

CSR-63

Item ref: 170.809UK

Rack-mountable Mixer DSP FX & BT

User Manual



Version 1.0



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

Introduction

Thank you for choosing a Citronic CSR-63 mixer as part of your professional sound system. This product has been developed to provide a wide range of facilities for professional and reliable sound reinforcement. Please read and keep this manual to achieve the best results from your purchase and avoid damage through misuse.

SAFETY SYMBOL AND MESSAGE CONVENTIONS



**CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN**

**AVIS
RISQUE DE CHOC
ELECTRIQUE NE PAS
OUVRIR**



This symbol indicates that dangerous voltage constituting a risk of electric shock is present within this unit



This symbol indicates that there are important operating and maintenance instructions in the literature accompanying this unit.

Warning

To prevent the risk of fire or electric shock, do not expose any components to rain or moisture. If liquids enter the housing, stop using immediately, allow the unit to dry out and have it checked by qualified personnel before further use. Avoid impact, extreme pressure or heavy vibration to the case.

No user serviceable parts inside – Do not open the case – refer all servicing to qualified service personnel.

Safety

- Use the 5Vdc power adaptor supplied or equivalent into either the rear or underside inlet. Caution: use only one DC input. Do not connect power adaptors to both DC power inlets
- Avoid ingress of water or particles into any part of the housing. 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

Placement

- If rack-mounted, replace the grey side panels with the supplied rack-mounting brackets and set the required mounting depth to avoid damage to the controls and connections.
- Leave a gap for cables to pass behind the CSR-63, so as not to cover the control surface.
- Keep the console out of direct sunlight and away from heat sources.
- Do not place heavy objects on top of the control surface
- Allow adequate space for airflow and keep the console away from damp or dust.

Cleaning

- Use a soft cloth with a neutral detergent to clean the housing as required.
- A soft brush can be used to clear debris from between controls without damaging them
- Do not use solvents for cleaning the unit.

Console layout

The CSR-63 compact mixing console has a bank of 6 mono input channels which can accept a balanced microphone input or switchable line/instrument input. There are also 3 stereo inputs for playback devices or line level instruments. All preamps have studio grade, low noise architecture for the cleanest possible path throughout the signal chain. Console layout is set out in distinct sections to simplify operation. The following pages are divided up into these stages to explain the details and function of each control.

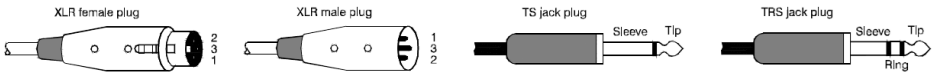
Channel inputs

Channel inputs are provided as XLR or 6.3mm jack on combo sockets.

If an XLR is plugged in, this will be connected as low impedance (microphone) level.

If a 6.3mm plug is used, this will be connected as high impedance (line) level.

The connections for these inputs are assigned as shown below.



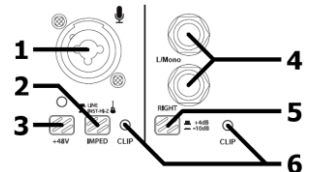
- Mono in** Connect a balanced microphone via XLR connection or a line level (or instrument) input via 6.3mm plug. An unbalanced XLR can be connected provided that +48V phantom power is not used. Wired as follows.

Balanced	Pin 1/Sleeve = Ground	Pin 2/Tip = Signal +	Pin 3/Ring = Signal -
Unbalanced	Pin 1/Sleeve = Ground	Pin 2/Tip = Signal +	Pin 3/Ring = Ground

- IMPED** Input impedance – switch out for line level, in for instrument

- +48V** Press this button in to enable +48V phantom power to the pair of XLRs and the LED indicator will light. This provides power to some condenser microphones and DI boxes. Do not use phantom power with unbalanced XLR connectors. (this does apply to any jack inputs)

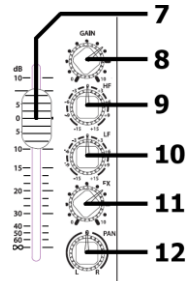
- Stereo in** Left & Right 6.3mm jack input for line level signals (playback machines, keyboards, e-drums etc.). If the input is mono, connect to L/Mono input to feed both sides of the mix.



- +4/-10dB** Switch to toggle between professional (+4dB) or domestic (-10dB) line input levels. (check the source equipment to match its output level)
- CLIP LED** A red indicator LED which illuminates when the signal is overloading. This LED may flash momentarily on peaks or transients in the signal (kick drum etc.) If this LED lights more constantly than a single flash on the accents of the sound, the channel gain or level should be reduced to avoid distortion in the signal and potential damage to this or other attached equipment.

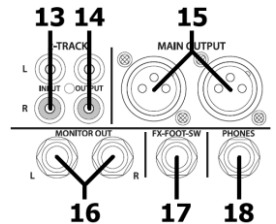
Channel controls

7. LEVEL 60mm channel fader to set the level of the channel in the main mix
8. GAIN Adjust this to match the input signal level for the channel.
Increase this setting if the input source is quiet.
Reduce this setting if the channel is overloading or sounds distorted.
9. HF This control can boost or cut the high frequencies by $\pm 15\text{dB}$ (12 o'clock position is zero)
10. LF This control can boost or cut the low frequencies by $\pm 15\text{dB}$ (12 o'clock position is zero)
11. FX This control regulates the amount of the channel signal that is fed to the DSP effects section, varying the amount of effect.
12. PAN Sets the position of the mono input channel within the stereo field.
Adjustable to the left or right of the mix with the "0" setting for centre.



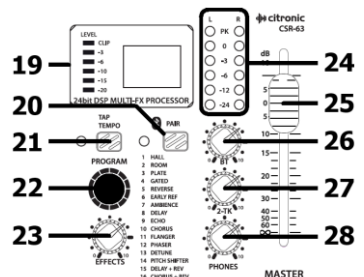
Output Section

13. 2-TRACK INPUT L+R stereo RCA line level input for playback equipment or as an additional stereo input for other sources
14. 2-TRACK OUTPUT L+R stereo RCA line level output for recording equipment or as an additional stereo output to amplifiers/speakers
15. MAIN OUTPUT Balanced XLR L+R output for connecting to amplification or recording equipment
16. MONITOR OUT 6.3mm L+R output for connecting to monitor speakers or as an additional stereo output for recording or other equipment
17. FOOT-SW Connect a momentary footswitch to this 6.3mm jack to mute or un-mute the DSP effects.
18. PHONES Connect headphones for monitoring the main mix output (32Ω min.)



DSP Effects & Bluetooth

19. Display DSP effects section LED VU meter & LCD display
20. PAIR Pairing button for internal Bluetooth receiver
21. TEMPO Tap the TEMPO button rhythmically more than twice to set a tempo for time effects.
22. PROGRAM In edit mode, press to adjust PARAMETER 2
23. EFFECTS In edit mode, press to adjust PARAMETER 2



22. PROGRAM Turn to change program and press in to confirm the program.
Press again to enter edit mode and turn to adjust PARAMETER 1.
Press again to confirm PARAMETER 1 setting
(press TAP to edit the PARAMETER 2 setting)
23. EFFECTS Overall volume control for DSP effects output

Master Section

24. VU meters LED main output volume meters
25. MASTER 60mm fader for master volume output
26. BT Rotary volume control for internal Bluetooth receiver
27. 2-TK Rotary volume control for 2-track RCA input
28. PHONES Rotary volume control for headphones and monitor outputs

Setting Up

Connect microphones to the Mic / Line / Instrument combo inputs (1) via XLR, ensuring that the +48V button (3) is pressed in for any condenser microphones or D.I. boxes that require phantom power to operate.

(If a microphone does not require phantom power, enabling it will not damage the microphone, but you must ensure that the XLR is wired as a balanced connection. i.e. separate +, -, and GND connections to avoid damage to the mixer)

For line inputs (such as CD, mp3 player, laptop, digital keyboard etc.) or instrument inputs (such as electric guitar), connect these via 6.3mm jack plug to the combo inputs (1)

If the input is a line level signal, keep the IMPED (2) button in the out position or for guitars and other electric instruments, press this button in.

For stereo line level signals, such as CD or mp3 players, computer sound cards or electronic keyboards, connect these via 6.3mm jack plug to the stereo inputs (4) or if the input device is mono, just connect to the L/MONO input. There are different line level standards for professional (+4dB) and domestic (-10dB) equipment. Check the output level of the source equipment and select the appropriate level using the +4dB/-10dB button (5)

An additional 2-track input (13) is provided for playback machines or other stereo line level inputs. Connect to this input using a L+R RCA lead. The level for this input in the mix is governed by the 2-TK volume control (27)

Connect the MAIN OUTPUT connectors (15) to the amplification or recording equipment with balanced or unbalanced XLR leads. This output is governed by the MASTER fader (25)

Headphones (32 Ω min.) can be connected to the stereo PHONES 6.3mm jack (18) for monitoring. Active monitor speakers or additional recording equipment may be fed from the L+R MONITOR jacks (16) Both PHONES and MONITOR outputs are governed by the PHONES level control (28)

A 2-TRACK output (14) is provided on L+R RCA connectors, which may feed additional amplification or recording equipment.

For hands-free muting and un-muting of the DSP effects section, a footswitch (momentary type) can be connected to the FX-FOOT-SW input (17)

Operation

Set the MASTER fader (25) fully down before powering up to avoid loud noises or overload.

Connect the supplied 5Vdc power adaptor to either the rear or underside power inlet (Never connect power supplies to both). Plug the adaptor into a suitable mains supply, ensuring the correct supply voltage. The CSR-63 will power up immediately when DC power is connected.

Check the output of any channel by starting with its level fader (7) turned fully down. HF and LF controls (9, 10) should all be set in the mid position (12 o'clock).

For channel inputs, before turning the faders up, play or speak the loudest expected sound through the channel and adjust the GAIN control (8) so that the CLIP LED only lights very briefly on the loudest peak.

Turn up the MAIN OUT (25) or PHONES (28) part way and listen whilst playing the signal (or speaking into the microphone) and increasing its channel level control (7) gradually. Stop when the desired output level is reached. Avoid aiming the microphone or instrument pickup towards the loudspeaker(s), which can cause feedback, which is a loud whistling or howling sound caused when a mic or pickup hears its own output.

To adjust the tone characteristics of a Mic, Line or Instrument input signal, the high, mid and low frequency content can be individually cut or boosted using the HF and LF EQ controls (9, 10)

Turning the HF control clockwise from 12 o'clock boosts the high frequencies (treble) for a brighter sound and turning it anticlockwise cuts them for a duller sound.
Turning the LF control clockwise from 12 o'clock boosts the low frequencies (bass) for a thicker sound and turning it anticlockwise cuts them for a thinner sound.

Boosting these too much can increase the chance of feedback, whereas cutting can sometimes help to reduce feedback, so experimentation is often necessary.

Adding some DSP presets to a mic or instrument can create a spatial or rotating effect. To add the effect, turn the EFFECTS control up (23) and gradually increase the FX control (11) on the input channel. There are 16 pre-set types available by rotating and pressing the preset selector (28) including digital reverbs, delays and modulation effects. Each effect has 2 adjustable parameters to enable you to tailor the effect as required. Experimentation is advised to achieve the best results from this section. See the previous "DSP Effects & Bluetooth" section and appendix for details about the DSP effects.

If a smart phone or tablet is to be connected as a wireless music source, press the PAIR button (20) and it will flash blue rapidly.

Search on the smart phone or tablet for a device called "Citronic" and select to connect for audio playback. The blue LED will be lit constantly when paired successfully.
When a track is being, the LED will flash slowly. Turn up the BT control (26) to hear the track being played. Pressing the BT PAIR button again will disable the Bluetooth receiver.

Turn down the volume controls before powering down to avoid loud noises through connected equipment.

Specifications

Power supply	5Vdc, 2A (in-line PSU included)
Output	Left + Right balanced XLR
Effects	16 program DSP (24-bit sigma-delta, 40kHz)
Power consumption max.	10W
Inputs	6 x combo XLR/jack + 3 x L(mono)+R jack
EQ: low	±15dB @ 80Hz
EQ: high	±15dB @ 12kHz
Phantom power	+48V individually switchable (XLR inputs only)
Input impedance : mic	2k Ohms
Input impedance : instrument	1M Ohms
Input impedance : line	20k Ohms
Audio source	Bluetooth receiver
Frequency response	20Hz - 20kHz (±0.5B)
THD +N	<0.03% @ 1kHz
Dynamic range	102dB
Crosstalk : stereo	92dB
Output impedance	120 Ohms
Max. output level	3Vrms
Dimensions	482 x 160 x 90mm
Weight	2.745kg



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.

Hereby, AVSL Group Ltd. declares that the radio equipment type 170.809UK is in compliance with [Directive 2014/53/EU](#)

The full text of the EU declaration of conformity for 170.809UK is available at the following internet address: <http://www.avsl.com/assets/exportdoc/1/7/170809UK%20CE.pdf>

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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 (11.6bpm)	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