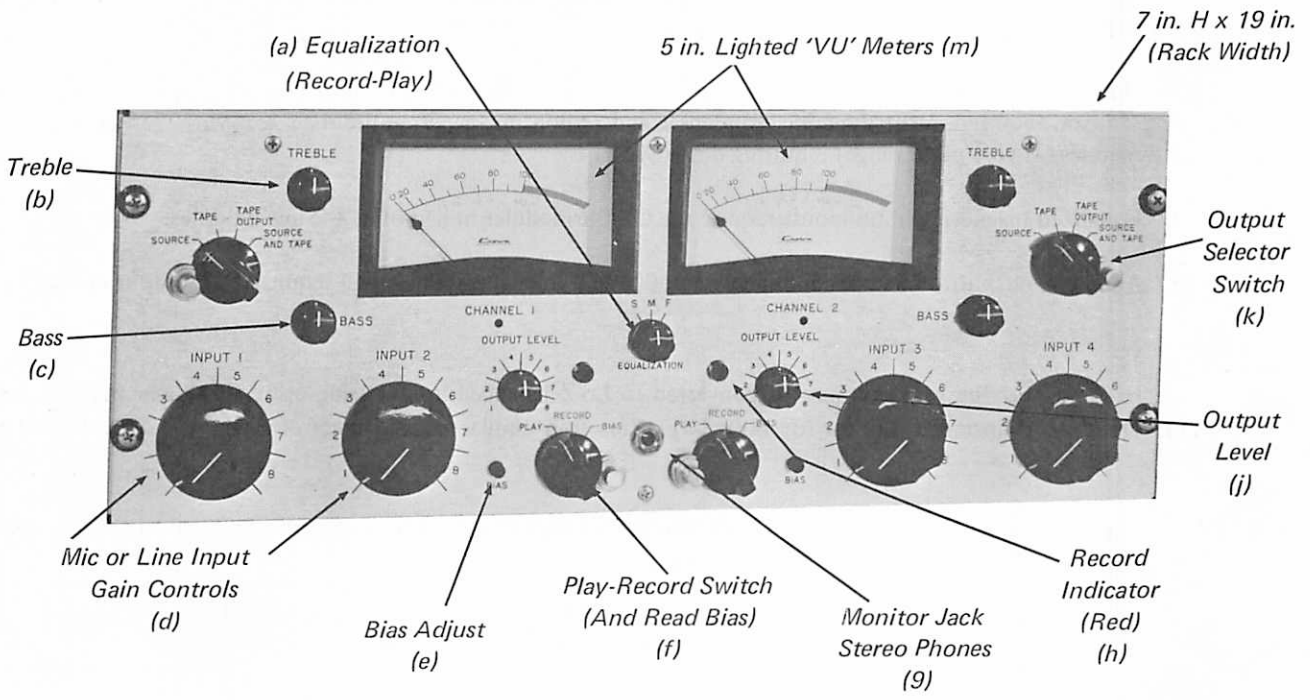
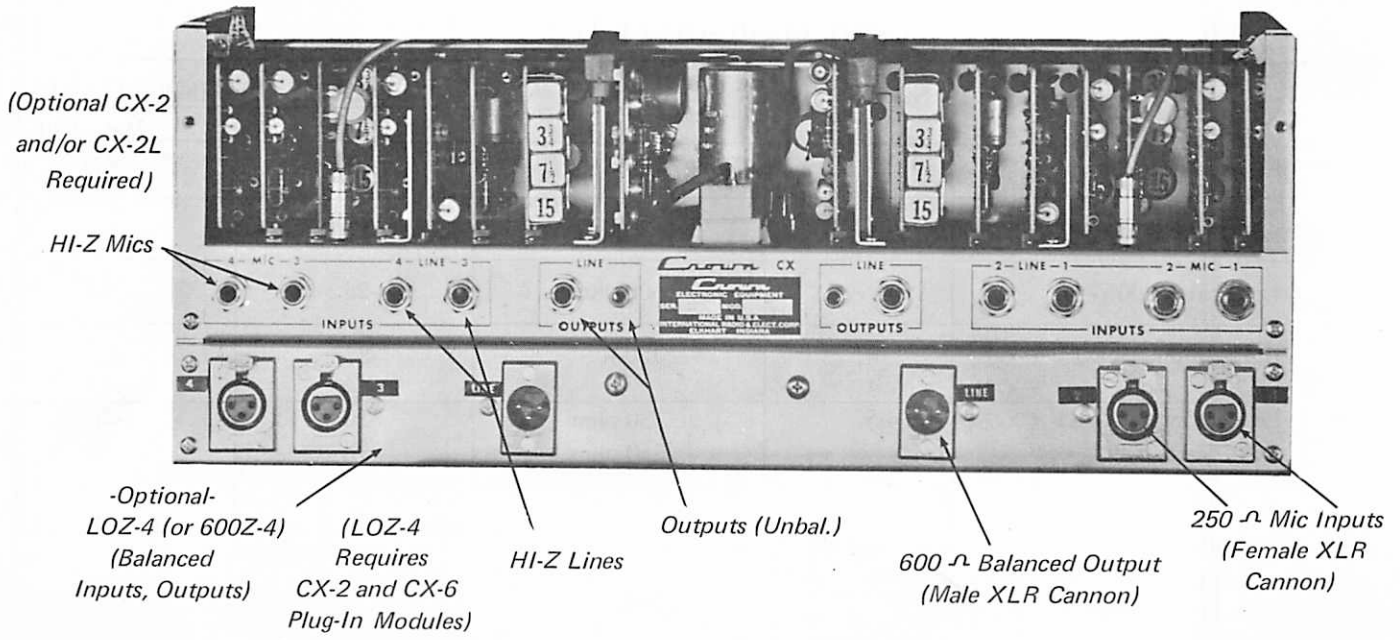


# Crown 'CX' MASTERING SERIES

## DUAL-CHANNEL, RECORD-PLAY ELECTRONICS



**Front Panel**



**Rear Panel**

The CX electronics is the sophisticated “nerve center” of a typical CX-700 or CX-800 series stereo recorder. Highly-accurate three-speed equalization and custom-calibration to all tapeheads assure unequaled record-reproduce performance.

A “basic” CX-700 or CX-800 recorder includes only two mixed Hi-Z line inputs, and 2000 ohm (CX-12) output, per channel. Referring to the accessory sheet for CX, CI recorders:

(A). One or two Hi-Z mic inputs per channel require one or two CX-2 (and/or CX-2L) plug-in modules as options –depending on gain required. Most dynamic, condenser and ribbon mics will require the CX-2, with close-miked condensers and a few dynamics (at very close range) requiring only CX-2L.

(B). Equalized magnetic-phonograph inputs require the CX-2R modules in lieu of CX-2 mic modules.

(C). Adequate output to most headphones, or a 600 ohm unbalanced line, will require CX-6 output modules (one per channel).

(D). Hi-Z mic (or line) inputs may be converted to Lo-Z balanced inputs using optional plug-in transformers SMIT (or SBIT). The factory-installed Lo-Z-4 (or 600 Z-4) offers four similar transformers of SMIT (or 600  $\Omega$  line) type as “built-ins.”

(E). The 600 ohm unbalanced line outputs may be converted to balanced with the optional SLOT. On electronics with Lo-Z-4 (or 600 Z-4) strips, these transformers are integral.

### INPUT CHARACTERISTICS

INPUT	NOTES	INPUT Z	RECOMMENDED INPUT LEVELS	
			Min. dbm	Max. dbm
Line–Hi-Z	1,2,3	100-K	-24*	+25*
Line–bridging (SBIT)	1	20-K	-18	+25
Line–Lo-Z bal. (600 Z-4)	1	600 ohm	-23	+25
Mic.–Hi-Z (phone jacks)	CX-2	350-K	-88*	-10*
	CX-2L		-64*	+14*
Mic.–Lo-Z (cannon XLR)	CX-2	50 ohm	-104	-26
		250 ohm	-98	-20
	CX-2L	50 ohm	-80	-2
		250 ohm	-74	+4

All levels are such that VU can be zeroed.

0 dbm = 1 mw into 600 ohms.

\*Voltage equivalent to 0 dbm, or 0.778 volts.

## OUTPUT CHARACTERISTICS

OUTPUTS	NOTES	MAX. OUTPUT Z	MIN. LOAD Z	OUTPUT * LEVEL
Line Out (with CX-12)	6,7,8	2-K	600 ohm	0 db into Hi-Z
Line Out (with CX-6)	7,9	25 ohm	600 ohm	+ 8 dbm
Front Panel Monitor Jack (with CX-12)	6,10	2-K	Note 10	0 db into Hi-Z
Front Panel Monitor Jack (with CX-6)	10	600 ohm	4-16 ohm	+ 8 db into Hi-Z
Balanced Out (cannon XLR male)	9	150 ohm	600 ohm	+ 8 dbm

\* 0 db is 0.778 volts.

0 dbm = 1 mw into 600 ohms.

### Notes:

1. Maximum input level limited only because gain setting becomes difficult at extremely high levels due to the very small amount of rotation required. If levels over +25 db are encountered, an external divider is recommended.
2. Plugging into Hi-Z line disconnects the corresponding mic input.
3. Input Z becomes 50-K ohms at maximum CW position of input control.
4. In general, low-quality microphones (most crystal, ceramic, and low-cost dynamic units) are not recommended for professional sound recording. For professional results use a professional microphone.
5. On units equipped with LoZ-4 (or 600 Z-4), a mic-input (or line-input) channel (in use) can be either phone jack, or cannon connector, but not both.
6. Applies to "basic" machines with CX-12 boards.
7. The line output pin jack has 560 ohms in series from the line-out phone jack.
8. 600 ohm output Z in Source-and Tape position or in Source position with output control full CW.
9. CX-6 output level is normally set to +8 dbm at the factory, but can be reset to any level up to +18 dbm. CX-6 must be installed with LoZ-4 strip for balanced output.
10. High or Lo-Z headphones may be used; however, in units without a CX-6, the line output will be loaded down by this load.

## TWO - CHANNEL CX ELECTRONICS

### I. Description of Front-Panel Facilities:

- (a). EQUALIZATION (3-position switch) adjusts reproduce and record circuits for proper equalization for a given tape speed.
- (b). TREBLE (variable control) adjusts amount of high-frequency boost (or cut) during record (reproduce). Mechanical detent assures flat response when not used. Maximum boost, 20 db and cut, 14 db @ 15 KHz.
- (c). BASS (variable control) adjusts amount of low-frequency boost (or cut) during record (reproduce). Mechanical detent assures flat response when not used. Maximum boost, 18 db and cut, 13 db @ 30 Hz. All circuitry is low-distortion feedback type.
- (d). INPUTS (variable controls) adjust MIC or LINE volume (either Hi or Lo-Z) with dual mixing, and echo, if desired. Dual-element controls enable wide dynamic range thru MIC preamps (CX-2).
- (e). BIAS (variable control) sets record bias for optimum results for a given tape. Visual indication of bias current is available on VU meter with PLAY-RECORD switch in BIAS position.
- (f). PLAY-RECORD (3-position switch, with mechanical interlock) sets electronics for PLAY, RECORD, or BIAS-read functions.
- (g). MONITOR (3-way phone jack) enables stereo monitoring.
- (h). RECORD INDICATOR (red neon) for visual indication of RECORD mode.
- (j). OUTPUT LEVEL (variable control) adjusts output signal through all connectors on both front and rear of chassis.
- (k). OUTPUT SELECTOR SWITCH (4-position)
  - (1). SOURCE: meter reads source mixer-buss level.
  - (2). TAPE: meter reads calibrated tape reproduce level.
  - (3). TAPE OUTPUT: meter reads tape reproduce level at output connector.
  - (4). SOURCE and TAPE: TREBLE (b) and BASS (c) controls become operative for reproduce, meter reads source mixed with tape reproduce. In RECORD this provides echo via output level control (j).
- (1). VU METER: 5 inch edge-lighted meter features a decibel and 0-100% modulation scale, with true VU damping per standards.

### II. Electronic Specifications:

- (1). Minimum frequency response  $\pm 0.5$  db, 10Hz - 50 KHz, thru Hi-Z LINE INPUTS to OUTPUTS.
- (2). Total distortion throughout ELECTRONICS less than 0.2% (not including tape).
- (3). Equivalent noise thru MIC INPUT (CX-2), with input shorted, better than -115 dbm.