



SERVICE manual

XPB-750/1600

Power Amplifier

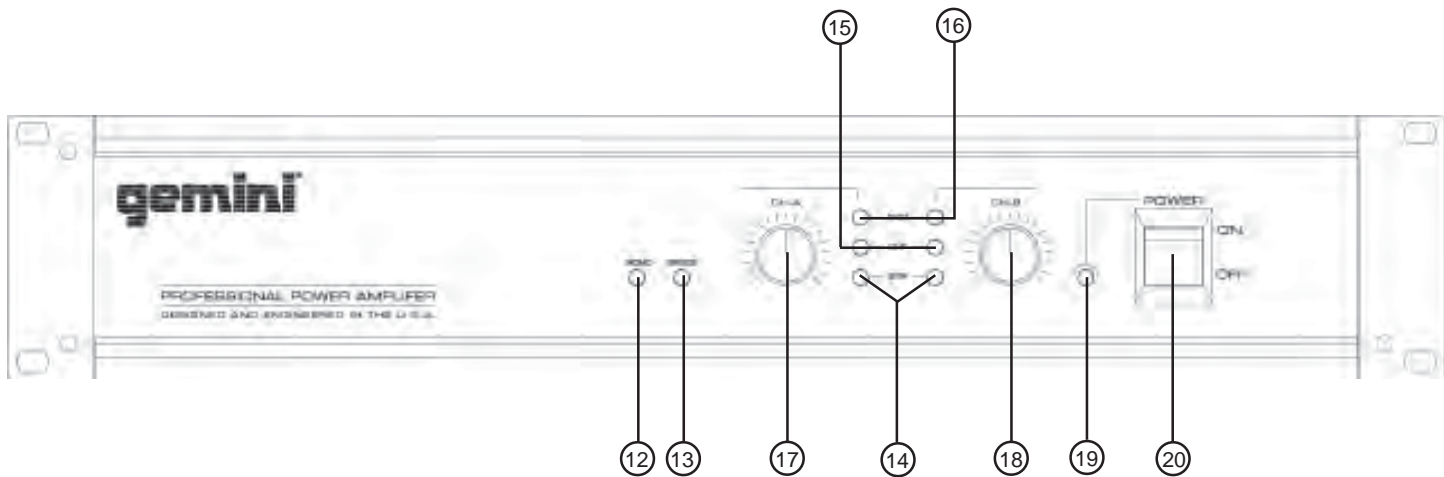
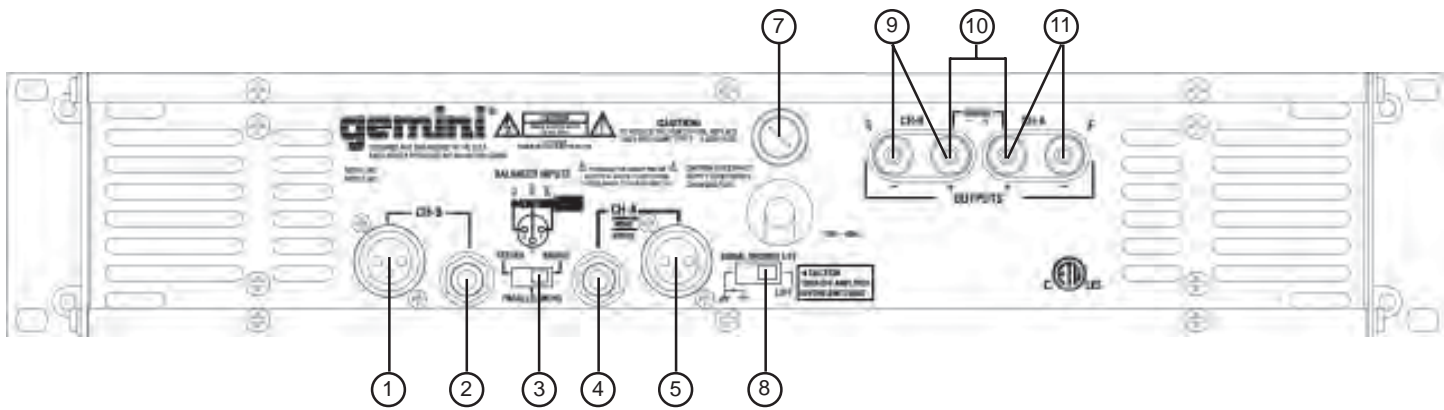
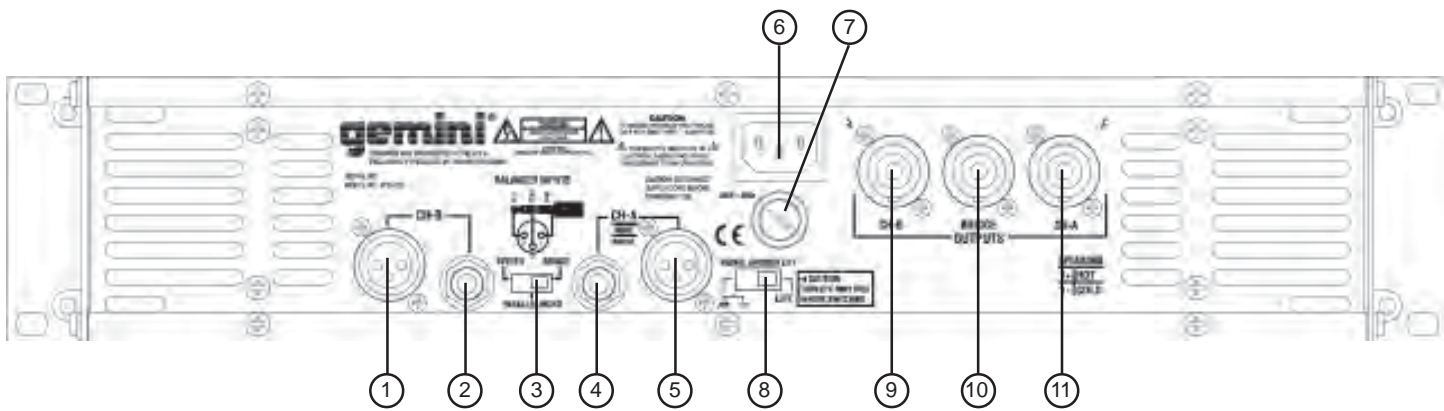


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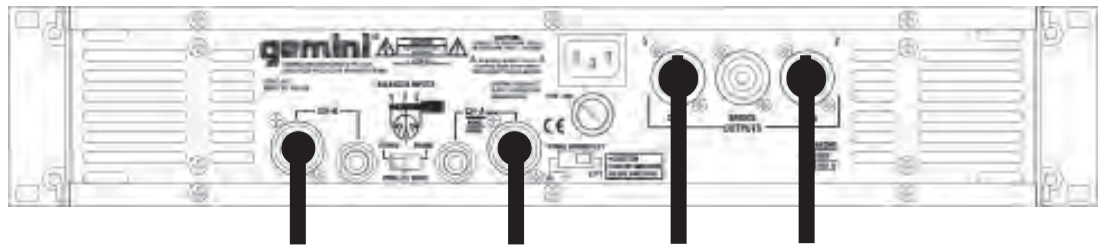
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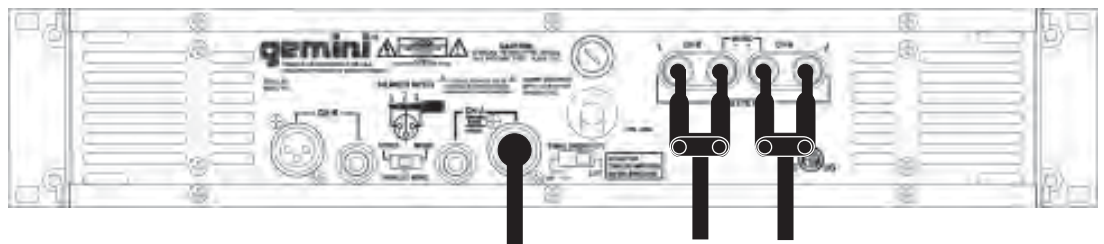
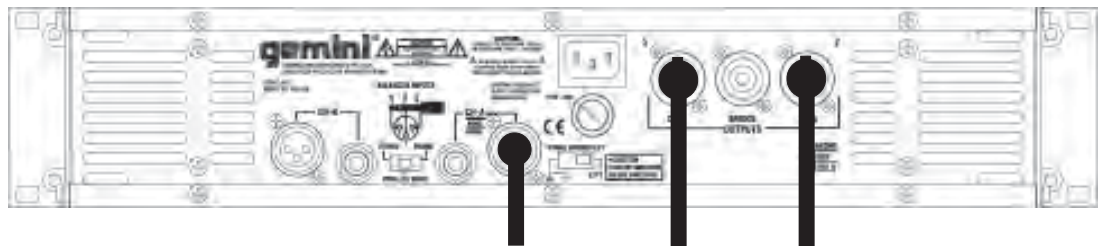
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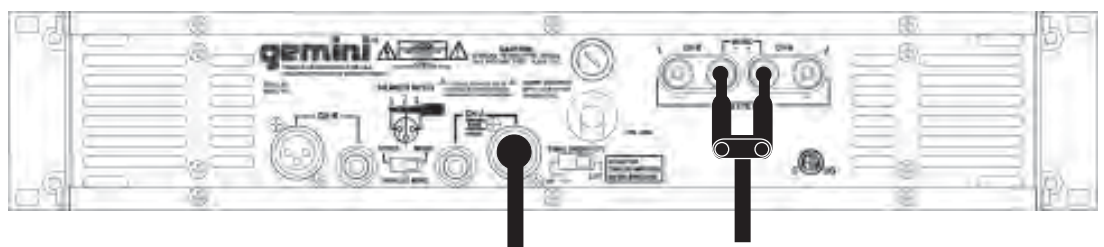
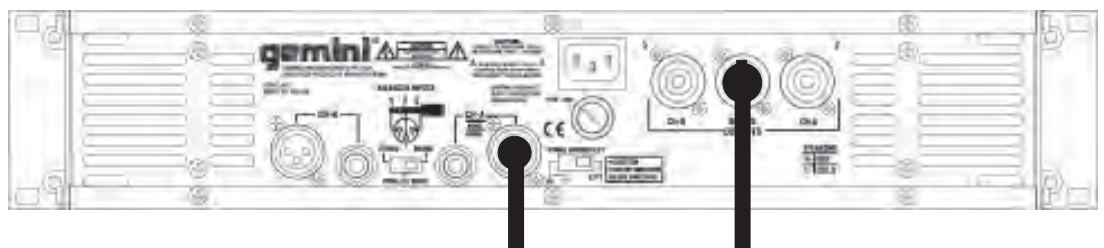
Stereo



Parallel Mono



Mono Bridge



Connections, Controls and Indicators

Rear Panel

Note: 120V and 230V units have different types of output connectors on the rear panel.

Input Section:

There are two parallel input connectors (one female XLR and one 1/4" jack) per channel. Either can be used as an input or as a link to chain amplifiers.

XLR Input Jacks (1, 5): electronically balanced inputs accept a standard XLR male connector. Pin 1 = shield/ground, pin 2 = hot or positive (+) and pin 3 = cold or negative (-).

1/4" Phone Input Jacks (2, 4): accept a balanced as well as an unbalanced line level signal. The unbalanced line uses a standard tip-sleeve connection. The tip is positive and the sleeve is negative/ground. The balanced line uses a tip-ring-sleeve connection. Tip = hot or positive (+), ring = cold or negative (-), and sleeve = shield/ground.

Operation Mode Switch (3): switch is used to set the unit for Stereo mode, Parallel Mono mode or Mono Bridge mode.

AC Power Section:

Fuse (7): replace fuse with those of proper type and rating.

Signal Ground Lift Switch (8) is used to lift the balanced input connectors' ground/shield from the amplifier's ground. When the signal ground lifted, the sound source disconnects from the amplifier's ground preventing ground loops which can generate hum and noise. See the Signal Ground Lift Switch Instructions for more detail.

AC Cord Outlet (6) (Note: 230V units only) is used to attach the power cord to the unit.

Output Section:

Disconnect the unit from the AC power source before making any connections. Pay close attention to polarity (shown on the back of the unit) when connecting your speakers. Connecting your speaker systems using the wrong polarity will not damage your speakers, but it will impact the quality of the sound (lack of bass and incorrect stereo image).

Speaker Outputs for 120V Unit (9, 10, 11): the speaker output jacks are 5-way binding posts that will accept a standard banana plugs, spade lugs or bare wire. Make sure that all the connections are clean when using bare wire connections. If any strands of wire from one connector touch the adjacent connector, the sound will be distorted, and your amplifier will overheat and go into protection mode.

Speaker Outputs for 230V Unit (9, 10, 11): Neutrik Speakon connectors are provided to connect speakers to the amplifier quickly and easily. They are high current rated and provide very stable and durable contacts. A third Speakon connector in the center is provided to be used if the amplifier is in the Mono Bridge mode. Every Speakon connector has pin 1- as negative and pin 1+ as positive.

NOTE: Total speaker impedance must not be lower than 2 Ohm per channel for Stereo and Parallel Mono modes, or 4 Ohm for Mono Bridge mode.

The XPB amplifier is designed to handle low impedance loads and will operate normally with most 2 ohm speakers/parallel speaker combinations. However, for optimal performance and reliability we recommend using speakers with higher impedance.

Front Panel

Power Switch (20): turns the unit on and off.

Power LED (19): the power LED lights when the power is on. If the power LED does not light, refer to the trouble shooting guide.

Mono LED (12): the mono LED will light when you have set the rear panel **Operation Mode Switch (3)** for parallel mono operation.

Always make sure that this switch is in the correct position and that all speaker connections have been made correctly for the mode of operation you wish to use before powering up the amplifier.

Bridge LED (13): the bridge LED will light when you have set the rear panel **Operation Mode Switch (3)** for mono bridge operation. Always make sure that this switch is in the correct position and that all speaker connections have been made correctly for the mode of operation you wish to use before powering up the amplifier.

Signal LED (14): the signal LEDs for each channel show when a signal is present. In Mono Bridge mode, both the channel A LED and the channel B LED will light in unison.

Clip LED (15): the amplifier has true clip LEDs to help you properly control the amplifier's output and achieve undistorted sound. The clip LEDs for each channel light when your signal level is so strong that the distortion reaches 1% THD. The clip LED should not remain constantly on or flash repeatedly during operation. For clean sound reproduction, the clip should only light occasionally for an instant. If the LED remains on or flashes repeatedly, you will hear distorted sound that can be damaging to your speaker systems. If this occurs, reduce the signal level by lowering the input level control for the channel that is clipping or reduce the level at the source. If the clip LED lights when no signal is present, it may indicate a RF signal on the output which may cause damage to speakers (the RF signal will not be audible). Please note that when you are using the amplifier in the Mono Bridge mode, both clip LEDs of the bridged channels will operate simultaneously.

Protect LED (16): when you first turn on the amplifier, the protect LEDs light briefly during a turn-on delay which indicates that the outputs are disconnected internally. There will be an audible click when the outputs reconnect and the protect LEDs will turn off. Otherwise, the protect LED indicates that there is a problem either in the amplifier's external connections, load or temperature conditions or its internal functions. If one of these situations occur, the amplifier senses the problem and automatically switches into protection mode. The LED will light to warn you of the trouble and the amplifier will stop working. If this occurs, switch off the amplifier and refer to the Trouble Shooting Guide. If the protect LED remains lit when resuming amplifier operation, do not use the amplifier and contact an authorized service technician.

Level Controls (17, 18): establish the input levels required for each channel. Only the **Channel A Level Control (17)** works in Mono Bridge mode.

Operating Instructions

THE AMPLIFIER'S POWER MUST BE TURNED OFF WHEN CHANGING MODES OF OPERATION.

Stereo Operation

The unit has two channels for stereo operation. Each channel provides a separate and discrete signal at the speaker outputs according to the signal received at the inputs. The following instructions are for applications with 8 Ohm, 4 Ohm or 2 Ohm speakers of matched power ratings.

1. With the power off, set the **OPERATION MODE SWITCH (3)** to the **STEREO** position. When the power is on, the Mono and Bridge LEDs on the front panel will not light. If these LEDs illuminate, you have the switch in the wrong position. Correct before continuing.
2. With the power off, connect your input cables to the channel A and B inputs using either the **XLR INPUT JACKS (1, 5)** or **1/4" INPUT JACKS (2, 4)** of each channel. The other channel A and channel B inputs can be used to link to an additional amplifier.
3. Connect the loudspeakers to the channel A and channel B **SPEAKER OUTPUTS (9, 11)**. **THE TOTAL SPEAKER LOAD MUST BE AT LEAST 2 OHMS PER CHANNEL.** If you try to operate at a lower impedance, the amplifier will go into protection mode and stop operation until you correct the load conditions.
4. With the **LEVEL CONTROLS (17, 18)** of both channels set to zero (fully counterclockwise), turn the **POWER SWITCH (20)** on. Apply a signal to the input of the amplifier. The level of the input signal should

be as high as you will ever need it to be. This way, it will be as high above the amplifier's noise floor as possible, ensuring an excellent performance and signal to noise ratio. Adjust the **LEVEL CONTROLS** for each channel to achieve the desired maximum listening level. Note, when the clip LEDs light, there is distortion present in the amplifier's output section. If a clip LED remains on or flashes repeatedly, reduce the signal level by lowering the input level control for the channel that is clipping or reduce the level at the source.

Parallel Mono Operation

Follow these instructions for Parallel Mono Operation using a single input cable, and you will have the same monophonic signal on both the channel A and the channel B outputs. Each channel's output is controlled independently by that channel's level control.

1. With the power off, set the **OPERATION MODE SWITCH (3)** to the **PARALLEL MONO** position. When the power is on, the **MONO LED (12)** on the front panel will light. If the LED does not illuminate, you have the switch in the wrong position. Correct before continuing.
2. With the power off, connect your input cables to the channel A input only using either the **XLR INPUT JACK (5)** or **1/4" INPUT JACK (4)** of channel A. The other channel A input can be used to link to an additional amplifier.
3. Connect the loudspeakers to the channel A and channel B **SPEAKER OUTPUTS (9, 11)**. THE TOTAL SPEAKER LOAD MUST BE AT LEAST 2 OHMS PER CHANNEL. If you try to operate at a lower impedance, the amplifier will go into protection mode and stop operation until you correct the load conditions.
4. With the **LEVEL CONTROLS (17, 18)** set to zero (fully counterclockwise), switch the power on. Apply a signal to the input. The level of the input signal should be as high as you will ever need it to be. This way, it will be as high above the amplifier's noise floor as possible, ensuring an excellent performance and signal to noise ratio. Adjust the **LEVEL CONTROLS** for each channel to achieve the desired maximum listening level. Note, when the clip LEDs light, there is distortion present in the amplifier's output section. If a clip LED remains on or flashes repeatedly, reduce the signal level by lowering the input level control for the channel that is clipping or reduce the level at the source.

Mono Bridge Operation

Follow these instructions to bridge the unit's outputs. Bridging the amplifier converts the unit to a monophonic or single channel. The amplifier can be used with 8 Ohm or higher loads only in Mono Bridge mode. This mode is used to provide a higher voltage with greater headroom to your speaker. Before setting your amplifier for Mono Bridge operation, make sure that your speaker can handle the high power level provided by the amplifier in Mono Bridge mode. CAUTION: VOLTAGE OVER 100 VOLTS MAY BE PRODUCED AT THE BRIDGE OUTPUT TERMINALS IN THIS MODE.

1. With the power off, set the **OPERATION MODE SWITCH (3)** to the **BRIDGE** position. When the power is on, the **BRIDGE LED (13)** on the front panel will light. If the LED does not illuminate, you have the switch in the wrong position. Correct before continuing.
2. With the power off, connect your input cables to channel A input only using either the **XLR INPUT JACK (5)** or **1/4" INPUT JACK (4)** of channel A. The other channel A input can be used to link to an additional amplifier.
3. Connect the loudspeaker to the **BRIDGE SPEAKER OUTPUT (10)** only. With a 230V unit, use the center speaker. With a 120V unit, use the two innermost red terminals. Be sure the polarity of your connections is correct. The total speaker load must be at least 4 Ohms or above. If you try to operate at a lower impedance, the amplifier will go into protection mode and stop operation until you correct the load conditions.
4. With the **CHANNEL A LEVEL CONTROL (17)** set to zero (fully counterclockwise), switch the power on. Apply a signal to the input. The level of the input signal should be as high as you will ever need it to be. This way, it will be as high above the amplifier's noise floor as possible, ensuring an excellent performance and signal to noise ratio. Adjust the **LEVEL CONTROL (17)** for channel A to achieve the

desired maximum listening level. Note, when the clip LEDs light, there is distortion present in the amplifier's output section. If a clip LED remains on or flashes repeatedly, reduce the signal level by lowering the input level control for channel A or reduce the level at the source. During Mono Bridge operation, the channel B level is inactive, however, both channels LEDs will flash simultaneously and show output conditions.

Using the Signal Ground Lift Switch

Depending on your system configuration, sometimes applying the ground will create a quieter signal path. Sometimes lifting the ground can eliminate ground loops and hum to create a quieter signal path.

1. With the power amp on, listen to the system in idle mode (no signal present) with the ground applied (the **SIGNAL GROUND LIFT SWITCH (8)** in the left position).
2. Then turn the power off before moving the **SIGNAL GROUND LIFT SWITCH (8)**. Lift the ground by moving the **SIGNAL GROUND LIFT SWITCH** to the right, turn the power back on and listen to determine which position will provide a signal devoid of background noise and hum. Keep the **SIGNAL GROUND LIFT SWITCH** in the ground position if the noise level remains the same in either position.

CAUTION: DO NOT TERMINATE THE AC GROUND ON THE POWER AMPLIFIER IN ANY WAY. TERMINATION OF THE AC GROUND CAN BE HAZARDOUS.

SYMPTOM	CAUSE	SOLUTION
UNIT DOES NOT PRODUCE SOUND. POWER LED DOES NOT LIGHT.	<ul style="list-style-type: none"> • POWER SWITCH NOT IN ON POSITION. • POWER CABLE NOT CONNECTED TO AMPLIFIER OR TO OUTLET. • AC OUTLET NOT ACTIVE. • MAIN AMPLIFIER FUSE DEFECTIVE. 	<ul style="list-style-type: none"> • MOVE POWER SWITCH TO ON POSITION. • CONNECT POWER CABLE TO AC SUPPLY. • CHECK CONDITION OF OUTLET. • REPLACE AMPLIFIER MAIN POWER FUSE ON REAR PANEL WITH CORRECT TYPE AND RATING.
POWER LED LIGHTS, BUT NO SOUND IS PRODUCED BY AMPLIFIER.	<ul style="list-style-type: none"> • NO INPUT SOURCE SIGNAL. • INPUT SOURCE NOT CONNECTED. • INPUT CONNECTING CABLE DEFECTIVE. • SPEAKER(S) NOT CONNECTED. • SPEAKER CABLE DEFECTIVE. • SPEAKER SYSTEM(S) INOPERATIVE. • AMPLIFIER'S LEVEL CONTROLS ARE SET TO ZERO. 	<ul style="list-style-type: none"> • CHECK FOR PROPER FUNCTION OF INPUT SOURCE DEVICE. • CHECK INPUT CABLES AND CONNECTIONS. REPLACE QUESTIONABLE CABLES WITH KNOWN GOOD CABLES. • CHECK SPEAKER CABLES AND CONNECTIONS. REPLACE QUESTIONABLE CABLES WITH KNOWN GOOD CABLES. • CHECK OPERATING CONDITION AND STATUS OF SPEAKER SYSTEM(S). BE SURE THE LEVEL CONTROLS ARE PROPERLY SET.
SOUND IS PRESENT BUT VOLUME IS TOO LOW EVEN THOUGH SOURCE DEVICE IS SET TO A HIGH LEVEL.	<ul style="list-style-type: none"> • AMPLIFIER INPUT LEVEL CONTROLS ARE SET TOO LOW. • WRONG PIN CONNECTIONS IN CABLES. 	<ul style="list-style-type: none"> • ADJUST LEVEL CONTROLS AS PER INSTRUCTIONS. • USE CORRECT CABLES (AS SHOWN ON BACK OF UNIT).
LOUD 50/60 HZ OR 100/120 HZ HUM IS HEARD AT ALL TIMES THROUGH THE SPEAKER SYSTEMS.	<ul style="list-style-type: none"> • IMPROPER OR DEFECTIVE GROUND CONNECTION AT INPUTS. IMPROPER OR DEFECTIVE GROUND AT INPUT SOURCE DEVICE(S). • IMPROPER OR DEFECTIVE GROUND CONNECTION ON AC OUTLET. • GROUND LOOP THROUGH AC LINE CONNECTION/ RACK MOUNTING. 	<ul style="list-style-type: none"> • CHECK FOR PROPER AC LINE GROUND ON POWER AMP AND ALL INPUT DEVICES. • CHECK INPUT CABLES FOR ALL SOURCE DEVICES AND SIGNAL PROCESSING AS WELL AS INPUT CABLES TO POWER AMPLIFIER. CHECK POSITION OF GROUND LIFT SWITCH AS PER INSTRUCTIONS FOR LIFTING THE GROUND. • NEVER LIFT THE AC LINE GROUND ON THE POWER AMPLIFIER. IF YOU ARE NOT TOTALLY FAMILIAR WITH GROUND LIFTING OR UNIFICATION PROCEDURES, DO NOT ATTEMPT THEM WITHOUT FIRST CONSULTING YOUR DEALER OR A QUALIFIED SOUND TECHNICIAN FOR MORE INFORMATION ON GROUNDING. IMPROPERLY DONE, SUCH PROCEDURES CAN POSE A SAFETY AND/OR FIRE HAZARD.
SOUND IS DISTORTED.	<ul style="list-style-type: none"> • DISTORTION OCCURRING IN SOURCE DEVICE. • INPUT LEVEL IS SET TOO HIGH. 	<ul style="list-style-type: none"> • CHECK CLIP INDICATORS ON INPUT SOURCE DEVICES AND RESET LEVELS IF NECESSARY TO ELIMINATE DISTORTION. • ADJUST LEVEL CONTROLS AS PER INSTRUCTIONS.
PROTECT LED REMAINS LIT OR GOES ON AND OFF INTERMITTENTLY AFTER USING AMPLIFIER FOR A SHORT TIME.	<ul style="list-style-type: none"> • UNIT IS OPERATING AT EXCESSIVELY HIGH TEMPERATURE. • EXTREMELY LOW SPEAKER IMPEDANCE. • SHORT IN SPEAKER CONNECTORS, SPEAKER CABLE OR SPEAKER SYSTEM. 	<ul style="list-style-type: none"> • CHECK THAT AMPLIFIER IS ADEQUATELY VENTILATED ON THE FRONT AND REAR PANELS WHERE THE AIR VENTS AND FANS ARE LOCATED. IF OVERHEATED, LET THE AMPLIFIER COOL DOWN BEFORE APPLYING AN INPUT SIGNAL. • CHECK THE POSITION OF OPERATION MODE SWITCH. BE SURE THAT THE SPEAKER CONNECTIONS ARE MADE IN ACCORDANCE WITH THE SWITCH SETTING. • VERIFY SPEAKER SYSTEM IMPEDANCES. BE SURE THE TOTAL SPEAKER SYSTEM IMPEDANCE IS AT LEAST 4 OHMS PER CHANNEL WHEN THE OPERATION MODE SWITCH IS IN THE STEREO POSITION OR PARALLEL MONO POSITION. IF THE SWITCH IS IN THE BRIDGE MODE, THE IMPEDANCE MUST BE AT LEAST 8 OHMS. IF YOU ARE NOT SURE OF YOUR TOTAL SPEAKER IMPEDANCE LOAD, CONTACT YOUR DEALER FOR MORE INFORMATION. • CHECK CONDITION OF SPEAKER CABLES. • IF USING BARE WIRE CONNECTIONS ON THE OUTPUTS OF THE AMPLIFIER, BE SURE THAT NO STRANDS FROM ONE CONNECTOR ARE TOUCHING ANY OTHER CONNECTOR.
FUSE BLOWS INTERMITTENTLY.	<ul style="list-style-type: none"> • SPEAKER LOAD IMPEDANCE IS TOO LOW. • TYPE OR RATING OF THE FUSE IS NOT CORRECT. 	<ul style="list-style-type: none"> • CHECK FOR SHORTS ON THE OUTPUTS. • CHECK YOUR SPEAKER IMPEDANCE (INFO FROM DEALER). • CHECK THAT THE FUSE TYPE AND RATING IS CORRECT.
PROTECT LED(S) STAY ON WITH NO SPEAKERS CONNECTED AND WITH THE AMPLIFIER COOLED DOWN.	<ul style="list-style-type: none"> • FAILED AMPLIFIER. 	<ul style="list-style-type: none"> • CONTACT THE GEMINI SERVICE DEPARTMENT OR YOUR AUTHORIZED DEALER TO SPEAK TO A QUALIFIED SERVICE TECHNICIAN.
POWER LED LIGHTS BUT THERE IS NO SOUND FROM ONE OR BOTH CHANNELS.	<ul style="list-style-type: none"> • SECONDARY DC FUSES ARE BLOWN (ON EITHER ONE OR BOTH CHANNELS INDICATING FAILED A FAILED CHANNEL OR CHANNELS. 	<ul style="list-style-type: none"> • IF ONLY ONE CHANNEL FAILS, THE SECOND MAY STILL OPERATE, BUT THE UNIT SHOULD BE SERVICED AS SOON AS POSSIBLE. CONTACT THE GEMINI SERVICE DEPARTMENT OR YOUR AUTHORIZED DEALER TO SPEAK TO A QUALIFIED SERVICE TECHNICIAN.

PARTS LISTS:

XPB-750 120v

Vendor Part #:	Description:	Quantity:
1) 102056543301	SPACER XPM-900	2
2) 102119214705	CARTON XPB-750	1
3) 102260018005	EXT.CARTON XPB-750	1
4) 103012005700	SPACER 1200x570m/m	1
5) 105011108801	HOLDER XPB-1600	2
6) 105032408401	WALL XPB-1600	1
7) 105034608801	SLID PANEL XPB-1600	2
8) 105343431801	TOP COVER XPM-900	1
9) 105443431702	BOTTOM CABI XPB-1600	1
10) 1070KG-010—	M0VEABLE BUSHING KG-010	2
11) 1070YJ-98—	NYLON CLAMPER YJ-98	12
12) 105242608607	XPB-750 BACK BOARD 120V	1
13) 107022—	TUBE 22 m/m XPB-1600	1
14) AB7N-2—	AC BUSHIN 7N-2	1
15) AC2016014R3C	AL-201 SJT W-A 14AWGx3C 6FT	1
16) 1070PO.86401	TUBE 0.864 BLACK	240
17) 106219207603	HEAT SINK 192x76x60 XPB-1600	2
18) 1070SS-6—	SELF RETATINING SPALERS SS-6	2
19) 2SA1943O—0	TR 2SA1943-O	6
20) 2SC5200O—0	TR 2SC5200-O	6
21) 2SA1015GR—T	TR 2SA1015GR T	6
22) 2SC1815GR—T	TR 2SC1815GR T	4
23) 6003501952—	XPB-1600 MAIN PC BOARD T=2oz	1
24) 70000SF14051	DIODE SF14	2
25) 700033050001	ZENER 3.3v 500mw	2
26) 700082050001	ZENER 8.2V 500mw	3
27) 700150050001	ZENER 15V 500mw	1
28) 700150100001	ZENER 15V 1W	2
29) 7001N4004051	DIODE 1N4004	4
30) 7001N4148051	DIODE 1N4148	35
31) MPMSC104100J	MSC .1u 100V 5% T	14
32) MPMSC105063J	MSC 1u 63V SC105J1J T	4
33) RC0030A33005	RESISTORS 3.3 ohm 1/4W T	8
34) RC0031000005	RESISTORS 10 ohm 1/4W T	6
35) RC0031010005	RESISTORS 100 ohm 1/4W T	7
36) RC0031020005	RESISTORS 1 K 1/4W T	8
37) RC0031030005	RESISTORS 10 K 1/4W T	4
38) RC0031040005	RESISTORS 100 K 1/4W T	2
39) RC0031320005	RESISTORS 1.3 K 1/4W T	2
40) RC0031520005	RESISTORS 1.5 K 1/4W T	2
41) RC0031610005	RESISTORS 160 ohm 1/4W T	4
42) RC0032020005	RESISTORS 2 K 1/4W T	5
43) RC0032230005	RESISTORS 22 K 1/4W T	2
44) RC0032240005	RESISTORS 220 K 1/4W T	2
45) RC0032430005	RESISTORS 24 K 1/4W T	5
46) RC0033010005	RESISTORS 300 ohm 1/4W T	2
47) RC0033030005	RESISTORS 30 K 1/4W T	4
48) RC0033040005	RESISTORS 300 K 1/4W T	2
49) RC0033310005	RESISTORS 330 ohm 1/4W T	2
50) RC0033610005	RESISTORS 360 ohm 1/4W T	2
51) RC0035110005	RESISTORS 510ohm 1/4W T	6
52) RC0038220005	RESISTORS 8.2 K 1/4W T	2
53) RC0034740005	RESISTORS 470 K T	2
54) RC0050A10005	RESISTORS 1 ohm 1/2W T	1
55) RC0053030005	RESISTORS 30 K 1/2W T	4
56) RM003001M001	RESISTORS 1M 1% 1/4W T	2
57) RM00301K2001	RESISTORS 1.2K 1% 1/4W T	2
58) RM00301K9101	RESISTORS 1K91 1% 1/4W T	2
59) RM00302K2101	RESISTORS 2.21K 1% 1/4W T	2
60) RM0030A12101	RESISTORS 121 ohm 1% 1/4W T	4
61) RM0030A15001	RESISTORS 150 ohm 1% 1/4W T	4
62) RM00310K0001	RESISTORS 10K 1% 1/4W T	8
63) RM003110K001	RESISTORS 110K 1% 1/4W T	2
64) RM00313K0001	RESISTORS 13K 1% 1/4W T	4
65) RM00324K3001	RESISTORS 24K3 1% 1/4W T	4
66) RM00368K0001	RESISTORS 68 K 1% 1/4W T	4
67) RM00516K5001	RESISTORS 16K5 1% 1/2W T	4
68) TRMPSA42—0	TR MPSA42	4
69) TRMPSA92—0	TR MPSA92	2
70) 105006400001	6.4m/m PIN (805551-BL2)	5
71) 106203003003	RECTIFIER HEAT SINK XPB-1600	1
72) 1070LEDS-6.5	LED SPACER SUPPORT LEDS-6.5	9
73) 7001N5404051	DIODE 1N5404	4
74) 700KBP060002	RECTIFIER KBP06 2A 600V	1
75) 700MP3504W02	RECTIFIER MP3504W 35A 400V	1
76) CCNOA101100K	CERAMIC CAP 100P 100V	6
77) CCZO100500K	CERAMIC CAP 10P 500V NPO	2
78) CCZO103500Z	CERAMIC CAP 103 500V	6
79) CCZO10220500K	CERAMIC CAP 22P/500V NPO	2
80) CCZO10271025K	CERAMIC CAP 270P	4
81) CCZO10330100K	CERAMIC CAP 33P/100V	2
82) CCZO10680500K	CERAMIC CAP 68P/500V NPO	4
83) COIL20105T—	COIL 2.0x10x10.5t XPB-750	2
84) ECL04700080M	ELEC CAP 4700u80v	4
85) ECS00100025M	ELEC CAP 100u25v	1

XPB-1600 120v

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1) 102056543301	SPACER XPM-900	2
2) 102119214704	CARTON XPB-1600	1
3) 102260018004	EXT.CARTON XPB-1600	1
4) 103012005700	SPACER 1200x570m/m PA1000	1
5) 105011108801	HOLDER XPB-1600	2
6) 105032408401	WALL XPB-1600	1
7) 105034608801	SLID PANEL XPB-1600	2
8) 105343431801	TOP COVER XPM-900	1
9) 105443431702	BOTTOM CABI XPB-1600	1
10) 107018206501	CARD BOARD 182x65x1t BLACK	2
11) 1070KG-010—	M0VEABLE BUSHING KG-010	2
12) 1070YJ-98—	NYLON CLAMPER YJ-98	12
13) 105242608609	XPB-1600 BACK BOARD 120V	1
14) 107022—	TUBE 22 m/m XPB-1600	1
15) AB7N-2—	AC BUSHIN 7N-2	1
16) AC2016014R3C	AL-201 SJT W-A 14AWGx3C 6FT	1
17) 106201500801	TO-92 HEAT SINK XPB-1600	4
18) 106201501401	TO-126 HEAT SINK XPB-1600	4
19) 106219207603	HEAT SINK 192x76x60 XPB-1600	2
20) 1070PO.86401	TUBE 0.864 BLACK	240
21) 1070SS-6—	SELF RETATINING SPALERS SS-6	2
22) 2SA1943O—0	TR 2SA1943-O	12
23) 2SC5200O—0	TR 2SC5200-O	12
24) 2SA1015GR—T	TR 2SA1015GR T	6
25) 2SC1815GR—T	TR 2SC1815GR T	4
26) 6003501952—	XPB-1600 MAIN PC BOARD T=2oz	1
27) 70000SF14051	DIODE SF14	2
28) 700033050001	ZENER 3.3v 500mw	2
29) 700082050001	ZENER 8.2V 500mw	3
30) 700150050001	ZENER 15V 500mw	1
31) 700150100001	ZENER 15V 1W	2
32) 7001N4004051	DIODE 1N4004	4
33) 7001N4148051	DIODE 1N4148	35
34) MPMSC104100J	MSC .1u 100V 5% T	14
35) MPMSC105063J	MSC 1u 63V SC105J1J T	4
36) RC0030A33005	RESISTORS 3.3 ohm 1/4W T	8
37) RC0031000005	RESISTORS 10 ohm 1/4W T	6
38) RC0031010005	RESISTORS 100 ohm 1/4W T	7
39) RC0031020005	RESISTORS 1 K 1/4W T	8
40) RC0031030005	RESISTORS 10 K 1/4W T	4
41) RC0031040005	RESISTORS 100 K 1/4W T	2
42) RC0031320005	RESISTORS 1.3 K 1/4W T	2
43) RC0031520005	RESISTORS 1.5 K 1/4W T	2
44) RC0031610005	RESISTORS 160 ohm 1/4W T	4
45) RC0032020005	RESISTORS 2 K 1/4W T	5
46) RC0032230005	RESISTORS 22 K 1/4W T	2
47) RC0032240005	RESISTORS 220 K 1/4W T	2
48) RC0032430005	RESISTORS 24 K 1/4W T	5
49) RC0033010005	RESISTORS 300 ohm 1/4W T	2
50) RC0033030005	RESISTORS 30 K 1/4W T	4
51) RC0033040005	RESISTORS 300 K 1/4W T	2
52) RC0033310005	RESISTORS 330 ohm 1/4W T	4
53) RC0033610005	RESISTORS 360 ohm 1/4W T	2
54) RC0035110005	RESISTORS 510ohm 1/4W T	6
55) RC0038220005	RESISTORS 8.2 K 1/4W T	2
56) RC0031550005	RESISTORS 1.5 M 1/4W T	2
57) RC0050A10005	RESISTORS 1 ohm 1/2W T	1
58) RC0053030005	RESISTORS 30 K 1/2W T	4
59) RM003001M001	RESISTORS 1M 1% 1/4W T	2
60) RM00301K2001	RESISTORS 1.2K 1% 1/4W T	2
61) RM00301K3001	RESISTORS 1.3K 1% 1/4W T	2
62) RM00302K2101	RESISTORS 2.21K 1% 1/4W T	2
63) RM0030A12101	RESISTORS 121 ohm 1% 1/4W T	4
64) RM0030A15001	RESISTORS 150 ohm 1% 1/4W T	4
65) RM0030A16201	RESISTORS 162 ohm 1% 1/4W T	2
66) RM00310K0001	RESISTORS 10K 1% 1/4W T	8
67) RM003110K001	RESISTORS 110K 1% 1/4W T	2
68) RM00324K3001	RESISTORS 24K3 1% 1/4W T	4
69) RM00340K2001	RESISTORS 40K2 1% 1/4W T	4
70) RM00368K0001	RESISTORS 68 K 1% 1/4W T	4
71) RM00523K2001	RESISTORS 23K2 1% 1/2W T	4
72) TRMPSA42—0	TR MPSA42	4
73) TRMPSA92—0	TR MPSA92	2
74) 105006400001	6.4m/m PIN (805551-BL2)	5
75) 106203003003	RECTIFIER HEAT SINK XPB-1600	1
76) 1070LEDS-6.5	LED SPACER SUPPORT LEDS-6.5	9
77) 7001N5404051	DIODE 1N5404	4
78) 700KBP060002	RECTIFIER KBP06 2A 600V	1
79) 700MP3504W02	RECTIFIER MP3504W 35A 400V	1
80) CCNOA101100K	CERAMIC CAP 100P 100V	6
81) CCZO100500K	CERAMIC CAP 10P 500V NPO	2
82) CCZO103500Z	CERAMIC CAP 103 500V	6
83) CCZO10220500K	CERAMIC CAP 22P/500V NPO	2
84) CCZO10271025K	CERAMIC CAP 270P	4
85) CCZO10330100K	CERAMIC CAP 33P/100V	2
86) CCZO10680500K	CERAMIC CAP 68P/500V NPO	4
87) COIL20105T—	COIL 2.0x10x10.5t XPB-1600	2
88) ECL06800100M	ELEC CAP 6800u100v	4
89) ECS00100025M	ELEC CAP 100u25v	1
90) ECS00220016M	ELEC CAP 220u16v	6
91) ECS00220025M	ELEC CAP 220u25v	2

PARTS LISTS CONT:

Vendor Part #:	Description:	Quantity:	Vendor Part #:	Description:	Quantity:
86) ECS00220016M	ELEC CAP 220u16v	6	92) ECS01000025M	ELEC CAP 1000u25v	1
87) ECS00220025M	ELEC CAP 220u25v	2	93) ECS02200025M	ELEC CAP 2200u25v	1
88) ECS01000025M	ELEC CAP 1000u25v	1	94) FC520CQ203SC	FUSE CLIP CQ-203SC	8
89) ECS02200025M	ELEC CAP 2200u25v	1	95) FS520ULC120F	FUSE 5x20 12A	4
90) FC520CQ203SC	FUSE CLIP CQ-203SC	8	96) ICNJM3404AD-	IC NJM3404AD	2
91) FS520ULC080F	FUSE 5x20 8A	4	97) ICTL071CP---	ICTL071CP	2
92) ICNJM3404AD-	IC NJM3404AD	2	98) ICTL072CP---	IC TL072CP	2
93) ICTL071CP---	ICTL071CP	2	99) JS1001025003	BASE 3P 2.5m/m	2
94) ICTL072CP---	IC TL072CP	2	100) JS1001025007	BASE 7P 2.5m/m	2
95) JS1001025003	BASE 3P 2.5m/m	2	101) JS1001R25002	BASE 2P JS-1001R-02	2
96) JS1001025007	BASE 7P 2.5m/m	2	102) LDG050210030	LED 5m/m GREEN	5
97) JS1001R25002	BASE 2P JS-1001R-02	2	103) LDR050410030	LED 5m/m RED	2
98) LDG050210030	LED 5m/m GREEN	5	104) LDY050610030	LED 5m/m YELLOW	2
99) LDR050410030	LED 5m/m RED	2	105) MJ0860250900	CONNOC JACK 086-25-90	2
100) LDY050610030	LED 5m/m YELLOW	2	106) MJCPJ-065---	JACK CPJ-065 XPM-900	2
101) MJ0860250900	CONNOC JACK 086-25-90	2	107) MPMEF104250K	MEF .1u 250V 10%	4
102) MJCPJ-065---	JACK CPJ-065 XPM-900	2	108) NTM3x07x030Y	NUT 3m/m W/S (0J0010-030001)	1
103) MPMEF104250K	MEF .1u 250V 10%	4	109) RC0200A20005	RESISTORS 2 ohm 2W M	4
104) NTM3x07x030Y	NUT 3m/m W/S (0J0010-030001)	1	110) RC0206820005	RESISTORS 6.8 K 2W M	2
105) RC0200A20005	RESISTORS 2 ohm 2W M	4	111) RC0300A27005	RESISTORS 2.7 ohm 3W M	2
106) RC0206820005	RESISTORS 6.8 K 2W M	2	112) RL832---12	832-1C-C-12D XPM-900	2
107) RC0300A27005	RESISTORS 2.7 ohm 3W M	2	113) RT0500222005	2.2 K 5W SQT TYPE	2
108) RL832---12	832-1C-C-12D XPM-900	2	114) RT0500A03305	0.33 ohm 5W SQT TYPE	8
109) RT0500122005	1.2 K 5W SQT TYPE	2	115) SR01MS3x081W	MS 3x8 (1JPHMC-030800)	1
110) RT0500A02205	0.22 ohm 5W SOT TYPE	8	116) SR01TP4x204Y	TP4x20 (1JBH6C-042021)	1
111) SR01MS3x081W	MS 3x8 (1JPHMC-030800)	1	117) SWL---1	SS004-P2430Em-PC10 XPM-900	1
112) SR01TP4x204Y	TP4x20 (1JBH6C-042021)	1	118) SWS---1	SS004-P022 BY-PF8	1
113) SWL---1	SS004-P2430Em-PC10 XPM-900	1	119) TRMJE340---0	MJE340	2
114) SWS---1	SS004-P022 BY-PF8	1	120) TRMJE350---0	MJE350	2
115) TRMJE340---0	MJE340	2	121) TRMPSA13---0	TR MPSA13	1
116) TRMJE350---0	MJE350	2	122) TRTIP122---0	TIP122	1
117) TRMPSA13---0	TR MPSA13	1	123) TRZ0103---0	TRIAC Z0103 MA1A600V RR-15	2
118) TRTIP122---0	TIP122	1	124) W20105070052	1015#14 5/70/5 RED XPB-1600	4
119) TRZ0103---0	TRIAC Z0103 MA1A600V RR-15	2	125) W20105070058	1015#14 5/70/5 GRAY XPB-1600	4
120) W20105130055	1015#14 5/130/5 GREEN XPB-1600	1	126) W20105070059	1015#14 5/70/5 WHITE XPB-1600	4
121) W20105135205	1015#14 GREEN XPM-900	1	127) W20105130055	1015#14 5/130/5 GREEN XPB-1600	1
122) W20105160051	1015x14 5/160/5 BROWN XPB-1600	2	128) W20105135205	1015#14 GREEN XPM-900	1
123) W20105170208	1015#14 5/170/20 GRAY XPB-1600	1	129) W20105160051	1015x14 5/160/5 BROWN XPB-1600	2
124) W20105185205	1015#14 GREEN XPM-900	1	130) W20105170208	1015#14 5/170/20 GRAY XPB-1600	1
125) W20105320202	1015#14 5/320/20 RED XPB-1600	1	131) W20105185205	1015#14 GREEN XPM-900	1
126) W2070A2200BB	1007#26 MIX XPB-1600	2	132) W20105320202	1015#14 5/320/20 RED XPB-1600	1
127) WS204x10x07W	SPRING W/S.M4-L(2JS100-040050)	1	133) W2070A2200BB	1007#26 MIX XPB-1600	2
128) PTH9M222---E2	PTH9M04BE222TS2F333 XPM-900	2	134) WS204x10x07W	SPRING W/S.M4-L(2JS100-040050)	1
129) PTH9M471---H1	PTH9M04BH471TS2F333 XPM-900	2	135) 6001730470---	MPMEF104250K	1
130) SR01MS3x121B	MS 3x12 BLACK	12	136) MPMEF104250K	MPMEF104250K	1
131) SR03TP4x084B	FMT+W TP 4x8 (1JB6P6C-040825)	8	137) RC0030A33005	RC0030A33005	12
132) WS132x08x10W	3.2x0.8x10 (2IFA032-081000)	8	138) RT0500A03305	0.33 ohm 5W SQT TYPE	12
133) WS203x08x05W	SPRING W/S.M3-L(2JS100-030050)	12	139) PTH9M222---E2	PTH9M04BE222TS2F333 XPM-900	2
134) 6000830380---	XPB-1600 83x38 m/m P.BOARD 2o	1	140) PTH9M471---H1	PTH9M04BH471TS2F333 XPM-900	2
135) NTC0120L---	NTC 20A SCK-0120 XPM-900	1	141) SR01MS3x121B	MS 3x12 BLACK	24
136) W2010G360050	1015#14 250R+360/5m/m BLACK	1	142) SR03TP4x084B	FMT+W TP 4x8 (1JB6P6C-040825)	12
137) W2010G440059	1015#14 250R+440/5m/m WHITE	1	143) WS132x08x10W	3.2x0.8x10 (2IFA032-081000)	20
138) W20110120100	1015#14 BLACK XPM-900U	1	144) WS203x08x05W	SPRING W/S.M3-L(2JS100-030050)	24
139) FH630207D---	FUSE HOLD CQ-207D	1	145) 6000830380---	XPB-1600 83x38 m/m P.BOARD 2oz	1
140) FS630ULC120F	FUSE 6x30 FAST/CERAMIC U/C 12A	1	146) NTC0120L---	NTC 20A SCK-0120 XPM-900	2
141) SPK1047R2001	WIN-1047R2 R/B XPM-900	1	147) W2010G360050	1015#14 250R+360/5m/m BLACK	1
142) SPK1047R2002	WTN-1047R2 B/R XPM-900	1	148) W2010G440059	1015#14 250R+440/5m/m WHITE	1
143) SPKCOVER---1	WIN-1047R2 COVER BLACK XPM-900	2	149) W20110120100	1015#14 BLACK XPM-900U	1
144) SPKCOVER---2	WIN-1047R2 COVER RED XPM-900	2	150) FH630207D---	FUSE HOLD CQ-207D	1
145) SR01MS3x061B	MS 3x6 BLACK(1JBHMC-030604)	4	151) FS630ULC150F	FUSE 6x30 FAST/CERAMIC U/C 15A	1
146) SR01MS4x061W	MS 4x6 (PLATING)	1	152) SPK1047R2001	WIN-1047R2 R/B XPM-900	1
147) SR01TP3x103B	TP 3x10 BLACK (1JBHCC-031024)	4	153) SPK1047R2002	WTN-1047R2 B/R XPM-900	1
148) WS408x04x10Y	EXT TOOTH W/S. 4m/m	1	154) SPKCOVER---1	WIN-1047R2 COVER BLACK XPM-900	2
149) LBC08---WH	LABEL 8m/m (GND)	1	155) SPKCOVER---2	WIN-1047R2 COVER RED XPM-900	2
150) 105142407902	FRONT PANEL XPB-750	1	156) SR01MS3x061B	MS 3x6 BLACK(1JBHMC-030604)	4
151) KB1819BL0001	KNOB 18x19 BLACK XPM-900	2	157) SR01MS4x061W	MS 4x6 (PLATING)	1
152) SR01TP3x063B	TP 3x6 BLACK (1JBHCC-030625)	5	158) SR01TP3x103B	TP 3x10 BLACK (1JBHCC-031024)	4
153) SWP---9	R22-22B-11B XPM-900	1	159) SR03TP4x084B	FMT+W TP 4x8 (1JB6P6C-040825)	8
154) VR16A1031501	16K4x1 10Ax1 41K L-15 XPM-900	2	160) WS408x04x10Y	EXT TOOTH W/S. 4m/m	1
155) W5010A370032	2852#26 RED XPM-900	1	161) LBC08---WH	LABEL 8m/m (GND)	1
156) W5010A460038	2852#26 GRAY XPM-900	1	162) 105142407901	FRONT PANEL XPB-1600	1
157) FAD012080001	SP802512H L=350m/m+XH	2	163) KB1819BL0001	KNOB 18x19 BLACK XPM-900	2
158) FTSF-006---	PLASTIC FOOT SF-006	4	164) SR01TP3x063B	TP 3x6 BLACK (1JBHCC-030625)	5
159) IBXPB1600-GI	MANUAL XPB-1600 (GEMINI)	1	165) SWP---9	R22-22B-11B XPM-900	1
160) NTM8x17x080B	NUT 5/16 (0A0220-310005)	1	166) VR16A1031501	16K4x1 10Ax1 41K L-15 XPM-900	2
161) PB420215---	PLOY BAG 8.5"x16.5"X0.05	1	167) W5010A370032	2852#26 RED XPM-900	1
162) PT120---5	TRANS. 120m/m XPB-750 120V	1	168) W5010A460038	2852#26 GRAY XPM-900	1
163) SR01MS3x081W	MS 3x8 (1JPHMC-030800)	1	169) FAD012080001	SP802512H L=350m/m+XH V2000	2
164) SR01MS3x121B	MS 3x12 BLACK	2	170) FTSF-006---	PLASTIC FOOT SF-006 V2000	4
165) SR01MS4x082B	MST 4x8 BLACK (1JBH1C-040824)	20	171) IBXPB1600-GI	MANUAL XPB-1600 (GEMINI)	1
166) SR01TP35x84B	TP 3.5x8 (1JPH6C-3F0824)	2	172) NTM8x17x080B	NUT 5/16 (0A0220-310005)	1
167) SR01TP3x063B	TP 3x6 BLACK (1JBHCC-030625)	6	173) PB420215---	PLOY BAG 8.5"x16.5"X0.05	1
168) SR03TP4x084B	FMT+W TP 4x8 (1JB6P6C-040825)	14	174) PT160---15	TRANS. 160m/m XPB-1600 120V	1
169) SR10MS8x751B	5/16x3" (1ATKMO-31C004)	1	175) SR01MS3x081W	MS 3x8 (1JPHMC-030800)	1
170) WDGEMINI---	GEMINI WARRANTY CARD	1	176) SR01MS3x121B	MS 3x12 BLACK	2
171) WS407x03x09Y	EXT TOOTH W/S. 3m/m	1	177) SR01MS4x082B	MST 4x8 BLACK (1JBH1C-040824)	20
172) LBC06---RD	LABEL 6m/m (VLOT)	3	178) SR01TP35x84B	TP 3.5x8 (1JPH6C-3F0824)	2
			179) SR01TP3x063B	TP 3x6 BLACK (1JBHCC-030625)	6
			180) SR03TP4x084B	FMT+W TP 4x8 (1JB6P6C-040825)	18
			181) SR10MS8x751B	5/16x3" (1ATKMO-31C004)V3000	1
			182) WDGEMINI---	GEMINI WARRANTY CARD	1
			183) WS407x03x09Y	EXT TOOTH W/S. 3m/m	1
			184) LBC06---RD	LABEL 6m/m (VLOT)	4

PARTS LISTS:

XPB-750 230v

Vendor Part #:	Description:	Quantity:
1) 102056543301	SPACER XPM-900	2
2) 102119214705	CARTON XPB-750	1
3) 102260018005	EXT.CARTON XPB-750	1
4) 103012005700	SPACER 1200x570m/m	1
5) 105011108801	HOLDER XPB-1600	2
6) 105032408401	WALL XPB-1600	1
7) 105034608801	SLID PANEL XPB-1600	2
8) 105343431801	TOP COVER XPM-900	1
9) 105443431702	BOTTOM CABI XPB-1600	1
10) 1070KG-010—	M0VEABLE BUSHING KG-010	2
11) 1070YJ-98—	NYLON CLAMPER YJ-98	12
12) 105242608608	XPB-750E BACK BOARD 230V	1
13) 107022—	TUBE 22 m/m XPB-1600	1
14) 107007—	TUBE 7 m/m XPB-1600	3
15) 6000800181—	SPKON PC BOARD XPB1600E/750E	1
16) AL301AL50101	AL301/AL501 H-05XX-F 1.0m/mX3G	1
17) A0016D130—	3P AC INLET R-301SN-M XPM-900	1
18) 1070P0.86401	TUBE 0.864 BLACK	240
19) 106219207603	HEAT SINK 192x76x60 XPB-1600	2
20) 1070SS-6—	SELF RETAINING SPALERS SS-6	2
21) 2SA1943O—0	TR 2SA1943-O	6
22) 2SC5200O—0	TR 2SC5200-O	6
23) 2SA1015GR—T	TR 2SA1015GR T	6
24) 2SC1815GR—T	TR 2SC1815GR T	4
25) 6003501952—	XPB-1600 MAIN PC BOARD T=2oz	1
26) 70000SF14051	DIODE SF14	2
27) 700033050001	ZENER 3.3v 500mw	2
28) 700082050001	ZENER 8.2V 500mw	3
29) 700150050001	ZENER 15V 500mw	1
30) 700150100001	ZENER 15V 1W	2
31) 7001N4004051	DIODE 1N4004	4
32) 7001N4148051	DIODE 1N4148	35
33) MPMSC104100J	MSC .1u 100V 5% T	14
34) MPMSC105063J	MSC 1u 63V SC105J1J T	4
35) RC0030A33005	RESISTORS 3.3 ohm 1/4W T	8
36) RC0031000005	RESISTORS 10 ohm 1/4W T	6
37) RC0031010005	RESISTORS 100 ohm 1/4W T	8
38) RC0031020005	RESISTORS 1 K 1/4W T	7
39) RC0031030005	RESISTORS 10 K 1/4W T	4
40) RC0031040005	RESISTORS 100 K 1/4W T	2
41) RC0031320005	RESISTORS 1.3 K 1/4W T	2
42) RC0031520005	RESISTORS 1.5 K 1/4W T	2
43) RC0031610005	RESISTORS 160 ohm 1/4W T	4
44) RC0032020005	RESISTORS 2 K 1/4W T	5
45) RC0032230005	RESISTORS 22 K 1/4W T	2
46) RC0032240005	RESISTORS 220 K 1/4W T	2
47) RC0032430005	RESISTORS 24 K 1/4W T	5
48) RC0033010005	RESISTORS 300 ohm 1/4W T	2
49) RC0033030005	RESISTORS 30 K 1/4W T	4
50) RC0033040005	RESISTORS 300 K 1/4W T	2
51) RC0033310005	RESISTORS 330 ohm 1/4W T	4
52) RC0033610005	RESISTORS 360 ohm 1/4W T	2
53) RC0035110005	RESISTORS 510ohm 1/4W T	6
54) RC0038220005	RESISTORS 8.2 K 1/4W T	2
55) RC0034740005	RESISTORS 470 K T	2
56) RC0050A10005	RESISTORS 1 ohm 1/2W T	1
57) RC0053030005	RESISTORS 30 K 1/2W T	4
58) RM003001M001	RESISTORS 1M 1% 1/4W T	2
59) RM00301K2001	RESISTORS 1.2K 1% 1/4W T	2
60) RM00301K9101	RESISTORS 1K91 1% 1/4W T	2
61) RM00302K2101	RESISTORS 2.21K 1% 1/4W T	2
62) RM0030A12101	RESISTORS 121 ohm 1% 1/4W T	4
63) RM0030A15001	RESISTORS 150 ohm 1% 1/4W T	4
64) RM00310K0001	RESISTORS 10K 1% 1/4W T	8
65) RM003110K001	RESISTORS 110K 1% 1/4W T	2
66) RM00313K0001	RESISTORS 13K 1% 1/4W T	2
67) RM00324K3001	RESISTORS 24K3 1% 1/4W T	4
68) RM00368K0001	RESISTORS 68 K 1% 1/4W T	4
69) RM00516K5001	RESISTORS 16K5 1% 1/2W T	4
70) TRMPSA42—0	TR MPSA42	4
71) TRMPSA92—0	TR MPSA92	2
72) 105006400001	6.4m/m PIN (805551-BL2)	5
73) 106203003003	RECTIFIER HEAT SINK XPB-1600	1
74) 1070LEDS-6.5	LED SPACER SUPPORT LEDS-6.5	9
75) 7001N5404051	DIODE 1N5404	4
76) 700KBP060002	RECTIFIER KBP06 2A 600V	1
77) 700MP3504W02	RECTIFIER MP3504W 35A 400V	1
78) CCNOA101100K	CERAMIC CAP 100P 100V	6
79) CCZ0A100500K	CERAMIC CAP 10P 500V NPO	2
80) CCZ0A103500Z	CERAMIC CAP 103 500V	6
81) CCZ0A220500K	CERAMIC CAP 22P/500V NPO	2
82) CCZ0A271025K	CERAMIC CAP 270P	4
83) CCZ0A330100K	CERAMIC CAP 33P/100V	2
84) CCZ0A680500K	CERAMIC CAP 68P/500V NPO	4
85) COIL20105T—	COIL 2.0x10x10.5t XPB-750	2
86) ECL04700080M	ELEC CAP 4700u80v	4
87) ECS00100025M	ELEC CAP 100u25v	1
88) ECS00220016M	ELEC CAP 220u16v	6
89) ECS00220025M	ELEC CAP 220u25v	2
90) ECS01000025M	ELEC CAP 1000u25v	1

XPB-1600 230v

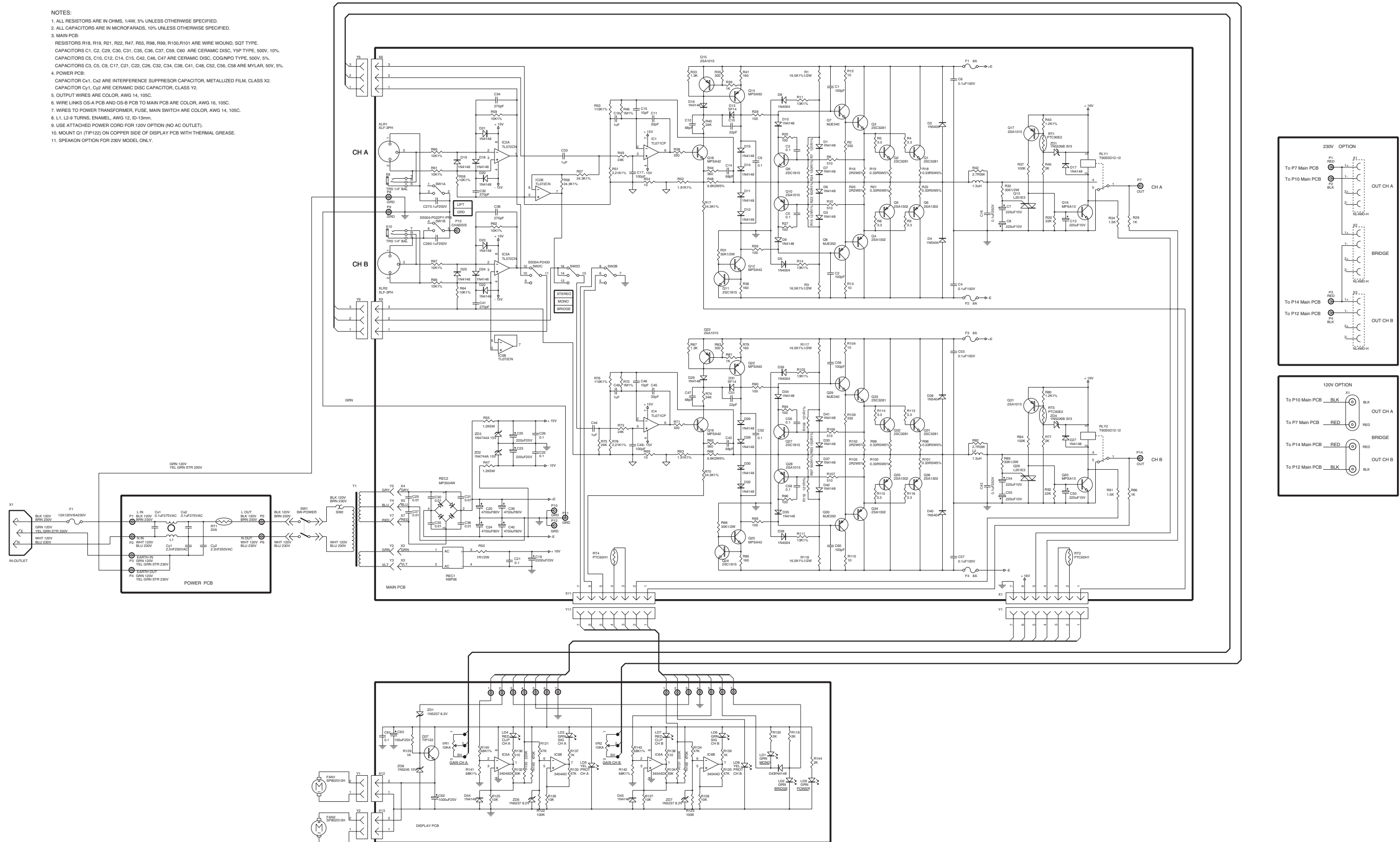
Vendor Part #:	Description:	Quantity:
1) 102056543301	SPACER XPM-900	2
2) 102119214704	CARTON XPB-1600	1
3) 102260018004	EXT.CARTON XPB-1600	1
4) 103012005700	SPACER 1200x570m/m	1
5) 105011108801	HOLDER XPB-1600	2
6) 105032408401	WALL XPB-1600	1
7) 105034608801	SLID PANEL XPB-1600	2
8) 105343431801	TOP COVER XPM-900	1
9) 105443431702	BOTTOM CABI XPB-1600	1
10) 107018206501	CARD BOARD 182x65x1t BLACK	2
11) 1070KG-010—	M0VEABLE BUSHING KG-010	2
12) 1070YJ-98—	NYLON CLAMPER YJ-98	12
13) 105242608609	XPB-1600E BACK BOARD 230V	1
14) 107022—	TUBE 22 m/m XPB-1600	1
15) 107007—	TUBE 7 m/m XPB-1600	3
16) 6000800181—	SPKON PC BOARD XPB1600E/750E	1
17) AL301AL50101	AL301/AL501 H-05XX-F 1.0m/mX3G	1
18) A0016D130—	3P AC INLET R-301SN-M XPM-900	1
19) 106201500801	TO-92 HEAT SINK XPB-1600	4
20) 106201501401	TO-126 HEAT SINK XPB-1600	4
21) 106219207603	HEAT SINK 192x76x60 XPB-1600	2
22) 1070P0.86401	TUBE 0.864 BLACK	240
23) 1070SS-6—	SELF RETAINING SPALERS SS-6	2
24) 2SA1943O—0	TR 2SA1943-O	12
25) 2SC5200O—0	TR 2SC5200-O	12
26) 2SA1015GR—T	TR 2SA1015GR T	6
27) 2SC1815GR—T	TR 2SC1815GR T	4
28) 6003501952—	XPB-1600 MAIN PC BOARD T=2oz	1
29) 70000SF14051	DIODE SF14	2
30) 700033050001	ZENER 3.3v 500mw	2
31) 700082050001	ZENER 8.2V 500mw	3
32) 700150050001	ZENER 15V 500mw	1
33) 700150100001	ZENER 15V 1W	2
34) 7001N4004051	DIODE 1N4004	4
35) 7001N4148051	DIODE 1N4148	35
36) MPMSC104100J	MSC .1u 100V 5% T	14
37) MPMSC105063J	MSC 1u 63V SC105J1J T	4
38) RC0030A33005	RESISTORS 3.3 ohm 1/4W T	8
39) RC0031000005	RESISTORS 10 ohm 1/4W T	6
40) RC0031010005	RESISTORS 100 ohm 1/4W T	8
41) RC0031020005	RESISTORS 1 K 1/4W T	7
42) RC0031030005	RESISTORS 10 K 1/4W T	4
43) RC0031040005	RESISTORS 100 K 1/4W T	2
44) RC0031320005	RESISTORS 1.3 K 1/4W T	2
45) RC0031520005	RESISTORS 1.5 K 1/4W T	2
46) RC0031610005	RESISTORS 160 ohm 1/4W T	4
47) RC0032020005	RESISTORS 2 K 1/4W T	5
48) RC0032230005	RESISTORS 22 K 1/4W T	2
49) RC0032240005	RESISTORS 220 K 1/4W T	2
50) RC0032430005	RESISTORS 24 K 1/4W T	5
51) RC0033010005	RESISTORS 300 ohm 1/4W T	2
52) RC0033030005	RESISTORS 30 K 1/4W T	4
53) RC0033040005	RESISTORS 300 K 1/4W T	2
54) RC0033310005	RESISTORS 330 ohm 1/4W T	4
55) RC0033610005	RESISTORS 360 ohm 1/4W T	2
56) RC0035110005	RESISTORS 510ohm 1/4W T	6
57) RC0038220005	RESISTORS 8.2 K 1/4W T	2
58) RC0031550005	RESISTORS 1.5 M 1/4W T	2
59) RC0050A10005	RESISTORS 1 ohm 1/2W T	1
60) RC0053030005	RESISTORS 30 K 1/2W T	4
61) RM003001M001	RESISTORS 1M 1% 1/4W T	2
62) RM00301K2001	RESISTORS 1.2K 1% 1/4W T	2
63) RM00301K3001	RESISTORS 1.3K 1% 1/4W T	2
64) RM00302K2101	RESISTORS 2.21K 1% 1/4W T	2
65) RM0030A12101	RESISTORS 121 ohm 1% 1/4W T	4
66) RM0030A15001	RESISTORS 150 ohm 1% 1/4W T	2
67) RM0030A16201	RESISTORS 162 ohm 1% 1/4W T	2
68) RM00310K0001	RESISTORS 10K 1% 1/4W T	8
69) RM003110K001	RESISTORS 110K 1% 1/4W T	2
70) RM00324K3001	RESISTORS 24K3 1% 1/4W T	4
71) RM00340K2001	RESISTORS 40K2 1% 1/4W T	4
72) RM00368K0001	RESISTORS 68 K 1% 1/4W T	4
73) RM00523K2001	RESISTORS 23K2 1% 1/2W T	4
74) TRMPSA42—0	TR MPSA42	4
75) TRMPSA92—0	TR MPSA92	2
76) 105006400001	6.4m/m PIN (805551-BL2)	5
77) 106203003003	RECTIFIER HEAT SINK XPB-1600	1
78) 1070LEDS-6.5	LED SPACER SUPPORT LEDS-6.5	9
79) 7001N5404051	DIODE 1N5404	4
80) 700KBP060002	RECTIFIER KBP06 2A 600V	1
81) 700MP3504W02	RECTIFIER MP3504W 35A 400V	1
82) CCNOA101100K	CERAMIC CAP 100P 100V	6
83) CCZ0A100500K	CERAMIC CAP 10P 500V NPO	2
84) CCZ0A103500Z	CERAMIC CAP 103 500V	6
85) CCZ0A220500K	CERAMIC CAP 22P/500V NPO	2
86) CCZ0A271025K	CERAMIC CAP 270P	4
87) CCZ0A330100K	CERAMIC CAP 33P/100V	2
88) CCZ0A680500K	CERAMIC CAP 68P/500V NPO	4
89) COIL20105T—	COIL 2.0x10x10.5t XPB-1600	2
90) ECL06800100M	ELEC CAP 6800u100v	4
91) ECS00100025M	ELEC CAP 100u25v	1
92) ECS00220016M	ELEC CAP 220u16v	6
93) ECS00220025M	ELEC CAP 220u25v	2
94) ECS01000025M	ELEC CAP 1000u25v	1
95) ECS02200025M	ELEC CAP 2200u25v	1
96) FC520CQ203SC	FUSE CLIP CQ-203SC	8

Vendor Part #:	Description:	Quantity:	Vendor Part #:	Description:	Quantity:
91) ECS02200025M	ELEC CAP 2200u25v	1	97) FS520ULC120F	FUSE 5x20 12A	4
92) FC520CQ203SC	FUSE CLIP CQ-203SC	8	98) ICNJM3404AD-	IC NJM3404AD	2
93) FS520ULC080F	FUSE 5x20 8A	4	99) ICTL071CP—	ICTL071CP	2
94) ICNJM3404AD-	IC NJM3404AD	2	100) ICTL072CP—	IC TL072CP	2
95) ICTL071CP—	ICTL071CP	2	101) JS1001025003	BASE 3P 2.5m/m	2
96) ICTL072CP—	IC TL072CP	2	102) JS1001025007	BASE 7P 2.5m/m	2
97) JS1001025003	BASE 3P 2.5m/m	2	103) JS1001R25002	BASE 2P JS-1001R-02	2
98) JS1001025007	BASE 7P 2.5m/m	2	104) LDG050210030	LED 5m/m GREEN	5
99) JS1001R25002	BASE 2P JS-1001R-02	2	105) LDR050410030	LED 5m/m RED	2
100) LDG050210030	LED 5m/m GREEN	5	106) LDY050610030	LED 5m/m YELLOW	2
101) LDR050410030	LED 5m/m RED	2	107) MJ0860250900	CONNOC JACK 086-25-90	2
102) LDY050610030	LED 5m/m YELLOW	2	108) MJCPJ-065—	JACK CPJ-065 XPM-900	2
103) MJ0860250900	CONNOC JACK 086-25-90	2	109) MPMEF104250K	MEF .1u 250V 10%	4
104) MJCPJ-065—	JACK CPJ-065 XPM-900	2	110) NTM3x07x030Y	NUT 3m/m W/S (0J0010-030001)	1
105) MPMEF104250K	MEF .1u 250V 10%	4	111) RC0200A20005	RESISTORS 2 ohm 2W M	4
106) NTM3x07x030Y	NUT 3m/m W/S (0J0010-030001)	1	112) RC0206820005	RESISTORS 6.8 K 2W M	2
107) RC0200A20005	RESISTORS 2 ohm 2W M	4	113) RC0300A27005	RESISTORS 2.7 ohm 3W M	2
108) RC0206820005	RESISTORS 6.8 K 2W M	2	114) RL832—12	832-1C-C-12D XPM-900	2
109) RC0300A27005	RESISTORS 2.7 ohm 3W M	2	115) RT0500222005	2.2 K 5W SQT TYPE	2
110) RL832—12	832-1C-C-12D XPM-900	2	116) RT0500A03305	0.33 ohm 5W SQT TYPE	8
111) RT0500122005	1.2 K 5W SQT TYPE	2	117) SR01MS3x081W	MS 3x8 (1JPHMC-030800)	1
112) RT0500A02205	0.22 ohm 5W SOT TYPE	8	118) SR01TP4x204Y	TP4x20 (1JBH6C-042021)	1
113) SR01MS3x081W	MS 3x8 (1JPHMC-030800)	1	119) SWL—1	SS004-P2430Em-PC10 XPM-900	1
114) SR01TP4x204Y	TP4x20 (1JBH6C-042021)	1	120) SWS—1	SS004-P022 BY-PF8	1
115) SWL—1	SS004-P2430Em-PC10 XPM-900	1	121) TRMJE340—0	MJE340	2
116) SWS—1	SS004-P022 BY-PF8	1	122) TRMJE350—0	MJE350	2
117) TRMJE340—0	MJE340	2	123) TRMPSA13—0	TR MPSA13	2
118) TRMJE350—0	MJE350	2	124) TRTIP122—0	TIP122	1
119) TRMPSA13—0	TR MPSA13	2	125) TRZ0103—0	TRIAC Z0103 MA1A600V	2
120) TRTIP122—0	TIP122	1	126) W20105070052	1015#14 5/70/5 RED XPB-1600	4
121) TRZ0103—0	TRIAC Z0103 MA1A600V	2	127) W20105070058	1015#14 5/70/5 GRAY XPB-1600	4
122) W20105130055	1015#14 5/130/5 GREEN XPB-1600	1	128) W20105070059	1015#14 5/70/5 WHITE XPB-1600	4
123) W20105135205	1015#14 GREEN XPM-900	1	129) W20105130055	1015#14 5/130/5 GREEN XPB-1600	1
124) W20105160051	1015x14 5/160/5 BROWN XPB-1600	2	130) W20105135205	1015#14 GREEN XPM-900	1
125) W20105170208	1015#14 5/170/20 GRAY XPB-1600	1	131) W20105160051	1015x14 5/160/5 BROWN XPB-1600	2
126) W20105185205	1015#14 GREEN XPM-900	1	132) W20105170208	1015#14 5/170/20 GRAY XPB-1600	1
127) W20105320202	1015#14 5/320/20 RED XPB-1600	1	133) W20105185205	1015#14 GREEN XPM-900	1
128) W2070A2200BB	1007#26 MIX XPB-1600	2	134) W20105320202	1015#14 5/320/20 RED XPB-1600	1
129) WS204x10x07W	SPRING W/S.M4-L(2JS100-040050)	1	135) W2070A2200BB	1007#26 MIX XPB-1600	2
130) PTH9M222—E2	PTH9M04BE222TS2F333 XPM-900	2	136) WS204x10x07W	SPRING W/S.M4-L(2JS100-040050)	1
131) PTH9M471—H1	PTH9M04BH471TS2F333 XPM-900	2	137) 6001730470—	TR PC BOARD 171x42 m/m 2oz	2
132) SR01MS3x121B	MS 3x12 BLACK	12	138) MPMEF104250K	MEF .1u 250V 10%	2
133) SR03TP4x084B	FMT+W TP 4x8 (1JBH6C-040825)	8	139) RC0030A33005	RESISTORS 3.3 ohm 1/4W T	12
134) WS132x08x10W	3.2x0.8x10 (2IFA032-081000)	8	140) RT0500A03305	0.33 ohm 5W SQT TYPE	12
135) WS203x08x05W	SPRING W/S.M3-L(2JS100-030050)	12	141) PTH9M222—E2	PTH9M04BE222TS2F333 XPM-900	2
136) 6000830380—	XPB-1600 83x38 m/m P.BOARD 2oz	1	142) PTH9M471—H1	PTH9M04BH471TS2F333 XPM-900	2
137) NTC0120L—	NTC 20A SCK-0120 XPM-900	2	143) SR01MS3x121B	MS 3x12 BLACK	24
138) W2010G360051	1015#14 250R+360/5 BROWN	1	144) SR03TP4x084B	FMT+W TP 4x8 (1JBH6C-040825)	12
139) W2010G440056	2015#14 250R+440/5 BLUE	1	145) WS132x08x10W	3.2x0.8x10 (2IFA032-081000)	20
140) W20110120101	1015#14 BROWN XPM-900E	1	146) WS203x08x05W	SPRING W/S.M3-L(2JS100-030050)	24
141) W20110120106	1015#1410/120/10 BLUE XPB1600E	1	147) 6000830380—	XPB-1500 83x38 m/m P.BOARD 2oz	1
142) FH63032I—	FUSE HOLD HTB-32I VDE TYPE	1	148) NTC0120L—	NTC 20A SCK-0120 XPM-900	2
143) FS630ULC060F	FUSE 6x30 FAST/GLASS U/C 6A	1	149) W2010G360051	1015#14 250R+360/5 BROWN	1
144) SPKONL4MDH01	SPEAKER JACK XPM-900	3	150) W2010G440056	2015#14 250R+440/5 BLUE	1
145) SR01MS3x061B	MS 3x6 BLACK(1JBHMC-030604)	4	151) W20110120101	1015#14 BROWN XPM-900E	1
146) SR01MS4x061W	MS 4x6 (PLATING)	1	152) W20110120106	1015#1410/120/10 BLUE XPB1600E	1
147) SR01TP3x103B	TP 3x10 BLACK (1JBHCC-031024)	10	153) FH63032I—	FUSE HOLD HTB-32I VDE TYPE	1
148) SR03TP4x084B	FMT+W TP 4x8 (1JBH6C-040825)	8	154) FS630ULC100F	FUSE 6x30 FAST/GLASS U/C 10A	3
149) W2010112510A	1015#14 4.5+125/10 G&Y XPB1500	1	155) SPKONL4MDH01	SPEAKER JACK XPM-900	3
150) W20110120101	1015#14 BROWN XPM-900E	1	156) SR01MS3x061B	MS 3x6 BLACK(1JBHMC-030604)	4
151) WS408x04x10Y	EXT TOOTH W/S. 4m/m	1	157) SR01MS4x061W	MS 4x6 (PLATING)	1
152) LBC08—WH	LABEL 8 m/m (GND)	1	158) SR01TP3x103B	TP 3x10 BLACK (1JBHCC-031024)	10
153) 105142407902	FRONT PANEL XPB-750	1	159) SR03TP4x084B	FMT+W TP 4x8 (1JBH6C-040825)	8
154) KB1819BL0001	KNOB 18x19 BLACK XPM-900	2	160) W2010112510A	1015#14 4.5+125/10 G&Y XPB1500	1
155) SR01TP3x063B	TP 3x6 BLACK (1JBHCC-030625)	5	161) W20110120101	1015#14 BROWN XPM-900E	1
156) SWP—9	R22-22B-11B XPM-900	2	162) WS408x04x10Y	EXT TOOTH W/S. 4m/m	1
157) VR16A1031501	16K4x1 10Ax1 41K L-15 XPM-900	1	163) LBC08—WH	LABEL 8 m/m (GND)	1
158) W5010A370032	2852#26 RED XPM-900	1	164) 105142407901	FRONT PANEL XPB-1600	1
159) W5010A460038	2852#26 GRAY XPM-900	1	165) KB1819BL0001	KNOB 18x19 BLACK XPM-900	2
160) FAD012080001	SP802512H L=350m/m+XH	2	166) SR01TP3x063B	TP 3x6 BLACK (1JBHCC-030625)	5
161) FTSF-006—	PLASTIC FOOT SF-006	4	167) SWP—9	R22-22B-11B XPM-900	1
162) IBXPB1600-GI	MANUAL XPB-1600 (GEMINI)	1	168) VR16A1031501	16K4x1 10Ax1 41K L-15 XPM-900	2
163) NTM8x17x080B	NUT 5/16 (0A0220-310005)	1	169) W5010A370032	2852#26 RED XPM-900	2
164) PB420215—	PLOY BAG 8.5"x16.5"X0.05	1	170) W5010A460038	2852#26 GRAY XPM-900	1
165) PT120—6	TRANS.120m/m XPB-750E 230V	1	171) FAD012080001	SP802512H L=350m/m+XH	2
166) SR01MS3x081W	MS 3x8 (1JPHMC-030800)	1	172) FTSF-006—	PLASTIC FOOT SF-006	4
167) SR01MS3x121B	MS 3x12 BLACK	2	173) IBXPB1500-GI	MANUAL XPB-1600 (GEMINI)	1
168) SR01MS4x082B	MST 4x8 BLACK (1JBH1C-040824)	20	174) NTM8x17x080B	NUT 5/16 (0A0220-310005)	1
169) SR01TP35x84B	TP 3.5x8 (1JPH6C-3F0824)	2	175) PB420215—	PLOY BAG 8.5"x16.5"X0.05	1
170) SR01TP3x063B	TP 3x6 BLACK (1JBHCC-030625)	6	176) PT120—6	TRANS. 160m/m XPB-1600E 230V	1
171) SR03TP4x084B	FMT+W TP 4x8 (1JBH6C-040825)	14	177) SR01MS3x081W	MS 3x8 (1JPHMC-030800)	1
172) SR10MS8x751B	5/16x3" (1ATKMO-31C004)	1	178) SR01MS3x121B	MS 3x12 BLACK	2
173) WDGEMINI—	GEMINI WARRANTY CARD	1	179) SR01MS4x082B	MST 4x8 BLACK (1JBH1C-040824)	20
174) WS407x03x09Y	EXT TOOTH W/S. 3m/m	1	180) SR01TP35x84B	TP 3.5x8 (1JPH6C-3F0824)	2
175) LBC06—RD	LABEL 6 m/m (VLOT)	4	181) SR01TP3x063B	TP 3x6 BLACK (1JBHCC-030625)	6
			182) SR03TP4x084B	FMT+W TP 4x8 (1JBH6C-040825)	18
			183) SR10MS8x751B	5/16x3" (1ATKMO-31C004)	1
			184) WDGEMINI—	GEMINI WARRANTY CARD	1
			185) WS407x03x09Y	EXT TOOTH W/S. 3m/m	1
			186) LBC06—RD	LABEL 6 m/m (VLOT)	3

XPB-750 Schematic

NOTES:

1. ALL RESISTORS ARE IN OHMS, 1/4W, 5% UNLESS OTHERWISE SPECIFIED.
2. ALL CAPACITORS ARE IN MICROFARADS, 10% UNLESS OTHERWISE SPECIFIED.
3. MAIN PCB:
RESISTORS R18, R19, R21, R22, R47, R55, R98, R99, R100, R101 ARE WIRE WOUND, SQT TYPE.
CAPACITORS C1, C2, C29, C30, C31, C35, C36, C37, C39, C60 ARE CERAMIC DISC, YSP TYPE, 500V, 10%.
CAPACITORS C5, C10, C12, C14, C15, C42, C46, C47 ARE CERAMIC DISC, COG/NPO TYPE, 500V, 5%.
CAPACITORS C3, C5, C9, C17, C21, C22, C26, C32, C34, C38, C41, C48, C52, C56, C58 ARE MYLAR, 50V, 5%.
4. POWER PCB:
CAPACITOR Cx1, Cx2 ARE INTERFERENCE SUPPRESSOR CAPACITOR, METALLIZED FILM, CLASS X2.
CAPACITOR Cx1, Cx2 ARE CERAMIC DISC, CAPACITOR, CLASS Y2.
5. OUTPUT WIRES ARE COLOR, AWG 14, 105C.
6. WIRE LINKS OS-A PCB AND OS-B PCB TO MAIN PCB ARE COLOR, AWG 16, 105C.
7. WIRES TO POWER TRANSFORMER, FUSE, MAIN SWITCH ARE COLOR, AWG 14, 105C.
8. L1, L2-9 TURNS, ENAMEL, AWG 12, ID-13mm.
9. USE ATTACHED POWER CORD FOR 120V OPTION (NO AC OUTLET).
10. MOUNT Q1 (TIP122) ON COPPER SIDE OF DISPLAY PCB WITH THERMAL GREASE.
11. SPEAKON OPTION FOR 230V MODEL ONLY.



XPB-1600 Schematic

- NOTES:
1. ALL RESISTORS ARE IN OHMS, 1/4W, 5% UNLESS OTHERWISE SPECIFIED.
 2. ALL CAPACITORS ARE IN MICROFARADS, 10% UNLESS OTHERWISE SPECIFIED.
 3. MAIN PCB:
RESISTORS R18, R19, R21, R22, R47, R55, R86, R89, R100, R101 ARE WIRE WOUND, SQT TYPE.
CAPACITORS C1, C2, C29, C30, C31, C35, C36, C37, C59, C60 ARE CERAMIC DISC, Y5P TYPE, 500V, 10%.
CAPACITORS C5, C10, C12, C14, C15, C42, C46, C47 ARE CERAMIC DISC, COGNPO TYPE, 500V, 5%.
CAPACITORS C3, C5, C9, C17, C21, C22, C26, C32, C34, C36, C41, C48, C52, C56, C58 ARE MYLAR, 50V, 5%.
 4. OSA PCB:
RESISTORS R1, R2, R3, R4, R5, R6 ARE WIRE WOUND, SQT TYPE.
 5. POWER PCB:
CAPACITOR Cx1, Cx2 ARE INTERFERENCE SUPPRESSOR CAPACITOR, METALLIZED FILM, CLASS X2.
CAPACITOR Cy1, Cy2 ARE CERAMIC DISC CAPACITOR, CLASS Y2.
 6. OUTPUT WIRES ARE COLOR, AWG 14, 105C.
 7. WIRE LINKS OS-A PCB AND OS-B PCB TO MAIN PCB ARE COLOR, AWG 16, 105C.
 8. WIRES TO POWER TRANSFORMER, FUSE, MAIN SWITCH ARE COLOR, AWG 14, 105C.
 9. L1, L2-9 TURNS, ENAMEL, AWG 12, ID-13mm.
 10. USE ATTACHED POWER CORD FOR 120V OPTION (NO AC OUTLET).
 11. MOUNT Q1 (TIP122) ON COPPER SIDE OF DISPLAY PCB WITH THERMAL GREASE.
 12. SPEAKER OPTION FOR 230V MODEL ONLY.

