

## CE22

### Enhancer/Exciter & Surround Processor

Order ref: 170.938UK

User Manual



### Features

- Switchable Surround Processor
- Independent Bass Processors with 2 modes
- Variable Enhancer/Exciter process blend
- Balanced or unbalanced signal path

Version 1.1



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

## **Introduction:**

Thank you for choosing this Citronic enhancer/exciter unit. This product has been designed to deliver professional audio processing facilities with reliable and accurate function. In order to achieve the best results from this equipment and avoid damage through misuse, please read and follow these instructions and retain for future reference.

## **Warning:**

To prevent the risk of fire or electric shock, do not expose any part of the unit to rain or moisture.

If liquids are spilled on the surface, stop using immediately, allow unit to dry out and have checked by qualified personnel before further use.

Avoid impact, extreme pressure or heavy vibration to the unit.

There are no user serviceable parts inside the enhancer/exciter – refer all servicing to qualified service personnel.

## **Safety**

- Check that the supplied mains lead is in good condition and the supply voltage is correct.
- Ensure signal leads are of good condition and connected to appropriate inputs/outputs
- Do not allow any foreign particles to enter the unit through control apertures or connector apertures

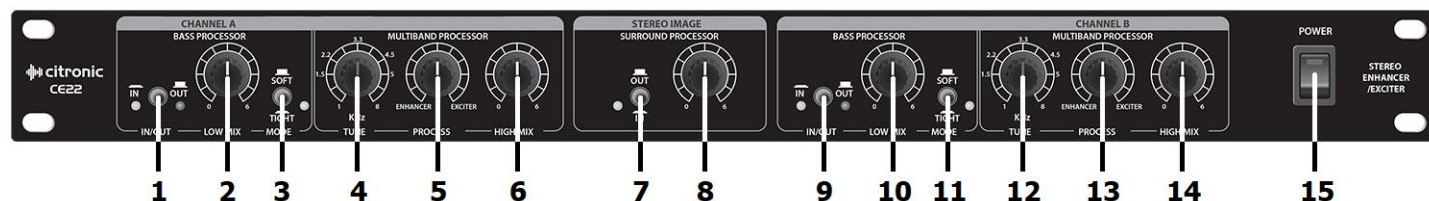
## **Placement**

- Keep out of direct sunlight and away from heat sources.
- Keep away from damp or dusty environments.
- When rack-mounting, avoid placing heavy units above the unit and ensure all connectors and controls are accessible

## **Cleaning**

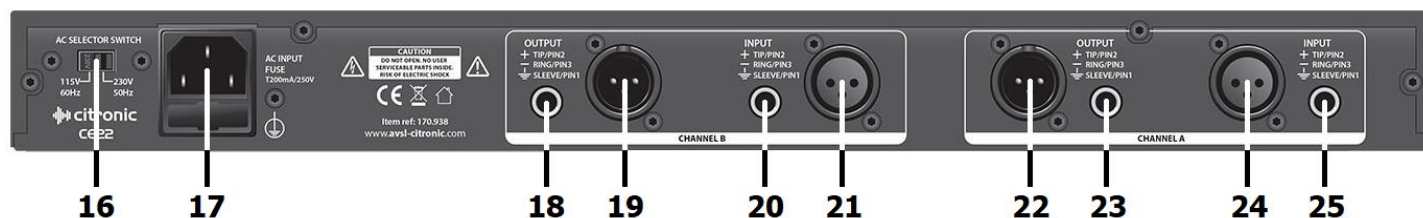
- Use a soft cloth with a neutral detergent to clean the casing as required
- Use a soft brush to clear debris from the control surface
- Do not use strong solvents for cleaning the unit.

## Front Panel



- |  |  |
|--|--|
| <ol style="list-style-type: none"> <li>1. IN/OUT switch and LEDs: CH A</li> <li>2. Bass Processor LOW MIX control: CH A</li> <li>3. Bass Processor MODE switch: CH A</li> <li>4. TUNE frequency control: CH A</li> <li>5. PROCESS control of Enhancer/Exciter mix: CH A</li> <li>6. HIGH MIX Enhancer/Exciter amount: CH A</li> <li>7. SURROUND PROCESSOR IN/OUT switch &amp; LED</li> <li>8. SURROUND PROCESSOR amount</li> </ol> | <ol style="list-style-type: none"> <li>9. IN/OUT switch and LEDs: CH B</li> <li>10. Bass Processor LOW MIX control: CH B</li> <li>11. Bass Processor MODE switch: CH B</li> <li>12. TUNE frequency control: CH B</li> <li>13. PROCESS control of Enhancer/Exciter mix: CH B</li> <li>14. HIGH MIX Enhancer/Exciter amount: CH B</li> <li>15. POWER switch</li> </ol> |
|--|--|

## Rear Panel



- |   |   |
|---|---|
| <ol style="list-style-type: none"> <li>21. Voltage Selector</li> <li>22. IEC mains inlet &amp; fuse</li> <li>23. 6.3mm jack output: CH B</li> <li>24. XLR output: CH B</li> <li>25. 6.3mm jack input: CH B</li> </ol> | <ol style="list-style-type: none"> <li>16. XLR input: CH B</li> <li>17. XLR output: CH A</li> <li>18. 6.3mm jack output: CH A</li> <li>19. XLR input: CH A</li> <li>20. 6.3mm jack input: CH A</li> </ol> |
|---|---|

## What is an Enhancer or Exciter

An Audio Enhancer is a multi-band processor which focuses selected high frequencies and applies specific filtering to isolate and boost them without introducing other unwanted high frequencies, thus giving more “sparkle” and “liveliness” to the signal.

An Audio Exciter is a processor which actively replaces missing high frequencies by actively generating overtones based on the existing frequencies to introduce more dramatic and yet more synthetic, high frequency content.

The Bass Processor on each channel is a device which improves phase-alignment and focus of low frequencies, giving similar attention to the bass as the Enhancer/Exciter does for the higher frequencies.

The SURROUND PROCESSOR varies phase-alignment between CH A and CH B to give the listener the impression that the sound is coming from increasingly different directions. This has the effect of a virtual widening of the stereo field when CH A and CH B are used to process the left and right channels of a mix.

## Connection

The unit can be used in 2 configurations...

1. As 2 independent mono graphic enhancer/exciter – e.g. for 2 separate microphones on channel inserts
2. As a stereo left & right processor – e.g. as a main L+R enhancer/exciter on master inserts or between the mixer and amplifier or recording equipment

Before connecting to an amplifier or other equipment, turn down all volume controls to avoid loud noises which may cause damage to other equipment.

Always switch amplifier power on last in line with volume levels down. Use good quality 6.3mm jack or XLR signal leads to connect the enhancer/exciter to allied equipment.

Connect mains power via the IEC (ensuring lead is in good condition and the voltage selector is same as the supply voltage) and switch the POWER on.

## Operation

Begin with LOW MIX, HIGH MIX and SURROUND controls set fully down (anti-clockwise)  
 Set the TUNE control to the desired range of frequencies to be affected – 1kHz is Mid frequencies and 8kHz is High  
 Begin with the PROCESS control in the centre position (equal amounts of each process)  
 Gradually increase HIGH MIX and check the difference in high frequency content until the desired effect is reached  
 Varying the TUNE control at this stage will sweep the effect through the various frequencies.

If the process sounds too dramatic or unnatural, turn the PROCESS control toward ENHANCER.  
 If the process is too mild or ineffective, turn the PROCESS control toward EXCITER

The BASS PROCESSOR has options for SOFT or TIGHT bass enhancement.  
 Select the MODE – SOFT suits classical and subtle music content, TIGHT suits high energy dance music  
 Rotating the LOW MIX control determines the amount of bass processing, with "0" being none and "6" being maximum.

The IN/OUT button is a bypass, which can be used to disable all processing for that channel for comparison with the original unaffected signal.

To expand the perceived stereo field, press IN/OUT on the Surround Processor until the indicator is lit and gradually increase the rotary control. Use the IN/OUT switch to compare the effected and unaffected signal until the desired amount of process is set.

## Specifications

|                       |                                       |
|-----------------------|---------------------------------------|
| Power supply          | 115/230Vac 50/60Hz - selectable (IEC) |
| Frequency response    | 20Hz-20KHz (+0/-3dB)                  |
| Input impedance       | 12kohms                               |
| Output impedance      | 45ohms                                |
| THD                   | 0.008% @ +4dBu 1KHz                   |
| Signal to noise ratio | >95dBu                                |
| Dimensions            | 44 x 482 x 250mm                      |
| Weight                | 3.5kg                                 |

## Troubleshooting

|   |  |
|---|--|
| No function and Power switch LED is not lit | Ensure mains voltage is correct and connected properly             |
|   | Ensure front panel power switch and mains outlet switch are on     |
| Power is on but no audio output             | Check XLR and/or jack leads are OK and connected properly          |
|   | Check that inputs and outputs are connected the correct way around |
| Distorted output                            | Reduce BASS MIX and HIGH MIX controls                              |
|   | Switch out the SURROUND PROCESSOR                                  |



**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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