

Operation

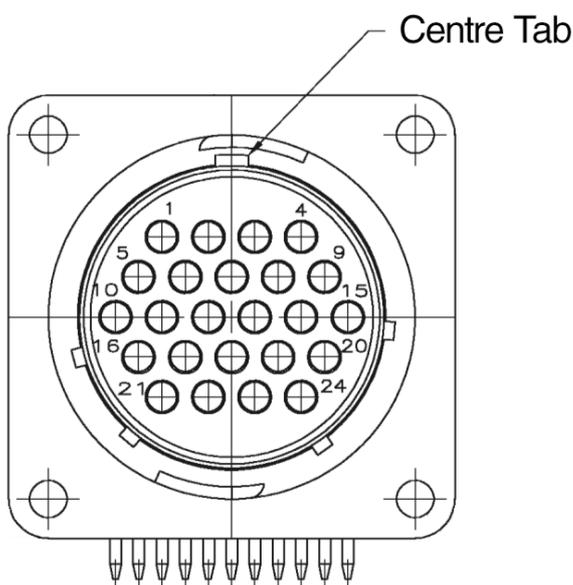
Powering Up

The Custom Series 75 is powered by an external Power Supply, and utilises Soft Start Technology.

To ensure a safe power up, observe the following procedure.

1. Switch off Mains Power.
2. Double check that the 115/230V Voltage Selector on the rear of the Power Supply is in the correct position in relation to your mains supply.
3. Connect the cable from the rear of the Power Supply to the rear panel of the consoles Master Section. Align one of the two tabs on the outside housing of the power cable, with the Centre Tab indicated on the image below. Slot the power cable into the connector on the rear panel of the Master Section. Screw the outside housing of the power cable into the rear panel connector ensuring that it locks into place.
4. All audio outputs are automatically muted during the consoles power up procedure.
5. Switch the Power Supply on using the two position switch located on the front panel, up is on.

The Green Light on the front of the Power Supply should light. Due to the classic circuitry, the console will take 15 seconds to stabilise during which all meters will light before returning to the default view.



The Power Supply and Soft Start

A large current is needed to power the console. A circuit board containing a microchip (known as the **Soft Start** board) slowly ramps the voltage up to the required amount. This procedure stops the power supply from drawing too much power and tripping the mains circuit. In the event that the console does not power up, the **Green Light** will not indicate on the front of the Power Supply, and instead the **Red Fault Light** will be active.

This indicates that one of the following errors has occurred:

- » The 115/230V Voltage Selector, found on the rear of the power supply, may be in the incorrect position.

Or

- » One or both of the two fuses found on the Soft Start circuit board may have blown – power down, remove the lid of the Power Supply, and locate the two fuse holders found adjacent to the 115/230V Voltage Selector (this is rare, generally there will be a reason the fuse has blown – it is highly recommended that the power supply be professionally serviced). Replace with **6 AMP** fuses.

If neither of the above solutions fix the problem, have the Power Supply professionally serviced.

Retro and Modern Circuitry

The Custom Series 75 console can achieve the Retro sound of classic 1970's circuitry, or the Modern sound of modern circuitry. There are a few ways in which these sounds can be achieved, however the true versatility of the Custom Series 75 is realized with the combinations of both Retro and Modern circuitry.

If you would like to quickly compare the sound of the Voltage and Current summing busses (see the Glossary for definitions of these), and the Retro and Modern output stages, try the following. Please then read on for a more in depth explanation of the signal flow.

1. Make sure you have a large number of signals being routed through the Channel paths of the console.
2. **Do not** select RETRO on the Channel modules or in the Console Modes section. This will route all channels to the Modern summing bus. Save as Scene 1 by selecting STORE and 1 when the eight scene buttons are flashing.
3. Now select RETRO in the Console Modes section. This will route all channels to the Retro summing bus. Save as Scene 2 by selecting STORE and 2 when the eight scene buttons are flashing.
4. For now, select MODERN OP in the Monitor Source section so that the main output stage remains uncoloured.
5. By switching between Scene 1 and Scene 2 you will hear the difference between each summing bus. The stronger the signals are driven the more obvious the colouration will be.
6. Now, toggling between MODERN OP and RETRO OP in the Monitor Source section will enable you to hear the difference between both output stages.

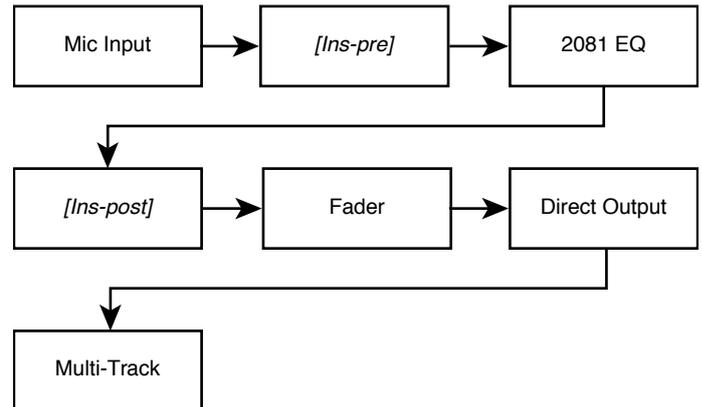
Typical Setups

The following outlines how to achieve both Retro and Modern sounds in a record, mixdown and overdub environment. Keep in mind that these are not the only scenarios possible. For further assistance, please consult the block diagrams.

Recording

Retro

Using a typical signal path for recording, i.e.



The signal will pass through a L0468 Input Transformer at the input stage, and an LO1166 Output Transformer, post-Fader, before feeding the Direct Out (always active) to the Multi-Track.

The resulting recorded signal will be marginally 'coloured'.

Modern

To record a clean signal (transformerless), bypass the LO1166 Output Transformer by patching the Insert Send directly to the Multi-Track Inputs. The Input Gain and Trim on the Channel will now be the only level to the Multi-Track. Engaging Fader Swap (depressing the High Pass Filter Selector) will result in the Fader controlling the level of the Multi-Track return, which may be more comfortable.

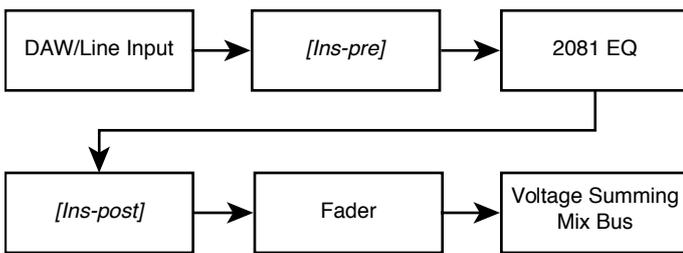
Fader Swap can be engaged globally in the Console Modes section of the Master Panel.

Mixdown

There are two selectable mix busses present in the Custom Series 75. One is based on Voltage Summing technology, the other on Current Summing technology - see the Glossary for explanations of each of these. Further, there are two selectable main mix outputs, the Retro Output (LO1166 Transformer) and the Modern Output (transformerless).

Retro

On the 2081 module of the Custom Series 75, selecting RETRO assigns the Channel Output to the Voltage Summing Mix Bus.



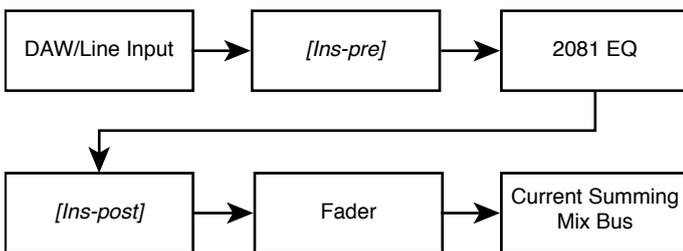
This then feeds the Main Mix Fader. Selecting RETRO OP in the Monitor Source section of the Master Panel routes the Main Mix Fader through a LO1166 Output Transformer to the Retro Outputs on the Mix Out DB25.

The Channel Retro can be engaged globally in the Console Modes section of the Master Panel.

Modern

If RETRO is not selected on the Channel module, the Channel output is assigned to the Current Summing Mix Bus.

This then feeds the Main Mix Fader. Selecting MODERN OP in the Monitor Source section of the Master Panel



routes the Main Mix Fader via an IC to the Modern Outputs on the Mix Out DB25.

Groups

Keep in mind that each of the eight Groups contains both a L0468 Input Transformer and an LO1166 Output Transformer. If a Channel is routed to a Group, it is summed on a Current Summing Mix Bus (the Group Mix Bus) before being passed through both transformers and fed to the Main Mix Fader.

The Groups are also patchable via the '8Trk Play/Ins Ret' and the 'Group Out/Ins Send' DB25's on the rear panel of the Master Section, or could be made available on a patchbay.

Further Experimentation

The flexibility of the Custom Series 75 becomes apparent when combinations of the above are implemented. Using the RETRO button to rout some channels to the Voltage Summing Mix Bus and others to the Current Summing Mix Bus, which are then summed at the Main Mix Fader, can add desired 'colour' to individual sounds. Assigning or patching signals to the Groups allows further colouration, and selecting RETRO OP and/or MODERN OP to output your mix via an LO1166 transformer, an IC, or both (!) results in ultimate control over a mix.