

CL1200

MIXING CONSOLE

Item ref: 170.881UK

User Manual





Caution: Please read this manual carefully before operating
Damage caused by misuse is not covered by the warranty

Introduction

Thank you for choosing the CL1200 mixing console as part of your professional sound system. This product has been developed to provide a full arsenal of facilities and features to fulfill a comprehensive range of audio requirements with high quality, reliable results. Please read and keep this manual to achieve the best results from your purchase and avoid damage through misuse.

Package Contents

- CL1200 mixing console
- MPR remote control
- Mains lead(s)
- User manual

If you find any accessory is missing or the product has arrived with any problems, please contact your retailer at once.

This product contains no user-serviceable parts so make no attempt to try to fix or modify this item yourself as this will invalidate the warranty. We recommend you keep the original package and proof of purchase for any possible replacement or returned demand.

Warning

To prevent the risk of fire or electric shock, do not expose any of the components to rain or moisture. If liquids are spilled on the console, stop using immediately, allow the unit to dry out and have checked by qualified personnel before further use.

Avoid impact or heavy vibration to any of the components.

No user serviceable parts inside - refer servicing to qualified service personnel.

Safety

- Ensure that the correct mains lead is used with adequate current rating and that the mains voltage is as stated on the unit
- Avoid ingress of water or particles into any part of the housing
- Do not cover or obstruct cooling vents

Placement

- Keep the console out of direct sunlight and away from heat sources.
- Do not place heavy objects on top of the control surface
- If rack-mounting, use the correct rack-ears and ensure adequate support for the weight of the product.
- Allow adequate space for air-flow and keep the console away from damp or dusty environments.

Cleaning

- Use a soft dry or slightly damp cloth to clean surfaces of the console
- A soft brush can be used to clear debris from between controls without damaging them
- To avoid damage, do not use solvents to clean the components

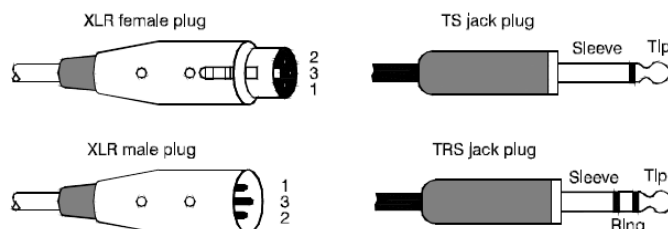
Console layout



The CL1200 has comprehensive input and output sections which can be split further into various stages of processing and routing. All preamps have studio grade, low noise architecture for the cleanest possible path throughout the signal chain. The input stages are repeated across each channel of the console, which simplifies operation and enables quick and easy location of various controls. The following pages of this manual are divided up into these stages to explain the details and function of each control.

Mic/Line Input Section

Channel inputs and inserts are provided as XLR and/or 6.3mm jack sockets. The connections for these inputs are assigned as follows.



1. **MIC input** Connect a balanced microphone to this XLRF input. An unbalanced microphone can be connected provided that +48V phantom power is not used. Wired as follows.

Balanced	Pin 1 = Ground	Pin 2 = Signal +	Pin 3 = Signal -
Unbalanced	Pin 1 = Ground	Pin 2 = Signal +	Pin 3 = Ground

2. **LINE input** Connect balanced or unbalanced line level signals to this 6.3mm TRS jack input. Wired as follows.

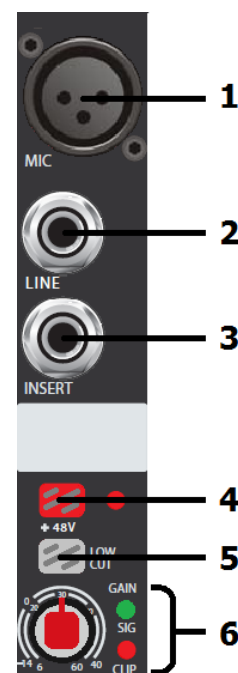
Balanced	Tip = Signal +	Ring = Signal -	Sleeve = Ground
Unbalanced	Tip = Signal +	-	Sleeve = Ground

3. **Channel INSERT** The channel signal can be diverted for external processing and returned back to the channel by connecting a TRS jack to 2 x mono jack lead to this connector. The channel inserts are post Low Cut but are pre-EQ. Wired as follows.

TRS jack	Tip = Send	Ring = Return	Sleeve = Ground
Left mono jack	Tip = Send	-	Sleeve = Ground
Right mono jack	Tip = Return	-	Sleeve = Ground

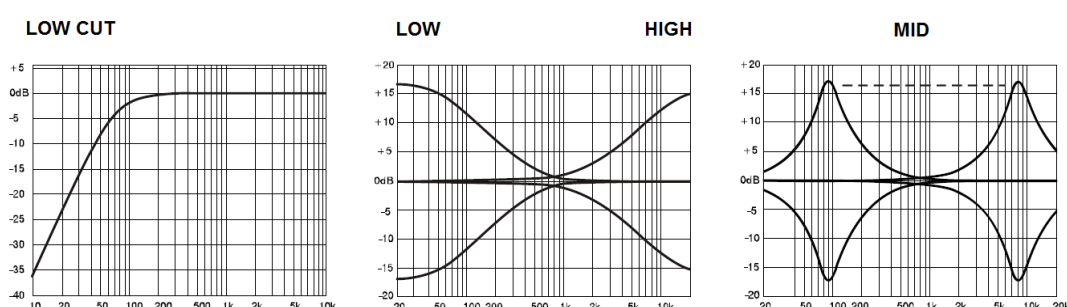
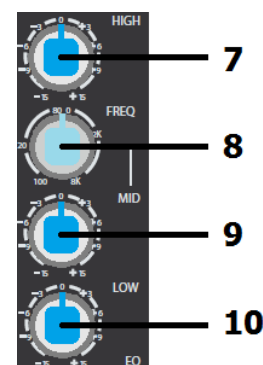
- 4.
5. **+48V Phantom** Press in this switch to apply +48Vdc voltage to the XLR input condenser microphones and D.I. boxes which require phantom power
6. **LOW CUT** Press in this switch to apply a 75Hz 18dB/oct low frequency roll-off filter which can help to reduce popping, rumble and handling noise from vocal microphones.

7. **GAIN control** This control trims the input signal to the optimum level for the channel strip circuitry. Too low a signal level can result in a weak signal-to-noise ratio and too high can result in overload and distortion in the signal output. The adjacent SIG and CLIP LEDs will give an indication of the signal level. Ideally, the Gain rotary control should be adjusted so that the green SIG LED is lit and the loudest passages of the input signal (e.g. bass drum beats) will just momentarily trigger the CLIP LED. Anything longer than a momentary flicker of the CLIP LED means that the Gain should be reduced. Using the PFL button further down the channel strip gives a more detailed view of the channel level on the main VU LEDs.



Mic/Line EQ Section

8. **HIGH** This control can boost or cut the high frequencies (centre 12kHz) by $\pm 15\text{dB}$ (12 o'clock position is zero)
9. **FREQ** This control sweeps the frequency band affected by the MID control with centre frequency from 100Hz through to 8kHz
10. **MID** This control can boost or cut the mid frequencies set using the FREQ control by $\pm 15\text{dB}$ (12 o'clock position is zero)
11. **LOW** This control can boost or cut the low frequencies (centre 80Hz) by $\pm 15\text{dB}$ (12 o'clock position is zero)

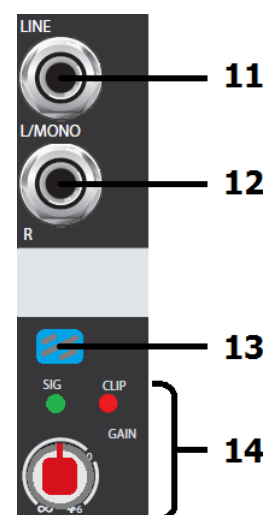


Stereo Line Input Section

12. **LINE L/MONO** Connect a balanced or unbalanced line level signal to this 6.3mm TRS jack input. Wired as follows.

Balanced	Tip = Signal +	Ring = Signal -	Sleeve = Ground
Unbalanced	Tip = Signal +	-	Sleeve = Ground

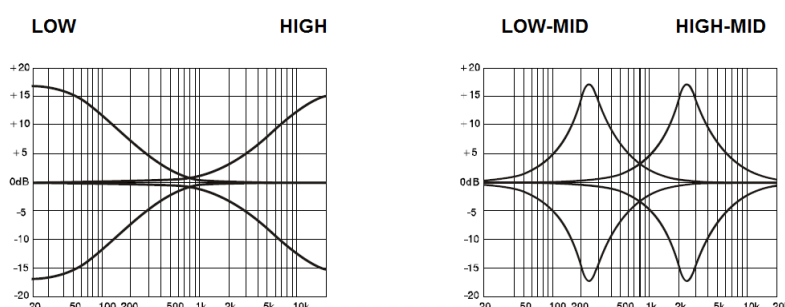
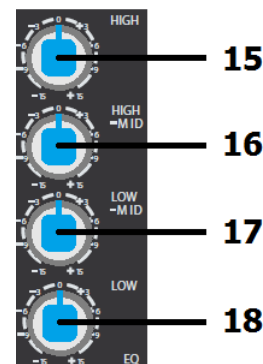
13. **LINE R** For stereo line inputs, use this connector for Right input and the above connector for Left input. All following channel controls will affect both signals but Left & Right signals will remain separate.
14. **ST1/PC** Switches the channel input between ST1 and the PC interface. Press this switch in to override the ST1 inputs and the channel will be fed from a PC or Mac connected to the USB B connector.
13. **ST2/MPR** Switches the channel input between ST2 and the MPR player. Press this switch in to override the ST2 inputs and the channel will be fed from playback of USB or SD media via the MPR.



14. **GAIN control** This control trims the mono or stereo input to the optimum level for the channel strip. Too low a signal level can result in a weak signal-to-noise ratio and too high can result in overload and distortion in the signal output. The SIG and CLIP LEDs above the rotary control give an indication of the signal level. Ideally, the Gain rotary control should be adjusted so that the green SIG LED is lit and the loudest passages of the input signal (e.g. bass drum beats) will just momentarily trigger the CLIP LED. Anything longer than a momentary flicker of the CLIP LED means that the Gain should be reduced. Using the PFL button further down the channel strip gives a more detailed view of the channel level on the main VU LEDs.

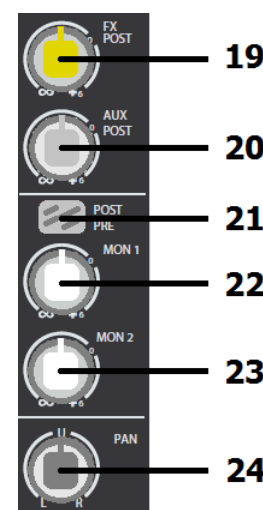
Stereo Line EQ Section

15. HIGH EQ This control can boost or cut the high frequencies (centre 12kHz) by $\pm 15\text{dB}$ (12 o'clock position is zero)
16. HIGH-MID This control can boost or cut the high-mid frequencies (2.5kHz) by $\pm 15\text{dB}$ (12 o'clock position is zero)
17. LOW-MID This control can boost or cut the low-mid frequencies (250Hz) $\pm 15\text{dB}$ (12 o'clock position is zero)
18. LOW This control can boost or cut the low frequencies (centre 80Hz) by $\pm 15\text{dB}$ (12 o'clock position is zero)



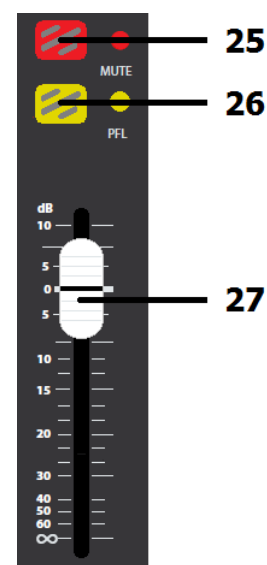
Channel Routing

19. FX POST This control governs the amount of signal from the channel routed to the DSP effects engine. If a jack is connected to the FX SEND connector (see 37 below), this will operate as an extra AUX output (POST means that it is post-fader - i.e. the signal routed to AUX SEND is also affected by the channel fader level)
20. AUX POST This control governs the amount of signal from the channel routed to the AUX SEND or auxiliary output to external equipment. (POST means that it is post-fader - i.e. the signal routed to AUX SEND is also affected by the channel fader level)
21. POST / PRE Pressing this button in changes MON 1 and MON 2 outputs from POST to PRE. POST is post-fader, meaning that the signals to MON 1 and MON 2 are also affected by the channel fader level. PRE is pre-fader, meaning that the signals to MON 1 and MON 2 are *not* affected by the channel fader level.
22. MON 1 This control governs the level of signal routed to the MON 1 OUT XLR connector. The output can be used for monitoring or recording equipment.
23. MON 2 This control governs the level of signal routed to the MON 2 OUT XLR connector. The output can be used for monitoring or recording equipment.
24. PAN/BAL This control adjusts the amount of signal from the channel fed to Left or Right outputs. This varies the point in the stereo field that the signal appears. For ST1 and ST2 channels, the PAN control is replaced with a BAL control for Left/Right balance.



Channel Faders

25. MUTE Pressing this switch in mutes the channel output (not Insert Send)
A red LED indicates that the channel is muted.
26. PFL Pre-Fade Listen sends the channel signal direct to monitoring.
This means that the channel signal is shown on the main VU LEDs.
Also, the signal is routed directly to the headphones output.
This allows the particular channel signal to be checked.
If many PFLs or AFLs are selected, all are routed to monitoring.
A yellow LED indicates that the channel is set to PFL.
27. Channel fader 60mm fader to adjust the channel level to the master output.
A dB scale is provided to show the level of boost or cut.



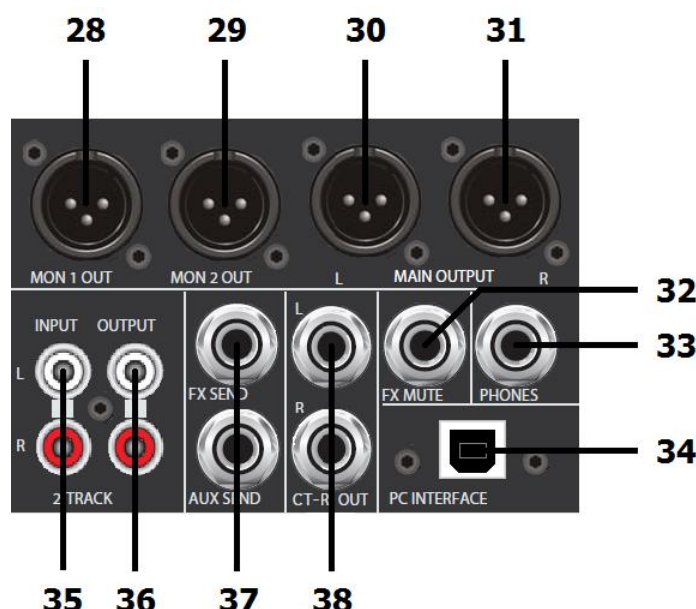
12Vdc Lamp Connection

At the top of the console, a 12Vdc output is provided on a BNC connection for a console lamp. This must be no more than 0.5A (6W)



Master Output Section

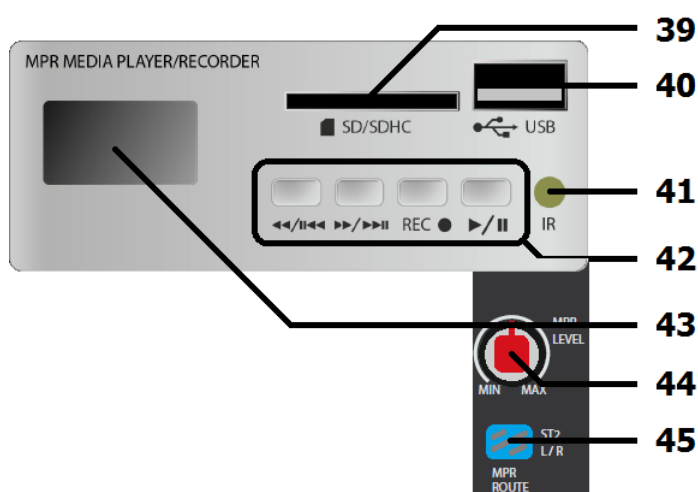
28. MON 1 OUT Balanced XLR output for MON 1 (monitor 1)
29. MON 2 OUT Balanced XLR output for MON 2 (monitor 2)
30. MAIN L OUTPUT Balanced XLR output for main left out
31. MAIN R OUTPUT Balanced XLR output for main right out
32. FX MUTE Footswitch jack to mute FX. Connect a non-latching footswitch here to mute or un-mute the FX SEND signal
33. PHONES Stereo headphones output
34. PC INTERFACE USB type B connector for PC or Mac computer. The computer will detect the console as a USB audio device (this does not require any special software driver) which can be used to send the main mix output to PC or Mac for digital recording. This connection can also be used for audio playback from PC or Mac by pressing in the 2TK MODE button (53). Playback level is governed by the 2TK/PC control (52)



- 35. 2 TRACK INPUT Left + Right RCA connection for auxiliary input of a playback device (e.g. CD or mp3)
This can be routed to ST1 or main outputs (see 54 below) and is governed by the 2TK/PC rotary level control (52)
- 36. 2 TRACK OUT Left + Right RCA connection for main mix output to a recording device.
This output is pre-master-fader (unaffected by main Left + Right faders)
- 37. FX / AUX SEND Unbalanced jack outputs from FX SEND or AUX SEND routes.
The mix is governed by FX and AUX levels from each channel.
- 38. CT-R OUT Control Room Out. Left + Right 6.3mm jack outputs from the monitoring section.

MPR Media Player/Recorder

- 39. SD card slot Insert SD or SDHC card with compressed audio files here
- 40. USB port Insert USB storage device with compressed audio files here
- 41. IR receiver Receiver for MPR remote
- 42. MPR controls Transport and recording controls for MPR section as shown below



- Press briefly for previous track. Press and hold for reverse search
- Press briefly for next track. Press and hold for forward search
- REC ●** Press to start recording main output to media. To stop recording, press and hold until "SAVE" is displayed. The recording will be named "RECxxx.wav" where xxx is the sequential number.
- Press to play or pause current track

- 43. Display Digital display with track and play status information
- 44. MPR LEVEL Rotary output level control for media player/recorder
- 45. MPR Route ST2 - L/R MPR Route select. If not pressed in, the MPR output is routed through ST2 channel

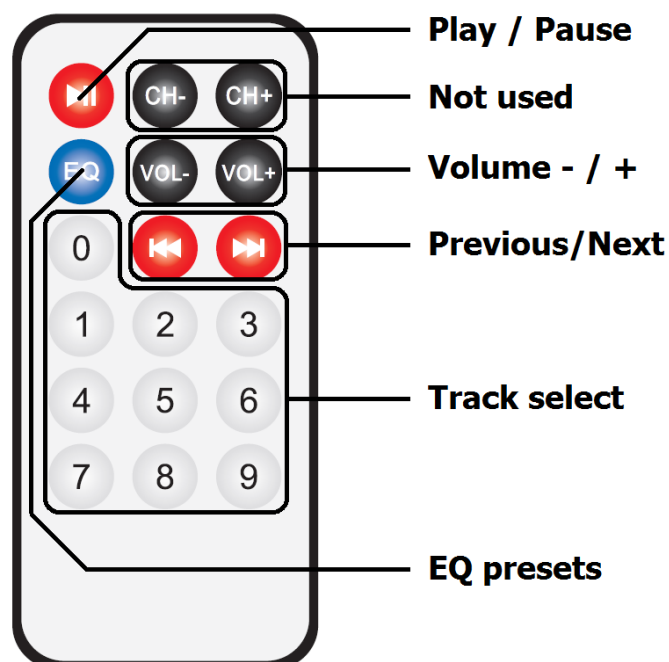
Remote Control for MPR Media Player/Recorder

The MPR module is supplied with an infra-red handheld remote control to handle some of the onboard controls away from the console.

Before use, it is necessary to pull out the clear tab at the base of the handset to engage the battery.

This remote control is most effective in line of sight with the "IR" receiver on the MPR window.

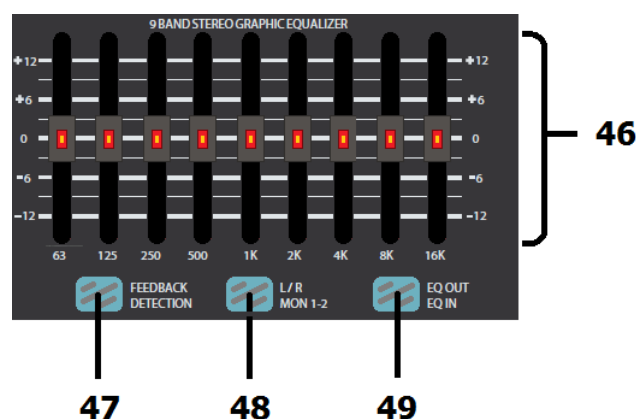
Key assignments are detailed on the diagram shown here.






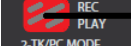
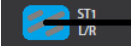

Graphic Equalizer

The main EQ is an illuminated stereo 9-band graphic equalizer with built-in feedback detection and can be assigned to main output or monitors. This offers refined audio spectrum shaping and feedback control for live mic situations.

- 46. EQ sliders. Each slider controls a boost or cut of up to 12dB centred at the specified frequency with an LED to aid visibility in dark situations.
- 47. Feedback Detection Press in to engage the feedback detection circuit. All slider LEDs Will be dimmed until feedback is detected and then the band within which the feedback is detected will illuminate brightly. Move this fader down to reduce or eliminate the risk of feedback at that frequency.
- 48. L/R MON1-2 The graphic equalizer is normally assigned to main left & right outputs but pressing this button in will assign it to monitor 1 and monitor 2 outputs instead. This gives the option of EQ and feedback control for monitors instead of main outputs.
- 49. EQ OUT/IN When this button is pressed in, the graphic equalizer is in operation and the slider LEDs will be lit. When the button is out, it is not in operation and the slider LEDs will be off.

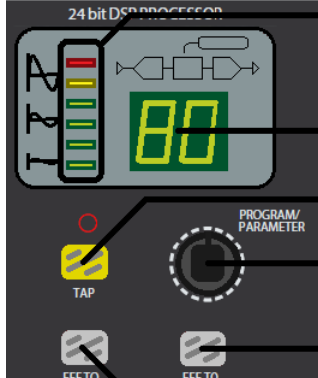


Master Routing Section

- | | | |
|--------------------------------|--|---|
| 50. FX SEND | Overall level control of signals routed to the FX Send buss, either for internal DSP or FX Send output (37). When using the internal DSP, it is important to observe the LED level meter on the DSP section (56) and if the signal is clipping (red LED lighting) to reduce the FX SEND level accordingly. |  50 |
| 51. AUX SEND | Overall level control of signals routed to the AUX Send output (37) |  51 |
| 52. 2-TK/PC | Output level control for the 2 track RCA inputs (35) or stereo input from the PC interface (34) |  52 |
| 53. 2-TK/PC MODE
REC/PLAY | When not pressed in, the main output is routed digitally to the PC interface for recording to PC or Mac computer. Pressing this button reverses this by routing the output of the PC or Mac back to the PC interface for playback. |  53 |
| 54. 2-TK/PC ROUTE
ST1 - L/R | Normally, playback from the PC interface is routed via ST1 channel. Press this button in to route playback directly to main outputs via 2TK/PC control (52) |  54 |
| 55. PHONES LEVEL | Level control for headphones output. |  55 |

DSP Effects Engine

The CL1200 has an internal 24-bit DSP processor for audio effects, as detailed on the DSP Table (next page)

- | | | |
|--|---|-----------|
| 56. 6-segment LED input level meter. Indicates overall input level to DSP. |  | 56 |
| 57. LED numerical display. Indicates selected program (see table below) | | 57 |
| 58. TAP Press once to switch the rotary control (59) to PARAMETER 2. Tap rhythmically more than twice to set a tempo for time effects | | 58 |
| 59. PROGRAM/PARAMETER Turn this rotary encoder to select a program. The numerical display will flash the selected program number. Press the encoder to confirm the selection and the display will stop flashing and the selected program will be active. | | 59 |
| | | 60 |

Press the encoder again and a dot will appear in the display indicating PARAMETER 1. Turning the encoder will change PARAMETER 1 for the selected program as detailed in the DSP Table on the next page.

Pressing the TAP button (58) will switch to PARAMETER 2 and then turning the encoder will change PARAMETER 2 for the selected program. These parameter changes are stored for when the program is selected in future.

- | | |
|---------------------|---|
| 60. EFF TO MAIN L/R | Press this button to send the output of the DSP to the main L + R via the FX fader (64) |
| 61. EFF TO MON | Press this button to send the output of the DSP to MON1 & MON2 via the FX fader (64) |

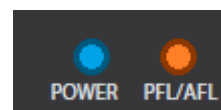
DSP EFFECTS TABLE

PROGRAM	EFFECT	PARAMETER 1	MIN	MAX	PARAMETER 2	MIN	MAX	TAP
01	Hall	Reverb time	01 (approx 1 second)	10 (approx 8 seconds)	Brilliance	OFF	ON	LED on/off
02	Room	Reverb time	01 (approx 0.5 second)	10 (approx 4 seconds)	Brilliance	OFF	ON	LED on/off
03	Plate	Reverb time	01 (approx 0.5 second)	10 (approx 5 seconds)	Brilliance	OFF	ON	LED on/off
04	Gated	Reverb time	01 (approx 0.1 second)	10 (approx 1 second)	Brilliance	OFF	ON	LED on/off
05	Reverse	Reverb time	01 (approx 0.1 second)	10 (approx 1 second)	Brilliance	OFF	ON	LED on/off
06	Early Reflections	Room size	01 (small)	10 (very large)	Brilliance	OFF	ON	LED on/off
07	Ambience	Area size	01 (small)	10 (very large)	Brilliance	OFF	ON	LED on/off
08	Delay	Repeats	01 (no regeneration)	20 (max regeneration)	Delay Time (bpm)	07 (72bpm)	60 (600bpm)	Blinking BPM Tempo
09	Echo	Repeats	01 (no regeneration)	40 (max regeneration)	Delay Time (bpm)	07 (72bpm)	60 (600bpm)	Blinking BPM Tempo
10	Chorus	Depth	01 (1%)	99 (99%)	Mod Speed bpm	02 (24bpm)	48 (480bpm)	Blinking Mod Speed
11	Flanger	Depth	01 (1%)	99 (99%)	Mod Speed bpm	02 (24bpm)	48 (480bpm)	Blinking Mod Speed
12	Phaser	Depth	01 (1%)	99 (99%)	Mod Speed bpm	02 (24bpm)	48 (480bpm)	Blinking Mod Speed
13	Detune	Depth	01 (1%)	99 (99%)	2nd voice delay	05 (5ms)	50 (50ms)	LED on/off
14	Pitch Shift	Semitone steps	-12 (1 octave down)	+12 (1 octave up)	Detune	OFF (0%)	ON (25%)	LED on/off
15	Delay + Rev	Ratio	-9 (90% Dly / 10% Rev)	9 (10% Dly / 90% Rev)	Delay time (bpm)	11 (116bpm)	60 (600bpm)	Blinking BPM Tempo
16	Chorus + Rev	Ratio	-9 (90% Cho / 10% Rev)	9 (10% Cho / 90% Rev)	Reverb time	12 (1.2sec)	24 (2.4secs)	LED on/off

Status Indicators

The master section has 2 status LEDs, which indicate as follows.

POWER	When lit, this indicates that the main power is on
PFL/AFL	Pre-Fade or After-Fade Listen is active when lit.



Main Output Level Meters

The main output level meters comprise a pair of volume ladders with 15 LEDs in each. These normally display the main left and right output levels unless PFL or AFL is active.

When one or more PFL or AFL buttons are pressed in, these ladders will show the output of that channel (or those channels) directly.

This enables more detailed analysis of the signal level than can be shown by the channel signal and clip LEDs alone.

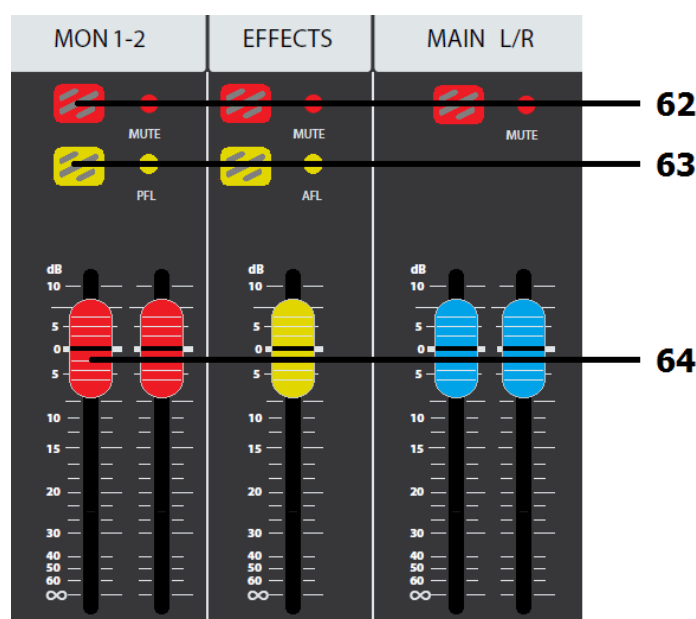
When monitoring any signal levels, it is important to prevent the red LEDs from lighting for anything longer than a brief flicker. Persistent lighting of the red LEDs indicates clipping or distortion.



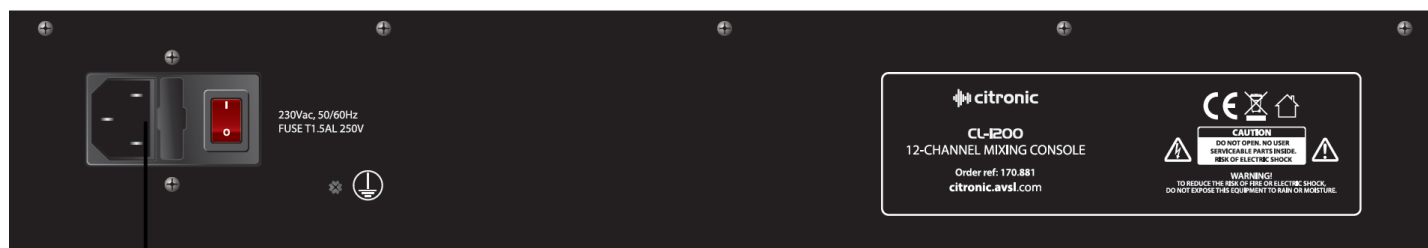
Master Fader Section

The master fader section controls output level for monitors 1 + 2, DSP and main L + R outputs.

- 62. MUTE Press to mute the relative output(s)
A red LED lights when muted.
- 63. PFL / AFL Activates Pre-Fader Listen for monitor outputs or After-Fader Listen for DSP Effects. The output of either is routed to the headphones (33) output and displayed on the main level meters (see PFL section above)
A yellow LED lights when active
- 64. Faders Output level 60mm fader controls for Monitors 1 + 2, Effects and Main L + R
Decibel markings (dB) give a reference to the level setting applied.



Rear Panel



65

65. Combined IEC mains inlet, fuse holder and switch.

Connect the IEC inlet (65) to mains power using the supplied mains lead.

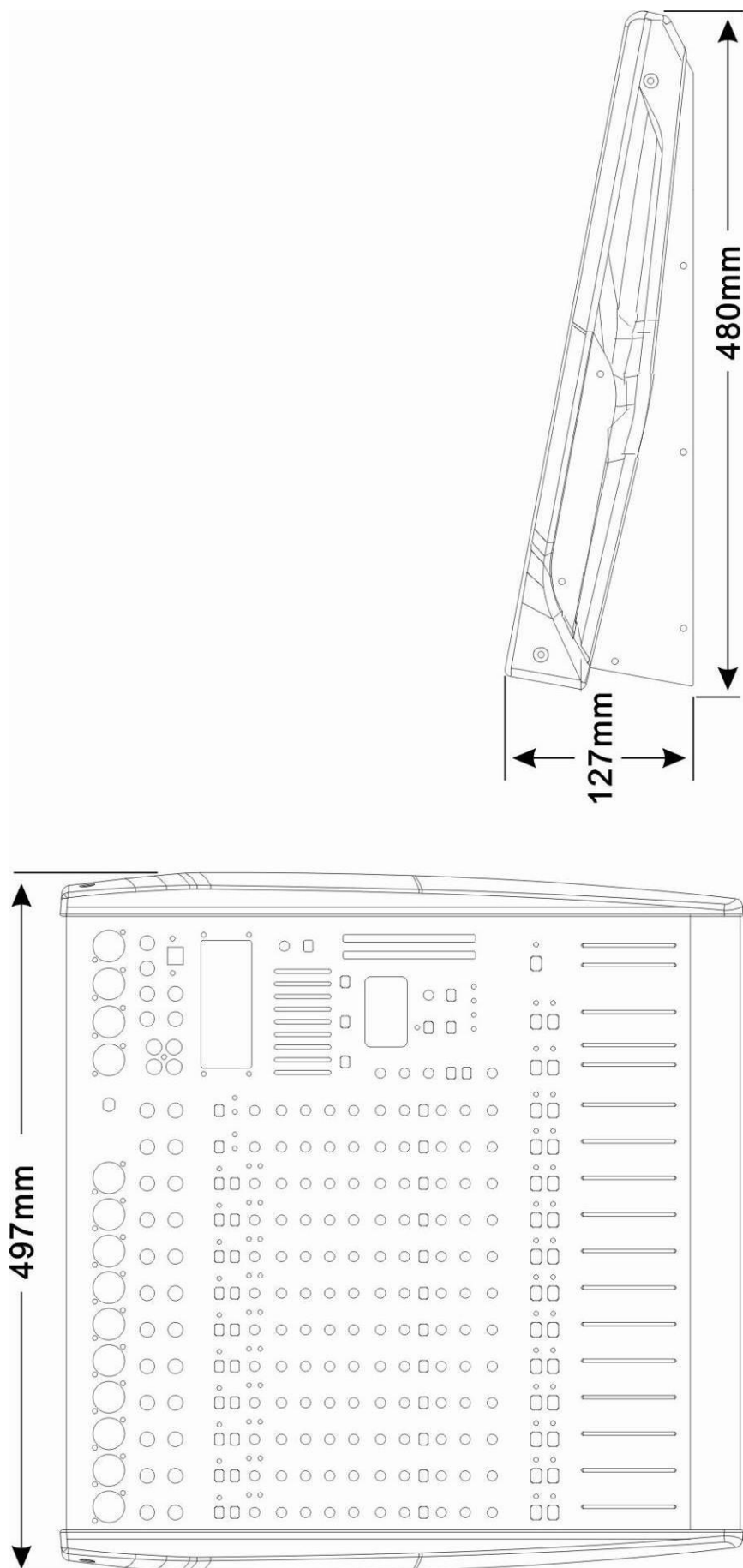
In case of the fuse blowing, replace only with the type indicated.

If the fuse is repeatedly blowing, refer to qualified service personnel

The illuminated rocker switch activates mains power to the unit.

Specifications

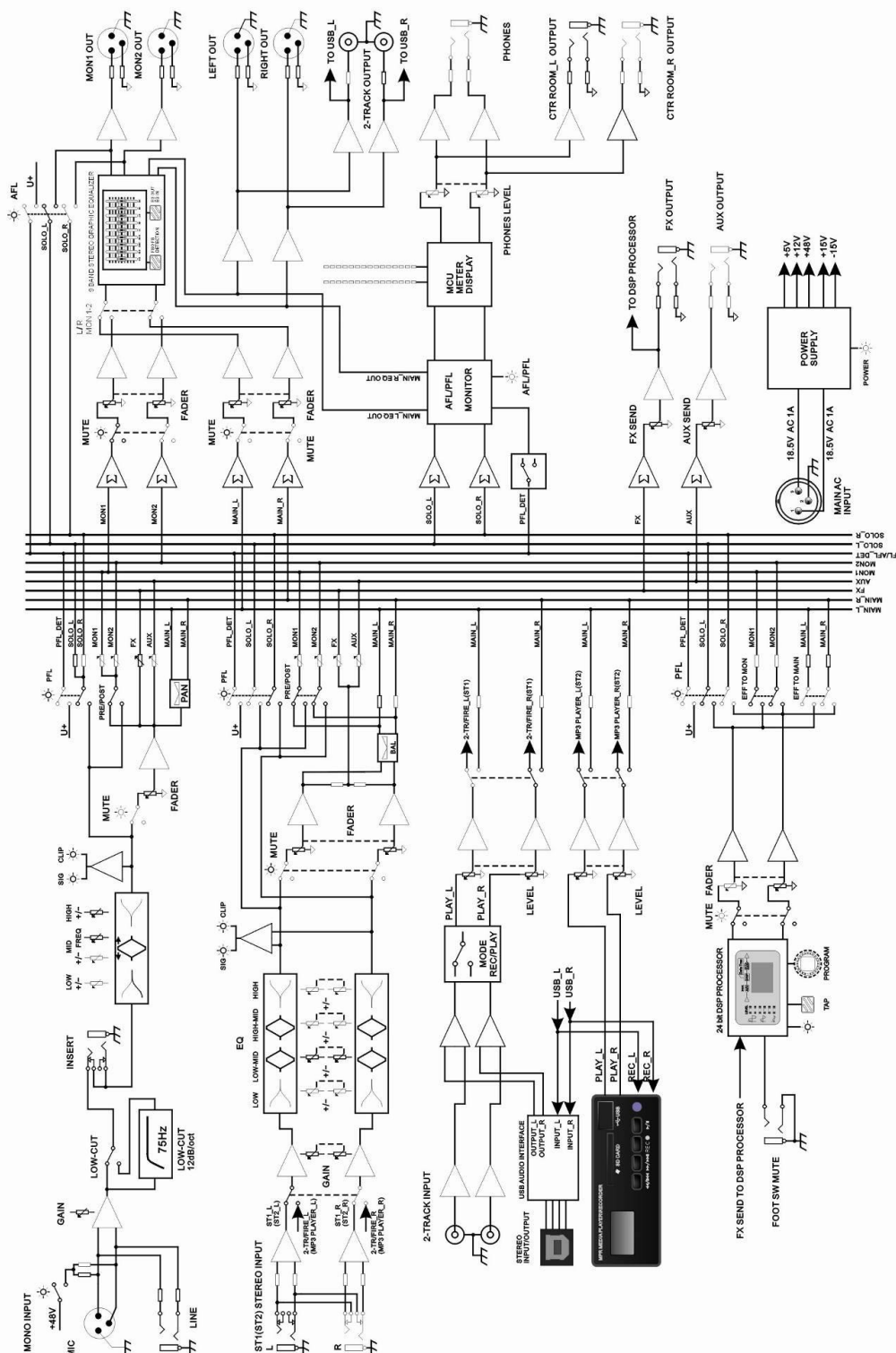
Power supply		230Vac, 50/60Hz (IEC)
Fuse rating		T1.5AL 250V
Power consumption		40W
Phantom power		+48V individually switchable to XLR inputs
Input level : Mic		+22dBu (max.)
Input level : Line		+20dBu (max.)
Output level		+28dBu (main), +22dBu (mon/aux)
Frequency response		20Hz - 30kHz (+/-1dB)
CMRR		>70dB typical @1kHz (mic)
THD		<0.005% (mic to main out)
Crosstalk		>89dB @ 1kHz
Signal to noise ratio		-86dB (unity gain)
Low-cut filter		75Hz, 18dB/oct (mic/line channels)
EQ Mic	High	12kHz shelving (+/-15dB)
	Mid	100Hz-8kHz swept band pass (+/-15dB)
	Low	80Hz shelving (+/-15dB)
EQ Line	High	12kHz shelving (+/-15dB)
	High-mid	2.5kHz band pass (+/-15dB)
	Low-mid	250Hz band pass (+/-15dB)
	Low	80Hz shelving (+/-15dB)
EQ Master		9-band graphic with feedback detection
EQ Master bands		63, 125, 250, 500Hz, 1k, 2k, 4k, 8k, 16kHz
Effects		16 preset, 24-bit DSP, 40khz
USB/SD player		MPR player/recorder with IR remote
USB computer interface		Type B duplex PC/Mac (16bit, 48kHz) plug & play
Headphone output		Stereo 6.3mm jack (30-600 Ohms recommended)
Dimensions		135 x 497 x 490mm
Weight		7.0kg



Troubleshooting

No power LED on control panel	Ensure mains outlet voltage is correct for the unit
	Check power is switched on at the rear panel
	Check IEC fuse – if blowing fuses, refer to qualified service personnel
Power LED is on but no other LEDs and no output	Check input signals and condition of connection leads
	Check GAIN is not too low on channel input
	Check channel fader, GAIN and EQ controls are not turned fully down
	Check MASTER faders are not fully down
	Check that channels or outputs are not muted.
	When using condenser microphones, check that +48V phantom is on. (Turn down all faders before switching on)
	Check that PFL/AFL buttons are all switched out
	Check that all Graphic EQ sliders are not fully down
	For digital media, check that files are standard compressed format
Power light and VU LEDs lighting but no main output	For PC or MPR digital audio inputs, check signal routing
	Check that Main L+R outputs are not muted
	Check MASTER faders are not fully down
No output from stereo inputs	Disconnect any leads from Power Amp inputs and re-check
	Check that PC or MPR routing are not switched in
	Check that stereo channels are not muted
No playback from USB or SD media	Check that stereo channel faders are not fully down
	Check that files are standard compressed audio format
	Check routing option for MPR section, switch to main L/R
No playback from PC interface	Check MPR level and/or ST2 level controls
	Check that computer is set to output to the CL1200 USB audio device
	Check that computer has installed the CL1200 as a USB audio device
	Check PC Mode and PC Route buttons are set for playback
No signal from PC interface to computer	If routed through ST1 channel, check mute and levels
	Check that computer has installed USB audio device
	Check PC Mode button is set to Record
VU LEDs do not show MAIN output levels	Check computer has USB audio device set as input source
Graphic EQ has no effect on MAIN outputs	Check that PFL/AFL buttons are all switched out
	Check L/R - MON1-2 button is not pressed in
Output is very loud or distorted	Check that EQ IN button is pressed in
	Check level of input signal is not too high
	Reduce channel GAIN and EQ settings
	Reduce channel and MAIN faders levels
	Ensure Hi-Z line level input(s) not connected via XLR
	Check output levels of equipment connected via channel inserts
	Check AUX and DSP level controls and reduce if necessary
Output is working but at very low level	Check input gain level on recorder or recording software
	Check input audio source level is not too low
	Ensure low impedance line or mic signal is not connected via jack
	Increase channel GAIN control and EQ settings if turned down
	Increase channel and MAIN faders levels
Feedback (loud squealing or howling from mics)	Check input gain level on recorder or recording software
	Face microphone away from speakers and monitors
	Reduce channel GAIN level and EQ level(s)
	Reduce AUX and/or EFFECT levels
	Reduce channel and/or MAIN fader levels
	Engage Feedback Detection & reduce any problem frequencies

BLOCK DIAGRAM



Disposal: The "Crossed Wheelie Bin" symbol on the product means that the product is classed as Electrical or Electronic equipment and should not be disposed with other household or commercial waste at the end of its useful life. The goods must be disposed of according to your local council guidelines.

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