	18/03/2010 05:54	HFile	7 KB		
Computer		a aspnet_perf	18/03/2010 16:42	Configuration satt	908 KB		
Local Disk (C:)		a spnet_perf2	18/03/2010 16:42	Configuration sett	906 KB		
CD Drive (D:)		aspnet_rc.dll	18/03/2010 16:47	Application extens	77 KB		
		aspnet_regbrowsers	18/03/2010 16:47	Application	20 KB		
Vetwork Network		🖭 aspnet_regiis	18/03/2010 16:47	Application	30 KB		
ј₩ 3CXPBX		aspnet_regsql	18/03/2010 16:47	Application	101 KB		
ABACHIKOV		aspriet_state	18/03/2010 16:47	Application	35 KB		
ALEXEY-VAIO		aspnet_state_perf.h	18/03/2010 05:54	HFile	IKB		
1 BRN_034E6B		a spnet_state_perf	18/03/2010 17:19	Configuration sett	42 KB		

Drag the file **aspnet\_regiis** into the **Command Prompt** then press the space bar and add the symbols - **i**. Then press **Enter** key:





Go to Control Panel/Administrative Tools.

Double click «Internet Information Services (IIS) Manager» shortcut and double click ISAPI and CGI Restrictions.



In the column restrictions set **Allowed** in all lines:



CO CO I ROMAN-FIK +			
File View Help			
Connections	ISAPI and CGI Restrictions Use this feature to specify the ISAPI and CGI extensions that Group by: No Grouping	Actions Add Deny Edd Kemove	
	Description Restriction Path Active Server P., Allowed Swindlin'blogster ASP NET v2.0.5., Allowed Swindlin'blogster ASP NET v2.0.3., Allowed C:/Windows/Mic ASP NET v4.0.3., Allowed C:/Windows/Mic	m32\inetsn\asp.dl andt.NET\Framework64\v2.0.50727\aspnet_mapi.dl soft.NET\Framework(v2.0.50727\aspnet_isapi.dl crosoft.NET\Framework(v4.0.30319\aspnet_isapi.dl crosoft.NET\Framework64\v4.0.30319\aspnet_isapi.dl	Edit Facture Settings. Hop DMARE Hop
e	Features View Content View		

Copy the Web Site archive **WebConsole** to **Computer/ Local Disc (C: )/ inetpub** to create the folder for web console.

Go to **Application Pools** (1). Double-click **DefaultAppPool** (2) and check **.Net Framework** version (3):

Applicat This page lets you view Application pools are applications, and prov	ion Poo w and man associated ide isolatio	OIS age the list of ap with worker pro in among differ	Edit Application Pool Name DefaultAppPool	Actions Add Application Pool	
Asp.NET v4.0 ASP.NET v4.0 ASP.NET v4.0 Cl Classic .NET Ap DefaultAppPool	Status Started Started Started Started	NET Fram v4.0 v4.0 v2.0 v4.0	Managed Pipel Integrated Classic Classic Integrated	NET Framework ve NET Framework ve Managed pipeline to Integrated	ersion: 1.0.30319 mode: pool immediately OK Cancel OK Cancel
	Application Application pools are application pools are applications, and prov Filter: Mame ASP.NET v4.0 ASP.NET v4.0 Cl Classic .NET Ap DefaultAppPool	Application Poor This page lets you view and man Application pools are associated applications, and provide isolation Filter: Name Status ASP.NET v4.0 ASP.NET v4.0 Classic .NET Ap Started Classic .NET Ap Started DefaultAppPool Started	Application Pools This page lets you view and manage the list of a Application pools are associated with worker pro applications, and provide isolation among differ Filter:  Filter:  Status NET Fram  ASP.NET v4.0 Started v4.0 Classic .NET Ap Started v4.0 Classic .NET Ap Started v4.0 DefaultAppPool Started v4.0	Application Pools This page lets you view and manage the list of application pools or Application pools are associated with worker processes, contain or applications, and provide isolation among different applications. Filter:	Application Pools This page lets you view and manage the list of application pools or application pools are associated with worker processes, contain or applications, and provide isolation among different applications. Filter:  Filter:  Status INET Fram. Managed Pipel.  ASP.NET v4.0 Started v4.0 Integrated Managed pipeline a Integrated Classic DefaultAppPool Started v4.0 Integrated Start application



### Go to **Sites\Default web site** (1):

Internet Information Services (IIS) M	lanager Sites +		
File View Help			
Connections	Sites	Alerts  This site has multiple bindings	
- 2 Application Pools	Filter	Go · C Show All Group by:	÷. Actions
Sites	Name	D Status Binding Canadad //a Binding Add Web Site	* (net.pi G Add Web Site Set Web Site Defaults
		Set Web Site Defaults Bindings	Edit Site Bindings
		Basic Settings Explore Edit Permissions Remove	Explore Edit Permissions Remove Rename
		Rename View Applications	View Applications View Virtual Directories
	<[	View Virtual Directories Manage Web Site	Manage Web Site
∢ m ► Ready	Features View 💦 C	Help     Online Help	V Stort

Right-click **«Default Web Site»** and select **View Applications** (2):

Internet Information Services (IIS) M	lanager			
G WIN7_ENG_TEST	▶ Sites ▶ Defau	It Web Site 🔸		iii ≈ ∰ ® •
Eile Yiew Help				
Connections	Applic This page lets you content and code.	ations view and manage the list of applicati	Actions Add Application Set Application Defaults	
Default Web Site	Filter:	- 📖 Ga - 🕁 Show All	Group by:	Online Help
	Virtual Path	Physical Path	Site	
· •	Features View	m Content View	_	•
Ready				<b>9</b> <u>1</u> .0



Specify the **Alias** and **Physical path** for default application:

Add Application		? X
Site name: Default Web Site Path: /		
Alias:	Application pool:	
Webconsole	DefaultAppPool	Select
Example: sales		
Physical path:	•	
C:\inetpub\WebConsole		•
Pass-through authentication		
Connect as Test Settings		
	ОК	Cancel

Browse folder with unarchieved web console.

Click «**OK»**.

To use web console on 64-bit OS go to **Application Pools** (1)\Advanced Settings (2):

File View Help	🖯 (General)		3	
Connections  WIN7_ENG_TEST (win7_en Application Pools Sites Default Web Site Default Web Si	.NET Framework Version Enable 32-Bit Applications Managed Pipeline Mode Name Queue Length Start Automatically Car Elimit Limit Automatically CPU Limit Limit Automatically CPU Limit Interval (minutes) Sciencessor Affinity Enabled Processor Affinity Mask ef Coressor Affinity Mask ef Coressor Affinity Mask ef Coressor Affinity Mask Elimerout (minutes) Licad User Profile	v4.0 True Integrator DefaultAppPool 1000 True 0 NoAction 5 False 4294967295 ApplicationPoolIdentity 20 True	7 polid polid polid polid	Actions Add Application Pool Set Application Pool Defaults Application Pool Tasks Start Stop Recycle Edit Application Pool Basic Settings Recycling Advanced Settings Rename Rename
Dingeties     Properties     Reports     Scripts	Process Model			View Applications

And select **Enable 32-Bit Applications – True** (3).

Web console is added in the list of default web sites:





**Note:** make sure your account has sysadmin privileges (for more details see <u>Appendix B: Configure SOL Server 2012 for Local System Account During Setup</u> and <u>Appendix C: Grant Sysadmin Role to Local System in SOL Server 2012</u>) and the database connection is successful (see <u>Database Authentication</u> section).

To open Web Console right click your application, select **Manage Application**\**Browse.** 



File View Help		
Consections	/TRBOnet webconsole Home	Actions
ROMAN-ITK (Roman-Its Application Pools Stee Default Web Stee TRBOnet web TRBOnet web	Shomman     Filter:        • If Co • Show All Group by: Area        • If +       ASP.NET        • If Co • Show All Group by: Area        • If +       ASP.NET        • If Co • Show All Group by: Area        • If +       Explore        • If Co • Show All Group by: Area        • If +       Explore        • If Co • Show All Group by: Area        • If +       Add Application        • If Controls        • If Pages and Session State SMTP E-mail       Manage Application        • Browse        • Browse	Edit Permosons  Edit Permosons  Permosons  Manage Application  Browne Application  Common Settings  Help Daline Help
	Refresh Remove Remove C. CGI Compression Default Document Browning For Pages Handler HTTP Logging MIME Types Modules Output Request Caching Filtering SSL Settings	

Web Console is ready for operation:



Type in **Login** and **Password** to launch the application.





# Web Console Setup

If TRBOnet Dispatch Software is not installed on the PC, click the application and select **Application Settings**:

Internet Information Services (IIS) M	ange	
C C ROMAN-FIK +	Sites + Default Web Site + TRBOnet webconsole +	₩ = % <b>9</b> ·
File View Help Connections ROMAN-TIK (Roman-TIK).Roman Application Pools Stas Control Control Control Polyalt Web Ste B Control Control Polyalt Web Ste B Control Control Polyalt Web Ste	/TRBOnet webconsole Home	Actions Open Fosture Displaye Edit Fosmissions Basic Setting Visar Vietual Directores
Account Account Audio Audio bin CustomData bin Log Log Scripts Scripts	Authorizat Compilation Pages Globalization Levels Settings Connection Machine Key Pages and Session State SMTP E-mail Strings Connection State SMTP E-mail Centrols Settings Connection Controls Settings Connection State SMTP E-mail Strings Connection Sta	Manage Application   Browse Application  Control (http)  Atkanced Settingson  Help  Contine Help
	Document Browsing T Document Browsing T Handler HTTP Logging MIME Types Modules Output Request Respon Six Settings	
× +	Management Configurat Editor T	

Specify **IP** and **Port** of the PC with TRBOnet Dispatch Software installed:





ROMAN-FIK +		10 × 5 6
ile View Help		
onections		Actions
1	ROMAN-TIK Home	Manage Server
ROMMN-TIK (Roman-(%).Roman)     Application Pools     Sites     Default Web Site     Default Web Site     TBPOnet client     TBPOnet undergangle	Filter:	Restart     Start     Start     Stop     View Application Pools     View Sites
Explore	izat Compilation Pages Globalization Levels Settings	Change NET Framework
Add Application.	ony	Help     Online Help
Refresh Remove Switch to Conten	P Authentic CGI Compression Default Directory View	
	Error Pages FastCGI Handler HTTP ISAPI and ISAPI Filters Settings Mappings Respon CGI Restri	
	Logging MIME Types Modules Output Request Server Caching Filtering Certificates	
	Worker Processes Management +	
	E Features View Contant View	

Right click **TRBOnet web console** and select **Edit Permissions:** 

Go to **Security** tab and click **«Edit»** button to edit permissions:

🗼 TRBOnet.Enterprise.WebConsole_4.1.0.255 Properties 👘 🔤
General Sharing Security Previous Versions Customize
Object name: C:\inetpub\TASOnet.Enterprise.WebConsole_4.1.(
Group or user names:
& CREATOR OWNER
& SYSTEM
& Administrators (win7_eng_test \Administrators)
1 lleare fuin7 ann taet\lleare
۴
To change permissions, click Edit. Edit
Permissions for CREATOR
OWNER Allow Allow
Full control
Modify
Read & execute
List folder contents
Read
Write *
For special permissions or advanced settings, Advanced
Leam about access control and permissions
OK Cancel Apply



Select **User** in the Users list (1). In the **Allow** column select **Write** line:

Permissions for TRBOnet.Enter	rprise.WebConso	ole_4.1.0.2 론	
Security			
Object name: C:\inetpub\TRBC	Onet.Enterprise.We	ebConsole_4.1.(	
Group or user names:		4	
& CREATOR OWNER			
SYSTEM .			
Administrators (win7_eng_tes	t \Administrators)		
Users (win7_eng_test\Users)		-	
Rest and the second sec	IIS_IUSRS (Win /_eng_test \IIS_IUSRS)     Is_IUSRS (Win /_eng_test \IIS_IUSRS)		
	Add	Remove	
Permissions for Users	Allow	Deny	
Read & execute	2		
List folder contents	- V		
Read	1	=	
Write			
Special permissions			
Learn about access control and permissions			
ОК	Cancel	Apply	

Click «Apply» button.

Click «**Ok»**.



# **APPENDIX A: SQL Server Edition Considerations**

	How to select SQL Server		
	0 - 200 subscriber units	200 + subscriber units	
Windows 7, Windows Server 2008	MS SQL 2008 Express	MS SQL 2008 Standard	
Windows 8, Windows Server 2012	MS SQL 2012 Express	MS SQL 2012 Standard	

Setup



# **APPENDIX B: Configure SQL Server 2012 for Local System Account During Setup**

During installation MS SQL Server 2012, you can grant required role to Windows **Local System** account in advance. On a configuration setup tab **Database Engine Configuration**:

Database Engine Confi Specify Database Engine authe	guration ntication security mode, administrators and data directories.	
Setup Support Rules Feature Selection Installation Rules Instance Configuration Disk Space Requirements Server Configuration Database Engine Configuration	Server Configuration         Data Directories         User Instances         FILESTR           Specify the authentication mode and administrators for the Data         Authentication Mode         Image: Constraint of the Cons	EAM tabase Engine. ntication)
Error Reporting Installation Configuration Rules Installation Progress Complete	Specify the password for the SQL Server system administrator (s Enter password: Confirm password: Specify SQL Server administrators	ia) account.
	VM_WIN7_002\admin (admin) Add Current User	SQL Server administrators have unrestricted access to the Database Engine.
	< Back Nex	t > Cancel Help

Click Add button to add additional account to MS SQL Server administrators.


In the window **Select Users or Groups** hit the **«Advanced»** button in the **Enter the object names to select** field to find a required user name:

cicci oscis or oroups		
Select this object type:		
Users, Groups, or Built-in security pr	incip <mark>al</mark> s	Object Types
From this location:		
VM_WIN7_002		Locations
Enter the object names to select (ex	amples):	Check Names

Click **«Find»** button and select LOCAL SERVICE account. Click **«OK»** to add the user and close the window.

Select Users or Groups			<u>? ×</u>
Select this object type:			
Users, Groups, or Built-in security principals			Object Types
From this location:			
MITYA			Locations
Common Queries			
Name: Starts with 🔽			Columns
Description: Starts with			Find Now
Disabled accounts			Stop
Non expiring password			
Days since last logon:			<b>\$</b>
Search results:		OK	Cancel
Name (RDN)	In Folder		<b>_</b>
Kalis_IUSRS	MITYA		
A INTERACTIVE			
NETWORK			
RETWORK SERVICE			
RIGHTS			
REMOTE INTERACTIVE LOGON			
💑 restore	MITYA		
SQLServer2005SQLBrowserUser\$MITYA	MITYA		•

Select NT AUTHORITY\LOCAL SERVICE (LOCAL SERVICE):



#### Setup

SQL Server 2012 Setup		
Database Engine Confi Specify Database Engine authe	guration	
Setup Support Rules Feature Selection Installation Rules Instance Configuration Disk Space Requirements Server Configuration <b>Database Engine Configuration</b> Error Reporting Installation Configuration Rules Installation Progress Complete	Server Configuration       Data Directories       User Instances       FILESTR         Specify the authentication mode and administrators for the Data Authentication Mode       Image: Configuration Mode       Image: Configuration Mode         Image: Mixed Mode (SQL Server authentication and Windows authentication Mode       Image: Configuration Mode       Image: Configuration Mode         Image: Specify the password for the SQL Server system administrator (Image: Confirm password)       Image: Confirm password       Image: Confirm password         Image: Specify SQL Server administrators       Image: Confirm password       Image: Confirm password       Image: Confirm password	REAM tabase Engine. entication) sa) account.
	Add Current User Add Remove	SQL Server administrators have unrestricted access to the Database Engine.

Click button and follow the prompts to finish the installation.



# Appendix C: Grant Sysadmin Role to Local System in SQL Server 2012

If you have already installed MS SQL 2012, you need to grant **sysadmin** role to **Local System** account in MS SQL Server 2012.

Run SQL Server Management Studio from Start menu:



Connect to your database instance where TRBOnet database created.



Go to Security node and select Logins:

Right-click NT AUTHORITY\SYSTEM login and select Properties.



In «Login Properties» window select «Server Roles» and check the box «sysadmin».

Login Properties - NT AUTH	ORITY\SYSTEM	
Select a page	🛃 Script 👻 🔀 Help	
Server Roles User Mappule Securables Status	Server role is used to grant server-wide security privileges to a user.  Server roles:  bulkadmin bulkadmin processadmin processadmin serveradmin serveradmin serveradmin serveradmin	
Connection Server: VM_WIN7_002\SQLEXPRESS Connection: VM_WIN7_002\admin IVM_WIN7_002\admin IVM_WIN7_002\admin IVM_WIN7_002\admin IVM_WIN7_002\admin IVM_WIN7_002\admin IVM_WIN7_002\admin IVM_WIN7_002\admin IVM_WIN7_002\admin IVM_WIN7_002\SQLEXPRESS IVM_WIN7_002\SQLEXPRES		
		OK Cancel

Click «OK» to add sysadmin privileges to selected user.



# Appendix D: Database and Audio Recordings Backup and Restore

## **Backup Configuration**

TRBOnet Dispatch Software has an embedded mechanism of database and audio recordings backup. Initially, it already has two paths to store database and audio recordings.

For TRBOnet.Enterprise:

%ProgramData%\Neocom Software\TRBOnet.Enterprise\Backups and %ProgramData%\Neocom Software\TRBOnet.Enterprise\Audio.

For TRBOnet.Plus:

%ProgramData%\Neocom Software\TRBOnet.Plus\Backups and %ProgramData%\Neocom Software\TRBOnet.Plus\Audio.

Default paths can be changed:

Open TRBOnet RadioServer**Configurator** and stop the TRBOnet RadioServer.

Configuration	Service
Service	
S Network	The server Windows Service is installed on this computer
Database	
Service Management	State: Started
X Advanced settings	Stop service
Map Servers for Geocoding	Save changes and restart service
Local Agent	
MOTOTRBO	
Services	Uninstall Service
Repeater #1	
X Advanced settings	
Slot #1	
<b>III</b> Slot #2	
Local Slots	
Analog Control Stations	
Remote Agents	Niew log entries
Friendly Servers	
🔞 Internal PBX Server	
🕿 External PBX Server	
Set Defaults	Apply OK Cancel

To customize backup folders, go to **Database** and select custom directory for the database (e.g. **C:\TRBOnetBackup\DB**) and audio files **(e.g.** 



#### Restore

**C:\TRBOnetBackup\Audio)**. The database backup will be stored to selected directory.

Configuration		Database	
🗬 Service			
S Network		SQL Server:	(local)\SQLEXPRESS -
Database		Database:	TRBOnet 🔹
🔅 Service Management		Authoritantian	Later de la companya de la comp
🔀 Advanced settings		Authenucauon:	windows +
Map Servers for Geocoding		Login:	
Local Agent		Password:	
MOTOTRBO	Ξ		
Services		Specify the path fo	r database archives
Repeater #1			
		Path:	C: \TRBOnet\Backup\DB
Privacy		Use custom folder f	for audio files
<b>III</b> Slot #1		Daths	
<b>III</b> Slot #2		Path:	
Local Slots			
Analog Control Stations		Test Connec	tion
📻 Remote Agents		Upgrade Data	abase
Friendly Servers		Crusta Datal	
🔞 Internal PBX Server		Create Data	Dase
🕿 External PBX Server	Ŧ		
Set Defaults			Apply OK Cancel

Save your changes and restart the service.

## **Backup Database and Audio Recordings**

To back up the database and audio recordings do the following:

In the Dispatch Console go to **Administer** section and select **Database** in the Navigation tree.



#### Click «Backup» button:

<u>File View Map Tools H</u> elp		
Administer	Database	
RadioServer  License  Calcense  Calcense Calcense Calcense  Calcense  Calcense  Calcense  Calcense  Calcense  Calcense Calcense Calcense Calcense Calcense Calcense Calcense Ca	Intercom Service inactive Service inactive Backup Catabase information Server name Database name: Backup date: Database version:	(ocal) \SQLEXPRESS TRBOnet22222 5/28/2014 7:36:18 PM Microsoft SQL Server 2005 - 9.00.3042.00 (Intel X86) Feb 9 2007 22:47:07 Copyright (J 1988-2005 Microsoft Corporation Express Edition on Windows NT 6.1 (Build 7601: Service Pack 1)
Radio	Data size:	5.31 MB
GPS Positioning		
Route Management		
Content Messages		
Reports and Statistics		
Event Log		
😰 Radio Allocation		
Administer		
🐻 127.0.0.1 🖓 🕵 🔥 🔺 Warning! You ar	e logged as Administrator 🛛 📑 Licensed	to: Demo Version Demo License

## Specify Backup details:

Clean database	×
Remove old data and shrink da	atabase
Path: C:\Program Files\Neocom Software\TR	BOnet Enterprise\tr\Temp
🕼 Backup audio	
📝 Remove	
Remove all data older than date:	02.05.2013 💌
☑ Audio files	
🔽 Data	
	OK Cancel

- Backup audio check to backup audio recordings;
- Remove check to remove audio files and data from database. Remove all data older than date - select the date;



- Audio Files -check to remove audio files;
- Data check to remove data.

Click «OK» to run backup procedure.

Backup progress bar will be displayed in low-right corner.

1. In a while a ZIP archive will be created in two possible directories:

### For TRBOnet.Enterprise:

- Default directory: %ProgramData%\Neocom
   Software\TRBOnet.Enterprise\Audio for Audio files and
   %ProgramData%\Neocom Software\TRBOnet.Enterprise\Backups for backup files;
- Custom directory specified in TRBOnet RadioServer settings.

### For TRBOnet.Plus:

- Default directory: %ProgramData%\Neocom Software\TRBOnet.Plus\Audio for Audio files and %ProgramData%\Neocom Software\TRBOnet.Plus\Backups for backup files;
- Custom directory specified in TRBOnet RadioServer settings.
- 2. The archive includes database backup file and audio recordings files. The archive name contains the date of backup. New backup files will be placed to the same directory.





For TRBOnet.Plus:

ganize • Include in	library      Share with      New folde	ч		
Favorites	Name	Date modified	Туре	Size
E Desktop Downloads Dropbox Recent Places	TRBOnet Plus_20140528.zip	5/28/2014 7:36 PM	Compressed (zipp	208 KB
Desktop  Libranes  Documents  Music  Pictures  Videos  Roman Lapin  Computer  Network Control Panel  Recycle Bin 100 level 2D map S85 roman  Config. Pics Config. Pics Config. Pics Elastic Elastic 22.0 x86 (f) Hoor				
Important docs Jenkins Licences				

## **Restore Database**

To restore the database, open TRBOnet RadioServer Configurator and stop TRBOnet RadioServer.

Service Network	
Database Service Management Advanced settings Local Agent MOTOTRBO Services IPSC #1 IPSC #1 Slot #1 Slot #2 Local Slots Analog Control Stations Remote Agents Friendly Servers SIP Interconnect License	The server Windows Service is installed on this computer State: Stop service Save changes and restart service Uninstall Service

Unzip the backup archive and open the folder:



#### Restore

Arganize + 🙀 Open	Include in library * Share with *	New folder			1月 •	•	
Favorites	Name	Date modified	Туре	Size			
E Desktop	🕌 Audio	8/9/2013 1:09 PM	File folder				
Downloads	Info.txt	8/9/2013 12:54 PM	Ted Document	1 KB			
Recent Places	TRBOnet.Enterprise.bak	8/9/2013 12:54 PM	BAK File	1,939 KB			
	TR8Onet.Enterprise_20130809.zip	8/9/2013 12:54 PM	WinRAR ZIP archive	164 KE			
Desktop							
😝 Libraries							
Documents							
J Music							
Fictures g							
Videos							
Roman Lapin							
Computer							
Network							
Control Panel							
Recycle Bin							
CP5_8_0_410							
👗 Elastix							
Important docs							
Pics							

Run **SQL Server Management Studio Express** with sufficient rights to manage databases.







Select **Database** in the navigation tree (e.g. **TRBOnet**):



Right-click selected database. Go to Tasks/Restore/Database:

A CONTRACTOR CONTRACTOR OF THE					
No backupset selected to be rest.	ored.				
iefect a page ∰ General ∰ Files ∰ Options	Scource © Qutabase: © Dyrice: Ogtabase: Destination Detabase: Bestore to: Restore plan				- Imglist.
Connection	Domain wave	California	 	Listauteur	Polecen
W. WIND 002/SQLEXPRESS [VM_WIND_002/setmin]					
Progress					
O Ready				Yes	illy Backup Media
			ОК	Cancel	Help



Select Database backup properties:

- In the **Destination** field type in or select **Database** name to backup to in the dropdown menu (e.g. **TRBOnet**);
- In the Source field check Device;
- Click button to select the directory with database backup:

B his back-seat related to be ret	tour i			120100
S un sacrapper relected to be les	Vada <sup>1</sup>			
Select a page	Script + DHelp			
ar General				
P Continent.	Source			
a specie	10 Detebase:			1
	@ Oprice			-
	Dgtabase:	1		
	Destruction			
	Children			
	Owtogene:	machiel		
	Bestore to			Tinging
	Select backup devic	45	1000	
	Specify the backup mes	Sit and its location for your restore operation		
		-	-	okpeint LSM uit
	Beckup media type:	The		
	Backup getta			
			8#	
			Benne	
connection.			Conjune	
VM_WIN7_002/SQLEXPRESS (VM_WIN7_002/admin)				
View connection properties				
rogress				
O Ready		QK I	Carroel   Help	Py Dicksop Michie
C Ready			Carlos Hep	Py Deckarp Me

Click dutton and select the directory you unarchived the database backup to (e.g., **C:\TRBOnet\Backup\DB**).





Note: Select file type - bak.

Click «**OK**» to add the directory.

N			
No backupset selected to be rest	ored		
Select a page ∰ General ∰ Files ∰ Options	Source Database Dytabase Destination Database Bestore to	TREOnet	
	and the second second		
	Specify the backup media Backup media type Backup gedia: C:\ProgramData\Neoc	and its location for your restore operation.	Sipoint LSN Ful L Add Berrove Contents
Connection VM_WINJ_002/SQLEXPRESS (VM_WINJ_002/sdrwin) View connection properties	Specify the backup media Backup media type: Backup gedia: C:\ProgramData\Neod	r and its location for your restore operation.	ekpoint LSN Ful L Add Bemove Conjunta
Connection VM_WINF_002/SQLEXPESS (VM_WINF_002/sdmin) View connection properties Programs	Specify the backup media (Backup media type: Backup media C:\ProgramCata)Neco	nend its location for your restore operation.	okpoint LSN Ful L <u>bbi</u> Berrove Contents

### Click «**OK»**.

The database is added to the list of restored databases





#### Restore

						2	Colores 6
P Ready							
ielect a page	Script + BHelp						
General Base							
P Options	Source						
	🖾 Database:						+
	@ Device	C:\ProgramD	sta\Neocom S	oftware\TR	BOnet Inte	erprise\Backup\TRB	-
	Dgtabase	TRBOnet					
	Destination						
	Database:	TRBOnet					
	Bestore to:	The last back	up taken (Tues	day, Augus	a 06, 2013	11:21:27 .	imeine
	Restore plan						
	Backup sets to restore:						
	Restore Name Component	Tipe Server		Database	Pastion	First LSN	Last LSN
	Database	Full S001	SQLEXPRESS	TRBOnet	1	24000000021800037	240000000
Connection (VM_WDV7_002/SQLEXPRESS [VM_WDV7_002/sadmin]							
View connection properties							
					1		
Programs	4 71						
Programs Done					1	Yerify Ba	ckup Media

Select the check box and click **«OK»** to restore the database.

Configuration	Database
🔗 Service 🔺	
🕤 Network	SQL Server: (local)\SQLEXPRESS -
Database	Database: TRBOnet22222
Service Management	Authentication:
X Advanced settings	TRBOnet_Test
Map Servers for Geocoding	Login: TRBOnet_Test1
Local Agent	Password: TRBOnet_Test11
MOTOTRBO	TRBOnet222
Services	Specify the path fo
Repeater #1	Pathy C:\Users\r. Janin NS\Deskton\Transfant.docs
X Advanced settings	
Privacy	Use custom folder for audio files
Slot #1	Path: ···
Slot #2	
	Test Connection
Analog Control Stations	
Eriondly Servers	Upgrade Database
Thernal DBY Server	Create Database
R External PBX Server	
Set Defaults	Apply OK Cancel
Test Connection	
Click	button to check the connection to Database

Go to **Database** section. Select the restored database from the dropdown list.



Click Upgrade Database

button to upgrade the database if current

database was restored from the database version lower than current.



Configuration	Service
🔗 Service	
S Network	The server Windows Service is installed on this computer
Database	
Service Management	State: 🜔 Service started
🔀 Advanced settings	Stop service
Map Servers for Geocoding	A Cause also and analysis and in a
Local Agent	
MOTOTRBO	
🗘 Services	Uninstall Service
Repeater #1	
Advanced settings	
Privacy	
<b>I</b> Slot #1	
<b>I</b> Slot #2	
Local Slots	
Analog Control Stations	· · ·
Remote Agents	View log entries
Friendly Servers	
📷 Internal PBX Server	
External PBX Server	
Set Defaults	Apply OK Cancel

# **Restore Audio Recordings**

To restore the audio file, Launch TRBOnet RadioServer Configurator and stop TRBOnet RadioServer service.

Configuration	Service
🗬 Service 🗸	× .
S Network	The server Windows Service is installed on this computer
Database	
Service Management	State: 🜔 Service started
X Advanced settings	Stop service
Map Servers for Geocoding	Eave changes and restart service
Local Agent	
MOTOTRBO	
Services	Uninstall Service
Repeater #1	
X Advanced settings	
Privacy	
<b>III</b> Slot #1	
<b>III</b> Slot #2	
EII Local Slots	
Analog Control Stations	
Remote Agents	View log entries
Friendly Servers	
Thernal PBX Server	
Z External PBX Server	
Set Defaults	Apply OK Cancel

#### Restore

Go to **Database** section in the navigation tree and specify custom directory for audio files (e.g. for TRBOnet.Enterprise **C:\TRBOnet.Enterprise\Backup\Audio**; For TRBOnet.Plus: **C:\TRBOnet.Plus\Backup\Audio**).

Configuration		Database		
🗬 Service				
S Network		SQL Server:	(local)\SQLEXPRESS -	
Database		Database:	TRBOnet22222	
Service Management		Authentication	SOL Server	
X Advanced settings		Addienticadon.	SQL Server	
Map Servers for Geocoding		Login:	sa	
Local Agent		Password:	*****	
MOTOTRBO	=			
Services		Specify the path fo	r database archives	
Repeater #1		Daths	C:\temp\TPBOpet	
X Advanced settings		raui.		
		Use custom folder f	for audio files	
		Path:	:\temp\Audio ····	
Slot #2				
Local Slots		Test Copper	tion	
Analog Control Stations		Test Connec	uon	
Remote Agents		Upgrade Database		
Friendly Servers		Create Database		
Thernal PBX Server	-			
X External PBX Server	-			
Set Defaults			Apply OK Cancel	

Go to the directory you specified to store backup audio files.

Unzip the backup archive:

Favorites     Name     Date modified     Type     Site       Desktop     Audio     8/9/2013 12:54 PM     File folder       Desktop     Info.bat     8/9/2013 12:54 PM     Tell Document     1 KB       TRBOnet.Enterprise.bak     8/9/2013 12:54 PM     BAK File     1.939 KB       TRBOnet.Enterprise.20130809.zip     8/9/2013 12:54 PM     WinRAR ZIP erchive     164 KB       Documents     Info.bat     8/9/2013 12:54 PM     WinRAR ZIP erchive     164 KB       Distaries     Documents     Info.bat     8/9/2013 12:54 PM     WinRAR ZIP erchive     164 KB       Videos     Roman Lapin     E     Computer     Info.bat     Info.bat     Info.bat     Info.bat       Computer     Network     E     Computer     Info.bat     Info.bat     Info.bat     Info.bat       E Computer     Info.bat     Info.bat     Info.bat     Info.bat     Info.bat     Info.bat       E Computer     Info.bat <th>rganize • 🤰 Open</th> <th>Include in library      Share with</th> <th>New folder</th> <th></th> <th></th> <th>31</th> <th>•</th> <th></th>	rganize • 🤰 Open	Include in library      Share with	New folder			31	•	
	Favorites	Name	Date modified	Туре	Size			
Dewnloads Recent Places Desktop Desktop Desktop Desktop Desktop Desktop Diversets Music Videos Roman Lapin Videos Recycle Bin Computer Recycle Bin Costrol Parell Recycle Bin Ensycle Bin Ensycle Bin Ensycle Bin Ensycle Bin Ensycle Bin Ensycle Bin Fics	Desktop	Audio	8/9/2013 1:09 PM	File folder				
Recent Places Ceshtop Ceshtop Ceshtop Control Parel Recont Places Ceshtop Control Parel Recent Places Ceshtot Control Parel Recent Places Ceshtot Ces	Downloads	hfo.bt	8/9/2013 12:54 PM	Text Document	1 KB			
TRBOnet.Enterorise_20130809.zip 8/9/201312:54 PM WinRAR ZIP archive 164 KB          Desktop         Libraries         Documents         Music         Pictures         Kies         Network         Computer         Network         Control Panel         Resyle Bin         Lestix         Latix         Libraries         Pics	Recent Places	TRBOnet.Enterprise.bak	8/9/2013 12:54 PM	BAK File	1,939 KB			
□ Desktop         □ Libraries         □ Documents         □ Music         □ Pictures         □ Pictures         □ Videos         □ Computer         □ Network         □ Control Panel         □ Resycle Bin         □ CPS_B_0_410         □ Eastix         □ Important docs         □ Pics		TRBOnet.Enterprise_20130809.zip	8/9/2013 12:54 PM	WinRAR ZIP archive	164 KB			
□ Libraries         □ Documents         □ Music         □ Pictures         □ Videos         □ Videos         □ Videos         □ Computer         □ Network         □ Control Panel         □ Pics	Desktop							
	Cibraries							
Music  Pictures  Videos  Roman Lapin  Computer  Network  Control Panel  Recycle Bin  Lops 8,0,410  Elasts  Monortant docs  Pics	Documents							
Pictures   Videos   Roman Lapin   Computer   Network   Picotrol Panel   Recycle Bin   CPS_B_0_410   Elastis   Elastis   Important docs   Pics	J Music							
Videos Roman Lapin Computer Network Network CPS_8_0_410 Lapin Lap	Pictures =							
	Videos							
Computer  Network  Control Panel  Recycle Bin  Cost 20, 20, 410  Lasts  Important docs  Pics	& Roman Lapin							
Network           Control Panel           Recycle Bin           Costs           Base           Lasts           Lasts           Lasts           Pics	Computer							
Control Panel Recycle Bin CPS_8_0_410 Etastik Monortant docs Pics	Network							
Recycle Bin     CPS_8_0_410     Elastik     Important docs     Pics	Control Panel							
CPS_8_0_410  Elastik  Minportant docs  Pics	Recycle Bin							
Lastix Jenportant docs Pics	L CPS_8_0_410							
Important docs     Pics	Lastix							
Pics	Manportant docs							
	Pics							
SASPlanet_12000	SASPlanet_12080							



Copy unarchieved audio files to the folder specified in TRBOnet RadioServer settings (e.g., **C:\ProgramData\TRBOnet Dispatch Software \Audio**):

Organize - Include in	Rosary * Share with * New fold	e			E. 0 0
Downloads *	Name	Date modified	Туре	Site	
30 Recent Places	2012 01 31 12	1/31/2012 12:27 PM	File folder		
	2012_01_31_18	1/31/2012 6/06 PM	File folder		
Desktop	2012_01_31_20	1/31/2012 8/13 PM	File folder	1	
Libraries	2012 02 01 10	2/1/2012 10:48 AM	File folder		
Documents	2012 02 01 18	2/1/2012 6/55 PM	File faider		
Music	2012_02_01_19	2/1/2012 7.56 PM	File folder		
Pictures	2012 02 01 20	2/1/2012 8-20 PM	File folder		
Videos	2012 02 02 17	2/2/2012 5:29 PM	Filefolder		
B Roman Lapin	2012_02_03_15	2/3/2012 3:53 PM	File folder		
1 Computer	2012 02 03 16	2/3/2012 4:10 PM	FileFolder		
Network E	2012 02 03 18	2/3/2012 6:43 PM	File folder		
Control Panel	2012 02 06 15	2/6/2012 3:58 PM	File folder		
E Recycle Bin	2012 02 06 16	2/6/2012 4:54 PM	File Polder		
CP5,8,0,430	2012 02 06 17	2/6/2012 5:24 PM	File folder		
a Electix	2012 02 06 18	2/6/2012 6:02 PM	File folder		
Important docs	2012 02 07 13	2/7/2012 1-95 PM	File folder		
Pics	2012 02 07 15	2/7/2012 3:45 PM	File folder		
SASPlanet_12080	2012 02 07 16	2/7/2012 4:06 PM	File folder		
Исходники Маф	2012 02 07 18	2/7/2012 6.14 PM	File folder		
4010	2012 02 08 13	2/8/2012 1:47 PM	File folder		
	1 301 7 03 08 14	5 /0 (1971 5 7 Ad Real	minister.		

Hit «Save changes and restart service» link.

Configuration	Service
Service Network Database Service Management Advanced settings Map Servers for Geocoding Local Agent MOTOTRBO Services Repeater #1 Advanced settings Privacy C Slot #1	The server Windows Service is installed on this computer State: Stop service Save changes and restart service Uninstall Service
Set Defaults	Apply OK Cancel

Audio files are restored.

## **Schedule Backups**

To set schedule backup for the database and audio recordings do the following:

In the Dispatch Console go to **Administer** section and select **Database** in the Navigation tree:



#### Restore

Eile View Map Iools Help			
Administer	Database		
Carlos Control	Intercom  Intercom  Service inactive  Service inactive  Schedule	Rado system 1     Rado system 2     Rado system 2	
Phone Calls  Todis  Todis  Telemetry  Kadio Groups Telemetry  Tools  Template Maker  Tools  Sundoor 2D Map Converter  Disabled Radios  Sundoor 2D Map Converter  Sundoor 2D M	Database informa Server name: Database name: Backup date: Database version:	tion (local)(SQLEXWEESS TRBOnet22222 5/28/2014 8:08:04 PM Microsoft SQL Server 2005 - 9.00.3042.00 (Intel X86) Feb 9 2007 22:47:07 Copyright (C) 1989-2005 Microsoft Corporation Express Edition on Windows NT 6.1 (Build 7601: Service Pack 1)	
Radio	Data size:	5.31 MB	
GPS Positioning	AUGU SIZE.		
🥡 Route Management			
Iext Messages			
Reports and Statistics			
Event Log	/		
Radio Allocation			
Administer			_

## Click «Schedule» button:

Administer	Database	9
RadioServer	Intercom In	Radio system 1 m C Radio system 2 C C C C
Tools     Tools     Tools     Radio Groups Telemetry     Tools     Tools     Tools     Tools     Disabled Radios     Southerner	Server name: Database name: Database name: Database version:	(local)/SQLEXPRESS TRBOnet22222 5/20/2014 6:00:04 PM Microsoft SQL Server 2005 - 9.00.3042.00 (Intel X06) Feb 9 2007 22:477.07 Feb 9 2007 20:470.07 Microsoft Corporation Capyright (2) 1900-2005 Microsoft Corporation Express Edition on Windows NT 6-1 (Build 7601: Service Pack 1)
Radio	Data size: Audio size;	5.31 MB 46.00 MD
GPS Positioning		
Job Ticketing		
Route Management		
Text Messages		
Reports and Statistics		
Fvent Log		
Radio Allocation		
Administer		

## Specify Backup details:



Schedule Database Backup						
Configure the database backup scheduler						
Enable scheduler						
Days of week: V Monday V Tuesday V Wednesday V Thursday V Friday Saturday V Sunday						
Start time: 12:00 AM						
Remove all data older than [X] days: 180						
Backup data						
Backup audio						
Remove						
Audio files						
Data						
OK Cancel						

- Enable the database backup scheduler check to enable the database backup scheduler;
- Days of week check days of week to back up the database;
- Start time select start time for database backup;
- Remove all data older than [X] days select number of days to remove all data;
- Backup audio check to backup audio recordings;
- Remove check to remove audio files and data from database). Remove all data older than date - select the date;
- Audio Files -check to remove audio files;
- **Data** check to remove data.

Click «OK» to run backup procedure.



# **Appendix E: Swift.Tracker Option Board Configuration**

TRBOnet Swift.Tracker solution based on MOTOTRBO Generic Option Board (GOB) and does not require any proprietary hardware. To enable this feature you only need to use a radio with Generic Option Board.

In the MOTOTRBO<sup>™</sup> portable radio, a standard option board is factory-installed to the radio. Generic Option Board replaces this standard option board and provides specific functionality.

The standard option board is found below the LCD display for the Display version or below the speaker for the Non-Display version of the radio.

The standard option board is replaced with GOB by removing four screws. It is recommended that the removed screws are not used for another installation.

GOB replacement is completed by installing four new screws into the designated holes:



- a Portable radio view;
- b Enclosure view;
- c Option Board position in the Motorola Portable radio.

**Note:** for further assistance on the installation sequences, please refer to Motorola documentation.



## **Option Board Support in Radio's Code plug**

- 1. To install MOTOTRBO CPS:
- Go to Motorola website.
- Download MOTOTRBO CPS software.
- After download completes, run the package and follow the prompts to complete the installation.
- 2. Connect programming cable to Portable radio.
- 3. Connect Portable radio to your PC.
- 4. Check Portable radio and PC power connection.
- 5. Launch MOTOTRBO CPS
- 6. Select Read button:

<b>III</b> N	MOTOTRBO Customer Programming Software - [Untitled1]												
<b>P</b>	<u>F</u> ile	<u>E</u> dit	<u>V</u> iew	<u>D</u> evice	Features	<u>R</u> emote	<u>W</u> indo	w <u>H</u> e	p				
6	<b>ž</b>			×	X 🖻	Ē.	0	<b>₽</b>		Þ	8	192.168.11.1	-
: O	pen :	Save	Reports	Delete	Cut Copy	Paste	Search	Read	Write	Clone	Bluetooth		

Note: Select View , Expert in MOTOTRBO CPS main menu.

7. Go to **Channels** in the Navigation Tree:



Select channel with GOB support.

Check the Option Board box.



#### Þ

- 8. Select Write to write the data;
- 9. Disconnect Radio from your PC.

## Add TRBOnet Firmware in MOTOTRBO GOB Loader

To use Swift.Tracker with a radio TRBOnet firmware should be uploaded to GOB as regular firmware.

### 1. Install MOTOTRBO GOB FLASH

Go to http://trbonet.com/download/ to download TRBOnet.Swift Software for Generic Option Board with Documentation. The archive has the latest firmware and MOTOTRBO GOB FLASH utility.

- 2. Connect programming cable to Portable radio.
- 3. Connect Portable radio to your PC.
- 4. Check Portable radio and PC power connection.
- 5. Select channel with GOB support on your MOTOTRBO Portable radio.
- 6. Launch MOTOTRBO GOB FLASH.

Note: Portable radio position for ManDown is set when programming for the first time. Select appropriate Portable radio position before programming!

7. Seleo	Detect Radios	<u>.</u>		
S MOTOTRBO	GOB Flash			
	Select a Radio	Choose Firmware	Flashing Radio	Feature Tests
	Connected Radios	Detect Radios	Radio Info	
THE FITTLEE OF THO HAVE AGIO MOTOTRBO	10-900 1P-192 168.10.1		Radio ID Radio Serial Radio IP Radio FW version GOB FW version GOB HW version GOB Begin Addr.	900 037TMCM900 192.168.10.1 R01.09.10 1 SwiftGOB D01.00.01 Can not be read
			Force Booting	from Bootloader
	Help About GOB F	lash	Test Up	date Exit

Your Radio is detected.

8. Click your Portable Radio image in the list of connected radios.





9. Select

Force Booting from Bootloader

Note: Check GOB Bootloader indication on your Portable radio display.

- 10. Select your Portable Radio in the list of connected radios. Click Update button to choose the firmware.
- 11. Select firmware to update:

S MOTOTRBO	GOB Flash	dis-jeg	
	Select a Radio	Choose Firmware	e Flashing Radio Feature Tests
	Radio Info		Firmware Info
		/	Wich firmware will be updated?
30		2	Third Party OB Application
D-WAY RADIO OTRI	The street	5	GOB Bootloader
E OF IN	Radio ID	900	Firmware File:
	GOB FW version	R01.00.00	C:\Temp\TRBOnet_Swift_ManDown_and_No! Browse
	GOB HW version	1	
	GOB Begin Addr.	Third Party OB App.	
	Help About GC	) <u>B Flash</u>	<pre>&lt;&lt; Back Next &gt;&gt; Exit</pre>

## Select Third Party GOB Application;

Click Browse... button to select Firmware File (C:\Temp\ManDown File for ex.). File format: .HEX

Select Firmware File. Click «OK».

- 12. Click Next >> button to continue.
- 13. Wait for Flashing Radio process finish.

The following message appears:



Do not disconnect the radio. Click «**OK**» to continue.





S MOTOTRBC	GOB Flash	a sea	ALCORECTED Name	
	Select a Radio	Choose Firmware	Flashing Radio	Feature Tests
	Updating Status			
TRBO		<ul> <li>Setting Begin Address</li> <li>Reseting radio</li> </ul>		
Е ОF ТИО-144		<ul> <li>Detecting radio</li> <li>Flashing radio</li> </ul>		
ине нития		The radio has been It is recommended that you	flashed successfully. execute the Features Test.	
	Help About (	GOB Flash	Select a Radio Test	Exit

Feature Test execution is recommended for Motorola Samples only.

15. Exit MOTOTRBO GOB FLASH.

## Enable Swift.Tracker in TRBOnet RadioServer

To enable Swift.Tracker functionality in TRBOnet Dispatch Software, enable **Swift.Tracker service**:



Configuration	Services		
🔗 Service 🔺	Location service (GPS)		
S Network	Deete	4001	
Database	Port;	1001	
🔅 Service Management	Indoor service	(K-TERM)	
🔀 Advanced settings	Port:	3022 🗘	
Map Servers for Geocoding	T-llumon Cont		
🗔 Local Agent	laiiysman Spri		
	Port:	4004 ‡	
Services	FS 5000 location service (GPS)		
Repeater #1		400.4	Ξ
X Advanced settings	Port:	4004	
	Swift.Tracker	service	
Slot #1	Porte	4004	
<b>III</b> Slot #2	Port:		
Local Slots	Swift.Tracker service (GSM channel)		
Analog Control Stations	Port:	4080 ‡	
🔂 Remote Agents			
Friendly Servers	Extended Tex	t Messaging service	
📷 Internal PBX Server	Port:	4010 ‡	
🕿 External PBX Server 🔻			Ŧ
Set Defaults		Apply OK Cancel	

Click «**OK**» to save the settings.

• Go to Service node, hit Save changes and restart service link.

Go to Service node, hit Save changes and restart service link.

- Launch TRBOnet Dispatch Console using shortcut on your desktop or Start menu.
- Log in as **Administrator**.
- Go to **Administer / Tools / Swift Configuration tool** and configure GOB parameters according to prompts in <u>Tools</u> chapter.



# **Appendix F: SIP Setup for Motorola Phone System**

The native MOTOTRBO phone system is supported in case of direct IP connection to repeater. Mototrbo Phone system recommended for IP Site Connect mode.

Note: no extra license per repeater required for Digital Phone Patch from Motorola.

## **TRBOnet RadioServer Configuration**

TRBOnet RadioServer requires specific set up for repeater in IP Site Connect mode as well as for SIP in order to make phone system work properly.

Open TRBOnet RadioServer Configurator using shortcut on your desktop and go to **SIP Interconnect / Advanced Settings** page:

Configuration	Repeater #1	
S Network		
Database	System Name:	Repeater #1
Service Management	TRBOnet Peer ID:	100 ‡
X Advanced settings	Radio ID:	64250
Map Servers for Geocoding		▼
Local Agent	TRBOnet Local Port:	50000 ‡
MOTOTRBO	Master Repeater Con	nection Info:
Services	Master IP Address:	10.10.110.206 -
Advanced settings	Master UDP Port:	50000 ‡ Test
Privacy	Authentication Key:	
Slot #1	System Type:	IP Site Connect 🔹
Slot #2	System Identifier:	
Local Slots	-,	
Analog Control Stations	Use NAI Voice	
Remote Agents	Use NAI Data (MNIS a	nd DDMS)
Friendly Servers		
Thernal PBX Server		
Advanced settings		
🕿 External PBX Server 🔹		
Set Defaults		Apply OK Cancel

Set DTMF Access Code «**0**» and DTMF Deaccess Code «**#**».

**Note:** Mototrbo Phone System available for repeaters in IP Site Connect mode. For system based on Control Stations use TRBOnet Phone System.



MOTOTREO Customer Programming Softs	ware - [Sample_DR3000.ctb]		- U ×
File Est View Device Features Coper Save Reports Diele Col Cop Search entenced	s Remote Window Help a 100 Q Paste Search Reed Write Clone Bluetooth By Name - Match Partial -		. <i>5</i> x
- CR 3000	Genera	I Settings	
Q Accessories	Tap CWID	Microphone	
Retwork	Radio Name	Notoroia	1
Chatrela	Radio ID	1	
-ILE Channell	5/7 (ms)	6000 -	-
- Channel2	Group Cell Hang Time (ms)	3000 순	
	Private Call Hang Time (ma)	4000 士	
	Emergency Call Hang Time (ma)	4000 土	-
	Call Hang Tane (sec)	3 🛨	
	Repeat Gain (dB)	0.0 ÷	
	Antenna Relay Delay Timer (ins)	100	
	TX Low Power (W)	11 2	
	TX High Power (W)	27.8 -	
anarat Cathoon		Department	-

#### Launch Mototrbo CPS and go repeater General Settings page:

The actual repeaters Radio ID in CPS must differ from TRBOnet Dispatch Software Peer ID. TRBOnet Dispatch Software acts as another virtual peer repeater with Peer ID (e.g. IPSC network consists of 1 master and 3 peers. The repeaters IDs (Radio IDs in CPS code plugs for repeaters) would be 1, 2, 3, 4. TRBOnet Dispatch Software peer ID must differ from all repeaters (master and all peers) otherwise a conflict will happen in network as peers have the same ID). TRBOnet Dispatch Software Peer ID is 64250.

 Open TRBOnet. Dispatch Console. Go Administer (1), Phone Calls (2), Radio Calls Configuration (3) – Configure (4) and set DTMF Access and DTMF Deaccess codes (5) as 0 and # respectively:





# **Programming Radios**

Special set up is required for radios in MOTOTRBO CPS.

Read a subscriber radio in CPS and go to Phone Systems (1):



MOTOTRBO Customer Programming Software	- [DP4601.cth]
Pie         Edit         Vew         Device         Features           Image: Pie         Image: Pie <th>Remote Window Help - 5 × Case Search Read With Cone Bluebooth 1921683110 + Name + Match Partel +</th>	Remote Window Help - 5 × Case Search Read With Cone Bluebooth 1921683110 + Name + Match Partel +
OP4601     General Settings     Q Accessories     Tot Messages     Tot Messages     Tot Messages     Tot Messages     Socurty     Systems     Tot Syst     Gasacty Plus Energency     T' Syst     Option Energency     T' Syst     Option Energency     T' Syst     Define Energency     T' Syst	Sys1         Image: Sys1      <
Control C	Notes  For MOTOTRBO Conventional radios, this feature is supported in Digital mode only.  This feature is applicable to MOTOTRBO Conventional radios and 3600 Trunking capable radios. +
Syst	Expert View NUM

Make sure that **Gateway ID (2)** is equal to repeater Slots IDs in TRBOnet RadioServer as well as TRBOnet Dispatch Software Peer ID in TRBOnet RaioServer.

Set DTMF Access Code «**0**» and DTMF Deaccess Code «**#**» (3).

Go to **Repeater/Channels (1)** and specify the phone system you have set up (2):



#### Appendix F: SIP Setup for Motorola Phone System

MOTOTRBO Customer Programming Software - (DP4601.ctb)	
Fire         East         Very         Device         Fashures         Remote         Window         Heip           Image: Severe Reports         Image: Severe Reports <th>- 6 ×</th>	- 6 ×
-nit special OP-9 *	iannel1
-n § #OFFICERB TBD -n § Cal2	RX IX
	None +
E Capacity Plus Capacity Plus Dual Capacity Direct Mod Dual Capacity Direct Mod	• F
CI MANAGMENT Timing Leader Preference	e Bigble 🔄
E Phone Scan/Roam Lis	t None
Call Auto Sea	E
E 🔤 RX Group Lists	-
E- Digital Color Cod	이 의
RepeterTime Sk	t. 1 -
List1 Diana Guiler	
- 30 List2	2021
E Channels AR	Disabled •
Entranced GP	E
- (* 00	-
ANALMENT A	m
The Chargest Phone System	2
Associates any available Phone System to the channel for use when the None option disables the user from initiating or receiving phone of Notes This feature is disabled when the Dual Capacity Direct Mode (DC This feature is supported in Digital mode only.	Initiating or receiving a phone call on a convertional channel. Selecting alls on this channel. This is a channel-wide feature. DM) feature is enabled.
Channailt	Expert View NUM

# **Appendix G: NAI VOICE & DATA Support**

TRBOnet Dispatch Software supports MOTOTRBO Network Application Interface (NAI) VOICE and DATA.

NAI protocol allows to operate with MOTOTRBO CapacityPlus and MOTOTRBO Linked CapacityPlus repeaters over IP. (Wireline Dispatch Console).

Voice Repeaters must have NAI VOICE and NAI DATA license activated. Data Revert repeaters must have NAI DATA license activated. A repeater must have 32 Mb memory.

## **Software Requirements**

Server Computer	Dispatch Computer
TRBOnet RadioServersoftware installed	
MOTOTRBO Network Interface Service (MNIS)	
MOTOTRBO Device Discovery and Mobility Service (DDMS)	console installed
MS SQL Server 2005 Express Edition or higher (can be installed on remote server)	

## **Hardware Requirements**

	Server Computer	Dispatch Computer
СРИ	Intel Core i7 or higher	Intel Core i5 or higher
Memory	3 GB	3 GB
Sound Card		Multi-channel Sound Card required. Recommended: 1. <u>M-Audio Delta 1010 LT</u> 2. <u>Roland OCTA CAPTURE Hi-SPEED USB</u> <u>Audio Capture</u>
Supported OS	Windows 7, Windows 8, Windows Server	Windows 7, Windows Server
Additional devices	—	Microphone and speaker (headset)



Note: It is possible to use a virtual machine as Server Computer.

## Voice and Data Flow 1

TRBOnet Dispatch Software Voice and Data flow for NAI is represented on the following scheme:



## Voice and Data Flow 2

MNIS is responsible to send / receive Data Packages and forward them to TRBOnet RadioServer.

DDMS (aka Presence Notifier) is responsible for ARS and notifies TRBOnet RadioServer when a radio is turned on/off. For more details see «**NAI\_RM\_Training\_v02.pdf**».

All the repeaters in all sites should be available for TRBOnet RadioServer, which normally required Port Forwarding rules on routers. For more details see «MOTOTRBO Linked Capacity Plus (LCP) - HP MSR 20-20 Router Configuration Guide».



## **Single PC Installation**

TRBOnet RadioServer and Dispatcher software can be installed on a single computer.



# **Client-Server Installation**

For the systems with 2 and more dispatch positions, it is recommended to have a dedicated server computer (could be a virtual machine).



One TRBOnet RadioServer and up to 30 Dispatchers.

TRBOnet RadioServer and all the LCP sites must be in different networks, behind routers:





Use the recommended Routers only.

## **IMPORTANT**

- One TRBOnet RadioServer computer is for one LCP System;
- It is possible to connect two or more LCP systems (System Bridging );
- TRBOnet System Bridging supports Group and Individual Calls;
- It is possible to use a Virtual machine as a Server.





## Limitations

- Logging of Radio-to-Radio TEXT is NOT SUPPORTED
- Phone Interconnect available with some limitations. For more details see the following article
- Local Talk Group IDs must be unique per a system



# **Radio Subscriber Configuration**

### **Network Settings**



## Personality Settings – 1




#### Personality Settings - 2



# **MNIS and DDMS Settings**

#### **General Settings**





## **Talk Group Settings**

MOTOTRBO Network Inter	face Service Configuration Utility MNIS Restart Required 🛛 🖶 📃 🗙
Configuration View Edit	Service Help
1 👗 🖬	000
LCP_Test	List1
- Security	Group List Type Capacity Plus/LCP
	All Groups 🔽
Conventional	Group Call ID Ranges
Capacity Plus	Add Delete
🗆 ζ 🗎 Sites	First Call ID Last Call ID
Advanced	
Forwarding Rules	

## Master Repeater Settings

MOTOTRBO Network Inter	face Service Configuration I	Utility — MNIS Restart Required	+ _ O ×
Configuration View Edit	Service Help		
1 📙	000		
LCP_Test	Link	ed Capacity Plus	
- Group List	Master IP Address	10.10.9.55	
😑 💼 Conventional	Master UDP Port	50011	
Domain 1	-		
Capacity Plus	MNIS LE Port	Automatically Assigned	_
Contractive Plus     Cont		C Manually Assigned Non	e 1
🖻 💼 Advanced	A disatisation Var		-
Network	Authentication Key		
Application Overric	Privacy Setting	None 💌	



#### **LCP Sites Settings**

MOTOTRBO Network Interface	Service Configu	ration Utility MI	IIS Restart	Required 😝 💶 🗙
Configuration View Edit Se	ervice Help			
1	00	2		
LCP_Test		Si	tes	
Security	_	Add	Delete	
Group List	Site Id	Group List		Outbound Data Limit
- Conventional	1	List1	-	2
- Domain 1	2	List1	-	2
Capacity Plus C				

#### **Advanced Settings**



### **Network Settings**

Note: ARS Monitor – check to enable ARS requests for MNIS.



LCP_Test	Network
- Orra General	CAI Network 12
☐ Group List	CAI Group Network 225
Conventional	Services
- 🛟 Capacity Plus	ARS UDP Port 4005
	TMS UDP Port 4007
Advanced	Telemetry UDP Port 4008
Forwarding Rules	User Defined UDP Port 1 Disabled
	User Defined UDP Port 2 Disabled
	User Defined UDP Port 3 Disabled 💼
	ARS Monitor
	ARS Monitor ID 64250
	Device Discovery and Mobility Service
	Server Address 127.0.0.1
	Watcher Port 3000

# **DDMS Settings**

**Note: DeviceRefreshTime** – how often radios should send ARS to TRBOnet Dispatch Software. The value depends on number of radios and channels.

MOTOTRBO DDMS			+ _ D X
File Action Help			
Logging	ARS Settings     PortSU     Passive Mode     Device Refresh Time     Deregistration TO     Persistence TO	4005 Off 30 120 12000	
	DeviceRefreshTime Device Registration duration minute interval Range: 0 - 64	in minutes, rounded up to the "60 (O=forever)	nearest 30
Settings for ARS/SU interface			



# **ARS TRBOnet Settings**

Configuration	Service Management		
💣 Service 🔹		*	
S Network	Automatic "Check Radio" service		
- Database	Auto request presence timeout: 5	minutes	
🔅 Service Management	APS refresh interval:	* minutes	
💥 Advanced settings 🔪	And relies interval.	+ mindles	
Map Servers for Geochding	Ignore unregistered Radios		
📴 Local Agent	Location comico		
MOTOTRBO			
Services	Enable GPS trigger	=	
Repeater #1	GPS Update Interval: 30	\$\$ seconds	
X Advanced settings	Requested GPS Data: Latitu	ide, Longitude, Pre 👻 🔳	
Privacy	Show Advanced Parameters		
Slot #1			
<b>III</b> Slot #2	Telemetry service		
Local Slots	Request for the status of GPIO when	a subscriber unit is powered on	
Analog Control Stations			
Remote Agents	Text Messaging service		
Friendly Servers	Text Message Format: Send	er and Text 👻	
📷 Internal PBX Server	Custom Format: {Sen	der} {Text}	
🕿 External PBX Server			
Set Defaults	Apply	OK Cancel	

- Auto Request Presence for NAI systems works as Radio Check command.
- Subscriber ARS is not used for NAI systems. Should be set as "0". The value is set in DDMS (DeviceRefreshTime).

Configuration		Repeater #1		
💣 Service				
S Network		System Name:	Repeater #1	
Database		TRBOnet Peer ID:	100	* *
Service Management		Radio ID:	64250	<u> </u>
Advanced settings		TDPOpot Local Dort	50000	 ▲
Map Servers for Geocoding		TREOTIEL LOCAL POLC	50000	<b>*</b>
Local Agent		Master Repeater Con	nection Info:	
	=	Master IP Address:	10.10.110.206	•
Peneater #1		Master UDP Port:	50000	‡ Test
Advanced settings		Authentication Key:		
Privacy		Sustem Turser	Linked CanacityPlus	
Audio Paths		System Type.	Enrice capacity has	
Analog Control Stations		System Identifier:		
Remote Agents		Lise NAT Voice		
Friendly Servers	-	Use NAT Data (MNIE ar	od DDMC)	
78 Internal PBX Server			IU DDMSJ	
🚰 External PBX Server				
Advanced settings				
🜵 Data Sources	Ψ.			
Set Defaults			Apply	OK Cancel

# **LCP Repeater Settings**

Special settings:

- **TRBOnet Peer ID** any unique value
- Radio ID the default TRBOnet ID
- TRBOnet Local Port any free port on PC





#### **Audio Paths**

Configuration	Audio	Paths				
Service Management	1.0	ad Groups Mar	, ,			
X Advanced settings			2			
Map Servers for Geocoding		Name	C	all Type	Group ID	Site ID
Local Agent		Call #!	Gr	roup Call	0	2
MOTOTRBO		Call #2	Gr	roup Call	3	Wide 💲
Services		Call #3	G	roup Call	0	Wide
Repeater #1			0	oup can		mac
X Advanced settings						
📖 💶 Audio Paths 😽 👘	a second					
Analog Control Stations						
Remote Agents						
Friendly Servers						
📷 Internal PBX Server						
🚰 External PBX Server						
Advanced settings						
∯ Data Sources						
🔀 Email						
NS SMS		Add	Delete			
Ta License						
Set Defaults				Apply	ОК	Cancel

Special settings

- Load Groups from Master Repeater;
- Add Local Groups manually.



# **Appendix I: Backup Server**

TRBOnet Server supports backup configuration which allows to have a working copy of server. Backup configuration allows to switch smoothly between working servers in case of failure for Dispatch Consoles.

Backup configuration overview:



- Main and Backup Server configured identically
- Backup Server is in "PASSIVE" mode (i.e., ARS confirmation disabled, Geofencing disabled etc.)
- Backup Server monitors Main Server status
- Dispatcher connected to Main and Backup Servers
- In case of the Main Server failure:
  - ✓ Dispatcher connects to Backup Server automatically;
  - ✓ Backup Server becomes "ACTIVE";
- Once Main Server comes back online, Dispatcher should reconnect to Main Server manually;
- Main and Backup Server do not exchange data.



# **TRBOnet Backup Server Configuration**

To configure Backup Server open TRBOnet RadioServer Configurator and navigate to **Network** page (1):

Configuration	Network	
💣 Service 🔺		
🕤 Network 🚤	Command port:	4021 ‡
Database	VoIP first port:	4022
Service Management		
X Advanced settings	VoIP protocol:	īφ ·
Map Servers for Geocoding	VoIP network interface:	System Default 📼 🕫
Local Agent	Use broadcast mode for audio	
MOTOTRBO	Basedesete extr	F000
Services	Broadcast port:	5000 -
Repeater #1	Use proxy server	
X Advanced settings	Configure	
	Encrypt data over network	
Slot #1	Reserve server mode	
Slot #2		
CI3 Local Clots	Reserve Mode:	Active
Analog Control Stations	Main Server IP Address:	
Remote Agents	Main Server Port:	4021
Friendly Servers		
Thernal PBX Server		Test
2 External PBX Server		
Set Defaults	Арр	y OK Cancel

Select **Reserve server mode** (2) and set the following reserve server parameters:

- Reserve Mode select mode for a backup server.
- Main Server IP Address type the IP address of main server;
- Main server port should be set to the "Command Port" value of Main server.

#### **Passive Reserve Mode**

In **Passive Reserve Mode** Backup Server saves data in the Backup Server database from the moment it was running. Main server's database is not available for Backup server and both of them handles each own database. In nutshell: there is no data replication between servers. If you need to get data from Main server which was stored before backup, you will need to restore the database. Nevertheless, this mode is easier to configure and allows continuing to work, but without access to old data.

#### **Active Reserve Mode**

**Active Reserve Mode** requires special restrictions (see below). Backup Server Database in Active Reserve Mode duplicates Main Server Database, e.g. you are able to view and work with Main Server data during Backup Server in Active Reserve Mode running.



## **Restrictions for Active Reserve Mode**

1. Go to **Service Management** and uncheck **Enable GPS trigger** backup server. In case when GPS trigger is enabled for Backup server, a radio tries to send GPS data to Main and Backup servers what corrupts GPS data:

Configuration	Service Management	
💣 Service 🔺		*
🕤 Network	Automatic "Check Radio" set	rvice
E Database	Auto request presence timeout:	5 \$ minutes
Service Management	ARS refresh interval:	0 minutes
🔀 Advanced settings 🥄	A COT CAT CONTINUE VOIL	
Map Servers for Geocoding	Ignore unregistered Radios	-
. Local Agent	Location service	
MOTOTRBO		
🗘 Services	Enable GPS trigger	
Repeater #1	GPS Update Interval:	30 🌲 seconds
X Advanced settings	Requested GPS Data:	Latitude, Longitude, Pre 🔻 🗉
🔒 Privacy	Show Advanced Parameters	
Slot #1		
Slot #2	Telemetry service	
Local Slots	Request for the status of GPIC	O when a subscriber unit is powered on
Analog Control Stations		
Remote Agents	Text Messaging service	
Friendly Servers	Text Message Format:	Sender and Text 🔹
🔞 Internal PBX Server	Custom Format:	{Sender} {Text}
🛣 External PBX Server		· · · · · · · · · · · · · · · · · · ·
Set Defaults		Apply OK Cancel

2. Go to repeater settings and make sure that **TRBOnet Peer ID** of Backup Server differs from the one set for Main Server. Each TRBOnet Server must have an unique peer ID in the radio system:

Configuration	Repeater #1	
🛷 Service 🔺		
S Network	System Name:	Repeater #1
Database	TRBOnet Peer ID:	100 ‡
Service Management	Radio ID:	64250
X Advanced settings	Kadio ID.	v v v v v v v v v v v v v v v v v v v
Map Servers for Geocoding	TRBOnet Local Port:	50000 ‡
Local Agent	Master Repeater Con	nection Info:
MOTOTRBO	Master IP Address:	10.10.110.206 -
Services	Master UDP Port:	50000 * Test
Repeater #1	A the Kerker Ker	
Advanced sottings	Authentication Key:	
	System Type:	IP Site Connect 🔹
Slot #2	System Identifier:	
Analog Control Stations	Use NAI Voice	
Remote Agents	🛅 Use NAI Data (MNIS a	nd DDMS)
Friendly Servers		
Thernal PBX Server		
🛣 External PBX Server		
Set Defaults		Apply OK Cancel



# **Dispatch Console Configuration**

To add Backup Server to the Radio Servers list, launch TRBOnet Dispatch Console to open Connect to Radio Server window or go to **File** Menu , **Connect to RadioServer** in the upper part of Dispatch Console:

Connect to Radio Server	<b>—</b>
Connect to:	
Radio Server:	127.0.0.1 🔹
Port:	4021 🚔 Configure
Authentication:	
Authentication:	TRBOnet Authentication 👻
User Name:	admin
Password:	******
Connect on startup	
	OK Cancel

Click «Configure» button to register main and backup RadioServers:

Register Radio Servers				
🛃 Add 💷 Edit   🔜 Delete				
Server Name	Server A	Address	Port	
	Register Server			×
	Name:	Main Server		
	Server:	10.10.101.169		
	Port:	4021		
	Connect to reserve server if connection lost			
	Server:	10.10.101.181		
	Port:	4021		
I			OK	Cancel

Click «Add» button to add new TRBOnet RadioServer:

- Name select name for new Main Server
- Server input the Main Server IP Address;
- Port specify the command port of the Main server;
- Connect to reserve server if connection lost select to allow Main Server to connect to a backup server;
- Server input the backup server IP Address;
- **Port** select the command port of Backup Server. Select Backup Server port depending on Backup Server configuration in Server Configurator.



**Note:** To register more backup servers, just add more server with the same "Main server" values and new backup servers.

Click «**OK**» to save settings and close dialog window.

## **Console Connection to Main and Backup Servers**

Go to **«File»** Menu , **Connect to RadioServer** and select from dropdown list the created server:

Connect to Radio Server				
Connect to:				
Radio Server:	127.0.0.1			
Port:	Main Server			
Authentication:				
Authentication:	TRBOnet Authentication 🔹			
User Name:	admin			
Password:	*******			
☑ Connect on startup				
	OK Cancel			

Hit "**OK**" button to connect to Main server. Now you are connected to the Main server, in case of lost connection to the Main server the Console will try to restore connection within 30 seconds. After 30 seconds passed the console will change connection to the Backup server automatically. When Main server is restored, the Dispatch Console will reconnect to the Main server automatically.