

# About This Manual

This manual is designed for **Software Version 3.0**, and should be used as a quick reference for owners of the *Custom Series 75* console, not to be read cover to cover, but as an accompaniment helping you to get to know your new console. Important terms can be found in **bold** allowing you to skim through to the exact section on a page that is relevant.

## Terminology

Extensive use of terminology, of which we feel it necessary to define before continuing, is used throughout this manual. Make sure you are familiar with this before continuing. The glossary located at the end of the manual may also assist!

**Module** - To avoid confusion between a Channel and the Channel path, 'Module' has been used instead to distinguish the physical modules that contain both the Channel path and Monitor path.

**DAW** - Digital Audio Workstation.

**Bus** - A summing point for all signals routed to the same place. All busses in the Series 75 are balanced lines to a particular destination (e.g. 'Stereo Local Mix Bus' picks up all signals routed from Channels and takes them to the Main Mix).

**Voltage Summing** - In the 1970s Voltage Summing was the only way to sum multiple signals onto a bus. Put simply, the signal level on the mix bus drops as more signals are fed to it, typically to around -30dBu. Further, the mix bus must be designed from the outset to have a fixed number of sources, and the impedance and bus level depends on this not changing. The signal passes through an input transformer and amplifying stage – the "mix amp". This input transformer will subtly colour the signal. Once the signal passes through the mix amp it hits an output transformer. The output transformer is where much of the sonic colour comes from. In effect, a Voltage Summing Mix Bus colours the audio in a way that is pleasing to our ear.

**Current Summing** - Current Summing is a modern solution to the 'deficiencies' of Voltage Summing. No matter how many signals you feed to the mix bus of a Current Summing circuit, the voltage on the bus will remain at 0 Volts. We call this a "Virtual Earth" - the inverted op-amp output voltage is 'fed back' to the virtual earth point via a feedback resistor, resulting in 0V at the op-amp input. A more sophisticated variant of this circuit is used to achieve balanced virtual earth mixing as used in this console. Due to the virtual earth, this design does not require an input or output transformer. A Current Summing Mix Bus does not colour the audio.

# Quickstart

If you don't want to read the complete manual, you can start with the most important sections below:

- » **Installation:**  
[http://www.customseries75.com/pdf/health\\_safety\\_installation\\_connections.pdf](http://www.customseries75.com/pdf/health_safety_installation_connections.pdf)
- » **Power Up Procedure:**  
<http://www.customseries75.com/pdf/operation.pdf>
- » **Master Section:**  
[http://www.customseries75.com/pdf/master\\_section.pdf](http://www.customseries75.com/pdf/master_section.pdf)
- » **Channel Strip:**  
[http://www.customseries75.com/pdf/2081\\_module.pdf](http://www.customseries75.com/pdf/2081_module.pdf)

This will give you a starting point from which you can come back and print out sections that you are interested in.

## Can I download the complete manual?

Yes, the manual can be downloaded at [http://www.customseries75.com/pdf/customseries75\\_manual.pdf](http://www.customseries75.com/pdf/customseries75_manual.pdf)