



TRBOnet Agent User Guide

Version 5.3.5

World HQ

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

Internet

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

Email: info@trbonet.com WWW.TRBONET.COM Telephone EMEA: +44 203 608 0598 Americas: +1 872 222 8726 APAC: +61 28 6078325 

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1 About TRBOnet Software

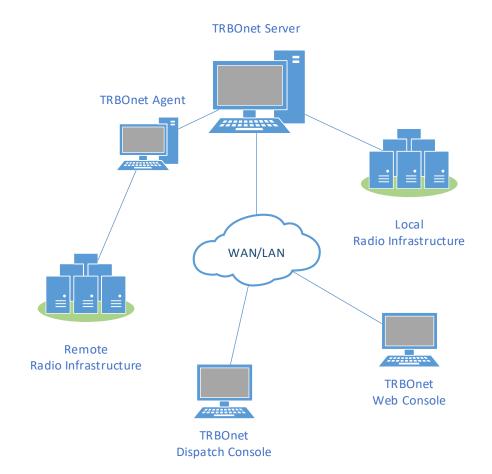
1.1 TRBOnet Server and Console

The TRBOnet software is designed as a client-server architecture, where **TRBOnet Server** is PC-based and runs as a Windows service on a network computer, stores data in an MS SQL database, and allows client connections from Web Consoles, Dispatch Consoles, and Mobile Clients. The TRBOnet service can be located on a dedicated remote PC, a local PC (along with the Dispatch Console), or on a virtual machine.

TRBOnet Dispatch Console is a PC-based voice dispatch and data application for MOTOTRBO professional digital two-way radio systems.

1.2 TRBOnet Agent

Software agents, such as **TRBOnet Agent**, can be connected to TRBOnet Server providing additional voice and data communications paths to and from remote sites. Such configurations can be used when radio equipment can't be connected directly to TRBOnet Server due to IP network limitations (see section <u>1.3, IP Backend</u> <u>Network Requirements</u>).





1.3 IP Backend Network Requirements

Before planning any IP connected MOTOTRBO system, read System Planner (chapter 4.6.3.2 Characteristics of Backend Network).

• Delay/Latency

The amount of time it takes for voice to leave the source repeater and arrive at the destination repeater. The delay should be less than 60 ms. It can be up to 90 ms, but requires changes in CPS for both radio units and repeaters.

• Jitter

The variation of the 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 summed up for all repeaters.

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

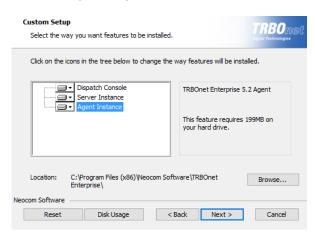


2 Installation

- Contact **Neocom Software** to obtain the latest installation package of the TRBOnet Enterprise software, unzip, and run the setup file as a local administrator.
- When the TRBOnet Enterprise Setup wizard appears, click Next.
- On the **End User License Agreement** page, accept the terms of the license, and then click **Next**.

Choose Setup 1 Choose the set	Type Up type that best suits your needs TRBO Definition of the suits your needs
	TRBOnet Dispatch Console This is a dispatcher computer and only Dispatch Console must be installed
	TRBOnet Server and Dispatch Console This is a Server computer and you need to install Server software and Dispatch Console
i,	Custom Allows users to choose which program features will be installed and where they will be installed.
Neocom Software –	< Back Next > Cancel

• On the Choose Setup Type page, click Custom.



- On the **Choose Setup Type** page, select either Server Instance and Agent Instance or only Agent Instance.
- Accept the defaults for the rest of the setup and complete the installation.



3 TRBOnet Agent configuration

To start TRBOnet Agent, click the corresponding shortcut on the desktop, or click **Start > All Programs > Neocom Software > TRBOnet Agent x.x**

3.1 License Manager

• In the **Configuration** pane on the left, select **License**. In the right pane, you can see the text of your current license.

Configuration	License	Version: 5.3.5.1872
Service Network Redundancy Advanced Settings TRBOnet Cloud Digital Systems Digital Systems Analog Control Stations Leense	License is valid License ID: f4eb0f94-f061-4ba0-a60f-1b58f91d9a58 (5. Hardware ID: 42B1-8A64-0473-06E8-0FAC License generated by: Eugene Balyabin License generated by: Eugene Balyabin License generated by: Eugene Balyabin License generated by: Eugene Balyabin License for: demo (Walt) Active instance: [Default] License for: demo (Walt) Active instance: [Default] License for: demo (Walt) Active instance: [Default] Licensed instance: [Default] Demo License Expiration date: 25 February 2020 Server Imitations Server Indiverse Keys: 42B1-8A64-0473-06E8-0FAC Remote Agent connections: 2 System types: Conventional: 2 Capadity Plus: 2 License Manager Senot	3)
Set Defaults	Apply	OK Cancel

To apply the new license:

- 1. Click the **License Manager** link in the right pane. The **License Manager** wizard appears.
- 2. Click Next.
- Click the ellipsis (...) button on the right-hand side of the License file box. The Open dialog box appears.
- 4. Locate the license file you received from our technical support and click **Open**. The full path of the license file appears in the **License file** box.
- 5. Click **Next**.
- 6. Click **Finish** to close the wizard.
- 7. Click **Apply** and then confirm to restart TRBOnet Agent.

Note: To use a single license for multiple TRBOnet software instances, you need **TRBOnet License Server**. For detailed instructions on how to use TRBOnet License Server, refer to *TRBOnet License Server Configuration Guide*.



3.2 TRBOnet Agent Service

• In the **Configuration** pane, select **Service**.

Configuration	Service	Version: 5.3.5.1872
Service Network Redundancy Advanced Settings TRBOnet Cloud Digital Systems Services	is completed, it is str Service, because it pro	stalled as a Windows Service. Once configuring ongly recommended to run agent as a Windows ovides additional stability and reliability and automatically after computer reboot.
Analog Control Stations	O Logon as Local S	vstem
License	O Logon as User	Joen
	User name:	NS\v.kulinichev
	Password:	
	Install Service	
	View Log Entries	Export Configuration Import Configuration
Set Defaults		Apply OK Cancel

- In the Service pane, specify the following service-related parameters:
 - Choose the required logon type:

Logon as Local System

Choose this option to use an account with local system administrator privileges to run the service as a Windows service (Recommended);

Logon as User

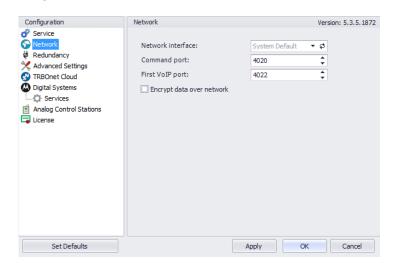
Choose this option to use a different account to run the service as a Windows service. This account must allow the user to run services in Windows, have read and write access to the **Neocom Software** folder and subfolders in the "**%ProgramFiles%**" (or, "**%ProgramFiles(x86)%**" for 64bit OS) and "**%ProgramData%**" folders. For example, using such an account may be required in the following cases:

- 1. An Active Directory domain network is used, and the current Windows user is not allowed to use a **Local System** account to launch services on the local PC due to domain policy restrictions.
- 2. MS SQL Server is installed on a remote PC, and **Windows Authentication** has been selected to connect to the database.
- Click Install Service.
- Click the **Start Service** link that appears in the right pane.



3.3 Network Parameters

• In the Configuration pane, select Network.



• In the **Network** pane, specify the following network-related parameters:

Network interface

From the drop-down list, select the network interface that will be used to communicate between the Agent and Server. Click to refresh the list of network interfaces available on your PC.

Note: If both TRBOnet Server and Agent are installed on the same PC, then select **127.0.0.1** (Loopback Pseudo-Interface).

Command port

Enter the port number to be used by a Server to connect to the Agent (4020, by default).

First VolP port

Enter the number of the first VoIP port for audio communications between the Agent and Server (4022, by default). Each additional Server will establish a connection on the next available port number.

Encrypt data over network

Select this option to guarantee the security of data transfer between TRBOnet Server and TRBOnet Agent. It is recommended that this option be used when a connection between system components is established via the Internet or other public networks.



3.4 Backup Configuration

TRBOnet Agent supports a redundant (secondary/backup) configuration which allows automatic switching from the primary to the redundant (secondary/backup) agent in case of failure of the primary agent. Dispatch Console operation will not be interrupted.

• In the **Configuration** pane, select **Redundancy**.

Configuration	Redundancy		Version: 5.3.5.187
Service Network Redundancy Advanced Settings TRBOnet Cloud	☑ Redundant agent mode Redundancy Mode: Main agents:	Passive	•
Digital Systems	IP Address		Port
Services	1 10.10.235.162		4021
C License			
	Add Edit	Delete	Test 🔺 🔻

- In the **Redundancy** pane, select the **Redundant server mode** option.
- Redundancy Mode

Select a mode for the backup agent from the drop-down list.

• To add a main agent, click Add.

Agent Properties						
IP Address:						
Port:	4020					
ОК	Cancel	Test				

• IP Address

Type the IP address of the main agent.

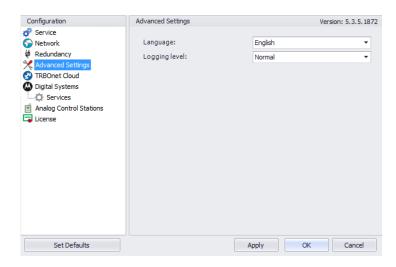
• Port

Enter the same port number as specified for the Command port.



3.5 Advanced Settings

• In the Configuration pane, select Advanced Settings.



- In the Advanced Settings pane, specify the following advanced parameters:
 - Language

From the drop-down list, select the interface language for TRBOnet Agent.

Logging level

From the drop-down list, select the logging level that determines the granularity of log messages in the System Log. The choices are: None, Low, Normal, and High.

Note: This information is used by technical support for troubleshooting purposes, so it is recommended that this value be kept unchanged (Normal).

3.6 Digital Systems

- In the Configuration pane, select Digital Systems.
- In the Digital Systems pane, select or make sure Enable Digital Systems is selected.
- In the **Digital Systems** pane, specify the following parameters:
 - CAI Network

The CAI (Common Air Interface) Network is a value that is combined with the Radio ID to produce the individual radio's air interface network IP address. All radios must use the same CAI Network ID to be able to exchange data. It is recommended that the default value of 12 is used.

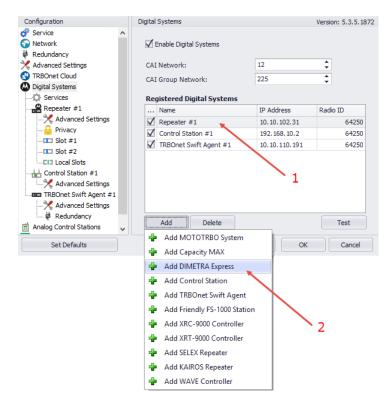
CAI Group Network

The CAI Group Network is a value that is combined with the Group ID to produce the group's air interface network IP address. The CAI Group Network ID forms the first or most significant byte of each group's network IP address. All radios must use the same CAI Group Network ID to be able to exchange data (225, by default).



Note: The values of these two parameters must match those configured for the radio units via the MOTOTRBO CPS.

3.6.1 Digital System Elements



All radio system elements based on MOTOTRBO services are represented in the **Registered Digital Systems** table, including their type (Control Station, Repeater, and others), IP Address, and Radio ID (1):

• To add an element to the system, click **Add** and select the element type from the drop-down menu (2).

3.6.2 Digital System Services

• In the Configuration pane, under Digital Systems, select Services:



Configuration	Services				Version: 5.3.5.187
🔗 Service 🏠 Network	Automatic Desite	ation a	nuico (ADC)		
Redundancy	Automatic Registr	_	ivice (ARS)		
Advanced settings	Port:	4005		÷	
TRBOnet Cloud	Telemetry service	(TLM)			
Digital Systems	Port:	4008		÷	
Services	Text Messaging s	ervice (1	TMS)		
Repeater #1	Port:	4007		*	
X Advanced settings Privacy				•	
Slot #1	Location service (door)	-	
	Port:	4001		Ŧ	
EII Local Slots	Job Ticketing serv	ice (JTS)		
Control Station #1	Port:	4013		÷	
Advanced settings	Text Messaging s	ervice D	MR		
TRBOnet Swift Agent #1	Port:	5016		4	
Advanced settings	Indoor service (K-	TEDM)			
Analog Control Stations	Port:	3022		*	
				Ŧ	
	Indoor LAN Service	e (K-TE	RM)		
	Port:	3001			
	Tallysman Sprite s	ervice			
	Port:	4004			
	E FS 5000 location s	ervice ((CPS)		
	Port:	4004		<u></u>	
				Ŧ	
	Swift.Tracker v.1	service			
	Port:	4004		÷	
	Swift.Tracker v.1	service	(GSM channel)		
	Port:	4080			
	Swift.Tracker v.2	service			
	Port:	4104			
			() D	•	
	Swift.Tracker v.2		(GSM channel)	_	
	Port:	4180		*	
	Extended Text Me	essaging	service		
	Port:	4010			
	Telemetry service	Novox			
	Requests port:			Ŧ	
	Events port:	8091		Ŧ	
	G4S RS232 servic	e			
		4004		_	
	Port:			Ŧ	
	Port:	rice		Ŧ	0-0
	Port: Zebra printer serv Port:	rice 4072		* 4 *	Configure
	Port:	rice 4072		* *	Configure
	Port: Zebra printer serv Port:	rice 4072		* * *	Configure

• In the **Services** pane, specify the following Digital System Services-related parameters:

Automatic Registration Service (ARS)

Select this option to enable the ARS service for the radios. When the radio powers up, it automatically registers with the server. This feature is used with data applications, that is, any data traffic on this channel is associated with an application server such as MOTOTRBO Text Messaging or MOTOTRBO Location Services.

• Port

Enter the local port number for the ARS service (4005, by default).



Telemetry service (TLM)

Select this option to enable the Telemetry service, which is the wireless transmission and reception of measured quantities for remotely monitoring environmental conditions or equipment parameters.

- Port
 - Enter the local port number for the Telemetry service (4008, by default).

Text Messaging service (TMS)

Select this option to enable the Text Messaging service which is used to exchange text messages between the radios and the dispatchers.

• Port

Enter the local port number for the Text Messaging service (4007, by default).

Location service (GPS / Indoor)

Select this option to enable the Location service. The radio can send its coordinates when it is in Global Positioning or iBeacon coverage area.

• Port

This is the local port number for the Location service (4001), which cannot be modified.

Text Messaging service DMR

Select this option to enable the DMR-based Text Messaging service.

• Port

Enter the local port number for the DMR-based Text Messaging service (5016, by default).

Indoor service (K-TERM)

Select this option to enable the Indoor Location service.

• Port

Enter the local port number for the Indoor service (3022, by default).

Indoor LAN Service (K-TERM)

Select this option to enable the Indoor LAN service.

• Port

Enter the local port number for the Indoor LAN service (3001, by default).

Tallysman Sprite service

Select this option to enable the service for autonomous event and aggregated event reporting to provide significant reduction in GPS data overhead.

• Port

Enter the local port number for the Tallysman Sprite service (4004, by default).

• FS 5000 location service (GPS)

Select this option to enable the FS 5000 location service, which is a service for transmitting GPS data packages. This service uses FS 5000 Option Board.



• Port

Enter the local port number for the FS 5000 location service (4004, by default).

Swift.Tracker v.1 service

Select this option to enable the service to transmit coordinates and data packages via a radio channel using the Swift.Tracker TR001 device.

• Port

Enter the local port number for the Swift.Tracker v.1 service (4004, by default).

Swift.Tracker v.1 service (GSM channel)

Select this option to enable the service to transmit coordinates and data packages via a radio channel and a reserved GSM channel using the Swift.Tracker TR001 device.

• Port

Enter the local port number for the Swift.Tracker v.1 service with a GSM channel (4080, by default).

Swift.Tracker v.2 service

Select this option to enable the service to transmit coordinates and data packages via a radio channel using the Swift.Tracker TR001 device (version 2).

• Port

Enter the local port number for the Swift.Tracker v.2 service (4104, by default).

Swift.Tracker v.2 service (GSM channel)

Select this option to enable the service to transmit coordinates and data packages via a radio channel and a reserved GSM channel using the Swift.Tracker TR001 device (version 2).

• Port

Enter the local port number for the GSM channel of the Swift.Tracker v.2 service with a GSM channel (4180, by default).

Extended Text Messaging service

Select this option to enable the Extended Text Messaging service to include sending detailed preconfigured templates with the help of TRBOnet Dispatch Software.

• Port

Enter the local port number for the Extended Text Messaging service (4010, by default).

Telemetry service NOVOX

Select this option to enable the Telemetry service based on NOVOX devices.

• Requests port

Enter the local port number to listen for requests (8090, by default).

• Events port

Enter the local port number to listen for events (8091, by default).



G4S RS232 service

Select this option to enable the custom developed G4S RS232 service.

• Port

Enter the local port number for the G4S RS232 service (4004, by default).

Zebra printer service

Select this option to enable the service for printing Job Tickets. A Zebra printer is connected to a radio via Bluetooth. The radios should be Bluetooth-enabled.

• Port

Enter the local port number for Zebra printer service (4072, by default).

Forward Data service

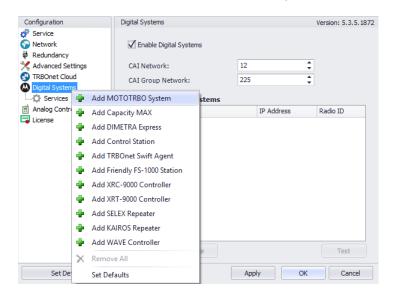
Select this option to enable the Forward Data service. This feature is used to forward "raw data" via the COM port from one device to another.

• Port

Enter the local port number for Forward Data service (4011, by default).

3.6.3 Adding a MOTOTRBO Repeater

- In the **Digital Systems** pane, click **Add**. Or, in the **Configuration** pane, right-click **Digital Systems**.
- In the drop-down menu, click Add MOTOTRBO System.



 In the **Repeater** pane, specify the connection parameters. To ensure your connection parameters match the actual configuration of your radio network, you may need to use Motorola CPS or Config Advisor tools to determine the values. Contact your radio network administrator, if you do not

have this information.



Configuration	Repeater #1		Version: 5.3.5.187
Service Network Redundancy Advanced settings TRBOnet Cloud Digital Systems Services Repeater #1 Advanced settings Privacy Dist #1	System Name: TRBOnet Peer ID: TRBOnet Radio ID: TRBOnet Local Port: Master Repeater Com Master IP Address: Master UDP Port:	10.10.102.131 50000	* * * * * * * * * * * * * *
Sol #1 Sol #2 Cill Local Slots Analog Control Stations License	Authentication Key: System Type: System Identifier: Use NAI Voice Use NAI Data (MNIS ar Use RCM for control ra		
Set Defaults		Apply	OK Cancel

System Name

Enter a name for the repeater. This name will be displayed in the Dispatch Console.

TRBOnet Peer ID

Enter a Peer ID for TRBOnet Agent. The Peer ID must be unique among the repeaters in the radio system.

Note: Motorola recommends that this value be less than 200.

TRBOnet Radio ID

Enter the Radio ID, which is a gateway for voice and data. The Radio ID must be unique in the radio system (for Capacity Plus and Linked Capacity Plus systems, the maximum value is 65535).

TRBOnet Local Port

Enter the local port number that will be used by TRBOnet Agent to establish a connection to the repeater. Use unique port numbers for each repeater connection if there are several repeaters connected.

Master IP Address

Enter the Ethernet IP address of the master repeater.

Note: This value is programmed for a repeater via MOTOTRBO CPS, in *Link Establishment* > *Master IP*.

Master UDP Port

Enter the UDP port number of the master repeater.

Note: This value is programmed for a repeater via MOTOTRBO CPS, in *Link Establishment*>*Master UDP Port*.

Authentication Key

Enter the repeater's authentication key (if any).

Note: This value is programmed for a repeater via MOTOTRBO CPS, in *Link Establishment>Authentication Key*.



System Type

From the drop-down list, select the system type.

Test

Click this button to check the connection to your master repeater. If the test is successful, you'll see the information on the repeater you are connected to, such as the serial number, firmware version, and other relevant information.

System Identifier

Enter the system identifier if a Capacity Plus or Linked Capacity Plus system is used with one or more control stations. Use the same system identifier as you have specified for the corresponding control stations.

Use NAI Voice

Select this option to connect to the repeater via NAI (Network Application Interface) for Voice transfer.

Use NAI Data (MNIS and DDMS)

Select this option to connect to the repeater via NAI (Network Application Interface) for Data transfer.

• MNIS

MOTOTRBO Network Interface Service is a Windows application which acts as a data gateway between the data applications and the radio system. Data messages are routed through the MNIS.

• DDMS

Device Discovery and Mobility Service is a service for tracking the presence of radio subscribers in the radio network and transmitting the data to the server.

3.6.3.1 Advanced Settings

• In the **Configuration** pane, under the corresponding **Repeater**, select **Advanced settings**.

Configuration	Advanced settings		Version: 5.3.5.1872
 Service Network 	Voice Call Hang Time	(ms):	
Redundancy	Group Call:	3000 🗘	
X Advanced settings TRBOnet Cloud	Private Call:	4000 🗘	
Digital Systems	Emergency Call:	4000 🗘	
Services	TX Preamble:	120 🛟	
Advanced settings	TX Timeout:	60 🗘	seconds
Slot #1	Phone System:	Motorola Phone System	•
Slot #2	Allow CSBK Data		
Analog Control Stations			
🗔 License			
Set Defaults		Apply	OK Cancel

• In the **Advanced Settings** pane, specify the following repeater-related advanced settings:



Voice Call Hang Time (ms):

Group Call

This value sets the duration the repeater reserves the channel after the end of a group call transmission. During this time, only members of the group that the channel is reserved for can transmit.

Private Call

This value sets the duration a radio keeps the private call setup after a user releases the PTT button. This is to avoid setting up the call again each time a user presses the 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* parameter specified for this channel in MOTOTRBO CPS.

Emergency Call

This value 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.

Note: The values of the above three parameters must be taken from the corresponding parameter values programmed for the repeater via MOTOTRBO CPS in *General Settings*.

TX Preamble

Enter the value of the TX Preamble. The TX Preamble is a string of bits added in front of a data or control message (Text Messaging, Location Messaging, Registration, Radio Check, Private Call, and other message types) before transmission. The acceptable range is 0 - 8640 ms. The recommended value is 120 ms.

TX Timeout

Enter the time, in seconds, to be used as a voice session limit. When the dispatcher starts any voice session in the Dispatch Console, transmission will be interrupted after this TX Timeout expires.

Phone system

From the drop-down list, select the system for phone calls:

• Motorola Phone System

This system uses a special call type with the parameters specified for a radio unit in MOTOTRBO CPS. The Motorola Phone System is recommended for IP Site Connect mode to minimize Radio response time.

• TRBOnet Phone System (TX Interrupt)

This is a phone call system based on the private call type using TX Interrupt feature. This phone system is available for radio systems with control stations.

Allow CSBK Data

Select this option so that GPS data is sent in a single CSBK.



Note: This feature is available only when the <u>MNIS Data Service</u> is enabled for the repeater.

3.6.3.2 Privacy

• In the **Configuration** pane, under the corresponding **Repeater**, select **Privacy**.

Configuration	Privacy			Version: 5.3.5.187
Service Network Redundancy Advanced Settings TRBOnet Cloud	Privacy Type: Basic Privacy Key ID: Enhanced Privacy Key	Enhanced 1	▼ 	
Digital Systems Digital Systems Services Repeater #1 Advanced Settings Privacy Slot #1 Slot #2 Ell Local Slots Analog Control Stations License	Alghoritm 1 ARC4 (40 bit) ARC4 (40 bit) AES (256 bit) AES (256 bit) Legacy			Value
	Add Re	emove		4 File
Set Defaults		Ap	ply	OK Cancel

• In the **Privacy** pane, specify the following privacy-related settings:

Privacy Type

From the drop-down list, select one of the privacy types: **None**, **Basic**, or **Enhanced**.

Basic Privacy Key ID

Enter the Privacy Key ID available for the **Basic** privacy type.

Enhanced Privacy Keys

Here you add enhanced privacy keys when the **Enhanced** privacy type is selected.

• Click **Add** and specify the required **Algorithm**, **ID**, **Name**, and **Value** for the privacy key being added.

✓ Algorithm

From the drop-down list, select one of the enhanced algorithms if you are going to use additional encryption.

3.6.3.3 DDMS Service

The DDMS, or Device Discovery and Mobility Service is a service for tracking the presence of radio subscribers in the radio network and transmitting the data to the server.

• In the **Configuration** pane, under the corresponding **Repeater**, select **DDMS service**.



Configuration	DDMS service			Version: 5.3.5.1872
양 Service S Network 韓 Redundancy	Use DDMS service	0	¢	
X Advanced Settings TRBOnet Cloud	Service IP Address:	127.0.0.1	•	Test
Digital Systems	Service port:	3000	÷	
Repeater #1	Authentication Port: Redundant services:	5055	÷	
	Service IP A	Address Service port	:	Local port
DDMS service	1 🚺 10.10.101.	207 3000		0
Analog Control Stations	Add	elete		Test
Set Defaults		Apply		OK Cancel

In the **DDMS service** pane, specify the following DDMS service-related settings:

Use DDMS service

Select this option to enable the DDMS service for the server.

Local Port

Enter the number of the local port to be used on a PC with TRBOnet Dispatch Software for DDMS service.

Service IP Address

Enter the IP Address of the PC with the DDMS service installed and running.

Service port

Enter the service port number.

Note: This value is programmed for a DDMS service via MOTOTRBO DDMS Administrative Client, in Interfaces>Watcher Settings>PortWatcher.

Authentication Port

Enter the authentication server port number.

Note: This value is programmed for a DDMS service via MOTOTRBO DDMS Administrative Client, in Interfaces>Authentication Server Settings> AuthenticationServerPort.

Redundant services

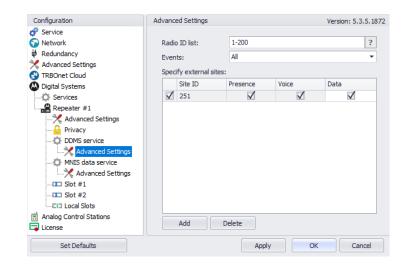
Here you see the list of redundant DDMS services for failover purposes.

- Click **Add** and specify the required parameters for the DDMS service being added.
- Click **Test** to test if the selected DDMS service is available.
- Use the Up () and Down () buttons to move a selected DDMS service up and down in the priority list of DDMS services.



Advanced Settings

• In the Configuration pane, under DDMS service, select Advanced Settings.



- In the Advanced settings pane, you can specify settings that relate to the connected DDMS service:
 - Radio ID list

Enter a list of the radios to receive data from according to the following rules:

- To receive data from all radios in the system, leave this box blank.
- To receive data from multiple radios, separate each Radio ID by a comma, for example, 105,106,111, and so on.
- To receive data from a range of radios, enter the range using the following example: 105-111.

Note: In the Radio ID list, enter Radio IDs only, without mentioning Radio Names and/or the word "Radio".

Events

In the drop-down list, select the events to be monitored.

Specify external sites

This is the list of sites that is used when the corresponding system has a MOTOROLA System Bridge to the current Capacity MAX system.

 Click the Add button and add a site by specifying its Site ID and selecting the appropriate data types (Presence, Voice, and/or Data).

3.6.3.4 MNIS Data Service

The MNIS, or Motorola Network Interface Service, is a Windows application which acts as a data gateway between the data applications and the radio system. Data messages are routed through the MNIS.

• In the **Configuration** pane, under the corresponding **Repeater**, select **MNIS data service**.



Configuration	MNIS data service		Version: 5.3.5.187
Configuration Service Advanced Settings TR80net Cloud Digital Systems Repeater #1 Repeater #1 DMS service DMS service MISE data service MISE data service Advanced Settings	MNIS data service Use Data Gateway Service is on a loca IP Address: Control port: MNIS Service: Redundant services: IP Address	l host 172.168.10.2	Test
Set Defaults	Add	Apply	Test OK Cancel

- In the **MNIS data service** pane, specify the following MNIS data service-related settings:
 - Use Data Gateway

Select this option to enable the MNIS data service for the server.

- Service is on a local host
 Select this option if the MNIS data service will be used on the local PC.
- IP Address

Enter the IP Address used by the MNIS to communicate with the PC.

Note: This value is programmed for a MNIS data service via MOTOTRBO MNIS Configuration Utility, and can be retrieved from *General*>*Tunnel Network*>*Tunnel IP Address*.

Control port

Enter the number for the MNIS control port.

Note: This value is programmed for a MNIS data service via MOTOTRBO MNIS Configuration Utility, in Advanced>Network>MNIS Control Interface TCP Port.

MNIS Service

Select this option, and from the drop-down list select the available MNIS service.

Redundant services

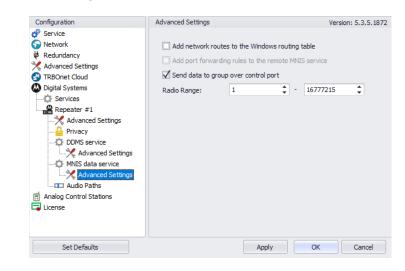
Here you see the list of redundant MNIS data services for failover purposes.

- Click **Add** and specify the required parameters for the MNIS data service being added.
- Click **Test** to test if the selected MNIS data service is available.
- Use the Up (
) and Down (
) buttons to move a selected MNIS data service up and down in the priority list of MNIS data services.



Advanced Settings

• In the **Configuration** pane, under **MNIS data service**, select **Advanced Settings**.



- In the **Advanced settings** pane, you can specify settings that relate to the connected MNIS data service:
 - Add network routes to the local Windows routing table Select this option to allow TRBOnet Agent to add network routes to the local Windows routing table so that data can be sent to the remote MNIS data service.
 - Add port forwarding rules to the remote MNIS service Select this option to allow TRBOnet Agent to add forwarding rules to the remote MNIS data service.
 - Send data to group over control port
 Select this option so that data will be sent via the specified control port.
 - Radio Range
 Specify the range of radios to be monitored by the MNIS service.



3.6.3.5 Slots

Note: The slots are available only when **IP Site Connect** is selected in the **Repeater** pane.

 In the Configuration pane, under the corresponding Repeater, select Slot #1 or Slot #2.

Configuration	Slot #1		Version: 5.3.5.1872
Service Network Redundancy Control Cloud Control Cloud Control Stations C	Use Privacy Privacy Key:	IPSC1 Normal Taoniy (GPS Revert or Data the PTT is pressed ("Impoli Indication	Ψ
Set Defaults		Apply OK	Cancel

• In the **Slot #1** (or **Slot #2**) pane, specify the following slot-related parameters:

Name

Enter a name for the slot. This name will be displayed in the Dispatch Console.

Messaging Delay

From the drop-down list, select the inter-repeater messaging delay based on the IP network configuration.

• Normal

The inter-repeater messaging delay is 60 ms.

• High

The inter-repeater messaging delay is 90 ms.

Use the slot for RX data only (GPS Revert or Data Revert)

Select this option to configure the slot so that it will only receive data, thus having no transmission capability.

Use Privacy

Select this option to use Privacy for the slot.

Note: This option is available only if the **Basic** or **Enhanced** Privacy Type have been selected in Repeater's <u>Privacy</u> settings.

• Privacy Key

From the drop-down list, select the privacy key.

Note: This option is available only if the **Enhanced** Privacy Type has been selected in Repeater's <u>Privacy</u> settings).



Allow TX interrupt

Select this option to allow interrupting dispatcher transmissions by radios that are Transmit Interrupt capable.

Note: This feature is available only when the **Use NAI Voice** option is cleared in the **Repeater** pane.

 Always transmit when the PTT is pressed ("Impolite" channel access) Select this option so that when the PTT button is pressed, the dispatcher will start transmitting regardless of whether the channel is free or not (that is any transmission in progress will be interrupted).

Data Call confirmed

Select this option to enable data packets in data calls (ARS, GPS, and Text Message) on the current slot to be confirmed.

Note: This feature is available only when both the **Use NAI Voice** and **Use NAI Data (MNIS and DDMS)** options are cleared in the **Repeater** pane.

Private Call Confirmed

Select this option to set Private calls on the current slot as confirmed. By default, Private calls are unconfirmed.

Emergency Alarm Ack

Select this option so that the Dispatch Console is allowed to acknowledge an emergency alarm received via this slot.

Emergency Call/Alarm Indication

Select this option so that audio and visual indication is given for an emergency call/emergency alarm received via this slot.

3.6.3.6 Local Slots

While on a local slot, voice or data are not transmitted between sites in IPSC systems. Due to MOTOTRBO limitations TRBOnet Agent can only receive information from local slots, but cannot transmit by IP connection to such slots.

- Note: Local slots are available only when **IP Site Connect** is selected, and the **Use NAI Voice** option is selected in the **Repeater** pane. If the **Use NAI Voice** option is cleared, local slots will be available only through dedicated control stations.
 - In the **Configuration** pane, under the corresponding **Repeater**, select **Local Slots**.

Note: This feature is not available in Capacity Plus and Linked Capacity Plus systems.



Configuration	Local Slots	Version: 5.3.5.1872
🖗 Service 💊 Network	Load Peers Map	
Redundancy	Name	Peer ID Peer Slot
Advanced Settings Advanced Settings Digital Systems Carlot Services Repeater #1 Advanced Settings Privacy Carlot #1 Carlot #2 Carlot Stations License	Local Jone's	1002 Slot #1
Set Defaults	Add Remove	oply OK Cancel

- In the **Local Slots** pane, specify the following Local Slot-related settings:
 - To add a Local Slot to the system, click **Add**.
 - Select the option in the first column to enable the selected local slot.
 - Enter a **Name** for the local slot. This name will be displayed in the Dispatch Console.
 - Enter the **Peer ID** of the repeater.

Note: This value can be taken from the repeater's configuration in MOTOTRBO CPS, in *General Settings*>*Radio ID*.

• From the drop-down list, select the **Peer Slot**.

3.6.3.7 Audio Paths

The Audio Paths are talk paths of the system to make and receive Voice Calls; in general, they are talk groups. TRBOnet Agent requires that all audio paths of a Capacity Plus system be registered in its configuration. If an audio path is not registered, the TRBOnet operator will not be able to receive and transmit to the corresponding talk group.

- Note: Audio paths are available only when **Capacity Plus** or **Linked Capacity Plus** are selected.
 - In the **Configuration** pane, under the corresponding **Repeater**, select **Audio Paths**.



Configuration	Audio	Paths				Version: 5.3.5.1872
Service Network	Loa	d Groups Map				
🖗 Redundancy		Call Type		Group ID		Site ID
🔀 Advanced settings	\checkmark	Group Call		10		Wide
😵 TRBOnet Cloud	\checkmark	Group Call		20		Wide
🐼 Digital Systems	\checkmark	Private Call	-			
Services	\checkmark	All Call				
Repeater #1 Advanced settings Privacy DDMS service Advanced settings Advanced settings Advanced settings Advanced settings Advanced settings Advanced settings License		Add Delete				Configure
Set Defaults			A	Apply	ок	Cancel

- In the **Audio Paths** pane, specify the following Audio Path-related settings:
 - To add an audio path to the system, click Add.
 - Make sure the check box in the first column is selected to make and receive voice calls from the selected subscriber.
 - From the drop-down list, select the **Call Type** for the audio path. The available call types are All Call, Group Call, and Private Call.
 - Enter the Group ID, which is an ID of the talk group the dispatcher can make calls to. The Group ID is not applicable for Private Calls and All Calls.
 - Enter the Site ID of the site the audio path will belong to in a Linked Capacity Plus system. Or, leave zero value in this column. In this case, the Site ID will be displayed as Wide, meaning that the audio path will belong to all sites in the system.
 - To configure the selected audio path, click **Configure**.
 - Specify the desired audio path settings similar to those for a common repeater <u>slot</u>.

3.6.4 Adding a Capacity MAX System

- In the **Digital Systems** pane, click **Add**. Or, in the **Configuration** pane, right-click **Digital Systems**.
- In the drop-down menu, click Add Capacity MAX.

Note that a Capacity Max system can only be integrated with TRBOnet PLUS software. For more information on how to configure and deploy a Capacity MAX system, see *TRBOnet PLUS MOTOTRBO Capacity MAX Deployment Guide*.

3.6.5 Adding a DIMETRA Express system

- In the **Digital Systems** pane, click **Add**. Or, in the **Configuration** pane, right-click **Digital Systems**.
- In the drop-down menu, click Add DIMETRA Express.

For more information on how to configure and deploy a DIMETRA Express system, see *TRBOnet DIMETRA Express Deployment Guide*.



3.6.6 Adding a Control Station

- In the **Digital Systems** pane, click **Add**. Or, in the **Configuration** pane, right-click **Digital Systems**.
- In the drop-down menu, click Add Control Station.

Configuration	Control Station #1	Version: 5.3.5.18
Service Service Network Redundancy Advanced settings Services Control Station #1 Advanced settings Analog Control Stations License	Name: Radio ID: IP Address: Mode: System Identifier: Use the radio for RX Playback device: Recorder device:	Control Station #1 64250 • 192. 168. 10.2 • Ø Test IP Site Connect • Department 1 Data only (GPS Revert or Data Revert) Speakers (Logitech USB Headset) • Ø Primary Sound Capture Driver • Ø
Set Defaults		Apply OK Cancel

• In the **Control Station** pane, specify the following control station-related parameters:

Name

Enter a name for the control station. This name will be displayed in the Dispatch Console in the Voice Dispatch Radio Interface pane. It will be the name at the top of the PTT box.

Radio ID

This is the Radio ID of the radio unit connected as a control station. (for Capacity Plus and Linked Capacity Plus systems, the maximum value is 65535).

Note: This box is populated automatically once you have successfully tested the control station by clicking the **Test** button.

IP Address

Enter, or select from the list, the IP Address of the control station network interface.

Note: This value is can be taken from the radio's configuration in MOTOTRBO CPS, in *Network* >*Accessory IP*.

Test

Click this button to check the connection to the control station. If the test is successful, you'll see the information on the control station you are connected to, such as radio ID, serial number, firmware version, and other relevant information.



Mode

From the drop-down list, select the connection mode for the control station being configured.

System Identifier

Enter the system identifier with which the control station is used within a Capacity Plus or Linked Capacity Plus system. Note that the system identifier should be the same for all control stations used in a (Linked) Capacity Plus system.

Use the radio for RX data only (GPS Revert or Data Revert)

Select this option to configure the radio channel so that it will only receive data, thus having no transmission capability.

Playback device

From the drop-down list, select the playback device on the PC that will be used to transfer audio data to the connected control station.

Recorder device

From the drop-down list, select the recording device on the PC that will be used to receive audio data from the control station connected via a line-in jack.

3.6.6.1 Advanced Settings

• In the **Configuration** pane, under the corresponding **Control Station**, select **Advanced Settings**.

Configuration	Advanced settings			Vers	sion: 5.3.5.1872
Service Service Network Redundancy Advanced settings Digital Systems Services Control Station #1 Advanced settings Aldvanced settings Aldvanced settings License	Automatically reset alar Automatically handle co Emergency Call/Alarmi Use front microphone Always transmit when t Use serial port for PTT Serial port: TX Timeout: Signaling System: Allow CSBK Data	Il alert ndication he PTT is pr	ressed ("Impoli T	te" channel acces seconds Configure	s)
Set Defaults			Apply	ОК	Cancel

- In the **Advanced Settings** pane, specify the following control station-related advanced settings:
 - Automatically reset alarm mode
 Select this option to reset alarm mode on the control station radio automatically. It is recommended to enable this option.

Automatically handle call alert Select this option to automatically redirect call alerts from the control station radio to the Dispatch Console.



Emergency Call/Alarm indication

Select this option so that audio and visual indication is given by the control station radio when an emergency Call/Emergency Alarm is received.

Use front microphone (for PTT key up)

Select this option to use a remote control of the PTT button via a remote speaker microphone on the radio.

 Always transmit when the PTT is pressed ("Impolite" channel access) Select this option so that when the PTT button is pressed, the radio will start transmitting regardless of whether the channel is free or not (that is any transmission in progress will be interrupted).

Use serial port for PTT key up

Select this option to use a remote control of the PTT button via the serial port of the PC, and select the serial port from the drop-down list.

TX Timeout

Enter the time, in seconds, to be used as a voice session limit. When a dispatcher starts any voice session in the Dispatch Console, the ongoing transmission will be interrupted after this TX Timeout expires.

Signaling system

From the drop-down list, select the signaling system.

- **MDC-1200** signaling is a Motorola data system using audio frequency shift keying (ASFK) using a 1,200 baud data rate. A general option setting for the system 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 (for example, 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 Voice Calls, Check Radio, Call Alert, and Enable/Disable Radio.

Click the **Configure** link and specify desired SELECT 5 settings.

Voice Calls			*
Call Type	Telegram ID	Source ID	Target ID
Private Call:	1 🗘 Encoder:		A1 A2 A3 A4
	Decoder:	A1 A2 A3 A4	
Group Call:	1 🗘 Encoder:		A1 A2 A3 A4
	Decoder:	A1 A2 A3 A4	
All Call:	1 🗘 Encoder:		A1 A2 A3 A4
4	Decoder:	A1 A2 A3 A4	
Check Radio			*
Call Alert			8
Enable Radio			8
Disable Radio			*

• **Quick Call I**. Using this signaling system, the radio sends a pair of tones followed by 50 to 1,000 milliseconds of silence and then a second pair of tones.

Click the **Configure** link and specify desired Quick Call I settings.



Quick Call I		×
Preamble:	500	🗘 ms
Tone 1:	1000	🗘 ms
Tone 2:	1000	‡ ms
Long Tone:	4000	🗘 ms
Pause:	200	‡ ms
Defaults	ОК	Cancel

• **Quick Call II**. Using this signaling system, the radio sends a single tone followed by 50 to 1,000 milliseconds of silence and then a second tone. Click the **Configure** link and specify desired Quick Call II settings.

• Quick Call II MOTOTRBO

When this system is selected, the parameters are configured on the radio unit via the MOTOTRBO CPS.

Allow CSBK Data

Select this option so that GPS data is sent in a single CSBK.

3.6.6.2 Audio Paths

The Audio Paths are talk paths of the system to make and receive Voice Calls; in general, they are talk groups. TRBOnet Agent requires that all audio paths of a radio system be registered in its configuration. If an audio path is not registered, the TRBOnet operator will not be able to receive and transmit to the corresponding talk group.

Note: Audio paths are available only when one of the following modes is selected: Capacity Plus, Linked Capacity Plus, Connect Plus, or Capacity MAX.

• In the **Configuration** pane, under the corresponding **Control Station**, select **Audio Paths**.

Configuration	Audio Paths	Version: 5.3.5.1872
 	Site ID:	Group ID Site
Advanced settings Advanced settings Digital Systems Services Advanced settings Advanced settings Advanced settings Advanced settings License	Group Call Group Call Private Call All Call	10 Wide 20 Wide
Set Defaults	A	pply OK Cancel

- In the Audio Paths pane, specify the following Audio Path-related settings:
 - To add an audio path to the system, click **Add**.
 - Make sure the check box in the first column is selected to make and receive voice calls from the selected subscriber.



- From the drop-down list, select the **Call Type** for the audio path. The available call types are All Call, Group Call, and Private Call.
- Enter the **Group ID**, which is an ID of the talk group the dispatcher can make calls to. The Group ID is not applicable for Private Calls and All Calls.
- In the Site column, select either Local or Wide. The value Wide means that the audio path will be to all sites in the system and not just to the local site.

3.6.7 Adding a TRBOnet Swift Agent

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

- In the **Digital Systems** pane, click **Add**. Or, in the **Configuration** pane, right-click **Digital Systems**.
- In the drop-down menu, click Add TRBOnet Swift Agent.

Configuration	TRBOnet Swift Agent #1			Version: 5.3.5	. 1872
Service Network Redundancy Advanced Settings TRBOnet Cloud Services TRBOnet Swift Agent #1 Advanced Settings Redundancy Advanced Settings Redundancy Analog Control Stations Clicense	Name: Radio ID: IP Address: Port: TRBOnet Local Port: Mode: System Identifier:	TRBOnet Swift Agen 64250 192.168.0.100 8002 50000 Single Control Statio Department2 Data only (GPS Revert 4000 PCM 8 kHz 16 bit	÷ •	Test Revert)	▼
Set Defaults		Apply		OK Cance	2

 In the TRBOnet Swift Agent pane, specify the following Swift Agent-related parameters:

Name

Enter a name for the Swift Agent. This name will be displayed in the Dispatch Console.

Radio ID

This is the Radio ID of the control station connected to the Swift Agent. (for Capacity Plus and Linked Capacity Plus systems, the maximum value is 65535).

Note: This box is populated automatically once you have successfully tested the Swift Agent by clicking the **Test** button.

IP Address

Enter the IP Address of the Swift Agent network interface.

Port

Enter the port number of the Swift Agent connection (8002, by default).



TRBOnet Local Port

Enter the local port number that will be used by TRBOnet Agent to establish a connection to the TRBOnet Swift Agent. Use unique port numbers for each swift agent connection if there are several swift agents connected.

Test

Click this button to check the connection to the Swift Agent. If the test is successful, you'll see the information on the Swift Agent you are connected to, such as Serial number, Firmware version, and other relevant information.

Mode

From the drop-down list, select the connection mode for the Swift Agent being configured.

System Identifier

Enter the system identifier if the control station is used with a Capacity Plus or Linked Capacity Plus system. Note that the system identifier should be the same for all control stations used in the radio system.

Use the radio for RX data only (GPS Revert or Data Revert)

Select this option to configure the radio channel so that it will only receive data, thus having no transmission capability.

VoIP port

Enter the port number for audio communications (4000, by default).

Note: This setting is used for older firmware versions of TRBOnet Swift Agent.

Audio Format

From the drop-down list, select the format to transmit audio data.

3.6.7.1 Advanced Settings

• In the Configuration pane, under the corresponding TRBOnet Swift Agent, select Advanced Settings.

Configuration	Advanced Settings			Version: 5.3.5.1872
Service Network Redundancy Advanced Settings TRBOnet Cloud Services TRBOnet Swift Agent #1 RBOnet Swift Agent #1 Redundancy Redundancy Avanced Settings Redundancy Analog Control Stations Clicense	Automatically reset al Emergency Call/Alarm Always transmit when TX Timeout: PTT Mode: Signaling System:	Indication	Impolit	te" channel access) seconds Configure
Set Defaults		Apply		OK Cancel

• In the **Advanced Settings** pane, specify the following Swift Agent-related advanced settings:



Automatically reset alarm mode

Select this option to reset alarm mode on the control station radio automatically. It is recommended to enable this option.

Emergency Call/Alarm indication

Select this option so that audio and visual indication is given by the Control Station radio when an Emergency Call/Emergency Alarm is received.

Always transmit when the PTT is pressed ("Impolite" channel access)
 Select this option so that that when the PTT button is pressed, the radio will start transmitting regardless of whether the channel is free or not (that is any transmission in progress will be interrupted).

Note: This feature is not available in Capacity Plus and Linked Capacity Plus systems.

TX Timeout

Enter the time, in seconds, to be used as a voice session limit. When a dispatcher starts any voice session in the Dispatch Console, transmission will be interrupted after this TX Timeout expires.

PTT Mode

From the drop-down list, select the mode of pressing the PTT on the radio.

Signaling system

From the drop-down list, select the signaling system.

- **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 (for example, 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 Voice Calls, Check Radio, Call Alert, and Enable/Disable Radio.

Click the **Configure** link and specify desired SELECT 5 settings.

• **Quick Call I**. Using this signaling system, the radio sends a pair of tones followed by 50 to 1,000 milliseconds of silence and then a second pair of tones.

Click the **Configure** link and specify desired Quick Call I settings.

- **Quick Call II**. Using this signaling system, the radio sends a single tone followed by 50 to 1,000 milliseconds of silence and then a second tone. Click the **Configure** link and specify desired Quick Call II settings.
 - **Quick Call II MOTOTRBO** When this system is selected, the parameters are configured for the radio units via the MOTOTRBO CPS.



3.6.7.2 Redundancy

A Redundant TRBOnet Swift Agent will be used when a connection to the Main TRBOnet Swift Agent is lost.

• In the **Configuration** pane, under the corresponding **TRBOnet Swift Agent**, select **Redundancy**.

Configuration	Redu	Indan	су		Version: 5.3.5.187
 ♂ Service ○ Network ♥ Redundancy > ✓ Advanced Settings 	Redu		It agents: IP Address 10.0.0.210	Port 8002	Local Port
Analog Control Stations License					
		Add	Delete		Test 🔺 🔻
Set Defaults				Apply	OK Cancel

- In the **Redundancy** pane, specify the following Redundant Agent-related settings:
 - Click Add and specify the desired parameters for the Redundant Agent being added.
 - IP Address

Enter the IP Address of the Swift Agent that will be used as a Redundant Swift Agent.

Port

Enter the port number that will be used for connections between the server and the Redundant Swift Agent (8002, by default).

- Click **Test** to check the connection to the Redundant Swift Agent. If the test is successful, you'll see the information on the Swift Agent you are connected to, such as Serial number, Firmware version, and other relevant information.
- Local Port

Enter the port number that will be used for connections from the Redundant Swift Agent. The value 0 (default) means that a random port will be used.

3.6.8 Adding an XRC Controller

The XRC Controller is a site controller that provides a channel for transferring data between sites and managing data flow.

- In the **Digital Systems** pane, click **Add**. Or, in the **Configuration** pane, right-click **Digital Systems**.
- In the drop-down menu, click Add XRC-9000 Controller.



Configuration	Controller #1		Version: 5.3.5.1872
Service Network Redundancy Redundancy TRBOnet Cloud Digital Systems TRBOnet Swift Agent #1 Controller #1 CServices Redundancy Advanced Settings Redundancy Analog Control Stations License	Name: IP Address: System Identifier:	Controller #1 10.10.100.100 Connect Plus 1	Test
Set Defaults		Apply	OK Cancel

- In the **Controller** pane, specify the following XRC controller-related parameters:
 - Name

Enter a name for the XRC controller. This name will be displayed in the Dispatch Console.

IP Address

Enter the IP Address of the XRC controller network interface.

- Click **Test** to check the connection to the controller.
- System Identifier

Enter the system identifier. Note that the system identifier should be the same through all the controllers in a Connect Plus system.

3.6.8.1 Services

• In the **Configuration** pane, under the corresponding **XRC Controller**, select **Services**.

Configuration	Services	Version: 5.3.5.1872
Service Network Redundancy Advanced Settings TRBOnet Cloud Digital Systems Digital Systems TBDonet Switces TBDonet Switces Services Services Advanced Settings Redundancy Analog Control Stations License	✓ Automatic Registration service (ARS) Controller port: 4005 Local port: 0 ✓ Location service (GPS / Indoor) Controller port: 4001 Local port: 4001 Local port: 4001 Use adaptive location trigger ✓ Text Messaging service (TMS) Controller port: 4007 Local port: 4007 Local port: 64250 Multi Gate Connection Subscribe ID: 1 1	
Set Defaults	Apply	OK Cancel

• In the **Services** pane, specify the following XRC controller-related services:



 Automatic Registration service (ARS) provides an automated data application registration for the radio. When the radio powers up, it automatically registers with the server. This feature is used with data applications, that is any data traffic on this channel is associated with an application server, such as MOTOTRBO Text Messaging or MOTOTRBO Location Service. This option is selected by default and cannot be cleared.

• Controller port

Enter the controller's port number for ARS service (4005, by default).

• Local port

Enter the local port of the PC with TRBOnet Dispatch Software. The value 0 (default) means that a random port will be used.

Location service (GPS)

Select this option to enable Location service on the controller. The radio can send its coordinates when it is in Global Positioning coverage area.

• Controller port

Enter the controller's port number for Location service (4001, by default).

• Local port

Enter the local port of the PC with TRBOnet Dispatch Software (4001, by default).

• Use adaptive GPS trigger

Select this option to use the adaptive GPS polling interval.

Text Messaging service (TMS)

Select this option to enable text message transmission on the controller.

• Port

Enter the controller's port number for Text Messaging service (4007, by default).

• Local port

Enter the local port of the PC with TRBOnet Dispatch Software (4007, by default).

• Dispatcher ID

Enter the Dispatcher ID. The Dispatcher ID should belong to TRBOnet Server account in a Connect Plus system.

Multi Gate Connection

Select this option to use a multi-gate connection and enter the corresponding **Subscribe ID.**

3.6.8.2 Advanced Settings

• In the **Configuration** pane, under the corresponding **XRC Controller**, select **Advanced Settings**.



Configuration	Advanced Settings			Version: 5.3.5.1872
Configuration Service Network Redundancy Advanced Settings TRBOnet Cloud Digital Systems Services TRBOnet Swift Agent #1 Controller #1 Services Advanced Settings	Advanced Settings Radio ID list: Specify external sites: Site ID Z 251 Z52	100-200 Presence	Voice	Version: 5.3.5.1877
Analog Control Stations License	Add	Delete		
Set Defaults		Арр	ly O	Cancel

- In the **Advanced Settings** pane, specify the following XRC controller-related services:
 - Radio ID list

Enter a list of the radios to receive data from according to the following rules:

- To receive data from all radios in the system, leave this box blank.
- To receive data from multiple radios, separate each Radio ID by a comma, for example, 105,106,111, and so on.
- To receive data from a range of radios, enter the range using the following example: 105-111.

Note: In the Radio ID list, enter Radio IDs only, without mentioning Radio Names and/or the word "Radio".

Specify external sites

This is the list of Connect Plus sites that is used when the corresponding Connect Plus system has a MOTOROLA System Bridge to the current Capacity MAX system.

 Click the Add button and add a site by specifying its Site ID and selecting the appropriate data types (Presence, Voice, and/or Data).

3.6.8.3 Redundancy

A redundant XRC controller will be used when a connection to the main XRC controller is lost.

• In the **Configuration** pane, under the corresponding **XRC Controller**, select **Redundancy**.



Configuration	Redundancy			Version	5.3.5.1872
Service Network Redundancy Advanced Settings TRBOnet Cloud Digital Systems Services TRBOnet Swift Agent #1 Services Services Advanced Settings	Redundant cont	rollers: Idress 168.0.255	Controller port 4005	Local port	\$
- C Services					
Set Defaults	Add	Delete	Apply	Test OK	Cancel

- In the **Redundancy** pane, specify the following redundant XRC controllerrelated settings:
 - Click Add and specify the desired parameters for the redundant XRC controller being added.
 - IP Address

Enter the IP Address of the XRC controller that will be used as a redundant XRC controller.

Controller Port

Enter the port number of the redundant XRC controller for incoming connections (4005, by default).

- Click **Test** to check the connection to the redundant XRC Controller. If the test is successful, you'll see the information on the XRC controller you are connected to, such as serial number, firmware version, and other relevant information.
- Local Port

Enter the port number that will be used for incoming connections from the redundant XRC controller. The value 0 (default) means that a random port will be used.

3.6.9 Adding an XRT Controller

The XRT controller functions as a voice gateway connected to each XRC controller in a Connect Plus system.

- In the **Digital Systems** pane, click **Add**. Or, in the **Configuration** pane, right-click **Digital Systems**.
- In the drop-down menu, click Add XRT-9000 Controller.



Configuration	Controller #1			Version: 5.3	.5.1872
Service Service Network Redundancy	System Name:	Controller #1			
Advanced Settings Advanced Settings TRBOnet Cloud Digital Systems Corrices TRBOnet Swift Agent #1 XEC Controller #1	Radio ID: Start Local Port: XRT-9000 Controller In Controller IP Address: Controller TCP Port:	192.168.0.225 10001	* * *	Test	
Advanced Settings Advanced Settings Advanced Settings Advanced Settings Advanced Settings Controller #1 Privacy Data Path Audio Paths Redundancy Analog Control Stations License	User Name: Password: System Identifier:	Admin Connect Pus 1 (without audio)			
Set Defaults		Apply	0	K Car	icel

- In the **Controller** pane, specify the following XRT Controller-related parameters:
 - System Name

Enter a name for the XRT Controller. This name will be displayed in the Dispatch Console.

Radio ID

Enter the individual virtual radio ID. The virtual Radio ID is required to do the following:

- Make all types of voice calls from XRT Controller to radios, dispatchers and groups.
- Send commands (for example, Remote Monitor).
- Start Local Port

Enter the local port of the PC with TRBOnet Agent. The value 0 (default) means that a random port will be used.

XRT Controller Info:

Controller IP Address

Enter the IP Address of the XRT controller network interface.

Controller TCP Port

Enter the port number of the XRT controller to be used for connections via TCP (10001, by default).

• Click **Test** to check the connection to the XRT controller.

User Name

Enter the user name. For the user name, refer to the XRT controller configuration.

Password

Enter the password for the user. For the password, refer to the XRT controller configuration.



Note: The user name and password should belong to the same TRBOnet Connect Plus account and be appropriately configured.

System Identifier

Enter the system identifier. Note that the system identifier should be the same through all the controllers in a Connect Plus system.

Monitor Voice sessions (without audio)

This is the Billing feature. Select this option to monitor only PTT press events.

3.6.9.1 Privacy

• In the **Configuration** pane, under the corresponding **XRT Controller**, select **Privacy**.

Configuration	Privacy		Version: 5.3.5.1872
Service Network Redundancy Advanced Settings TrBOnet Cloud Digital Systems Digital Systems TrBOnet Swift Agent #1 Services TrBOnet Swift Agent #1 Redundancy Redundancy Redundancy Data Path Audio Paths Redundancy Analog Control Stations License	Privacy Type: Basic Privacy Key ID: Enhanced Privacy Keys: Alghoritm ID ARC4 (40 bit) 1 ARC4 (40 bit) AES (256 bit) AES (256 bit) Legacy Add Remo	Enhanced 1 Name	Value Value
Set Defaults		Apply	OK Cancel

• In the **Privacy** pane, specify the following Privacy-related settings:

Privacy Type

From the drop-down list, select one of the privacy types: **None**, **Basic**, or **Enhanced**.

Basic Privacy Key ID

Enter the Privacy Key ID available for the **Basic** privacy type.

Enhanced Privacy Keys

Here you add enhanced privacy keys when the **Enhanced** privacy type is selected.

• Click **Add** and specify the required **Algorithm**, **ID**, **Name**, and **Value** for the privacy key being added.

✓ Algorithm

From the drop-down list, select one of the enhanced algorithms if you are going to use additional encryption.



3.6.9.2 Data Path

The Data Paths are used to transmit data in a Connect Plus system.

• In the **Configuration** pane, under the corresponding **XRT Controller**, select **Data Path**.

Configuration	Data Path		Version: 5.3.5.1872
💣 Service			
S Network	Data Service:	Autodetect	•
🛱 Redundancy	Radio ID:	64251	
🔀 Advanced Settings		•	
😵 TRBOnet Cloud			
🙆 Digital Systems			
💭 Services			
Controller #1			
Services			
🔤 🕸 Redundancy			
XRT Controller #1			
Privacy			
🗘 Data Path			
Audio Paths			
Redundancy			
Analog Control Stations			
license			
Set Defaults		Apply	OK Cancel

• In the **Data Path** pane, specify the following data path-related settings:

Data Service

From the drop-down list, select the data service to be used to transfer data.

Radio ID

Enter the Radio ID of the data service.

3.6.9.3 Audio Paths

The Audio Paths are talk paths of the system to make and receive voice calls; in general, they are talk groups. TRBOnet Agent requires that all audio paths of a Connect Plus system be registered in its configuration. If an audio path is not registered, the TRBOnet operator will not be able to receive and transmit to the corresponding talk group.

• In the **Configuration** pane, under the corresponding **XRT Controller**, select **Audio Paths**.



Configuration	Audio Paths		Version: 5.3.5.1872
Service	Call Type	Source ID	Target ID
S Network	Group Call	000100100	10
🕏 Redundancy			
X Advanced Settings	Group Call		20
S TRBOnet Cloud	Private Call		\$
🐼 Digital Systems	All Call		
Services			
XRC Controller #1			
Services			
Advanced Settings			
Redundancy			
XRT Controller #1			
Privacy			
Data Path			
Audio Paths			
Redundancy			
Analog Control Stations			
📮 License			
	Add Delete		Configure
Set Defaults		Apply	OK Cancel

- In the Audio Paths pane, specify the following Audio Path-related settings:
 - To add an Audio Path to the system, click Add.
 - Make sure the check box in the first column is selected to make and receive Voice Calls from the selected subscriber.
 - From the drop-down list, select the **Call Type** for the audio path. The available call types are All Call, Group Call, and Private Call.
 - Enter the Source ID for Private Calls. In general, this is TRBOnet's Radio ID. If more than one Radio ID is specified in a Connect Plus system (for example, for different dispatchers), the corresponding talk paths should be added for all of them.
 - Enter the **Target ID** for Group Calls. This is the Radio ID of the talk group to make a call to. The Target ID is not applicable for Private Calls and All Calls.

3.6.9.4 Redundancy

A Redundant XRT Controller will be used when a connection to the Main XRT Controller is lost.

• In the **Configuration** pane, under the corresponding **XRT Controller**, select **Redundancy**.



Configuration	Redu	ndano	ev.		Version: 5	3.5.1872
🔗 Service			t controllers:		Version, s.	5.5.1072
S Network			Controller IP Address	Controller TCP Po	rt Start Local Port	
Advanced Settings	1	\checkmark	192.168.0.226	10001	0	
TRBOnet Cloud						
Digital Systems						
Services						
TRBOnet Swift Agent #1						
Services						
Advanced Settings						
Redundancy						
Controller #1						
Audio Paths						
🛱 Redundancy						
Analog Control Stations						
📮 License						
		Add	Delete		Test	
Set Defaults				Apply	ОК Са	ancel

- In the **Redundancy** pane, specify the following Redundant XRT Controllerrelated settings:
 - Click Add and specify the desired parameters for the Redundant XRT Controller being added.
 - Controller IP Address

Enter the IP Address of the XRT Controller that will be used as a Redundant XRT Controller.

Controller TCP Port

Enter the port number of the Redundant XRT Controller to be used for connections via TCP (10001, by default).

• Start Local Port

Enter the local port of the PC with TRBOnet Dispatch Software. The value 0 (default) means that a random port will be used.

 Click **Test** to check the connection to the Redundant XRT Controller. If the test is successful, you'll see the information on the XRT Controller you are connected to, such as Serial number, Firmware version, and other relevant information.

3.6.10 Adding a Selex Repeater

The **Selex** repeater is configured as a stand-alone repeater which supports connections to MOTOTRBO[™] radios to transmit voice and data in digital, analog, and mixed modes.

- In the Digital Systems pane, click Add.
 Or, in the Configuration pane, right-click Digital Systems.
- In the drop-down menu, click Add SELEX Repeater.



Configuration	Selex #1		Version: 5.3.5.1872
Service Service Service Redundancy Advanced Settings Digital Systems Services TRBOnet Cloud Digital Systems Services TRBOnet Swift Agent #1 Solor #1 Solor #1 Solor #1 Solor #1 Solor #1 Solor #2 Analog Control Stations License	Name: Radio ID: Repeater Mode:	Selex #1 64250 Digital	•
Set Defaults		Apply	OK Cancel

- In the **Selex** pane, specify the following Selex Repeater-related parameters:
 - Name

Enter a name for the Selex Repeater. This name will be displayed in the Dispatch Console.

Radio ID

Enter the Radio ID for the Selex Repeater (for Capacity Plus systems, the maximum value is 65535).

The Radio ID is 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.

Repeater Mode

From the drop-down list, select the mode. The available modes are Digital, Analog, Mixed, and <u>Tier III</u>.

3.6.10.1 Advanced Settings

• In the **Configuration** pane, under the corresponding **Selex**, select **Advanced Settings**.

Configuration	Advanced Settings		Version: 5.3.5.1872
Controller #1 C	Keep Alive Interval: TX Timeout:	10 \$ 60 \$	seconds
Set Defaults		Apply	OK Cancel



- In the **Advanced Settings** pane, specify the following Selex Repeater-related advanced settings:
 - Keep Alive Interval

Enter the time interval, in seconds, for TRBOnet Agent to check the connection to the Selex repeater (10, be default).

TX Timeout

Enter the time, in seconds, to be used as a voice session limit. When a Dispatcher starts any Voice Session in the Dispatch Console, transmission will be interrupted after this TX Timeout expires (60, be default).

3.6.10.2 Slots

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

• In the **Configuration** pane, under the corresponding **Selex**, select **Slot #1** or **Slot #2**.

Configuration	Slot #1		Ve	ersion: 5.3.5.1872
Service Network	Slot #1			
Network Redundancy Redundancy Advanced Settings TRBOnet Cloud Digital Systems Services TRBOnet Swift Agent #1 Controller #1 Controller #1 Selex #1 Advanced Settings	Slot #1 Name: TRBOnet IP Address: SELEX IP Address: Use the gateway for R Use Encryption Always transmit when Data Call Confirmed	10. 10. 9. 30 Test X Data only (GPS Rev		
Slot #1 Slot #2 Analog Control Stations	Yorka Call Confirmed Private Call Confirmed	Apply	ОК	Cancel

- In the **Slot #1** (or **Slot #2**) pane, specify the following slot-related parameters:
 - Name

Enter a name for the slot. This name will be displayed in the Dispatch Console.

TRBOnet IP Address

Enter the IP Address of the PC with TRBOnet Dispatch Software. Enter the **Port** number (6080, by default).

SELEX IP Address

Enter the IP Address of the Selex Repeater (refer to the repeater configuration). Enter the **Port** number (6080, by default).

- Click **Test** to check the connection to the repeater.
- Use the gateway for RX data only (GPS Revert or Data Revert) Select this option to configure the channel so that it will only receive data, thus having no transmission capability.



Use Encryption

Select this option to encrypt voice and data traffic over IP.

 Always transmit when the PTT is pressed ("Impolite" channel access) Select this option so that that when the PTT button is pressed, the radio will start transmitting regardless of whether the channel is free or not (that is any transmission in progress will be interrupted).

Note: This feature is not available in Capacity Plus and Linked Capacity Plus systems.

Data Call Confirmed

Select this option to enable individual packets in data calls (ARS, GPS, and Text Message) on the current slot to be confirmed.

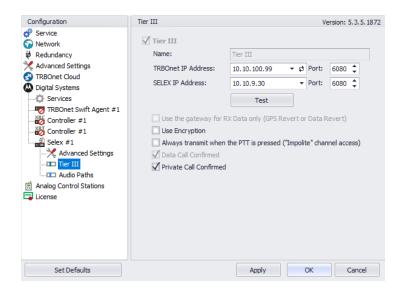
Private Call Confirmed

Select this option to set Private calls on the current slot as confirmed.

3.6.10.3 Tier III and Audio Paths

The Selex repeater can be used in a **Tier III** mode. To configure this mode, do the following:

- While in the **Selex** pane, select **Tier III** from the **Repeater Mode** drop-down list.
- In the Configuration pane, under the corresponding Selex, select Tier III.



• In the **Tier III** pane, specify the following Tier III-related parameters:

Use Encryption

Select this option to encrypt voice and data traffic over IP.

Always transmit when the PTT is pressed ("Impolite" channel access)
 Select this option so that that when the PTT button is pressed, the radio will start transmitting regardless of whether the channel is free or not (that is any transmission in progress will be interrupted).



- Note: This feature is not available in Capacity Plus and Linked Capacity Plus systems.
- To configure Audio Paths:
- In the **Configuration** pane, under the corresponding **Selex**, select **Audio Paths**.

Note: Make sure the **Tier III** mode has been selected as a Repeater Mode for the Selex repeater.

Configuration	Audio Paths	Version: 5.3.5.1872
Service	Call Type	Group ID
S Network	Group Call	10
Redundancy Advanced Settings	Group Call	20
RBOnet Cloud	✓ Gloup Call ✓ Private Call	20
Digital Systems	All Call	
Services		
TRBOnet Swift Agent #1		
Controller #1		
Controller #1		
📸 Selex #1		
Tier III		
Audio Paths		
Analog Control Stations		
📮 License		
	Add Delete	
Set Defaults	Apply	OK Cancel

- In the Audio Paths pane, specify the following Audio Path-related settings:
 - To add an Audio Path to the system, click **Add**.
 - Make sure the check box in the first column is selected to make and receive Voice Calls from the selected subscriber.
 - From the drop-down list, select the Call Type for the audio path. The available call types are All Call, Group Call, and Private Call.
 - Enter the Group ID, which is a radio ID of the talk group to make a call to. The Group ID is not applicable for Private Calls and All Calls.

3.6.10.4 Analog channel

The Selex repeater can also use the Analog channel.

- In the **Configuration** pane, under the corresponding **Selex**, select **Analog**.
 - Note: Make sure the **Analog** or **Mixed** mode have been selected as a Repeater Mode for the Selex repeater.



Configuration	Analog		Ve	ersion: 5.3.5.1872
Service Network Redundancy Advanced Settings TBOnet Cloud Digital Systems Services TBOnet Swift Agent #1 Controller #1 Controller #1	Analog Name: TRBOnet IP Address: SELEX IP Address: Use the gateway for RI Use Encryption	10. 10. 9. 30 Test K Data only (GPS Reve	Port: Port: Port:	6080 🛟 6080 🗘
Controller #1 Selex #1 Advanced Settings Analog Analog Analog Control Stations License	Use Encryption Always transmit when t Data Call Confirmed Private Call Confirmed	he PTT is pressed ("In	npolite" char	inel access)
Set Defaults		Apply	OK	Cancel

- In the **Analog** pane, specify the following Analog channel-related settings:
 - Name

Enter a name for the Selex repeater in the analog mode. This name will be displayed in the Dispatch Console.

TRBOnet IP Address

Enter the IP Address of the PC with TRBOnet Dispatch Software. Enter the **Port** number (6080, by default).

SELEX IP Address

Enter the IP Address of the Selex Repeater (refer to the repeater configuration). Enter the **Port** number (6080, by default).

- Click **Test** to check the connection to the repeater.
- Always transmit when the PTT is pressed ("Impolite" channel access) Select this option so that when the PTT button is pressed, the radio will start transmitting regardless of whether the channel is free or not (that is any transmission in progress will be interrupted).

Note: This feature is not available in Capacity Plus and Linked Capacity Plus systems.

3.6.11 Adding a Kairos Repeater

The **Radio Activity Kairos** repeater is configured as a stand-alone repeater which supports connections to MOTOTRBO[™] radios to transmit voice and data in digital, analog, and mixed modes.

- In the **Digital Systems** pane, click **Add**. Or, in the **Configuration** pane, right-click **Digital Systems**.
- In the drop-down menu, click Add KAIROS Repeater.



Configuration	Repeater #1		Version: 5.3.5.1872
💣 Service			
🕎 Network	Name:	Kairos #1	
🛱 Redundancy	IP Address:	10, 10, 155, 130 -	
🔀 Advanced Settings	User Name:	kairos	
🚱 TRBOnet Cloud		kairos	
🚱 Digital Systems	Password:	•••••	
Services		Test	
TRBOnet Swift Agent #1			
Controller #1	Radio ID:	64250	
Controller #1	Repeater Mode:	Mixed (Analog and Digital)	-
Selex #1			
Kairos #1			
🕂 🕺 Advanced Settings			
Slot #1			
Analog			
Analog Control Stations			
License			
Set Defaults		Apply	K Cancel

- In the Kairos pane, specify the following repeater-related parameters:
 - Name

Enter a name for the Kairos repeater. This name will be displayed in the Dispatch Console.

IP Address

Enter the IP Address of the Kairos repeater network interface.

User Name

Enter the user name. For the user name, refer to the Kairos repeater configuration.

Password

Enter the password for the user. For the password, refer to the Kairos repeater configuration.

Radio ID

Enter the Radio ID, which is a gateway for voice and data. The Radio ID must be unique in the radio system.

Repeater Mode

From the drop-down list, select the mode. The available modes are Digital, Analog, and Mixed.

3.6.11.1 Advanced Settings

• In the **Configuration** pane, under the corresponding **Kairos**, select **Advanced Settings**.



Configuration	Advanced Settings		Version: 5.3.5.1872
💞 Service			
S Network	Keep Alive Interval:	10 🗘	seconds
🕏 Redundancy	TX Timeout:	60 📩	seconds
🄀 Advanced Settings		•	
😵 TRBOnet Cloud	Voice Call Hang Time ((ms):	
🙆 Digital Systems	Group Call:	3000]
Services			
	Private Call:	4000 -	
	Emergency Call:	4000 ‡	
- 📸 Selex #1			
Kairos #1			
X Advanced Settings			
III Slot #1			
III Slot #2			
Analog			
Analog Control Stations			
📮 License			
Set Defaults		Apply	OK Cancel
Set Defaults		мрріу	Cancel

- In the **Advanced Settings** pane, specify the following Kairos Repeater-related advanced settings:
 - Keep Alive Interval

Enter the time interval, in seconds, for TRBOnet Agent to check the connection to the Kairos repeater (10, be default).

TX Timeout

Enter the time, in seconds, to be used as a voice session limit. When a Dispatcher starts any Voice Session in the Dispatch Console, transmission will be interrupted after this TX Timeout expires (60, be default).

Voice Call Hang Time (ms):

Group Call

This value sets the duration the repeater reserves the channel after the end of a group call transmission. During this time, only members of the group that the channel is reserved for can transmit.

Private Call

This value sets the duration a radio keeps the private call setup after a user releases the PTT button. This is to avoid setting up the call again each time a user presses the 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* parameter specified for this channel in MOTOTRBO CPS.

Emergency Call

This value 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.

3.6.11.2 Slots

The Kairos repeater has two digital slots (in **Digital** mode) and one analog slot (in **Mixed** or **Analog** mode) to transmit voice and data.

• In the **Configuration** pane, under the corresponding **Kairos**, select **Slot #1** or **Slot #2** (or **Analog**, if you have selected **Mixed** or **Analog** mode).



Configuration	Slot #1		Version: 5.3.5.1872
Service Network	Slot #1		Version: 5.5.5.1672
 Redundancy Advanced Settings TRBOnet Cloud Digital Systems Services TRBOnet Swift Agent #1 Controller #1 Controller #1 Selex #1 Selex #1 Advanced Settings Slot #1 Slot #2 Analog Analog Control Stations License 	Name: Audio Codec: Audio port KAIROS: Audio port TRBOnet: Data port KAIROS: Data port TRBOnet:	Slot 1 G.711µ-Law/8000 40000 ↓ 40001 ↓ 40001 ↓	•
Set Defaults		Apply Ok	Cancel

- In the **Slot #1** (or **Slot #2**) pane, specify the following slot-related parameters:
 - Name

Enter a name for the slot. This name will be displayed in the Dispatch Console.

Audio Codec

From the drop-down list, select the audio codec to be used to compress the audio files.

Audio port KAIROS/ Audio port TRBOnet

Enter the port numbers to be used for KAIROS/TRBOnet audio ports.

Data port KAIROS/ Data port TRBOnet

Enter the port numbers to be used for KAIROS/TRBOnet data ports.

Note: Use the matching port numbers for KAIROS and TRBOnet. The default audio and data port numbers are **40000** and **40001** for Digital slot 1, **40002** and **40003** for Digital slot 2, and **40004** and **40005** for the Analog slot.

3.6.12 Adding a Wave Controller

Before creating a connection to the Wave controller, make sure the Wave server is configured to allow 3rd party applications to connect with a Neocom Software-specified license key.

- In the **Digital Systems** pane, click **Add**. Or, in the **Configuration** pane, right-click **Digital Systems**.
- In the drop-down menu, click Add WAVE Controller.



Configuration	Wave controller #1		Version: 5.3.5.187
💣 Service			
S Network	Name:	Wave Server1	
🕏 Redundancy	Connection:		
X Advanced Settings	Use proxy for connec	tion	
Digital Systems	Controller IP Address:	10.10.150.110 🔻	
Services	Controller Port:	4502	
TRBOnet Swift Agent #1	TRBOnet Local Port:	0 🗘	
Controller #1	User Name:	test4	
Selex #1	Password:	*****	
Wave Server1	Profile:	all-channles	•
📮 License		Test	
Set Defaults		Apply	K Cancel

• In the **Wave Controller** pane, specify the following Wave controller-related parameters:

Name

Enter a name for the Wave controller. This name will be displayed in the Dispatch Console.

Use proxy for connection

Select this option to use a proxy server to connect to the Wave controller.

Controller IP Address

Enter, or select from the list, the IP Address of the Wave controller.

Controller Port

Enter the port number of the Wave controller.

Local Port

Enter the local port number that will be used by TRBOnet Agent to establish a connection to the Wave controller.

User Name

Enter the user name. For the user name, refer to the Wave server configuration.

Password

Enter the password for the user. For the password, refer to the Wave server configuration.

Profile

From the drop-down list, select the profile to be used on the Wave server.

Test

Click this button to check the connection to the Wave controller.

3.7 Analog Control Stations

TRBOnet Dispatch Software allows using analog radios as control stations.

- In the Configuration pane, select Analog Control Stations.
- In the Analog Control Stations pane, select Enable Analog Control Stations.



Conference Have	Apples Control Chattana	
Configuration Service	Analog Control Stations	Version: 5.3.5.1872
Network Redundancy Advanced Settings TRBOnet Cloud Digital Systems TRBOnet Swift Agent #1 Controller #1 Selex #1 Analog Control Stations Control Station A1 License	Enable Analog Control Stations Name Control Station A1 Add Delete	Serial Port COM1
Set Defaults	Арр	ly OK Cancel

3.7.1 Adding an Analog Control Station

• In the Analog Control Stations pane, click Add.

Configuration	Control Station A1	Version: 5.3.5.1872
💣 Service		
S Network	Name:	Control Station A1
🕸 Redundancy		
🔀 Advanced Settings	Playback device:	Primary Sound Driver 🔻 🕫
TRBOnet Cloud	Recorder device:	Primary Sound Capture Driver 🔻 🕫
🐼 Digital Systems		
Services	Serial port:	COM1 •
TRBOnet Swift Agent #1	Always transmit when	the PTT is pressed ("Impolite" channel access)
	TX Timeout:	60 🗘 seconds
Selex #1	Mic delay time:	0 milliseconds
Analog Control Stations		
Control Station A1		
📮 License	Extended protocol:	None
	Signaling System:	Quick Call I
		Configure
Set Defaults		Apply OK Cancel

- In the **Control Station** pane, specify the following Analog Control Station-related settings:
 - Name

Enter a name for the analog control station. This name will be displayed in the Dispatch Console.

Playback device

From the drop-down list, select the playback device on the PC that the control station is connected to.

Recorder device

From the drop-down list, select the recording device on the PC that the control station is connected to.



Serial port

From the drop-down list, select the serial port the control station is connected to on the PC.

 Always transmit when the PTT is pressed ("Impolite" channel access) -Select this option so that when the PTT button is pressed, the radio will start transmitting regardless of whether the channel is free or not (that is any transmission in progress will be interrupted).

Note: This feature is not available in Capacity Plus and Linked Capacity Plus systems.

TX Timeout

Enter the time, in seconds, to be used as a voice session limit. When a Dispatcher starts any voice session in the Dispatch Console, transmission will be interrupted after this TX Timeout expires.

Mic delay time

Enter the time, in milliseconds, to be used as a delay time interval between pushing the PTT and starting voice communication.

Extended protocol

From the drop-down-list, select either **None**, if your radio does not support the extended protocol, or **IC-F1721D v1.01** if the radio supports the extended protocol.

Signaling System

From the drop-down-list, select the signaling system (**Quick Call I** or **Quick Call II**). Click the **Configure** link and specify desired Quick Call settings. Selecting the signaling system is available only if **None** is selected in the **Extended Protocol** list.

3.7.1.1 Serial Port

Note: The serial port settings are available only when the extended protocol **IC-F1721D v1.01** is selected for the analog control station.

• In the **Configuration** pane, under the corresponding **Control Station**, select **Serial Port**.



Configuration	Serial Port			Version: 5.3.5.1872
💣 Service				
S Network	Baud Rate:	19200	÷	
🛱 Redundancy	Data Bits:	8	*	
🔀 Advanced Settings			•	
😵 TRBOnet Cloud	Parity:	None	•	
🚇 Digital Systems	Stop Bits:	1	*	
Services			_	
TRBOnet Swift Agent #1	Handshake:	None	*	
Controller #1				
Controller #1				
- 📸 Selex #1				
Wave Server1				
Analog Control Stations				
Control Station A1				
Serial Port				
📮 License				
Set Defaults		Apply	OK	Cancel

• In the **Serial Port** pane, specify the same serial port settings as those on the radio device connected to the serial port.



4 TRBOnet Server configuration

This section describes how to connect TRBOnet Agent to TRBOnet Server. To start TRBOnet Server, click the corresponding shortcut on the desktop, or click **Start > All Programs > Neocom Software > TRBOnet Server x.x**

• In the **Configuration** pane, select **Remote Agents**.

Configuration	Remote Agents			
Radio Networks	Registered remote Agents:			
Services	Agent Name	IP Address	Port	Redundancy
Repeater #1	Agent: 1	10.10.110.190	4020	No
TRBOnet Swift Agent#1				
Controller #1				
Selex #1				
Advanced settings				
Analog				
Analog Control Stations				
Control Station A1				
Remote Agents				
Agent: 1				
Redundancy				
Friendly Servers				
🔞 Telephony	Add Delete			Test
Set Defaults		Apply	OK	Cancel

• In the **Remote Agents** pane, click **Add**.

- In the **Agent** pane, specify the following parameters:
 - Agent Name

Enter a name for the remote agent. This name will be displayed in the Dispatch Console.

• IP Address

Enter the IP address of the agent.

Note: If both TRBOnet Server and Agent are installed on the same PC, then select **127.0.01** (Loopback Pseudo-Interface).



• Port

Enter the local port number that will be used by TRBOnet Server to accept connections from the remote agent.

- Click **Test** to check the connection to the remote agent.
- Use all services

Choose this option so that all available services will be used on the remote agent.

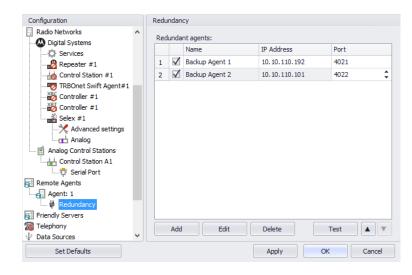
• Use only specified services

Choose this option and click the **Load services from agent** link to load services available on the remote agent.

4.1.1 Redundancy

A Redundant remote agent will be used when a connection to the Main remote agent fails.

• In the **Configuration** pane, under the corresponding **Agent**, select **Redundancy**.



• In the **Redundancy** pane, click **Add**.

Remote Agent			×
Agent Name:	Backup Agent 2	2	
IP Address:	10.10.110.101		
Port:	4022	Test	
O Use all service	s		
O Use only spec	ified services		
Service	Name		
Load service	s from agent		
		OK Can	cel



• In the **Remote Agent** dialog box, specify the following parameters:

• Agent Name

Enter a name of the redundant remote agent.

• IP Address

Enter the IP address of the redundant remote agent.

• Port

Enter the local port number that will be used by TRBOnet Server to accept connections from the redundant remote agent.

- Click **Test** to check the connection to the redundant remote agent.
- Use all services

Choose this option so that all available services will be used on the redundant remote agent.

• Use only specified services

Choose this option and click the **Load services from agent** link to load services available on redundant the remote agent.

• Click **OK** to add a redundant remote agent to the system.