



Connecting radios all over the world

How to setup and use
Mimer RTP Gateway
3157



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This guide will help with the setup of your Mimer RTP Gateway system.

Please also refer to the web pages www.lse.se, www.lse.se/RTPGateway.

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2 General

Mimer RTP Gateway is a component in the Mimer family of products for IP-network operated 2-way radios and other devices.

Basically, the RTP Gateway is used to act as a gateway for audio data from the IP-network connected devices and PC operators to third party audio recording equipment.

The gateway samples the audio packets in the SoftRadio system and resends them as an RTP stream to a predefined IP port. In this way the audio can be recorded by the third-party audio recording equipment.

Please note that the current version of the RTP Gateway will only sample audio from equipment that is connected through a Network Interface or a virtual Network Interface. This means that for example calls made through the option for SIP phone calls and the DAMM Tetra system, will not be sampled.

2.1 Technical

The audio is sent as multicast in μ Law code, that is part of the G711 standard. The information is not encrypted.

2.2 Mimer VoiceLog

There is also a component in the Mimer family that works as a full recorder of audio, it is called Mimer VoiceLog. Please see the web page for more information.

www.softradio.se/VoiceLog.htm

3 RTP Gateway installation

Install the software package from the supplied USB stick or download.

3.1 Installed as a Windows Service

From version 3.0 and onwards the RTP Gateway software is installed as a Windows Service on the server. This means that it auto starts with the server itself and always runs in the background. If the server is rebooted, the RTP Gateway will automatically start up again.

3.2 Recommended hardware

We recommend running the software on a separate Windows Server or Windows PC. In small systems the server function may be placed on one of the operator PC's.

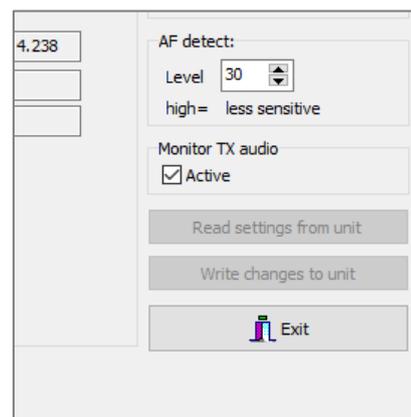
In systems with for example a Mimer NetworkRepeater, the server can be shared between the applications.

3.3 Activate the Monitor function

In the Network Interfaces that connects each radio to the IP system there is a setting called "Monitor Tx Audio". This setting needs to be active.

The audio transmitted from the operators will then be echoed through the network interfaces back into the IP network so that other operators can hear the audio, and in this case also so that the RTP Gateway can sample the audio and distribute it for recording.

Without the "Monitor Tx function" active, the operators will not be recorded.

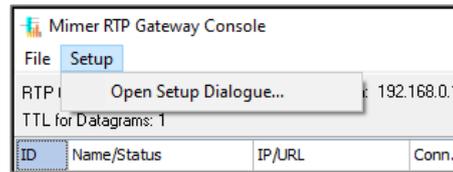


4 RTP Gateway configuration

- Open the RTP Gateway Console window.
- Go to “Setup – Open Setup Dialogue...”.

- **RTP Gateway ID**

Select a unique ID number for the RTP Gateway. It can be any number 10-240 that is not in use by another unit in the SoftRadio system.



- **TTL for datagrams**

This sets the number of routers that you allow the Multicast RTP message to travel through. Normally this is set to “1”, the message will then stay in the local subnet and not be allowed to pass through routers.

- **IP Addresses for RTP Data**

This is the addresses that you want your audio data to go to. In most cases it is only one, but if you have several, you can separate the addresses with a comma.

- **Send session metadata**

This function will send Json-formatted UDP messages to the same IP address as the RTP data. The messages are sent when a call begins or ends and contains radio and Mimer ID information related to the call.

- **Port for metadata**

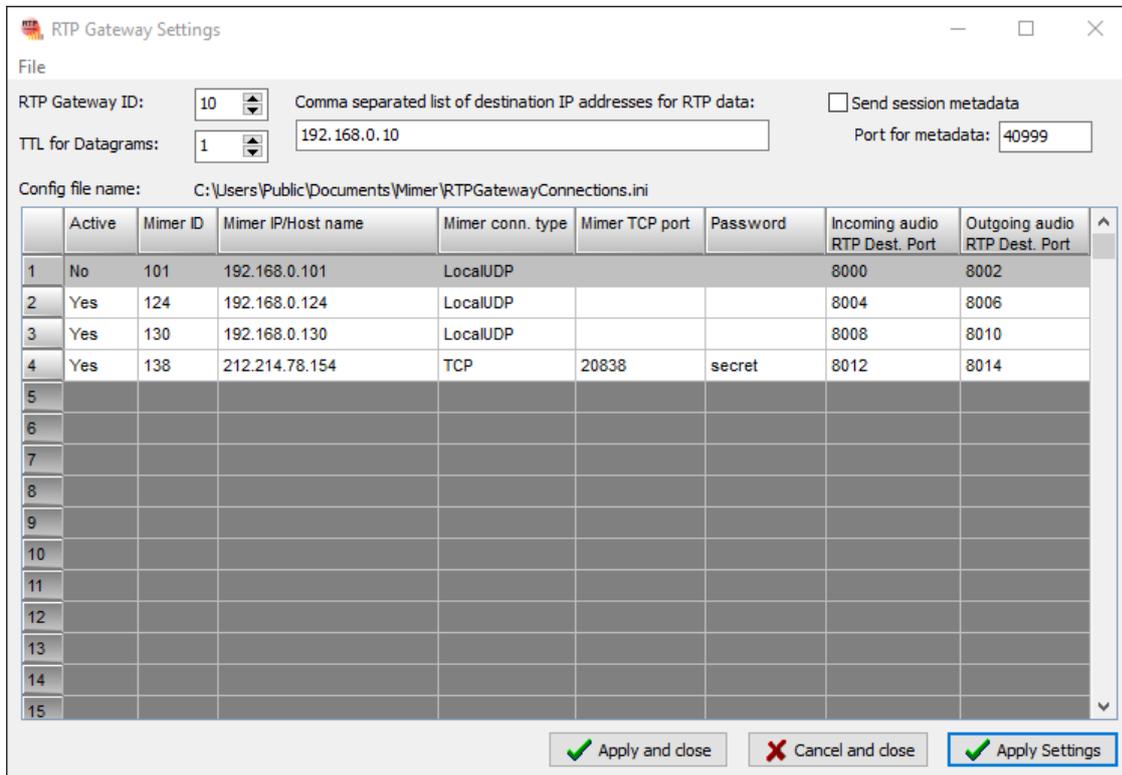
The UDP destination port for the above messages.

- **Connections**

Add a connection that specifies the first network interface using the following settings:

- Set Active to Yes on the first line.
- Enter the Mimer ID of the network interface by the device. It is a number in the range 10-240 that is defined in the Network Interface.
- Enter the IP address, or URL, to the network interface at the device.
- Set the Connection type to UDP for local connection or TCP for remote connection.
- Select the Remote TCP port. (Not needed for UDP) This is configured in the interface as the “TCP server port”. The factory default for the interfaces is port 20997. If you have several interfaces behind a router, on the same IP address, you may want to use port forwarding to route the data to each interface. You will then need to set different port numbers to each interface.
On the other hand, if the interfaces are accessed on different IP addresses, they may use the same port number.
- Specify the password for the connection to the network interface. (Not needed for UDP) This is defined in the network interface.
- Set the RTP Destination Ports for incoming and outgoing audio.

- You have now defined the first connection. If the RTP Gateway shall serve more devices, just add these in the same way.
- Finally press [Apply and Close]



Setup window for the Mimer RTP Gateway

5 Running the application

The server software is installed as a Windows Service and auto starts with the server itself and then runs in the back ground.

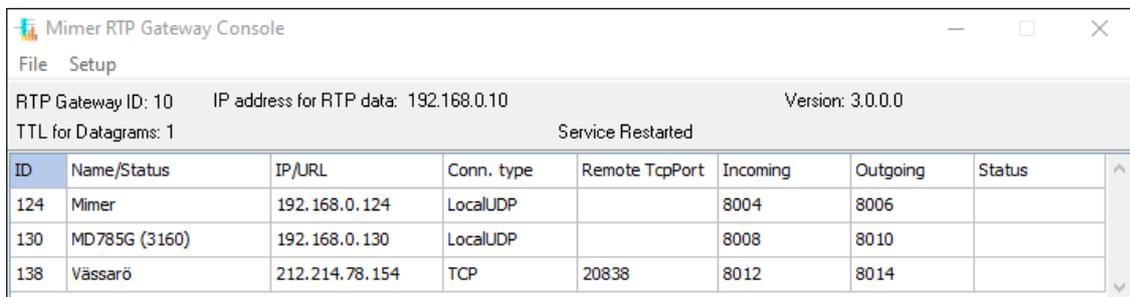
Older versions (before 3.0) were not installed as a Service and needed to be started manually.

5.1 Console Window

There is a “RTP Gateway Console” window, that can be opened. It does not need to be active for the server to run.

From the console window you access all settings for the server. See above.

Each monitored network interface is listed with its status.



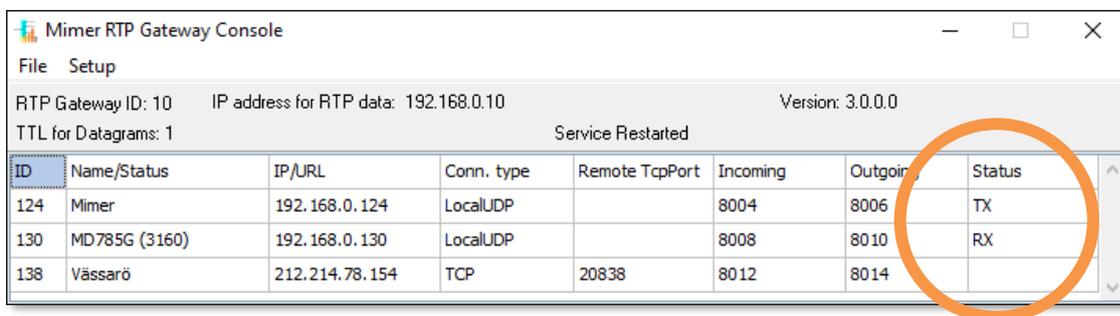
The screenshot shows the Mimer RTP Gateway Console window. At the top, it displays 'RTP Gateway ID: 10', 'IP address for RTP data: 192.168.0.10', and 'Version: 3.0.0.0'. Below this, it says 'TTL for Datagrams: 1' and 'Service Restarted'. The main part of the window is a table with the following data:

ID	Name/Status	IP/URL	Conn. type	Remote TcpPort	Incoming	Outgoing	Status
124	Mimer	192.168.0.124	LocalUDP		8004	8006	
130	MD785G (3160)	192.168.0.130	LocalUDP		8008	8010	
138	Vässarö	212.214.78.154	TCP	20838	8012	8014	

Console screen for the RTP Gateway

If status is “RX” then the audio is coming in from the network interface and is being resent through the gateway to the predefined RTP port.

If status is “TX” then the audio is coming in from one of the operators and is echoed in the network interface and then being resent through the gateway to the predefined RTP port.



This screenshot is similar to the previous one, but the 'Status' column in the table is circled in orange. The status for ID 124 is 'TX', for ID 130 is 'RX', and for ID 138 is empty.

ID	Name/Status	IP/URL	Conn. type	Remote TcpPort	Incoming	Outgoing	Status
124	Mimer	192.168.0.124	LocalUDP		8004	8006	TX
130	MD785G (3160)	192.168.0.130	LocalUDP		8008	8010	RX
138	Vässarö	212.214.78.154	TCP	20838	8012	8014	

One network interface in receive mode and one operator transmitting



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