Safety instructions

1 All safety instructions, warnings and operating instructions must be read first.

2 All warnings on the equipment must be heeded.

3 The operating instructions must be followed.

4 Keep the operating instructions for future reference.

5 The equipment may never be used in the immediate vicinity of water; make sure that water and damp cannot get into the equipment.

6 The equipment may only be installed or fitted in accordance with the manufacturers recommendations.

7 The equipment must be installed or fitted such that good ventilation is not obstructed in any way.

8 The equipment may never be installed in the immediate vicinity of sources of heat, such as parts of heating units, boilers, and other equipment which generates heat (including amplifiers).

9 Connect the equipment to a power supply of the correct voltage, using only the cables recommended by the manufacturer, as specified in the operating instructions and/or shown on the connection side of the equipment.

10 The equipment may only be connected to a legally approved earthed mains power supply.

11 The power cable or power cord must be positioned such that it cannot be walked on in normal use, and objects which might damage the cable or cord cannot be placed on it or against it. Special attention must be paid to the point at which the cable is attached to the equipment and where the cable is connected to the power supply.

12 Ensure that foreign objects and liquids cannot get into the equipment.

13 The equipment must be cleaned using the method recommended by the manufacturer.

14 If the equipment is not being used for a prolonged period, the power cable or power cord should be disconnected from the power supply.

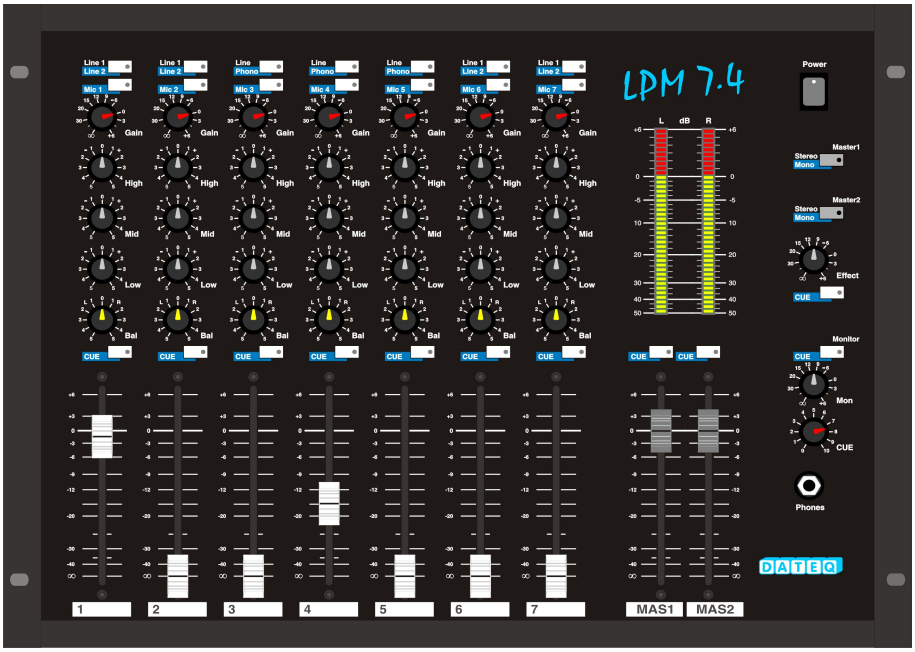
15 In all cases where there is a risk, following an incident, that the equipment could be unsafe, such as:
- if the power cable or power cord has been damaged
- if foreign objects or liquids (including water) have entered the equipment
- if the equipment has suffered a fall or the casing has been damaged
- if a change in the performance of the equipment is noticed

it must be checked by appropriately qualified technical staff.

16 The user may not carry out any work on the equipment other than that specified in the operating instructions.

DATEQ
audio technologies

LPM 7.4: Multipurpose Compact Mixing Console



The LPM 7.4 is a very versatile, 7 channel stereo mixer with an extraordinary high quality. At least 14 stereo signals and 7 microphones can be connected simultaneously. Herewith the LPM 7.4 is introducing a new standard for professional audio.

Each channel can handle three different audio signals. By pressing the button you can switch between a microphone or a line input. When the line-input is selected a second button makes it possible to switch between line 1 and line 2 input. However channels 3, 4 and 5 have one line and one phono-input. This means you can have 21 audio-inputs within reach! Also there are 2 independent professional stereo Masters available, both come with a balanced output on XLR-Male connectors; as well as an unbalanced output on cinch-connectors.

Another nice feature of the mixer is the stereo effect-send. Each channel can be configured to send it's signal to the effect-send output or not. This means that the effect-send output can also be used as a cleanfeed.

The large 2x40 segment VU-meter is switchable between master and PFL. All switches on the master-section have a LED-indicator. Phantom power is available on each microphone channel, and can be switched on with an internal jumper. The master has a noise-gate which can be disabled with an internal jumper.

Thanks to the internally modular setup, the extreme solid construction and by using only high-performance components we made the LPM 7.4 an ideal partner for 'on the road'. Of coarse the LPM 7.4 has the specific characteristics of a 'real DATEQ mixer', which means years of satisfactory mixing!

Because of the universal design the LPM 7.4 has a wide area of applications. A perfect house-mix, AV-post production, disco or a multifunctional audio installation: The LPM 7.4 can handle it...

Product support

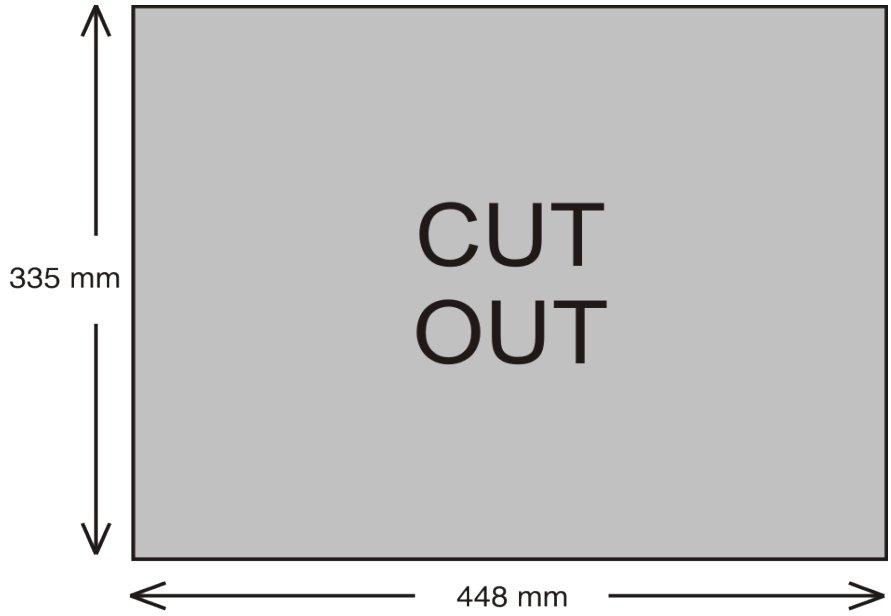
For questions regarding the LPM 7.4, accessories and other products, please contact

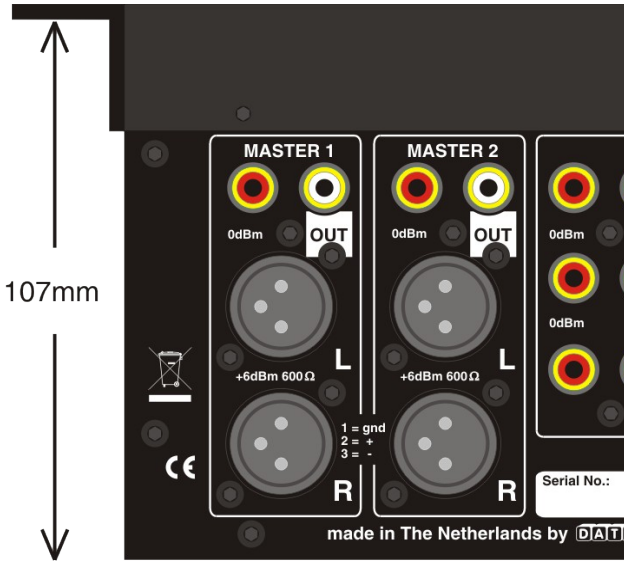
Dateq Audio Technologies B.V.
De Paal 37
1351 JG Almere, The Nederlands

Telephone: +31 36 5472222
Fax: +31 36 5317776
E-mail: info@dateq.nl
Internet: www.dateq.nl

Mounting the LPM 7.4

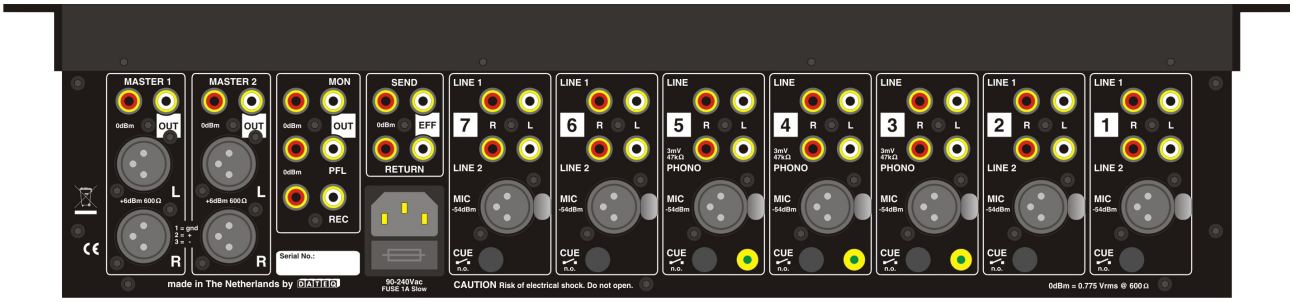
The LPM 7.4 can be used as stand-alone or built-in (mounted). The housing fits in an opening of 448 x 335 x 107mm (W x H x D). See also the drawings below. When mounting take into account the protruding connectors on the backside of the LPM 7.4.





LPM 7.4 Connectorboard

The connections for all audio in- and outputs are situated at the backside of the LPM 7.4. The mains inlet and the fuse are also located here.



L/ R Balanced Master 1/ Master 2 Outputs (XLR 3-pins male)

Pin	Function	Type
1	Audio GND	A-GND
2	Audio +	Out
3	Audio -	Out

Out/ Mon/ Rec/ Effect send Stereo Outputs (Cinch female)

Pin	Function	Type
Tip	Audio +	Out
Shield	Audio GND	A-GND

Phones Output (TRS Jack 3p)

Pin	Function	Type
Tip	Left	Out
Ring	Right	Out
Sleeve	Audio GND	A-GND

Phono/ Line 1/ Line 2/ Effect Return Stereo Inputs (Cinch female)

Pin	Function	Type
Tip	Audio +	In
Shield	Audio GND	A-GND

Balanced Mic inputs (XLR 3-pins female)

Pin	Function	Type
1	Audio GND	A-GND
2	Audio +	In
3	Audio -	In

Cue Output (TS Mini Jack 2p)

Pin	Function	Type
Tip	N.O. (switch contact)	Out
Sleeve	Common (Switch contact)	Out

Connections

BALANCED MASTER L / R Electronically balanced master outputs for the left and right channel on XLR connectors for Master 1 & 2. This type of output guarantees a perfect signal transport, even when long audio cables are being used. These outputs are equipped with relays to prevent audible 'blobs' on connected equipment when the LPM 7.4 is switched on or off.

MASTER 1 & 2 Unbalanced master output on cinch-connectors. Can be used to connect the LPM 7.4 to an amplifier or a recorder.

MON Unbalanced monitor output on cinch connectors. Can be used to connect a second amplifier with monitor speakers for the DJ or a second room.

PFL Unbalanced output on cinch connectors. This output follows the pre-fader listening. This output can be used to connect an (monitor) amplifier or recorder.

REC Unbalanced recorder output on cinch-connectors. This output is fixed-level (independent from the master volume control).

EFFECT SEND Stereo postfader effect sends from microphone inputs. This output can also be used as a cleanfeed output.

EFFECT RETURN Stereo effect return input. Can also be used as an extra input.

CHANNELS 1..7 Cinch connectors for all stereo channels. Channel 1, 2, 6 and 7 have two identical line inputs. Channels 3, 4 and 5 have both an input for turntables (phono) and an input for equipment like CD-players, samplers, keyboards and recorders (line). When turntables are being used, these must be earthen by means of the earth-clamp.

CHANNELS 1..7 Electronically balanced microphone input on XLR connector. When used unbalanced, connect pin 1 and 3 with the shielding of the cable. Both channels are equipped with a secondary stereo line input.

CUE Channel 3, 4 and 5 are equipped with a remote start connector. As soon as the fader of the concerning channel is opened, the contact between tip and ring of this mini jack (3,5 mm) connection is made. With this the connected equipment can be remote started.
The remote-connection is NOT suitable for switching mains voltage!

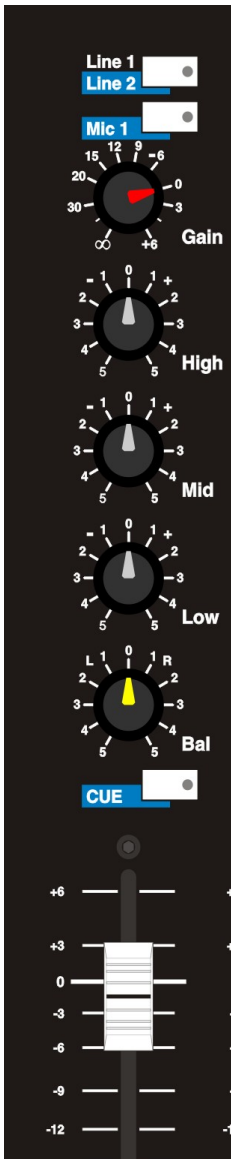
FUSE Mains fuse. Dimension 5x20mm (small), 315mA slow.

MAINS Euro-style mains inlet. Before connecting the LPM 7.4for the fist time, check if your LPM 7.4 is meant for the mains voltage in your country (label on the connector board at the rear).

For all cinch-connectors:
White = Left, Red = Right.

Microphone /line channels (1, 2, 6 and 7)

These channels are equipped with a double input selector which makes it possible to easily switch between 2 line inputs (such as CD-players, MD recorders) and a microphone source, as well as a Gain control, 3-way tone control, balance and pre-fader listening.



Line 1 / Line2 Input selector. When pushed line 2 is selected. The LED will light up when the audio-level somewhere in this module is too high. Because of the high audio level the signal can be distorted.

MIC Input selector. When pushed (activated LED) the MIC input is activated.

GAIN Determines the pre-adjustment of the volume for the microphone as well as both stereo line inputs.

HIGH High tone control.

MID Mid tone control.

LOW Low tone control.

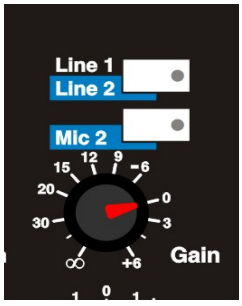
BALANCE Adjusts the balance between the left and right audio channel.

PFL(CUE) Switches pre-fader listening on and off indicated by a LED inside the button. When this function is active, the headphone will switch to PFL and all the inputs with active PFL can be heard even though the fader is closed. When no PFL has been selected on any channel, the master signal can be heard via PFL.

FADER 100 mm fader through which the volume of this channel can be determined precisely.

Combined Turntable-/ line-/ microphone channels (3, 4 and 5)

These three stereo channels have three inputs (phono for turntables, line for equipment like CD-players and MD-recorders and mic for a microphone input), Gain control, 3-way tone control, balance and pre-fader listening.



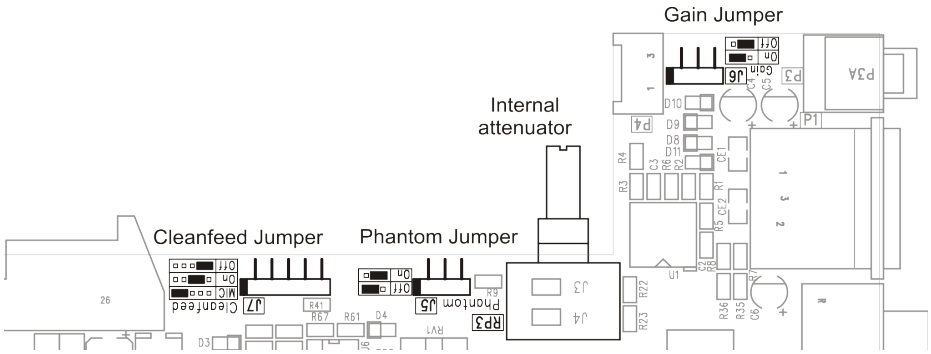
PHONO / LINE Input selector. Normally the line input is selected. When pushed the phono input is selected. The LED is an overload indicator.

MIC Input selector. When pushed the MIC input will be activated.

GAIN Determines the pre-adjustment of the volume for the microphone as well as both stereo PHONO/line inputs.

Effect sends (Cleanfeed)/ Phantom and jumpers

For each channel, with three internal jumpers, the Effects-sends/ Cleanfeed, the Phantom- power and extra microphone Gain can be selected. To adjust these settings the mixer has to be opened.
See the drawing.



Cleanfeed. For each channel jumper J7 determines if it sends it's signal to the effect-send output or not. It's also possible to send the signal to the effect output only when the microphone input is active.

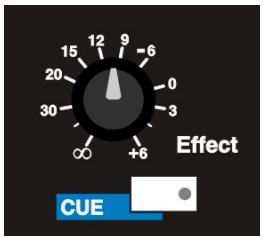
Cleanfeed off: The channels signal is not send to the effect-send output. This is the default setting

Cleanfeed on: The channels signal is send to the effect-send output. This can be used when the effect-send is used as a cleanfeed. The signal of this channel is send to the telephone hybrid. The cleanfeed of the channel to which the hybrid is connected must be set to off.

Cleanfeed MIC: The channels signal is send to the effect-send output only when the microphone input is selected. This can be used when an effect-generator (echo etc.) is connected to the effect-sends output.

The effect-send output is post-fader: the volume is dependent of the fader.

The output of the effect-generator can be connected to the effect-return input. This return input can if needed also be used as an extra input.



Phantom. For each channel jumper J5 determines if phantom-power is switched on or off.

Microphone Phantompower is switched on.

Microphone Phantompower is switched off. This is the default setting.

Extra Gain. For each channel jumper J6 determines if 10dB extra microphone gain is switched on or off.

10dB extra microphone gain is switched on.

10dB extra microphone gain is switched off. This is the default setting.

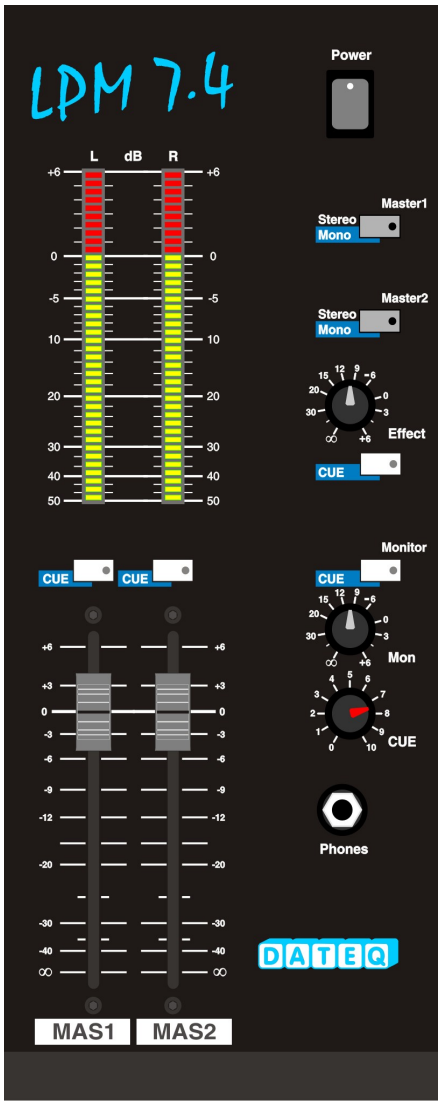
Internal attenuator

Each input-module has an internal attenuator to prevent the input-signal from being distorted. By default the attenuator is disabled (potentiometer turned clockwise).

When more attenuation is needed the LPM 7.4 has to be opened. The attenuation can be adjusted for each input-module separately. Max. internal attenuation is 40dB.

Master

The master section has volume controls for the various outputs of the LPM 7.4 and a 2 x 40 segments LED-bar meter which precisely indicates the Master or PFL signal level.



POWER Mains power switch.

STEREO/MONO Master 1 & 2 Switch to change the master 1 and master 2 signal between stereo and mono indicated by a LED inside the button.

EFFECT Volume control for the stereo Effect-return input.

CUE Switch to listen to Effect-return pre-signal.

Monitor CUE Switch to listen to the monitor post-signal, indicated by a LED inside the button. **This function is only active if all input channel and effect PFL(CUE) buttons are off**.

MON Volume control for Monitor output.

CUE Volume control for the headphone output.

PHONES Stereo headphone output.

CUE (Mas 1& 2) Switch to listen to post-signal of Master 1 or Master 2, indicated by a LED inside the button. **This function is only active if all input channel and effect PFL(CUE) buttons are off**.

MAS 1 Fader which controls the output volume of Master 1 output (both balanced and unbalanced).

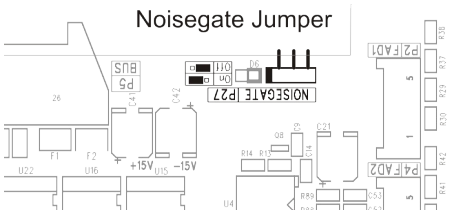
MAS 2 Fader which controls the output volume of Master 2 output (both balanced and unbalanced).

Meter

2 x 40 segments LED-indication of the master or PFL level. An operational level of approximately 0dB is normal.

Noisegate jumper

The noisegate mutes the master-section if no input signals are present. Jumper P27 in the mastersection determines if the noisegate is switched on or off. See the drawing



Noisegate is switched on. This is the default setting

Noisegate is switched off.

Technical specifications

MONO Inputs

MIC (channel 1..7) ..... XLR-3 female, electronically balanced
- Signal level ..... -54 dB @ 600 Ohm variable
- Impedance ..... 3 kOhm nominal
- Input noise ..... < -107 dB (IHF-A)
- Headroom ..... +20 dB
- Phantom power ..... +24 Vdc

STEREO Inputs

PHONO (Channel 3, 4 and 5) ..... Cinch
- Signal level ..... -42 dB @ 47 kOhm variable
- Impedance ..... 47 kOhm/ 25pF nominal
- Input noise ..... < -80 dB (IHF-A)
- Channel separation ..... > 76 dB @ 1 kHz

LINE (channel 1..7) ..... Cinch
- Signal level ..... 0 dB @ 600 Ohm variable
- Impedance ..... 10 kOhm nominal
- Input noise ..... < -80 dB (IHF-A)
- Channel separation ..... > 80 dB @ 1 kHz

TONE CONTROL
- High ..... 12 kHz ±12 dB, Shelving
- Mid ..... 1400 Hz ±12 dB, Bell
- Low ..... 50 Hz ±15 dB, Shelving

OUTPUTS

MASTER 1 & 2 (XLR) ..... +6 dB balanced/ 600 Ohm/ variable
MASTER 1 & 2 / MONITOR / PFL (Cinch) ..... 0 dB unbalanced/ 600 Ohm/ variable
REC (Cinch) ..... 0 dB unbalanced/ 600 Ohm/ fixed
STEREO EFFECT SEND (Cinch) ..... 0 dB unbalanced/ 600 Ohm/ postfader
PHONES (6,3 mm TRS Jack) ..... 0,3 W @ 4 Ohm/ Impedance 4..32 Ohm

FREQUENCY RESPONCE

Input to Master ..... 20 Hz...25 kHz -3 dB
THD+N ..... 0,007 % nominal

GENERAL

POWER SUPPLY
- Mains voltage ..... 230 VAC +/-10% @ 50 Hz
- Power consumption ..... 20 W

FADERSTART

(channel 3 t/m 5) ..... Maximum ratings: 48V/ 0,1A; 3,5 mm jack

SIZE AND WEIGHT
- Front ..... 483 x 355 mm (W x H) = 19”, 8HE
- Cutout ..... 448 x 335 mm (W x H)
- Depth ..... 107 mm
- Weight ..... 6.4 kg Net.