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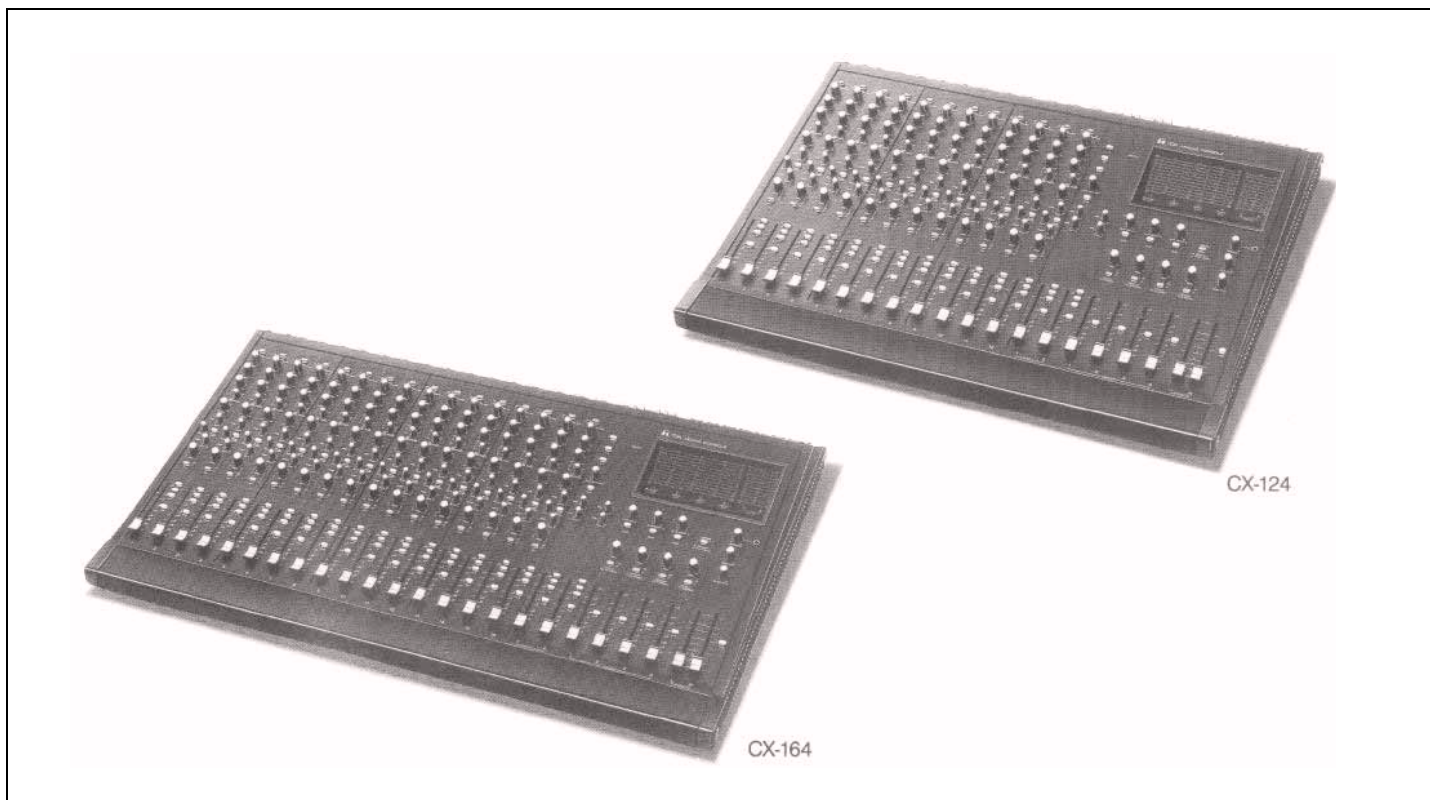
## TOA PROFESSIONAL SOUND SYSTEM

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# MIXING CONSOLE

## CX-124/CX-164

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### DESCRIPTION

The CX-124 & CX-164 are professional quality mixing consoles with 12 (CX-124) & 16 (CX-164) inputs, 2 stereo inputs, and 4 group outputs, 1 stereo output and 1 sum and 3 auxiliary outputs. The CX consoles are designed for use in professional sound reinforcement systems. They provide a wide range of versatile functions to meet all mixing requirements. Their high performance capabilities and modular construction assure reliability, easy operation and simple maintenance.

Each input channel has balanced/unbalanced connectors, and a variety of operating features such as signal processing device insertion, condenser mic. phantom power, and trim controls, all to enhance system versatility. A pan control assigns the fader output signal of each channel to group 1, 2, 3, 4, or to stereo L and R. Cue switches on input/output channels allow headphone/cue monitoring of pre-fader signals. Additional stereo inputs are provided for auxiliary equipment hook-ups. Three independent aux. outputs are included, one pre-EQ, one post-fader and one switchable.

### FEATURES

Each Input Channel:

1. Electronically balanced, low impedance XLR connector, and balanced 1/4" phone jack.
2. Accessory input/output jack.
3. Input pad switch and trim control.
4. Three-band equalizer with sweepable mids.
5. Signal/peak indicator LED.

Other Features:

1. Phantom power switch for each set of 4 input channels.
2. Cue switch on each input channel, stereo and aux. input, and on group, stereo and aux. outputs.
3. Log-linear 100mm faders.
4. Stereo inputs for playback deck, CD player, etc.
5. LED bargraph peak meters for group 1, 2, 3, 4, or aux. send 1, 2, 3, SUM output and stereo output L and R.
6. Installation of optional input/output transformers allows conversion of electronically balanced input/output to transformer balanced I/O.

## SPECIFICATIONS

Frequency Response	+0.5, -1.0dB 50Hz ~ 15kHz +0.5, -3.0dB 20Hz ~ 20kHz
Total Harmonic Distortion	0.1% at +4dB 1kHz
Equivalent Input Noise (Rs=150 ohms)	-130dB (IHF-A)
S/N (Rs=150 ohms)	69dB (20Hz ~ 20kHz) GROUP OUT or 70dB (IHF-A) STEREO OUT
Crosstalk	-60dB at 1kHz
Maximum Voltage Gain	76dB INPUT to GROUP OUT, 82dB INPUT to GROUP OUT to STEREO OUT, 26dB STEREO IN to AUX SEND
Channel Equalizer	LOW 20Hz ±15dB Shelving, MID 300Hz~4kHz variable +15dB Peaking, HIGH 20kHz ±15dB Shelving
Peak Indicator	LED turns on when the pre-fader and post EQ signal reaches 6dB before clip.
Phantom Power	+ 24V DC
AC Line Voltage	AC Mains, 50/60Hz
Power Consumption	CX-124 48W, CX-164 52W
Dimensions (W x H x H)	CX-124 837 x 147 x 680mm (33.0" x 5.79" x 26.8") CX-164 997 x 147 x 680mm (39.3" x 5.79" x 26.8")
Weight	CX-124 23kg (50.7 lb.), CX-164 27kg (59.5 lb.)

## Input Specifications

Contents in ( ) stand for CX-164 data.

Input	PAD	TRIM	For Use with Nominal	Input Level		Connector
				Nominal	MAX. Before Clip	
CH INPUT 1-12 (16)	ON[20dB]	-4.0	LOW-Z 50-600Ω Mics or Lines	0dB	+ 20dB	XLR-3-31 or equivalent [Balanced] Phone Jack [Balanced]
	OFF		- 20dB	+ 10dB		
	[ 0 dB ]		- 60dB	- 30dB		
ACCESSORY IN 1~12 (16)		0	10kΩ Lines	- 10dB	+ 10dB	Phone Jack [Unbalanced]
STEREO IN L, R 1, 2			10kΩ Lines	- 10dB	+ 14dB	Pin Jack
AUX RETURN L, R/MONO			10kΩ Lines	+ 4dB	+ 20dB	Phone Jack [Unbalanced]

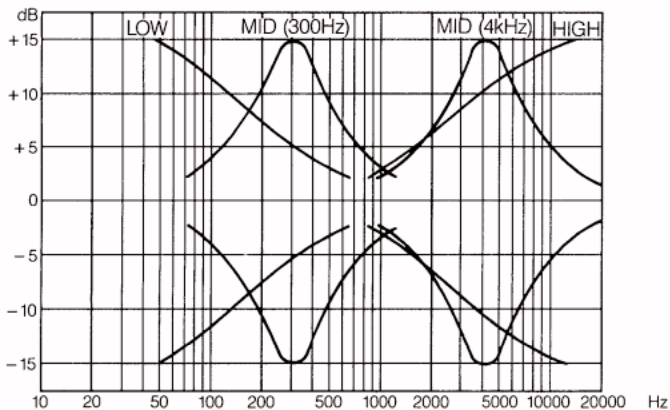
## Output Specifications

Output	For Use with Nominal	Output Level		Connector
		Nominal	MAX. Before Clip	
GROUP OUT 1~4 STEREO OUT L, R SUM OUT	600 Ω Lines	+4dB	+26dB	XLR 3-32 or equivalent [Balanced]
AUX SEND 1,2,3	10kΩ Lines	+ 4dB	+ 20dB	Phone Jack [Unbalanced]
ACCESSORY OUT 1-12 (16)	10kΩ Lines	- 10dB	+ 20dB	Phone Jack [Unbalanced]
CUE OUT L, R	10kΩ Lines	+ 4dB	+ 20dB	Phone Jack [Unbalanced]
REC OUT L, R	10kΩ Lines	- 10dB	+ 8dB	Pin Jack
PHONES	8Ω	1.5mW(8Ω)	20mW(8Ω)	Phone Jack (TRS)

\*Stereo phone jack is wired: Tip=Left, Ring=Right and Sleeve=Common  
The XLR type connectors are wired as follows.  
PIN NO.1 — Ground PIN NO.2 — Cold (Low) PIN NO.3 — Hot (High)

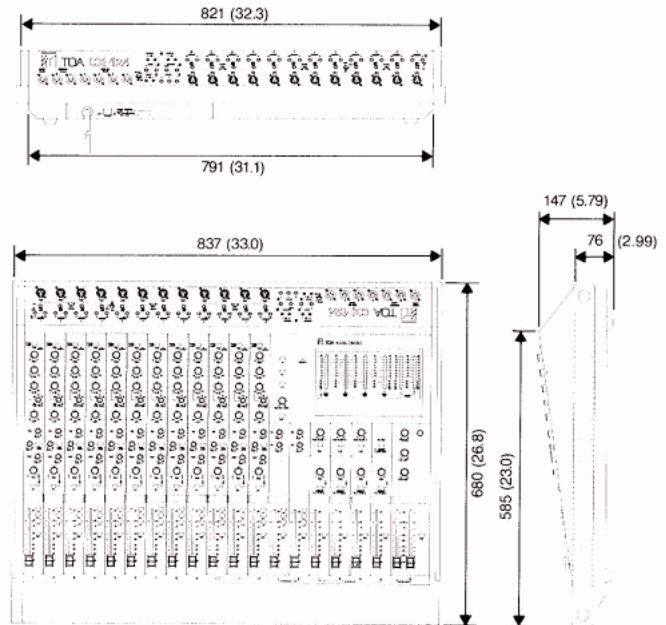
## CHARACTERISTIC DIAGRAM

### Input Characteristics

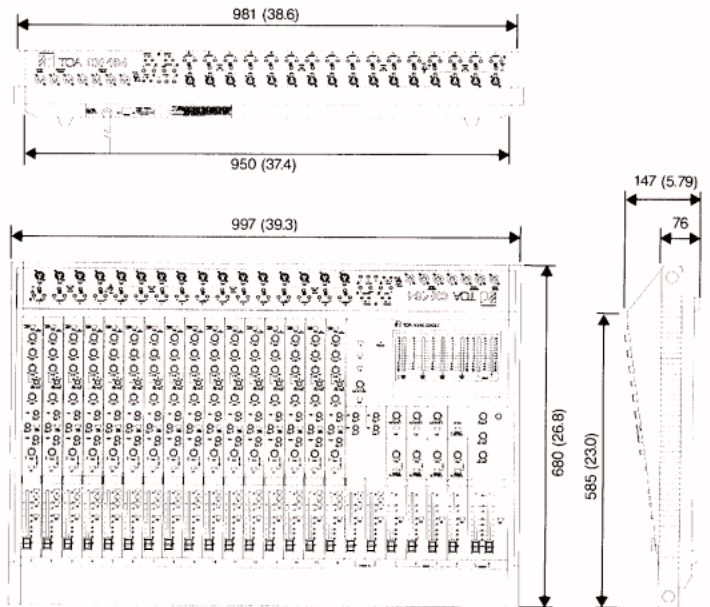


## DIMENSIONAL DIAGRAMS

### CX-124

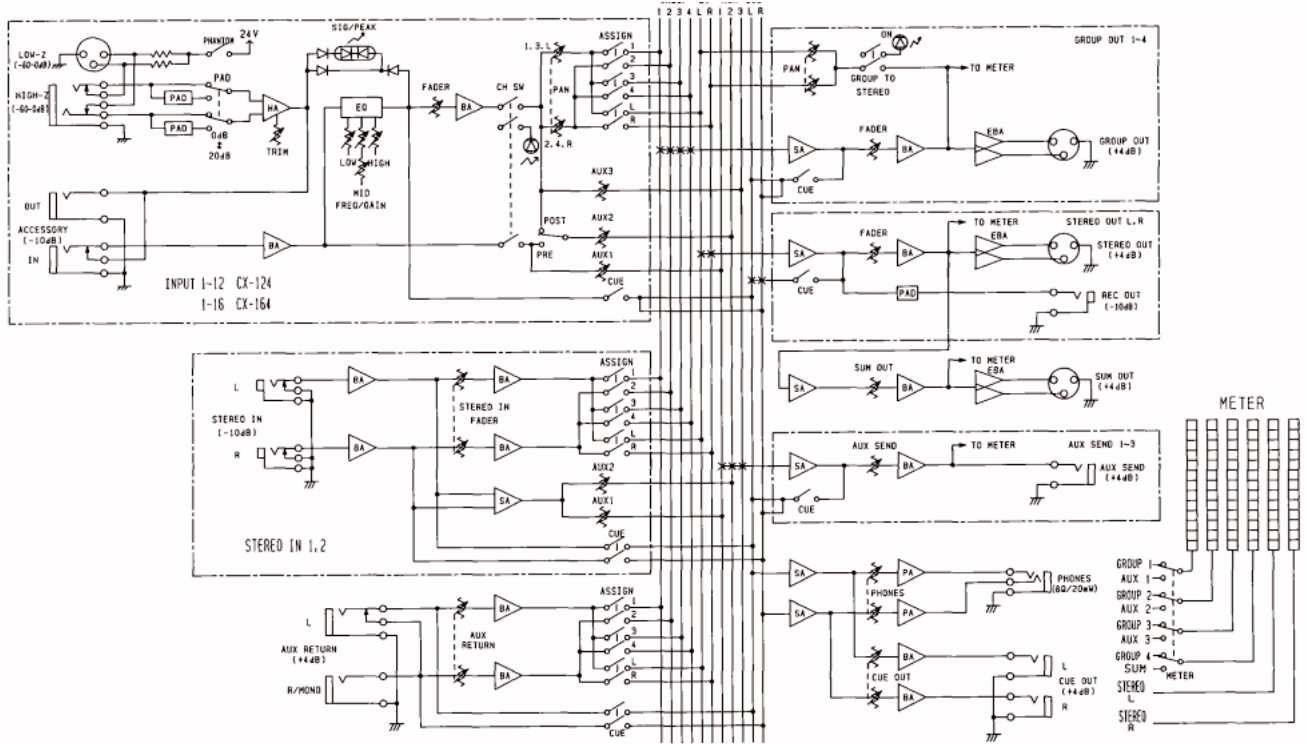


### CX-164

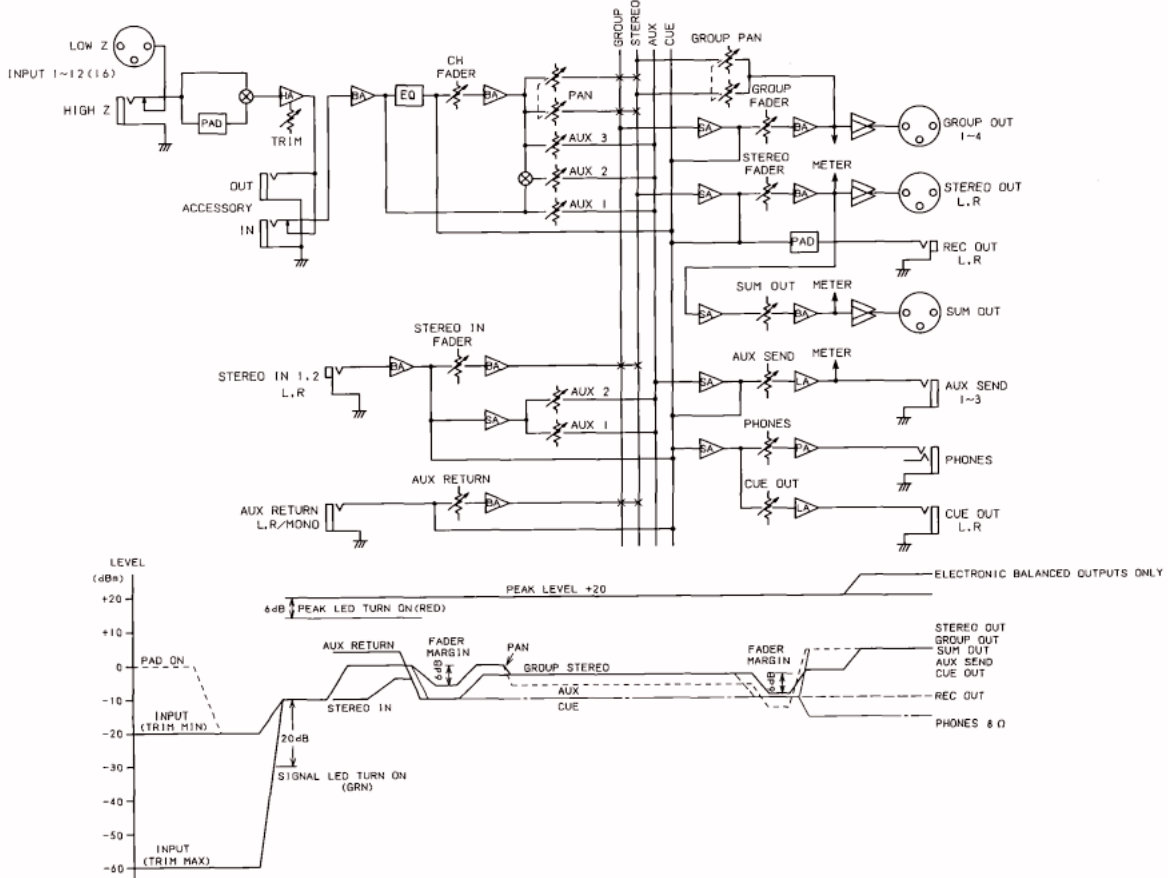


mm (in.)

# BLOCKDIAGRAM



# LEVEL DIAGRAM

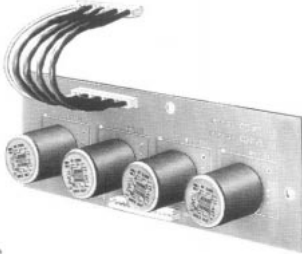


## OPTIONAL ACCESSORIES

- IT-M4CX Microphone Level Input Transformer
- IT-L4CX Line Level Input Transformer

The CX-124 and the CX-164 are designed with electronically balanced inputs. However, the optional input transformer IT-M4CX (for microphone input) or IT-L4CX (for microphone or line inputs) can be built into the consoles, for conversion into a transformer input system. The input transformer is used only for four channels.

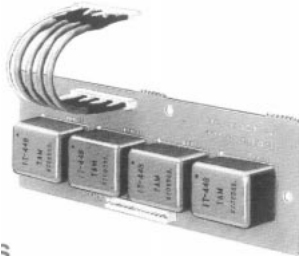
### IT-M4CX



### SPECIFICATIONS

Model No.	IT-M4CX
Frequency Response	50Hz ~ 15kHz within $\pm 1.0$ dB
Distortion	Less than 0.4% (50Hz, ~ 20dB)
Maximum Input Level	- 2dB 50Hz 1%
Constant Loss	Within 1.5dB at 1kHz
Impedance	600 ohms/600 ohms

### IT-L4CX



### SPECIFICATIONS

Model No.	IT-L4CX
Frequency Response	30Hz ~ 20kHz within $\pm 0.15$ dB
Distortion	Less than 0.2% (50Hz, +5dB)
Maximum Input Level	+ 11dB-50Hz 1%
Constant Loss	Within 1.5dB at 1kHz
Impedance	600 ohms/600 ohms

\*0dB is referenced to 0.775V rms.

- OT-X4 Output Transformer Panel

The TOA OT-X4 is an output transformer panel containing four individual transformers. A one rack unit size panel, the OT-X4 is mountable in 19" racks.



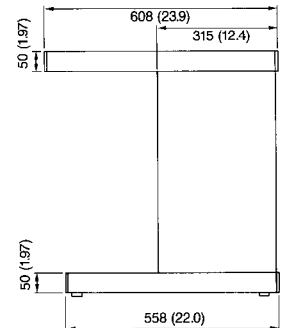
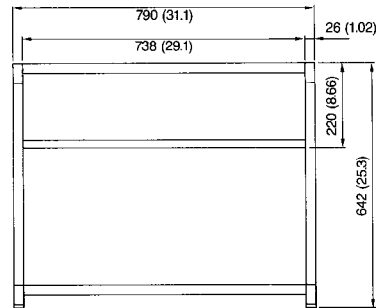
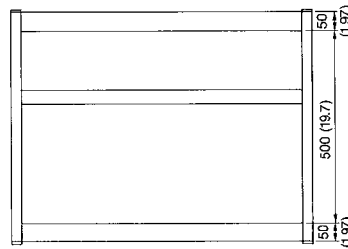
### SPECIFICATIONS

Model No.	OT-X4
Frequency Response	20Hz~20kHz. $\pm 1$ dB at 1kHz
Distortion	Less than 0.5% (20dB*, 20Hz)
Constant Loss	Within 1dB (at 1kHz)
Impedance	600 ohms/600 ohms
Dimensions (W x H x D)	483 x 47.1 x 280mm (19.0" x 1.85" x 11.0")
Weight	36kg (7.9 lb.)

\*0dB is referenced to 0.775V rms.

### Mixing Consoles Stand

#### CX-10T



mm (in.)