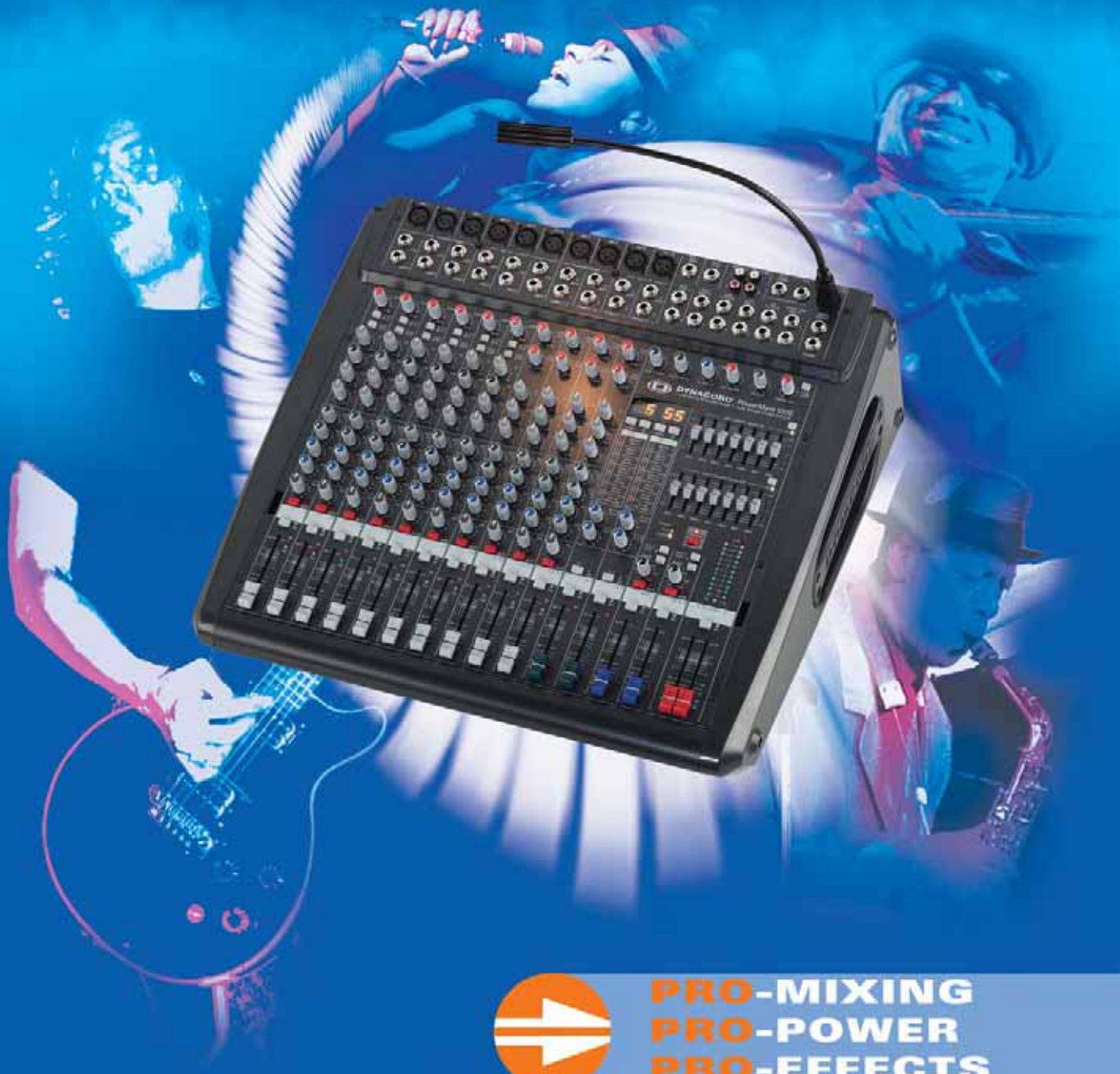




The power and the beauty!



PRO-MIXING
PRO-POWER
PRO-EFFECTS

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ENGLISH



The Power and the Beauty!

The POWERMATE

The PowerMate has long been regarded as the epitome of a powered mixer, offering uncompromised professional quality in every department: professional components, professional features, professional reliability. With well over 80,000 units already sold, the PowerMate is one of the most important products in the pro audio sector — not just the biggest selling but undisputedly the best product of its kind on the market. It's the Formula One of power mixers, so it's hardly surprising that the PowerMate has won numerous awards and come out on top in countless comparative tests. But aside from its quality, it's the fact that it matches perfectly the needs of its users that makes the PowerMate the outstanding solution for a wide range of professional sound reinforcement applications. Now, after many extraordinarily successful years, the PowerMate has undergone a metamorphosis from which it emerges, more powerful, more fully-featured, and more elegant than ever before: the Power and the Beauty.

What makes a PowerMate a PowerMate?

All the function groups of the PowerMate are 100% professional in terms of their design and specification. First comes the mixing section, where you will find high-quality, discrete microphone preamps, new, dust-

proof ALPS faders (specially developed for the PowerMate) with very high attenuation even in the HF range, 48V phantom power switchable to the channels in groups of six and a dynamic range that would put most dedicated professional mixers to shame. AUX 3+4 are separately switchable pre/post fader. Then come the ultra-efficient Class H power amplifiers, which now deliver 2 x 700 W into 4 Ohms (PM 1000 and 1600). They are equipped with dynamic limiters, an extensive range of protections and the patented LPN filter for clearly improved bass performance. Finally in the effects section, the two digital effects processors offer 99 studio quality presets each and are individually foot-switchable.

On top of these, there are many other useful features designed to solve special problems, such as the two feedback filters, the vocal voicing filter and the standby switch.

This is a powered mixer that can also be used as a pure mixer, with power amplifiers every bit as good as dedicated 19" concert sound amplifiers, and studio quality effects specially optimised for live performance. Housed in a robust case with a sturdy metal lid, the PowerMate is manufactured in Germany to the highest standards. Nothing else sounds like it. Nothing else performs like it. And nothing is as reliable.

PRO-MIXING
PRO-POWER
PRO-EFFECTS





The Power and the Beauty!



⇒ PRO-MIXING

The discrete microphone preamps of the PowerMate 1000 and PowerMate 1600 combine outstanding audio quality with extremely low noise and distortion, setting new standards in professional mixing technology. Ergonomically designed gain controls with a range of 60 dB, group-switchable phantom power, vocal voicing filters, 3-band EQ with semiparametric mids, four aux sends, PFL, Mute, dust-proof ALPS faders, 2 x 7-band graphic EQs, feedback filters and four stereo channels are just some of the other professional features.

⇒ PRO-POWER

The integrated high-efficiency Class H power amplifiers deliver an impressive 2 x 700 watts into 4 ohms and an absolutely safe 2 x 870 watts into 2.66 ohms with comparatively little heat build-up. All the protective circuits with which the Dynacord 19" amplifiers are equipped are present here, including protections against overheating, short-circuits and DC voltage and HF and back EMF protection. The flow of current at power up is limited and there is a short delay before power is switched to the loudspeaker outputs. An LPN filter and a super-fast dynamic audio limiter are further Dynacord-typical features.

⇒ PRO-EFFECTS

Two parallel and individually controlled 24-bit stereo digital effects devices with 48-bit algorithms offer a total of 2 x 99 live-optimised presets in studio quality. User-friendly Up/Down keys are used to select between room reverb, plate reverb, echo reverb, chorus reverb, mono/stereo delay, modulated delay effects (like chorus and flanger) and a large number of other special effects. Your preferred starting presets can be stored in program mode so as to be instantly available next time you switch on the device. The effects returns can be switched into or out of the signal path using either one footswitch for both of the integrated effects devices or a separate footswitch for each.



SYSTEM DETAILS & FEATURES

MIC / LINE CHANNELS

The MIC/LINE channels of the PowerMate are outstandingly well-equipped and offer a multitude of useful extras. To allow the use of condenser microphones, phantom power can be switched to the channels in groups of six. Inserts in each mono channel permit the external processing of the microphone signals. Ergonomically designed GAIN pots with a range of 60 dB plus Signal Present and Peak LEDs beside the faders provide optimum control over the performance of the discrete microphone pre-amps. A switchable 80 Hz LO-CUT FILTER is provided for the suppression of low frequency noise. The 3-band EQ section includes a sweepable (100 Hz – 8 kHz) semi-parametric MID, a LO-SHELV at 60 Hz and a HI-SHELV at 12 kHz with a control range of +/- 15 dB in each case. AUX1 and AUX2 are switched post-fade and control the level of signal sent to the onboard effects devices FX1 and FX2. AUX3 and AUX4 are designed to be switched pre-fade for separate monitor mixes but can also be switched post-fade to supply additional effects devices in the sum. The channel strips also include PAN pots as well as PFL and MUTE switches, each with its own LED. Ultra-high quality dust-protected ALPS faders with extremely high maximum attenuation levels control the ratios of the individual channels.

FEEDBACK FILTER



The AUX3 and AUX4 auxiliary sends offer switchable anti-feedback filters, sweepable over the range 80Hz – 7.7kHz, for the swift and precise elimination of feedback between the microphones and monitor loudspeakers (a common problem) and for which an additional equaliser would otherwise be needed.

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VOCAL VOICING FILTER



With its special asymmetric structure, this filter, which can be switched to each mic-channel separately, emphasizes the frequency range in which the fundamental tones

of the human voice are located, raising the profile of the vocals within the overall mix. This type of contouring, which cannot be achieved using ordinary EQ, solves the problem of 'thin voices'.

MIC / STEREO LINE CHANNELS

The MIC/STEREO LINE channels differ from the mono channels in having separate GAIN MIC and LINE TRIM controls instead of the LO-CUT and VOCAL VOICING switches, 3-band equalisation (LO, MID and HI) and a BALANCE control instead of the PAN control offered by the mono channels.

MASTER SECTION

In the master section, too, you'll find PowerMates are exceptionally well-equipped. Faders are provided for the returns of the integrated effects devices, FX1 and FX2, as well as for the AUX3 and AUX4 sends and the stereo MASTER. The left and right channels of the 2 x 7-band equaliser used to neutralise problematic room acoustics (with frequency bands optimised for live performance) are separately switchable and adjustable. The AUX1 and AUX2 sends can be used to supply separate effects devices, either parallel to the internal ones or on their own, and have individual level controls. There is an additional MONO OUT, switchable pre/post. Power, Limit and Clip LEDs and a 2 x 12 LED Master Display provide a clear overview of the operating state. The 2-TRACK RETURN allows a line input signal — e.g. from a tape machine — to be fed into the sum or AUX3 and AUX4 monitor sends with individual level control. Also on hand is a STANDBY switch that eliminates the mixer section altogether, in which case only the signals from the 2-TRACK RETURN are fed to the built-in amplifier.

STAGELIGHT

To permit the swift and sure operation of the PowerMate on dark stages during live performances, a socket is provided for an XLR gooseneck light (12V, 2.4W) which is available as an optional extra.



PROTECTIVE LID



Included in the delivery is a robust, metal lid that clicks shut and allows the PowerMate to be transported safely without the need for an additional flight-case.



HANDLES

Easy and problem-free handling is assured by a beam running the entire width of the device at the front and the ergonomically-shaped handles recessed into the sides.



POWER

At 2 x 700 W into 4 ohms and 2 x 870 W into 2.66 ohms, both PowerMates output considerably more power than conventional power mixers but with extremely low distortion and intermodulation values. Special pole zero compensators — Dynacord's patented LPN filter — eliminate transient response distortion typically introduced by PA speakers and provide a degree of punch and impulse-fidelity in the bass reproduction never before achieved.



Maximum Midband Output Power, 1 kHz, THD=1%, Dual Channel		
into 4 Ohms	2 x 700 W	
into 8 Ohms	2 x 430 W	
Maximum Midband Output Power, 1 kHz, THD=1%, Single Channel		
into 4 Ohms	2 x 870 W	
into 8 Ohms	2 x 500 W	
Rated Output Power, THD=0.1%, Single Channel		
into 4 Ohms	2 x 700 W	
into 8 Ohms	2 x 350 W	
Maximum Output Voltage of power amplifier, no load		
	70 Vrms	
THD at 1kHz, MBW=80kHz		
MIC input to Main L/R output, +16 dBu, typical	< 0.005%	
Power amplifier input to Speaker L/R output	< 0.01%	
DIM 30, power amplifier	< 0.01%	
IMD-SMPTE, power amplifier, 60Hz, 7 kHz	< 0.01%	
Frequency Response, -3dB ref. 1kHz		
Any input to any Mixer output	15Hz ... 80kHz	
Any input to Speaker L/R output	20Hz ... 70kHz	
Crosstalk, 1kHz		
Fader and AUX-Send attenuation	> 85 dB	
Channel to channel	> 80 dB	
CMRR, MIC input, 1kHz	> 80 dB	
Input Sensitivity, all level controls in max. position		
MIC input	-74 dBu (155 µV)	
LINE Input (Mono)	-54 dBu (1.55 mV)	
LINE Input (Stereo)	-34 dBu (15.5 mV)	
Power Amplifier Input	+6 dBu (1.55 V)	
Maximum Level, mixing desk		
MIC inputs	+ 21 dBu	
Mono Line inputs	+ 41 dBu	
Stereo Line inputs	+ 30 dBu	
All other inputs	+ 22 dBu	
Record Send output	+ 14 dBu	
All other outputs	+ 22 dBu	
Input Impedances		
MIC	2 kΩ	
Insert Return	2.2 kΩ	
EQ Input and 2 Track Return	8 kΩ	
All other inputs	> 15 kΩ	
Output Impedances		
Record Send	1 kΩ	
Phones	47 Ω	
All other outputs	75 Ω	
Equivalent Input Noise, MIC Input, A-weighted, 150 Ω		
	-130 dBu	
Noise, Channel inputs to Main L/R outputs, A-weighted		
Master fader down	1000	1600
Master fader 0 dB, Channel fader down	-95 dBu	-95 dBu
Master fader 0 dB, Channel fader 0 dB	-90 dBu	-88 dBu
Master fader 0 dB, Channel fader 0 dB, Channel gain unity	-83 dBu	-82 dBu
Signal/Noise-Ratio, power amplifier, A-weighted		
	105 dB	
Equalization		
LO Shelving	± 15 dB / 60 Hz	
MID Peaking, mono inputs	± 15 dB / 100 Hz .. .8 kHz	
MID Peaking, stereo inputs	± 12 dB / 2.4 kHz	
HI Shelving	± 15 dB / 12 kHz	
Master EQ, 2x7-band, 63, 125, 400, 1k, 2k5, 6k, 12k Hz	± 10 dB / Q=2.0	
Power Consumption at 1/8 maximum output power, 4Q		
	640 W	
Dimensions, (W x H x D), mm		
PM1000	514.5 x 210.3 x 478.7	
PM1600	673.5 x 210.3 x 478.7	
Weight, without lid / including lid		
PM1000	20 kg / 21 kg	
PM1600	23.5 kg / 25 kg	
Optional		
RMK-1000 (Rack-Mounting-Kit PowerMate 1000)	112 698	
Gooseneck lamp, 12V/2.4W, 12", XLR	112 700	
FS11 (Footswitch with LED)	110 693	

* Mixing desk in rated condition, Unity Gain (MIC Gain 20 dB), all faders position 0 dB, all pots in mid position, Master fader + 6dB, amplifier rated output power into 8 ohms, Dual channel, unless otherwise specified.



6 MIC/LINE+ 4 MIC/STEREO LINE
PowerMate 1000-2 230 V #112926



12 MIC/LINE+ 4 MIC/STEREO LINE
PowerMate 1600-2 230 V #112960

RACK MOUNTING

An optional kit is available for mounting the PowerMate 1000 in a 19" rack RMK-1000 (# 112 698)





POWERMATE 600



The integration of mixing console, power amplifier and effects devices in a compact and modern unit reaches a new high with the PowerMate 600. With 6 Mic/Line as well as two Stereo/Line channels, two mixable 24-bit effects devices, a 7 band master equalizer and integrated 2 x 300 W power amplifier, the PowerMate 600 is the absolute allround solution for a multitude of applications,

ideally suited to the needs of both single entertainers and small bands. For schools, clubs or similar institutions, the PowerMate is the perfect tool for a wide range of sound reinforcement tasks. Safe and easy to carry, fast and simple to set up, intuitive and uncomplicated to operate, the smallest member of the PowerMate family delivers Dynacord quality in a compact, elegant frame.



PRO-MIXING

All the features of a professional mixing console but without the bulk. With six Mic/Line and two Stereo/Line channels, three-band EQ in every channel, separate effects and monitor sends, a 7-band master equalizer and LED level meters in the master as well as every channel, the Power Mate 600 is a joy to use in any situation. There are other convenient features, too, such as a switchable Standby function, which allows you to feed the signal from a tape or MD recorder directly to the amplifiers without disturbing your mixer settings, as well as an additional mono output (with its own level control) to provide sound reinforcement to additional rooms and a headphone socket (also with its own level control).

PRO-POWER

Despite its compact dimensions, the PowerMate 600 is rated at 2 x 300 watts into 4 ohms and therefore offers large dynamic reserves with exceptionally low distortion and intermodulation values. All the safety features of Dynacord's 19" amplifiers are on board as well as the patented LPN Filter technology for ultra-powerful bass reproduction and a superfast dynamic audio limiter, whilst the power supply offers the legendary 30% headroom.

PRO-EFFECTS

Two parallel and individually controlled 24-bit stereo digital effects devices with 48-bit algorithms offer a total of 198 live-optimised presets in studio quality. User-friendly Up/Down keys are used to select between room and plate reverb, echo reverb, mono/stereo delay and a large number of other special effects. Your preferred starting presets can be stored in program mode so as to be instantly available next time you switch on the device. The return signals of both effects devices can be switched singly or jointly into or out of the signal path either at the device or using a footswitch.

SPecs PowerMate 600

Maximum Midband Output Power, 1 kHz, THD=1%, Dual Channel	
into 4 Ohms	2 x 270 W
into 8 Ohms	2 x 180 W
Maximum Midband Output Power, 1 kHz, THD=1%, Single Channel	
into 4 Ohms	2 x 340 W
into 8 Ohms	2 x 200 W
Rated Output Power, THD=0.1%, Single Channel	
into 4 Ohms	2 x 300 W
into 8 Ohms	2 x 150 W
Maximum Output Voltage of power amplifier, no load	
	43 Vrms
THD at 1kHz, MBW=80kHz	
MIC input to Main L/R output, +16 dBu, typical	< 0.006%
Power amplifier input to Speaker L/R output	< 0.08%
DIM 30 , power amplifier	
	< 0.03%
IMD-SMPTE , power amplifier, 60Hz, 7 kHz	
	< 0.2%
Frequency Response , -3dB ref. 1kHz	
Any input to any Mixer output	15Hz ... 60kHz
Any input to Speaker L/R output	30Hz ... 40kHz
Crosstalk , 1kHz	
Fader and AUX-Send attenuation	> 80 dB
Channel to channel	> 70 dB
CMRR , MIC input, 1kHz	
	> 80 dB
Input Sensitivity , all level controls in max. position	
MIC input	-74 dBu (155 μ V)
LINE Input (Mono)	-54 dBu (1.55 mV)
LINE Input (Stereo)	-34 dBu (15.5 mV)
Power Amplifier Input	+6 dBu (1.55 V)
Maximum Level , mixing desk	
MIC inputs	+ 11 dBu
Line inputs	+ 30 dBu
All other inputs	+ 20 dBu
Record Send output	+ 14 dBu
All other outputs	+ 20 dBu
Input Impedances	
MIC	1.8 k Ω
2 Track Return	10 k Ω
All other inputs	> 15 k Ω
Output Impedances	
Record Send	1 k Ω
Phones	47 Ω
All other outputs	75 Ω
Equivalent Input Noise ,	
MIC Input, A-weighted, 150 Ω	-130 dBu
Noise , Channel inputs to Main L/R outputs, A-weighted	
Master fader down	-90 dBu
Master fader 0 dB, Channel fader down	-89 dBu
Master fader 0 dB, Channel fader 0 dB, Channel gain unity	-83 dBu
Signal/Noise-Ratio ,	
power amplifier, A-weighted	105 dB
Equalization	
LO Shelving	\pm 15 dB / 60 Hz
MID Peaking	\pm 15 dB / 2.4 kHz
HI Shelving	\pm 15 dB / 12 kHz
Master EQ, 7-band, Stereo	\pm 10 dB
Phantom Power	
all MIC inputs	+24 Vdc
Power Requirements	
Factory preset, 50 Hz ... 60 kHz	100V, 120V, 230V, 240V
Power Consumption	
at 1/8 maximum output power, 4 Ω	450 W
Dimensions , (W x H x D), mm	
	455.5 x 175.8 x 340.6
Weight , including lid	
	13 kg
Optional	
RMK-600 (Rack-Mounting-Kit PowerMate 600)	112 741
Gooseneck lamp, 12V/2.4W, 12", XLR	112 700
FS11 (Footswitch with LED)	110 693

* Mixing desk in rated condition, Unity Gain (MIC Gain 20 dB), all faders position 0 dB, all pots in mid position, Master fader + 6dB, amplifier rated output power into 8 ohms, Dual channel, unless otherwise specified.



6 MIC/LINE + 2 STEREO LINE
PowerMate600-2 230V #112959

RACK MOUNTING

The optional kit RMK-600 (# 112 741) is available for mounting the PowerMate 600 in a 19" rack. (PowerMate1000 shown in picture)



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