

Audio devices



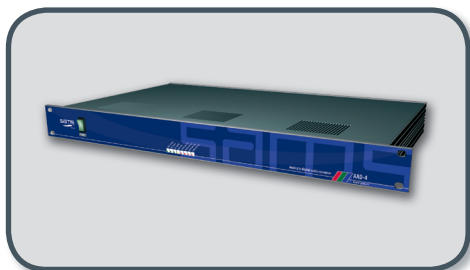
sams

Professional and broadcast audio equipment

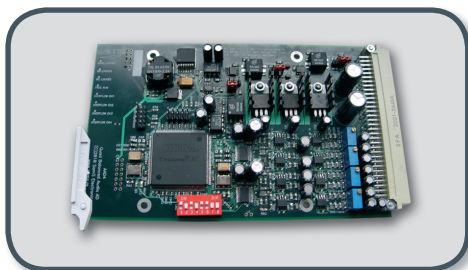
48 Zivka Davidovića st. • 11050 Belgrade • Serbia • +381 11 3806 253; +381 11 2402 212 • sams@sams.rs • www.sams.rs

- Broadcast quality
- 24bit conversion, 48 / 96 / 192 sampling rate
- 24dBu max input level
- 4ch analog inputs
- 2ch digital outputs
- The possibility of raising input level 0dbFS @ 24dBu or 0dbFS @ 18dBu
- Automatic or manual reference selection: BB / DARS / Word clock (optional)

AAD-4 is a high quality four channel analog audio to digital two channel converter. The conversion is 24 bit and the device has selectable sampling rates over the dip switch: 48 / 96 / 192 KHz. UNITS accepts different types of external references: Black Burst, DARS, Free Run or Word clock (optional). Audio input level can be raised to +6 dB. Maximum input level is 24dB. The output can be AES / EBU or SPDIF. The module is placed in the SRU-306 3RU chassis with capacity of 6 modules. Also, the device is available in standalone version.



Standalone version



Module for SRU-306 rack frame

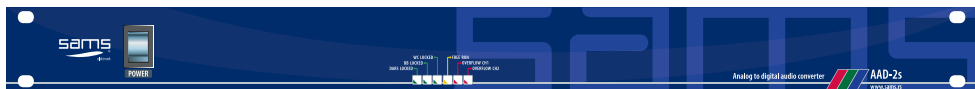


AAD-4s, front side



AAD-4s, rear side

NOTE: The device can be made in a shortened version of AAD-2, two-channel analog to one channel digital converter.



AAD-2s, front side



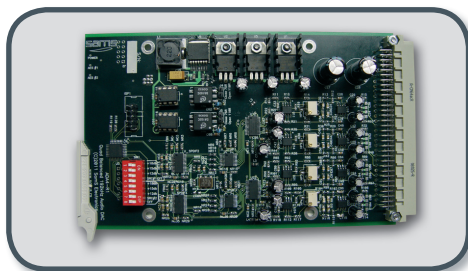
AAD-2s, rear side

- Broadcast quality
- 24bit conversion, 32 to 192 KHz sampling rate
- Output level from 9 to 24dB for 0dBFS in 1dB increment
- 4ch analog outputs
- 2ch digital inputs
- Low-Jitter Clock Recovery
- The selection of inputs: AES/EBU or SPDIF
- Fine-tune the output level
- Led indication of input signal

ADA-4 is a high quality two channel digital audio to four channel analog converter. The conversion is 24 bit and the device automatically adjusts by the incoming sampling rate and supports from 32 to 192 KHz. The maximum output level from +9 to +24 dB 0dbFS and is set by dip-switch in 1dB increment. The input can be AES / EBU or SPDIF. The module is placed in the SRU-306 3RU chassis with capacity of 6 modules. Also, the device is available in standalone version.



Standalone version



Module for SRU-306 rack frame



ADA-4s, front side



ADA-4s, rear side

NOTE: The device can be made in a shortened version of ADA-2, one channel digital to two-channel analog converter.



ADA-2s, front side



ADA-2s, rear side

3RU 19" RACK FRAME WITH 6/12 MODULES **SRU^{306/312}**

- 3RU 19" rack frame for 6/12 modules
- It can be configured in any combination of digital modules
- The system provides three individual grounds (mains, chassis and 0V) performed on a connector on the back of the case
- Wiring is completely eliminated by using the motherboard which keeps all signals and low voltage power supply to each card

SRU-306 is a 3RU chassis with pull-down door that accepts up to 6 modules. The casing is capable of storing any combination of digital modules.

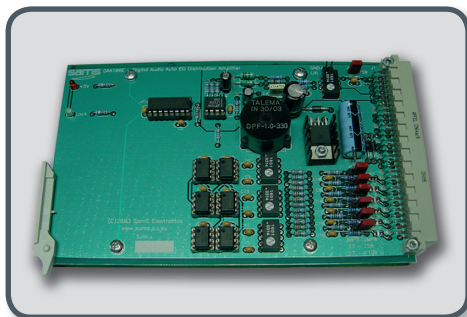
All modules are in format "LITTLE EUROPE", 100x160mm and easily assembled and disassembled from the rack. All modules have the ability to lock in the frame, which prevents accidental problems in contacts between the module and the motherboard.

Modules can be reconfigurable, whether it comes to replacing them, adding new or relocation of existing. The door on the housing can be of aluminum or acrylic glass. The back of the frame has a choice of the masses.



AES/EBU DISTRIBUTION AMPLIFIER, 1ch, 110/75Ω, 1x6 **DAA^{106e}**

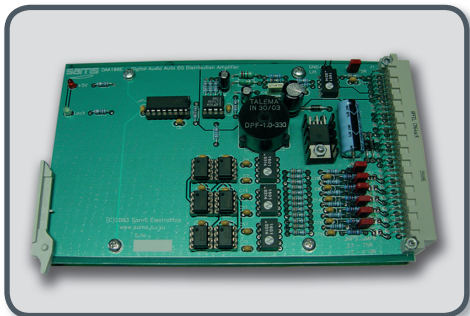
- High quality
- 6 individual buffer outputs
- AES/EBU 110Ω balanced / SPDIF 75Ω unbalanced inputs
- AES/EBU 110Ω balanced / SPDIF 75Ω unbalanced outputs
- Input and output transformers
- Automatic cable EQ
- Multiple configuration possible



The **DAA-106 Digital** Audio Distribution Amplifier is solution for distribution of digital audio signal over long distances (up to 200m). An hybrid 75/100 unit allowing signals to be converted from balanced to unbalanced format without the amplitude and phase distortion associated with transformers. The modules mount into the SRU-312 frames 3RU, 12 module capacity.

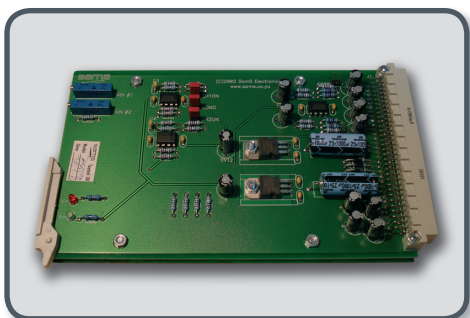
- Low noise (100dB S/N)
- 6 outputs
- Individual buffer outputs
- Gain range -6dB to +6dB
- +24/16dB maximum output level
- Dual low voltage AC power input
- Available in 66Ω or 600Ω output impedance

The AA-101 mono audio distribution amplifier is designed for Broadcast Television and post Productions. Excellent output isolation and inter channel crosstalk is assured by the use of individual drivers for each output. Outputs can be customized, 600Ω or low 66Ω as per AES recommendations 1708 (1-3). The modules mount into the SRU-112 frames 3RU, 12 module capacity.



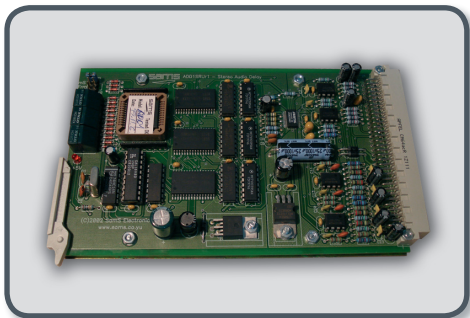
- High quality
- Jumper selectable Stereo or Summa Mode
- Stereo analog input and output

The ASA-100 is designed to combine two stereo signals into one mono in adjustable aspects. This device is useful also as stereo amplifier. Ideal position of ASA-100 is before transmitter antenna. The modules mount into the SRU-112 frames 3RU, 12 module capacity.



- High quality
- Delay up to 999ms
- Delay adjustment milliseconds
- Stereo balanced analog input and output

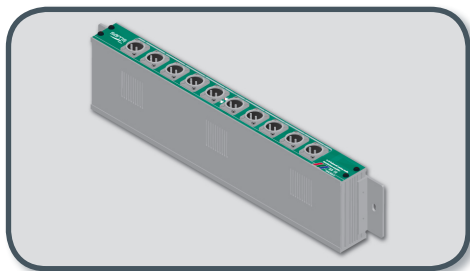
The DDL-2 products process up to 2 analog audio channels. It's easy to program by using the trimmers on front panel. The modules mount into the SRU-112 frames 3RU, 12 module capacity.



ANALOG AUDIO DISTRIBUTION AMPLIFIERS **AA**^{10p/10pt/10w} for wall mount

- High quality
- 10 outputs (20 outputs - optional)
- Low noise (100dB S/N)
- Gain range -6dB to +6dB
- Individual buffer outputs
- Available in 66Ω or 600Ω output impedance
- Transformer coupled input (optional)

Series of audio distribution amplifiers have excellent isolation from crosstalk between channels and it has provided individual amplifiers for each output. The device have possibility of installation of transformer at the entrance. Distribution automatically adjusts for unbalanced output.



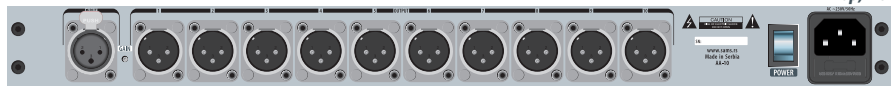
AA-10w, wall version (top and front view)



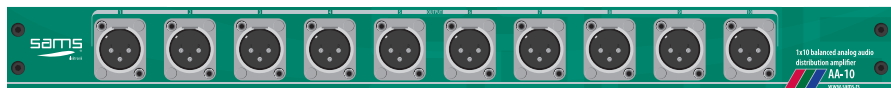
AA-10p, standalone version



AA-10p, front side



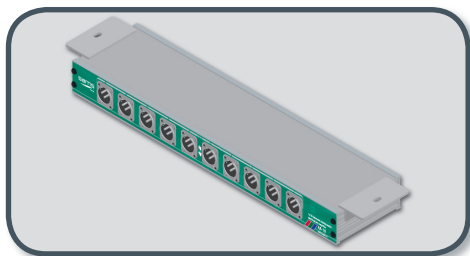
AA-10p, rear side



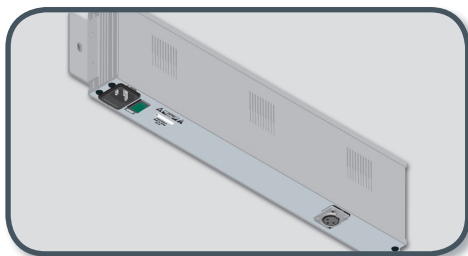
AA-10w - wall version, top side



AA-10w - wall version, bottom side



AA-10w, wall version (top and back view)

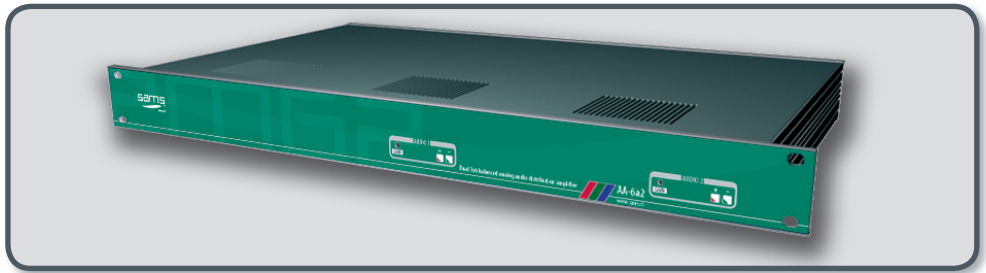


AA-10w, wall version (bottom and front view)

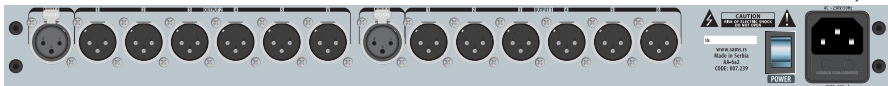
ANALOG AUDIO DISTRIBUTION AMPLIFIERS **AA**^{4I/4a2I/5I/5a2I/6I/6a2I}

- High quality
- 4 to 6 outputs 1/2ch
- Low noise (100dB S/N)
- Gain range -6dB to +6dB
- Individual buffer outputs
- Available in 66Ω or 600Ω output impedance
- Transformer coupled input (optional)

Series of audio distribution amplifiers have excellent isolation from crosstalk between channels and it has provided individual amplifiers for each output. The device have possibility of installation of transformer at the entrance. Distribution automatically adjusts for unbalanced output.



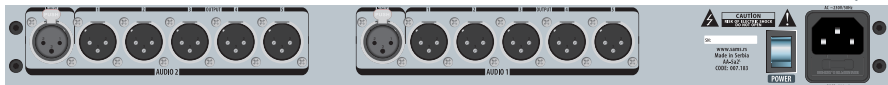
AA-6a2I, front side



AA-6a2I, rear side



AA-5a2I, front side



AA-5a2I, rear side



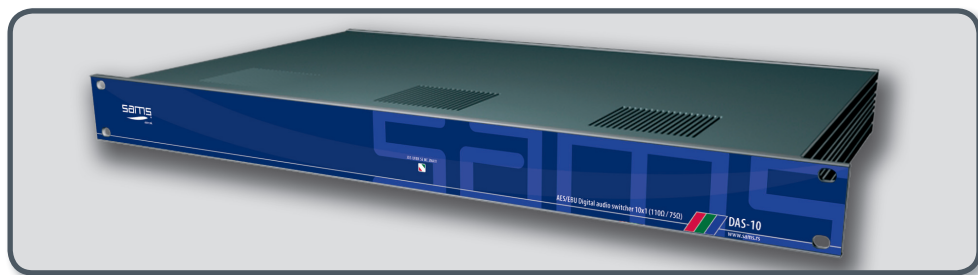
AA-4a2I, front side



AA-4a2I, rear side

- 4x1 / 10x1 AES/EBU audio switcher
- 110Ω / 75Ω balanced / unbalanced inputs and output
- 24bit / 32-96KHz sampling and processing
- Can function independently or be linked with other 10x1 switchers
- Return to the previous state due to power failure
- Local or remote control
- PC control

DAS-4/10 is a 4/10x1 AES / EBU digital audio switcher. Input and output level has been mixed 75/110Ω and allows the signal to be converted from balanced to unbalanced format without amplitude and phase distortion as it is achieved by using transformers. High signal quality is achieved through the development in the SMD technology. Switcher has automatic signals equalization. It is designed to meet the most demanding requirements for switching signals in televisions and digital studios. Available in 1RU 19" chassis. Control may be the front panel or by remote control SCU-4/10. Also, the device can be controlled from a computer through a TCP-IP network. Can function independently or be associated with related switcher for audio-follow-video control.



DAS-10, rear side



DAS-4, rear side



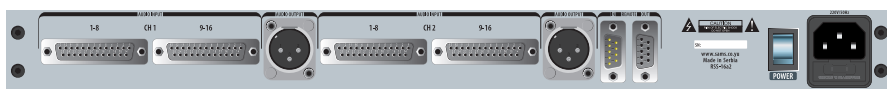
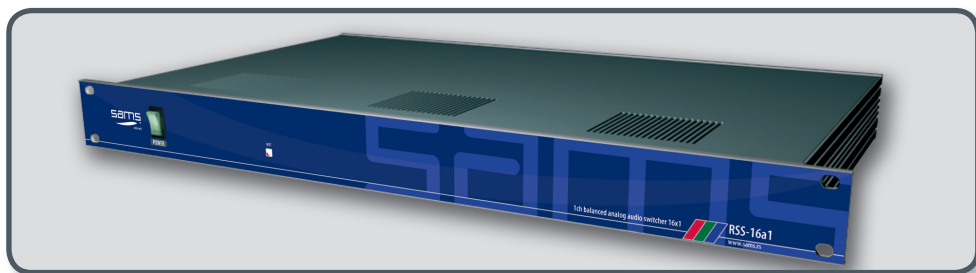
Remote control SCU-4, front side



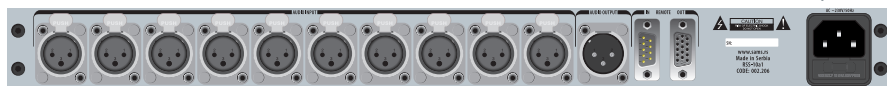
Remote control SCU-10, front side

- 1/2ch analog audio switchers
- Balanced inputs and output
- Can function independently or be linked with video switcher
- Return to the previous state due to power failure
- Local or remote control

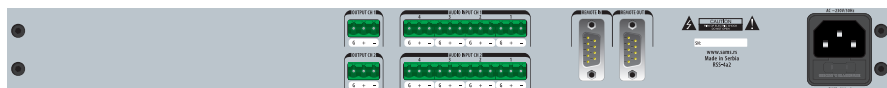
The RSS switchers provides analog stereo audio signals for production and broadcast environments in a single rack mount (1RU). It can be controlled by a local or remote push button panel. 4x1 switcher can control audio level through remote control SCU-4vca (optional).



RSS-16a2, rear side



RSS-10a1, rear side



RSS-4a2, rear side



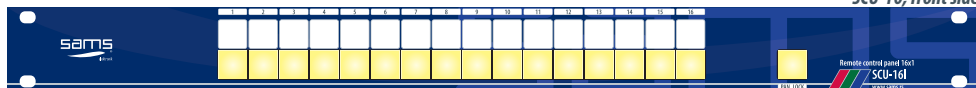
SCU-4, front side



SCU-4vca, front side



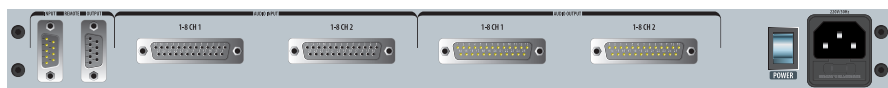
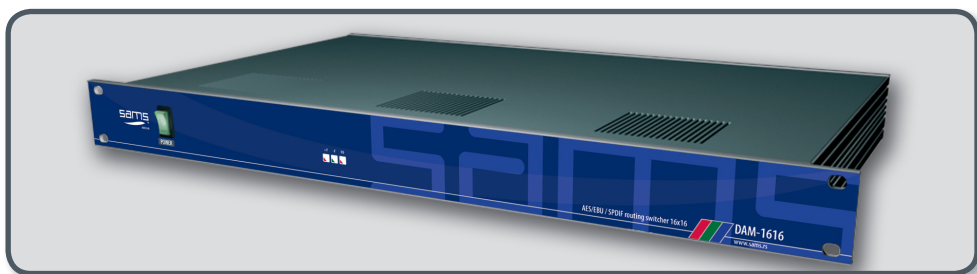
SCU-10, front side



SCU-16, front side

- From 4x4 to 16x16 AES/EBU (or SPDIF) audio routing switchers
- 110Ω / 75Ω inputs and outputs
- 24bit / 32-96KHz sampling and processing
- Can function independently or be linked with other routing switchers (with same configuration)
- Return to the previous state due to power failure
- Local or remote control
- PC control

The DAM series is an digital audio routing switcher with balanced/unbalanced input and outputs, jumper selectable. This top of the line routing switchers provides high performance circuits and can be configured in many ways as will as combined with other matrix tips such as analog video and serial digital video.



DAM-88, rear side



DAM-1616, rear side

TECHNICAL SPECIFICATIONS

Specifications and designs are subject to change without notice

■ INPUT

Connector 25pin SUB D female or 3-pin terminal strip
Impedance 110 Ω balanced or 75 Ω unbalanced

■ OUTPUT

Connector 25pin SUB D male or 3-pin terminal strip
Impedance 110 Ω balanced or 75 Ω unbalanced
Signal level 0.2-7 V p-p

■ PERFORMANCE

Sampling rates 32-96 KHz

■ POWER

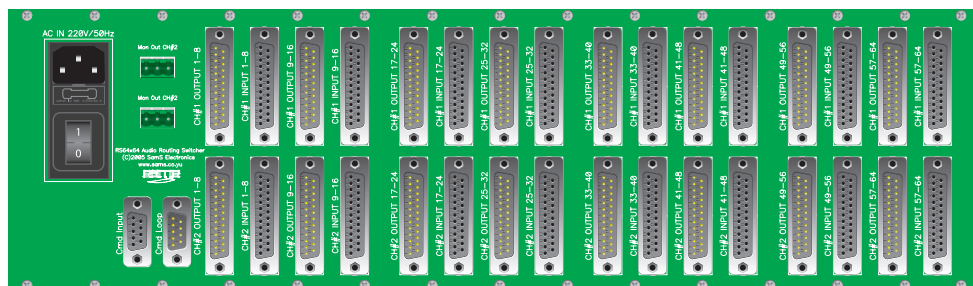
Power ~230 V AC ±10%
Frequency 50 Hz
Consumption 20 W

■ TEMPERATURE

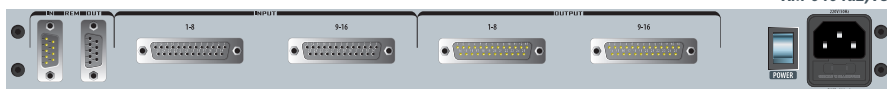
Performance 5 - 40° C
Operating 0 - 50° C

- High quality
- From 4x4 to 64x64 analog audio routing switchers 1/2ch
- Balanced inputs and outputs
- Can function independently or be linked with other routing switchers (with same configuration)
- Return to the previous state due to power failure
- Local or remote control
- PC control

The SAM series is an analog audio routing switchers. High performance circuits in SMD technology assure undiminished signal quality. They are well suited for all demanding routing tasks in studio or broadcast applications. The built-in RS-232 interface allows the user to control the router via PC Software. The control bus technology allows the linking of the unit with the SVM or DVM series to create an audio-follow-video router.



AM-6464a2, rear side



SAM-1616, rear side

TECHNICAL SPECIFICATIONS

Specifications and designs are subject to change without notice

■ INPUT

Connector 25pin SUB D female
Impedance > 40 kΩ, balanced

■ OUTPUT

Number 25pin SUB D male
Impedance 10 Ω
Max output level +24 dB

■ PERFORMANCE

Pojačanje -6 dB to +6 dB
Frekventni opseg < ± 0.1 dB (20 Hz to 20 KHz)
Odnos signal/šum > 100 dB unity gain 20 Hz to 20 KHz
TDH 0.1 % @ 20 Hz to 20 KHz

■ POWER

Power ~230 V AC ±10%
Frequency 50 Hz
Consumption 20 W

■ TEMPERATURE

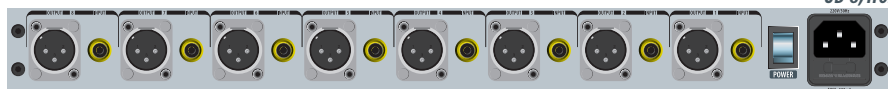
Performance 5 - 40° C
Operating 0 - 50° C

- Converts between unbalanced to balanced
- 8 unbalanced inputs
- 8 balanced outputs
- Gain adjustment $\pm 6\text{dB}$

UB-8 converts audio impedance, built for studio quality, between unbalanced to balanced. Fine tuning gain level trim pots are in front panel with $\pm 6\text{dB}$ adjustment for each channel. It is great for splitting signals for distribution to multiple recorders, or for multizone sound routing applications.



UB-8, front side



UB-8, rear side

- Converts between unbalanced to balanced
- 8 balanced inputs
- 8 unbalanced outputs
- Gain adjustment $\pm 6\text{dB}$

BU-8 converts audio impedance, built for studio quality, between balanced to unbalanced. Fine tuning gain level trim pots are in front panel with $\pm 6\text{dB}$ adjustment for each channel. It is great for splitting signals for distribution to multiple recorders, or for multizone sound routing applications.



BU-8, front side



BU-8, rear side

- The cost effective adapters with accurate impedance
- Dozvoljava duge kablove za digitalni audio signal putem koaksijalnog kabela
- Converts balanced (110 Ω) to unbalanced (75 Ω) or vice versa
- Wired in a plastic box that increases devices durability
- Adapters are available with a 3-pin male / female XLR on one side and BNC connectors on the other side
- Easy to use, passive units



- Designed for two commentators with their microphones and headphones
- One COMM output to talk with the studio for both commentators
- Listening 2 external line inputs, COMM port and mix output with the selection of listening to the left or right headphone specifically for each commentator
- Microphone input Gain adjustable from 20 to 70dB
- Separate output for each microphone plus the output from the mixed microphone signals
- PPM signal level meter mixed or a single microphone
- Mute switch with LED indication
- Button for cough and agreement for each commentator
- All inputs and outputs derived from transformer symmetry
- External power supply through AC adapter

Commentary box is designed for independent operation of two commentators. Allows an independent output from both microphones or mixed output - MIX OUT. In particular there is output for communication with the studio or OB - COMM OUT. All outputs are derived through high-quality output transformers. Every commentator has a button for coughing, which also serves to communicate with the studio through COMM OUT output. Each commentator can independently listen and with corresponding knobs adjusts the listening 2 external line inputs, commentators A and B, COMM IN from studio and MIX OUT from commentary box. Commentator also can make a special mix for left and right headphone. Microphone signals in individual and collective action are measured through the built-in PPM meter with LED's.

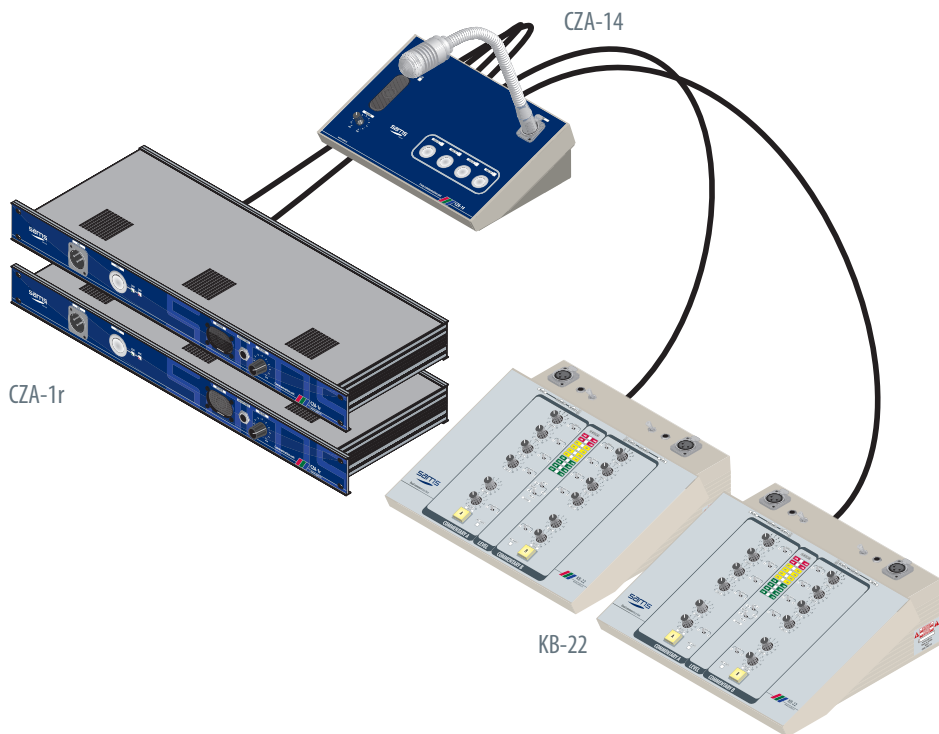
AC adapter
230V to 2x15V



Commentary headset

- High quality
- Adjusting output level
- Balanced input and output
- Microphone with flexible neck can be removed
- The ability to communicate with multiple users

CZA-14 is 4-way communication unit and is used in production studios and TV stations.

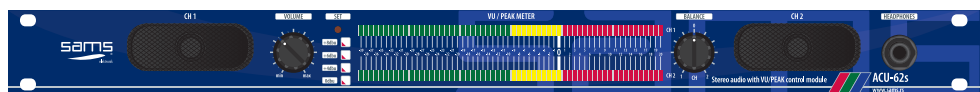
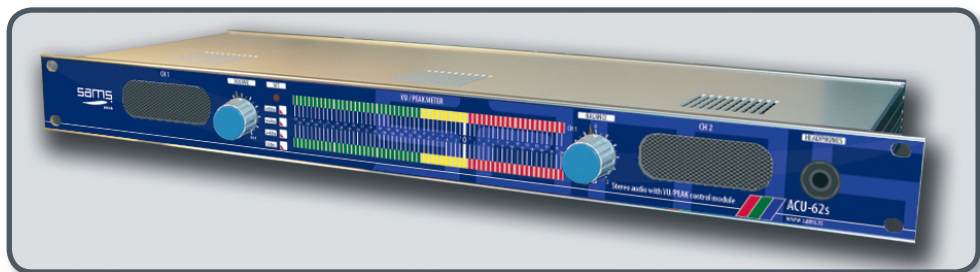


- High quality
- Adjusting output level
- Balanced input and output
- Microphone with flexible neck can be removed

CZA-1r is communication unit and is used in production studios and TV stations.

- High quality
- VU / PEAK meter
- Headphones jack
- 2 speakers
- 2 channels 120 segment LED bar
- Dual display mode PPM / VU

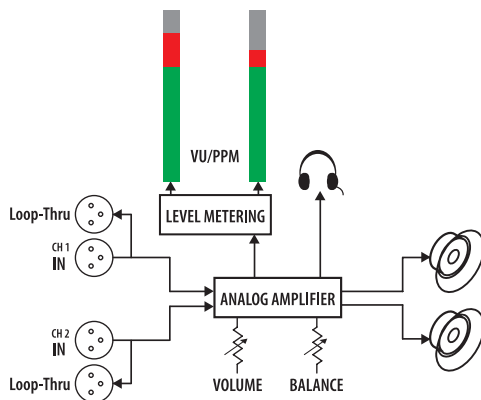
ACU-62 is a series of audio control and monitoring, which easily use stereo or two mono signals. Speakers reproduce audio signals with low distortion and high power output. Because of its size can be used in small spaces. The signal can be monitored through headphones. It is equipped with XLR connectors for balanced audio. The front panel volume control. The device has 60 LED per channel that display VU and Peak on a scale from -39dB to +20 dB. As needed Scale can be moved to +4 dB, +6 dB and +8 dB. The device is capable of calibration. It is used for TV and radio stations, multimedia systems, security systems and so on. Each device is individually calibrated at the factory a standard audio analyzer.



ACU-62, front side



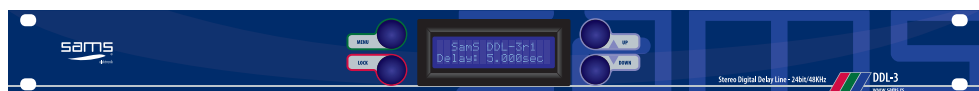
ACU-62, rear side



ACU-62 schematic drawing

- High quality
- Delay up to 5 sec or 1sec
- Delay adjustment in frames, fields or milliseconds
- Panel lock
- Stereo balanced analog input and output
- 24 bit conversion, 48 KHz sampling rate
- 24dBu level
- Power down memory recovery
- Power off / unit fail bypass relay without delay

The DDL-3 products process up to 2 analog audio channels, with 24 bit AD/DA conversions. A/D and D/A signal path is fully differential from input to output, providing best audio performances. The DDL-3 it's easy to program by using the menu on front panel. During absence of power DDL-3 will pass trough incoming audio signal without delay and interruption by use of bypass relay's inside the unit.



DDL-3, front side



DDL-3, rear side

TECHNICAL SPECIFICATIONS

Specifications and designs are subject to change without notice

INPUT

Impedance > 40 Ω 0 dB,
Input level Balanced, max. +16 dB
Number 2, XLR

OUTPUT

Impedance 600 Ω
Output level 0 dB, balanced, max. +24 dB
Number 2, XLR

Power

Power ~230 V AC $\pm 10\%$
Frequency 50 Hz
Consumption 20W

TEMPERATURA

Performance 5 - 40° C
Operating 0 - 50° C