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The “NICERIZER 16 mk2” Owner’s Manual

Firstly, let us congratulate you on your purchase of the “Nicerizer 16 mk2”. We know you will be as pleased with its sonic qualities as we are.

You are now the proud owner of a “Nicerizer 16 mk2” that has the advantages of more than 25 years experience in audio engineering, today’s component and manufacturing technology, but still retaining “that sound” uniquely achievable through Class A design.

As you can tell, Phoenix Audio is dedicated to the development of Class A discrete technology used within high build-quality equipment.

The “Nicerizer 16 mk2” was originally conceived because of the demand from customers for something that would "sweeten" the output from Digital Audio Workstations, and to make the final mix easier to distribute and handle.

The “Nicerizer 16 mk2” is designed to take the output out of the digital realm, and to add the Class A characteristics and feel before the final recording.

The “Nicerizer 16 mk2” uses our well proven and loved Class A output stage (DSOP-2), but also has our latest breakthrough in transformer-less Class A, Discrete Input Technology which gives a "valve-like" sound, and our Class A, Discrete, Virtual Earth mixing stage, and Unique Class A Discrete Stereo Width mixing stage.

You CAN hear the difference!!

The “Nicerizer 16 mk2” is a 2U, 19" rack mountable 16 channel Input unit, which can be stacked and linked up to 6 units.

Applications: Range from "digital sweetening" to source routing, to DAW mixing and from studio to stadium.

Specifications:

- 16 channels of our Class A, discrete, truly balanced transformer-less input stage.
- Our proven and loved Class A, discrete, transformer balanced output stage (DSOP-2).
- Class A, Discrete, High Gain, Inverting (Virtual Earth) Mixing stage.
- Individual pan control for each channel (16 x Pan pots).
- 16 x Balanced Input XLR's. Can accept balanced or unbalanced input with no -6dB loss.
- 2 x mix busses (Stereo Mix Bus).
- ¼" TRS Inserts on Busses (L + R Bus Insert points).
- +8dB Boost button on each channel.
- Master mix bus output level control.
- Stereo LED level monitoring. Switchable for each channel and Main Output.
- Stereo/mono External/Headphone monitoring Output. Switchable to each channel, external input (via 2T Return), Auxiliary and Main output, includes monitoring of the mix bus. (L, R, and Stereo).
- Main Outputs on Balanced XLR's
- Auxiliary Outputs on ¼" TRS Jacks.
- 2T Return inputs on ¼" TRS Jacks.
- Class A Stereo Width control with Loss-less Bass. Pan-able from mono through to +25% Wider + Width control Bypass switch.
- Huge headroom available on all channels. Input Headroom +26dB. Output Headroom +26dB

Overview:

The Input signal is fed to the “Nicerizer 16 mk2” via the Input XLR's on the rear panel. The input signal is panned by the associated pan control on the front panel and can be monitored by selecting the associated channel on the Monitor control on the front panel. Monitoring can be achieved via the Front ¼" jack, and rear connections, and visually by the LED metering on the front panel.

The Nicerizer 16 mk2 is usually used in channel pairs Eg: 1- Left, 2 –Right. All channels can be monitored individual, and the L bus and R bus can also be monitored individually. The main bus output level is adjusted via the main level control on the front panel.

All connections to the “Nicerizer 16 mk2” are wired as follows:

3 Pin XLR connectors: Pin 1 – Ground, Pin 2 – Hot (signal +ve), Pin 3 – Cold (signal –ve).

¼” (6.35mm) TRS Stereo Jack Sockets: Tip – Hot (signal +ve), Ring - Cold (signal –ve), Sleeve- Ground.

¼” (6.35mm) TS Mono Jack Sockets: Tip – Signal, Sleeve – Ground.

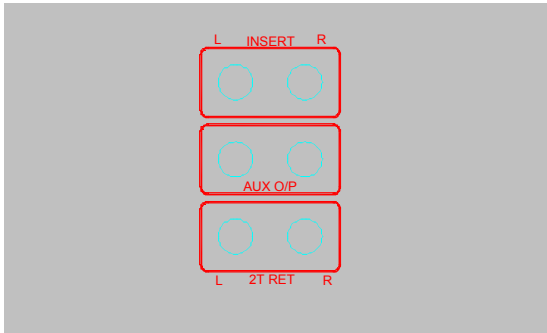
¼” (6.35mm) TRS Bus Insert Jack Sockets: Tip – Send, Ring – Return, Sleeve – Common.

Rear Panel Connections:

Inputs:

On the rear panel there are 2 rows of XLR connectors Numbered 1 – 16. These correspond with the Pan controls and monitor control on the front panel. These are Balanced XLR Inputs, but are equally capable of accepting an unbalanced signal without the 6dB loss often associated with sending an unbalanced signal into a balanced input.

¼” Jacks on Rear Panel:



Inserts:

There are two TRS ¼” Jacks marked Insert L and R. These are unbalanced inserts to allow you to insert outboard equipment across the busses (such as a compressor). The inserts can be used as unbalanced or balanced inserts, providing the correct cable is used. (see connections and functions for wiring detail).

Aux O/P:

The Auxiliary Output ¼” Jacks are unbalanced outputs. These outputs can be used to drive external monitoring amplifiers or other equipment. The Auxiliary signal is monitored after the Bus and Stereo Width stage, but before the Main Output level control and Output Transformers. The Auxiliary Output level is independently controlled by the Aux Level Control on the front panel.

2T Return:

The 2T Return jacks are ¼” inputs. The input can be either balanced or unbalanced signal. The purpose of the 2T Return is so that external equipment

(such as analogue tape machines, CD Burners, A/D Converters, Etc.) can be fed back to the Nicerizer 16's monitoring system to be monitored on the headphone output jack on the front panel. The 2T Return does not return the signal to the bus.

Main Outputs:

There are 2 x Main output XLR's Labelled Output L and R. These provide access to the 2 mix busses which are transformer-balanced Outputs driven by our Class A, Discrete DSOP-2 Output stages, and can be used in either balanced or un-balanced mode. These outputs can also be chained to any number of pieces of external equipment as long as total loading does not exceed 600R.

Front Panel:

Pan Controls

The front panel has 2 rows of Pan controls numbered 1 - 16 associated with the Input XLR's on the rear panel. Each channel is individually controlled and can be panned From Left to Right, and anywhere in between.

+8 dB Push-button switches

Between the rows of Pan controls there is a row of Push-button switches marked +8. Each switch is associated with an individual channel, and pressing a switch will add an additional gain of +8dB to the input of that channel.

Monitor Selector Switch (Rotary)

The monitor Selector switch is a 12 position switch that selects pairs of channels for monitoring purposes Eg: 1 and 2, 3 and 4 Etc. It also allows monitoring of the main L and R outputs, Pre-Fade signal, Auxiliary Output, and 2T Input. Monitoring is achieved visually by the LED meter, and is also available on the Auxiliary Output Jack sockets on the rear and Output Jack socket on the front panel.

Front Output Jack Socket

The ¼" TRS Monitor output jack is used to monitor individual channels (mono), stereo channels (channel pairs), The Auxiliary Output, 2T Return, Pre-fade level and the Main Output. The Monitor Jack Socket is capable of driving directly into headphones but is also capable of driving external monitoring equipment or studio talk-back style systems Etc.

Level Control

The Level Control adjusts the level available at the front Output Jack Socket only.

Monitor selector Toggle Switch (Left/Stereo/Right)

The switch has 3 positions. L, R and Stereo. When the switch is in the L position the Left signal being monitored via the Monitor Selector switch is sent to both sides of the headphone at once (mono). Eg: Channel 1 sent to both sides of headphone. When the switch is in the R position the Right Signal being monitored by the Monitor Selector switch is sent to both sides of the headphone at once (mono) Eg: Channel 2 sent to both sides of headphones. When the switch is in the Central position (stereo) The left signal is sent to the left headphone, and the Right signal to the Right headphone (Eg: 1 on Left, 2 on Right), this also allows you to hear any mixing that may have occurred via the pan controls across the two associated channels.

LED Level monitoring

The LED Level metering follows the monitor selector switch. Eg: If the Monitor Selector switch is in position 1 / 2, the Left row of LED's will show the input Level of Channel 1(L), and the right row will show the input level Channel 2 (R). This is measured as the level after the input amplifier, and is the level being sent onto the busses. When the monitor selector switch is set in the L/R position, the meter displays the level being sent to the Output XLR's. The LED Level indicator lights an LED as each indicated level is reached. (-2, +4, +10, +13, +16 dB). Although the metering only shows a maximum level of +16dB and the LED's are Red, this in **NO WAY indicates that the unit is clipping!!** The Nicerizer 16 is capable of delivering up to +26dB, way beyond the capability of the LED Meters.....So, if you want a much hotter output, just turn it up!!

Stereo Width Control and Toggle switch

The Stereo Width control is a Class A, Discrete, lossless-bass circuit that can be used to control the perceived "width" of the stereo image. The control only affects the output of the signal after the bus (it has no effect on individual channels before the bus). The width control will alter the image from mono, round to approximately 25% wider than the original image sent to the busses.

The stereo width toggle switch can be used to bypass the width control so that the control has no effect on the stereo image regardless of its position.

Main Output Level Control

The Main Output Level control is used to adjust the Main Output Level of the unit on the main Output XLR's. The Output level can be seen on the Level LED Meter when the Monitor Selector Switch is in the L/R position. Remember!! You can turn this control almost all the way to it's maximum position, way beyond the LED Metering Display's Capability, and still be sure that the Output will not clip! (The output can actually be driven another +10dB beyond the last Red LED before the output stages in the unit "might" clip).

Illuminated Mains switch.

Switching this switch into the 'ON' position so that the Neon glows, has a profound effect on the sound quality and gain of the unit. This is best left in the "ON" position for normal use. ☺