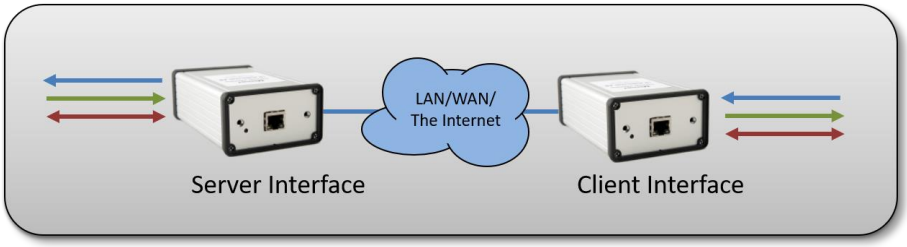
Mimer SoftLine

Connecting radios all over the world

Mimer SoftLine

Functional Description and examples



V 1.4

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This paper describes various alternatives how to build a **Mimer SoftLine** system, over an IP connection, by using two network interfaces.

This is for example useful for bridging radio systems together, or cross patching between systems. (If you need to bridge radios at the same site, use the Mimer X-Link instead, www.lse.se/x-link)

Certain radios can also be remote controlled using their own control head at the dispatch end, instead of a PC with software as you do with Mimer SoftRadio.

Mimer SoftLine is also used in cases where you need to upgrade from old leased lines to IP connections but still keep the radio equipment at each end.

In the standard SoftRadio systems there is one network interface at the radio, or other audio component, and at the operator there is only a Windows PC with the SoftRadio software (no hardware interface). Many nodes can be connected together.

In SoftLine systems no Windows PC is used and only two nodes can be connected together.

Please also see the web pages www.lse.se/softline.

If you have any questions, just drop us an email and we will help.

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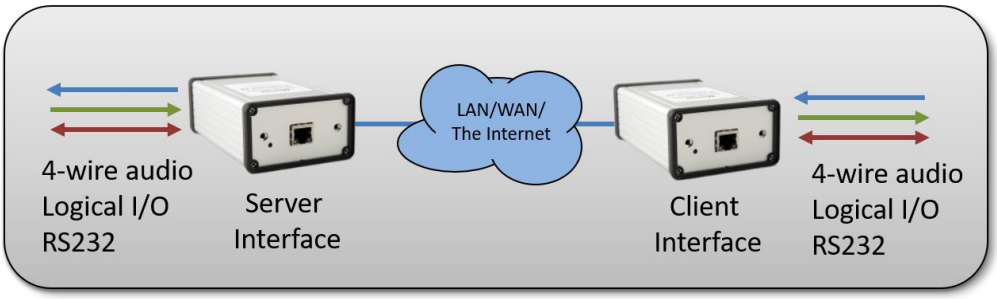
1 Mimer SoftLine

Two Mimer Network Interfaces with a special software can be set up to work together over a LAN or over the Internet with one as Server and one as Client. Between them, over the IP connection, there will be a virtual 4-wire audio line, a virtual RS232 serial data connection and some logical in/out´s.

The two interfaces will log onto each other when a connection is available. If the connection is lost and then restored, they will reconnect automatic.

The SoftLine interfaces can in this way be used instead of leased lines, for audio or modem data connections etc. The system is mostly used for radio systems, but can also be used for totally different purposes.

Mimer Softline will work over LAN, WAN or the Internet.



Basic connections in the SoftLine setup

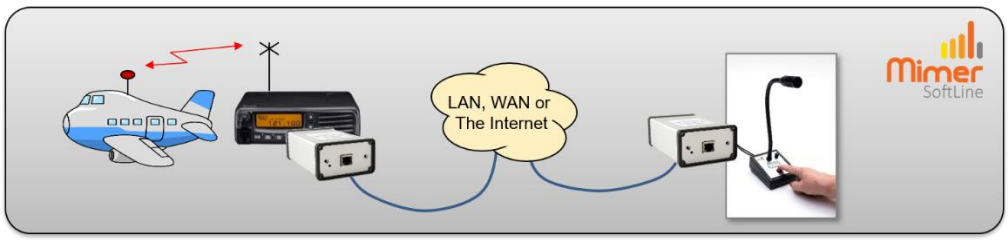
2 Examples of SoftLine use

2.1 SoftLine Remote talk setup

Some users prefer to remote control a radio over IP using only a microphone and a speaker at the operator end. There is a version of SoftLine for this purpose.

Using a table top microphone with a built in speaker connected to the interface at one end, and a radio connected to the interface at the other end. Recommended microphone is 3110/07.

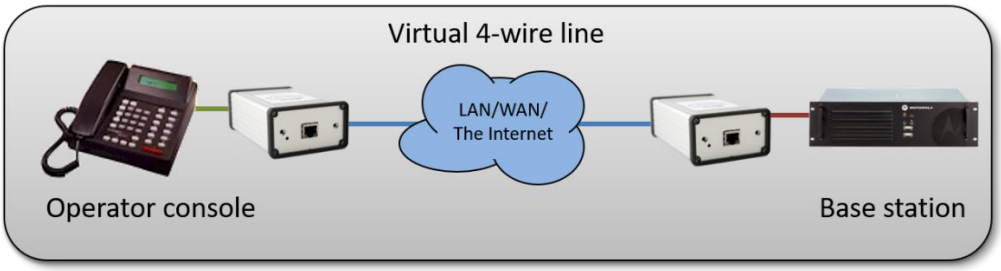
Most types of radios can be used for this type of setup.



In this example an airband radio is remote controlled through a desktop microphone with built in speakers

2.2 Remote control of an old base station radio

Instead of using an expensive leased line connection between a dispatcher console and an old base station radio you can use LAN, WAN or the Internet for connection.



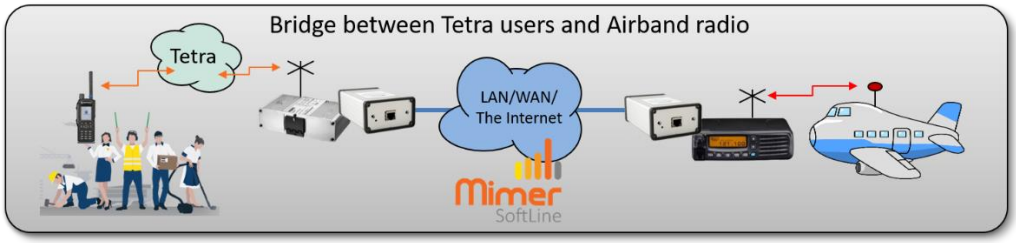
Remote control of an old base station, substituting the leased line

2.3 SoftLine Bridging and Cross patching

We have a version of SoftLine for radio system bridging and CrossPatch use.

You can place the radios next to each other, or remote, using the Internet between them. The radios can be of the same type and be used for bridging two areas together, or they can work in totally different radio systems to build a cross patch.

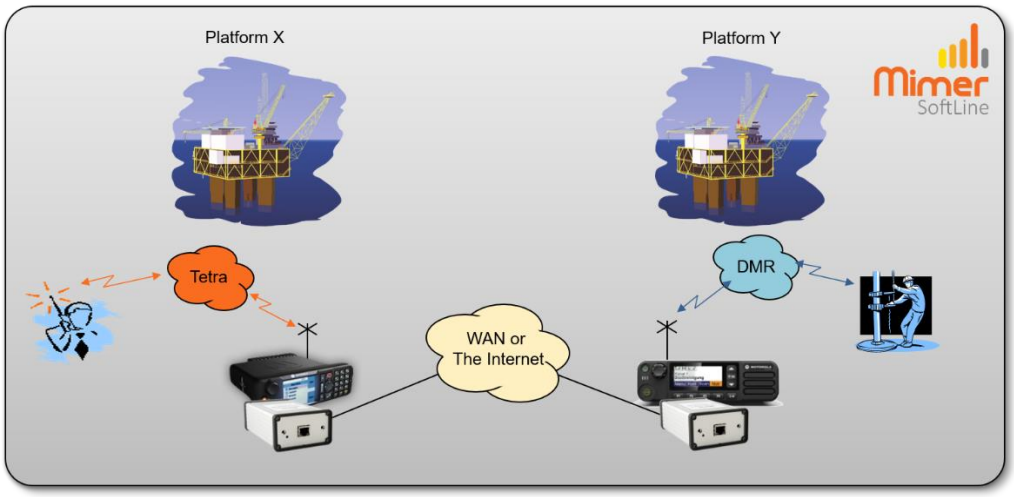
The cross patch is often used at airports. It connects for example an air band radio to a Tetra terminal over the local LAN. This gives Tetra users (ground personnel) the ability to talk and listen to air band channels.



Cross patching Tetra to Airband on an airport.

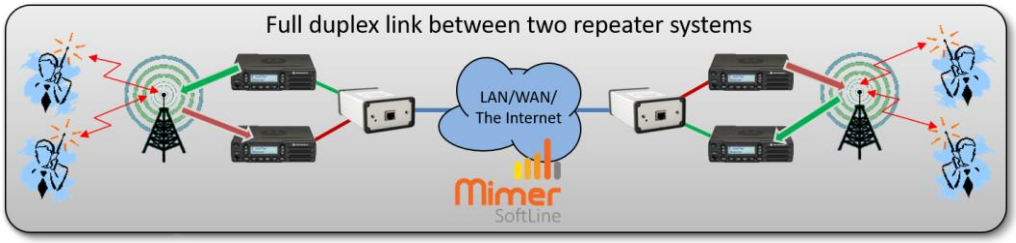
The system can be set up for almost any types of radios.

As soon as there is reception on one radio the incoming audio will be rebroadcasted on the other radio, and vice versa.



Bridging a Tetra talkgroup on one platform to a DMR talkgroup on another platform.

Using two radios at each end as in the example below, or by connecting to full duplex base stations, the system will be duplex.



Bridging two repeater systems in full duplex, by using two mobile radios at each end.

2.3.1 Alternative: SoftRadio Cross patch

The patch functionality can also be achieved by using Mimer SoftRadio with the option CrossPatch. This gives the PC dispatcher the control of turning the patch on/off and to change channels etc on the radios.

www.lse.se/crosspatch

2.3.2 Alternative: X-Link Cross patch

You can also use the Mimer X-Link. The X-Link interface connects two radios together when they are installed at the same site. The X-Link has no IP connection and does not work in duplex.

www.lse.se/x-link

3 SoftLine for remote control of a radio

Some customers do not want to use the SoftRadio solution where the operator use a PC with software, they prefer to use the radios standard control head although the distance is to long for standard remote control.

For this purpose, we have made setups that can separate the radio and the standard control head using LAN, the Internet or a fibre cable.

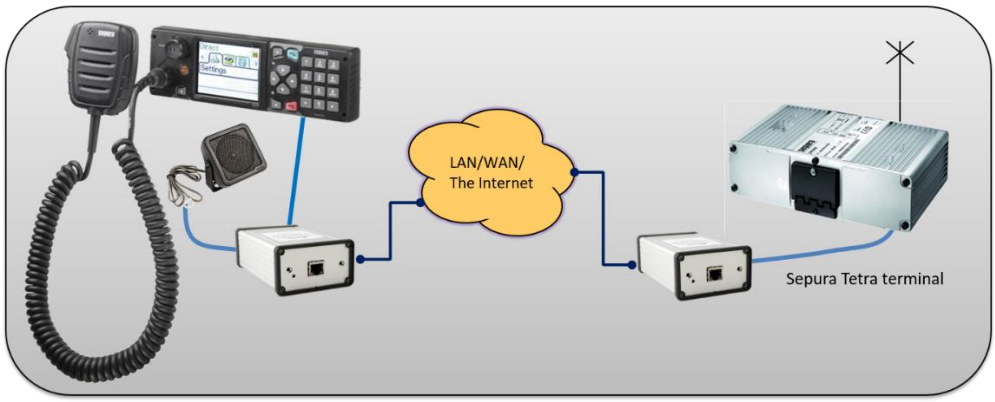
The setup gives full remote functionality of the radio.

Unlike the SoftRadio solution this is a point-to-point setup with only one radio and one operator.

3.1 SoftLine Sepura

Via SoftLine Sepura two network interfaces can be connected together over an IP-net. One interface will be connected to the radio and one connected to the control head.

The standard speaker and microphone, or handset, can be used at the operator end.



Remote control of Sepura Tetra terminal

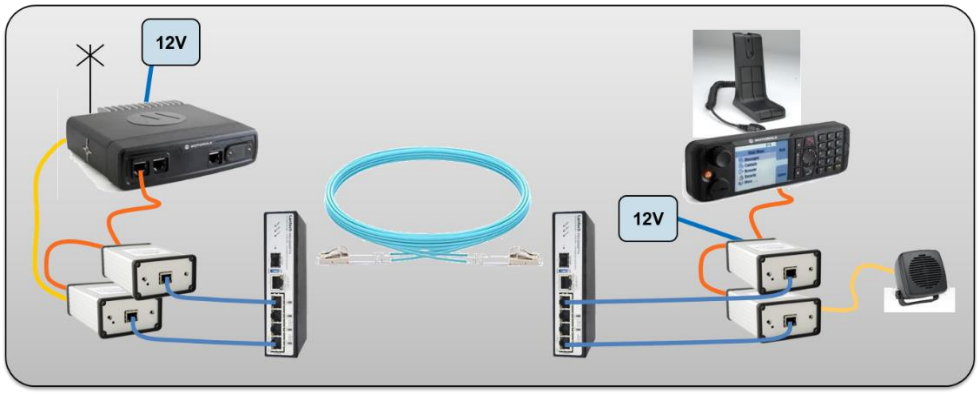
3.2 SoftLine Motorola MTM5500

As above, this solution can also be built for Motorola MTM5500 Tetra radios. With the exception that it only works in a local LAN, not over the Internet.

One remote control head through this application can be used in parallel with a local standard control head.

The system needs two IP connections. One for control and one for audio.

Our standard delivery includes fibre modems.

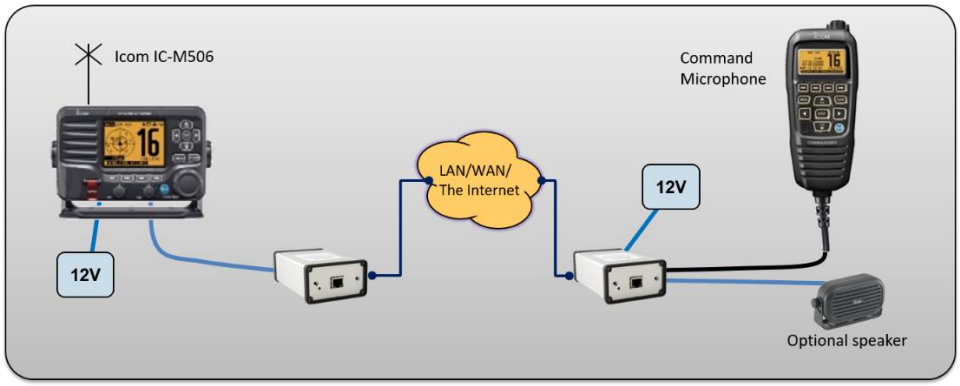


MTM5500 remote controlled with a fibre connection

3.3 SoftLine Icom Marine

There is also a solution for the marine radios Icom M423/M424 or M400BB, M506 and M510 (also versions with G and E at the end of the model number). With these radios the standard Command microphone is used.

When remote controlling an Icom marine radio the radios standard front panel and microphone can be used in parallel.



Remote control of Icom marine radio

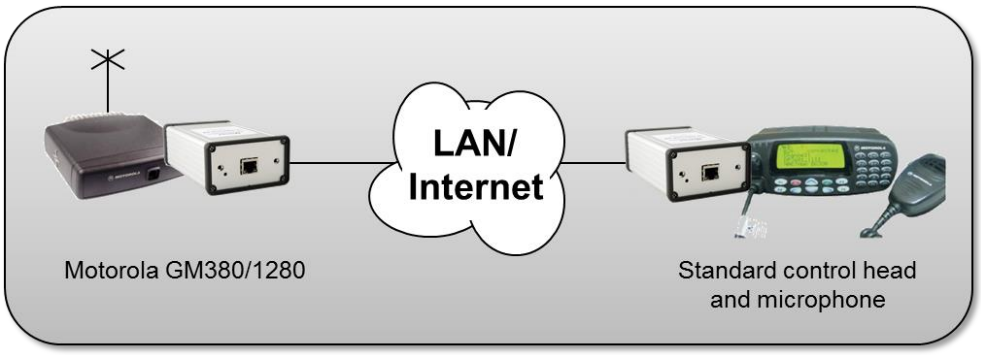
3.4 SoftLine Motorola Analogue

Via SoftLine Motorola two network interfaces can be connected together over an IP-net. One interface will be connected to the radio and one connected to the control head.

The operator will use the standard radio control head and the standard microphone.

The solution fits to Motorola GM380, GM398, GM399 and GM1280 radios.

The interface in the radio end is a standard interface, same that is used in Mimer SoftRadio. This means that you can mix clients that use a standard PC with SoftRadio as the operator position.



Remote control of analogue Motorola radio

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