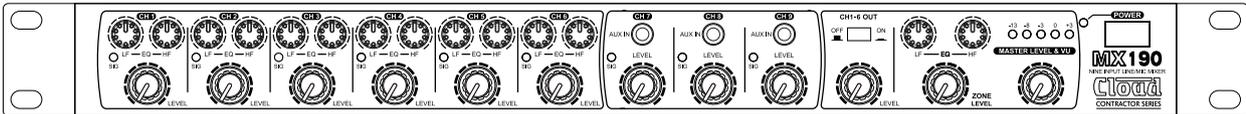


Cloud

CONTRACTOR SERIES

MX190

9CH PRE AMP MIXER



MANUAL

Thank you for choosing Cloud Contractor Series for your sound system. To make sure that this product meets your expectations and provides long-term, reliable performance, please read and follow this instruction manual carefully.

IMPORTANT SAFETY INSTRUCTIONS

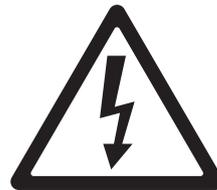
- Read these instructions and all markings on the product. Keep these instructions.
- Heed all warnings and instructions, both in this manual and on the product.
- Clean only with a dry cloth. Unplug from AC supply before cleaning.
- Do not use this product near water and avoid any exposure to water.
- Only connect this product to an AC supply with sufficient power handling, protective earth connection, ground-fault (earth-fault) protection and overload protection.
- Disconnect the product from the AC supply during thunderstorms or longer periods of being unused.
- Make sure any heat sink or other cooling surface, or any air convection slot, is exposed sufficiently to free air circulation and is not blocked.
- Do not operate this product in environmental temperatures exceeding 35° C and/or 85% relative humidity.
- Position the product in a safe and stable place for operation, out of reach of unauthorised persons.
- Make sure any cable connections to and from the product are neither subject to potentially destructive mechanical impact nor present any risk of stumbling or other accident risk to people.
- Audio equipment may generate sound pressure levels sufficient to cause permanent hearing damage to persons. Always start up at low volume settings and avoid prolonged exposure to sound pressure levels exceeding 90 dBA.
- Do not open this product for service purposes. There are no user-serviceable parts inside.
- Warranty will be void in any case of unauthorised service by the user or other not authorised persons.
- Take any precaution required by local law, applicable regulations or good business practice to avoid injury of people or material damage by use of this product.



ATTENTION!
Read manual
before installation
and operation.



DANGER!
Safety hazard.
Risk of injury or death.



WARNING!
Hazardous voltage.
Risk of severe or fatal
electric shock.



WARNING!
Fire hazard.

Compliances

Cloud Electronics Ltd confirms that the MX190 is compliant with the following international standards:

- EN 55032:2015+A1:2020
- EN IEC 61000-3-2:2019+A1:2021
- EN IEC 62368-1:2020+A11:2020
- EN 61000-3-3:2013:A2:2021
- EN 55035:2017+A11:2020

Overview

General

The MX190 is a multi-purpose mic/line mixer for use in installed sound systems. It has 6 mic/line inputs (1-6) and 3 stereo line inputs (7-9). Input 1 can be configured as a priority input with either a mic or line source. All inputs have Gain controls, and each mic/line input also has HF/LF EQ controls. The balanced output is provided on XLR connectors and has a Master level control and bargraph meter. There are three additional auxiliary outputs, making the unit highly flexible in application.

Health advice

This unit produces and absorbs electromagnetic radiation. The strength of radiation and the sensitivity for disturbing interference matches the CE requirements. Any change or modification may affect the behaviour of the unit concerning electromagnetic radiation, with the CE requirements eventually not to be met any more. The manufacturer takes no responsibility in this case.

Functional advice

This unit is immune to the presence of electromagnetic disturbances – both conducted and radiated - up to a certain level. Under peak conditions, the unit is classified to show a “class C” performance criteria and may encounter temporary degradation or loss of function which may need manual help to recover. In such case, disconnect the AC power from the unit and reconnect it again to recover.

Environmental advice

Cloud Electronics Limited manages its business and collaborates with its suppliers to comply with the European Union restriction of the use of certain hazardous substances in electrical and electronic equipment, RoHS Directive (2002/95/EC), that came into force on 1st July 2006, and similar restrictions in other jurisdictions.



The “crossed out wheeled bin” symbol on the product and represented above is there to remind users of the obligation of selective collection of waste. This label is applied to various products to indicate that the product is not to be thrown away as unsorted municipal waste. At the end of life, dispose of this product by returning it to the point of sale or to your local municipal collection point for recycling of electric and electronic devices.

Customer participation is important to minimize the potential effects on the environment and human health that can result from hazardous substances that may be contained in this product.

Please dispose of this product and its packaging in accordance with local and national disposal regulations, including those governing the recovery and recycling of waste electrical and electronic equipment. Contact your local waste administration, waste collection company or dealer.

Unpacking

Please check that the box contains the following items:

- 1 x MX190 main unit
- 2 x AC cables (UK and Schuko)
- Mating 2-pin Eurobloc plug
- Set of 4 adhesive feet

If any part is missing, please contact your dealer immediately for replacement.

Note re AC mains

The MX190 incorporates a Universal Power Supply Unit (PSU), which can operate from any AC mains supply in the voltage range 100 to 250V and in the frequency range 50 to 60 Hz.

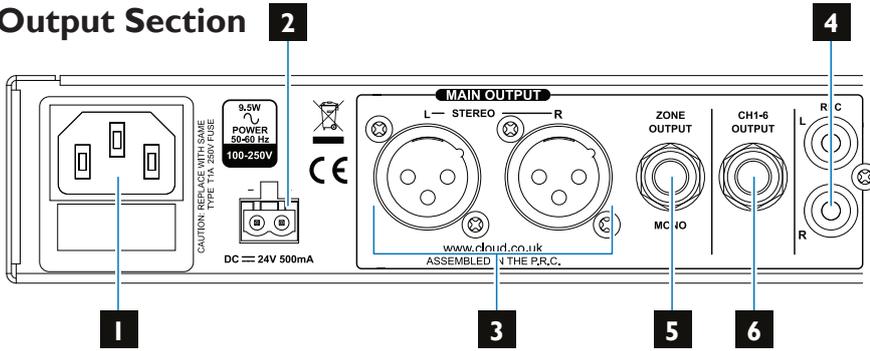
The AC connector on the rear panel is the standard IEC receptacle type; use the AC cable supplied to connect the MX190 to a convenient AC source. The connector has an integral fuse holder with a 1 A fuse, type T1A 250V, 20 x 5 mm. Only replace the fuse with one of the same type. If a replacement fuse fails immediately on switch-on, the unit is faulty and should be passed to qualified service personnel for further investigation.

Alternatively the MX190 can be powered from an external 24V DC supply.

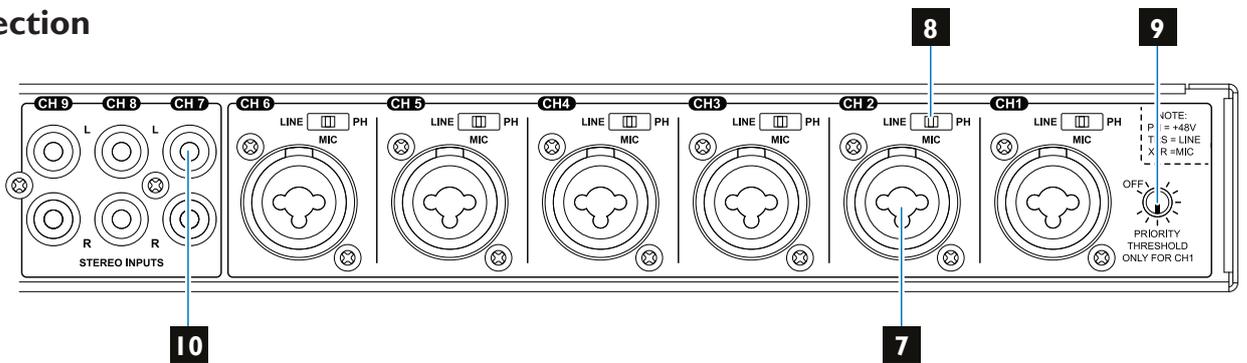
Controls and Connections

Connections - Rear

Output Section

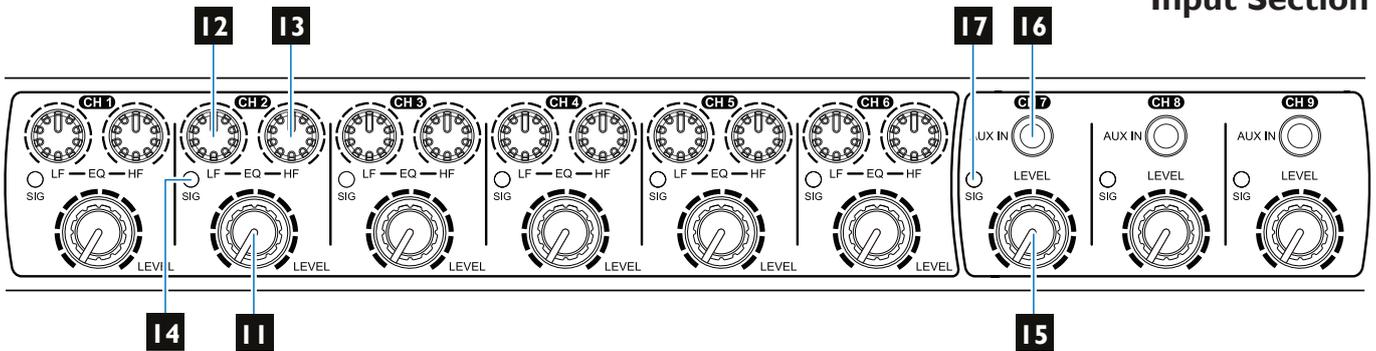


Input Section

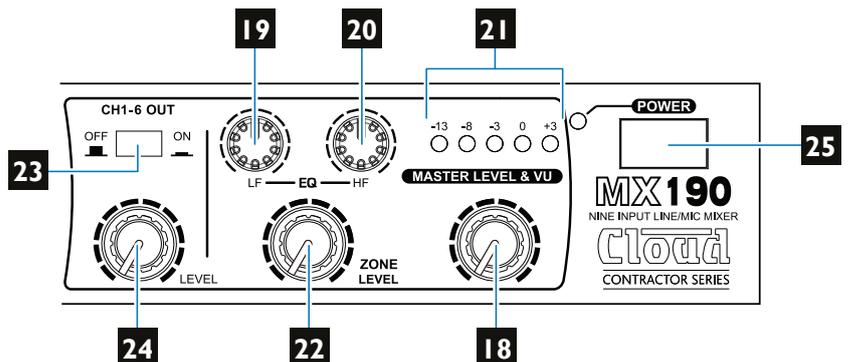


Controls - Front

Input Section



Output Section



Functional Description

The MX190 is a mic/line mixer with 6 mic/line inputs (one configurable for priority or talkover use) and 3 stereo line inputs. All inputs have Gain controls; the mic/line inputs also have LF/HF EQ controls. The stereo balanced output is provided on two XLR3M connectors, and there are additional Zone, Record and Input 1-6 Sum outputs.

- 1** AC inlet and fuse holder. Use the supplied AC cable to connect the unit to AC mains. The fuse can be accessed by the small drawer at the AC inlet. To change the fuse, first unplug the AC cable; pull out the fuse drawer and ONLY replace the fuse with a fuse of the SAME type and rating. If the fuse blows again after replacement, pass the unit to qualified service personnel.
- 2** DC power input. The MX190 will operate from a 24V DC power source rated at 500 mA. The connector is a 2-pin 5 mm-pitch Phoenix-type (Eurobloc); a mating connector is supplied.
- 3** Stereo Main output – 2 x XLR3M connectors.
- 4** Record output. This is an unbalanced stereo output (2 x phono/RCA) carrying the same signal as the main outputs (3), but the level is not affected by the Master Level control (18). This is normally used for recording the output on an external audio device.
- 5** Zone output. This carries a mono sum of the main output mix, and can be used instead of the stereo main output, or as an additional mono output. The level is adjusted by the Zone Level control (22). The output is balanced; the connector is a ¼" TRS jack socket.
- 6** This carries a mix of input channels 1-6 only. This could have various uses, for example allowing the MX190 to be used as a microphone submixer feeding a larger sound system. The level is adjusted by (24), the output is balanced on a ¼" TRS jack socket.
- 7** Balanced mic/line inputs for Channels 1 to 6. These use "Combo" connectors, which can accept either XLR or ¼" TRS jacks. Phantom power is available on the Combo's XLR pins, thus these inputs can be used either with condenser or dynamic microphones. The gain of these inputs is controlled by the front panel controls (11).
- 8** Mic/line switch for each Channel (1 to 6). Set switch to LINE when a line level input source is connected via a TRS jack, and to MIC when using a microphone connected via an XLR. Phantom power (48V) may be activated for individual mic inputs by selecting PH.
- 9** Channel 1 priority threshold adjustment for Main, Zone and Record outputs. This sets the Channel 1 signal level at which Channels 2 to 9 are reduced in volume, or "ducked". The threshold control should be adjusted with a small screwdriver or trimming tool.
- 10** Stereo line inputs for Channels 7 to 9, using phono/RCA connectors. Use the channels to connect stereo line-level sources such as CD players, laptops/PCs, TV sound, etc.
- 11** LEVEL control for mic/line input channels 1 to 6. This allows the sensitivity (input gain) for each input to be adjusted, so that sources with different output levels can be mixed and balanced.
- 12** LF equalisation for input channels 1 to 6: provides ± 12 dB adjustment for the respective input at 60 Hz.
- 13** HF equalisation for input channels 1 to 6: provides ± 12 dB adjustment for the respective input at 12 kHz.
- 14** Signal Present LED for channels 1 to 6 – illuminates when an input signal is detected.
- 15** LEVEL control for line input channels 7 to 9.
- 16** AUX IN – a 3.5 mm TRS jack socket for convenient connection of e.g., portable music sources. A device connected here will override a source connected at the channel's rear panel phono/RCA sockets (10).
- 17** Signal Present LED for channels 7 to 9 – illuminates when an input signal is detected.
- 18** MASTER output level control. Sets the level present at main stereo outputs (3).
- 19** LF equalisation for main stereo outputs: provides ± 12 dB adjustment at 50 Hz.
- 20** HF equalisation for main stereo outputs: provides ± 12 dB adjustment at 10 kHz.
- 21** Master output level meter. Displays the level at the stereo main output (2); the indication is affected by the Master Level control (18).
- 22** ZONE output level control. Sets the level present at the mono Zone output (5).

- 23** CHI-6 OUT on/off switch. When the switch is off, the MX190 provides a mix of Channels 1-9 at the Main (3), Zone (5) and Record Outputs (4), and the CHI-6 Output (6) will be inoperative. When the switch is on, the Main, Zone and Record outputs only carry a mix of Channels 7 to 9, while the CHI-6 Output carries a (mono) mix of Channels 1 to 6.
- 24** The CHI-6 LEVEL control sets the level at the CHI-6 Output when it is in use.
- 25** AC Power switch. Make sure to switch the unit off when not in use. Note that this switch is not functional if the MX190 is running from a 24V DC power source.
- 26** Power LED – lights when the MX190 is active.

Operation

A. Connections

When connecting the MXI90 to AC mains, please note the following:

- Check that the AC mains voltage and frequency is within the range specified for the MXI90 (see rear panel of product). If the specified voltage or your AC plug does not match local conditions, do NOT plug the AC cable into the wall outlet and contact your dealer immediately.
- Do not operate this unit without the AC cable earth (ground) wire connected. To do so may increase the risk of electric shock and increase AC cable conducted emissions.

Always remember that good and reliable audio connections are a basic requirement for good quality sound and reliable operation. Bad soldering of cables can result in intermittent signals or temporarily lost ground connections, so always use good quality cables. In case of doubt about making connections correctly, please see the standard pin assignments in the following section of this manual.

B. Powering up

Following a proper power-up sequence protects your equipment – specifically speakers – and your ears. Follow the procedure below:

- Turn down the output volume controls of all equipment in your audio system.
- Switch on your audio sources first (Tuners, CD Players, PC soundcards, etc.).
- Switch on the MXI90
- Switch on any audio processor between the MXI90 and the amplifier(s) [if any].
- Switch on the amplifier(s).
- Turn up the audio level of your sources.
- Set the audio output of your MXI90 to a low level, using the meter.
- Set the audio output of any audio processor between the mixer and the amplifier(s) to a medium level.
- Turn up the volume controls of your amplifier(s) slowly.
- Make adjustments to all volume settings as needed.

When switching off, follow the sequence in reverse – switch off amplifier(s) first, then any processors between mixer and amplifier(s), then the mixer, then the sources.

C. Use

Apart from using good equipment, good sound comes from using it correctly. Setting levels incorrectly is the most common reason why even good equipment may not perform as desired. For setting levels, follow these two guidelines:

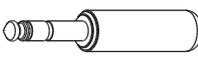
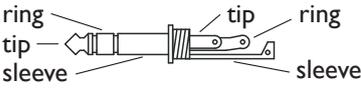
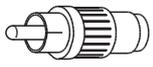
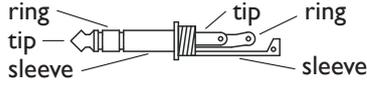
- Avoid distortion by leaving some headroom. Never overdrive the inputs of any audio equipment. Level meters and displays allow you to make sure that signals do not reach critical levels.
- Avoid unnecessary amplification by using as little attenuation as possible. For example, if you reduce the input level to a mixer, and then increase the mixer's main output to maximum to drive the amplifier, you will generate unnecessary noise.

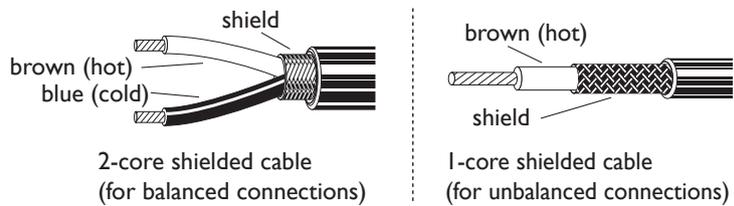


WARNING - HEALTH RISK Excessive volume levels from headphones or loudspeakers may cause hearing damage. Always turn the volume control to minimum when you switch the unit on, and avoid prolonged exposure to sound pressure levels exceeding 90 dBA.

Connections

The MX 190 uses the connector types below, for which the pin assignment must comply with the connections as shown. Always make sure to use good quality connectors and cables for best results. Balanced connections are to be preferred over unbalanced connections wherever feasible. Avoid unbalanced connections exceeding 2m of cable length.

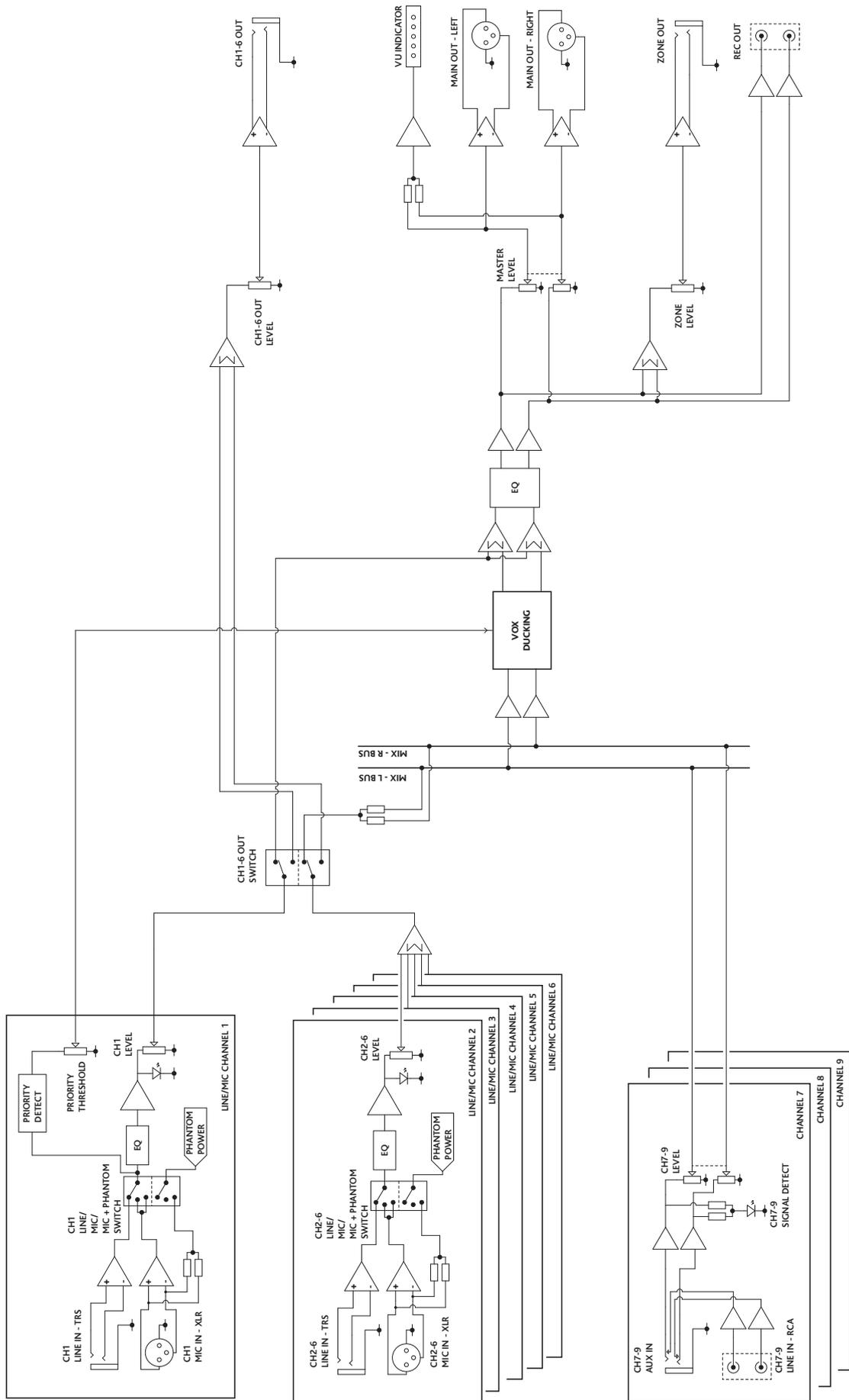
MX190 I/O	Mating Connector	Structure	Balanced connection	Unbalanced connection
CHI-6 Mic in	XLR3M 		screen: pin 1 hot: pin 2 cold: pin 3	screen: pins 1 & 3 hot: pin 2
CHI-6 Line in	1/4" TRS-stereo 		hot: tip cold: ring screen: sleeve	hot: tip screen: ring+sleeve
Zone Output				
CHI-6 Out				
CH7-9 in (rear) Record Outputs	Phono / RCA x 2 	RCA 	hot: tip cold: sleeve	hot: tip screen: sleeve
CH7-9 in (front)	3.5mm TRS-stereo 			left ch: tip right ch: ring screen: sleeve
Main Outputs	XLR3F x2 		screen: pin 1 hot: pin 2 cold: pin 3	



Technical Specifications

- Signal/Noise >85 dB (Line)
- Crosstalk >75 dB (Line)
- THD <0.06% (Output <+10 dBu)
- Frequency response. 20 Hz – 22 kHz, +0/-3 dB
- Channel balance. <3 dB
- Power supply 100-250 V AC @ ~50/60 Hz, or 24V DC
- Power consumption. max. 9.5 W
- Dimensions (W x H x D) 483 mm x 44.5 mm (1U) x 169.5 mm (19" x 1.75" x 6.7")
- Weight 2.30 kg (5.15 lb)

Block Diagram



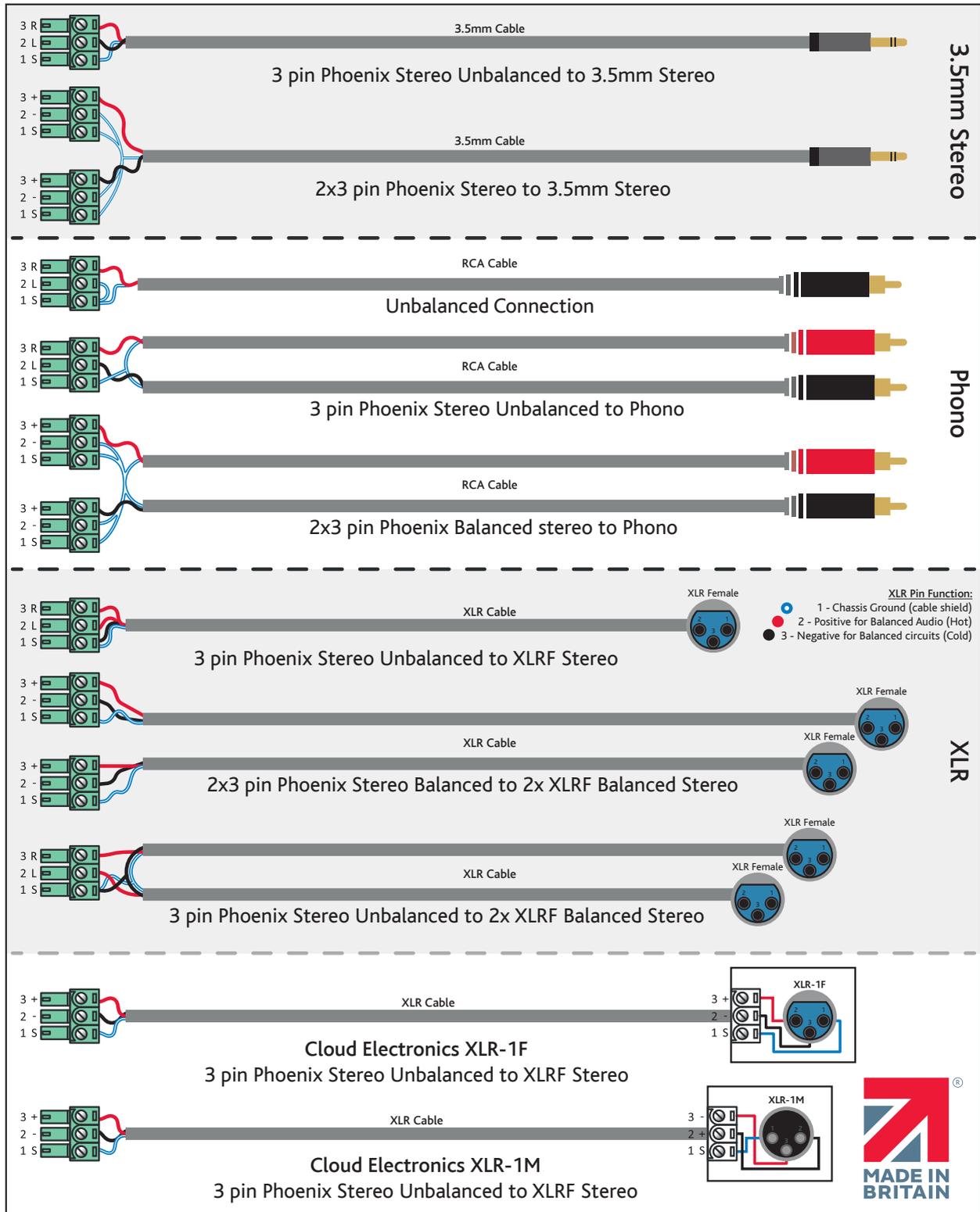
Maintenance and Warranty

While we have quality components to make this product as rugged and reliable as possible, some mechanical parts in audio products (potentiometers, switches, etc.) are subject to wear: this is a matter of cycles of operation, and not of time. While providing a full, time-based warranty (according to the country's requirements) covering the unit's electronic functionality, the warranty for such electro-mechanical parts is limited to 90 days from the date of purchase.

In many cases, malfunction of electro-mechanical parts occurs due to dust contamination, which may necessitate cleaning. As the inside of such parts is inaccessible, a common practice is to use cleaning fluids in the shape of sprays. Please be reminded that many of such fluids contain chemicals which may wash away the dust but at the same time corrode or damage contact surface and may cause cosmetic damage to other parts. We hence explicitly exclude any claims for exchange of damaged part due to mechanical or chemical impact.

Wiring

(Phoenix to various cable connections)



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Cloud
CONTRACTOR SERIES

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