

# AV81-2i Manual

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8-Channel Monitor Amplifier with IEPE (Integrated Electronics Piezo Electrical) inputs.

Items:

1x AV81-2i: 2 groups of 4-channel microphones mixed with IEPE input and amplifier box  
MI10Si IEPE (Integrated Electronics Piezo-Electrical) microphones (option)  
IEPE Accelerometers (option)  
MK10 microphone clip (option)  
BNC/BNC cable, difference lengths (option)  
KH10: dynamic headphone (option)  
AVTR: Wireless Headphone, Set of Transmitter – Receiver (option)

## USES

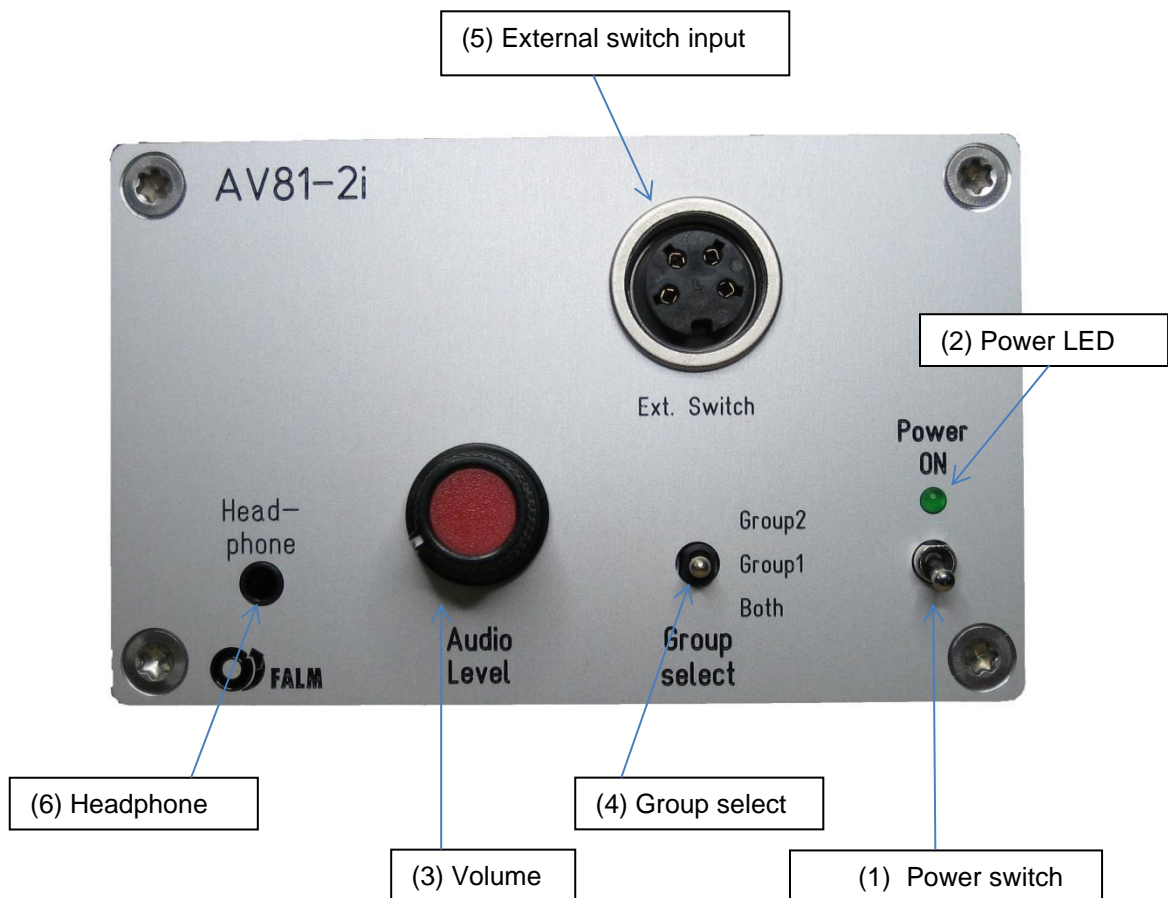
- Acoustic Measurements
- Source Location
- Machine Diagnostics
- Vibration monitoring

## FEATURES

- 8x IEPE input: Microphone inputs mixed as one of two groups of 4 microphones or both
- Adjustable Headphones level output
- Other IEPE sensor (accelerometer) can use

The 8-channel amplifier AV81-2i is an instrument, which has been constructed mainly to monitor acoustic or vibration signals. It has three measuring channels for IEPE electret condenser microphones. A headphone output is built in for monitoring purposes. The loudness of the headphone can be adjusted by the potentiometer on the front side of the amplifier.

On the front panel an external switch can be connected via DIN 4pol plug. This external switch can select the measuring groups via SPS etc.. **When use the external switch, the internal switch must in position group 1!**

**Front View AV81-2i**


### Back view AV81-2i

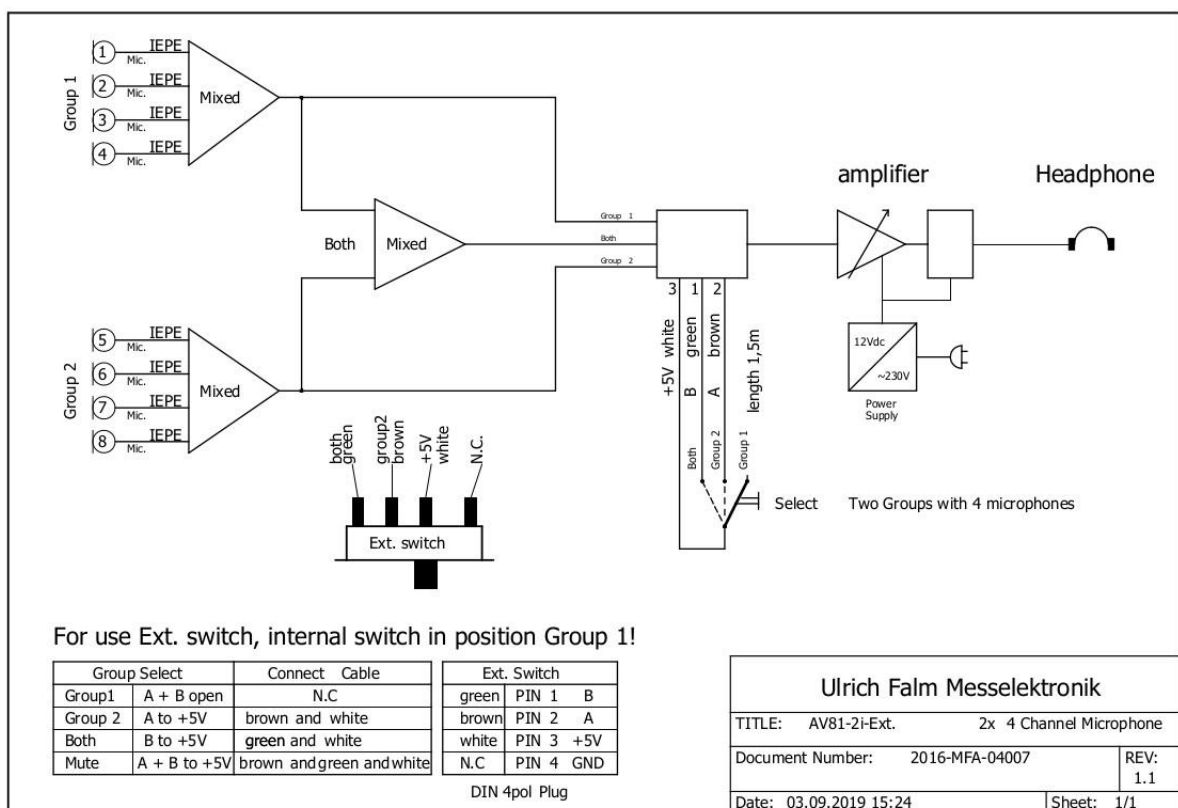


(7) Ext. 12VDC Power

(8) Microphone Inputs

(9) Sensor OK Led

## Block diagram AV81-2i



## 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

- Turn Volume Knob (3) to minimum level to protect yourself from hearing loss.
- Connect the 12V power supply to the power input (7)
- Connect the microphone extension cables and MI10Si to the microphone inputs (8)
- Switch the microphone group selector (4) or the ext. switch (5) of the AV81-2i amplifier to the desired position. **Use with ext. switch, the internal switch must in position group 1!!**
- Connect the headphones KH10 to the headphone output (6).
- Switch-on the power (1) of AV81-2i Amplifier.
- The green Power LED (2) lights up and the green Sensor LEDs (9) lights up when a sensor is connected.

## Operating Instructions

Locating noises with the headphone

- Bring the microphones in the line of the noise source.
- Put the headphones on and turn the volume knob (3) to the desired position.
- Now you can hear the noise. If you change the group of the microphones you can locate the noise source with your ears.

## Technical Data

### Inputs

IEPE Microphone input: .....BNC  
Number: .....8

### Headphones - Amplifier

Frequency response: .....-3 dB between  
30 Hz – 20 kHz  
Max. Output voltage: .....4 V<sub>ss</sub>\*) at 150 Ω  
Distortion factor: .....< 1 % at 1 kHz and 4 V<sub>ss</sub>  
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 – 30 kHz

IEPE power  
IEPE supply : .....24V /4mA

### LED

„Power“ .....green

### Power Supply

Supply: .....external 12–15 V DC  
Current Consumption: .....50 to 100 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

## Accessories option

- Wireless Headphone Set, Transmitter + Receiver