Crucial Audio®

Products & Services For The Music Industry



STUDIO-NUGGET Prime Number Vacuum Tube Analog Delay Stereo

OPERATING INSTRUCTIONS

Crucial Audio llc

October, 2026

SNS_MANUAL Rev A

Rack Mount Vacuum Tube Prime Number Analog Delay

IMPORTANT: READ ALL INSTRUCTIONS BEFORE OPERATING THIS UNIT!

CAUTION NOTES

- TO PREVENT DAMAGE, FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.
- ALLOW ADEQUATE VENTILATION SPACE ABOVE UNIT, DO NOT TIGHTLY STACK.
- NO USER SERVICEABLE PARTS INSIDE, REFER SERVICING TO QUALIFIED PERSONNEL ONLY.

Studio-Nugget Prime Number Vacuum Tube Analog Delay

Congratulations and Thank You for purchasing ***The Studio-Nugget*** by **Crucial Audio**. Pure analog tonality, and a feature set that will blow your mind. Transformer coupled Class A Valve Preamp stages with Selected & Matched Vacuum Tubes… Prime Number & Tempo Indicators, Analog VU Meters with Crucial Audio's critically acclaimed BBD circuitry deliver authentic analog echoes with sonic excellence for your mix! Please, refer to the following sections for operational and maintenance information.

FEATURES:

- *Dual LED Delay Time Displays*, with ***Prime Number*** Indicators
- *Dual Analog VU Meters* with Selectable Input & Output Monitors
- *Selected & Matched Vacuum Tubes*
- *Transformer Balanced Inputs & Outputs* on XLR connectors (*+4dBu)*
- *Low Noise High Voltage Class A Vacuum Tube Preamps*
- *BBD Analog Delay* with *Dual Analog Clocks* @ 1ms resolution range from *61ms* to greater than *600ms*
- *Dual Coarse & Fine Delay Time Controls*
- *Tempo LEDs* for Optical rhythm synchronization
- *Dual Modulation Depth & Rate Controls* plus *Modulation Rate LEDs*
- *Dual Dry Level, Repeats, Delay Level & Tone Controls*
- *Mono/Stereo Input Mode Selector* (on Rear Panel)
- *Gold Anodized Rugged 19" 2U Rackmount Enclosure*
- *115/230Vac 50/60Hz World Wide Power Input* featuring *Independent Medical Grade Power Supplies*
- 1 Year Limited Warranty

FUNCTIONS



Front Panel

7- SEGMENT LED DISPLAY: Indicates Delay Time in milliseconds, and displays “P” when the Delay Time equals a Prime Number.

TIME COARSE: Adjusts Delay Time from ~61 to >600 milliseconds (ms).

TIME FINE : Fine Tunes Delay Time Adjustment within +/- 1ms steps.

REPEATS: Feedback control adjusts the number of repeats from 1 to infinite.

MOD RATE : Sets the Speed for Delay Time Modulation.

MOD DEPTH : Sets the Delay Time Modulation Range from minimal to maximum time swings.

DRY LEVEL: Adjusts the amount of the Original (Dry) signal.

DELAY LEVEL: Adjusts the amount of the Delayed (Wet) signal.

DELAY TONE: Adjusts the tone of the Delayed signal from Dark to Bright.

IN/OUT SWITCH: Meter Selection Switch Routes Input or Output Signal as the source for the VU Meter level monitoring.

RED LED: Indicates Prime Number Delay Time

YELLOW LED: Pulses to the rhythm of the delay time. This can be used to ‘optically synchronize’ the delay to your desired tempo.

GREEN LED: Pulses to the rhythm of the Modulation Rate.

ANALOG VU METER: Indicates Output or Input Signal Levels, depending upon Meter Selection Switch position.



REAR PANEL FUNCTIONS

AC INPUT: This IEC AC power inlet accepts world wide voltage levels from 100 – 230 Vac. Use only approved IEC AC Power Cables.

POWER SWITCH: ON/OFF Power Switch, Top Position for Power On. Note: This switch is rear mounted for signal purity and to protect against unintentional power downs during high amplitude scenarios.

INPUT MODE: This toggle switch selects Input signal routing. ***MONO*** mode parallels ***INPUT 1*** & ***INPUT 2*** permitting a single input source to **IN1** or **IN2** to be routed to both channels.

INPUT 1 JACK: This Female XLR connector accepts 600Ω Balanced signals at +4dBu levels from your amplifier, mixing console, DAW or other effect units. This signal is routed to Channel 1 (or both channels if in MONO Input Mode).

OUTPUT 1 JACK: This Male XLR connector delivers 600Ω Balanced signals at +4dBu levels to your amplifier, mixing console, DAW or other effect units. This signal is routed from Channel 1's output.

INPUT 2 JACK: This Female XLR connector accepts 600Ω Balanced signals at +4dBu levels from your amplifier, mixing console, DAW or other effect units. This signal is routed to Channel 2 (or both channels if in MONO Input Mode).

OUTPUT 2 JACK: This Male XLR connector delivers 600Ω Balanced signals at +4dBu levels to your amplifier, mixing console, DAW or other effect units. This signal is routed from Channel 2's output.

Specifications

Model:	Studio-Nugget Stereo	
Power Requirement:	100-230Vac 50 Watts	
Input Impedance:	600 Ω	
Output Impedance:	600 Ω	
Nominal Input Level:	+4 dBu	
Nominal Output Level:	+4 dBu	
Delay Time Range:	61 - <610ms	
Valves:	12AU7 & 7025/12AX7 (Selected and Matched)	
Dimensions:		
Height:	3.5 in	8.89 cm (2u)
Width:	19 in	48.26 cm
Length:	12 in	33.02 cm
Weight:	7.5lbs	3.4 kg

Product Specifications are typical and subject to change without notice.

A Crucial Audio Tech Note About Prime Numbers & Delay Times

Professional Producers & Recording Engineers have known that Delay Times/Echoes set to Prime Numbers deliver a sonic difference in overall Echo clarity & level in the Mix. It can be an effective technique at any song tempo.
A prime number can only be divided by 1 and itself. Thus less likely to create phase cancellations of fundamental frequencies during audible inter-modulation events. One example is a multi-tone of 250Hz + 1kHz Dry & Delayed Sine Waves (summed with delay range of 80 – 120ms) @ 0dBv & -10dBv. Measurements on our Stanford Research Systems SR-760 FFT spectrum analyzer illustrate that a change of 1ms from a prime number can yield as much as -8dBv in delay gain at the 1kHz carrier during the 250Hz inter-modulation. Hence the audible difference of reported echo clarity and level within the frequency feast of the 'Mix'.

Maintenance

Your Studio-Nugget Stereo is designed to be relatively low maintenance and durable. Crucial Audio llc recommends that electronic service only be performed by qualified personnel. Dangerous voltages may be present on the circuit board (even if the unit is unplugged from its power adapter). Please, refer any repair to a qualified and authorized technician.

Product Support & Contact Information

Please, refer all technical support inquiries to Crucial Audio Customer Support. Product information, Frequently Asked Questions, and other information can be found online at www.crucialaudio.com

Contact Information:

Crucial Audio LLC
Tel/Fax 1-302-927-0090
Email: info@crucialaudio.com
URL: crucialaudio.com

Crucial Audio LLC Limited Warranty

Crucial Audio LLC warrants that the Crucial Audio product you have purchased shall be free of any defects in parts and workmanship if used under normal operating conditions for a period of one (1) year from the date of purchase, except that vacuum tubes, cables, and other included accessory products are warranted for ninety (90) days from date of purchase. This warranty shall run to the original purchaser or lessee when purchased or leased from an Authorized Crucial Audio Dealer and any transferee of a retail purchaser. IMPORTANT: PLEASE RETAIN YOUR SALES RECEIPT OR LEASE AS IT IS YOUR PROOF OF PURCHASE COVERING YOUR LIMITED WARRANTY. IF YOU WANT TO TRANSFER THE WARRANTY TO A SUBSEQUENT PURCHASER OF THE PRODUCT YOU MUST ENDORSE THE SALES RECEIPT TO SUCH SUBSEQUENT PURCHASER. THIS LIMITED WARRANTY IS VOID WITHOUT SUCH SALES RECEIPT OR LEASE. Defective parts presented during the applicable warranty period with proof of purchase will be repaired or replaced without charge if the complete product is returned to any Authorized Crucial Audio Electronics Service Center within the country it was purchased. Any repair or service performed by any person or entity other than an Authorized Crucial Audio Electronics Service Center is not covered by this limited warranty. Transportation costs are not included in this limited warranty.This limited warranty becomes void if the serial number on any product is defaced or removed, or the product has been damaged to alteration, misuse, accident, or neglect; or the product has been repaired or serviced by persons not authorized by Crucial Audio. THE FOREGOING CONSTITUTES THE ONLY WARRANTY MADE BY CRUCIAL AUDIO WITH RESPECT TO THE PRODUCTS AND IS MADE EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES EXPRESS OR IMPLIED. Any implied warranties, including without limitation, any implied warranties of duration of this limited warranty. Some states do not allow limitations on how long an implied warranty lasts, so the above limitations may not be applicable to you. This warranty applies only to products purchased and serviced within the U.S.A and Canada.

EFFECTIVE DATE: JUNE 1, 2020