



GUARDIAN CX10

PRIORITY/EVACUATION INTERFACE

USERS MANUAL

General information

The CX10 provides a priority input into an audio system of up to 10 channels in a 19" 1RU package. The CX10 may be used with any sound system where a priority override facility is required e.g. Entertainment venue, shopping centres, malls, cruise ships or any public area where fire, security or other important announcements are required.

The CX10 features unity gain, balanced line level inputs, and outputs. The signal chains use low noise, low distortion pro audio circuits so as to be almost transparent in use. A balanced line level priority input is incorporated (microphone level priority input is available to order). The trigger input is via a closing contact which must be fully isolated.

Operation

The CX10 has been designed to be connected between the mixer/zoner (or pre amp) of an audio system and the power amplifiers. The priority signal (e.g. evacuation message) is a line level input and is connected to the priority input socket and the control input is connected to the fire alarm or whatever triggering method is required.

In normal mode programme signals pass through the 10 audio channels of the CX10 with no change in level. When the unit is triggered the incoming programme level is attenuated and the priority signal is mixed into the ten outputs. When the unit is reset the priority signal is removed and the programme will fade back to the original volume.

The attenuation level is fully adjustable, as is the priority signal level (The priority signal level is individually adjustable to the various outputs). A local test button is provided for setting up the system.

Remote monitoring of units is possible by using the switch contacts available from the local test button, and the unit-powered relay (6 way connector). (Both provide single pole change over-contacts).

If more than 10 channels are required multiple units may be fitted. The trigger input may be paralleled to several units so long as the polarity is maintained. E.g. pin 1 to pin 1 - pin 2 to pin 2.

In a normal situation the connections to the CX10 can be considered as a straight-through link which will not affect the normal operation of the system. Only when the CX10 is triggered will there be any effect on the system.

Set up

On the back panel connect the line level priority source to the priority input and connect the trigger (normally a fire alarm) to the priority control connector (must be isolated contacts that close to trigger).

Connect the mixer/zoner outputs to the connectors marked "INPUT". The adjacent connector to each input is the output for that channel (marked "OUT"). Connect the output to whatever was previously connected to the mixer/zoner (usually this will be equalisation, crossover or amplifiers).

To test the unit use a small screwdriver to press the "LOCAL TEST" switch that is recessed behind the front panel, the "PRIORITY" LED on the front panel should illuminate. Press the "LOCAL TEST" switch again and after a few seconds the "PRIORITY" LED will go out (the "LOCAL TEST" switch also has an LED which is illuminated and visible through the recessed hole when the "LOCAL TEST" switch is on).

A set of isolated contacts on the "LOCAL TEST" switch are available at the monitor ("MON") connector pins 4,5&6 allowing a remote monitoring circuit to be connected (eg "NO" contacts can be used to close a circuit that lights a LED). There is also a set of isolated contacts at the monitor ("MON") connector pins 1,2&3 allowing a remote monitoring circuit to be connected that will monitor the power status of the unit (eg "NO" contacts can be used to close a circuit that lights a LED or "NC" contacts can be used in which case the LED will go out).

Through the front panel using a small flat blade screwdriver adjust the potentiometers marked 1 – 10 fully clockwise.

Play audio through a channel at the required level and trigger the priority using the “LOCAL TEST” switch. Through the back panel using a small flat blade screwdriver adjust the priority programme attenuation potentiometer marked “ATTEN” (generally music should be quiet but audible).

Play audio through the priority input and through the back panel using a small flat blade screwdriver adjust the priority level potentiometer marked “LEVEL” for the maximum required system level, individual channel levels can then be adjusted below this level if required.

Play audio through channels 1 – 10 and through the front panel using a small flat blade screwdriver adjust the potentiometers marked 1 – 10 fully for the required priority level on any channels where it is required to be lower than the system level.

Mains Voltage

The CX10 has been designed to operate on 220-240Vac, a 110-120Vac version is available on request from Formula Sound.

Fuses

Mains fuse sizes are 250mA anti surge for 220-240V operation and 500mA anti surge for 110-120V operation. **It is important for safety reasons that the correct fuse sizes are always used.**

Internal

There is a ground/Earth lift located by the mains transformer towards the back and side of the unit. Removing this may be necessary in some installations. A skilled audio system specialist should determine if this is necessary, otherwise this should be left in the factory supplied or normal position.

N.B. Internal settings should be undertaken by skilled personnel only.

DISCONNECT THE UNIT FROM THE MAINS SUPPLY

Remove the top case cover by removing 6 screws located at the sides of the unit and 2 screws located on the top of the unit. (Re-assemble in the reverse order)

DAMAGE MAY RESULT IF THE UNIT IS CONNECTED TO THE WRONG SUPPLY VOLTAGE

THIS UNIT MUST BE EARTHED

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GUARDIAN CX10 MK TECHNICAL SPECIFICATION

Gain	Normal operation, unity gain +0dB -1dB	
Frequency Response	20Hz - 20KHz + 0.5dB -1dB	
Distortion THD @ 1KHz	O/P +20dBu <.015% (Typically .007%)	
Noise	< -90dBu EIN	
Inputs	Balanced	Unbalanced
Connector type	XLR	
Input impedance	> 30K Ohms	>15K Ohms
Max input level	+22dBu	
Outputs	Electronically balanced; source impedance <100R	
Connector type	XLR	
Max O/P level	+22dBu into 600R load	
Controls	1 – System priority input level into all channels 2 – Attenuation of channels programme in priority mode 3 – Attenuation of priority level in each individual channel 4 – Manual test switch All controls are operated through holes in the front or rear panels.	
Priority input	Balanced, input impedance >20K. Unbalanced, input impedance <10K Max I/P level +22dBu	
Control input	Isolated switch contacts that close to operate	
Visual indicators	Power - Priority	2 x Green LED's Red LED.
Connectors	3.5mm pitch horizontal connectors, screw terminal mating halves provided	
Dimensions	19" rack mounting. 1RU, Width 482mm (19"), Depth 206mm (8.1"), Height 44mm (1.75")	
Finish:-	Front - and Rear panels- Black anodised aluminium with silver notation which will not rub off in use. Case - black plastic coated steel.	
Power	IEC Connector 220 - 240V AC. Mains Fuse 250mA Anti Surge (slow blow) To order: 110 – 120V AC. Mains fuse 500mA Anti Surge (slow blow)	



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E.U. CERTIFICATE OF CONFORMITY

We declare that the products listed conform to the following directives and standards

89/336/EEC amended by 92/31/EEC and 93/68/EEC

BS EN 50082-1 BS EN 50081-1

PRODUCT TYPE

GUARDIAN CX10

The CE mark was first applied in 1995

Signed

B. J. Penaligon General Manager

Attention

The attention of the specifier, purchaser, installer, or user is drawn to the fact that good wiring practice must be observed when connecting the above equipment. Good quality connectors and screened cables must be used for all audio connections. Twin screened cables should be used for all balanced lines.

THIS EQUIPMENT MUST BE EARTHED
CONSULT THE USERS MANUAL FOR TECHNICAL DETAILS