
EVO
LIVE PERFORMANCE+
FAIRLIGHT
EVO.Live
FAIRLIGHT | EVO.Live

FAIRLIGHT | **EVO.Live**

EVO.Live is a new generation digital audio mixing system from Fairlight, the brand trusted for over 30 years by high-end audio professionals around the world. Built for the most demanding broadcast and Live Production studios, EVO.Live comes with true live credentials that offers the best possible price/performance value and a set of unique operational features for enhanced productivity and reliability.

The mixing console's scalable and application specific design creates the perfect mixing environment for OB trucks, performing arts venues, houses of worship and broadcast facilities. The ergonomic layout of the control surface offers immediate access to all critical live functions with excellent visualisation. The console includes interactive Picture Keys that self-label instantly for each task performed, always displaying the right commands and functions at the right time. In addition, Fairlight's new iCAN (Integrated Control across Network) technology provides the operator with an easy to use interface to design customised layouts.

Dual-Operator functionality allows two audio engineers to independently access their own set of input channels, faders, Solo system, channel processing and monitoring controls.

The 2U compact, FPGA-based Crystal Core audio processor ensures very high channel and bus counts with sub millisecond audio latency. Comprehensive Mix-Minus, comms, metering and flexible bussing are perfectly implemented. Adding a second hot-swappable Crystal Core engine with dual-input power supplies guarantees the highest system reliability. Built-in, local I/O provides for all control room needs and can be complemented with a choice of modular remote I/O to meet the demands of any application.

The power of EVO.Live reaches far beyond Live Mixing, with full integrated audio disk recording capabilities, off-line preparation via laptop, a built-in cart machine for flying in sound effects, control extensions to lighting systems, and third party DAWs.

After the live event has completed, EVO.Live can be instantly reconfigured, turning into Fairlight's industry-leading Post Production system featuring audio editing, full HD video integration, plug-ins, comprehensive timecode-based automation and sophisticated 3D surround panning.

FAIRLIGHT | EVO.Live

Live Performance+

Unrivalled Price-Performance Value

EVO.Live's efficient console design and FPGA-based Crystal Core processing power delivers a high performance digital audio mixing system at an unprecedented price level.

Intelligent Control

EVO.Live is available in a wide range of chassis sizes and table-mount configurations, fitted with a selection of 12 to 60 faders. An intelligent blend of touch screens and dedicated control elements for critical functions accelerate the speed of operation significantly.

Customised For You

For the ultimate in customisation, the EVO.Live control surface includes dynamic Picture Keys that can be assigned to control any console and router function with user-specified text and graphical labels.

Enhanced Reliability

EVO.Live maintains full system redundancy with dual independent power supplies and automatic switchover in case of core component failure. A second Crystal Core audio processor and hot-swappable remote I/O can be added to guarantee highest system reliability.

Live and Post Dual-Functionality

EVO.Live can quickly switch between Live and Post Production modes, making it a fully integrated, dual-functional production system. The smart use of shared resources provides efficiencies in time critical situations and delivers an exceptional return on investment.

Beyond Mixing

EVO.Live is a complete production centre offering Live and Post Production tools "in the box" plus sound-effect play-out, multitrack audio performance recording, external device control, full timecode capability and extensive metering.

FAIRLIGHT | **EVO.Live**

Mixing Console Control Surface

The EVO.Live mixing console excels in modularity and customisation – enabling you to build exactly the right mixing environment for your production. Ergonomically designed control modules with excellent visual feedback and immediate access to critical functions, allow you to work with complete confidence during the production. The console can be split into two independent fader sets for dual-operator functionality. Fully redundant power supplies and Ethernet-based control surface module interconnection ensure a high level of reliability. The modular panel design facilitates fast access to service or exchange components if required.

Console Frame

The EVO.Live mixing console is available in a wide range of chassis sizes, to fit 12 to 60 faders (0.5 to 4.5m wide). It is configurable in a straight, L or U-shape frame style with 0 or 8 degree rake. EVO.Live is also available in a table-mount version where the control modules are inserted into custom furniture.

Fader Panel

Fader panels are available with 6 or 12 faders, each controlling a mono, stereo, LCR or 5.1 signal path. Each fader strip includes a high quality, 100mm motorised fader with control buttons for Solo, Mute, Scene-automation, and interrogation. A colour OLED display shows channel naming, metering, pan position and other visual feedback. Completing the channel strip, are Mute and Solo switches and a touch-sensitive rotary control for various parameters, such as LR or FB pan.

Channel Panels

The fader panels are complemented with channel panels. These add 4 rotary touch sensitive encoders and 10 switches to each fader strip, which operate in dual modes – either strip mode (inline channel controls) or spread channel mode (all controls for one channel). These panels provide direct access to Mix-Minus, Talk channel selection and fader set layering.

Touch Screen Display

High-res 20" colour TFT monitors with touch functionality provide excellent visualisation and additional controls. The mixer overview screen shows all key functions of your mix at a glance.

IntelliPad Customisation Panel

The IntelliPad incorporates 28 of Fairlight's patented Picture Keys, organised as 24 command keys with 4 bank select switches, providing the ultimate customisation tool. Picture Keys are able to change function and labelling instantly, repurposing the pad in context with the task at hand. The choice of functions are yours – literally any console function can be given a dedicated button.

Monitor Panel

Provides dedicated buttons for control of the built-in talkback and monitoring system, including source selection, control-room and studio level controls, and associated Mute, Dim and Talk switches.

Selection of custom Sub-modules:

Control of the EVO.Live system can be further enhanced by adding any of the following sub-module options:

- **Ancillary Panel** The Ancillary panel offers eight illuminated keys that can be mapped to customisable scripted functions, or external devices such as GPIOs.
- **XLR Panel** The XLR panel is designed to include a range of different connectors for talkback, 1/4 Inch Stereo Jack for headphones, or USB connectors.
- **Trackball & Joystick** Fairlight offers a trackball as an alternative to a mouse based input device. The joystick panel is used for control of surround panning.
- **GPIO** The GPIO-LAN board provides 8 inputs and 8 outputs.
- **Automation Panel** Controls functions that are implemented in the EVO Post Production software. This panel offers dedicated switches for all automation features.


FAIRLIGHT
EVO.Live

Visual User Interface

Large touch screens are used in EVO.Live to provide an overview of the entire system, and at the same time to allow instantaneous changes via touch control. Using colour coding and carefully graded contrast, the visual user interface keeps you completely informed at any stage of the mix. Extensive metering is available at all times, depicting every channel, bus and built-in R128 metering for the Main Bus.

In-Line Display

The In-Line Display provides graphical feedback for the hardware channel strip directly below. For each channel in the current fader set, the screen clearly shows its status, with naming, metering and alternate fader layer. Parameters are presented both graphically and numerically – easy recognition backed up with precision.

The upper section includes an indicator panel showing In-Out status for processing blocks (EQ, Dynamics and Inserts), Grouping, plus Talk channel assignment and Mix-Minus bus selection.

As the channel strip changes function, the display automatically follows, including detailed graphical feedback of the channel processing being affected. All switches and rotary knobs can be operated via the touch screen, providing a parallel level of control redundancy.

Bus Metering Display

This panel displays high-resolution meters for all busses: Aux, Sub, Mix-Minus, Multitrack and Main, including Group Masters, Solo and Control Room monitoring. Peak displays can be set to adjustable hold time (including infinity) and cleared at the push of a button.

The Main Bus also includes built-in R128 metering up to 5.1.

The meter strips expand and contract as busses are added or removed, so it always shows the entire complement of busses.

On-Air and Monitor Display

The On-Air button protects live operations from interruption by Talkback and destructive Solo switching, inadvertent stopping of live recording or loss of Main Bus outputs.

Also displayed are the level controls and source indicators for control room A & B and studio monitor circuits.

Channel Metering Display

On multi-monitor systems, the primary monitor displays bus output metering and the secondary monitor displays channel input signal levels for all 104 channels.

Mixer Screen

The Mixer Screen displays all parameters for every channel in the system and also includes busses, Group Masters and Solo Masters. This super-compact display gives you a complete overview of your setup, including Solo, Mute, fader position (with numeric readout), level metering, bus assignment, Aux sends, inserts and graphs of EQ and Dynamics curves.

The system automatically scrolls to follow the current channel (if desired), or can be scrolled using controls on the mixer. All controls on this screen are “live”, meaning that the whole system can be run from the screen when it is desirable not to disturb the hardware control status.

The Mixer Screen also includes a Bus Metering section with associated faders. The meter strips expand and contract as busses are added or removed, so it will always show the entire complement of busses in use.

Live Audio Processor

At the core of EVO.Live is an incredibly powerful audio processing engine designed with FPGA (Field Programmable Gate Array) technology. The compact, 2U rack mounted unit contains Fairlight's renowned Crystal Core processing engine, 1+1 redundant PSUs, all interfaces for local control room I/O, monitor screens, GPIOs, storage and other system hardware.

Fairlight's patented Crystal Core has revolutionised audio processing ensuring sub millisecond audio latencies from (digital) input to output, with phase coherence across every channel in the system. Performing audio processing in dedicated hardware guarantees that every channel has the same powerful digital signal processing available at all times.

All processing such as input mixing, dual-band filters, 4 band parametric EQ, three-stage Dynamics, delay, stereo and surround panning is available on every channel. Each channel has an insert and direct output, and in addition the Live Audio Processor provides 1 Main (5.1), 24 Subs and 24 Aux busses up to 5.1, 16 Mix-Minus, 24 Multitrack busses and 32 VCA groups at all times.

EVO.Live offers 104 Input Channels and 128 bus elements at 48 KHz with high precision floating point processing and mono, stereo and 5.1 surround sound formats. The system core runs all signal path segments via its 2000 x 2000 router, allowing every system channel to connect with every other.

The Live Audio Processor is equipped with dual power supplies. A second Audio Processor can be added to maintain complete system redundancy.

EVO.Live also features a unique grouping and panning system that allows fast access from the control surface. Grouping channels provides a convenient method of controlling more than one signal path from a single fader or parameter control. Groups simplify many tasks associated with working with surround format busses and can be used to quickly control the operational features of multiple Input channels.

Surround Panning tools include, basic panning, spread, divergence, rotation, and LFE control.

Local I/O

The Live Audio Processor incorporates built-in, local I/O and Sync connections on the front of the unit and optical MADI for connection to remote I/O units as required.

Included are:

- 12 Analogue line outputs (XLR) relay protected
- 4 Analogue line inputs (XLR)
- 2 Stereo digital inputs (XLR)
- 6 Stereo digital outputs (XLR)
- Video Sync input (BNC)
- Word Clock input (BNC)
- Word Clock output (BNC)

MADI

Four pairs of MADI I/O ports are provided, 3 pairs via optical connectors, and one pair via a COAX connector on the rear panel.

Redundancy

Nothing is more critical in Live Production than reliability. To meet the level of bulletproof resilience required for live use, Fairlight's new EVO.Live system achieves this in the following ways:

Dual Power Supplies

Every Live Audio Processor and every console is fitted with dual automatic switchover power supplies. This ensures that the console stays live in the event of mains or power supply failure.

Dual Processing Units

Optionally a system may be supplied with parallel Live Audio Processing units. All system intelligence, audio processing, and I/O are duplicated, and the second unit shadows operation of the first. In the event of signal loss from the primary system, the second automatically takes over.

Software Operation

All realtime system functions are accomplished from hardware controls – even complex command sequences that can be scripted and triggered from an IntelliPad. In the unlikely event of hardware failure, every function can also be controlled from the main Mixer display, using mouse or touch control screens.

Remote I/O

The remote I/O rack is a 19" frame, 4U high unit that holds a combination of up to 21 I/O modules.

The following I/O modules are available:

- 4 Channel - Mic. preamp
- 8 Channel - Analogue Input Card
- 8 Channel - AES/EBU Input Card with Sample Rate Conversion
- 8 Channel - Analogue Output Card
- 8 Channel - AES/EBU Output Card
- 64 Channel - MADI Fiber-I/O Card (multimode) with two parallel transceivers

Beyond Mixing

The power of EVO.Live reaches far beyond Live Mixing. The console is a complete production centre combining a wide range of "in the box" tools for live events and providing the industry's most powerful platform for customisation.

Expanded Live Production tools include:

- **Extensive metering** Includes peak-hold, numerical read-out and loudness metering.
- **Cart machine for sound-effect play-out** Supporting mono, stereo and 5.1 sound effects with a completely customisable user interface.
- **Live performance recording** Record up to 128 channels for archiving and Post Production purposes: 104 Input channels and 24 channels of Wild Tracks, used for signals such as Main mix, Aux or Sub busses or comms feeds.
- **Full timecode capability** LTC generator and reader is included in the system.
- **External device control** Interface to MIDI-based devices such as effects.
- **Control extensions to lighting systems** Via optional DMX 512 controller card.
- **Third party DAW integration** Fader, Mute, timecode control via MTC, HUI and MCU protocols.

Customisation

EVO.Live incorporates Fairlight's iCAN technology with a drag-and-drop Layout Editor, allowing audio engineers to design their own button layouts to suit in-house workflow. Graphic and text labelling in any language can be applied.

Further customisation using powerful scripts can be triggered from the Picture Keys, using a C-based macro language that has access to the complete mixer command set.

Customisation also extends to audio formats. EVO.Live features customisable bussing that allows you to add a third dimension to your soundfield through inclusion of an Up-Down panning paradigm. Custom bussing provides you with the flexibility to tailor speaker set ups for complex events, and future proofing towards emerging 3D broadcast technologies such as MDA from DTS®.

Live and Post Dual Functionality

One of the great advantages of Fairlight's Crystal Core audio processor is the ease with which it can be reconfigured to suit different applications. EVO.Live takes full advantage of this flexible processing power to switch to a second operational mode – Audio Post Production. This means a single console system can be used for both Live and Post Production tasks, maximising the flexibility and productivity of the facility and significantly increasing the return on investment.

Fairlight is an established leader in Post Production technology, with installations in top broadcast facilities and audio post studios throughout the world.

All it takes is to exit the live software and start up the post software. Within a minute the system is transformed into a Post Production powerhouse including the following features:

- Audio Disk recorder with up to 192 simultaneous playback tracks
- Video Disk recorder handling all common and professional formats (SD and HD) - with an optional second video track
- Multitrack editing system handling audio and video simultaneously if desired
- 230 channel mixer with dedicated EQ and Dynamics on all channels
- 72 bus elements, configurable in all common formats, plus user configurations up to 24-wide stems
- 3D mixing, using three dimensional panning
- Audio database for sound effects search and placement
- Access to all industry-standard VST plugins

Live Automation

EVO.Live features a wide array of tools for storing, recalling, and automating Live Productions.

Templates

Templates are used to store console configuration settings for use later on. Store templates for your current production or save for use in different projects or applications. EVO.Live has templates for the entire console system (including patching, bussing and fader-mapping), or component parts, full channels or individual processing elements such as EQ and Dynamics.

Scenes

The console can save any number of mix setups, known as “Scenes”. These are stored within your Live Production, and can be recalled either in their entirety, or as partial recalls. They allow for instantaneous changes between shows, acts or just two different groups of presenters, without affecting the main anchor and music.

Cue Lists

A Cue List feature allows you to build a sequential list that defines key events in a performance. Each cue can be tagged and loaded with one or a number of actions, for example recalling a scene, activating a playlist sequence, sending out MIDI messages or controls to lighting systems.

The mixing console has a visual interface that indicates the current cue and the next cue to load. The interface allows selection of the next cue to load, as well as the actual cue loading.

Add-ons

Tracks Package

The ‘Tracks Package’ adds a 128 track audio disk recorder to EVO.Live. All 104 console input channels can be recorded as industry-standard wav files, with a range of different naming and time stamping options. A further 24 ‘wild record’ tracks are available with sources selectable from the Patching Page.

An additional feature of the Tracks Package is the option to switch any number of console input channels to recorder playback channels. Playback channels can play complex edited productions, with either local transport control or by slaving to an external device.

Offline Setup & SoundCheck™

Live.prep allows complete console setups to be built offline on a standard PC, including bus format and assignment, channel naming, Mix-Minus assignment and even channel processing. When EVO.Live starts up, just load the production file and you’re ready to work.

Live.prep also enables two unique apps, SignalCheck™ and SoundCheck™. Designed to accelerate and test your initial signal routing paths and buss assignments during sound check though the use of channel specific spoken idents and context specific library sounds.

Cart Machine

Integrated into the system is Live.cart, a cart machine application that plays standard wav file sound effects supporting mono, stereo and 5.1 sound with a completely customisable user interface. Trigger sound effects or music cues from keys, GPI or a touch screen interface.

Audio-follows-Video

Bundled with EVO.Live is the Live.afv app. This software application can be run either on the Live Audio Processor or an external PC. The Live.afv application connects to a Video Editor using the D/ESAM protocol, and allows crossfades to be controlled remotely.

Partner Products

Fairlight has partnered with a number of other companies to expand the flexibility of EVO.Live and provide additional connectivity beyond our own I/O.

These include:

- DirectOut Technologies®: Supplying a range of high-density digital and analogue I/O devices.
- ENTTEC®: DMX USB Pro mk2, for DMX512 and/or MIDI connectivity.
- 4HM®: Multi-channel SDI to MADI De-Embedder.

FAIRLIGHT | **EVO.Live**

Technical Specs

Console

- Available in modular chassis or table mount execution
- From 12 up to 60 faders (6 or 12 faders per panel)
- Each fader strip features:
  - 100mm touch-sensitive fader
  - Colour OLED display, including 12-character wide channel name
  - Metering, up to 5.1
  - 5 touch-sensitive rotary knobs per channel
  - 14 switches, including Solo, Mute, Call, and Auto buttons
- Mixer overview screen
- Sophisticated customisation tools
- Self-configurable picture keys
- Selection of additional control modules
- Ethernet-based modules
- Offline configuration tool
- Scene-based automation (live mode), timecode-based automation (post mode)
- Extensive GPI/O support

Local I/O

- 4 MADI inputs (total of 256 channels)
- 4 MADI outputs (total of 256 channels)
- 4 Analogue line ins, 12 Analogue line outs
- 2 digital ins, 6 digital outs (4 and 12 Channels)

Remote I/O

- Support for multiple 4U remote I/O units
- Each remote I/O unit holds up to 21 I/O modules
- MADI connection for audio
- Ethernet connection for control

Live Mixer Configuration

- 104 Input Channels and 128 bus elements
- A / B Channel inputs
- 1 x Main out (mono, stereo, or 5.1)
- 24 x Sub Group out (mono, stereo, or 5.1)
- 24 x Auxiliary out (mono, stereo, or 5.1)
- 24 x Multi Track out (mono)
- 16 x Mix-Minus busses
- 1 x Direct out per channel
- 1 x Mix-Minus out per channel
- 1 x Insert on every channel, Main, Sub and Aux bus
- 32 x VCA groups
- 6-Band EQ on every channel, Main, Sub and Aux bus
- Dynamics processing on every channel (Exp/Gate, Compressor, Limiter)
- 2 sec delay available on all channels
- Dual-path 5.1 + stereo control room output
- 2 x Stereo Studio Monitor outputs
- 4 Talkback groups
- Talk to Channel Mix-Minus, Channel Direct out, busses

Mix-Minus System

- Contains 16 mono Mix-Minus busses
- Each channel has a single send to the Mix-Minus system
- The channel's send can:
  - Switch to either pre or post fader
  - Provide independent level control
  - Provide independent bus-assign to 16 Mix-Minus busses
- Mono channels have a single Mix-Minus output section
- Channel's Mix-Minus output section can be:
  - Sourced from any of the 16 Mix-Minus busses
  - Independently level controlled
  - Patched to any available output

Talkback

- To the Mix-Minus output of any channel
- To the Direct out of any channel
- To any combination of Aux and Sub busses

Channel Delay

- Each input can be delayed by up to 2 seconds

Monitor Control

The monitor control panel provides direct access to the main C/R A & B monitors, and to Studio 1 & 2 monitors.

Control facilities include:

- Source selection, main and speaker mutes
- Speaker selection
- Dim and Level control

Other Features

- On-Air mode prevents destructive features to be used including:
  - Loading a console template
  - Turning the OSC on
  - Destructive Solo
  - Dropping out of Record
  - Knob and fader 'Smart Level set' to unity
- Manual channel to physical fader mapping or smart fader set mapping based on channels with sources patched and busses in use

Redundancy

- Fully redundant FPGA-based Crystal Core Media Engine
- Dual-input, fully redundant power supplies for control surface and Live Audio Processor
- Continuous auto-diagnosis including error logging

FAIRLIGHT

Fairlight Head Office
15 Rodborough Road
Frenchs Forest
NSW 2086
Australia
Telephone: +61 2 9975 1777
Facsimile: +61 2 9975 1999
Email: info@fairlight.com.au
Web: www.fairlight.com.au

Please visit our website to learn more about Fairlight products and services or to find your local Fairlight distributor.

Distributor