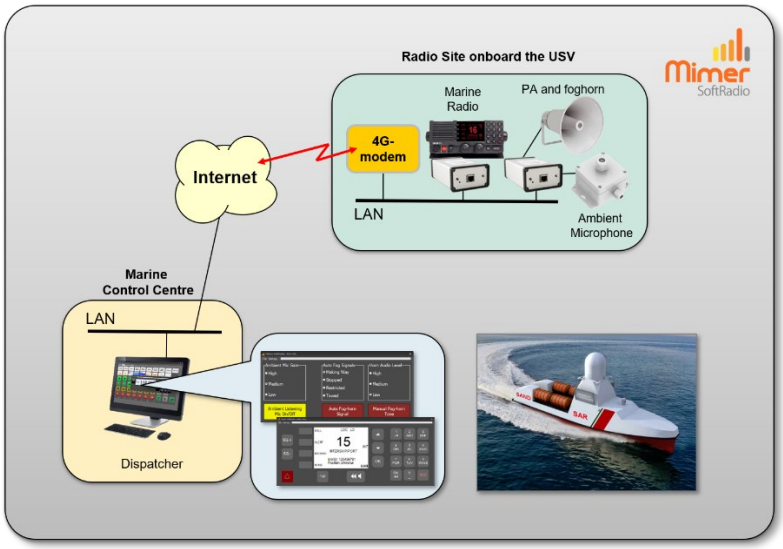
Mimer SoftRadio

Connecting radios all over the world

Mimer Interface 3009/50

PA, FogHorn &

Ambient Microphone



Release date March 31, 2025

This guide will help with the use and setup of your Mimer Network Interface 3009/50 giving PA, fog horn signaling and ambient listening functions.

Please also refer to the web pages www.lse.se, www.lse.se/pa and the setup instructions for SoftRadio found on www.lse.se/setup.

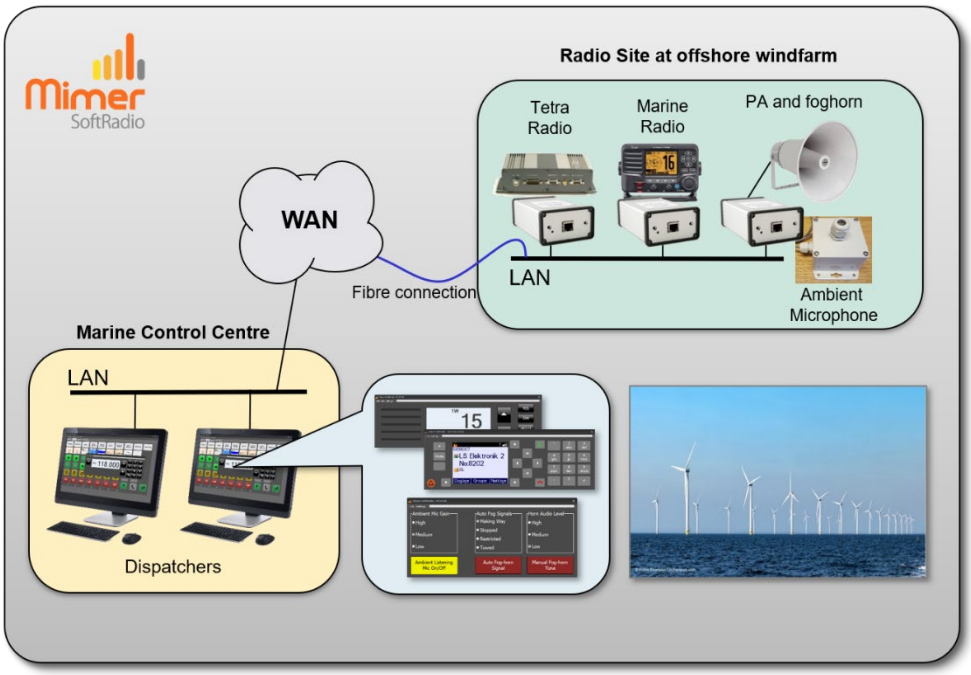
1 Table of Contents

2 General

The Network Interface is designed to work together with a PA-speaker and a microphone for ambient listening. The interface also has a built-in sound generator so that the PA speaker can be used as a fog horn.

The interface fits in together with all other equipment in the Mimer SoftRadio family making it easy to use from the same operator GUI as the radios, phones etc.

It is remote controlled over IP in the same way as the interfaces for radios. Making it possible to use both local and remote. Each interface can be used by several operators, and each operator can handle many interfaces.



Example of windfarm system with two operators working with two radios and an interface for PA, fog horn signalling and ambient listening.

From 2025 there is also an alarm function on the interfaces. Se chapter 8 further down.

3 Needed hardware

- Network Interface 3009/50.
- Cable kit 3277 or 3277/02
- PA-speaker with amplifier, 3279 + 3280
- Microphone with pre amplifier, 3278
- The interface needs 12VDC and the amplifier 230VAC

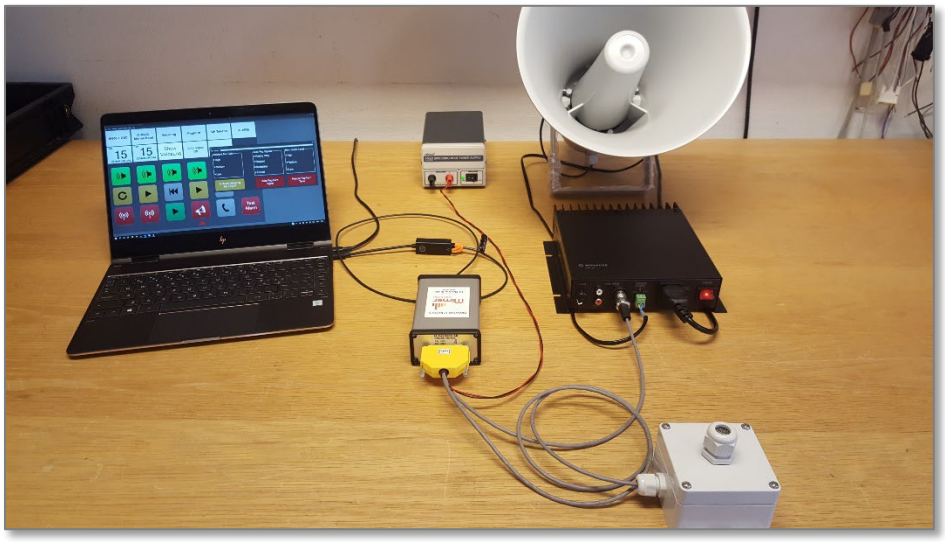
3.1 Alternative speaker

Also, other amplifiers and PA speakers can be used. The Network Interface gives a low-level balanced audio output.

4 Needed software

The clients shall have Mimer SoftRadio installed.

Version 4.0.16.5 or higher.



Test setup with SoftRadio on a laptop, local network to the interface, microphone and amplifier/speaker.

5 Installation

The interface is connected to a 12VDC power supply and to the speaker and microphone as described below.

5.1 Setup of the interface

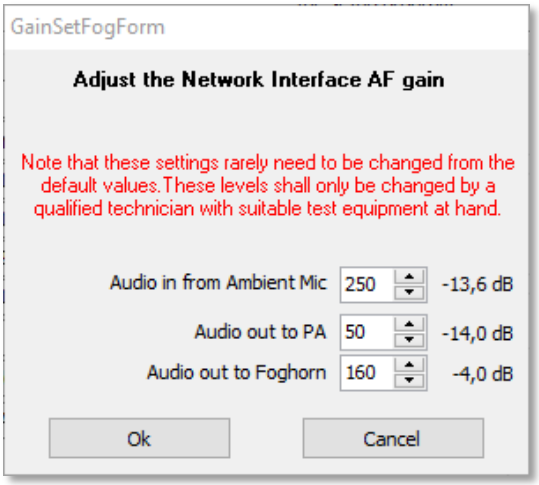
5.1.1 IP and ID

The IP connection of the interface is described in the **Setup Manual for Mimer SoftRadio**. It is handled in the same way as all the interface types that are used with radios.

5.1.2 Advanced Settings - Audio levels

The audio levels to the horn and from the ambient microphone are set High/Medium/Low on the operator's device panel, see further down in this manual. It can also be fine-tuned in the "Interface Setup" software behind the "Advanced Settings" key. There are separate settings for the level of PA audio from the operator's microphone and the FogHorn tone.

These settings are pre-set and seldom needs to be changed.



The maximum gain for PA and FogHorn are 0dB, represented by a value of 255. Normally you would like the FogHorn to be louder than the PA speaker and therefor it is set to a higher value.

The Ambient Microphone gain is also maximised at 0dB, represented by 255. The scale is steeper, than for the output, so a small value change gives many dB´s change.

5.2 Recording

If there is a Mimer VoiceLog in the system, the PA announcements and the ambient listening will be recorded. The fog horn tone transmission will not be recorded.

6 Setting up the PA Speaker

Different types of PA-systems can be connected. The description below shows the system with an amplifier and a speaker that can be ordered together with the interface.

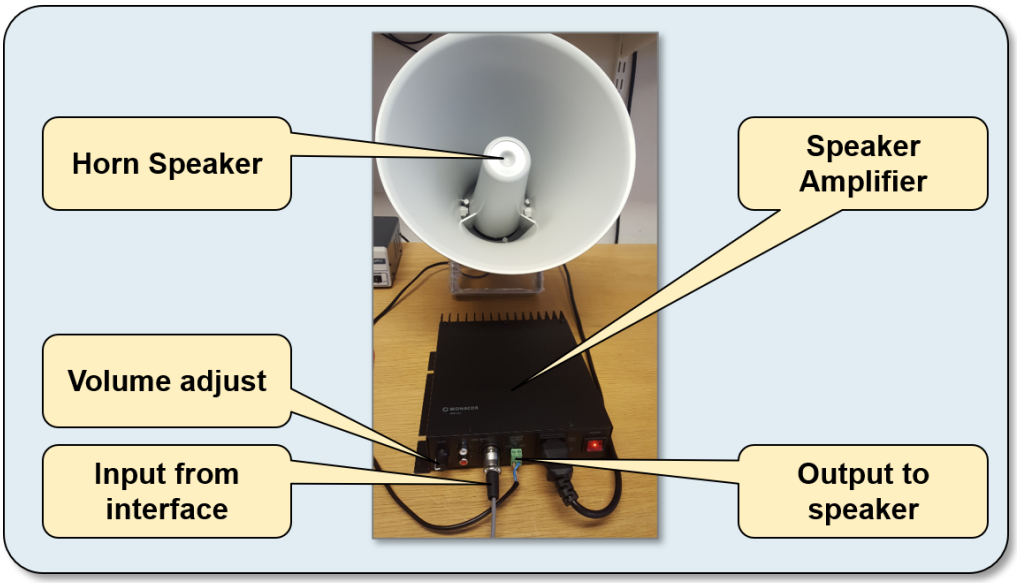
6.1 Mimer kit 3279 + 3280

The kit consists of a Monacor PA amplifier AKB-160 and a Monacor IT-60 horn speaker. The amplifier uses the common 100V technology for audio distribution in PA-systems. More than one speaker can also be connected in parallel.

The cable kit 3277 has an XLR connector that fits into the amplifier. See picture below.

The amplifier has a screw connector for a standard two-wire speaker lead that connects to the speaker. The two-wire lead is not included in the kit. The maximum length is over 100m.

The amplifier has a gain control on the front panel. Manually adjust this so that when using the highest level from the operator, you have a high enough output. Then fixate the knob in position with tape, so that it does not accidently change its position.



Amplifier and horn speaker.

7 Setting up of the microphone

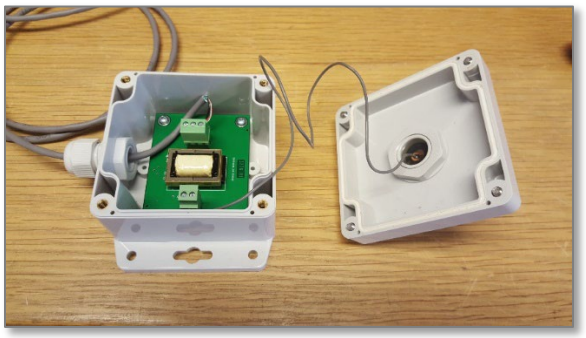
Different types of microphones can be connected. The description below shows the system that can be ordered together with the interface.

7.1 Mimer kit 3278

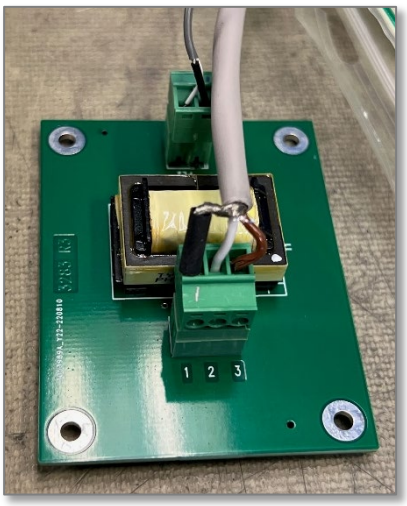
The kit consists of a Zenitel outdoor microphone together with a Mimer pre amplifier. The delivery includes a mounting box (apr. 80x100x55mm).

The microphone can also be installed directly through a mounting hole if the box is placed directly on the inside with the pre amplifier. Take care to make all holes water tight.

The cable from the microphone to the interface shall be a standard two lead cable plus shield. The maximum length is about 30m. The delivery includes a 1m cable, for test purposes, it is up to the installer to extend the cable at installation.



Outdoor mounting box with preamplifier, microphone installed in the lid of the box.



Connection:

1: Shield
2: White
3: Brown

8 Alarm input

From March 2025, there is an alarm input on the network interface. If activated this will trigger the “Restricted” foghorn signal to sound, until the input is deactivated again.

The function is built for the unmanned/autonomous ships. So that in the unlikely event that the data link to the ship is lost, the IP system onboard can set the alarm input, and thereby signal to other ships that the ship is uncontrolled.

8.1 Needed equipment

Cable kit 3277/02
Interface firmware 6.136, or later.

8.2 Connection

A high input (5-30V) on the alarm wire will activate the signal.
The wire is normally pulled low.

The wire goes to PIN11 on the network interfaces DB25-connector.

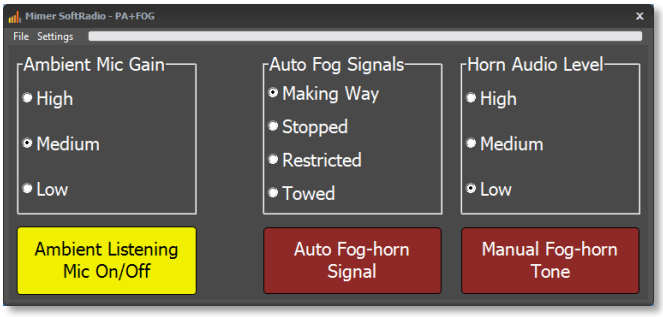
9 Operation

The operator will see the PA interface as one more device panel among the radios, phones etc. in the SoftRadio GUI.

If several operators share the interface, they will all be able to control the functions in parallel, just as they do with the radios.

Clicking the name label will bring forward/close the device panel where settings and controls are available.

Mimer SoftRadio with two radios, a phone and a PA & FogHorn unit connected. The operator is talking on the PA speaker.



Device panel for the PA, FogHorn and ambient listening.

9.1 Using the PA function

Talking over the PA speaker is done by pushing the red transmit button, in the SoftRadio GUI, in the same way as when transmitting on a radio.

On the device panel the “Horn Audio Level” can be changed in three steps. This is a common setting for both PA and for fog horn signalling.

The ambient microphone can be used for listening to the PA announcement. But be aware that this can lead to acoustic feedback.

9.2 Using the FogHorn function

On the device panel there are both a manual fog horn key and four automatic schemes.

Pushing the “Manual Fog-horn Tone” will sound the fog horn for as long as the key is pressed.

Selecting one of the four “Auto Fog Signals” schemes and then pressing the “Auto Fog-horn Signal” will start one of the automatic sessions. This will continue until the same key is pressed, or the manual Fog-Horn key is pressed.

On the device panel the “Horn Audio Level” can be changed in three steps. This is a common setting for both PA and for fog horn signalling.

The ambient microphone can be used to check that the fog horn is working.

All Fog Horn settings work in parallel for all operators.

9.3 Using the Ambient listening function

When audio is received from the microphone the text label in the SoftRadio GUI will turn yellow. In the same way as when a radio is receiving audio.

Normally the microphone will always be active, and fetches the ambient audio, when the audio is over the AF detect threshold set in the Network Interface. The microphone can also be shut off with the switch on the device panel, “Ambient Listening Mic On/Off”. The purpose of this is to minimise the data stream when used in systems where there is a cost for the use of mobile data, for example when using 4G or satellite.

Also, if there is a lot of background noise, the microphone audio might be on at all times. To adjust this, the sensitivity of the microphone can be set in three steps under “Ambient Mic Gain”.

Settings of Mic On/Off and the Mic Gain are sent to the network interface, they are there for a common setting for all operators.

In the SoftRadio GUI the Ambient Listening audio to the operator speaker can be turned on/off with the green button (same as on radios). If volume control is selected, also the audio level can be changed. But please note that this is for each operator separate.

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