

# 100 V Power Amplifiers



## PA-1960

Order No. 17.2550



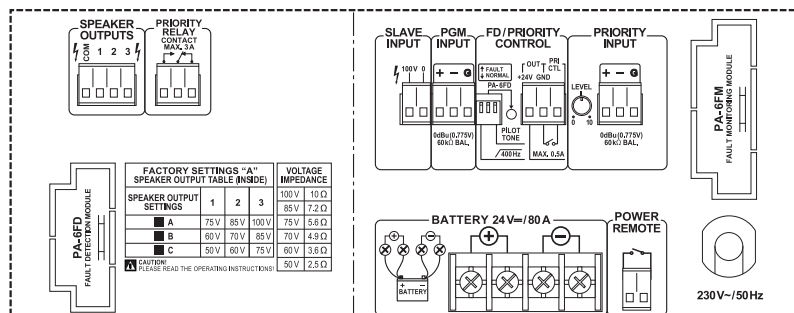
### High-power mono PA amplifier

- 1 x 960 W<sub>RMS</sub>
- Additional, adjustable priority input with switchable priority function
- 100 V slave input for inserting the amplifier into a 100 V speaker line
- Switchable 400 Hz high-pass filter 6 dB/oct.
- 2 insertion facilities at the rear panel for

optional modules with the following features:

- PA-6FD: fault detection module
- PA-6FM: fault monitoring module
- Connection for external on/off switch (remote start)
- Temperature-controlled fan, continuously adjustable
- LED display for fault, protect, clip, signal, priority
- Mains operation or 24 V emergency power operation

Model	PA-1960
Output power	1 x 960 W <sub>RMS</sub>
Input sensitivity	0.775 V/60 kΩ, bal.
Output impedance	75 V/5.6 Ω, 85 V/7.2 Ω, 100 V/10 Ω
Frequency range	35-20,000 Hz
S/N ratio	> 100 dB, A-weighted
THD	< 0.4 %
High-pass filter	400 Hz, 6 dB/oct.
Admiss. ambient temp.	0-40 °C
Power supply	230 V~/50 Hz/2,600 VA, 24 V~/80 A
Dimensions	483x133x374 mm, 3 RS
Weight	25 kg
<b>Connections</b>	
Signal input	screw terminals
Speaker output	screw terminals
Other features	



## PA-1480

Order No. 17.1110



### Mono PA power amplifier

- 1 x 480 W<sub>RMS</sub>
- Switchable 400 Hz high-pass filter 6 dB/oct.
- Temperature-controlled fan, continuously adjustable
- LED display for clip, protect, overtemperature and output level
- Feed-through output (link)
- Mains operation or 24 V emergency power operation

Model	PA-1480
Output power	1 x 480 W <sub>RMS</sub>
Input sensitivity	1.2 V, bal.
Output impedance	62 V/8 Ω, 70 V/10 Ω, 100 V/21 Ω
Frequency range	35-20,000 Hz, -3 dB
S/N ratio	> 100 dB, A-weighted
THD	< 1 %
High-pass filter	400 Hz, 6 dB/oct.
Admiss. ambient temp.	0-40 °C
Power supply	230 V~/50 Hz/1,400 VA, 24 V~/40 A
Dimensions	483x88x374 mm, 2 RS
Weight	17.5 kg
<b>Connections</b>	
Signal input	XLR / screw terminals
Speaker output	screw terminals
Other features	

## 100 V Power Amplifiers



### PA-1242

Order No. 17.2780

### PA-1122

Order No. 17.1020



#### Mono PA power amplifiers

- 1 x 240 W<sub>RMS</sub> (PA-1242), 1 x 120 W<sub>RMS</sub> (PA-1122)
- Switchable 400 Hz high-pass filter 6 dB/oct.
- Temperature-controlled fan, continuously adjustable
- LED display for clip, protect, overtemperature and output level
- Feed-through output (link)
- Mains operation or 24 V emergency power operation

Model	PA-1242	PA-1122
Output power	1 x 240 W <sub>RMS</sub>	1 x 120 W <sub>RMS</sub>
Input sensitivity	1.2 V, bal.	1.2 V, bal.
Output impedance	25 V/2.6 Ω, 70 V/20 Ω, 100 V/42 Ω	25 V/5 Ω, 31 V/8 Ω, 70 V/41 Ω, 100 V/83 Ω
Frequency range	35-20,000 Hz, -3 dB	35-20,000 Hz, -3 dB
S/N ratio	> 100 dB, A-weighted	> 100 dB, A-weighted
THD	< 1 %	< 1 %
High-pass filter	400 Hz, 6 dB/oct.	400 Hz, 6 dB/oct.
Admiss. ambient temp.	0-40 °C	0-40 °C
Power supply	230 V~/50 Hz/750 VA, 24 V~/20 A	230 V~/50 Hz/340 VA, 24 V~/10 A
Dimensions	483x88x374 mm, 2 RS	483x88x374 mm, 2 RS
Weight	12.5 kg	12 kg
<b>Connections</b>		
Signal input	XLR / screw terminals	XLR / screw terminals
Speaker output	screw terminals	screw terminals



### PA-1250D

Order No. 17.3860

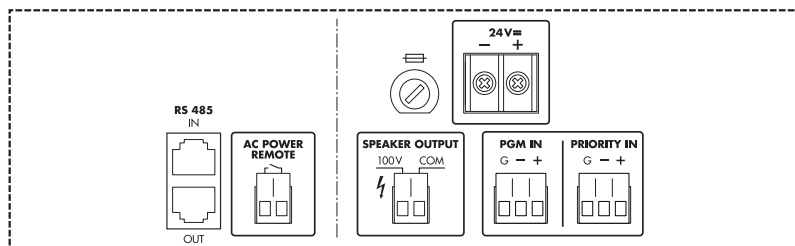


#### Digital mono PA power amplifier, with an energy-saving effect.

- 1 x 250 W<sub>RMS</sub>
- Class D concept with a high efficiency of more than 90 % to reduce energy costs
- Additional integrated energy saving functions, e.g. unit automatically goes to standby mode when no input signal is present (as soon as an input signal is detected, the amplifier is automatically switched on again)
- Requires a significantly lower rechargeable battery capacity for emergency power operation than 100 V analogue amplifiers
- Clearly reduced cooling requirements due to low heat dispersion
- Maintenance-free cooling and silent operation due to fanless cooling concept, thus especially suitable for noise-sensitive areas, e.g. offices, conference rooms or churches

- Special protective circuits prevent damages caused by short circuit or overheating
- Extensive, menu-controlled settings
- Switchable 200 Hz high-pass filter, 6 dB/oct.
- Additional priority input
- LCD for the operating parameters
- Mains operation or 24 V emergency power operation

Model	PA-1250D
Output power	250 W <sub>RMS</sub> , 350 W <sub>MAX</sub>
Input sensitivity	1.2 V, bal. (line)
Output impedance	100 V/40 Ω
Frequency range	50-18,000 Hz, ±3 dB
S/N ratio	> 100 dB, A-weighted
THD	< 0.5 %
High-pass filter	200 Hz, 6 dB/oct.
Admiss. ambient temp.	0-40 °C
Power supply	230 V~/50 Hz/350 VA, 8 W (standby mode), 24 V~/20 A, 280 mA (standby mode)
Dimensions	482x88x410 mm, 2 RS
Weight	7.5 kg
<b>Connections</b>	
Signal input	screw terminals
Speaker output	screw terminals



# 100 V Power Amplifiers

AMPLIFIERS



## PA-980S

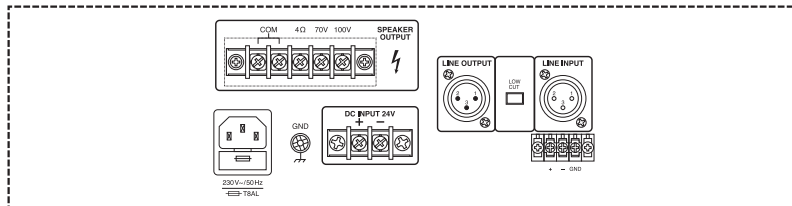
Order No. 17.2910



### Mono PA power amplifier

- 1 x 480 W<sub>RMS</sub>
- 2-way tone control
- Switchable low cut filter
- Speaker outputs via screw terminals

- Temperature-controlled fan, continuously adjustable
- Feed-through output (link)
- Mains operation or 24 V emergency power operation



Model	PA-980S
Output power	480 W <sub>RMS</sub> , 680 W <sub>MAX</sub>
Input sensitivity	0.765 mV/10 kΩ, bal.
Speaker output	4 Ω, 70/100 V
Frequency range	50-15,000 Hz, ±3 dB
Equalizer bass	±10 dB/100 Hz
Equalizer treble	±10 dB/10 kHz
S/N ratio	> 80 dB
THD	< 2 %
Admiss. ambient temp.	0-40 °C
Power supply	230 V~/50 Hz/1,350 VA, 24 V~/14 A
Dimensions	482x135x410 mm, 3 RS
Weight	25.5 kg
<b>Connections</b>	
Signal input	XLR / screw terminals
Speaker output	screw terminals



## PA-940S

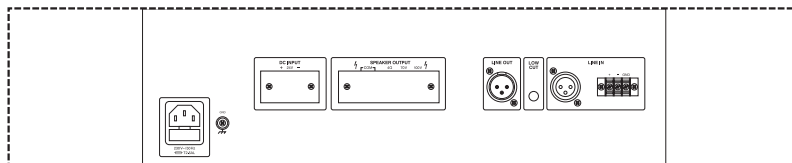
Order No. 17.2100



### Mono PA power amplifier

- 1 x 240 W<sub>RMS</sub>
- 2-way tone control
- Switchable low cut filter
- Speaker outputs via screw terminals
- Temperature-controlled fan, continuously adjustable

- Feed-through output (link)
- Mains operation or 24 V emergency power operation
- 482 mm (19") rack installation with supplied mounting brackets



Model	PA-940S
Output power	240 W <sub>RMS</sub> , 340 W <sub>MAX</sub>
Input sensitivity	0.765 mV/10 kΩ, bal.
Speaker output	4 Ω, 70/100 V
Frequency range	50-15,000 Hz, ±3 dB
Equalizer bass	±10 dB/100 Hz
Equalizer treble	±10 dB/10 kHz
S/N ratio	> 80 dB
THD	< 2 %
Admiss. ambient temp.	0-40 °C
Power supply	230 V~/50 Hz/520 VA, 24 V~/18 A
Dimensions	482x135x380 mm, 3 RS
Weight	19 kg
<b>Connections</b>	
Signal input	XLR / screw terminals
Speaker output	screw terminals

## 100 V Power Amplifiers



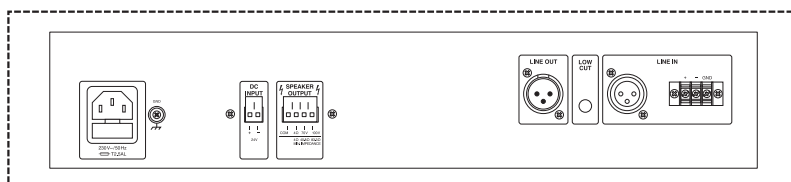
### PA-900S

Order No. 17.2080



#### Mono PA power amplifier

- 1 x 120 W<sub>RMS</sub>
- Silent operation due to fanless cooling concept
- 2-way tone control
- Switchable low cut filter
- Speaker outputs via screw terminals
- Feed-through output (link)
- Mains operation or 24 V emergency power operation
- 482 mm (19") rack installation with supplied mounting brackets



### AKB-160

Order No. 17.4260



#### PA amplifier module, with 100 V output.

- 1 x 40 W<sub>RMS</sub>
- Silent operation due to fanless cooling concept
- Balanced line input (XLR) and unbalanced line input (RCA)
- Speaker output via spring-loaded speaker terminals
- Volume control
- Metal housing with mounting brackets



Model	PA-900S	AKB-160
Output power	120 W <sub>RMS</sub> , 160 W <sub>MAX</sub>	40 W <sub>RMS</sub> , 60 W <sub>MAX</sub>
Mic input	-	-
Aux input	765 mV (line)	390 mV/26 kΩ, bal. 420 mV/11 kΩ, unbal.
Speaker output	4 Ω, 70/100 V	100 V
Frequency range	50-15,000 Hz, ±3 dB	17-20,000 Hz, -3 dB
Equalizer bass	±10 dB/100 Hz	-
Equalizer treble	±10 dB/10 kHz	-
S/N ratio	> 80 dB	> 80 dB
THD	< 2 %	< 1 %
Power supply	230 V~/50 Hz/300 VA, 24 V~/9 A	230 V~/50 Hz/75 VA
Admiss. ambient temp.	0-40 °C	0-40 °C
Dimensions	482x88x275 mm, 2 RS	213x55x238 mm
Weight	9.5 kg	3.2 kg
Special feature	low cut filter	-
<b>Inputs</b>		
Aux, phono	(signal input) 1 x XLR, 1 x screw terminal	1 x XLR (line) 1 x RCA L/R (line)



## Zone Mixers

### PA-4040MPX

Order No. 17.3450



**4-zone mixer**, for general multi-room PA applications.

- 4 zones with routing facility of all input channels as desired
- 3 inputs microphone/line via comb. jacks
- 2 inputs line stereo via RCA jacks
- Each input channel with gain control, 2-way tone control and zone routing switch
- Microphone inputs with +15 V phantom power, to be switched on as required
- Priority function for channels 1-3, switchable



- Independent paging input, can be routed to each zone
- 4 zone outputs, can be adjusted individually
- Connection for monitor speaker
- Level control via zone VU meter and monitor VU meter
- Adjustable headphone output
- Mains operation or 24 V emergency power operation

### MPX-4PA

Order No. 20.2070



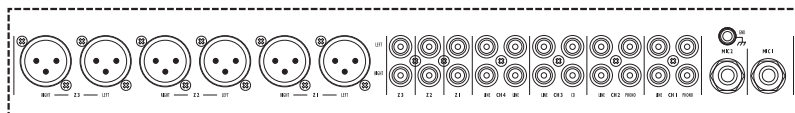
**3-zone mixer**

- 3 zones with routing facility of all input channels as desired
- XLR and RCA zone outputs
- 6 input channels (4 stereo ways, 2 microphone ways)
- Both microphone ways can only be routed together
- Recessed gain control for each input channel
- Microphone ways, each with 2-way tone control, talkover and PAD switch
- Stereo channels, switchable
- 2 x phono/line and 2 x line/line
- Zone outputs, each with 3-way equalizer, LED level display of the stereo master, balance control, pre-fader listening (PFL) and mono/stereo selector switch



- Adjustable headphone output with pre-fader listening (PFL) to the stereo input channels and the zone outputs
- Connection for gooseneck light GNL-204 or GNL-205

Model	MPX-4PA
Mic input	1.5 mV
Phono input	3 mV
CD input	150 mV
Line input	150 mV
Master output	1 V/600 Ω
Record output	-
Headphones	≥ 8 Ω
Frequency range	20-20,000 Hz
THD	0.1 %
S/N ratio	61 dB, unweighted
Equalizer, bass	+12 dB, -12 dB/50 Hz
Equalizer, midrange	+12 dB, -12 dB/1 kHz
Equalizer, treble	+12 dB, -12 dB/10 kHz
Talkover	-16 dB
Gooseneck light	12 V/5 W, BNC
Power supply	230 V~50 Hz/20 VA
Admiss. ambient temp.	0-40 °C
Dimensions	482x177x105 mm, 4 RS
Weight	3.75 kg



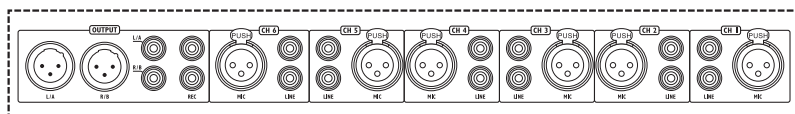
### MMX-602/SW

Order No. 20.2230



**Microphone line mixer**, 6 channels.

- 6 stereo line inputs, 6 balanced mono microphone inputs, switchable
- Adjustable automatic talkover (-12 dB), switchable for channel 1 or channels 1+2
- Balance control for each stereo input channel
- 3-way equalizer
- 12 V phantom power can be switched on additionally
- LED VU meter, peak LED
- Master output and record output
- Output can be switched stereo/mono
- Adjustable headphone output
- 482 mm (19") rack installation, 1 RS



Model	MMX-602/SW
Line input, stereo	100 mV/10 kΩ
Microphone input	1 mV/6.6 kΩ
Master output, stereo	1 V/600 Ω
Record output, stereo	310 mV/600 Ω
Headphones, stereo	> 8 Ω
Frequency range	20-20,000 Hz
THD	0.1 %
S/N ratio	62 dB, unweighted
Equalizer, bass	±12 dB/50 Hz
Equalizer, midrange	±12 dB/1 kHz
Equalizer, treble	±12 dB/10 kHz
Power supply	230 V~50 Hz/12 VA
Admiss. ambient temp.	0-40 °C
Dimensions	482x47x208 mm, 1 RS
Weight	2.8 kg
Line input, stereo	6 x RCA L/R
Microphone input	6 x XLR, bal.
Master output, stereo	1 x RCA L/R, 1 x XLR L/R, bal.
Record output, stereo	1 x RCA L/R
Headphones	1 x 6.3 mm jack

## Monitor Unit, Line Splitter, Preamplifier



### PA-1200M

Order No. 24.0260



#### Monitor unit, 10 + 1 channels

- Audio sources can be selected via rotary switch
- 10 monitor inputs 1-100 V/10 k $\Omega$
- 1 aux input 0 dB (0.775 V)/600  $\Omega$
- Level control, LED VU meter and clip LED for each monitor input

- Built-in 2 W speaker, volume control
- Headphone output:  $\geq 8 \Omega$ , 0.1 W
- Frequency range: 100-20,000 Hz
- THD:  $< 0.3 \%$
- Power supply: 230 V~/50 Hz/15 VA or 24 V~/0.5 A
- Dimensions: 482x88x200 mm, 2 RS

- Weight: 4.7 kg
- Mains operation and 24 V emergency power operation



### PA-24AD

Order No. 17.1890

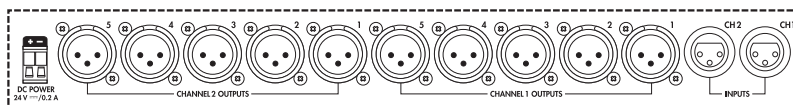


#### 10-way PA line splitter

- 2 separate inputs
- Stereo operation or mono operation
- Balanced XLR connection for each input and output

- Gain control for each output
- Peak indication for each input
- Mains operation and 24 V emergency power operation

Model	PA-24AD
Line inputs, mono	0.775 V/15 k $\Omega$
Line outputs, mono	0.775 V/600 $\Omega$
Frequency range	20-20,000 Hz
THD	$< 0.05 \%$
S/N ratio	$> 68$ dB
Power supply	230 V~/50 Hz/10 VA 24 V~/0.2 A
Admiss. ambient temp.	0-40 °C
Dimensions	482x45x235 mm, 1 RS
Weight	3.1 kg



### PA-1412MX

Order No. 17.3440

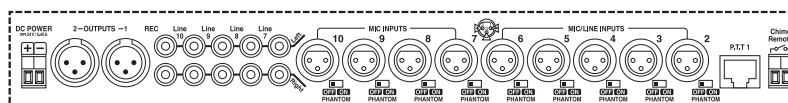


#### 10-channel PA preamplifier

- 5 XLR input channels, switchable mic/line
- 4 input channels, switchable XLR mic/RCA line
- 2 XLR master outputs
- 1 record output (master 1, master 2)
- Input channels with level control and output selector switch (master 1, master 1+2, master 2)
- Each master output with 2-way tone control
- Chime button with priority circuit, remote control possible, 2-tone chime or 4-tone chime, siren (selectable)
- 1 push-to-talk connection, RJ45, with

- priority circuit (suitable e.g. for PA-4000PTT)
- Low cut filter to be switched on additionally for each microphone input
- Priority circuit for channels 2-3
- Phantom power for electret microphones can be switched on additionally for each XLR input channel
- Mains operation or 24 V emergency power operation

Model	PA-1412MX
Frequency range	20-20,000 Hz (-0.5 dB)
Input sensitivity	
Mic	2.5 mV, bal.
Line XLR	250 mV, bal.
Line RCA	250 mV, unbal.
Outputs	1.2 V/200 $\Omega$ , bal.
S/N ratio	
Mic	$> 60$ dB
Line	$> 75$ dB
THD	$< 0.05 \%$
Admiss. ambient temp.	0-40 °C
Power supply	230 V~/50 Hz/15 VA, 24 V~/0.5 A
Dimensions	482x45x240 mm, 1 RS
Weight	3.9 kg



## Feedback Controllers



### MFE-212

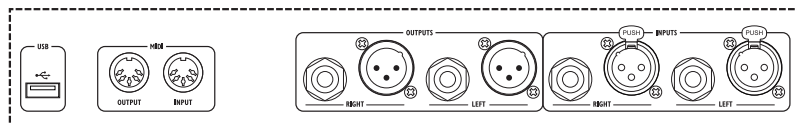
Order No. 25.4520



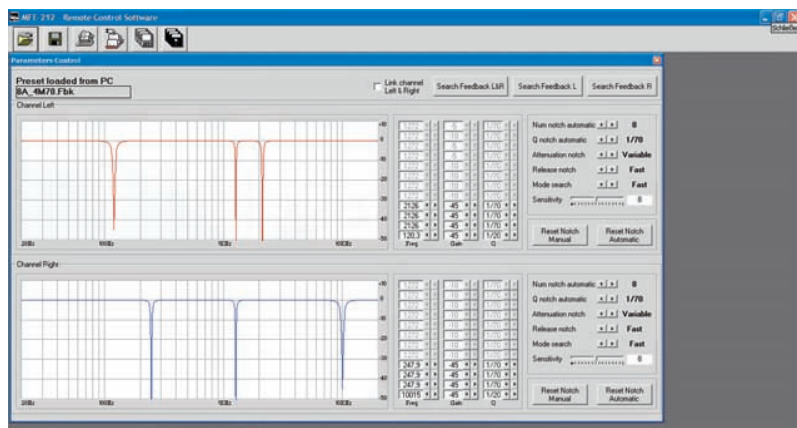
#### Stereo DSP feedback controller

- Prevents acoustic feedback appearing in PA systems
- 12 steep-edged precision notch filters for each stereo channel
- Editable filter parameters (supplied with software)
- 4 factory presets, 16 user presets
- Mono operation or 2-channel operation possible
- AD/DA resolution: 24 bits

- 45 dB attenuation (with gradual reduction in variable mode)
- Optionally continuous signal monitoring (auto notch) or manual setting of the required filters (manual notch)
- Backlit 2 x 20 dot matrix display
- Adjustable input level and output level
- Bypass function
- Clip LED
- Balanced inputs and outputs: XLR and 6.3 mm jack
- USB A port
- MIDI input and output
- 482 mm (19") rack installation, 1 RS



Model	MFE-212
<b>General information</b>	
Frequency range	20-20,000 Hz
Inputs	2.2 V max.
Outputs	2.2 V max.
S/N ratio	> 90 dB
THD	< 0.01 %
Power supply	230 V~/50 Hz/20 VA
Admiss. ambient temp.	0-40 °C
Dimensions	482x44x193 mm, 1 RS
Weight	2 kg
<b>Inputs</b>	
Mic/line	1 x XLR L/R, bal. (line)
	1 x 6.3 mm jack L/R (line)
Foot pedal	-
<b>Outputs</b>	
Mic/line	1 x XLR L/R, bal. (line)
	1 x 6.3 mm jack L/R (line)



### PA-24FR

Order No. 17.2580

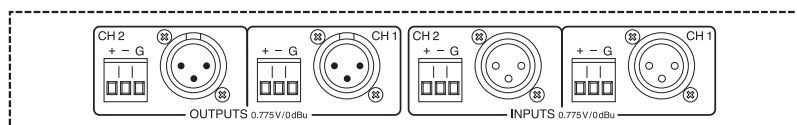


#### 2-channel anti-feedback controller

- Efficient protection against acoustic feedback due to frequency shift method
- Selectable frequency shift 3-15 Hz, adjustable in 13 steps via DIP switches
- Integrated noise gate (mute when input level is too low)
- Bypass function
- LED display for operation, input signals and activated frequency shift function

- XLR connections and screw connections for line inputs and outputs

Model	PA-24FR
Inputs	0.775 V, 60 kΩ, bal.
Outputs	0.775 V, 50 Ω, bal.
Frequency range	20-20,000 Hz
S/N ratio	> 70 dB
THD	< 0.05 %
Power supply	230 V~/50 Hz/10 VA
Dimensions	482x44x230 mm, 1 RS
Weight	2.4 kg





## Ambient Noise Controller, Volume Controls



### PA-100ANC

Order No. 17.2280



**Ambient noise controller**, for automatically matching the signal in case of ambient noise.

The wanted audio signal is held at a fixed distance to a second audio signal. The second audio signal is usually the ambient noise which normally appears in shopping centres, hotels, train stations, airports or restaurants. The supplied noise detector and a microphone (available at option) monitor the ambient noise and the wanted signal (e.g. announcement or music) is boosted or attenuated accordingly. Thus, the signal for announcements or music is, at the set level, always at a higher volume than the distracting ambient noise.

- Supplied with noise detector for the connection of an electret microphone or a dynamic microphone with XLR jack or 6.3 mm jack

- Adjustable limiter for setting the low output level
- Adjustable Q-factor
- Adjustable band filter for measuring (30-15,000 Hz)
- Bypass switch for deactivating the noise detector
- Phantom power can be switched on additionally via noise detector
- LED display for output level and clipping
- 24 V emergency power supply

Matching microphones DM-2500, ECM-302B/WS, ECM-10/SW or ECM-10/WS are available at option.

Model	PA-100ANC
Input	0.775 V, 30 k $\Omega$ , bal., XLR
Output	0.775 V, 600 $\Omega$ , bal., XLR
S/N ratio	> 60 dB
Frequency range	20-20,000 Hz
THD	< 0.3 %
Phantom power	20 V <sub>m</sub>
Power supply	230 V~/50 Hz/10 VA 24 V~/150 mA
Dimensions	482x44x230 mm (noise detector)
Weight	3.5 kg (in total)



Including noise detector



### VCA-202

Order No. 17.1880

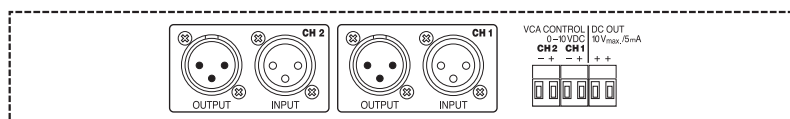


**Voltage-controlled 2-channel VCA volume control**

- 2-channel mono operation or stereo operation
- Remote control for each channel via optional wall-mounted volume control VCA-202RN or via lin. 10 k $\Omega$  potentiometer (not supplied), control voltage: 0-10 V<sub>m</sub>
- 10 V voltage output for potentiometer
- Servo-balanced inputs and outputs
- 482 mm (19") rack installation, 1 RS

For the remote volume control of PA systems in large areas (e.g. churches, workshops). The volume control VCA-202 is inserted between preamplifier and power amplifier. The surface-mounted housing ATT-300 can be used for universal mounting of the potentiometers.

Model	VCA-202
Line input, mono	1 V/30 k $\Omega$
Input control voltage	0-10 V~/100 k $\Omega$
Line output, mono	1 V/600 $\Omega$
Output control voltage	10 V~/5 mA
Frequency range	20-20,000 Hz
THD	0.1 %
S/N ratio	70 dB
Power supply	230 V~/50 Hz/10 VA
Admiss. ambient temp.	0-40 °C
Dimensions	482x48x105 mm, 1 RS
Weight	1.5 kg
Line input, mono	2 x XLR, bal.
Input control voltage	plug-in screw connection
Line output, mono	2 x XLR, bal.
Output control voltage	plug-in screw connection



### VCA-202RN

Order No. 17.3000

**Wall-mounted volume control**, for the use with VCA-202 or similar applications.

- Linear 10 k $\Omega$  potentiometer, mono
- Built-in relay (24 V<sub>m</sub>) for priority circuit
- Flush mounting in standard 60 mm wall socket

- Surface mounting with matching housing ATT-300, available at option
- Mounting depth: 27 mm
- Plug-in screw terminal



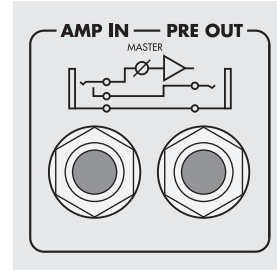


## KNOW-HOW: Remote Volume Control

### The Role of Insert Jacks

Time and again it is necessary to insert additional units like equalizers into a signal way. This is not a problem with systems set up separately with individual mixers and power amplifiers. In this case, the signal cables are simply connected to the units. This is different with compact full amplifiers, as they are customary for PA applications. In this case, the separation is done by special jacks. With these combined jacks, it is possible to separate the preamplifier with the inputs (PRE OUT) from the mere power amplifier (AMP IN). The illustration shows the outputs by example of the **PA-1120** amplifier. Due to the ability to separate, it is now possible to insert additional units into the signal way.

Two examples of such additional units and their features are shown below.

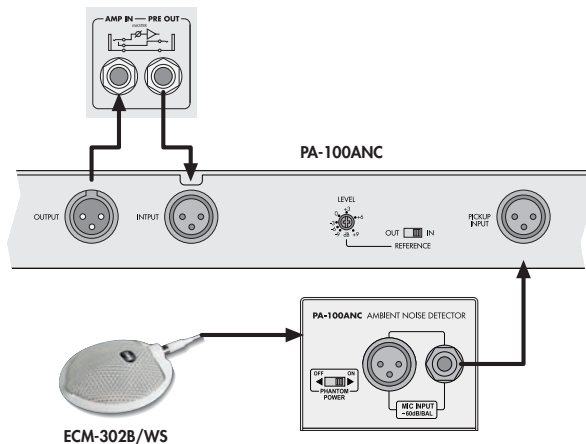


### Automatic Volume Control with PA-100ANC

By using this ambient noise controller, it is possible to achieve a signal volume depending on the ambient noise. To put it more simple, the louder the surrounding, the more signal is fed to the speakers.

In practical application it is possible, e.g. to match the volume of the background music in a restaurant automatically to the noise level of the rooms. This adjustment is usually slightly delayed and attenuated, so that short noise peaks will not have any effect on the volume control.

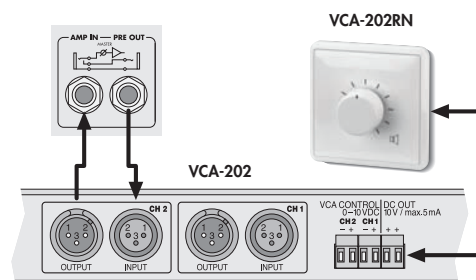
A microphone is additionally required for the **PA-100ANC**.



### Remote Volume Control with VCA-202

The remote volume control is a further requirement which often has to be met. This is always the case, if the system is not set up at a location where staff may be nearby. For this purpose, previous solutions included the adjustment of the speaker outputs. With the **VCA-202** and **VCA-202RN**, the amplifier output power can now easily be adjusted remotely. The **VCA-202** is also inserted between preamplifier and power amplifier. This could be a compact PA amplifier, a mixer with separate power amplifier or also a CD player and a power amplifier.

A basic cable with a minimum of 3 wires connects the control unit and the **VCA-202**. Because this cable does not carry an AF signal, shielding is not compulsory. If both inputs of the **VCA-202** are used, the volume adjustments can either be done together via one control or separately via two controls.



## KNOW-HOW: Example of Application

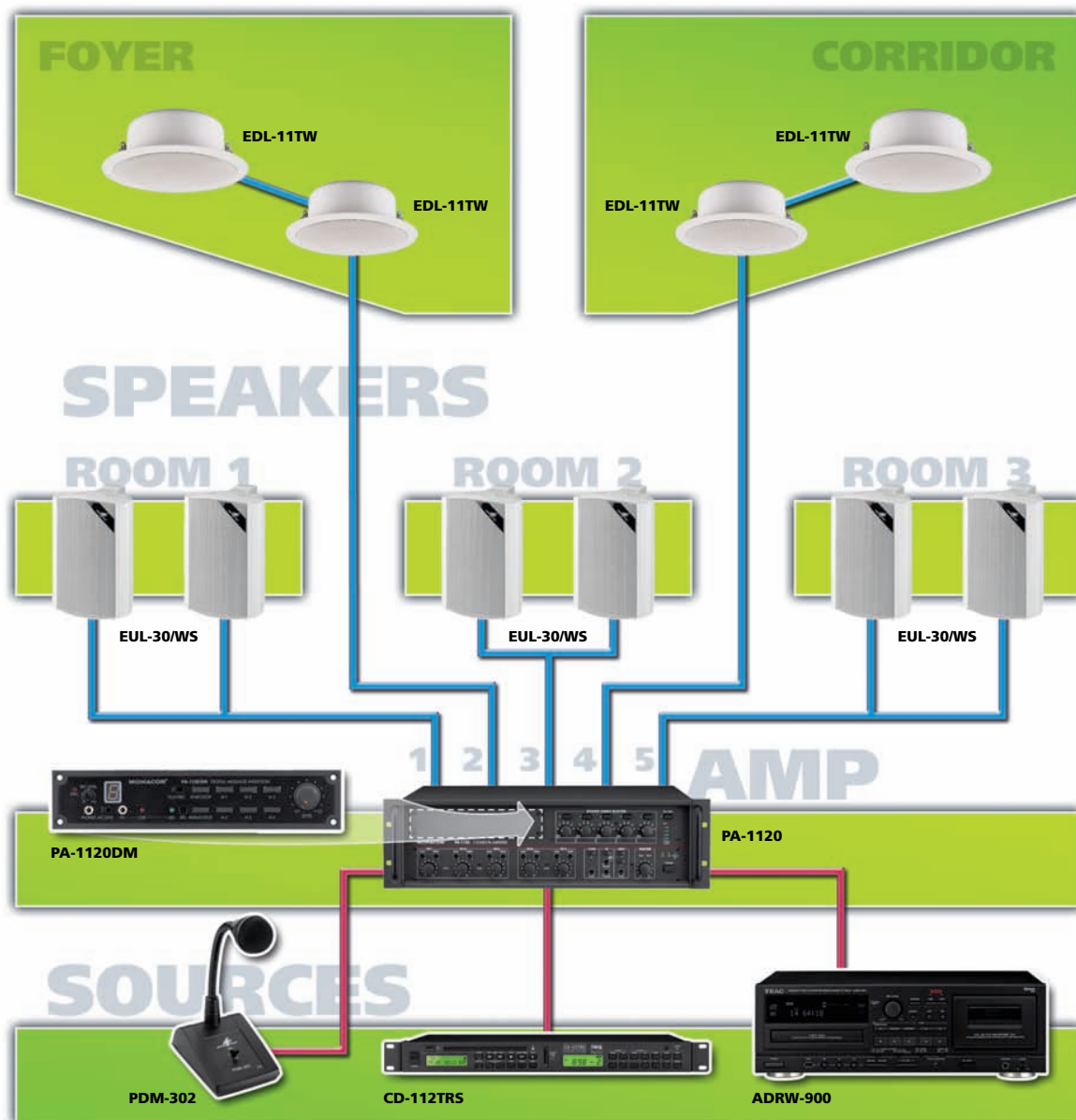
### A PA System for Conference Rooms

In larger hotels, conference rooms are frequently provided. It is required to adjust the volume in the individual rooms separately, with the option to switch off the background music and announcements of the PA system completely. This can be done at the amplifier itself which is equipped with 5 adjustable output groups.

In case of an alarm, e.g. fire, the announcements have to reach the switched-off areas as well. This is realised by the emergency

priority function of the amplifier. If this function is activated, every output will be adjusted to max. volume.

The message module **PA-1120DM** can be built into the amplifier. Thus, a contact-controlled replay of individually recorded alarm messages is possible.



List of materials	
1 x PA-1120	5-zone amplifier
1 x PA-1120DM	message module
1 x PDM-302	desktop microphone
1 x CD-112TRS	CD and MP3 player
1 x ADRW-900	CD and MP3 recorder + tape deck

Speakers	
6 x EUL-30/WS	wall speakers . . . . . each 15 W
4 x EDL-11TW	ceiling installation . . . . . each 5 W
Total . . . . . 110 W	

## Emergency Sound System



### PA-24FMU

Order No. 17.2570



**PA emergency sound system**, for integrating into PA systems according to EN 60849.

- Hand-held microphone with monitored functionality
- Alarm input for triggering alarm
- Integrated digital voice storage (60 seconds max.) with microphone input or line input for recording messages
- Recorded message is also kept without operating voltage
- Siren emits an acoustic signal for 10 seconds when alarm is triggered, volume control

- Built-in signal light FIRE flashes when alarm is triggered
- Balanced line output via spring-loaded terminal
- 24 V power supply via PSS-3000SV, available at option

Model	PA-24FMU
Output level	1.23 V/600 Ω, bal.
Siren frequency	800 Hz
Max. recording time	60 seconds
Power supply	24 V=200 mA
Dimensions	482x88x200 mm, 2 RS
Weight	3 kg

### PATEL-1

Order No. 17.4170

**PA telephone announcement adapter**, for connecting to a telephone system as an analogue AB extension line.

- Announcement facility for each telephone connected to the telephone system
- Automatic call acceptance
- Automatic disconnection
- Chime can be switched on additionally
- Analogue telephone connection (RJ11)

- RJ45 jack for control output NO/NC and mono audio output for the connection to the supplied screw terminal adapter box
- Supplied with Cat. cable and TAE cable
- Power supply via supplied plug-in PSU



### SLA-35

Order No. 21.4010

**Stereo level and impedance matching amplifier**

Volume distortions or volume losses may occur when connecting smartphones, mobile phones, tablet PCs and MP3 players to an amplifier or a mixer. Due to the correct setting of impedance and gain, the SLA-35 is able to provide a better sound.

- Adjustable attenuation down to 1/10 (-20 dB) or gain up to 10-fold (+20 dB)
- Impedance switching Hi/Lo
- RCA and 3.5 mm stereo inputs and outputs
- Metal housing
- Supplied with plug-in PSU



Model	SLA-35
Frequency range	3-50,000 Hz, -1 dB
Input voltage	7 V max.
Output voltage	4.5 V max.
Input impedance	35 kΩ/8.1 kΩ (switch -5.6 dB)
Output impedance	1.6 kΩ
Amplification factor	0.1-10 (±20 dB) continuously adjustable, additionally -5.6 dB, switchable
THD	< 0.03 %
Crosstalk attenuation	> 68 dB
S/N ratio	> 83 dB
Power supply	via suppl. PSU
Dimensions	88x37x103 mm
Weight	450 g

#### tools4music 04/2013

"This unit is an excellent addition to your tool case. With the required connections and a volume control with well-dimensioned amplification, the SLA-35 from MONACOR is an ideal aid for level adjustments. It is of solid workmanship and service-friendly. The SLA-35 was intended as a basic level control and impedance converter. However, due to its excellent S/N ratio and the wide frequency range, it is also suitable for traditional high-end premium hi-fi applications."

#### tastenwelt 04/2013

"With the SLA-35, it is also possible to use smartphones as an audio source at the mixer. The level/impedance converter allows for perfect signals. This results in absolutely clean signals which prevent both clipping and noise. Top workmanship!"

# Audio Matrix Router

## Audio Matrix System

The system ARM-880... from MONACOR is an extra flexible PA solution for multi-room applications. It is ideally suited for the application in hotels, in restaurants and bars, in conference rooms, schools, sports and fitness centres. Eight different audio sources, e.g. CD players, SAT receivers, radio programmes can be distributed to 8 output zones, assignment as required.

The audio matrix router ARM-880 is the heart of the system. For the operation, one amplifier is required for each output used. This may be an individual power amplifier or an active speaker system. Matching wall modules ARM-880WP1, ARM-880WP2 and ARM-880WP3 for the remote control of ARM-880 and with additional local inputs for the zone are available at option.

With a master/slave connection, it is possible to extend the system to up to 32 output zones. Connections for the various alarm signals and a local microphone are available.

Announcements can be made via 2 optional zone paging microphones ARM-880RC with zone selection.



## ARM-880

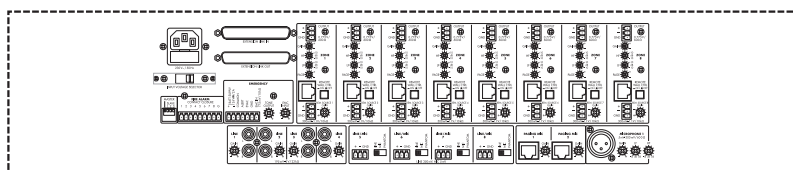
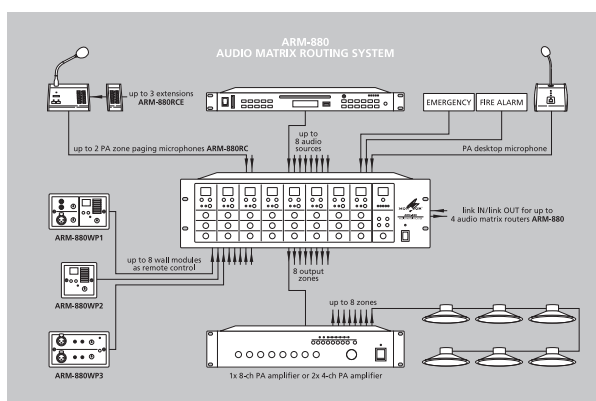
Order No. 17.3800



### Audio matrix router

- 8 audio inputs and 8 audio outputs
- Inputs 1-4, line, with gain control
- Inputs 5-8, switchable line/mic
- 2 zone paging microphones ARM-880RC and 1 local microphone (for all zones) can be connected
- 1 additional audio input for each zone, non-routable, with gain control
- 8 wall modules ARM-880WP... can be connected as remote control
- Extendable to up to 32 zones
- Microphone, music and master volume controls for each zone
- 2-way tone control for each zone
- Priority management
- Emergency announcement with priority for each zone, even when extended
- 3 different alarm signals
- 7-segment LED display for each zone

- Clipping indicator
- Monitoring function with built-in speaker
- 482 mm (19") rack installation
- Mains operation or 24 V emergency power operation



Model	ARM-880
<b>General Information</b>	
Frequency range	20-20,000 Hz (line) 80-18,000 Hz (mic)
Input sensitivity	
Mic 1	300 mV/660 Ω
Zone paging mic.	500 mV/10 kΩ
line 1-4	195 mV-2 V/47 kΩ
line 5-8	350 mV (line) 5 mV (mic)
zone 1-8	300 mV-1.1 V/10 kΩ
Emergency announcem.	775 mV/10 kΩ
Outputs	
zone 1-8	1.5 V/600 Ω
Equalizer bass	±10 dB/100 Hz
Equalizer treble	±10 dB/10 kHz
S/N ratio	> 65 dB (mic) > 85 dB (line)
THD	< 0.07 %
Admiss. ambient temp.	0-40 °C
Power supply	230 V-50 Hz/30 VA
Dimensions	482x142x325 mm, 3 R5
Weight	6 kg
<b>Connections</b>	
Mic 1	1 x XLR
Zone paging mic.	2 x RJ45
Line 1-4	4 x RCA L/R
Line/Mic 5-8	4 x plug-in screw terminal
Zone 1-8	8 x plug-in screw terminal (IN) 8 x plug-in screw terminal (OUT)
Wall modules	8 x RJ45
Fire alarm	9-pole plug-in screw terminal
Emergency announcem.	1 x plug-in screw terminal
24 V	1 x plug-in screw terminal
Alarm	1 x plug-in screw terminal
EVAC	1 x plug-in screw terminal
Extension	2 x D-sub DC37 (IN/OUT)



## Zone Paging Microphone, Wall Modules

### ARM-880RC

Order No. 17.3810

**PA zone paging microphone**, for the audio matrix router ARM-880.

- 8 zones
- Zones can individually be controlled, group call
- Replaceable zone lettering
- Plug-in electret gooseneck microphone (3-pole XLR jack from NEUTRIK)
- 2-tone or 4-tone chime, can be switched off
- Volume control for microphone and chime
- LEDs for operation, output level and selected zone
- 8 additional zones with each extension module (available at option), 32 zones in total with a maximum of 3 extension modules, connection via available flat cable
- Connection to ARM-880 via RJ45 jack and Cat. 5 network cable (supplied w/o cable)
- Power supply via supplied PSU



### ARM-880RC

Order No. 17.3820

**8-zone extension module**, for the PA zone paging microphone ARM-880RC.

- 8 zones can individually be controlled
- Replaceable zone lettering
- LED display for selected zone
- Addressing via DIP switches
- Connection to ARM-880RC or additional ARM-880RC via flat cable
- Power supply via ARM-880RC



### ARM-880WP1

Order No. 17.3830

**Wall module**, for the remote control of audio matrix router ARM-880.

- Range of application: remote control of one zone, local feed of audio signals
- 2 RCA jacks for line signals
- Microphone connection via 3-pole XLR jack from NEUTRIK
- Source selector switch
- Level controls for line, microphone and source
- 15 V phantom power
- 7-segment LED display
- Connection to ARM-880 and power supply via RJ45 jack and Cat. 5 network cable. For cable lengths of more than 50 m, a separate PSU is required for operation
- Dimensions front panel: 146x86 mm
- Supplied with robust flush-mounted metal housing



### ARM-880WP2

Order No. 17.3840

**Wall module**, for the remote control of audio matrix router ARM-880.

- Range of application: remote control of one zone
- Source selector switch
- Level control
- 7-segment LED display
- Connection to ARM-880 and power supply via RJ45 jack and Cat. 5 network cable. For cable lengths of more than 50 m, a separate PSU is required for operation
- Dimensions front panel: 86x86 mm
- Supplied with robust flush-mounted metal housing



### ARM-880WP3

Order No. 17.3850

**Wall module**, for the remote control of audio matrix router ARM-880.

- Range of application: local connection of 2 microphones in one zone
- 2 x 3-pole XLR jack from NEUTRIK
- 2-way tone control and level control for each microphone channel
- 15 V phantom power
- Priority switch
- Connection to ARM-880 and power supply via RJ45 jack and Cat. 5 network cable. For cable lengths of more than 50 m, a separate PSU is required for operation
- Dimensions front panel: 146x86 mm
- Supplied with robust flush-mounted metal housing

# Digital Matrix Router



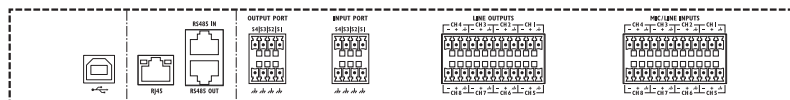
## DRM-880LAN

Order No. 17.3750



### Digital 8x8 matrix router

- 8 inputs and 8 outputs (plug-in screw terminals, switchable mic/line, balanced)
- +48 V phantom power
- Routing matrix for routing the inputs to the outputs as desired
- The level of each routed input can be adjusted per assigned output (individual output mix)
- Up to 32 units can be managed via software
- 4 x 24 bits, A/D converter: 1 x 24 bits, D/A converter
- Extensive signal processing and monitoring, e.g. frequency shift feedback eliminator, parametric 5-band equalizer with peak and shelving filters, variable low-pass/high-pass filters - optionally with Bessel, Butterworth or Linkwitz-Riley characteristics, RMS compressor, peak limiter, selectable phase, delay
- 6-fold LED status cluster for each channel
- 6 user presets in the direct access mode
- Link feature for simultaneously changing the settings of several channels
- Dot matrix display with 2 x 24 characters
- Remote control via USB, RS-485 or TCP/IP LAN. With the optional USB/RS-485 converter DA-70157, it is possible to connect a PC or laptop with USB interface to the serial RS-485 interface and to address and configure several units connected to each other
- Real-time remote control via software
- Individual room control via wall-mounted remote control panel DRM-880WP, available at option
- Robust steel housing with aluminium front panel



- 482 mm (19") rack installation, 1 RS

### Input (data for each channel):

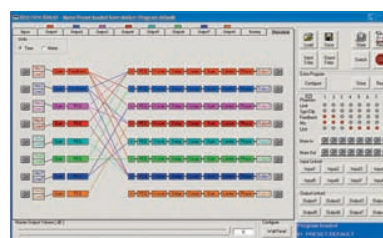
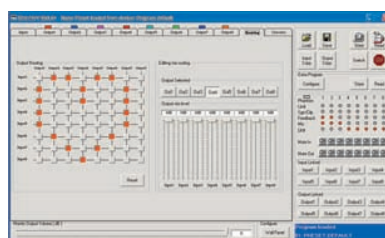
- Gain control with 0 dB bypass function
- Mic/line switching
- Parametric 3-band equalizer (peak, low-pass shelving, high-pass shelving)
- Frequency shift feedback eliminator
- Selectable phase (180°)

### Output (data for each channel):

- Low-pass filter/high-pass filter with Butterworth, Linkwitz-Riley and Bessel characteristics (to -24 dB/oct.). Even higher slopes possible in combination with equalizer
- Parametric 5-band equalizer with peak or low-pass/high-pass shelving filters
- Peak limiter and RMS compressor with a ratio of up to 32:1 and continuously adjustable soft/hard knee characteristics. Threshold: 18 dBu to -12 dBu, release time: 0.1-3 s, attack time: 5-200 ms
- Peak limiter and RMS compressor with bypass function

- Switchable delay between time (ms) and distance (m): 380.998 ms max. in steps of 21µsec or 129.539 m max. in steps of 6.8 mm
- Selectable phase (180°)
- Gain control

Model	DRM-880LAN
<b>General information</b>	
Frequency range	20-20,000 Hz
Inputs	6.2 V max.
Outputs	6.2 V max.
S/N ratio	> 104 dB
THD	< 0.005 %
Power supply	230 V~/50 Hz/20 VA
Admiss. amb. temp.	0-40 °C
Dimensions	482x44x250 mm, 1 RS
Weight	2.5 kg
<b>Inputs</b>	
Mic/line	8 x plug-in screw terminal, bal.
Foot pedal	-
<b>Outputs</b>	
Mic/line	line: 8 x plug-in screw terminal, bal.
Other features	USB, RS-485, TCP/IP



## DRM-880WP

Order No. 17.3760

**Wall-mounted remote control panel**, for the digital matrix router DRM-880LAN.

- The first 4 presets of the DRM-880LAN can be activated at the touch of a button
- Preset status display
- Individual adjustment of the room volume
- Protected from unauthorised access via key switch

- Connection to DRM-880LAN via RS485 interface
- Power supply: 5 V~/20 mA via PSU PSS-510DC, available at option



## CD and MP3 Player, Stereo Tuner, MP3 Recorder



### CDP-650

Order No. 21.3040



**CD and MP3 player**, with USB interface at the front panel.

- Supports iPod and iPhone (with charging function)
- Reproduction of CD-DA, CD-R/RW, MP3 CDs as well as MP3 files via USB port
- Record function for recording MP3 files onto a USB storage medium
- Fast forward and reverse

- Track programming
- Folder navigation
- Repeat function (repeat 1, repeat all, repeat album)
- Random play
- Adjustable headphone output
- Analogue output and optical digital output

- Remote control connections for the system remote control in combination with AR-650
  - Supplied with infrared remote control
  - Power supply: 230 V~/50 Hz/25 W
  - Dimensions: 435x85x285 mm
  - Weight: 4 kg
- Supplied without iPod and iPhone.**

### TR-650

Order No. 21.2710



**RDS stereo tuner**

- 2-band tuner (FM/AM)
- RDS text (PS/PTY/RT/TA/CT)
- 50 station presets (30 FM, 20 AM)
- Dimmable display
- Digital display of signal strength
- Automatic station scanning
- Timer function and sleep function
- Antenna connection: 75 Ω
- Power supply: 230 V~/50 Hz/10 VA



- Dimensions: 435x87x294 mm
- Weight: 2.9 kg



### ADRW-900

Order No. 21.2920



**CD and MP3 recorder**, with USB interface and integrated tape deck.

Direct dubbing from audio cassettes, CDs or via the analogue audio input onto external USB storage media in MP3 format.

CD recorder/player:

- Random play
- Repeat function (repeat 1, repeat all, programme, A-B)
- Shuffle
- Intro play
- New track number (automatic/manual)

Tape deck:

- Auto reverse (rec./play)
- Pitch control
- Dolby B noise suppression
- Timer recording, timer play
- Manual level control with visual indicator

Reproduction:

- Audio CD, CD-R/RW and MP3 CD
- Compact cassettes
- USB storage media (MP3)

Recording options:

- CD to tape and USB
- Tape to CD and USB

- Line in (aux) to tape, CD and USB
- Digital in to tape, CD and USB
- USB output for connecting CD, tape, digital input and aux directly to a PC

General information:

- Analogue audio input and output
- Digital audio input
- Adjustable headphone output
- Infrared remote control
- Power supply: 230 V~/50 Hz
- Dimensions: 435x145x288 mm
- Weight: 5.3 kg

## CD and MP3 Players



### PA-24RCD

Order No. 17.4410



**CD and MP3 player with FM RDS tuner and USB interface, SD/MMC card slot.**

- Autostart function (after being switched on or a power failure, the unit starts up with the last stored settings)
- FM RDS tuner with 24 station presets
- USB storage media can be connected directly
- For SD/MMC cards up to 32 GB (FAT16/FAT32), available at option
- CD drive with anti-shock system, audio CD/CD-R/CD-RW/MP3 CD
- Supports ID3 tags

- Folder navigation
- Dual output mode or single output mode for CD and tuner, adjustable
- Fast forward and reverse
- Repeat function (repeat 1, repeat all, repeat folder)
- Random play
- 482 mm (19") rack installation, 1 RS
- Mains operation or 24 V emergency power operation

Model	PA-24RCD
<b>General information</b>	
Frequency range	20-20,000 Hz
THD	< 0.1 %
Channel separation	> 60 dB
Dynamic range	-
S/N ratio	> 85 dB
Wow and flutter	not measurable, quartz precision
Output, analogue	0-1 V
Power supply	230 V~/50 Hz/15 VA, 24 V~/1.5 A
Admiss. ambient temp.	0-40 °C
Dim., player mech.	482x44x290 mm, 1 RS
Weight	5 kg
<b>Connections</b>	
Analogue output	1 x XLR, bal. 2 x RCA L/R



### CD-112TRS

Order No. 21.2810



**CD and MP3 player with FM/AM tuner and USB 2.0 interface, RS-232 interface, SD/MMC card slot**

- Tuner with 100 station presets (60 x FM, 40 x AM)
- USB storage media can be connected directly
- For SD/MMC cards up to 32 GB (FAT16/FAT32), available at option
- Anti-shock system
- Supports ID3 tags
- Folder navigation
- Autoplay function
- Fast forward and reverse

- Track programming
- Repeat function (repeat 1, repeat all, repeat folder)
- Random play
- Balanced XLR outputs for tuner and CD
- RS-232 interface for remote control
- Supplied with infrared remote control and antennas for FM/AM reception
- 482 mm (19") rack installation with supplied mounting brackets, 1 RS
- Audio CD/CD-R/CD-RW/MP3 CD

Model	CD-112TRS
<b>General information</b>	
Frequency range	20-20,000 Hz
THD	< 0.1 %
Channel separation	> 60 dB
Dynamic range	> 96 dB
S/N ratio	> 70 dB
Wow and flutter	not measurable, quartz precision
Output, analogue	1.2 V
Power supply	230 V~/50 Hz/50 VA
Admiss. ambient temp.	0-40 °C
Dim., player mech.	482x44x265 mm, 1 RS
Weight	4.1 kg
<b>Connections</b>	
Analogue output	1 x XLR L/R, bal. (CD) 1 x XLR L/R, bal. (tuner)



### CD-112RDS/BT

Order No. 21.2950



**CD and MP3 player with FM RDS tuner and Bluetooth receiver**

- Bluetooth receiver for the wireless connection of laptops, smartphones or tablet PCs
- FM RDS tuner with 30 station presets
- USB storage media can be connected directly
- For SD/MMC cards up to 32 GB (FAT16/FAT32), available at option
- Anti-shock system
- Supports ID3 tags
- Folder navigation
- Autoplay function

- Fast forward and reverse
- Track programming
- Repeat function (repeat 1, repeat all, repeat folder)
- Random play
- RS-232 interface for remote control
- Supplied with infrared remote control and antenna
- 482 mm (19") rack installation with supplied mounting brackets, 1 RS
- Audio CD/CD-R/CD-RW/MP3 CD

Model	CD-112RDS/BT
<b>General information</b>	
Frequency range	20-20,000 Hz
THD	< 0.1 %
Channel separation	> 60 dB
Dynamic range	> 96 dB
S/N ratio	> 70 dB
Wow and flutter	not measurable, quartz precision
Output, analogue	1.2 V
Power supply	230 V~/50 Hz/50 VA
Admiss. ambient temp.	0-40 °C
Dim., player mech.	482x44x265 mm, 1 RS
Weight	4.1 kg
<b>Connections</b>	
Analogue output	1 x XLR L/R, bal. (CD) 1 x XLR L/R, bal. (priority) 1 x RCA L/R (Bluetooth) 1 x RCA L/R (tuner)



## CD and MP3 Players



### CD-122

Order No. 21.2820



**Dual CD and MP3 player**, with USB 2.0 interface and SD/MMC card slot.

- USB storage media can be connected directly
- For SD/MMC cards up to 32 GB (FAT16/FAT32), available at option
- Anti-shock system
- Supports ID3 tags
- Folder navigation
- Autoplay function
- Fast forward and reverse
- Track programming
- Repeat function (repeat 1, repeat all)

- Random play
- Supplied with infrared remote control
- 482 mm (19") rack installation with supplied mounting brackets, 1 RS
- Audio CD/CD-R/CD-RW/MP3 CD

Model	CD-122
<b>General information</b>	
Frequency range	20-20,000 Hz
THD	< 0.1 %
Channel separation	> 60 dB
Dynamic range	> 96 dB
S/N ratio	> 70 dB
Wow and flutter	not measurable, quartz precision
Output, analogue	1.2 V
Power supply	230 V~/50 Hz/50 VA
Admiss. ambient temp.	0-40 °C
Dim., player mech.	482x44x265 mm, 1 RS
Weight	4.3 kg
<b>Connections</b>	
Analogue output	2 x RCA L/R



### CD-112/BT

Order No. 21.2940



**CD and MP3 player**, with Bluetooth receiver, USB interface and SD/MMC card slot.

- Bluetooth receiver for the wireless connection of laptops, smartphones or tablet PCs
- USB storage media can be connected directly
- For SD/MMC cards up to 32 GB (FAT16/FAT32), available at option
- Anti-shock system
- Supports ID3 tags
- Folder navigation
- Autoplay function
- Fast forward and reverse

- Track programming
- Repeat function (repeat 1, repeat all, random repeat)
- Random play
- Supplied with infrared remote control
- 482 mm (19") rack installation with supplied mounting brackets, 1 RS
- Audio CD/CD-R/CD-RW/MP3 CD

Model	CD-112/BT
<b>General information</b>	
Frequency range	20-20,000 Hz
THD	< 0.1 %
Channel separation	> 60 dB
Dynamic range	> 96 dB
S/N ratio	> 70 dB
Wow and flutter	not measurable, quartz precision
Output, analogue	1.2 V
Power supply	230 V~/50 Hz/50 VA
Admiss. ambient temp.	0-40 °C
Dim., player mech.	482x44x265 mm, 1 RS
Weight	4 kg
<b>Connections</b>	
Analogue output	1 x RCA L/R (CD) 1 x RCA L/R (Bluetooth) 1 x RCA L/R (priority)



### CD-112

Order No. 21.2800



**CD and MP3 player**, with USB interface and SD/MMC card slot.

- USB storage media can be connected directly
- For SD/MMC cards up to 32 GB (FAT16/FAT32), available at option
- Anti-shock system
- Supports ID3 tags
- Folder navigation
- Autoplay function
- Fast forward and reverse
- Track programming

- Repeat function (repeat 1, repeat all, random repeat)
- Random play
- Supplied with infrared remote control
- 482 mm (19") rack installation with supplied mounting brackets, 1 RS
- Audio CD/CD-R/CD-RW/MP3 CD

Model	CD-112
<b>General information</b>	
Frequency range	20-20,000 Hz
THD	< 0.1 %
Channel separation	> 60 dB
Dynamic range	> 96 dB
S/N ratio	> 70 dB
Wow and flutter	not measurable, quartz precision
Output, analogue	1.2 V
Power supply	230 V~/50 Hz/50 VA
Admiss. ambient temp.	0-40 °C
Dim., player mech.	482x44x265 mm, 1 RS
Weight	4 kg
<b>Connections</b>	
Analogue output	1 x RCA L/R

## CD and MP3 Players



### DMP-230

Order No. 21.2970



**Dual MP3 player**, with USB interface and SD/MMC card slot.

- For USB and SD storage media
- Alphanumeric display
- Repeat function
- Preprogrammed equalizer settings
- Separate volume control for each player
- Balanced XLR outputs and unbalanced RCA outputs for each player

- Blue backlit displays
- 482mm (19") rack installation

Model	DMP-230
<b>General information</b>	
Frequency range	20-20,000 Hz
THD	< 0.1 %
Channel separation	> 60 dB
Dynamic range	> 95 dB
S/N ratio	> 70 dB
Wow and flutter	-
Output, analogue	2 V (XLR, bal.) 1 V (RCA)
Output, digital	-
Power supply	230 V~/50 Hz/10 VA
Admiss. ambient temp.	0-40 °C
Dim., player mech.	482x45x160 mm, 1 RS
Weight	2.2 kg
<b>Connections</b>	
	2 x USB A jack
	2 x SD/MMC card slot
Analogue output	2 x XLR L/R, bal. 2 x RCA L/R



### DMP-130MIX

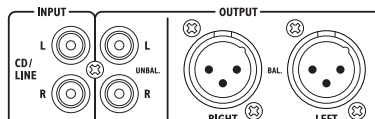
Order No. 21.3090



**MP3 player and microphone line mixer**  
With this unit combination, it is possible to mix 3 audio signal sources. The integrated MP3 player can be switched between SD card and USB port.

- For USB and SD storage media
- Alphanumeric display
- Repeat function
- Preprogrammed sound adjustments
- 3 inputs channels with level control (mic, AUX/MP3, line)

- AUX input and microphone input via front panel connection
- 2-way tone control and level control for the master output
- Blue backlit LCD
- 482 mm (19") rack installation



Model	DMP-130MIX
<b>General information</b>	
Frequency range	20-20,000 Hz
THD	< 0.1 %
Channel separation	> 60 dB
Dynamic range	> 96 dB
S/N ratio	> 70 dB
Wow and flutter	-
Output, analogue	2 V (XLR, bal.) 1 V (RCA)
Power supply	230 V~/50 Hz/20 VA
Admiss. ambient temp.	0-40 °C
Dim., player mech.	482x44x160 mm, 1 RS
Dim., control panel	-
Weight	2.23 kg
<b>Connections</b>	
	1 x USB A jack
	1 x jack/6.3 mm
	1 x 3.5 mm jack
	1 x RCA L/R
Analogue output	1 x RCA L/R 1 x XLR L/R, bal.



### CD-113DPR

Order No. 21.3080



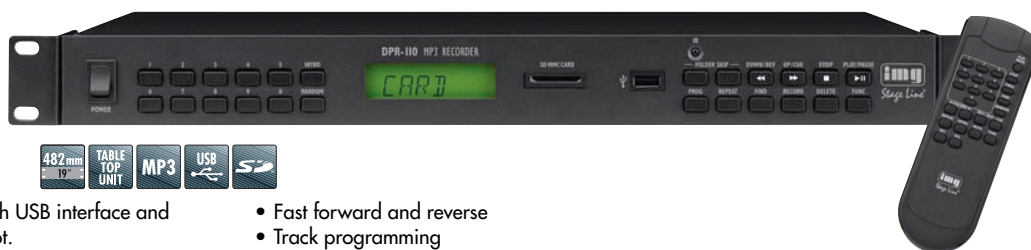
**CD and MP3 player with recording function**, as well as USB interface and SD/MMC card slot.

- Recording/copying from CD, USB medium, SD/MMC card or external source (aux) onto USB medium or SD/MMC card
- Manual level control for external source
- Recording level display
- USB storage media can be connected directly
- For SD/MMC cards up to 32 GB (FAT16/FAT32), available at option
- Anti-shock system

- Supports ID3 tags
- Folder navigation
- Autoplay function (selectable via jumper)
- Fast forward and reverse
- Track programming
- Repeat function (repeat 1, repeat all, repeat folder, random repeat)
- Random play
- Supplied with infrared remote control
- 482 mm (19") rack installation with supplied mounting brackets, 1 RS
- Audio CD/CD-R/CD-RW/MP3 CD

Model	CD-113DPR
<b>General information</b>	
Frequency range	20-20,000 Hz
THD	< 0.1 %
Channel separation	> 60 dB
Dynamic range	> 96 dB
S/N ratio	> 80 dB
Wow and flutter	not measurable, quartz precision
Output, analogue	1.2 V
Power supply	230V~/50Hz/50 VA
Admiss. ambient temp.	0-40 °C
Dim., player mech.	482x44x265 mm, 1 RS
Weight	3.9 kg
<b>Connections</b>	
	1 x RCA L/R (aux input)
Analogue output	1 x RCA L/R

## MP3 Recorder, Stereo Tuners



### DPR-110

Order No. 21.2320



**MP3 recorder**, with USB interface and SD/MMC card slot.

- USB storage media can be connected directly (e.g. USB flash drive)
- For SD/MMC cards up to 8 GB (FAT16/FAT32), available at option
- Recording from USB medium, SD/MMC card or external source (aux) onto USB medium or SD/MMC card
- Selectable recording bit rate: 96/128/192 kbps
- Supports MP3
- Supports ID3 tags

- Fast forward and reverse
- Track programming
- Folder navigation
- Repeat function (repeat 1, repeat all, repeat album)
- Random play
- Intro play
- Supplied with infrared remote control
- 482 mm (19") rack installation with supplied mounting brackets, 1 RS

Model	DPR-110
<b>General information</b>	
Frequency range	20-20,000 Hz
THD	< 0.3 %
Channel separation	> 60 dB
Dynamic range	> 96 dB
S/N ratio	> 60 dB
Output, analogue	1.2 V
Power supply	230 V~/50 Hz/50 VA
Admiss. ambient temp.	0-40 °C
Dim., player mech.	430x44x265 mm, 1 RS
	(w/o mounting brackets)
Weight	3.4 kg
<b>Connections</b>	
	1 x RCA L/R (aux input)
Analogue output	1 x RCA L/R



### FM-100DAB

Order No. 17.3700



**Digital stereo tuner for the reception of FM and DAB+**

- FM radio reception (87.5-108 MHz) with RDS function
- Interference-free reception of digital radio via digital audio broadcasting (DAB+, band III, 174.928-239.2 MHz)
- Display of additional broadcasting information, e.g. frequency, name of radio station, genre, track name, artist
- Large backlit dot matrix display
- Field intensity display

- 10 station presets each for FM mode and DAB mode
- 5 station keys with double assignment
- Manual frequency adjustment and station adjustment
- Autoscanner
- Mono/stereo selection
- 75 Ω antenna input
- Stereo output via RCA jack L/R
- 482 mm (19") rack installation, 1 RS, removable mounting brackets

- Supplied with infrared remote control and telescopic antenna
- Power supply: 230 V~/50 Hz/50 VA
- Dimensions: 482x44x185 mm
- Weight: 3.35 kg



### WAP-100

Order No. 38.6190



**Internet radio, FM RDS tuner and MP3 player**

- Network connection via LAN jack or WLAN
- Access to more than 10,000 radio stations worldwide
- Station scan by genre, station name, location
- FM RDS reception function (87.5-108 MHz)

- USB host input for playing MP3 files directly
- Easy operation via jog dial
- Large illuminated dot matrix display
- 12 menu languages
- 75 Ω FM antenna input, coaxial
- SMA RP antenna connection
- 1 x RCA input jacks L/R (for external audio players)
- 1 x RCA output jacks L/R

- 482 mm (19") rack installation, 1 RS, removable mounting brackets
- Supplied with infrared remote control, rod antenna and FM wire antenna
- Power supply: 230 V~/50 Hz/50 VA
- Dimensions: 482x44x195 mm
- Weight: 3.5 kg

## MP3 Recorders, CD Player Modules

### DPR-10

Order No. 17.2740



**Compact MP3 recorder**, with USB interface and SD/MMC card slot.

- USB storage media can be connected directly (e.g. USB flash drive)
- For SD/MMC cards up to 8 GB (FAT16/FAT32), available at option
- Recording from USB medium, SD/MMC card or external source (aux) onto USB medium or SD/MMC card
- Selectable recording bit rate: 96/128/192 kbps
- Supports MP3
- Supports ID3 tags
- Fast forward and reverse
- Track programming

- Folder navigation
- Repeat function (repeat 1, repeat all, repeat album)
- Random play
- Intro play
- Supplied with infrared remote control
- 12 V power supply via plug-in PSU, available at option



Model	DPR-10
<b>General information</b>	
Frequency range	20-20,000 Hz
THD	< 0.3 %
Channel separation	> 60 dB
Dynamic range	> 96 dB
S/N ratio	> 60 dB
Output, analogue	1.2 V
Power supply	via optional PSU, e.g. PSS-600E
Admiss. ambient temp.	0-40 °C
Dim., player mech.	175x52x110 mm
Weight	545 g
<b>Connections</b>	
Analogue output	1 x RCA L/R (aux input)

### M-34CDP

Order No. 17.3590



**CD player module with pitching function**, USB 2.0 interface and SD/MMC card slot.

- Adjustable reproduction speed (pitching)
- Slot-in mechanism
- USB storage media can be connected directly
- For SD/MMC cards up to 32 GB (FAT16/FAT32), available at option
- Anti-shock system
- Supports ID3 tags
- Folder navigation

- Single play function
- Autoplay function (selectable via jumper)
- Random play, repeat function
- Track programming
- Supplied with infrared remote control
- Power supply: 12 V $\pm$ /800 mA
- Dimensions: 174x52x160 mm
- Mounting cutout: 155x50x150 mm



- Audio CD/CD-R/CD-RW/MP3 CD

### M-32CD

Order No. 17.3350



**CD player module**, with anti-shock system and MP3 reproduction.

- Slot-in mechanism
- USB port for external storage media
- Random play, repeat function
- Track programming

- Supplied with remote control
- Power supply: 12 V $\pm$ /800 mA
- Dimensions: 174x52x160 mm
- Mounting cutout: 155x50x150 mm



- Audio CD/CD-R/CD-RW/MP3 CD



## MP3 Player Insertion Modules



### DMP-250

Order No. 17.3610



**MP3 player insertion module**, with USB interface and SD/MMC card slot.

- USB storage media can be connected directly
- For SD/MMC cards (FAT16/FAT32), available at option
- 12 one-touch buttons for announcements or jingles
- Numerical keypad for direct track selection
- Folder navigation
- Autoplay function (selectable via jumper)
- Fast forward and reverse
- Repeat function (repeat 1, repeat all, album)
- Volume control
- Green backlit LCD
- Supplied with infrared remote control



### DMP-200

Order No. 17.3600



**Compact MP3 player insertion module**, with USB interface and SD/MMC card slot.

- USB storage media can be connected directly
- For SD/MMC cards (FAT16/FAT32), available at option
- Folder navigation
- Autoplay function (selectable via jumper)
- Fast forward and reverse
- Repeat function (repeat 1, repeat all, album)
- Volume control
- Green backlit LCD
- Supplied with infrared remote control



### DMP-100

Order No. 17.3510



**Compact MP3 player insertion module**, with USB interface and SD/MMC card slot.

- USB storage media can be connected directly
- For SD/MMC cards (FAT16/FAT32), available at option
- Autostart function
- Fast forward and reverse
- Repeat function (repeat 1, repeat all)
- Green backlit LCD
- Supplied with infrared remote control



### DMP-100T

Order No. 17.3520



**Compact MP3 player insertion module with FM tuner**, USB interface and SD/MMC card slot.

- USB storage media can be connected directly
- For SD/MMC cards (FAT16/FAT32), available at option
- FM tuner with 30 station presets
- Autostart function
- Fast forward and reverse
- Repeat function (repeat 1, repeat all)
- Green backlit LCD
- Supplied with infrared remote control



Model	DMP-250	DMP-200	DMP-100	DMP-100T
<b>General information</b>				
Frequency range	20-20,000 Hz	20-20,000 Hz	20-20,000 Hz	20-20,000 Hz
THD	< 0.2 %	< 0.2 %	< 0.2 %	< 0.2 %
Channel separation	> 60 dB	> 60 dB	> 60 dB	> 60 dB
S/N ratio	> 75 dB	> 75 dB	> 75 dB	> 75 dB
Output, analogue	500 mV	500 mV	500 mV	500 mV
Power supply	12 V=100 mA	12 V=100 mA	12 V=100 mA	12 V=100 mA
Admiss. ambient temp.	0-40 °C	0-40 °C	0-40 °C	0-40 °C
Dim., player mech.	175x52x82 mm	100x52x85 mm	120x22x58 mm	120x22x58 mm
Weight	420 g	190 g	48 g	48 g

### DMP-12CC

Order No. 21.2930

**Connection cable for the insertion modules of the DMP... series as well as M-32CD and M-34CDP**

- Ready made-up adapter cable for connecting DMP-100, DMP-100T, DMP-200, DMP-250, M-32CD and M-34CDP to an amplifier or mixer
- 5-pin multipoint connector to RCA jack L/R and low-voltage jack 5.5/2.1 mm
- Total cable length: approx. 40 cm



## Flush-mounted Amplifiers, Radio, Receiver



### BTR-55

Order No. 17.3770

#### Flush-mounted Bluetooth receiver

The BTR-55 is a flush-mounted Bluetooth receiver with integrated stereo amplifier for receiving music from Bluetooth-enabled devices, e.g. smartphones, tablet PCs, MP3 players, laptops.

The unit is operated via one button only for pairing, connecting and switching the appliance on or off. The front panel with a size of 55x55 mm is compatible with many standard switches and allows an installation into standard flush-mounted sockets. The connection to the respective end device via Bluetooth is done once with the operating button and LED indicator. After the first connection, the BTR-55 stores the end device. Up to 8 units can be stored. When switching the BTR-55 on, it identifies the stored end devices and connects to them automatically. The music selection and volume control can be done via the portable end device. The music is transmitted wirelessly to the BTR-55 via Bluetooth. Suitable speakers, e.g. ceiling speakers can be connected to the integrated stereo amplifier of the BTR-55. With the line output at the rear panel of BTR-55, any standard hi-fi system can also be connected.

In combination with the flush-mounted RDS-RADIO, the BTR-55 allows the reproduction from additional external audio sources.



### RDS-RADIO

Order No. 17.3780



#### Flush-mounted RDS radio

The flush-mounted RDS-RADIO can be operated via the supplied remote control and via 4 buttons directly at the unit.

The aux input at the front panel allows the connection of any external audio source, e.g. MP3 players. The front panel with a size of 55x55 mm is compatible with many standard switches and allows an installation into standard flush-mounted sockets.

The RDS-RADIO is supplied with a wire antenna for empty tubes. For an optimum reception quality, the roof antenna (75  $\Omega$ , coaxial) can be connected to the antenna terminal. Two speakers can be connected to the integrated amplifier. An external amplifier can be connected to the line output for a full range music reproduction of high volume. The line input at the rear panel can be connected to the Bluetooth receiver BTR-55. Thus, further external audio sources can be played in addition to the 9 radio stations.

- Display: RDS text, time
- Features: on/off, volume, station 1-9, memory, sleep, alarm clock, volume limit, menu lock

Model	BTR-55	RDS-RADIO
Output power	2 x 1.3 W <sub>RMS</sub> /4 $\Omega$	1 x 1.3 W <sub>RMS</sub> /4 $\Omega$
Audio inputs	-	line in, front and rear
Audio outputs	line out/speaker output (stereo)	line out/speaker output (stereo)
Interfaces	incl. Bluetooth receiver (version 2.1, A2DP profile)	antenna input for supplied wire antenna or roof antenna (75 $\Omega$ , coaxial)
Operating range	approx. 10 m	-
Power supply	230 V~	230 V~
Dimensions	55x55x36 mm	55x55x36 mm
Other features		Supplied with remote control

## Sound from the Socket

#### Description of features:

A microphone with a 6.3 mm plug and a sound source, e.g. CD player, tuner, etc. with RCA plugs can be connected to the preamplifier PREAMP-1UP and be adjusted separately via the two front controls.



### AMP-1UP

Order No. 17.1340

#### Flush-mounted power amplifier, 10 W

- For the connection to one preamplifier PREAMP-1UP
- Fitted metal base plate
- Incl. level scale and volume sticker



### PREAMP-1UP

Order No. 17.1350

#### Flush-mounted preamplifier

- For the connection of up to 20 power amplifiers AMP-1UP
- Fitted metal base plate
- Connections and level controls for line input and microphone input

The preamplifier PREAMP-1UP is connected to the power amplifier AMP-1UP. The cabling can be realised via the main lead, i.e. the signals can be fed through from one unit to the other.

A max. of 20 power amplifiers AMP-1UP can be connected to one preamplifier PREAMP-1UP. The speakers must be connected to the power amplifier AMP-1UP. Two 8  $\Omega$  speakers or one 4  $\Omega$  speaker can be operated with one power amplifier.

- Designed for transmitting announcements and music conveniently to different rooms
- Individual volume control and switching-off possible in each room
- Compatible with many standard switches
- Suitable for standard 63 mm flush-mounted wall sockets

Model	AMP-1UP	PREAMP-1UP
Frequency range	45-20,000 Hz	20-20,000 Hz (line) 40-15,000 Hz (mic)
Input	5 V max./47 k $\Omega$	400 mV (line) 4 mV (mic)
Output	10 W at a load of 4 $\Omega$	5 V max./50 $\Omega$
Control voltage	0-10 V=	0-10 V=
Power supply	22-26 V=0.77 A	22-26 V=0.025 A
Connection	7-pole terminal strip, removable	7-pole terminal strip, removable 1 x RCA L/R (line) 1 x 6.3 mm jack (mic)

# Wireless Microphone Systems

## TXS-871

Order No. 25.3600

## TXS-872

Order No. 25.2770

## TXS-875

Order No. 25.5320

**new**

**Multifrequency receiver units**, with UHF PLL technology.

- TXS-871: 15 selectable UHF frequencies (863-865 MHz), TXS-872: 193 selectable UHF frequencies (740-764 MHz), TXS-875: 193 selectable UHF frequencies (518-542 MHz)
- True diversity system with removable antennas (BNC connection)
- Autoscan



- Pilot tone squelch, noise mute
- Selectable lock mode
- LCD for frequency, antenna A/B, RF receiving level, AF audio level, battery status of the transmitter
- XLR output and 6.3 mm output
- Supplied with PSU
- Supplies operating voltage to TXS-872BOOST (TXS-871, TXS-872) or TXS-875BOOST (TXS-875)

Model	TXS-871	TXS-872	TXS-875
Carrier frequency	863-865 MHz	740-764 MHz	518-542 MHz
Audio frequency range	40-18,000 Hz	40-18,000 Hz	40-18,000 Hz
THD	< 0.6 %	< 0.6 %	< 0.6 %
Dynamic range	> 105 dB	> 105 dB	> 105 dB
Audio signal	900 mV/1 kΩ (jack)	900 mV/1 kΩ (jack)	900 mV/1 kΩ (jack)
	150 mV/150 Ω (XLR, bal.)	150 mV/150 Ω (XLR, bal.)	150 mV/150 Ω (XLR, bal.)
Admiss. ambient temp.	0-40 °C	0-40 °C	0-40 °C
Power supply	via suppl. PSU	via suppl. PSU	via suppl. PSU
Dimensions	211x40x130mm	211x40x130 mm	211x40x130mm
Weight	1,100g	1,100 g	1,100g

## TXS-871HT

Order No. 25.3610

## TXS-872HT

Order No. 25.2790

## TXS-875HT

Order No. 25.5340

**new**

**Hand-held microphones with integrated multifrequency transmitter**, with UHF PLL technology.

- Dynamic microphone cartridge, hypercardioid characteristic
- Diecast aluminium body
- TXS-871HT: 15 selectable UHF frequencies (863-865 MHz), TXS-872HT: 193 selectable UHF frequencies (740-764 MHz),

TXS-875HT: 193 selectable UHF frequencies (518-542 MHz)

- Adjustable sensitivity (0 dB, -10 dB, -20 dB, -30 dB)
- LCD for frequency and battery status
- Transmitting power: 10 mW (EIRP)
- Selectable lock mode
- Power supply via 2 x 1.5 V battery AA size (not supplied)
- Supplied with plastic case, microphone holder and 7 coloured caps to be pushed on



**TXS-871HT: licence-free in the EU.**

**TXS-872HT: licence required for this system in the EU!**

**TXS-875HT: licence required for this system in the EU!**

## TXS-871HSE

Order No. 25.3620

## TXS-872HSE

Order No. 25.2780

## TXS-875HSE

Order No. 25.5330

**new**

**Multifrequency pocket transmitters**, with UHF PLL technology.

- Suitable for the combination with head-band microphone or earband microphone with 3-pole mini XLR connector
- TXS-871HSE: 15 selectable UHF frequencies (863-865 MHz), TXS-872HSE: 193 selectable UHF frequencies (740-764 MHz), TXS-875HSE:

193 selectable UHF frequencies (518-542 MHz)

- Adjustable sensitivity
- LCD for frequency and battery status
- Transmitting power: 10 mW (EIRP)
- Selectable lock mode
- Power supply via 2 x 1.5 V battery AA size (not supplied)
- Supplied in a plastic case

**TXS-871HSE: licence-free in the EU.**

**TXS-872HSE: licence required for this system in the EU!**

**TXS-875HSE: licence required for this system in the EU!**



## RCB-870

Order No. 24.2830



**482 mm (19", 1 RS), unit holder**, for the installation of two multifrequency receiver units TXS-871, TXS-872, TXS-875 or TXS-852, TXS-855. Supplied with dummy cover. Dimensions: 482x44x108 mm



## Microphones, Gooseneck Microphones



### DM-5000LN

Order No. 23.0400

**Dynamic microphone**, for stage and vocals.

- Supercardioid characteristic
- Highly sensitive neodymium magnet version
- Supplied with microphone holder, cable and case



### DM-2500

Order No. 23.0050

**Dynamic microphone**, for stage, speech, vocals and DJ applications.

- Cardioid characteristic
- POP noise head
- Supplied with microphone holder, cable and case.



### ECM-10/SW

Order No. 23.2720

### ECM-10/WS

Order No. 23.2730

**Built-in phantom microphones**

- Especially suitable for PA applications
- Metal housing
- Black (SW) or white (WS) cartridge cover



### ECM-302B/WS

Order No. 23.3630

**Boundary microphone**

- Integrated electronics for the direct connection to a phantom power supply 9-48 V=
- Transformer-balanced AF output
- With 6 m connection cable, 3-pole mini XLR/XLR



### ECM-304BD/WS

Order No. 23.3270

**Boundary microphone**

- Switchable between cardioid characteristic and omnidirectional characteristic
- Power supply via 1.5 V button cell (not supplied). Phantom power via mixer not required
- With 4 m connection cable, 3.5/6.3 mm plug



### EMG-330P

Order No. 23.4270

**Miniature electret directional microphone with gooseneck**

- Transformer-balanced
- Hypercardioid/lobe characteristic
- Foam windshield
- 3-pole XLR plug
- With optional desktop microphone base DMS-1, especially suitable as PA desktop microphone



### DMG-400

Order No. 23.1550

**Dynamic gooseneck microphone**

- Excellent sound characteristics
- Balanced version
- Cardioid characteristic
- M10 threaded part (length: 8 mm)
- For console and front mounting
- Total length: 385 mm



### DMG-600

Order No. 23.1560

**Dynamic gooseneck microphone**

- Balanced version
- Cardioid characteristic
- 3-pole XLR plug
- Total length: 565 mm



### EMG-400P

Order No. 23.1620

**Electret gooseneck microphone**

- Cardioid characteristic
- Microphone windshield
- 3-pole XLR plug
- Total length: 455 mm

Model	ECM-10/SW	ECM-10/WS
System	electret/omnidirectional	
Frequency range	30-17,000 Hz	
Impedance	300 Ω	
Sensitivity	2.3 mV/Pa/1 kHz	
Max. SPL	110 dB	
Power supply	9-48 V=, phantom power	
Body	metal	
Dimensions	ø 30 mm x 71 mm	
Weight	90 g	
Connection, microphone	XLR, bal.	

Further specifications can be found in the main catalogue or on our website [www.monacor.com](http://www.monacor.com).



## Desktop Microphones



### ECM-500

Order No. 23.2550

**PA desktop microphone**, with gooseneck.

- Electret, cardioid characteristic
- Indicating light for microphone operation
- ON/OFF switch
- Removable gooseneck (XLR connection)
- Solid version



### ECM-310P

Order No. 23.2430

**PA desktop microphone**, with gooseneck.

- Electret, cardioid characteristic
- Phantom power
- ON/OFF switch
- 3 m connection cable with XLR plug, balanced



### ECM-200

Order No. 23.0280

**PA desktop microphone**, with gooseneck.

- Electret, omnidirectional characteristic
- Push-to-talk button and lock button



### ECM-450

Order No. 23.3370

**PA desktop microphone**, with gooseneck.

- Electret, cardioid characteristic
- Volume control for speech and chime
- Different types of chimes can be selected
- Automatic chime activation (can be switched off)
- Power supply via supplied PSU or batteries (not supplied)
- 1.5 m connection cable with 6.3 mm connector (on both ends)



### PDM-300

Order No. 23.1200

**PA desktop microphone**, with gooseneck.

- Dynamic, cardioid characteristic
- Low-noise push-to-talk switch, latching or non-latching
- 1 m helix cable, balanced, with 6.3 mm mono plug



### PDM-302

Order No. 23.5560

**PA desktop microphone**, with gooseneck.

- Dynamic, cardioid characteristic
- Low-noise push-to-talk switch, latching or non-latching
- 5 m connection cable with XLR plug, balanced

Model	ECM-500	ECM-310P	ECM-200	ECM-450	PDM-300	PDM-302
<b>General information</b>						
Frequency range	100-16,000 Hz	80-14,000 Hz	60-12,000 Hz	100-12,000 Hz	60-12,000 Hz	60-12,000 Hz
Sensitivity	3.9 mV/Pa/1 kHz	8 mV/Pa/1 kHz	6 mV/Pa/1 kHz	3.2 mV/Pa/1 kHz	3.2 mV/Pa/1 kHz	3.2 mV/Pa/1 kHz
Impedance	600 Ω	250 Ω	1 kΩ	600 Ω	600 Ω	600 Ω
S/N ratio	> 40 dB	> 55 dB	> 40 dB	> 40 dB	-	-
Admiss. ambient temp.	0-40 °C	0-40 °C	0-40 °C	0-40 °C	0-40 °C	0-40 °C
Power supply	2 x 1.5 V batt. AA size	22-48 V=, phantom power	1 x 1.5 V batt. AA size	via suppl. PSU or 2 x 1.5 V batt. C size	-	-
<b>Dimensions</b>						
console housing only	135x60x145 mm	ø 80 mm x 25 mm	75x25x110 mm	180x50x130 mm	120x60x160 mm	120x60x160 mm
Total length of gooseneck	450 mm	200 mm	200 mm	210 mm	310 mm	310 mm
Weight	1.5 kg	372 g	380 g	925 g	1,100 g	1,100 g
<b>Connections</b>						
	1 x XLR	XLR, bal.	6.3 mm plug	6.3 mm jack low-voltage jack	6.3 mm plug	XLR, bal.