



Network Interface LE

Technical Specification



Release E

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This paper describes the technical part of the Network Interface LE (3130) in Mimer SoftRadio systems.

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2 Mimer SoftRadio background

The Mimer SoftRadio system consists of software that runs on Windows PC's. The software works together with one or more Network Interfaces that are connected to two-way radio units. One Network Interface is needed for each radio unit.

The purpose is to remotely control the two-way radio from the PC over a LAN, WAN or the Internet. In this way several operator PC's can share one radio and every operator can control several radios.

The basic control panel GUI displays controls like PTT-button, speaker on/off, device volume, etc.

For many radio types the operator will also have available a virtual control head emulating the front panel of the radio. This gives the operator the same feeling as if he was sitting in front of the radio itself.

However with the Network Interface LE this is not possible. The LE interface is meant to be used with radios that do not require any advanced functions, only audio in/out and PTT on a fixed channel/talk group.



Connected interface

3 The Network Interface

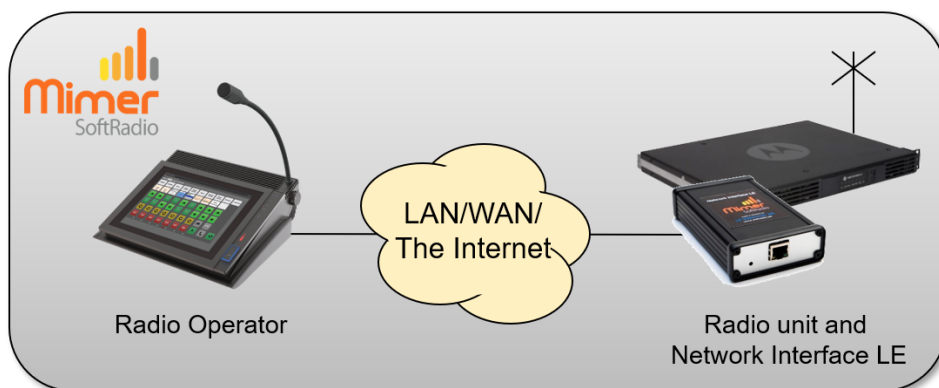
The purpose of the Network Interface is to be a bridge between the radio and the computer network. It transforms audio and signalling from analogue to digital and back again.

The Network Interface has a very flexible design so the I/O signals can be configured to fit almost any radio on the market, both Mobile Radios and Base Stations.

The Network Interface LE has connections for Audio input and output, I/O control signals like Squelch and PTT.

The network connection is a standard 10/100 base-T Ethernet connection. Both TCP and UDP network protocols are available simultaneously depending on the system configuration. This allows a flexible approach for designing the most optimum network based system.

The Network Interface runs on 12VDC just as most radios and is therefore easy to power from the same source as the radio, and to feed with backup power. If power is lost, the Network Interface will restart itself in a matter of seconds when the power comes back.



Connection to a base station radio

4 Setup

The Network Interface is set up through a special software called "Network Interface Setup" that is delivered with the standard package of "Mimer SoftRadio" software.

With the software all IP-addresses, numbers, ports, names etc are configured before initial use.

5 Specifications

Specifications for the “LE” version of Mimer Network Interface.

5.1 General

Size	130 x 80 x 30 mm
Weight	160g
Power supply	9-18 Volt / 250mA
Temp range	-10 - +50 °C
Connectors	RJ45 for Ethernet D-sub for audio, power, I/O
MTBF	350 000 Hours

5.2 Audio

Input (from radio speaker output)	0.7-13Vpp (0.25-4.5Vrms)
Output (to radio microphone input)	0-1.1Vpp

5.3 I/O

Open collector output (Used for radio PTT)	Max 30V / Max 10mA. Optional reverse-current protected 5.6k pull-up to +5V
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There are also special versions of the standard network interface with other types of connectors and ports.



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