



Liquid Channel Emulations

IMPORTANT INFORMATION:

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MICROPHONE PRE-AMPLIFIERS

- * FLAT e-BAL/CLEAN SOUND 10kΩ ELECTRONIC
Liquid Channel transparent transformerless mono mic-pre.
- * FLAT trfmr/CLEAN SOUND 10K Ω
Liquid Channel transparent transformer-based mono mic-pre.
- * THE GUV/BRIT MODERN SOLID STATE 1
Emulation of an AMEK Pure Path* dual mic-pre. amp (transformer-like amplifier) (UK) serial # unknown.
- * VALVE/US MODERN HYBRID 1
Emulation of an APHEX Thermionics Model 1100* discrete Class A tube dual mic-pre. (US) serial # 1134
- * US TRANY/US CLASSIC DISCRETE 1
Emulation of an API 3124+* discrete quad mic-pre. (US) serial # 10149
- * TRANY H/ US CLASSIC DISCRETE 1 HOT
Emulation of an API 3124+* discrete quad mic-pre. (US) serial #10149
- * SILVER 1A/US MODERN DISCRETE 1 HΩ
Emulation of an AVALON AD 2022* dual mono Class A pre-amp. (US) serial # 28136 (Impedance set to 'mic')
- * SILVER 1B/US MODERN DISCRETE 1 MΩ
Emulation of an AVALON AD 2022* dual mono Class A pre-amp. (US) serial # 28136 (Impedance set to 'mic')
- * SILVER 2/ US MODERN TUBE 1
Emulation of an AVALON VT-7375P* valve channel strip (US) serial # 12545
- * BRIT 70'S/ BRIT CLASSIC DESK 3
Emulation of a CADAC G Series 268E* console mic-pre. (UK) serial # unknown.
- * BIRD BRAIN/US MODERN SOLID STATE 1
Emulation of a CRANE SONG LTD Flamingo* dual channel discrete Class A mic-pre. (US) serial # unknown.
- * BIG BLUE A/US /CLASSIC SOLID STATE 1 Ω
Emulation of a dbx 786* dual mic-pre. (US) serial # FN97BD-10029
- * BIG BLUE B/US /CLASSIC SOLID STATE 1 LΩ
Emulation of a dbx 786* dual mic-pre. (US) serial # FN97BD-10029
- * WASP 1/BRIT CLASSIC TUBE 1
Emulation of a DRAWMER 1960* vacuum tube compressor amplifier (UK) serial # 1002

- * SCARLET/ US BOUTIQUE TUBE 1
Emulation of a DW FEARN VT-2* dual channel vacuum mic-pre. (US) serial # 38
- * FF ISA 110/ FOCUSRITE CLASSIC ISA 110
Emulation of a FOCUSRITE ISA 110 mono mic-pre./EQ (UK) serial # 665
- * FF GREEN 5/ FOCUSRITE GREEN CHANNEL STRIP
Emulation of a FOCUSRITE GREEN 5 CHANNEL STRIP (UK) serial # GO05116
- * FF RED 1/ FOCUSRITE CLASSIC RED 1
Emulation of a FOCUSRITE RED 1 quad Class A mic-pre. (UK) serial # FO7858T
- * BIG TUBE A/ US BOUTIQUE TUBE 2 LΩ
Emulation of a GROOVES TUBES VIPRE* variable impedance pre-amp. (US) serial # unknown. (Rise Time Slow setting.)
- * BIG TUBE B/ US BOUTIQUE TUBE 2 MΩ
Emulation of a GROOVES TUBES VIPRE* variable impedance pre-amp. (US) serial # unknown. (Rise Time Slow setting.)
- * SAVILLEROW/ BRIT CLASSIC DESK 4
Emulation of a HELIOS* console mic-pre./EQ (UK) serial # unknown. (Colour Green.)
- * DUNK/ US MODERN TUBE 2
Emulation of a MANLEY SLAM!* Transformer/valve mic-pre. (US) serial # SLAM120.
- * NEW AGE 1/ US MODERN DISCRETE 3
Emulation of a MILLENNIA HV-3D* 8-channel mic-pre. (US) serial # D-367.
- * NEW AGE 2A/ US MODERN HYBRID 2A
Emulation of a MILLENNIA STT-1* mono mic pre/channel strip (US) serial # 0-161. (Vacuum tube setting.)
- * NEW AGE 2B/US MODERN HYBRID 2B
Emulation of a MILLENNIA STT-1* mono mic-pre./channel strip (US) serial # 0-161. (Vacuum tube and transformer setting.)
- * BRIT DESK1/ BRIT CLASSIC DESK 1
Emulation of a NEVE VR CONSOLE* mic-pre. (UK) serial # unknown.
- * CLASS A 1/ BRIT 70'S CLASS A 1
Emulation of a NEVE 33114* mono mic-pre./EQ (UK) serial # unknown
- * CLASS A 2A/ BRIT 70'S CLASS A 2 HΩ
Emulation of a NEVE 1073* mono mic-pre./EQ (UK) serial # 7172K

- * CLASS A 2B/ BRIT 70'S CLASS A 2 LΩ
Emulation of a NEVE 1073* mono mic-pre./EQ (UK) serial # 7172K
- * CLAS AB 3A/ BRIT 70'S CLASS AB 3 HΩ
Emulation of a AMS NEVE 1081* Classic mono mic-pre./EQ (UK) serial # 50189/B
- * CLAS AB 3B/ BRIT 70'S CLASS AB 3 LΩ
Emulation of a AMS NEVE 1081* Classic mono mic-pre./EQ (UK) serial # 50189/B
- * OLD TUBE/ US 60'S TUBE 1
Emulation of a PULTEC M8-1* fixed gain valve mic-pre. (US) serial # 6846
- * RE-ISSUE/ MODERN DEUTSCH CLASSIC
Emulation of a SOUNDS INCORPORATED TELEFUNKEN V72* valve mic-pre. (DE) serial # unknown
- * BRIT DESK2/ BRIT CLASSIC DESK 2
Emulation of a SOLID STATE LOGIC SL 4000 G+* console mic-pre. (UK) serial # unknown
- * SWISS ROLL/ SWISS MODERN TUBE
Emulation of a STUDER D19 MicVALVE* valve mic-pre. (CH) serial # 1216. (Bass Warmth, Angel Zoom, Valve Drive Gain CCW, Valve Drive Clip CW (soft) settings.)
- * DEUTSCH 72/ DEUTSCH 60'S TUBE 1
Emulation of a TELEFUNKEN V72* valve mic-pre. (DE) serial # 2107.
- * DEUTSCH 76/ DEUTSCH 60'S TUBE 2
Emulation of a TELEFUNKEN V76/80* valve mic-pre. (DE) serial # 5507. (80Hz HPF switched out.)
- * BRIT TUBE1/ BRIT MODERN TUBE 1
Emulation of a TL AUDIO PA-1* dual pentode valve mic-pre. (UK) serial # 130318.
- * NASHVILLE BRIT CLASSIC DESK 5
Emulation of a TRIDENT-MTA A SERIES* dual discrete console mic-pre./EQ (UK) serial # 1017208.
- * VIKING 1/ DANISH CLASSIC TUBE 1
Emulation of a TUBE TECH MEC 1A* tube channel strip (DK) serial # 9503.
- * STELLAR 1A/ US 60'S TUBE 2 HΩ
Emulation of a UNIVERSAL AUDIO M610* mono tube pre-amp. (US) serial # 459.
- * STELLAR 1B/ US 60'S TUBE 2 LΩ
Emulation of a UNIVERSAL AUDIO M610* mono tube pre-amp. (US) serial # 459.

COMPRESSORS

- * FLAT COMP/ CLEAN SOUND FREE CONTROLS
Focusrite Liquid Channel DSP compressor.
- * TRANY C/ US CLASSIC DISCRETE 1C
Emulation of an API 2500* stereo mastering compressor, (US) serial #0016 (Old/Normal/Hard settings.)
- * TRANY A/ US CLASSIC DISCRETE 1A
Emulation of an API 2500* stereo mastering compressor (US) serial #0016 (Old/Normal/Soft settings.)
- * SILVER 2/ US MODERN TUBE 1
Emulation of an AVALON VT-7375P* valve channel strip (US) serial #28150

- * LIVE SOUND/ BRIT LIVE SOUND 1
Emulation of a BSS DPR402* dual compressor/limiter (UK) serial #02-9983-B
- * LONDON/ BRIT BOUTIQUE TUBE 1
Emulation of a CHISWICK REACH* (UK) stereo valve compressor serial #RMS0061
- * WASP 2/ BRIT CLASSIC SOLID STATE 1
Emulation of a DRAWMER DL221X* (UK) serial #1008X
- * WASP 1/ BRIT CLASSIC TUBE 1
Emulation of a DRAWMER 1960* (UK) vacuum tube compressor amplifier serial #1002
- * BIG BLUE A/ US MODERN SOLID STATE 1A
Emulation of a dbx 160S* (US) compressor/limiter serial # 000004 (Standard compression setting.)
- * BIG BLUE B/ US MODERN SOLID STATE 1B
Emulation of a dbx 160S* (US) compressor/limiter serial # 000004 (OverEasy compression setting.)
- * US RADIO/ US CLASSIC SOLID STATE 1
Emulation of a dbx 165* compressor/limiter (US) serial # 1821
- * COPY CAT/ US MODERN COPY CAT
Emulation of a EMPIRICAL LABS EL8 DISTRESSOR* (US) serial # 1689
- * VINTAGE/ US VINTAGE TUBE 1
Emulation of a FAIRCHILD MODEL 670* (US) serial # 530
- * FF ISA 130/ FOCUSRITE CLASSIC ISA 130
Emulation of a FOCUSRITE ISA 130 (UK) serial # F00069T
- * FF GREEN 5/ FOCUSRITE GREEN CHANNEL STRIP
Emulation of a FOCUSRITE CHANNEL STRIP (UK) serial # GO05116
- * FF RED 7/ FOCUSRITE CLASSIC RED 7
Emulation of a FOCUSRITE RED 7 (UK) serial # FO6350T
- * DUNK A/ US MODERN FET 1
Emulation of a MANLEY SLAM!* (US) serial # SLAM120 (FET limiter)
- * DUNK B/ US MODERN OPTICAL 1
Emulation of a MANLEY SLAM!* (US) serial # SLAM120 (ELOP (opto) limiter)
- * PRIMITIVE/ US CLASSIC TUBE 2
Emulation of a MANLEY STEREO "VARIABLE MU"* (US) serial # MSLC61536
- * BIG GREEN/ BRIT CLASSIC OPTICAL
Emulation of a JOE MEEK SC2* COMPRESSOR* (UK) serial # 05-1038
- * NEW AGE 2E/ US MODERN HYBRID 2E
Emulation of a MILLENNIA STT-1* (US) serial # 0-161 (Solid state input, solid state compressor settings.)
- * NEW AGE 2A/ US MODERN HYBRID 2A
Emulation of a MILLENNIA STT-1* (US) serial # 0-161 (Vacuum tube input, Vacuum tube compressor settings.)
- * CLASS A 1 / BRIT 70'S CLASS A 1
Emulation of a NEVE 2254/A* dual/stereo compressor/limiter (UK) serial # 5008K

- * CLASS A 2/ BRIT 70'S CLASS A 2
Emulation of a NEVE 33609/B* dual/stereo compressor /limiter (UK) serial # 108
- * BRIT DESK1/ BRIT CLASSIC DESK 1
Emulation of a NEVE VR CONSOLE* compressor (UK) serial # unknown.
- * MEAT PIE/ BRIT 60'S CLASS A
Emulation of a PYE 84 4060/01* compressor/limiter (UK) serial # 60
- * GRINDER A/ BRIT MODERN DESK COPY A
Emulation of a SMART RESEARCH C2* bus compressor (UK) serial # C217.
- * GRINDER B/ BRIT MODERN DESK COPY B
Emulation of a SMART RESEARCH C2* bus compressor (UK) serial # serial # C217. (Crush setting.)
- * MIX BUSS/ BRIT CLASSIC BUSS
Emulation of a SOLID STATE LOGIC FX G384* stereo compressor (UK) serial # FX384-180
- * BRIT DESK2/ BRIT CLASSIC DESK 2
Emulation of a SOLID STATE LOGIC SL 4000 G+* console compressor (UK) serial # unknown.
- * BRIT DESK3/ BRIT MODERN DESK 1
Emulation of a SOLID STATE LOGIC SL 510* (5000 series dynamics module) (UK) serial # unknown.
- * ACME 1/ US MODERN TUBE 3
Emulation of a SUMMIT DCL-200* dual compressor/limiter (US) serial # 0721076
- * ACME 2/ US MODERN TUBE 4
Emulation of a SUMMIT TLA-100A* tube levelling amplifier (US) serial # 0120429
- * LEVELLER/ US CLASSIC TUBE 3
Emulation of a TELETROX MODEL LA-2A* (US) valve compressor/limiter serial # 00227 (Silver face, pre-Harman)
- * BRIT TUBE/ BRIT MODERN TUBE 1
Emulation of a TL AUDIO C-1* dual valve compressor (UK) serial # 121739
- * VIKING 1/ DANISH CLASSIC TUBE 1
Emulation of a TUBE TECH CL-1B* compressor (DK) serial # 04150
- * VIKING 2/ DANISH CLASSIC TUBE 2
Emulation of a TUBE TECH LCA 2B* dual/stereo compressor/limiter (DK) serial # 04010
- * STELLAR 1/ US CLASSIC SOLID STATE 1
Emulation of a UNIVERSAL AUDIO 1176LN* mono limiting amplifier, (US) serial # 1394 (Black face, pre-Harman; a re-issue of the Urei 1176LN)
- * STELLAR 2/ US CLASSIC SOLID STATE 2
Emulation of a UREI MODEL 1176LN* mono limiting amplifier (US) serial # 11854 (Silver face)
- * STELLAR 3/ US CLASSIC SOLID STATE 3
Emulation of a UREI/TELETROX* mono levelling amplifier LA-3A (US) serial # 1584 (Black face, 30dB switch setting on rear panel.)
- * STELLAR 4/ US CLASSIC OPTICAL 1
Emulation of a UREI LA-4* compressor/limiter (US) serial # 4832A (Silver face)

everyone needs

Any mic pre and compressor in history

The Liquid Channel™ is a revolutionary professional channel strip that emulates a plethora of classic mic-pres and compressors. Combining radical new analogue pre-amp technology with Dynamic Convolution™ techniques, The Liquid Channel fuses cutting-edge analogue design with lightening fast SHARC DSP. Augmented by fully digital controls and optional remote software, The Liquid Channel provides the ultimate fluid vintage collection.



- Loaded with 40 classic mic-pre and 40 classic compressor emulations
- Endlessly expandable library of emulations via USB download
- 100 Programme Memories allow you to save every parameter – file format provides easy transfer to other Liquid users
- Free software application LiquidControl™ allows comprehensive remote operation and archiving facility
- 192kHz internal processing and ADC/DAC as standard
- New Focusrite Digital EQ
- Adjustable harmonic distortion accounts for variance in vintage originals
- Cascade up to 8 units for multichannel-linking of all parameters

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Liquid Technology

The Liquid Channel provides reliable emulation of a wide range of vintage units. It does this by emulating their sonic behaviour using Dynamic Convolution; the application of a unique, level-dependant set of responses to an audio signal.

These measured responses, sampled at numerous levels and with a multitude of setting combinations, are applied to the input stream on a sample-by-sample basis for extremely convincing results.

Liquid Pre-amplification™

Mic-pre emulation can't be achieved with software alone. Hardware is required in addition to account for the physical interaction with the microphone. As a result, Focusrite invested vast amounts of time and energy into designing and building the ultimate 'liquid' pre-amplifier, able to match the input impedance and signal path (transformer or electronic) of the device being emulated.

Not all Vintage units are born equal

Harmonic distortion is a beneficial artefact of analogue circuits (especially tube and transformer-coupled designs) providing the much-loved 'warmth'. However, often two units of the same type will vary in the amount of 2nd-, 3rd- or 5th-order distortion produced, so an additional control for modifying this vintage property is provided. This allows highly advanced control over all Liquid Channel emulations.



The best of both worlds – Analogue and Digital



The Liquid Channel combines a highly complex, massively flexible analogue front-end with Dynamic Convolution processing, which utilises lightning fast SHARC chips and runs at sample rates of up to 192kHz.

The front panel controls are digital, with tactile rotary encoders; all parameters can be stored in one of 100 Programme Memories. At the press of a button, you can reload all mic-pre, compressor and EQ settings for an individual session. This provides huge time saving benefits and portability; two advantages never previously associated with processing of this nature.

If using The Liquid Channel in conjunction with a recording platform (e.g. Pro Tools), both the session files and The Liquid Channel's Programme Memories and emulations can all be sent via standard data transfer methods, providing a completely mobile recording session. A multitude of emulated vintage classics with the power and ease of use of the digital domain.



Infinite expansion and remote control



The USB port on the rear panel allows remote control of The Liquid Channel via the free software application, Liquid Control™, leaving the processor safely racked away. But that's not all. The software application also serves as an archiving system for additional emulations and User Memories, and permits the uploading of additional classic units obtained free of charge from www.fliquid.com. So, The Liquid Channel is infinitely expandable.



Liquid Channel Performance Specifications

CONVERTER PERFORMANCE

- Sample Rate: 44.1, 48, 88.2, 96, 176.4 and 192kHz
- Bit Depth: 24Bit

ADC

- SNR: 120dB measured with 20Hz/22kHz bandpass A-weighted filter
- Frequency Response: ± 0.05 dB between 20Hz – 20kHz
- Maximum input level: +22dBu
- THD+N: 0.00035% (-109dB)

DAC

- Dynamic Range: 116dB measured with 20Hz/ 22kHz bandpass A-weighted filter
- Frequency Response: ± 0.05 dB between 20Hz – 20kHz
- Maximum output level: +22dBu
- THD+N: 0.0007% (-103dB)

Jitter

- Internal Clock: <20pico-seconds
- AES Output: <200pico-seconds
- External Clock: <1nano-seconds

ANALOGUE AND DIGITAL PATH

Mic Pre

- Gain Range: +6dB to +80dB, switched in 1dB steps
- Frequency Response: Variable, set by pre-amp emulation chosen.
- THD+N at analogue out: 0.001% measured with a +4dBu 1kHz input signal with 20/22kHz bandpass filter
- THD+N at AES out: 0.0005% measured with a +4dBu 1kHz input signal with 20/22kHz bandpass filter
- Mic Noise: EIN = -126dB measured at 80dB of gain with 150 Ω source impedance and 20Hz/22kHz bandpass A-weighted filter
- Noise Analogue Out: -92dBu measured at +6dBu gain with 20 Hz/22kHz bandpass A-weighted filter
- Noise AES Digital Out: -119dBfs measured at +6dB gain with 20Hz/22kHz bandpass A-weighted filter
- Maximum Input Level: +16dBu
- Input Impedance: Variable, set by pre-amp emulate chosen
- CMRR: Transformer: 123dB @ 60dB of gain
Electronic: 102dB @ 60dB of gain

Line Input

- Gain Range: -10dB to +10dB, switched in 1dB steps
- Frequency Response: 0dB ± 0.1 dB between 20Hz – 20kHz
- THD+N at analogue out: 0.001% measured with an +18dBu 1kHz input signal with 20/22kHz bandpass filter
- THD+N at AES out: 0.0004% measured with an +18dBu 1kHz input signal with 20/22kHz bandpass filter
- Noise Analogue Out: -92dBu measured at 0dB gain with 20Hz/22kHz bandpass A-weighted filter
- Noise AES Digital Out: -120dBfs measured at 0dB gain with 20Hz/22kHz bandpass A-weighted filter
- Maximum Input Level: +22dBu

High Pass Filter

- Roll off frequency: switchable between 75Hz and 120Hz, frequency measured at -6dB down point, 12dB per octave roll-off

Harmonics

- Distortion Range: 0 to 15 where maximum (15) = 10% of 2nd-, 20% of 3rd- and 10% of 5th-order at 0dBfs (level-dependent distortion)

Compressor

- In 'AS-ORIGINAL' mode the parameter ranges will be the same as on the original unit being emulated. In 'FREE' mode the parameter ranges are as follows:
- Threshold Range: -40db to 20dB switched in 1dB steps
 - Ratio Range: 1:1 to Limit to -1:1
 - Attack Range: 0.1mS to 1S
 - Release Range: 1mS to 10S
 - Make Up Gain: -20dB to +20dB switched in 0.5dB steps.

EQ

High Shelf

- Frequency Range: 200Hz to 20kHz
- Gain: ± 18 dB

Mid Band

- Frequency Range: 100Hz to 10kHz
- Gain: ± 18 dB
- Q: Variable between 0.8 and 2.5

Low Shelf

- Frequency Range: 10Hz to 1kHz
- Gain: ± 18 dB

REAR PANEL CONNECTIONS

- Mic Input: XLR socket
- Line Input: XLR socket
- Analogue Output: XLR plug
- AES Digital Input: XLR socket
- AES Digital Output: XLR plug
- Wordclock In: BNC, 75 Ω input impedance.
- Wordclock Out: BNC, outputs regenerated buffered wordclock at selected sample frequency
- Digital Link Bus Input: RCA connector
- Digital Link Bus Output: RCA connector

Weight

- 8.6kg

Dimensions

- 484mm (w) x 85mm (h) x 270mm (d)
- 2U rackmount

