

Section 3. Specifications

PM4000 Mixing Console General Specifications

Total Harmonic Distortion (Master Output)	<0.1% (THD+N)	20 Hz - 20 kHz @ +14 dBu, 600Ω
	<0.01% (2nd - 10th harmonics)	20 Hz - 20 kHz @ +14 dBu, 600Ω
Frequency Response (Master Output)	0 ±1/3 dB	20 Hz - 20 kHz @ +4 dBu, 600Ω
Hum & Noise (48 Channels) (20 Hz - 20 kHz) RS + 150Ω Input Gain = Max. Input Pad = OFF Input Sensitivity = -70 dB	-128 dB	Equivalent Input Noise
	-100 dB	Residual Output Noise
	-85 dB (89 dB S/N)	GROUP OUT Master fader at nominal level, all channel assign switches OFF
	-54 dB (58 dB S/N)	GROUP OUT Master fader at nominal level, one channel fader at nominal level
	-84 dB (88 dB S/N)	STEREO OUT Master fader at nominal level, all channel assign switches OFF
	-94 dB (98 dB S/N)	MTRX OUT Master and Matrix mix controls at maximum level, all GROUP to MTRX switches OFF
Crosstalk	-80 dB @ 1 kHz, -70 dB @ 10 kHz	adjacent inputs or input to output
Maximum Voltage Gain	94 dB	CH IN to GROUP OUT/STEREO OUT (CH to ST)/MTRX OUT
	104 dB	CH IN to stereo out (G to ST)
	90 dB	CH IN to AUX OUT (PRE)/AUX ST OUT (PRE, LVL)
	100 dB	CH IN to AUX OUT (POST)/AUX ST OUT (POST, LVL)
	87 dB	CH IN to AUX ST OUT (PRE, PAN)
	84 dB	CH IN to CH DIRECT OUT
	104 dB	CH IN to MONITOR OUT (GROUP to MONITOR)
	84 dB	CH IN MONITOR OUT (INPUT CUE)
	94 dB	ST IN (ST/L/R) to GROUP OUT
	91 dB	ST IN (L+R) to GROUP OUT
	87 dB	ST IN (ST/L/R) to AUX OUT (mono, PRE)
	90 dB	ST IN (L/R) to AUX OUT (mono, PRE)
	90 dB	ST IN (ST/L/R) to AUX ST OUT (stereo, PRE LVL)
	87 dB	ST IN (L+R) to AUX ST OUT (stereo, PRE LVL)
	87 dB	ST IN (ST/L/R) to AUX ST OUT (stereo, PRE BAL)
	84 dB	ST IN (L+R) to AUX ST OUT (stereo, PRE BAL)
	64 dB	TB IN to TB OUT
0 dB	SUB IN (MTRX) to MTRX OUT	
10 dB	SUB IN (Others) to OUT (Others)	
10 dB	2TR IN to MONITOR OUT	
Channel Equalization	±15 dB maximum	HIGH 1k - 20 kHz (shelving/peaking, Q = 0.5 - 3)
		HI-MID 0.4 k - 8 kHz (peaking; Q = 0.5 - 3)
		LO-MID 80 - 1.6 kHz (peaking, Q = 0.5 - 3)
		LOW 30 - 600 Hz (shelving/peaking, Q = 0.5 - 3)
Channel High Pass Filter	12 dB/octave	Roll off below 20 - 400 Hz @ -3 dB points
Oscillator/Noise Generator	Switchable sine wave @ 100 Hz, 1 kHz, 10 kHz or pink noise	Frequency sweepable at x0.2 - 2.0 nominal; less than 1% THD at +4 dBu
CH Preamp & EQ Peak Indicators	Red LED	Built into each input and stereo-in module; turns on when pre-EQ level or post-EQ level reaches 3 dB below clipping
Channel LED Meter	6 LEDs	Level meter built into each monaural and stereo input module

VU Meters (0 VU = +4 dBu output) 24 or 32 channel consoles	2 large meters	Illuminated meters: STEREO L, R
	12 small meters	Illuminated meters, all switchable: #1 - #4; GROUP (1 - 4) / MTRX (1 - 4) / AUX (1 - 4) #5 - #8; GROUP (5 - 8) / MTRX (5 - 8) / AUX (5 - 8) #9; AUX ST1 L / MONITOR A L (pre-MONITOR control) #10; AUX ST1 R / MONITOR A R (pre-MONITOR control) #11; AUX ST 2 L / TB #12; AUX ST 2 R / OSC
40 or 48 channel consoles	16 small meters	Illuminated meters, all switchable: #1 - #8; GROUP (1 - 8) / MTRX (1- 8) / AUX (1- 8) #9; GROUP 1 / MTRX 1 / AUX ST1 L #10; GROUP 2 / MTRX 2 / AUX ST1 R #11; GROUP 3 / MTRX 3 / AUX ST2L #12; GROUP 4 / MTRX 4 / AUX ST2R #13; GROUP 5 / MTRX 5 / MONITOR A L (pre) #14; GROUP 6 / MTRX 6 / MONITOR A R (pre) #15; GROUP 7 / MTRX 7 / TB #16; GROUP 8 / MTRX 8 / OSC
VU Meter Peak Indicators	LED (red)	Built into each VU meter, the LED turns on when the pre-line amp level reaches 3 dB below clipping
Phantom Power	+48 V dc	Available at balanced inputs (via 6.6 k Ω current limiting/isolation resistors) for powering condenser microphones; may be turned ON or OFF via rear-panel Phantom Master switch. When Master is ON, individual channels may be turned OFF or ON via +48V switches on the mono input, stereo input and talkback modules
Dimensions (W x H x D)	48 Channel	2086 x 346 x 1121 mm 82-1/8 x 13-5/8 x 44-1/8 inches
	40 Channel	1846 x 346 x 1121 mm 72-11/16 x 13-5/8 x 44-1/8 inches
	32 Channel	1586 x 346 x 1121 mm 62-7/16 x 13-5/8 x 44-1/8 inches
	24 Channel	1346 x 346 x 1121 mm 53 x 13-5/8 x 44-1/8 inches
Weight	48 Channel	183 kg 403 lbs. 7 oz
	40 Channel	161 kg 354 lbs. 14 oz
	32 Channel	137 kg 301 lbs. 15 oz
	24 Channel	115 kg 253 lbs. 7 oz

PW4000 Power Supply Specifications

Power Requirements	Japan	100 V, 50/60 Hz	48 Channel	1100 W
			40 Channel	1000 W
			32 Channel	900 W
			24 Channel	800 W
	CSA/UL General	120 V, 60 Hz	1500 VA	1250W
230/240 V, 50/60 Hz			1250W	
DC Output Voltages			\pm 19V	13A
			+12V	8A
			+48V	0.7 A
Fuses	Main (x3)		6 A	250 V
	Sub (x1)		2A	250 V
Dimensions (W x H x D)	480.0 x 186.0 x 460.6 mm		18.8 x 7.3 x 18.1 inches	
Weight	36 kg		79.4 pounds	

INPUT CHARACTERISTICS

Connection	PAD	Gain Trim	Actual load Impedance	For use with Nominal	Input level (*3)			Connector In Mixer (*2)
					Sensitivity (*4)	Nominal	Max before Clip	
CH IN 1 ~ [ch (*1) ST CH IN 1 ~ 4ch	0	-70	3kΩ	50Ω ~ 600Ω mics and 600Ω lines	-90 dB (0.025 mV)	-70 dB (0.25 mV)	-48 dB (3.09 mV)	XLR-3-31 type
	30				-60 dB (0.775 mV)	-40 dB (7.75 mV)	-18 dB (97.6 mV)	
	0	-20			-40 dB (7.75 mV)	-20 dB (77.5 mV)	+2 dB (0.976 V)	
	30				-10 dB (245 mV)	+10 dB (2.45 V)	+32 dB (30.9 V)	
SUB IN GROUP (1 ~ 8) STEREO (L, R) AUX (1 ~ 8) AUX ST1, 2 (L, R) CUE (L, R) MTRIX (1 ~ 8)			10kΩ	600Ω lines	-6 dB (388 mV) +4 dB (1.23 V)	+4 dB (1.23 V)	+26 dB (15.5 V)	XLR-3-31 type
TALKBACK IN	-50		3kΩ	50 ~ 600Ω mics	-70 dB (0.25 mV)	-50 dB (2.45 mV)	-28 dB (30.3 mV)	XLR-3-31 type
	+4			600Ω lines	-16 dB (123 mV)	+4 dB (1.23 V)	+26 dB (15.5 V)	
INSERT IN CH 1 ~ [ch (*1) ST CH 1 ~ 4ch GROUP (1 ~ 8) STEREO (L, R) AUX (1 ~ 8) AUX ST1, 2 (L, R) MTRIX (1 ~ 8)			10kΩ	600Ω lines	-16 dB (123 mV)	+4 dB (1.23 V)	+26 dB (15.5 V)	Phone Jack (TRS)
		-6 dB (388 mV)						
		+4 dB (1.23 V)						
2TR IN 1, 2 (L, R)			10kΩ	600Ω lines	-6 dB (388 mV)	+4 dB (1.23 V)	+26 dB (15.5 V)	XLR-3-31 type

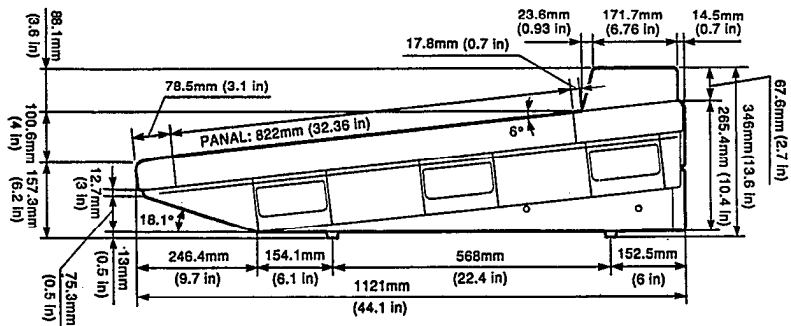
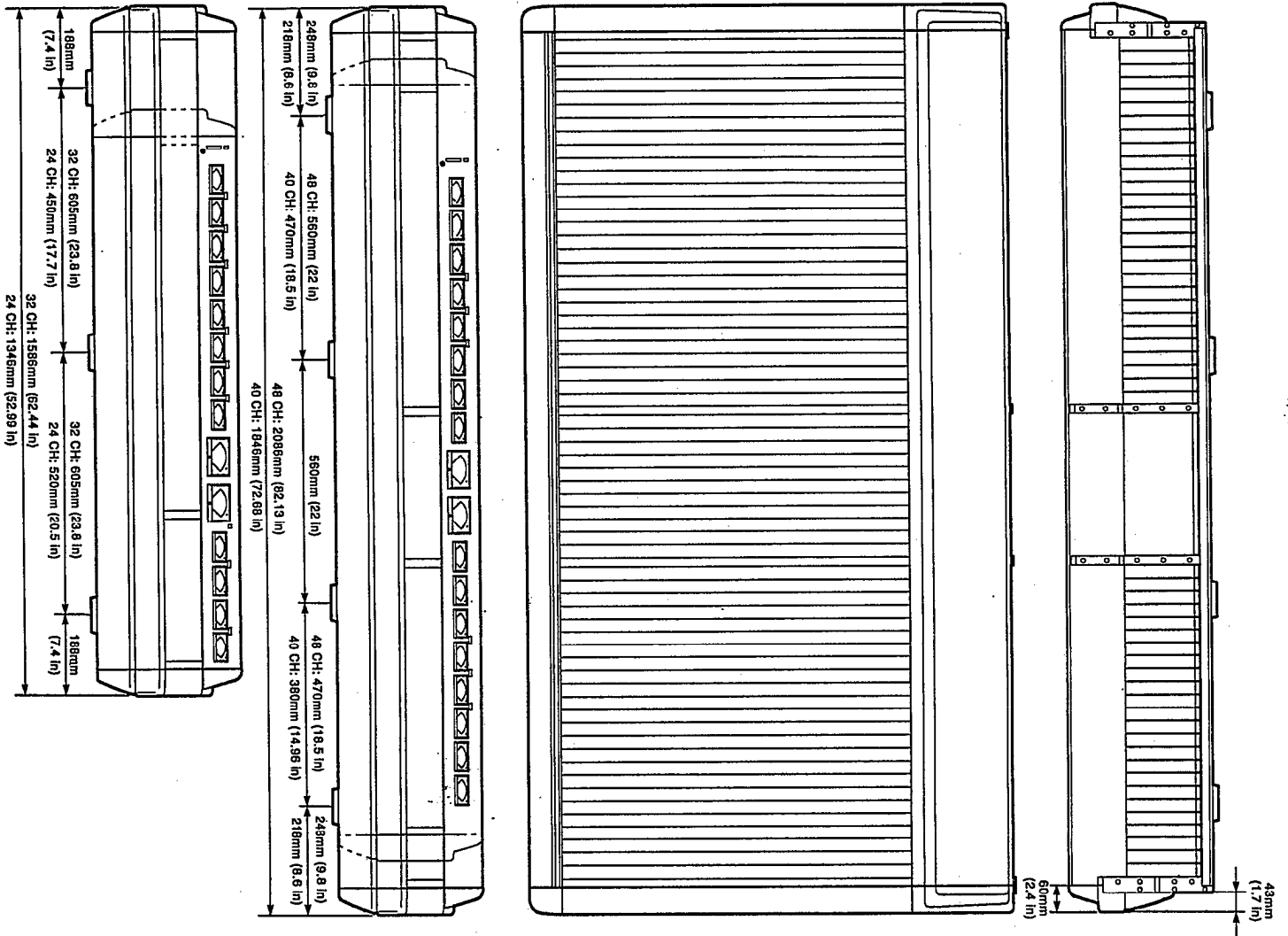
- NOTES: *1 PM4000 -24: 24 ch, -32: 32 ch, -40C: 40 ch, -48C: 48 ch
 *2 All XLR connectors are electronically balanced. Phone jacks are balanced with Tip = signal high (+), Ring = signal low (-), and Sleeve = ground.
 *3 In these specifications, when dB represents a specific voltage, 0 dB is referenced to 0.775 Vrms.
 *4 Sensitivity is the lowest level that will produce an output of +4 dB (1.23 V), or the nominal output level when the unit is set to maximum level.

OUTPUT CHARACTERISTICS

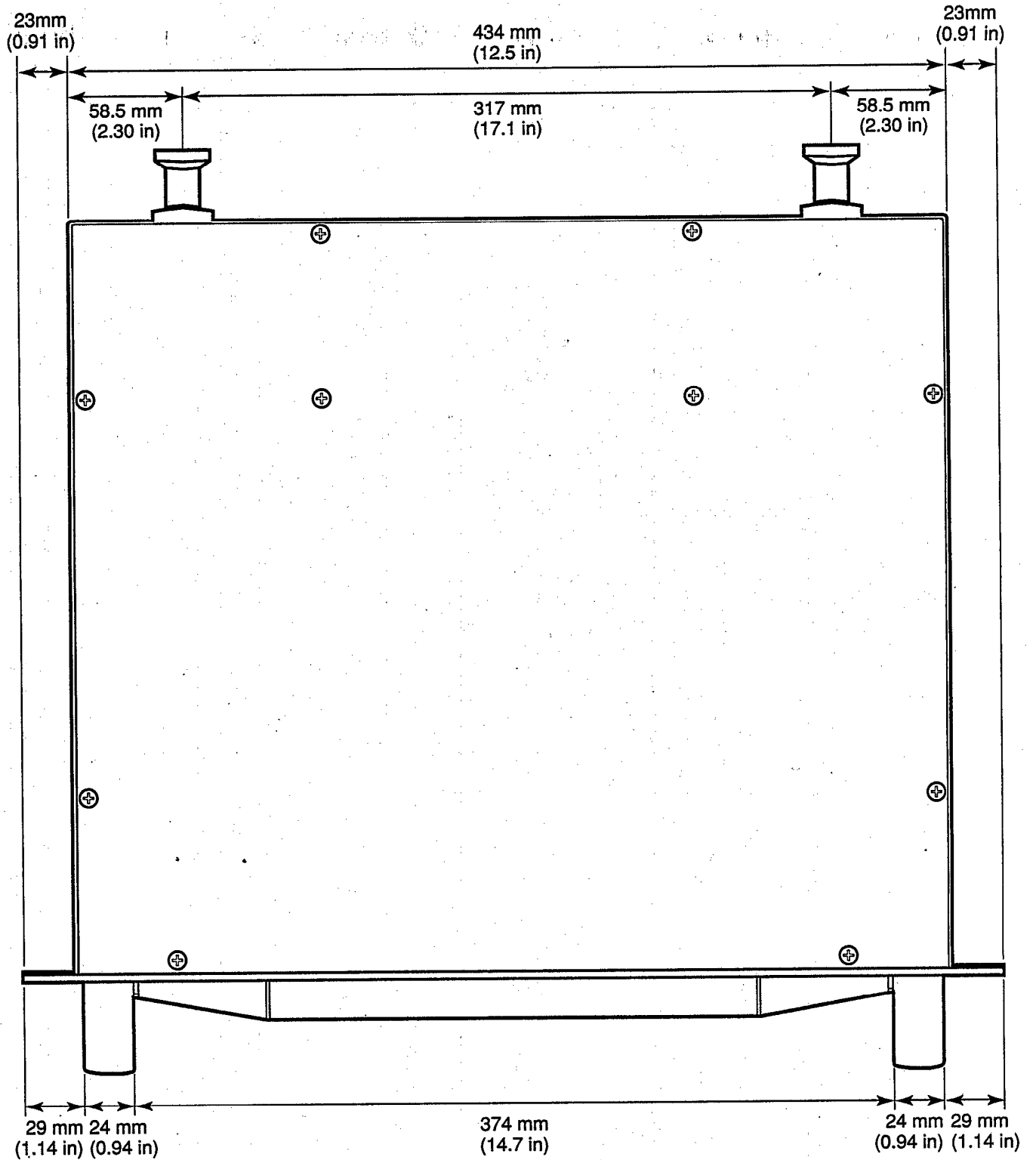
Connection	Actual source Impedance	For use with Nominal	Output level (*3)		Connector In Mixer (*2)
			Nominal	Max before Clip	
GROUP OUT (1 ~ 8) STEREO OUT (L, R) MTRIX OUT (1 ~ 8) AUX OUT (1 ~ 8) AUX ST1, 2 OUT (L, R) TALKBACK OUT OSC OUT	150 Ω	600 Ω lines	+4 dB (1.23 V)	+24 dB (12.3 V)	XLR-3-32 type
CH DIRECT OUT 1 ~ [ch (*1)	150 Ω	600 Ω lines	+4 dB (1.23 V)	+24 dB (12.3 V)	Phone Jack (TRS)
CH INSERT OUT 1 ~ [ch (*1) ST CH INSERT OUT 1 ~ 4ch GROUP INSERT OUT (1 ~ 8) STEREO INSERT OUT (L, R) MTRIX INSERT OUT (1 ~ 8) AUX INSERT OUT (1 ~ 8) AUX ST1, 2 INSERT OUT (L, R)	150Ω	10kΩ lines	+4 dB (1.23 V)	+24 dB (12.3 V)	Phone Jack (TRS)
PHONES OUT 1, 2 (L, R)	15Ω	8Ω Phones	75 mW	150 mW	Phone Jack (STEREO)
		40Ω Phones	65 mW	150 mW	

- NOTES: *1 PM4000 -24: 24 ch, -32: 32 ch, -40C: 40 ch, -48C: 48 ch
 *2 All XLR connectors are electronically balanced. Phone jacks are balanced with Tip = signal high (+), Ring = signal low (-), and Sleeve = ground. Phone Jacks (STEREO) are unbalanced.
 *3 In these specifications, when dB represents a specific voltage, 0 dB is referenced to 0.775 Vrms.

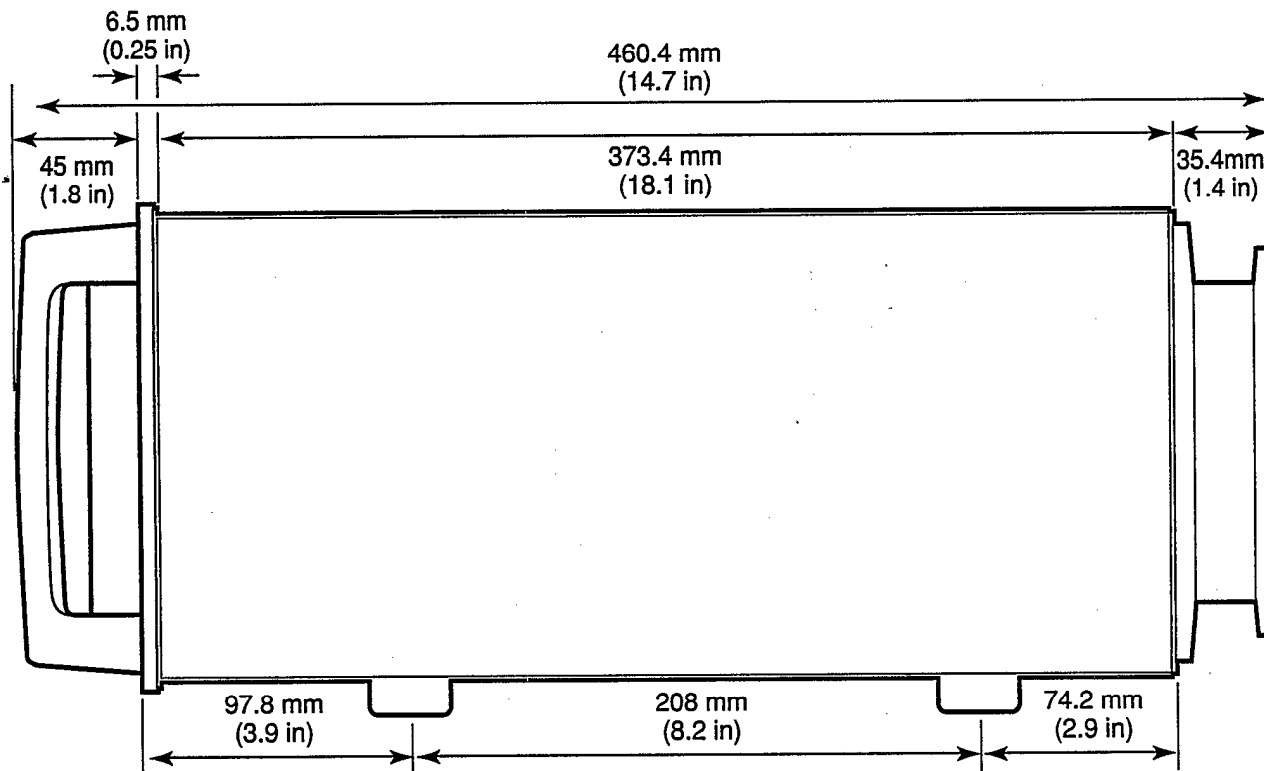
Dimensional Drawings



PM4000 Console (all versions)

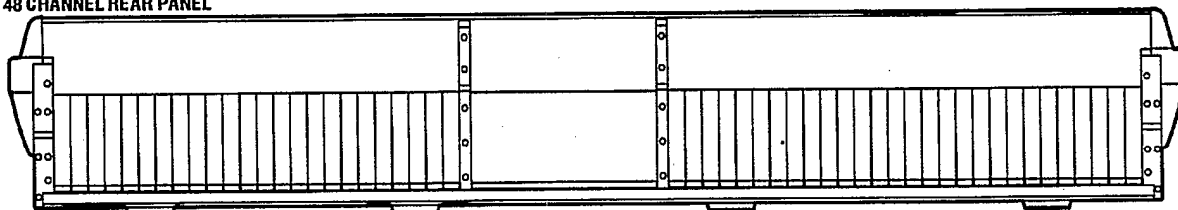


PW4000 Dimensions (top view)

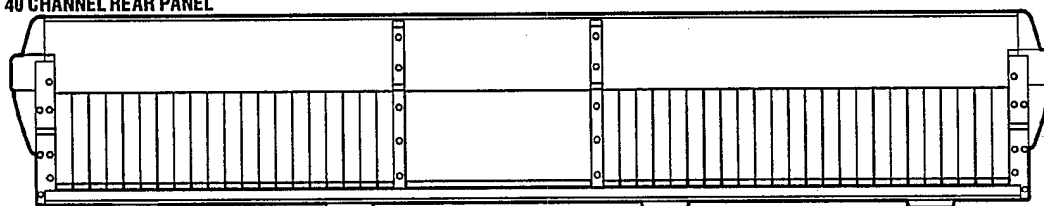


PW4000 (side view)

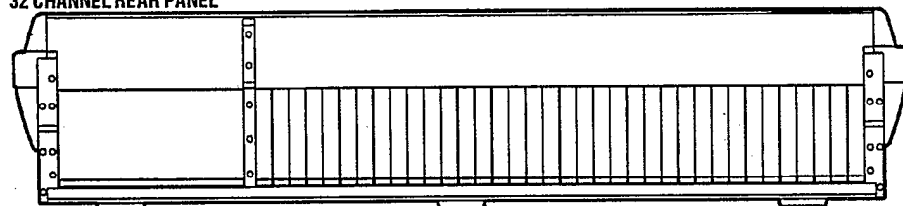
48 CHANNEL REAR PANEL



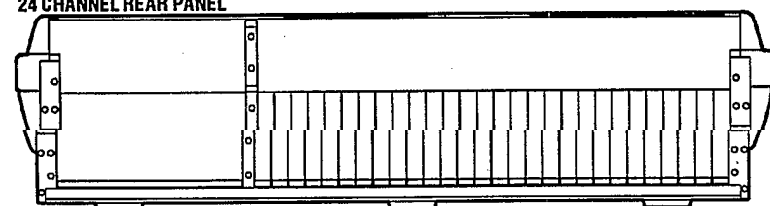
40 CHANNEL REAR PANEL



32 CHANNEL REAR PANEL



24 CHANNEL REAR PANEL



PM4000 Console Rear Profiles