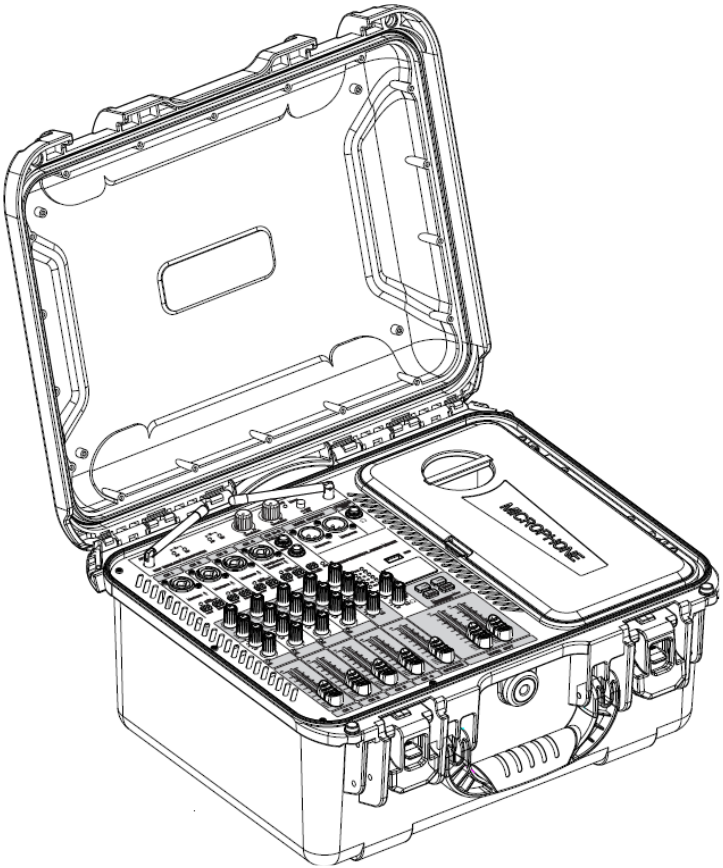
FLITE-600

Item ref: 170.600UK

User Manual

Powered Mixer with DSP & 2 UHF Mics



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 FLITE-600 powered 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 IEC power lead provided or an equivalent
- The FLITE-600 is housed in a heavy duty moulded case but is not waterproof.
  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 it checked by qualified personnel before further use

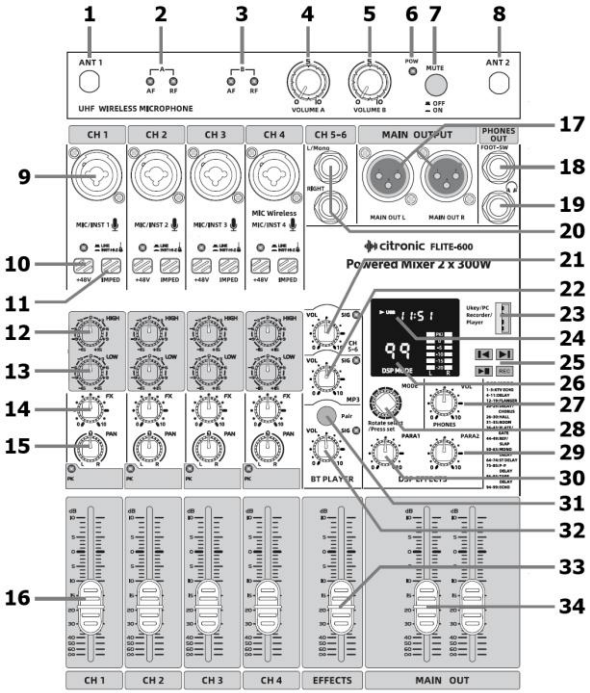
Placement

- 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 at the rear and keep the console clear of damp or dust.

Cleaning

- Use a soft cloth with a neutral detergent to clean the surfaces 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



1. UHF antenna 1 BNC connection
2. UHF MIC A AF and RF LED indicators
3. UHF MIC B AF and RF LED indicators
4. UHF MIC A VOLUME control
5. UHF MIC B VOLUME control
6. POWER LED indicator
7. UHF global MUTE push button
8. UHF antenna 2 BNC connection
9. MIC/LINE/INST input XLR/jack
10. +48V phantom power switch
11. IMPEDANCE selector line/instrument
12. HIGH EQ tone rotary control
13. LOW EQ tone rotary control
14. FX (effects) level rotary control
15. PAN (L-R) rotary control
16. Channel level fader
17. MAIN OUTPUT L+R XLR (balanced)
18. FOOTSWITCH jack (momentary)
19. Headphones 6.3mm stereo jack
20. Stereo Line input L+R 6.3mm jack
21. Stereo Line input VOLUME control
22. mp3 player VOLUME control
23. USB port (mp3 player)
24. mp3 playback display
25. mp3 playback controls
26. DSP effects display
27. HEADPHONES output level control
28. DSP rotary selector / push to set
29. DSP PARAMETER 2 control
30. DSP PARAMETER 1 control
31. Bluetooth Pairing button
32. Bluetooth player VOLUME control
33. Global DSP effects level fader
34. MAIN OUT L+R level faders

The FLITE-600 has 4 mono input channels which can accept a balanced microphone input or switchable line/instrument input. Channel 4 is used for the inbuilt dual UHF microphones but can be operated in the same way and channels 1, 2, and 3 if wireless microphones are not being used.

There is also a stereo input for playback devices or line level instruments. All preamps have studio grade, low noise architecture for the cleanest possible path throughout the signal chain.

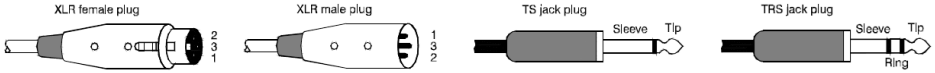
For music playback, there is a USB mp3 player/recorder/interface, Bluetooth receiver and a fully-featured DSP effects section. Console layout is set out in distinct sections to simplify operation of each section.

The following pages are divided up into these stages to explain the details and function of each control.

Channel 1-4 inputs

Channel 1-4 inputs are provided as XLR or 6.3mm jack on combo sockets (9)
If an XLR is plugged in, this will be accepted as a low impedance microphone level signal.
If a 6.3mm plug is used, this will be accepted as a high impedance line or instrument signal.
For a line level source, leave the IMPED switch (11) at the 'out' position.
For an instrument (e.g. guitar) source, press the IMPED switch in to correctly match the input level.

The connections for these inputs are assigned as shown below.



For microphones or DI boxes that require phantom power, press in the +48V button (10) and the LED will light. Do not use phantom power with unbalanced XLR connectors. (this does apply to any jack inputs)

Channel 4 is shared by the onboard dual wireless UHF microphone system.
If the wireless microphones are not being used, channel 4 operates the same as channels 1, 2, and 3.

The HIGH EQ control (12) can boost or cut the high frequencies by ±15dB (12 o'clock position is zero)
The LOW EQ control (13) can boost or cut the high frequencies by ±15dB (12 o'clock position is zero)

FX (14) controls the amount of the channel signal that is fed to the DSP effects section, determining the amount of the selected audio effect that is applied to it.

PAN (15) is short for Panoramic Potentiometer and controls the amount of left or right field that the channel is fed out to, affecting its position within the stereo field.

Channels 1-4 each have a 60mm level fader for quick and easy adjustment of mix levels (16)

UHF wireless microphones

The FLITE-600 has a section above the mixing console for an onboard dual wireless microphone system.
The system has 2 channels, A and B, which are governed by 2 rotary VOLUME controls (4, 5).
Turn these controls down before checking the system to avoid any accidental feedback or loud noises.

Two UHF handheld microphone transmitters are provided in the right-side compartment of the mixer.
For each handheld microphone, unscrew the lower half of the housing to reveal the battery compartment.
Insert 2 x AA alkaline batteries, observing the polarity as marked inside the compartment.
Replace the lower cover of the microphone and slide the switch on the side on the microphone upward.
The LED should light briefly to show that power is on (if the LED lights constantly, replace the batteries).

With all Channel faders fully down, turn up the UHF VOLUME controls (4, 5) part way and the MAIN OUTPUT faders up part way, then ensure the UHF microphones are not too close to the speakers and pointing away from them to avoid feedback whilst checking.

Gradually increase the Channel 4 fader whilst speaking into each of the UHF microphones until the speech can be heard and increase the Channel 4 fader to the required level and adjust each UHF VOL control as required for additional level or for balance between the 2 microphones.

When not in use, slide the button on each UHF microphone down and if not being used for long periods, remove the batteries until needed.

Channel 5-6

A pair of 6.3mm jacks serves as a stereo pair for input 5-6 (20) at line level signal (e.g. CD, PC, mp3 etc.) If the line input is mono, using just the LEFT jack input will let the signal occupy both sides.
This input does not have EQ or DSP effects. It is governed by a single volume control (21)

Output section

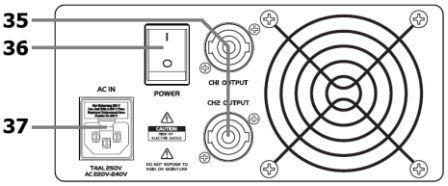
In addition to the speaker outputs described below, the FLITE-600 has two balanced XLR outputs (17), which can be connected as Left & Right Main Mix line output onto further stereo amplifiers, active speakers or recording equipment.

There is also a 6.3mm PHONES OUT stereo jack (19) for connecting headphones (32Ω min.) to monitor the main output, which is governed by the PHONES volume control (27).

The last connection in this section is a 6.3mm jack labelled FOOT-SW (18), which is for connecting a momentary foot switch to mute/un-mute the DSP effects section (e.g. to defeat echo/reverb effects for announcements between songs)

Rear Panel

35. Speaker outputs L+R (CH1 & CH2)
36. Power on/off rocker switch
37. IEC mains power inlet & fuse holder



FLITE-600 has an inbuilt 2 x 300Wrms amp with a pair of twist-lock speaker outputs on the rear panel (35).

Each output can operate down to a 4Ω minimum load…
1 x 8Ω speaker connected to one of these outputs would need to be able to handle up to 150Wrms.
2 x 8Ω speakers connected in parallel = 4Ω total… with 300Wrms shared equally between the 2 speakers.

The rear panel is also home to the IEC power inlet with integral mains fuse holder (37) and the POWER switch (36) to power up the FLITE-600.

Setting Up

If a wired microphone is to be used with the FLITE-600, connect to input channel 1, 2, or 3 via XLR cable. If the onboard UHF microphones are not being used, then input 4 is also available. For condenser microphones or D.I. boxes that require phantom power, enable this by pressing the +48V button in (10).

For any instruments or line level inputs that are to be used, these should be connected to channels 1-4 via the 6.3mm plug and if the input source is an instrument (e.g. electric guitar or bass), press in the IMPED button (11), otherwise for line level sources, leave this button in the 'out' position.

Connect 1 or 2 speakers to each speaker output using Speakon leads, ensuring 4Ω min. load and adequate power handling as described above.

Begin with all faders (16) at the bottom of the console fully down, FX controls (14) fully down and HIGH and LOW EQ (12, 13) and PAN (15) controls pointed vertically at the 12 o'clock position.
Also turn fully down the channel 5-6, MP3 and BT controls (21, 22, 32)

Finally, connect mains power to the FLITE-600 via the IEC mains inlet (37) with the power lead provided (or equivalent), ensuring the correct supply voltage and then power up the FLITE-600 (36).

Operation

For the initial system check, set the MAIN OUT faders (34) up part way (for safety, do not set to full volume). Speak into a connected microphone or play a line level or instrument input through one of the input channels 1-4 whilst gradually increasing the output from the relative channel fader (16) until the output can be heard through the speakers. Then increase the fader (and MAIN OUT) to the required level.

Equally, the UHF mics or a line input through CH5-6, a track streamed via Bluetooth or played from a USB flash drive (see below) could be used for the initial system check, gradually increasing the signal level from its relative volume control (21, 22, 32).

The system can be checked via the PHONES OUT jack (19) with the PHONES control (27) up part way.

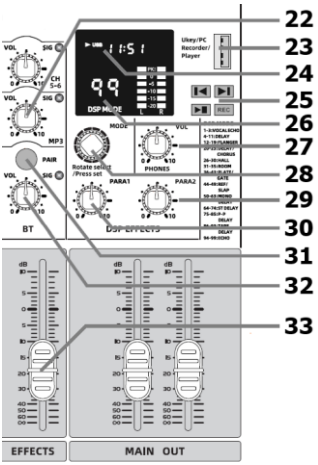
To change the tonal character of channels 1-4, you can adjust the HIGH and LOW EQ controls.
Turning the HIGH control clockwise from 12 o'clock boosts the high frequencies (treble) for a brighter sound and turning it anticlockwise cuts them for a duller sound.
Turning the LOW control clockwise from 12 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.

Note: If the PK indicator above the channel fader is lighting constantly (i.e. more than a brief flicker), this is a sign that the signal level is too high, and it will be necessary reduce the channel EQ or overall level.

For any of channels 1-4 that require effects, turn up the EFFECTS fader (33) part way and gradually increase the FX control (14) for the channel that is in operation until the effects can be heard and then increase to the required amount. To change or adjust the effects, see the section on DSP Effects below.

The last adjustment to make is the PAN control (15) which determines the left/right position of the channel in a stereo field, which is useful for spatial spread and separation of elements in the mix.

MP3 Player/Recorder



The FLITE-600 has a built-in USB mp3 audio player/recorder, with playback level governed by the MP3 volume control (22).

The USB port (23) directly below the PHONES OUT jack can accept a USB flash drive that is formatted to FAT32 to play back audio tracks that are stored as .mp3 or .wma files on the flash drive.

The status of the mp3 player can be viewed in the upper part of the onboard display (24) Tracks can be navigated on the USB flash drive using the ◂ Previous, ▸ Next, and ▸ II Play/Pause buttons (25). Use the **REC** button to initiate recording onto the USB flash drive. Pressing **REC** again will stop the recording and store it as a numbered file onto the USB flash drive.

Connecting the USB to a PC (using a USB A to A lead) provides a stereo plug & play USB audio interface. This will appear in your PC software as an input/output option.

The signal to the PC will be the overall mix of all channels and the signal back from the PC will be added to the main mix via the MP3 volume control.

Bluetooth

To connect a smart phone for wireless playback of stored tracks through the FLITE-600, press the BT PAIR button (31), which will flash blue to indicate that it is in pairing mode. Open the Bluetooth menu on the smart phone and search for the device ID "Citronic" and select to pair.

When pairing is confirmed, the PAIR button will stay lit blue constantly. If it is still flashing, there may be another "Citronic" item in range.

In this case, temporarily disable Bluetooth on any other items with the "Citronic" ID and then try pairing when the target FLITE-600 is the only powered up Bluetooth device with this ID.

When successfully paired, playback of audio from the smart phone will be streamed wirelessly to the FLITE-600 and the level of this playback will be governed by the BT VOL control (32)

DSP Effects

The FLITE-600 has a DSP effects engine to provide sound effects to vocals and instruments across input channels 1-4 via the FX control (14). A choice of 99 pre-set effects is available by turning the rotary selector (28) and pressing it to choose the required pre-set effect. This is indicated in the lower part of the display (26)

For each pre-set effect, there are 2 adjustable parameters which can be set using the PARA 1 and PARA 2 rotary controls (30, 29). A full list of effects and parameters is included at the end of this manual.

The overall level of effect in the mix is controlled by the EFFECTS fader (33)

To enable or disable the DSP effects remotely, connecting a momentary foot switch to the FOOT-SW jack (18) gives the facility to mute or un-mute the effects to mix.

Powering Down

Turn down the MAIN OUT controls before powering down the FLITE-600 to avoid loud noises through any connected equipment.

Specifications

Power supply	220-240Vac, 50Hz (IEC)
Fuse	T4AL
Inputs : Mic/Line	4 x combo XLR/jack
Inputs : Line	1 x L/mono+R 6.3mm jack
Phantom power	+48V switchable (XLR inputs only)
Dynamic range	102dB (mixer channels)
EQ: low	±15dB @ 80Hz
EQ: high	±15dB @ 12kHz
Bluetooth version	v5.1 (+BR+EDR+BLE)
Effects	99 program DSP (2 parameter controls)
Audio source	Bluetooth receiver, USB mp3 player/recorder
USB version	v1.1 audio (mp3/wav/ape/flac)
Output : line	L+R XLR
Outputs : speaker	L+R SPK connection
Output : rms @ 4 Ohms	2 x 300W
Output : rms @ 8 Ohms	2 x 150W
Wireless microphone frequencies	863.1MHz + 864.5MHz
Antenna connection	BNC
Wireless range	up to 50m
Weight	6.8kg
Dimensions	430 x 350 x 205mm

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 170.600UK is in compliance with Directive 2014/53/EU

The full text of the EU declaration of conformity for 170.600UK is available at the following internet address: http://www.avsl.com/assets/exportdoc/1/7/170600UK%20CE.pdf

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DSP Effects Presets & Parameters

No	Name	Para 1	Para 2
1	KTV Echo 3	Dly Time	Decay Time
2	KTV Echo 2	Dly Time	Decay Time
3	KTV Echo 1	Repeat	Decay Time
4	Bright Hall Mid	Pre-Delay	Decay Time
5	Bright Room Mid	Pre-Delay	Decay Time
6	Plate Mid	Pre-Delay	Decay Time
7	Mono Delay 220	Repeat	Delay Time
8	Stereo Delay 220	Repeat	Delay Time
9	Ping Pong Delay 220	Repeat	Delay Time
10	Tape Delay 220	Repeat	Delay Time
11	Modulation Delay	Depth	Delay Time
12	Chorus Slow	Depth	Speed
13	Chorus Fast	Depth	Speed
14	Flanger Light	Depth	Speed
15	Flanger Heavy	Depth	Speed
16	Distortion FX	Drive	Gain
17	Wah Wah	Depth	Speed
18	Tremolo	Depth	Speed
19	Pitch Shift	Cent	Key
20	Chorus + Room	Speed	Decay Time
21	Chorus + Hall	Speed	Decay Time
22	Delay + Chorus	Speed	Delay Time
23	Delay + Flanger	Speed	Delay Time
24	Delay + Chorus + Room	DlyTime	Decay Time
25	Delay + Chorus + Hall	DlyTime	Decay Time
26	Bright Hall Small	Pre-Delay	Decay Time
27	Bright Hall Large	Pre-Delay	Decay Time
28	Warm Hall Small	Pre-Delay	Decay Time
29	Warm Hall Mid	Pre-Delay	Decay Time
30	Warm Hall Large	Pre-Delay	Decay Time
31	Bright Room Small	Pre-Delay	Decay Time
32	Bright Room Large	Pre-Delay	Decay Time
33	Warm Room Small	Pre-Delay	Decay Time
34	Warm Room Mid	Pre-Delay	Decay Time
35	Warm Room Large	Pre-Delay	Decay Time
36	Plate Small	Pre-Delay	Decay Time
37	Plate Large	Pre-Delay	Decay Time
38	Reverb + Gate Short	Gate Time	Decay Time
39	Reverb + Gate Mid	Gate Time	Decay Time
40	Reverb + Gate Long	Gate Time	Decay Time
41	Doubling Small	DlyTime	Decay Time
42	Doubling Mid	DlyTime	Decay Time
43	Doubling Large	DlyTime	Decay Time
44	Early Reflections Small	Pre-Delay	Decay Time
45	Early Reflections Mid	Pre-Delay	Decay Time
46	Early Reflections Large	Pre-Delay	Decay Time
47	Slap Short	None	Delay Time
48	Slap Mid	None	Delay Time
49	Slap Long	None	Delay Time

No.	Name	Para 1	Para 2
50	Mono Delay 60	Repeat	Delay Time
51	Mono Delay 100	Repeat	Delay Time
52	Mono Delay 150	Repeat	Delay Time
53	Mono Delay 300	Repeat	Delay Time
54	Mono Delay 500	Repeat	Delay Time
55	Mono Delay 600	Repeat	Delay Time
56	Mono Delay 800	Repeat	Delay Time
57	Mono Delay 1000	Repeat	Delay Time
58	Mono Delay 1200	Repeat	Delay Time
59	Mono Delay 1400	Repeat	Delay Time
60	Mono Delay 1800	Repeat	Delay Time
61	Mono Delay 2500	Repeat	Delay Time
62	Mono Delay 3000	Repeat	Delay Time
63	Mono Delay 3500	Repeat	Delay Time
64	Stereo Delay 60	Repeat	Delay Time
65	Stereo Delay 100	Repeat	Delay Time
66	Stereo Delay 150	Repeat	Delay Time
67	Stereo Delay 300	Repeat	Delay Time
68	Stereo Delay 500	Repeat	Delay Time
69	Stereo Delay 600	Repeat	Delay Time
70	Stereo Delay 800	Repeat	Delay Time
71	Stereo Delay 1000	Repeat	Delay Time
72	Stereo Delay 1200	Repeat	Delay Time
73	Stereo Delay 1400	Repeat	Delay Time
74	Stereo Delay 1800	Repeat	Delay Time
75	Ping Pong Delay 60	Repeat	Delay Time
76	Ping Pong Delay 100	Repeat	Delay Time
77	Ping Pong Delay 150	Repeat	Delay Time
78	Ping Pong Delay 300	Repeat	Delay Time
79	Ping Pong Delay 500	Repeat	Delay Time
80	Ping Pong Delay 600	Repeat	Delay Time
81	Ping Pong Delay 800	Repeat	Delay Time
82	Ping Pong Delay 1000	Repeat	Delay Time
83	Ping Pong Delay 1200	Repeat	Delay Time
84	Ping Pong Delay 1400	Repeat	Delay Time
85	Ping Pong Delay 1800	Repeat	Delay Time
86	Tape Delay 60	Repeat	Delay Time
87	Tape Delay 100	Repeat	Delay Time
88	Tape Delay 150	Repeat	Delay Time
89	Tape Delay 300	Repeat	Delay Time
90	Tape Delay 500	Repeat	Delay Time
91	Tape Delay 600	Repeat	Delay Time
92	Tape Delay 800	Repeat	Delay Time
93	Tape Delay 1000	Repeat	Delay Time
94	Echo 1 100	Repeat	Delay Time
95	Echo 1 400	Repeat	Delay Time
96	Echo 2 100	DlyTime	Decay Time
97	Echo 2 400	DlyTime	Decay Time
98	Echo 3 100	DlyTime	Decay Time
99	Echo 3 400	DlyTime	Decay Time