

EIB-Audio System

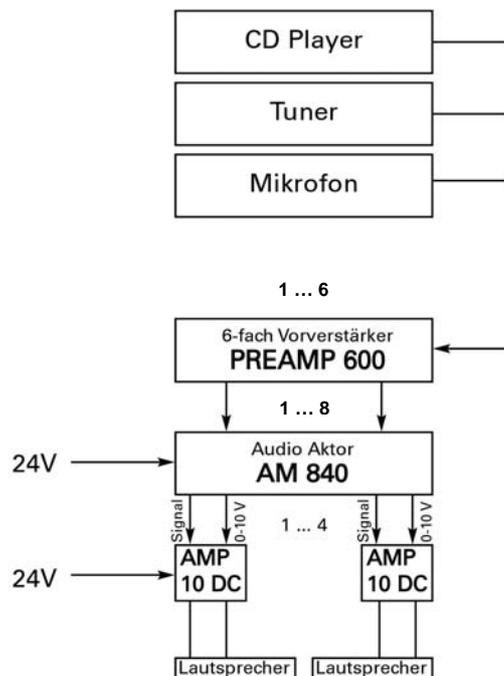
One more reason to use EIB ...

By using the **Audio Actuator AM 840**, you can create a complete multiroom audio system controlled by EIB. Audio sources, volume and tone can be controlled individually in every room. The AM 840 is able to take up to 8 mono or 4 stereo sources, which can be independently directed to outputs of 4 mono or 2 stereo zones. It can also be cascaded to give additional zones. The AM 840 is a DIN rail mounted device with a metal case that provides good electrical and mechanical shielding.

Another component in the system is the **Preamplifier PREAMP 600** that boosts the signal level of up to six mono or 3 stereo audio sources to a level that minimises the possibility of external interference. Optionally, input 6 can be used as a microphone input. Each input has gain control and is fitted with an overload indicator. The outputs from the PREAMP 600 connect with the inputs of the AM 840. The outputs of the AM 840 can be connected via **Power Amplifier AMP 10 DC** to drive each zone. The AMP 10 DC accepts the audio output from the AM 840 as well as its DC gain control output. The AMP 10 DC fits a standard wall box and is compatible with most commercially available switch styles.

In addition, WHD offers a range of speakers with built-in amplifiers. This makes mounting and wiring easier.

A particular **highlight** of the system is its **broadcast announcement** capability. A microphone connected to the PREAMP 600 can be used to make announcements to any zone in the system.



Connection of the audio sources and the PREAMP 600

Cinch cable (stereo) maximum length 3m.

Mono operation:

Left output of the audio source to left input (1) of the PREAMP 600.

Right output of the audio source to right input (1) of the PREAMP 600.

The output (1) of the PREAMP 600 provides a mono (sum) signal.

Stereo operation :

Left output of the audio source to left input (1) of the PREAMP 600.

Right output of the audio source to right input (2) of the PREAMP 600.

The output (1) of the PREAMP 600 provides the left signal, the output (2) of the PREAMP 600 provides the right signal.

Connection of the PREAMP 600 and audio actor AM 840

2 x CAT 7 (AWG 22) cable, maximum length 100 m.

Other cables can be used, when they have internal pair shielding.

Connection of the audio-actor AM 840 and amplifier AMP 10 DC

1 x CAT 7 cable (AWG 22), maximum length 60 m.

If the cable length is more than 60 m, an additional cable with sufficient cross section (max. 1.5 mm²) for power supply is recommended. If several AMP 10 DC are supplied by a trunk line, junction boxes are recommended because the AMP 10 DC has no looping through terminals.

Connection of AMP 10 DC and loudspeaker

Speaker cable 2 x 0.75mm² with double sheath, maximum length 12m.

Stranded wire is not recommended. Max. two cables with 0.8mm² can be used in the same terminal.

Cascading Audioactuator AM 840:

If more than 4 mono (or two stereo) zones are necessary, additional actuators must be installed. The AM 840 provides two D-SUB sockets for looping through the audio inputs.

This saves wiring time. WHD provides a D-SUB cable with a length of 0.5 m (accessories).

Power supply dimensioning

We recommend a switched mode stabilized power supply.

It should be short circuit proof and operatable in parallel connection.

WHD offers three different types for for DIN rail mounting.

Type	Technical data
PS 24 / 1.3	24 VDC / 1.3 A
PS 24 / 4.2	24 VDC / 4.2 A
PS 24 / 10	24 VDC / 10 A

The current consumption of one AM 840 is 0.2 A

The current consumption of one AMP 10 DC is 0.8 A

Example :

System consisting of four zones (mono).

1 x AM 840 with 0.2 A

4 x AMP 10 DC with 4 x 0.8 A = 3.2 A

Sum : 3.4 A

The power supply must provide at least this value. In this example PS 24 / 4.2

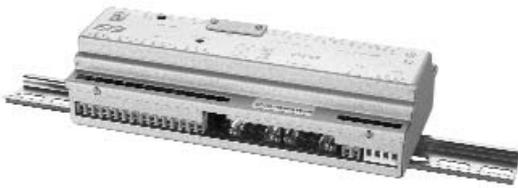
6-channel preamplifier	PREAMP 600
Inputs:	Channel 1-5: Line (Stereo); Channel 6: Mic- or Line / 1 Microphone switch-input
Mic input:	Input impedance: 4,7 kOhm Input voltage: 4 mV Phantom voltage: 23 VDC
Line input:	Input impedance: 47 kOhm Input voltage: 400 mV
Outputs:	6 Mono outputs Output impedance: 47 Ohm Output voltage: 5 V AC
Terminals:	Mikrophone and outputs: screw terminals, Line: Cinch sockets
Power supply:	24 V DC, 180 mA (included)
Dimensions:	430 x 70 x 284 mm
Weight:	4,2 kg
EIB Audio-actor	AM 840
Audio-inputs:	8 Mono or 4 Stereo Input voltage: 5 VAC Input impedance: 100 kOhm
Audio-outputs:	4 Mono or 2 Stereo Output voltage: 5 VAC Output impedance: 47 Ohm
Control outputs:	4x 0-10 VDC
Switched outputs:	4x 24 VDC, max. 10 A
Terminals:	Screw type + D-Sub
Tone control:	Bass, Highs: +/- 14 dB; Mids: - 4 dB / 3,5 kHz
Power supply:	24 VDC, 180 mA + 0,8 A per Amp 10 DC
Dimensions:	208 x 89 x 60 mm (DIN rail case)
Weight:	0,7 kg
Operating features:	Amplifier on/off, volume, source selection, mandatory-/ zone broadcast, tone control: Bass, Mids, Highs
Frequency range:	Mikrophone: 30-16 000 Hz (-1,5 dB); Line: 30-20 000 Hz (-1,5 dB)
Distortion:	< 0.1%
Audio-power-amplifier	AMP 10 DC
Input voltage:	5 V AC max., unbalanced
Input impedance:	47 kΩ
Frequency range Line (-1 dB):	45 - 20 000 Hz
Output voltage max:	6,3 V
Output power at 1% distortion:	10 W / 4 Ω
Noise voltage :	< 1 mV
Control voltage:	0-10 V DC
Load:	4 Ω (min)
Supply voltage:	22 - 26 V
Current consumption :	0,77 A
Mounting diameter :	60 mm
Mounting height:	46 mm
Net weight:	0,1 kg
Terminal:	7 pole plug, removable



PREAMP 600
silver



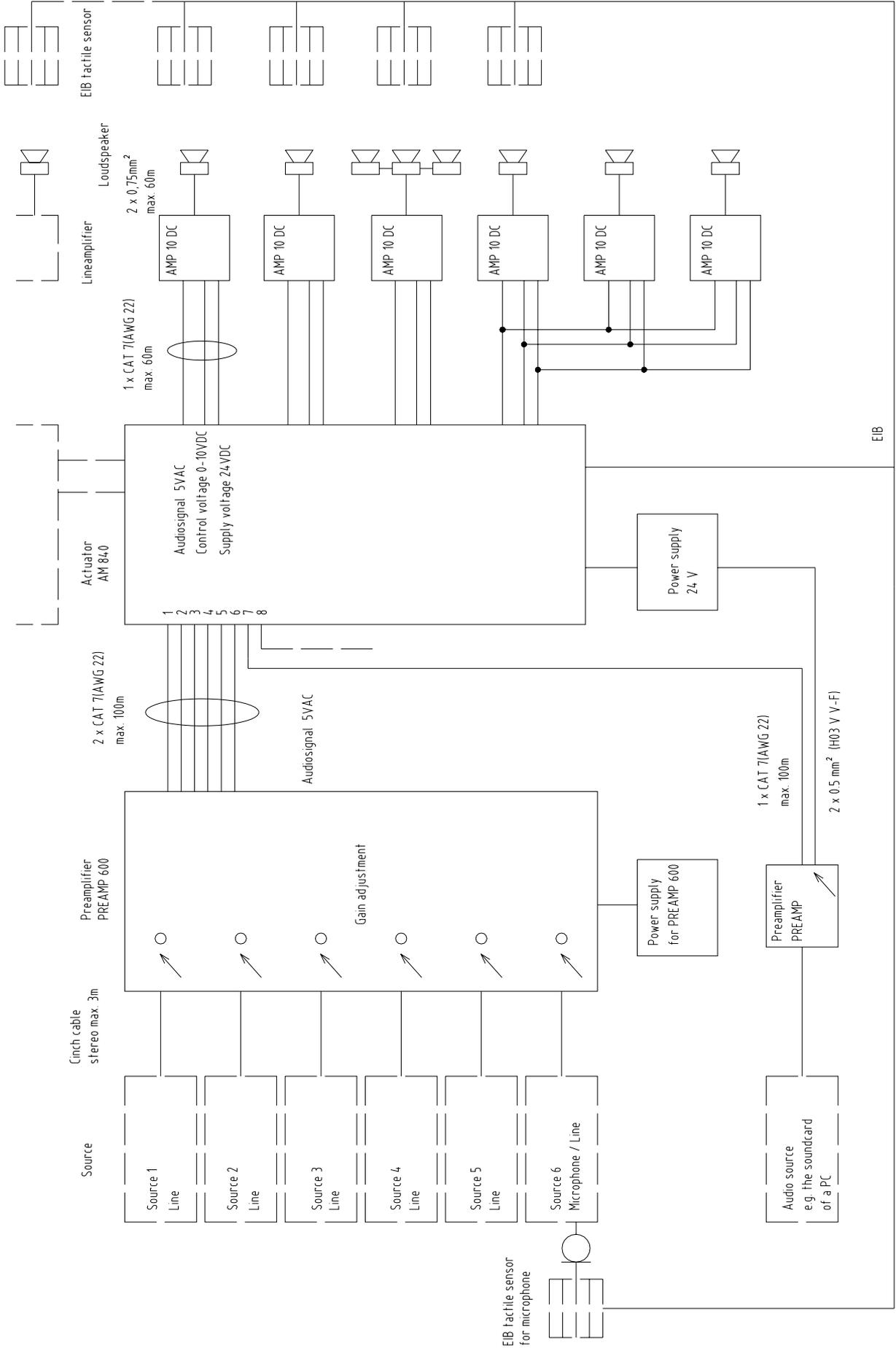
PREAMP 600
black



AM 840



AMP 10 DC



EIB Basic wiring