

AUDICO

AVEC G2

ADA 8x8 Central Unit

Digital sound reproduction and
voice evacuation system



EN 54 -16
VOICE ALARM CONTROL
AND INDICATING EQUIPMENT



EN 60849
SOUND SYSTEMS FOR
EMERGENCY PURPOSES

Avec G2 is Audico's latest Sound Reproduction and Voice Evacuation system. The heart of the system is the ADA 8x8 Central Unit, a digital multichannel amplifier, which contains routines for diverse digital signal processing and the monitoring of system operation. Avec is an optimal system for a multitude of sound reproduction needs - background music, public address and voice evacuation in all public buildings. Thanks to being digital, the sound quality, efficiency and flexibility of the systems are excellent.

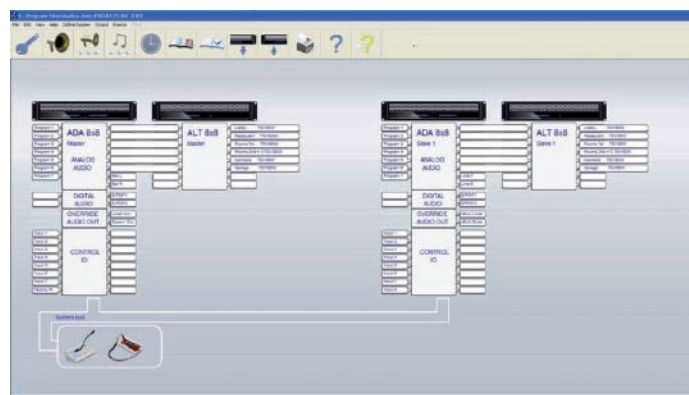
The ADA 8x8 is an effective and compact unit. It has versatile analog audio inputs, effective digital signal processing circuitry and matrix, built-in prerecorded spoken message player and even 8 digital 150W power amplifiers. The Audico Avec also accommodates system surveillance according to the EN 54-16 and EN 60849 standards. All this in a single 2U 19" device!

The versatile paging/control consoles of the Avec family are used for making announcements, playing messages, giving on-screen information on the equipments' status and are used for selecting programme sources and adjusting volume. The consoles are stylish and the user interface is logical and easy to use.



MAIN FEATURES

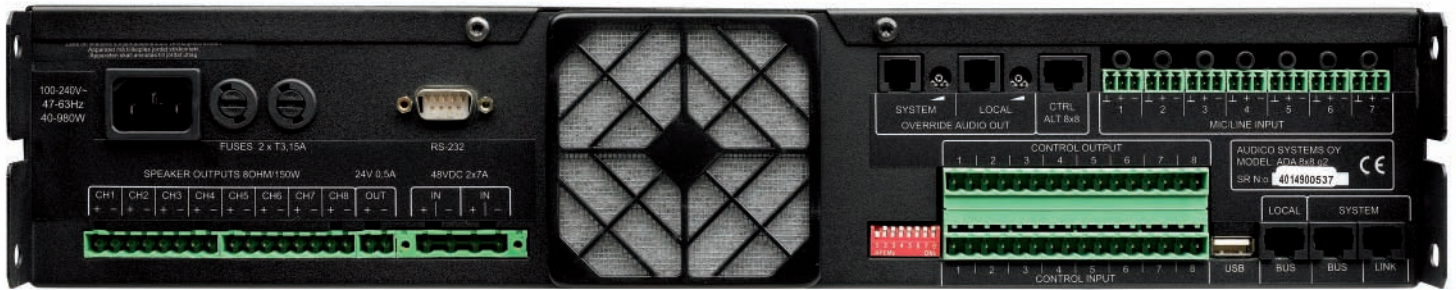
- EN 54-16 and EN 60849 certified
- Voice Evacuation system
- 8 independent 150W @ 8 Ohms amplifiers
- Digital matrix 7x8
- 7 analog audio inputs, mic/line level
- Built-in message/advertisement player
- Messages in USB-memory-stick
- Calendar and timer functions
- Phantom voltage for microphones
- 8 control contact inputs
- 8 control contact output
- System Connection Bus 1 and Bus 2 (CAT5/6/7)
- Efficient signal processing (DSP)
- Volume and source controls on users' panel



Audico Avec is configured using intuitive and easy to use Avec software, the file is downloaded to the ADA 8x8.

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POWER CONNECTIONS AND FUSES

ADA 8x8 is connected to 230V operation voltage using standard plug (IEC). The ADA contains two separate parallel low voltage power units. Both power supplies have dedicated fuse at the rear panel. Fuse size T3, 15A. The ADA has two 48VDC inlets for backup power supply. The system can be equipped with an EN 54-4 certified secondary power supply. The power supply is connected to the 48VDC connectors in the rear panel.

SPEAKER OUTPUTS

ADA contains 8 pcs of 150W digital power amplifiers. 8 Ohms loudspeakers may be connected directly to the speaker outputs. When 70-100V speakers are used the ADA must be equipped with ALT 8x8 line transfer unit. It converts the 8 Ohms outputs to desired line voltage. The ALT also provides priority voltage outputs, individually for each line (24VDC).

DEVICE ADDRESS DIP-SWITCH

Each ADA must have its own individual device address in the same order as they appear on the configuration software. The system can consist of up to 64 ADA central units (512 speaker lines).

24VDC OPERATION VOLTAGE OUTPUT

The 24VDC power output is used to supply power to the ALT 8x8 line transfer unit. The same voltage is used for priority voltage, to bypass possible attenuators in rooms during paging or alarm to ensure the message is heard everywhere in the building.

FAN

The ADA is equipped with a fan. The rotation of the fan is variable and internally monitored.

FRONT USB-B JACK

The USB socket at the front panel of ADA is used for downloading the configuration file to the memory of the ADA. It is also used to control system information like log and surveillance files.

BUS 1 & BUS 2 OVERRIDE AUDIO OUT

Both paging and alarm signals can be configured to these outputs. The outputs are mainly intended to feed paging audio to external amplifiers or other systems.

USB-MEMORY STICK CONNECTOR

The alarm and other messages are stored in wav format on a USB-memory stick (max 4GB). The stored sound files can be played to selected zones as chime, alarm or information messages triggered by a timer, paging, control input or a fault in the system etc. The port can be simultaneously also used as a intelligent interface to external control systems like ao. Espa 4.4.4.

CTRL ALT 8x8 CONTROL DATA TO ALT 8x8

The ALT 8x8 delivers priority voltage to attenuators' relays according the data from ADA 8x8. The ALT is connected with a RJ45 cable.

CONTROL OUTPUTS

The control outputs may be configured to activate on diverse situations, like paging, alarm, fault-indication, firebell muting etc. The output is open-collector type. The ADC 200 relay module is available if a dry contact is needed or the control output is used to control auxiliary alarm devices.

CONTROL INPUTS

The control inputs may be used to active different ADA actions like activate a paging, change the preset, play message, alarm etc. If a monitored control line to fire alarm system is required an ASI 200 supervision line module is required. The transmitting end of the line must be equipped with an ADC 200 relay module.

AUDIO INPUTS (MIC/LINE INPUTS)

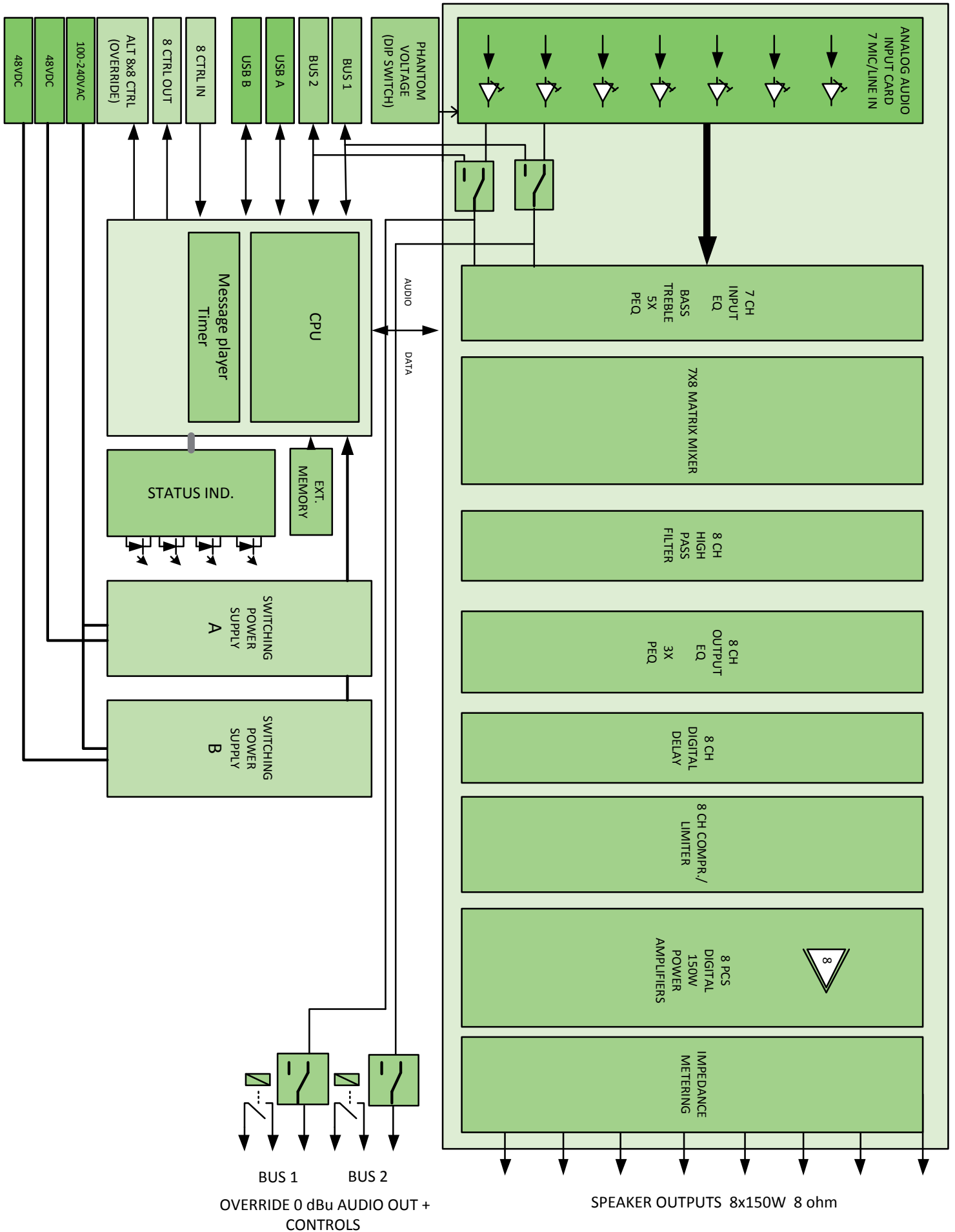
7 pcs microphone/line inputs. The connector is removable 3-pin plug. Each input has own input sensitivity trimmer. The mic/line selection is done using the configuration software. The Phantom voltage is selected with DIP-switches.

SYSTEM BUS

Audico AVEC devices are connected together using either Bus 1 or Bus 2. The devices connected to the Bus 1 can be used to control all ADA's in a single installation. Maximum number of devices in a single bus is 32. The system can be made redundant.

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ADA 8x8 CENTRAL UNIT G2

Audico code 30011
EAN-code 6430029191016

Signal processing and routing characteristics:

8 digital power 150W @ 8 Ohms amplifiers
7 analog audio inputs,
configurable either to mic or line level
Phantom-voltage for electret microphones

Internal message player (max 128 messages), security messages in internal memory, unlimited number of messages on USB memory stick. (wav)

Input channels digital signal processing (DSP),
7 channels

- Parametric equalizer, 3 band
- Digital routing
- Level control

Output channels digital signal processing (DSP),
8 channels

- Tone control
- Parametric equalizer, 5 band
- High pass filter, frequency freely selectable
12 or 24 dB/octave
- High or low pass filter 6 or 12 dB/octave
- Delay max 4ms
- Compressor /limiter
- Volume control

Connection buses and I/O's:

Bus 1 ja Bus 2 (CAT5/6/7) for paging and control devices.
Bus 1 link connector for chaining to next ADA 8x8.
Front panel USB connector for configuration file down/upload.
Rear panel and internal USB jacks for message memory
8 control contact inputs, operation configurable
8 control contact outputs, operation configurable
Priority data for controlling the ALT 8x8 line transfer unit
Intelligent interfaces to external control systems like ESPA 4.4.4 for fire detection controls or hospital paging systems
RS-485 controlling protocol (optional)

System operation:

System is expandable by adding required number of ADA units. Up to 512 speaker lines / paging zones. Possibility to use local programme sources in any ADA 8x8.

System surveillance:

Device and system monitoring according to EN 54-16 and EN-60849 standards.
Automatic switch-over to a another 8x8 if master ADA fails.
Power supply voltage and temperature monitoring.
Fan rotation monitoring.

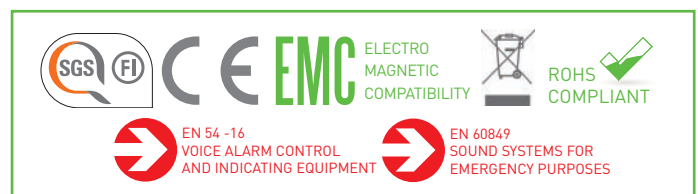
TECHNICAL FEATURES

Analogue input 1...7, sensitivity	-45 dBu ... + 6 dBu
Analogue input impedance (balanced)	20 kohm
Bus 1 & 2 audio (balanced)	+ 6dBu
Digital message signal format (WAV)	16bit 32 or 44,1 kHz sample rate
Frequency response -1 dB	20Hz - 20kHz
S/N level	96 dBA
THD+N @1W/1 kHz	< 0,05%
Dynamic Power @8 Ω	8 x 150W max.
Output power for 70/100V 8 outputs (ALT 8x8)	640W, 120W RMS max. /channel
Continuous power @8 Ω/70/100V all ch. driven < 1%THD	8 x 80W RMS
Peak wattage capability	150W @8Ω, 180W @6Ω, 260W @4Ω
Dynamic range	105 dB
Mains operating voltage	100-240VAC, 47-63Hz
Mains type connector	Class I
Power consumption at VAC	40W-990W
Power factor at full load	0,95
Main fuses 5x20mm	2 x T3,15A
Backup DC Power Inlet	48VDC, 2x7A max.
Backup Power fuses	2xT10A (inside)
Operation temperature	-5 ...+50 °C
Operation humidity (non-condensing)	20 ...90% RH
Measurements W x H x D	485mm x 88mm x 375mm
Weight	8,5 kg netto

Standards and requirements

The product is Rohs-compliant, it is tested and approved by SGS Fimko for all relevant safety and electromagnetic compatibility standards (EMC). The ADA 8x8 is certified and compliant to EN 54-16 and EN 60849 as a part of the Audico Avec family product range. Product recycling according to WEEE regulations.

Standards also set guidelines for the users of the installed systems. The main user must take care of regular system maintenance, testing, keep a logbook and ensure all other users are well trained to use the system. We have prepared a booklet guiding the user as well installation and service parties to set-up and run a voice evacuation system according to the standards.



AUDICO

Audico Systems Oy
Ruunikokatu 2, PO Box 39, 20381 Turku, FINLAND
Kornetintie 3, PO Box 65, 00381 Helsinki, FINLAND
tel: +358 (0)20 747 9340 | info@audico.fi | www.audico.fi