

AV61 Manual

6-channel electronic stethoscope for machine monitoring

USES

- Machine Monitoring
- Multi interfering noise location

FEATURES

- 6x Electret condenser microphone inputs
- single microphone input selectable
- Additional automatic pass through all channels plus the mixed signal
- Adjustable Headphones level output

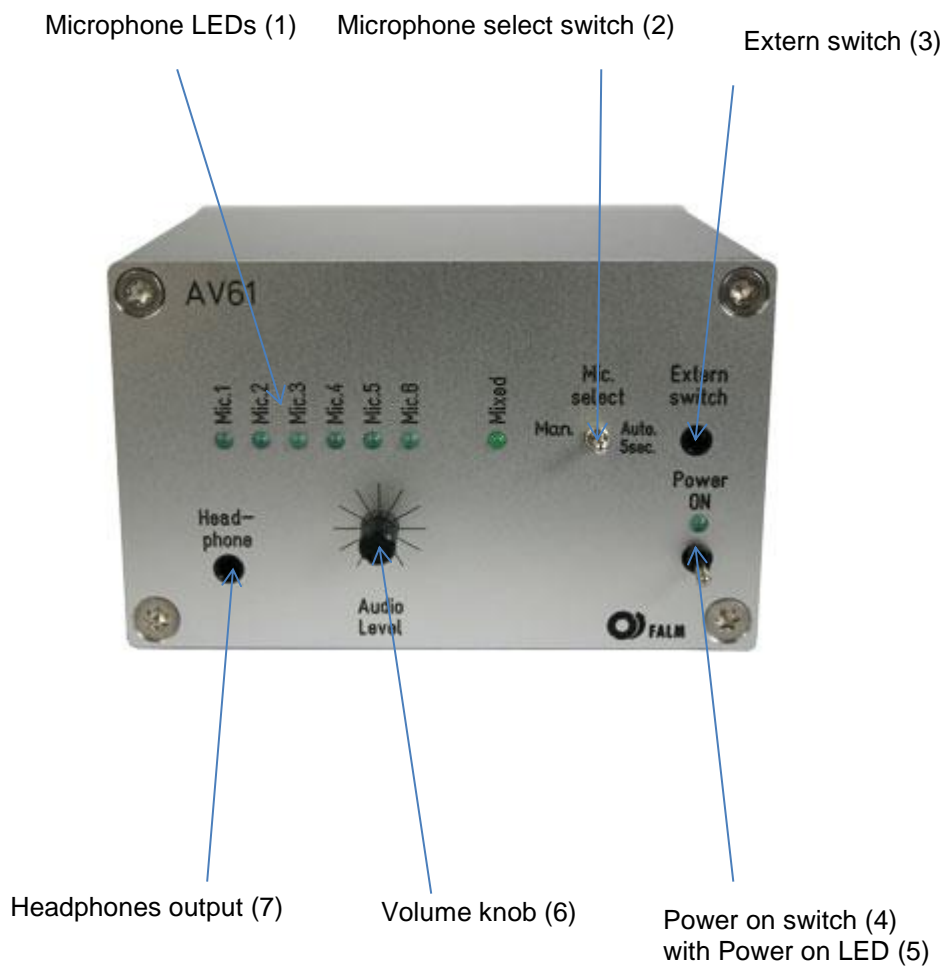
The 6-channel amplifier AV61 is an instrument, which has been constructed mainly to monitor acoustic signals with headphones.

The channel to be monitored can be selected individually. The unit also has an automatic pass through all channels plus the mixed signal. Each signal channel and the mixed signal of all microphones are automatic selected one after the other for a period of 5 seconds.

The loudness of the headphone can be adjusted by the potentiometer on the front side of the amplifier.

The device has a BNC signal output on the back, so it can also be used as a front end.

On the front panel an external switch can be connected via 3,5mm jack. This external switch can select the same measuring signals like the Microphone selector on front panel.

Front View AV61

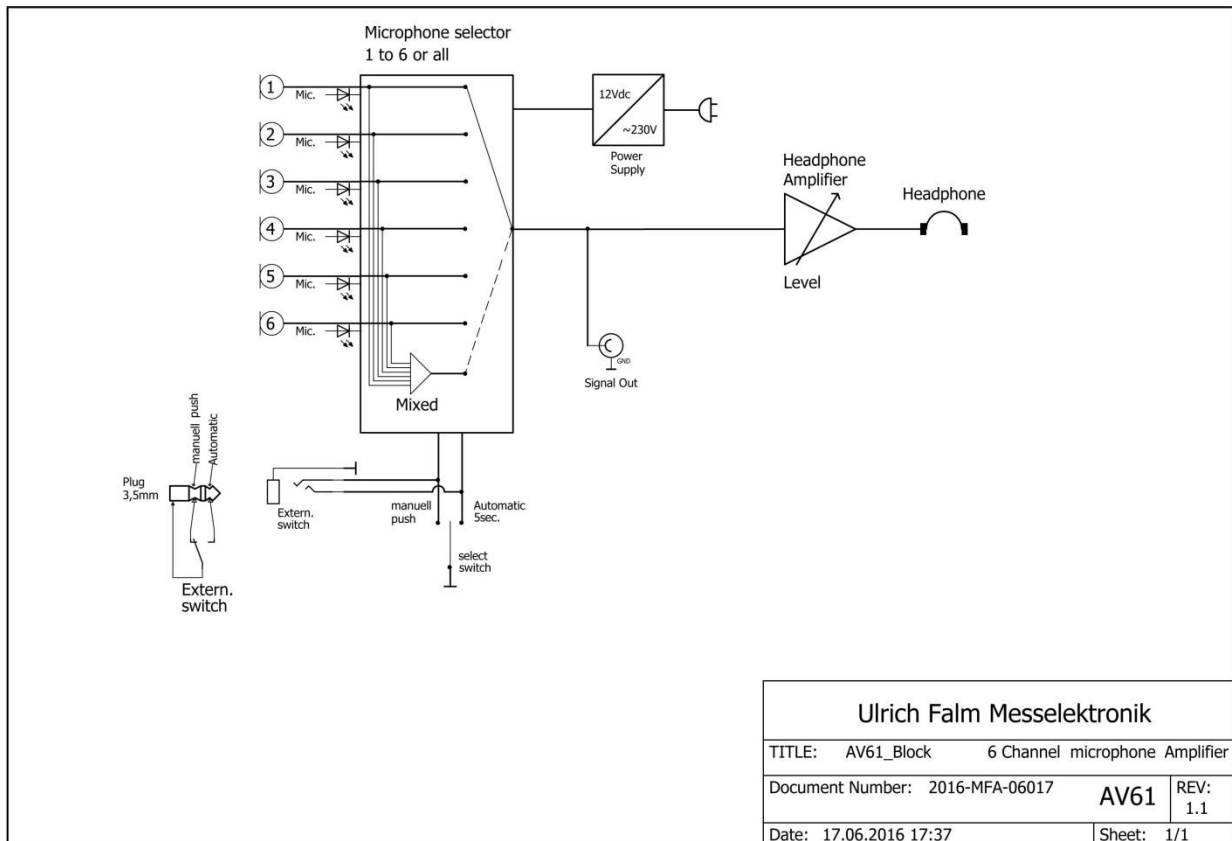
Back view AV61

Signal output (8)

BNC connector to microphones (9)



Power 12V DC input (10)

Block diagram AV61


Safety instructions



You need to be aware of some basic Information before you start:

1. Caution! Too high loudness can cause hearing loss!
Protect yourself from too high loudness. Before powering on the amplifier lower the headphones output volume to minimum level (turn Volume knob left as far as it will go).
2. Be sure that the voltage is correct (12-14 V DC) before connecting a power supply unit. If you are not going to use the device for an extended period, disconnect it from the power supply.
3. Remove dust by wiping the unit with a soft, dry cloth.
4. Do not open the cabinet.

Installation

- Place the MI10S microphones at the measuring points using the MK10 microphone clamps. Connect the microphones to the microphone cables.
- Mount the AV61 in your control cabinet. Plug the other cable end of the microphone cable into the corresponding input BNC connector (9) on the back of the AV61.

Preparing Operating

- Turn Volume Knob (6) on the front side of the AV61 to minimum level to protect yourself from hearing loss. To do this, turn Volume knob anti-clockwise as far as it will go.
- Connect the included External AC adaptor with the Power 12V DC input (10) on the back of the AV61. Connect the included External AC adaptor with your mains supply.
- Connect the headphones KH10 to the headphone output (7) on the front side of the AV61.
- Switch-on the power (4) of AV61 Amplifier on the front side of the AV61.
- The green Power LED (5) lights up.

Operating Instructions

Locating noises with the headphone

- Select the desired measurement signal - you have two options:

(1) If you turn the microphone select switch (2) on the front side of the AV61 to **right**, the switch locks in this position. The automatic pass through starts directly. The system goes through all channels plus the mixed signal. Each signal channel and the mixed signal of all microphones are automatic selected one after the other for a period of 5 seconds. You can see which channel is currently selected on the illuminated Microphone LED (1).

(2) If you turn the microphone select switch (2) on the front side of the AV61 to **left**, the switch does not lock in this position. On the left side the switch is a push button. By pushing the button to the left, you can select a single microphone channel. You can see which channel is currently selected on the illuminated Microphone LED (1).

- After you selected the channel or automatic pass through, you can hear the measurement signal in the headphone KH10. You can adjust the loudness with the Audio level knob (6).

Additional Options

Signal output

The device has a BNC signal output (8) on the back. This measuring signal is the voltage proportional to the sound pressure independent of the amplification of the headphone amplifier. The signal is corresponding to the selected channel.

External switch

The device has an input for an External switch (3) on the front side. With the help of an external switch, you can select the measuring channels from a distance. Please note that this is only useful if the operator has a view of the LEDs on the front of the AV61.

The external switch is not included. You can see the pin configuration of the external switch in the block diagram.

Technical Data

Inputs

Microphone input:BNC
Number:6

Headphones - Amplifier

Frequency response:-3 dB between
10 Hz – 20 kHz
Max. Output voltage:4 V_{ss}*) at 150 Ω
Distortion factor:< 1 % at 1 kHz and 4 V_{ss}
Output socket:3.5 mm stereo jack

Measuring Amplifier

Output Impedance:50 Ω in series with 10 μF
Max. Impedance:> 10 kΩ, < 10 nF
Frequency response:-3 dB between
10 Hz – 20 kHz

Microphone power
supply voltage:5 V via 4.7 kΩ

LED

„Power”green

Power Supply

Supply:external 12–15 V DC
Current Consumption:50 to 80 mA, depends on
adjusted amplification

Operation conditions

Operating temperature
range:+/- 0°C to +50°C

Mechanical Data

Case material:Aluminum
Dimensions (W x H x D):105 x 65 x 85 mm
Weight (both):approx. 850 g

Safety

IEC61010

EMC

EN55103-1, EN55103-2

Accessories included

- External AC adaptor, 100-240 VAC / 12 VDC