

# MIXER SPECIAL

Resolution's essential briefing on the latest mixers

## API



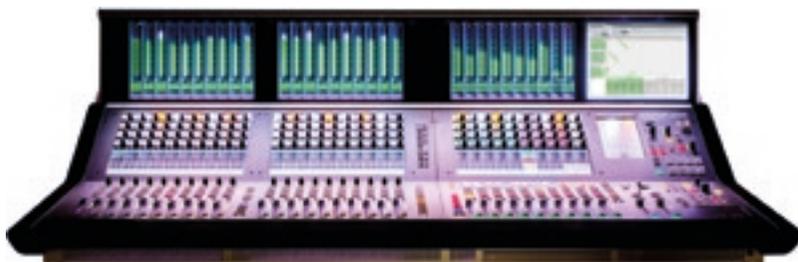
API has a pedigree going back to 1968 — if there was an example of a company sticking to its core competency (see this month's leader) — it would be Automated Processes Inc. The name may have a vintage ring to it, but modern producers and recording facilities the world over continue to have confidence in the Maryland-based manufacturer delivering and

maintaining analogue quality. As we reported in *Resolution* 17-D, 15IPS Studios in Croatia will be taking delivery of a 32 channel AXS console.

Announced at AES 2016, API's Legacy AXS has dual 200 Series and a 500 Series EQ on each channel, generous patchbay options and a DAW/Producer's desk. Building on the success of their previous Legacy consoles, API have cleverly designed their latest edition around the traditional API 1.5-inch module width — meaning that any classic 500-series module will fit. There are options available starting with various frame sizes from 32 to 80 channels, in 16-channel buckets. Each channel features dual 200 Series slots which can be specified with any of the following; 212 Mic Pre, 225 Compressor, 235 Noise Gate, 215 Filter or a 205 Direct Input. Further down each channel there's a 500 Series slot for the EQ, which of course API recommend their 550A and 560 Equalisers.

The Legacy scales from 16 to 96 channels in increments of 16 channels with 16 main buses, six auxes (One stereo) in 'all input' or split formats. Legacy Plus ups the main bus count to 24 with 12 auxes (three stereo) in dual input (inline) format. Faders are manual with the option of Automix or Automix Plus automation. While API have stuck to their fully-analogue signal path, there are some innovative modern features including fully automated and motorised faders and mutes available, managed by a central on-board screen. The centre section also supports 5.1 mixing and offers 6 stereo returns, which API intend also being used for parallel processing if required.

[www.apiaudio.com](http://www.apiaudio.com)



## Studer

The Studer Vista 5 Black Edition (BE) is a cost effective mixer surface that combines a Studer control surface with support for the industry-leading Infinity Core processing engine that has advanced capabilities such as Dynamic EQ plug-ins and full Core redundancy with up to 1000 MEQs (Mono Equivalent Channels).

Available in 22, 32 and 42 fader sizes The Studer Vista 5 BE supports an optional TFT meter bridge. Some of the console's features include Studer's unique Vistonics interface and FaderGlow technology that provides the operator with an instant overview of the console status, by illuminating each fader in one of eight, freely assignable colours. Giving the user visibility to see exactly where the channel groups, this dramatically improves reaction time and reduces the stress of mixing in an environment where there is no second chance.

The Vista 5 BE supports Studer's Infinity Core 300, 600 and 1000 products, as well as the new COTS (Commercial off the Shelf) — an IT-friendly solution allows customers to run Studer's real-time audio processing on their own server hardware — just by adding a standard PCIe Infinity CoreLink card.

[www.studer.ch](http://www.studer.ch)



## Lawo

The new mc<sup>2</sup>56 incorporates features drawn from Lawo's mc<sup>2</sup>96 flagship, while retaining a compact size for broadcast and live, with a 64-fader surface suited to most OB vehicle dimensions. The new mc<sup>2</sup>56 has full native support for SMPTE 2110, AES67/RAVENNA and DANTE, featuring capabilities such as IP-Share gain compensation and DSCA Dynamic Surface to Core Allocation.

Available in frames from 16 to 112 faders, the mc<sup>2</sup>56 supports up to 8,192x8,192 crosspoints, 888 DSP channels, 144 summing buses and 128 aux buses at 44.1-96kHz operation. Lawo's eye-catching LiveView provides thumbnail previews of video streams directly in the fader labelling displays.

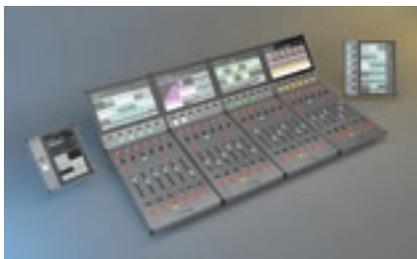
The new mc<sup>2</sup>56's extended free control section gives direct access to four parameters in addition to gain control for balance between decentralized and centralized control workflows. For the performing arts, the console includes Selective Recall, Oversnaps (relative trim-sets), comprehensive theatre automation cue list including multiple triggers (MIDI, GPIO, LTC), Waves SoundGrid and Neumann DMI-8 digital microphone integration, and mirror-console operation. Comprehensive local I/O includes 16 Lawo-grade Mic/Line inputs.

[www.lawo.com](http://www.lawo.com)

## Calrec

At NAB 2018 Hebden Bridge-based Calrec launched its first fully IP mixing console — after including interface connections for AoIP on its existing range of desks. The new Calrec Type-R is not only its first all-IP mixer, but also its first native AoIP product. The desk marks Calrec's return to the radio market, which it has not targeted with a dedicated product since the late '90s with the X Series. Since then, the manufacturer has concentrated on desks for TV broadcast production, with mixers such as the Apollo, Artemis and, more recently, the Summa and Brio aimed at studio and OB truck applications.

A key difference between the Type-R and its TV-oriented counterparts is the networking. The new console does not feature Calrec's proprietary Hydra2 routing and I/O system, integral to the Apollo and Artemis range. Hydra2 is being used by leading broadcasters, including Sky and BT Sport, to interconnect several consoles in sound



galleries within a broadcast centre. By interfacing with AoIP formats, including RAVENNA and Dante — plus the AES67 interoperability standard — it is possible to link such in-building set-ups with wider networks. Instead of Hydra2, the Type-R is based on a simple 2U core, plus “integrated I/O resources”. Networking is through AES67 compatible connections, which means the desk can link to other Calrec consoles fitted with the necessary interface. But the main reason for targeting the radio market with the Type-R is because radio, unlike TV, has already unequivocally embraced AoIP.

The Type-R has been designed for flexible configuration with the control section comprises three panels: a fader module and two soft control units, one large and one small. The soft panels are touch screens that can be set up as multi-function controllers, providing specific features for each presenter while still leaving final control with the technical staff. The basic fader panel has six faders, working with a DSP engine.

Meanwhile, Calrec has continued to develop its other lines of digital consoles, introducing Brio 12 in November 2017. Brio 12 has the same feature set and mix capabilities as its larger sibling, Brio 36, and is intended for use as a broadcast mixer in very tight spaces like small vans and compact control rooms. With 12 physical dual-layer faders for mixing live sources during broadcast, Brio 12 provides extra virtual faders via its UI. With 48 input channels and the same buss count as the Brio 36, the console has capacity for sub-mixes and VCA slaves. Brio 12 can be added to an existing Hydra2 network and utilize I/O via a range of Hydra2 modules through its integral I/O expansion slots, yet at under 18-inches wide, it can be fit into standard racks.

[www.calrec.com](http://www.calrec.com)



## Stage Tec

Stage Tec's flagship AURUS was launched in 2002, the console has been developed continuously and is now in its fourth generation. AURUS platinum has a unique control concept predicated on fast operation: 22 rotary encoders per channel strip and up to 96 control strips with real-time switching and display give direct access to all channels and parameters. An integrated touch pad replaces external input devices such as keyboard and mouse, and facilitates fast and simple operation.

AURUS platinum provides more than 800 audio channels for easy handling of resource intensive formats such as 7.1 mixes with 128 sum buses at 96kHz. The console offers sophisticated functionality for a wide range of applications — such as a clearly organised matrix mixer, DAW control and the ability to use meter bridge screens for external video signals. Loudness metering according to EBU R 128 is available directly in sum buses and in the group channels. The Stage Tec Automixer is integrated into the console and can be used in all input channels, each of which feature a de-esser.

AURUS' strength is in large audio networks with a wide variety of mixing tasks, but its stand-alone performance is equally impressive.

[www.stagetec.com](http://www.stagetec.com)

## Schertler

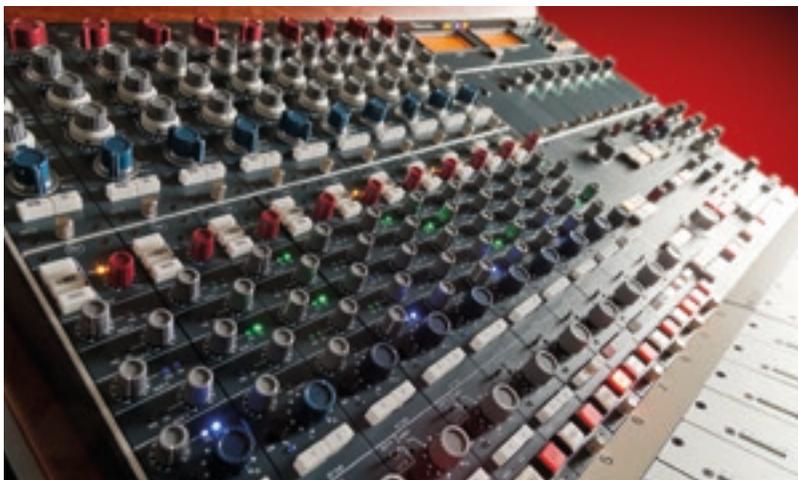
Schertler's Arthur mixer is a modular system whereby you can configure your own high quality analogue mixer from scratch, adding a variety of input and output modules as necessary. You can add pretty much any number of channels you want, attaching extra power supply modules for larger setups. A key selling point is its premium sound quality courtesy of all-discrete, DC-coupled (there are no DC-blocking capacitors in the signal paths), Class-A transistorised circuitry, which has been designed with 'zero' (minimal) negative feedback (NFB) throughout.

Our review model (*Resolution V15.7*) modules comprised a Yellow Instrument Input, Mono Microphone Inputs, a Stereo Input, a L/R Master and an Aux Master. Three-band EQ includes an On button, and fixed High and Low boost/cut, plus a sweepable two-knob mid band. The EQ's treble is pretty sweet. The mid band is reasonably broad and ranges from 250Hz to 3.2kHz. Three Auxes are provided, each selectable Pre or Post, then there is the Pan knob, PFL button, and finally a long-throw fader with three large LEDs which meter post-EQ/pre-fader signal level. “The mic preamp is clean and neutral without any harshness, and is clearly a high quality design,” concluded reviewer George Shilling.

At NAMM 2018 Schertler introduced a new concept — Arthur Prime. The Prime mixers incorporate technology from the company's flagship 48-format mixer, but serve it up in bite-sized five, nine, and 13-channel configurations ideal for mobile applications..



[www.schertler.com](http://www.schertler.com)



## AMS Neve

AMS Neve cover the spectrum from compact high-end, analogue mixers to very large scale digital consoles. The analogue 88RS uses an extended in-line recording console architecture. The design is linear from end to end, with no VCAs. Bandwidth extends to 100kHz. Options include scoring panel, stem mixer and classic Neve remote mic pre-amps. Broadcast features include a redundant PSU, VCA fader system and a frame designed for OB trucks. 88RS comes with the Encore Plus automation system.



## Yamaha

Yamaha Professional Audio introduced its new RIVAGE PM7 Digital Mixing System earlier this year, designed to be a more portable counterpart to the RIVAGE PM10. Yamaha also announced V2 of the RIVAGE firmware, offering a number of new features such as 5.1 surround and mix minus capability for broadcast applications, Rupert Neve Designs Portico 5045 Primary Source Enhancer and the Dual Console function. The new PM7 system comprises the CSD-R7 Digital Mixing Console, TWINLANE-based RPIO622 and RPIO222 I/O Racks, and Dante-based Rio3224-D2 and Rio1608-D2 I/O Racks.

The DSP engine is built into the CSD-R7 console, making the unit a very portable package. The mixer features 120 input channels, 60 mix buses, 24 matrices and 48 plug-ins. A Dual Console function allows the CSD-R7 to be connected to one of the RIVAGE PM10 system control surfaces for multi-operator use.

The dedicated TWINLANE network uses optical cable to handle up to 400 channels of audio. Combinations of the RPIO622 and/or RPIO222 I/O racks and HY256-TL or HY256-TL-SMF audio interface cards allow input via Hybrid Microphone Preamplifiers with analogue input stages, as well as digital sections with VCM technology models of Rupert Neve Designs transformer and SILK processing circuitry.

[www.yamahaproaudio.com](http://www.yamahaproaudio.com)

88D is a digital console with a 1000 track DSP engine and classic Neve 1081R mic pre-amplifiers, dedicated 8.1 surround monitoring of multiple sources and Encore Plus automation, high PCM sampling rates, DXD mixing and 40-bit floating point processing with classic Neve EQ and Dynamics plug-ins. The 88D digitally controlled analogue monitor facilities rack includes context mixing and stem summing for music for film mixing and control of multiple surround speaker sets.

For the largest film mixes the DFC Gemini delivers the Neve sound across up to 2000 audio signal paths at 96kHz, 24 bit in a single, high-resolution DFC signal-processing tower. To accommodate a large number of inputs within a sensible working footprint, the surface is semi-assignable. Any channel strip can control all resources on mono, stereo or up to eight channel inputs. WavTrak display of audio track data provides the user with level and dynamics metering, graphical EQ curve and audio waveform information on a path-by-path basis. Encore: 2 Automation Reconform enables mix automation to be re-conformed to match a new cut. The latest DFC3D offers native Dolby Atmos mixing at the highest level and other 3D formats. The DFC PS-1 is derived from the DFC for mid-range film and TV dubbing applications and shares many of its attributes.



[www.ams-neve.com](http://www.ams-neve.com)

## Waves eMotion

The Waves eMotion LV1 MGO MADI Package offers a hybrid software and hardware for FOH, monitor, and broadcast



engineers. Each of the mixer's channels has its own plugin rack capable of running up to eight Waves and third-party plug-ins. You can mix with hundreds of instances of plug-ins, all running inside the eMotion LV1 mixer itself. The mixer's channel strip — its standard EQ, filters, and dynamics processing — is provided by Waves eMo-series plugins. All plug-in presets and chains saved in the eMotion LV1 can be shared with the Waves MultiRack and StudioRack plugin hosts, allowing engineers to move seamlessly between live and studio environments.

To use eMotion LV1 with audio, you need to connect a PC or Mac running the mixer to SoundGrid-compatible devices — an audio interface and a server. These can be any computer, any SoundGrid interface, any SoundGrid server — not necessarily the ones you'll be using at the actual show. At the venue, your computer may be a desktop with large touchscreen monitors — but at home, you can use a small laptop or tablet. At the venue, you can take advantage of the SoundGrid network to connect any number of large interfaces with lots of I/O, as well as extra mixers, extra DAWs for playback and recording, and more. But at home, or on the tour bus, you can use as little as a small server and a compact, lightweight interface in order to mix..

[www.waves.com](http://www.waves.com)

## PreSonus

The PreSonus StudioLive AR USB hybrid mixers make it simple to mix and record. Aimed at musician-producers they are packed with analogue connections and digital tools. The series includes the 18 channel StudioLive AR16 USB, 14 channel StudioLive AR12 USB and the 8channel StudioLive AR8 USB.

StudioLive AR USB mixers are equipped with a USB 2.0 audio interface that can capture all input channels, plus the main mix at 24 bit 96kHz.

PreSonus' Capture live-recording software and Studio One 3 Artist software are both included free. An onboard stereo SD recorder lets you record the main mix without a computer also. All models are intended to be available in the third quarter of 2016, with expected prices of \$599.95 (AR16), \$499.95 (AR12) and \$299.95 (AR8).

PreSonus has also released two new models in the RM Active Integration live mixer range. The RML16AI and RML32AI rack-mount mixers provide similar functionality to their predecessors, yet each offer eight of their inputs as TRS combo locking sockets allowing line inputs via 1/4" TRS. The 16 and 32 channel versions retail at \$1119.95 and \$1799.95 respectively.



[www.presonus.com](http://www.presonus.com)

## Trident Audio Developments

The Trident 78 is available with eight, 24 or 32 input channels, with the option of VU or LED bar-graph metering. Each mono channel



strip accommodates two signal paths — channel and monitor — and are equipped with four mono and one stereo aux sends, a four-band EQ derived from the Trident 80B console design, a balanced pre-fade insert and a configurable balanced direct output. The sort of desk we imagine our editor would be quite happy to sit behind.

As an in-line console, the monitor path can be assigned the EQ and stereo aux, and routes to the stereo mix bus via a rotary and pan-pot. The channel path can also be routed into the stereo mix bus and/or any of eight mono group outputs. Each sub-group is equipped with balanced pre-fader inserts and can access two mono and the stereo aux sends. They also feature balanced outputs, post-fade metering, and a long fader, but not EQ. By default, the sub-group output is routed to the stereo mix bus via a separate rotary monitor fader and pan-pot. Each sub-group also accommodates a stereo effects return which feeds directly into the stereo mix bus, and the first six sub-groups also carry the corresponding auxiliary master controls.

There are several channel/transformer and metering options to choose from, a 24 channel VU frame with Lundhal output transformers will come in at around £19,200.

[www.tridentaudiodevelopments.com](http://www.tridentaudiodevelopments.com) • [www.pmiaudio.com](http://www.pmiaudio.com)

## Fix Audio Designs

The man behind Fix is Paul Wolff, who owned API for 14 years, and designed several products like the well-regarded 2500, the 8200 series summing mixer, the 7800 master section, and (with Jeff Bork) the Vision console. Wolff left API in 2004 to form Tonelux Designs, with a product line geared towards a 'new studio model', where much more of the production work is being done in the DAW. Fix's concept is similar, with a mixer frame which can be expanded at any time, when ordered, on site, or in the future as you expand the modules.

Buckets are completely self contained, work independently and can be used stand-alone, or they can be interfaced with a master section using the slate control monitor controller which has three sets of cards for summing. Cards can be ordered with any type of op-amp and transformer you want, so you can have a different tone on each stereo bus. All the mix busses and the send busses fold into a grand master.

Terry Lewis and Jimmy Jam recently purchased a Fix which will be used for tracking and summing/mixing, with four Tonelux MP5A mic preamps, three rack-mounted bus compressors, along with a dual Slate Raven system installed.



[www.fixaudiodesigns.com](http://www.fixaudiodesigns.com)



## Audient

Audient's flagship console, the ASP8024 Heritage Edition was launched at Frankfurt in 2016. It was predicated as the 'definitive version' of David Dearden's classic ASP8024 design — in production since the late nineties and installed in studios all over the world. A brand new look and an array of added enhancements 'under the hood' have given the console a renewed lease of life and earned it a NAMM TEC award nomination.

From Shanghai to the enormous 48-channel Heritage in Oslo's Concert Hall, Russia to Kentucky, USA, the Heritage Edition is finding favour with private studios and high profile educational facilities alike. Kingston University's Visconti Studio, ACM and Veale designed University of Winchester as well as increasing numbers of SAE Institutes have all opted for Heritage.

Building on the success of its bigger brother, the ASP4816 delivers compact, cost-effective functionality in a smaller footprint. Loaded with the key features of a large format recording console, the ASP4816 also benefits from David Dearden's design, and provides a versatile array of connectivity, signal conditioning, routing, summing, processing and monitoring capability. ASP4816 handles mix duties in the studios of Pete Townshend, University of West London's new Paragon Complex and mau5trap's Brit producer, BUDD.

[www.audient.com](http://www.audient.com)