

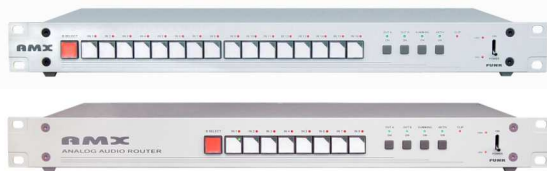


**new**



## LAP-2.V4 (..2V4-A /...2v4-S) Stereo Preamplifier / Splitter

The successor to the LAP-2.V2 but with a new matrix, even larger dynamic range, yet lower distortion levels and second monitor output for subwoofer. Separate mute for monitor and record outputs. The highly neutral **LAP-2.V4** is a high-end ultra-linear preamplifier with excellent audio properties for discerning amateurs and small studios. This unit allows you to select and split monitor signals and record analogue audio signals from high-fidelity stereo systems using RCA input and output connectors. Integrated high quality headphone amplifier. The volume levels of all 6 stereo inputs can be adjusted internally (optional). The unit is designed to match the appearance of the CAS-2.V4. The LAP-2.V4 is used as a reference unit in the high-end sector.



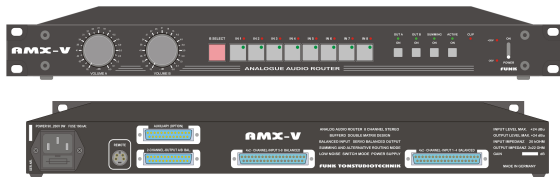
## AMX-8 and AMX-16 Monitor Router / MIXER

Professional, active monitor and recording signal switch for analogue balanced stereo signals. The units consist of 2x8 (2x16) stereo matrices (matrix A, matrix B) with particularly high crosstalk attenuation (larger than 120 dB at 1 kHz). Matrix A and Matrix B both have access to all 8 (16) stereo input amplifiers; but it is still possible to make the selections independently of each other. The AMX matrix allows you to sum the signals from any number of inputs. Both stereo outputs can be muted separately of each other. The units can be remotely controlled from two different locations at the same time (remote control in 19" version).



## SMX-V2 6-channel surround router/signal splitter alternatively

Fully balanced 6-channel surround signal switch for expanding an existing monitor system to maximum 6 alternate surround sources. Each channel can be muted and finely adjusted within a range of -6 to +6 dB. The matrix contains purely passive as well as active signal paths with excellent audio signal quality. The following functions are possible: 1) Surround source expansion, 2) Connections for 6 stereo, quadro or surround sources, 3) balancing or unbalancing of signals, 4) Fully balanced level adjustment, 5) Connection function for up to 6 channels, 6) Surround speaker also for stereo signals. The SMX also allows you to send a surround signal to max. 7 alternative 6-channel receivers! ore a stereo signal can be split across up to 21 receivers.



## AMX-V Stereo Summing Amp and Router

Professional, active monitor and recording signal switch and Volume control for analogue balanced stereo signals. The units consist of 2x8 stereo matrices (matrix A, matrix B) with particularly high crosstalk attenuation (larger than 120 dB at 1 kHz). Matrix A and Matrix B both have access to all 8 stereo input amplifiers; but it is still possible to make the selections independently of each other. The AMX matrix allows you to sum the signals from any number of inputs. Both stereo outputs can be muted separately of each other. The units can be remotely controlled from two different locations at the same time (remote control in 19" version).

**new**



## MTX MONITOR V3b4.3.6 Monitor Control Amplifier

High-quality active switch for monitor and recording signals with up to 8 analogue stereo signals. The matrix, most of the monitor functions and the volume and balance controller function on a contact-free basis. The optional remote control allows you to control all functions incl. balance and volume as well as to additionally control a router for digital audio signals (e.g., AMS-2 DAR or PAS-8). Extremely low distortion levels typ. < 0.0001% (< -120 dB). The MTX Monitor is a standard unit in many recording-, radio- and TV studios.

- 8 stereo inputs (4x balanced, 4x unbalanced)
- Select from 2 monitoring amplifiers (1x balanced, 1x unbalanced)
- Measuring output for stereo peak meter; stereo imager
- 2 recording outputs
- Functions: Dim, Mute L, Mute R, Phase, Mono, Mute Speaker
- High-quality, high power headphone amplifier, 2x 2600 mW
- Unbalanced input and output levels can be adjusted internally
- Compatible with digital router
- Excellent audio quality
- Available in 19" or HiFi version with 435 mm enclosure width



## AMS-2.v2 MONITOR CONTROL SYSTEM

Professional preamplifier for the highest demands with respect to audio quality and operational ease. This unit allows you to monitor, split and record digital and analogue signals in recording studios (video studios) and from the mixer output. The AMS-2 is the ideal unit for connecting analogue and digital audio devices as well as the various peripheral devices. The ultralinear technology implemented in the monitor system is exceptionally suited for processing fast pulse signals. By using the AMS-2 as a mastering controller at digital editing workstations, you can now comfortably monitor and record the various signals. The AMS-2 can also be used as a replacement/extension for existing mixer-monitor routers. A version is also available for installation in table rack systems. The AMS-2 can optionally also be operated from a second place. Input selection, left/right adjustment and volume controls are operating without any mechanical contacts and offer a long live with high accuracy. Selection of source for analogue monitoring and analog recording is independent.

1 stereo and 1 mono analogue measuring outputs are provided.  
Monitoring functions: -20 dB headphone, -20 dB speaker, +10 dB, left mute, right mute, sum mute, mute only speaker, mono, L - R, balance  $\pm 6$  dB in 1dB steps, flip channels, reverse phase.  
Digital selection: optional the monitoring system allows you to choose 2 different signals at the same time from 8 digital audio sources (AES/EBU).



## SAM-1Bs / SAM-1C Balancing /differential amplifiers



2-Channel



4-Channel



optionally also in black

Universal, high-quality 2/4-channel matching and balancing amplifier for connecting unbalanced hi-fi inputs/outputs to balanced or unbalanced inputs/outputs on studio devices. The unit is also highly suitable for adapting signal levels between mixers, tape machines and audio interfaces operating at -10 dBV and studio devices operating at +4 dBu or the standard +6 dBu inputs/outputs level. Amplification/attenuation for each channel with externally adjustable 15-turn calibration trimmer. Many different SAM-1C-versions are available. **SAM-1Bs** has the same functionality but 3..4 dB lower dynamic range.

The **SAM-1C** allows you to use the following functions simultaneously:

- \* A signal with a high impedance is converted to a low impedance signal (impedance conversion/buffer amplifier)
- \* An input signal can be amplified/attenuated
- \* Up to 4 input signals can be mixed
- \* A balanced signal becomes unbalanced
- \* An unbalanced signal becomes balanced
- \* "Ground loops" between unbalanced units can be eliminated
- \* Splitter amplifier function (can be configured as balanced and splitter amplifier)

The extremely high common mode rejection ratio of the input amplifier in the SAM-1C of typically 110 dB at 1 kHz ensures that noise in balanced lines is almost completely eliminated. The balanced inputs of the SAM-1C can also be used as unbalanced inputs without any problem (e.g., as balanced makeup amplifiers/impedance converter or phase inverter). Since the balanced outputs are servo-electronically balanced, unbalanced connections do not change the output level or headroom! To prevent ground loops from occurring, the protective earth is kept separate from the signal ground in the unit. SAM-1C are equipped with a switching power supply for worldwide use (80...245 V / 45...440 Hz) and a removeable power supply cable.

## SAM-2B.V2 / SAM-2C Balancing /differential amplifier



Universal, professional 10-channel matching and balancing/differential/splitter amplifier module with similar properties as SAM-1C. Versions are available with 4...10 amplifier channels. Amplification/attenuation for each channel with externally adjustable 15-turn calibration trimmer. Also available as a fully balanced splitter amplifier. Inputs/outputs via XLR/RCA connector. The "power-off" relays at all outputs prevent clicks and pops from occurring when power is lost. Equipped with precision switch mode power supply for worldwide use. Gain of balanced outputs: 0...+24 dB, gain of differential outputs: -20...+0 dB (+6 dB). Special features: excellent dynamic range more than 135 dB (!), minimum distortion typically lower than 0.0001% for +6 dBu at 1 kHz. Unit configuration can be changed or extended quickly and easily without need for soldering work. Many different SAM-2C-versions are available. **SAM-2B.V2** has the same functionality but 3...4 dB less dynamic range.

## SAM-3B.V2 and SAM-3B.V3-EX Multiple balancing /differential amplifier



Universal, professional 4-16-channel matching and balancing/differential/splitter amplifier module with similar electrical properties as SAM-1C/2C. Many configurations are available. Also available as a fully balanced splitter amplifier or 8-channel fully balanced level converter. Inputs/outputs using 37-pin Sub-D connector. Versions are available with 4 – 16 amplifier channels. Amplification/attenuation for each channel with externally adjustable calibration trimmer. Amplification of balanced outputs: 0 – +24 dB, amplification of balanced inputs: -20 – +0 dB (+6 dB). Special features: excellent dynamic range larger than 132 dB (!), minimum distortion typically lower than 0.0001% for +6 dBu at 1 kHz.

## Digital signal router / converter

### CAS-2.V4 Digital Signal Switch



Signal switch/splitter/converter for digital audio signals in SPDIF (consumer format). This unit allows you to comfortably monitor up to 8 connected devices and, independently of this, to record one of these signals to all other connected devices. By pressing a button, you can activate a digital connection point where you can insert external processing units into the recording path. The unit stores the current configuration even after you turn it off. Power supply: 230 V/50...60 Hz, Sampling rate: 28...192 kHz Supported word length: 16...24 bits Inputs and outputs: 4 Toslink inputs, 4 coax inputs, 5 recording outputs (3x coax, 2x Toslink), 1 coax monitor output (digital monitor output, e.g., for external D/A converters), 1 coax digital insert point (send + return). You can adapt the input configurations internally using jumpers.

### PAS-8 Digital Router



Professional monitor router for digital audio signals in AES/EBU format. This unit allows you to comfortably monitor up to 8 connected devices (with external D/A converters) and, independently of this, to record a signal simultaneously to the connected devices. By pressing a button, you can activate a digital connection point where you can insert an external processing unit into the recording or monitoring path. All of the inputs and outputs are designed as floating balanced XLR connectors. With the exception of the insert, you can control everything on the unit using the audio monitor systems AMS-2 or MTX-Monitor. The PAS-8 also accepts SPDIF signals at the inputs but does not convert the format. Supported sampling rates: 28...96 kHz, 16...24 bits, 8 inputs, 2 monitor outputs, 2 record outputs, 1x insert send/return

### AMS-2 DAR Digital Monitor Router



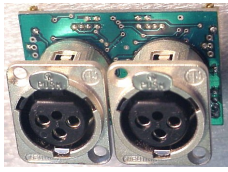
Professional monitor router for up to 8 digital audio signals in AES/EBU format for **AMS-2** or **MTX-Monitor** audio monitor systems. This unit allows you to comfortably monitor signals (with external D/A converters) and, independently of this, to record a signal simultaneously to the connected devices. All of the inputs and outputs are designed as floating, balanced XLR connectors. The unit is powered and controlled by the AMS-2 or MTX-Monitor system. The input impedances can be changed for each input from 110  $\Omega$  to 1 k $\Omega$  using the internal jumpers. This makes it possible to connect the input signal from the AMS-2 DAR to a following unit! The unit also accepts SPDIF signals at the inputs but does not convert the format. Supported sampling rates: 28...96 kHz, supported bit depth: 24 bits, 8 inputs, 2 monitor outputs, 2 independent record outputs.

### DDA-12 AES/EBU and AES-3 Signal Splitter



Professional splitter amplifier for digital audio signals in AES/EBU format. The unit has 2 inputs and 2 output groups with 6 outputs each. The two output groups can be assigned to the 2 inputs in any given manner (also remotely controllable). The automatic "DUTY CYCLE" correction maintains a constant duty cycle even for varying input levels. LEDs are used to display the input assignment and indicate when a sampling rate is detected at the input. The inputs and outputs are available as floating balanced XLR connectors. The unit is compatible with sampling rates from 28...192 kHz and bit depths of up to 24 bits. The DDA-12 can be used with the AMS-2 to split the digital output signals from the router.





## SSIM-03a / SSIM-03b Differential amplifier, 2-channel

2-channel-differential amplifier (unbalancing amplifier) makes it possible to convert balanced inputs to unbalanced lines and match levels using 15-turn calibration trimmer. Inputs are 2x XLR female, outputs and power supply via 8-pin box header (female header supplied). Amplifier gain range -40...+6dB, power supply  $\pm 12... \pm 19$  V. Special features: very compact, high dynamic range, very low distortion, high crosstalk attenuation.



## SSOM-03b / SSOM-03b.V2 Balancing amplifier, 2-channel

2-channel-balancing amplifier makes it possible to convert unbalanced outputs to balanced lines and match levels using 15-turn calibration trimmer. Inputs and power supply use 8-pin box header (female header supplied), outputs are 2x XLR male. Amplifier gain range -0 to +24dB, power supply  $\pm 12... \pm 19$  V. Special features: very compact, high dynamic range, very low distortion, high crosstalk attenuation. **SSOM-03b.V2** has the same functionality like the SSOM-03b but 3 dB better dynamic range.



## SSIM-04Mb / SSIM-04Mc Differential amplifier, 2-channel

2-channel differential amplifier (unbalancing amplifier) makes it possible to convert balanced inputs to unbalanced lines and match levels using horizontal 15-turn calibration trimmer (adjustable from outside). Inputs are 2x XLR female, outputs are 2x RCA jacks and 14-pin box header (female header supplied). Amplifier gain range -21 to +6dB, power supply  $\pm 12... \pm 20$  V. Special features: large dynamic range, minimum distortion, excellent common mode reaction ratio of more than 110 dB at 1 kHz and 10 kHz, high crosstalk attenuation, integrated "mute" relays. **SSIM-04Mc** has the same functionality like the SSIM-04Mb but 3 dB better dynamic range.



## SSOM-04Mb.V2 / SSOM-04Mc Balancing amplifier, 2-channel

2-channel-balancing amplifier makes it possible to convert unbalanced outputs to balanced lines and match levels using horizontal 15-turn calibration trimmer (adjustable from outside). Inputs are 2x RCA jacks and 14-pin box header (female header supplied). Outputs are 2x XLR male. Amplifier gain range -0 to +22 dB, power supply  $\pm 12... \pm 20$  V. Special features: highly suitable as splitter amplifier with balanced outputs, large dynamic range, minimum distortion, excellent output symmetrie of typically more than 80 dB, balancing of output impedance typically over 75 dB, high crosstalk attenuation, integrated "mute" relay. **SSOM-04Mc** has the same functionality like the SSOM-04Mb.V2 but 3 dB better dynamic range.



## SIA-02.V2 Differential amplifier, 2-channel

2-channel differential amplifier (unbalancing amplifier) makes it possible to convert balanced inputs to unbalanced lines and match levels using horizontal (SIA-02.V2a, adjustable from outside) or vertical (SIA-02.V2b) 20-turn calibration trimmer. Suitable for installation in enclosures with existing XLR/RCA/jack connectors and where space is very limited. Inputs: 10-pin box header (female headers supplied), outputs: 10-pin plug. Power supply via 6-pin box header (female header supplied). Amplifier gain range: -40 – +6 dB, power supply  $\pm 12... \pm 19.5$  V. Special features: very compact, high dynamic range, very low distortion, high channel separation.



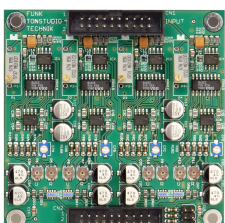
## SOA-02.V3 Balancing amplifier, 2-channel

2-channel-balancing amplifier makes it possible to convert unbalanced outputs to balanced lines and match levels using horizontal (SOA-02.V3a, adjustable from outside) or vertical (SOA-02.V3b) 20-turn calibration trimmer. Suitable for installation in enclosures with existing XLR/RCA/jack connectors and where space is very limited. Inputs: 10-pin box header (female headers supplied), outputs: 10-pin box header. Power supply via 6-pin box header (female header supplied). Amplifier range -0 to +22 dB, power supply  $\pm 12... \pm 19$  V. Special features: very compact, high dynamic range (> 136 dB), ultra low distortion, high channel separation (130 dB/10 kHz), excellent symmetry.



## SIA-04.V3 Differential amplifier, 4-channel

4-channel differential amplifier (unbalancing amplifier) makes it possible to convert balanced inputs to unbalanced lines and match levels using horizontal (SIA-04.V3a, adjustable from outside) or vertical (SIA-04.V3b) 20-turn calibration trimmer. Suitable for installation in enclosures with existing XLR/RCA/jack connectors or multicore connectors and where space is very limited. Inputs: 20-pin box header (female headers supplied), outputs: 20-pin box header. Power supply via 6-pin box header (female header supplied). Amplifier gain range -20 to +6 dB, power supply  $\pm 12... \pm 19.5$  V. Special features: very compact, high dynamic range, very low distortion, high channel separation.



## SOA-04.V3 Balancing amplifier, 4-channel

4-channel balancing amplifier makes it possible to convert unbalanced outputs to balanced lines and match levels using horizontal (SOA-04.V3a, adjustable from outside) or vertical (SOA-04.V3b) 20-turn calibration trimmer. Suitable for installation in enclosures with existing XLR/RCA/jack connectors and where space is very limited. Inputs: 20-pin box header (female headers supplied), outputs: 20-pin box header. Power supply via 6-pin box header. Amplifier gain range 0 to +24 dB, power supply  $\pm 12... \pm 19.0$  V. Special features: highly suitable as splitter amplifier with balanced outputs, very compact, high dynamic range, very low distortion, high channel separation.

**new**

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## LPA-2S / LPA-2S+ Headphone Amplifier

High quality stereo headphone amplifier, medium and high power range. It has a premium quality stereo stepping potentiometer with precise channel balance (less than 0.5 dB in the operating range). Gain control between -70 and 0 dB. Suitable to drive headphones having impedances between 16 and 2 k $\Omega$ . Output power > 2 x 1500 mW. Output voltage: +23 dBu at 150  $\Omega$ . Features: extraordinary signal to noise ratio, lowest distortion (< -120 dB), large frequency range. in- and outputs as well as power supply are connected by Micro-Match 14 pin connector strip. Size : 67 x 47 x 28 mm. LPA-2S+ 2x 2000 mW.

## SIA-5.V2 / SIA-5.V3 new Midget 2 channel amplifier, balanced to unbalanced

midget 2-channel differential amplifier and impedance converter. gain (-6, 0, +6 dB) is adjustable separately in 3 steps for each channel: (+/- 9 to 19 Volts) Input resistance 10 M $\Omega$ . Outstanding soundquality. THD+N at 1 kHz +23 dBu and 600  $\Omega$  load  $\leq$  -118 dB !! Reasonably priced. Especially designed to balance the inputs of the LPA-2 module. For this purpose the LPA-2 is equipped with a dedicated multiple pin strip. SIA-5.V3 ultra low noise, THD+N better than 123 dB ! Size : SIA-5.V2 38 x 36 x 8 mm. SIA-5.V3 39x35x5.

## PWS-04B-T / PWS-05B-T High-precision twin power supply

Very stable LOW-DROP precision twin power supply. Its toroid transformer causes a very low magnetic stray field. Intended to supply analogue devices up to 150 / 250 mA current consumption. Ideal to drive the balancing differential amplifiers SSIM-03b / SSOM-03b / SSIM-04Mb / SSOM-04Mb. The output voltage is  $\pm$ 19,0 Volt. Voltage between  $\pm$  6...  $\pm$  24V can be ordered. Also available delivering +24 Volt, according to the German broadcasting standard; or providing 48 Volt for phantom powering. It has a current limiting circuit to prevent from inadvertent short circuits. Features: balanced output voltage without hum, output noise voltage < 15  $\mu$ V at full load. When one output voltage is reduced due to overcharge, the other will track by the same amount. A short circuit will cause a reduction of both voltages of the PWS-04B-T thus switching off all involved amplifiers. The unit contains a primary fuse and a line filter. Size : 123 x 67 x 37 mm.

## SMPS-12T Switch Mode Precision twin power supply

Very stable and precise LOW-DROP switching twin power supply with medium output power. Applicable to supply analogue devices up to +/- 250 mA (+/- 350 mA) current consumption. Available output voltages : +/- 18V ... +/- 20 V. (standard is 19,7 V) Output noise voltage (hiss and hum) is extraordinary low (lower than 15  $\mu$ V<sub>eff</sub> at full load. This value is so unique that this power supply may even replace a storage-battery for audio application. An integrated monitoring of symmetry provides exactly the same voltage at the positive and at the negative output. This short-circuit-proof power supply has an elaborate line filter and may be operated at all usual power networks between 90 - 260 V and 40 ...400 Hz . It needs a rather low switching-on current, therefore not producing transient current-pulses, as they are produced by conventional transformers. The SMPS-12DM has a higher efficiency than conventional power supplies that is why it produces less heat. Mains socket and switch are incorporated.

## SMPS-14T / SMPS-24T.V2 Switch Mode Precision twin power supply

Very stable and precise LOW-DROP switching twin power supply with higher output power. Applicable to supply analogue devices up to +/- 280 mA (+/- 350 mA) current consumption. Available output voltage :  $\pm$  15,  $\pm$  18,  $\pm$  19,  $\pm$  20 and  $\pm$  24V (other voltages on request). Output noise voltage (hiss and hum) is extraordinary low:  $\leq$  10  $\mu$ V<sub>eff</sub> (20 Hz ...20 kHz) at full load. The SMPS-24T.V2 provides a current of 350 mA, but for a short time it can deliver up to 620 mA. When one output voltage is reduced due to overcharge, the other will track by the same amount. A short circuit will cause a reduction of both voltages of the power supply, thus switching off all involved amplifiers. The power supply has an elaborate line filter and may be operated at all usual power networks between 90...260 V and 40...400 Hz . It needs a rather low switching-on current, therefore not producing transient current-pulses in the mains. It is smaller than other power supplies, it has a better efficiency (75 to 80 %) thus producing less heat. Mains-fluctuations do not cause variations of the output voltage. On-Off remote controlling is possible. Available also with power switch. Integrated temperature protection circuit. Size : SMPS-14T: 175 x 35 x 32 SMPS-24T.V2 : 233,5 x 39 x32 mm (l x b x h).