DESCRIPTION

First of all we should like to thank and congratulate you for choosing the power amplifiers of the M SERIES.

The power amplifiers of the M SERIES meet the most stringent requirements of tough
Touring applications.they are protected against high-temperature,overload,shorted outputs,radio frequncy interference and DC faults.The power transistors are protected form back-EMFdamage by means of an additional protective circuit.For the so-called sofe-start the power outputs are switched on delayed via relays. An inrush current limiter circuit prevents the mains fuses form being blown.

Maximum precision is alos guaranteed as regards mechanical constuction and finish.Therobust steel chassis featureds remarkable torsion resistance and is part icularly designed to cope with the tough wear and rear associated with going on tour in the rock & rol business.Thermal stability id guaranteed by seeveral low-noise 3-stage fans which also means that the amplifiers asn be used inside the studio.

Comparator circuits constantly monitor the power amplifiers input and output signal and control the internal limiters in case of non-linesr operating conditions.They protect the loudspeakers from overload due to clipping of the amplifier.The power amplifiers feature excellent transmission properThese power amplifiers topology also makes for extremely low distortion rates.Distortion factor(THD),intermodulation distortion(AMPTE-IM)and transient intermodulation distortion(DIM 30 and DIM100) are so low that they detectable with the most sophisticated measuring equipment.Generously dimensioned powersupplies with low-leakage toroidal-core transformers provide consider-able headroom well above the nominal ratings.V/I foldback limiter circuits were deliberately not included in the power amplifiers to facilitate operation at complex loads up to a phase angle of +/-90.
°

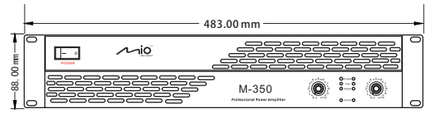
The inputs are electronically balanced on XLR connectors.(Isoation transformers can be retrofitted).Direct Outs in the form of XLR connectors (male),to daisy-chain the signal,are also standard features.The modes DUAL/Stereo or PARALLEL/Mono can be selected via the Input Routing Switch.Furthermore,the power amplifiers can also be operated in "Mono Bridged" mode.

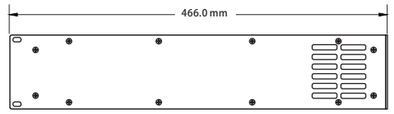
The front panel accommodates the dB-calibrated input Gain controle which are designed as particularely precise and safe-to-operate detented potentionmeters.The LED display provides information about the power amplifersoperating status.For the two channels,they indicate readiness to operate,whether there is a signal at the input or output,then the Limiters have been activated and whether one of the protective circuits has been triggered.Thepower outputs Channel A,Channel B andBridged Out are available on Speakon connectors.The real panel also accommodates the ON/OFF switches for the integrated Hi and Lo cut filters,a groundlift switch which separates the chassis from the circuit ground thus helping to prevent hum loops and the operating mode selector for mono bridged operation.All the power amplifiers can be used in normal applications on loads as 2 ohms and in bridged mode down to a minimum of 4 ohms.They also festure extremely quiet fans with front-to-rear airflow,facilitating operation in large and narrow amplifier racks.

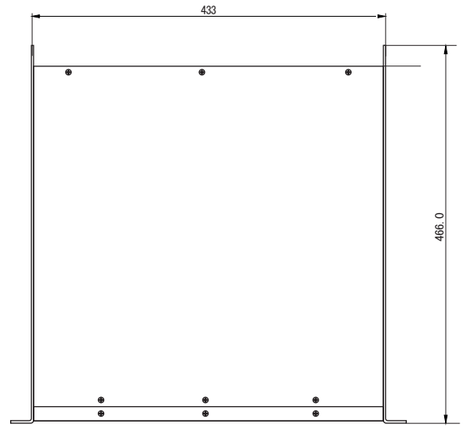
This Owners Manual is meant to help you familiarize yourself with all the M SERIESother features.Please read it through caregully and we guarantee that your new power amplifier of the M SERIES from us will give you great pleasure.

DIMENSIONS

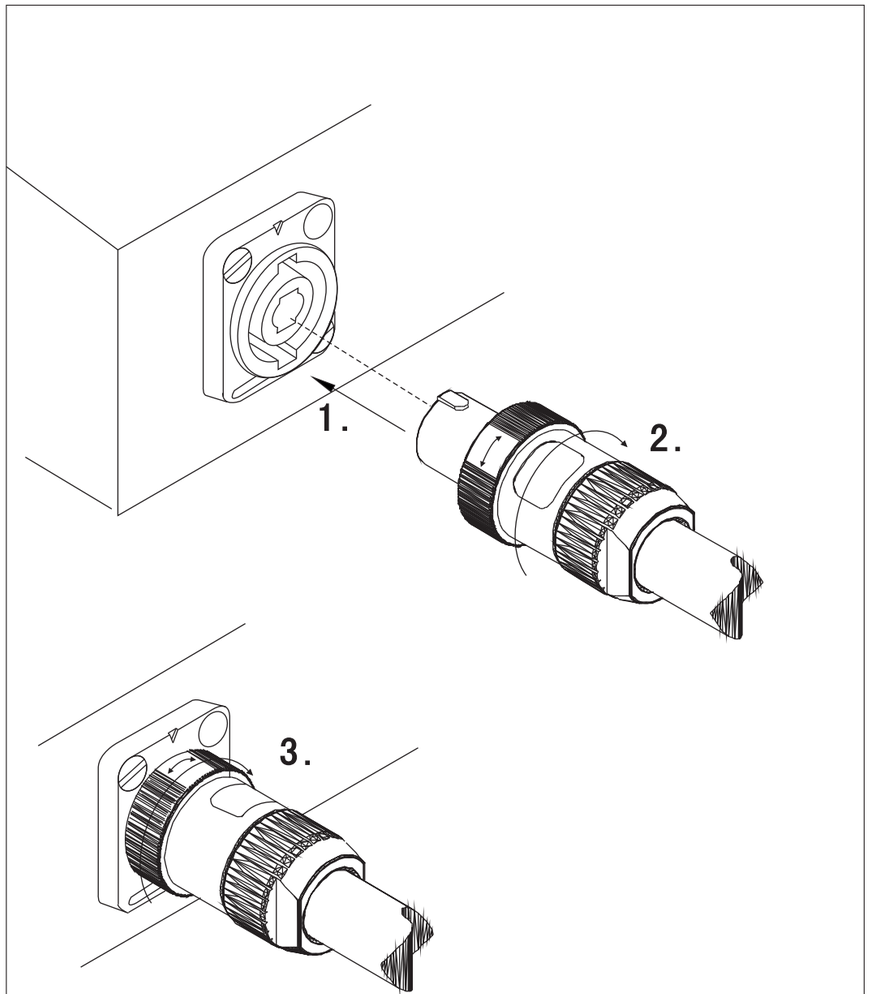
Dimensions(mm)







SYSTEM CONNECTION



1. Insert piug into socket.

CONTENTS

IMPORTANT NOTE

ATTENTION: This unit must be protected from damp because of the risk of fire and the possibility of electric shocks.

1. Make sure that you have the correct mains voltage. Only operate the unit at the mains voltage marked on the rear panel.

2. Make sure that nothing especially no metal objects are inserted into the device. This could result in electric shock or malfunction.

3 . If the unit is subjected to extreme fluctuations of temperature e.g.On being transported from outside into a heated room,condensation can form.The unit should not be used until it has reached room temperature.

4. In the event of water or any other fluid being accidentally spilt on the unit switch the unit off immediately and send it to a qualified service workshop for inspection.

5. Make sure that the unit is always well ventilated and never exposed to direct sunlight

6. Do not use sprays to clean the unit as they have a detrimental effect on the unit and could ignite suddenly.

7. The machine use single power switch, please cut off the power before fix.

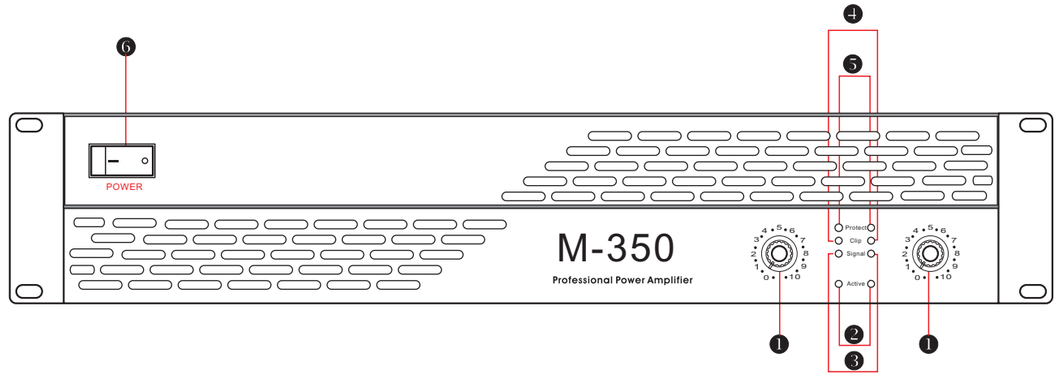
8. Please do not put the cup, vessel of flower or container above the machine, In case the leak out water then cause the leakage current off the machine.

SPECIFICATIONS

Professional Power Amplifier Specifications

Model	**M-350**
8Ω Stereo Power	**350W**
4Ω Stereo Power	**2x525W**
2Ω Stereo Power	**N/A**
8Ω Bridged Mono Power	**1040W**
4Ω Bridged Mono Power	**N/A**
IMD (rated 8Ω 60Hz~70KHz)%	0.05%
Input Impedance (balanced/unbalanced)	20kΩ/10kΩ
Input Sensitivity (rated power at 8Ω)	0dB/6dB/26dB
Input Connectors (ber channel)	Female XLR (pin 2+,configurable for pin 3+),TRS(tip+)
Output Connectors (ber channel)	Five-wey output binding posts,Speakon
Cooling	Three variable speed DC fans
Face panel LED Indicators	Protect LED, Clip LED, Signal LED, Power LED
Class	Bridge pattern enlarge
Protection	Temperatuer, DC,SuB/Ultea-sonic, Short circuit, IGM, Output
Frequency Response (+0/-0.3dB,1W/8Ω)	20Hz--20KHz
THD+N (Rated Power,4Ω/KHz)%	<0.05%
Signal Noise Ration(dB)	100dB
Input Impedance (balanced/unbalanced)	20KΩ/10KΩ
Input Sensitivity (rated power at 8Ω)	0.775V
Operating Voltage	~220-240V/50--60Hz
Dimennsions (Height x Width x Depth)mm	88x483x466mm
Gross Weight(Kg)	**18.5kg**

FRONT PANEL



1. Level control

Calibrated detente potentiometers to alter the total gain of the power amplifier . Ln order to avoid distortions in mixing consoles upstream , these controls should normally be positioned between 0dB and-6dB . The calibrated markings show the additional attenuation directly.

2.Active

This LED light up when the mains switch is pressed .If it does not light up ,the unit is not connected to the mains or the mains fuse has blown .

3.Signal

This LED lights up if a signal is present at the power amplifier output .The indicator goes off when the speaker line has shorted or a protective circuit has been activated thus indicating that there is no signal at the speaker output terminals .

4. Clip

This LED lights up if the limiter has been activated and the power amplifier is being operated at the clip level .If the LED flashes briefly ,this is not a cause for concern. If this LED is lit permanently ,the volume should be reduced to avoid overload damages to the connected loudspeaker systems.

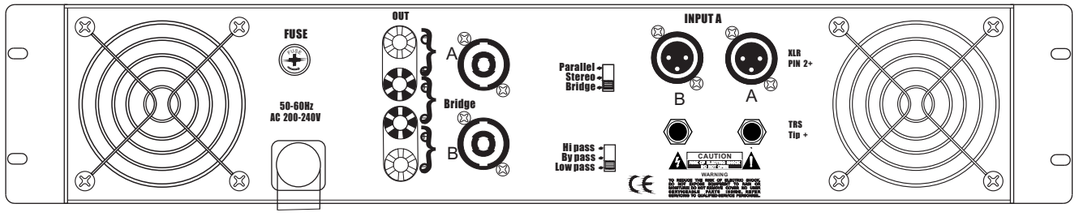
5.Protect

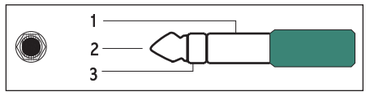
When this LED lights up during operation ,one of the protection circuits against over-temperature , overload ,shorted outputs ,radio frequency interference or DC faults has been triggered .The cause of the error e.g. shorted loudspeaker line must be remedied .In case of overheating ,wait a little until the amplifier switches back to operating mode itself .

6.Power Switch

The unit is switched on via the power switch. The loudspeaker outputs are switched on via delayed relays so that no startup transients are audible .A current limiter prevents startup peaks on the mains line and prevents the mains fuse from blowing .

REAR PANEL





POWER AMPLIFIER INPUT CONNECTORS

XLR connectors (male) are provided for "Looping" the signal to other power amplifiers .These are wired parallel to the XLR input connectors in each channel.

The inputs of the power amplifier are electronically balanced and wired according to IEC 268 .Isolation transformers can be retrofitted in order to avoid hum interference in larger sound reinforcement systems .Please contact your dealer if you have any problems.

Input wiring XLR

PIN 1: SHIELD
PIN 2: a,+,hot
PIN 3: b,-,cold

The input sensitivity is set to odBu (775 mV)

INPUT ROUTING

PARALLEL MONO

If the mode selector is in position PARALLEL ,the input connectors channel A and B are directly wired in parallel ,but the volume for channel A or B can be adjusted independently using the input controls A or B.

DUAL STEREO

If the mode selector is in position STEREO ,channel A and B are amplified separately.

Many mixing consoles have XLR connectors in the outputs ,but are wired in such a way that they are unbalanced .If a mixer is used with unbalanced output ,PIN 1 and PIN 3 of the power amplifier's inputconnectors must be connected by a jumper or PIN 3 must not be connected to the connectioncable .

If signals are taken from unbalanced units via PIN 3(b,-,cold)and PIN 2(a,+,hot),strange hum interference or high frequency oscillations can occur ,These effects can cause power amplifiers or loudspeakers to malfunction.

REAR PANEL

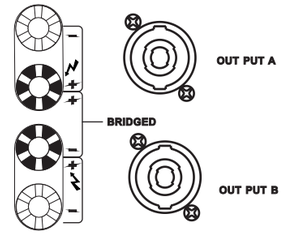
BRIDGED MODE

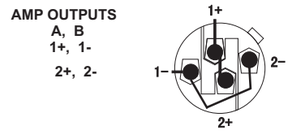
Slide switch to change from Normal Stereo mode to Bridged mode. In Bridged mode the built-in power amplifiers operate in "push-pull"and the double output voltage from channel A and B appears at the Bridged output connector. The phases of Channel A and B are in opposite and therefore the individual channels must not be used as loudspeaker outputs.

POWER AMPLIFIER OUTPUT CONNECTORS

SPEAKER output connectors are provided for the power amplifier channels A (left)and B (right).

The Bridged Out Connector for bridged operation is sealed with a plastic cover to prevent connection errors.





INSIDE CROSSOVER SWITCH

Slide the switch to choose the crossover .In the BYPASS model the output is whole range signal .In the HI-PASS model the inside hi-pass filter will cut off the low frequency lower than 200 Hz. In the LOW-PASS model the inside low-pass filter will cut off the frequency higher than 250 Hz.

Professional Power Amplifiers

OWNER'S MANUAL