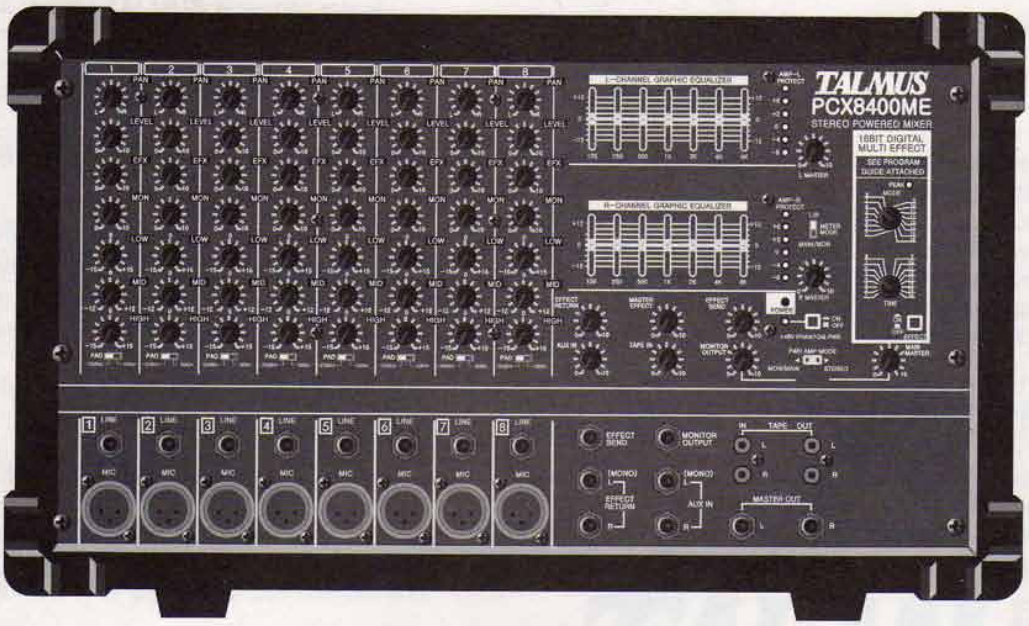
TALMUS

POWERED MIXER



PCX6400ME
6 CHANNEL POWERED MIXER-AMPLIFIER

PCX8400ME
8 CHANNEL POWERED MIXER-AMPLIFIER

OWNER'S MANUAL

PCX-Series
POWERED MIXER

Congratulations !

You have just purchased one of the finest powered mixers on the market today. This unit was developed using expertise of professional sound engineer and working musicians.You will find your TALMUS powered mixer has superior performance and greater flexibility than any other powered mixer in its price range.
Read this manual carefully to get the most out of your unit.
Thanks for selecting TALMUS as your choice in powered mixers.

Features

PCX8400ME, PCX6400ME.STEREO POWERED MIXERS

Choice of 6 channel (PCX6400ME)or 8 channel (PCX8400ME) powered mixer-amplifier

. Top of the line performance and operating flexibility and convenience

. Built in selectable 16 mode, 128 program digital stereo signal processing (DSP) for the widest possible choice of different reverb and multi-effects delay

. Dual 200 watt(@ 4 Ohms) amplifier can both mains and monitors.

. Each channel includes stereo pan, effects and level controls, 3 band EQ and signal pad switches

. 7 band stereo master graphic EQ's

. Selectable 48V phantom power on mic inputs

. 5 LED stereo level indicator

. Switchable level meter (L,R/Monitor, Main)

. Switchable power amplifier (Right/Monitor, Left/Main)

. Left, right and main master level controls

. Master section also includes:stereo effect send, return and master, aux in, tape in and monitor out level controls; aux stereo input; stereo mix output; stereo tape input and stereo recording output

. All level controls have center detents

. Effect send and monitor output

. 20 dB pad switch on each input

. Thermal and short circuit protection

. Rugged road carrying case with reinforced corners and handles

PRECAUTIONS

. To prevent or shock hazard, do not expose this appliance to rain or moisture.
. To prevent the risk of electric shock, do not remove cover(or back) . No user serviceable parts inside. Refer servicing to qualified servicing to qualified service personnel.
. Always power off before making connections.
. Always use the correct AC power source.
. Do not touch the heat sink when this powered mixer in use. It can get very hot.
. Keet this powered mixer away from locations with excessive heat, humidity, dust or vibration.

PROTECTION CIRCUITS.

This powered mixer is built with a temperature limiting circuit, a short circuit current limiting circuit (to protect the power amplifier against incorrect loading), a power on and off anti-thump circuit, and a DC protection to prevent any damage to the speaker system being used.
You will be notified of such a protection via the LED indicator POWER AMP-L AMP-R PROTECT.

The temperature limiting circuit, if trigger, will restore operation when the unit has cooled to a normal operating temperature.

To prevent such as abnormal condition, the powered mixer should ideally be situated on a hard, flat, stable, surface, with correct speaker matching, correct power source, and with adequate air circulation around the unit.

TALMUS

The operating instructions in this owners manual are for both the PCX6400ME and PCX8400ME powered mixers. For brevity, the copy refers to the PCX8400ME only (as this model has more inputs) but the instructions apply to the PCX6400ME as well.
The primary differences between there 2 models is as follows:

. PCX6400ME
6 channels of inputs and controls

. PCX8400ME
8 channels of inputs and controls

CHANNEL INPUT SECTION CONTROLS

1 . PAN
This control allows you to set the position of the signal in the stereo image. When in the central position the channel signal is routed equally to both L & R outputs.

2 . LEVEL
This adjusts the output level for each channel.

3 . EFX(EFFECT)
This control allows you to adjust the amount of signal that is sent to the EFFECT bus. The signal that of the EFX bus passes through the EFFECT section and built-in effect, and is sent to the external effect device connected to the EFFECT SEND jack (35).

Note : The signal is sent to the EFX bus from a location after the LEVEL pot (2) of each channel. This mean that the amount of signal that is sent to the EFX bus will be affected not only by the setting of the effect control, but the setting of the level control.

4 . MON(MONITOR)
This control allows you to adjust the amount of signal sent to the MONITOR bus. The signal of the MONITOR bus is sent to the POWER AMP 2 A/B jacks(only if the PWR AMP MODE selector switch (30) is in the MON/MAIN position) and to the MONITOR OUTPUT jack (37).

Note: The signal is sent to the MONITOR bus from a location before the LEVEL control (2) of each channel. This means that will not affected by the setting of the LEVEL control.

5. LOW
This control allows the adjustment of the low frequencies with a cut or boost of ±15dB from the flat position.

6. MID(MIDDLE)
This control allows the adjustment of the middle frequencies with a cut or boost of ±12 dB from the flat position.

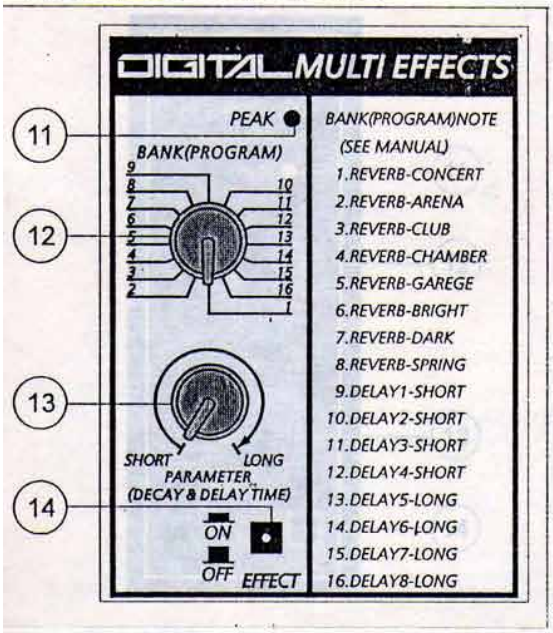
7. HIGH
This control allows the adjustment of high frequencies with a cut or boost of ±15dB from the flat position.

8. PAD
This switch attenuates the input signal by 20dB. When connecting a line level device to channels, or if the mic input is distorted, set this switch to the position of -20dB.

9. LINE
This is a high impedance, unbalanced line, 3-pole, 1/4"(stereo) TRS jack input suitable for stereo line level devices such as synthesizers, electric guitars, rhythm boxes

10. MIC
This is a balanced XLR input socket suitable for the connection of low impedance microphones, either balanced or unbalanced.

DIGITAL EFFECT SECTION



11. PEAK

This indicator allows you to monitor the level of the digital effect signal which is output from the built-in 16bit digital effect. To avoid distortion, adjust the MASTER EFFECT (25) so that the indicator lights only occasionally on peak levels.

12. MODE

Select the effect MODE for the built-in digital effect according to the PROGRAM GUIDE on page 9 of this manual.

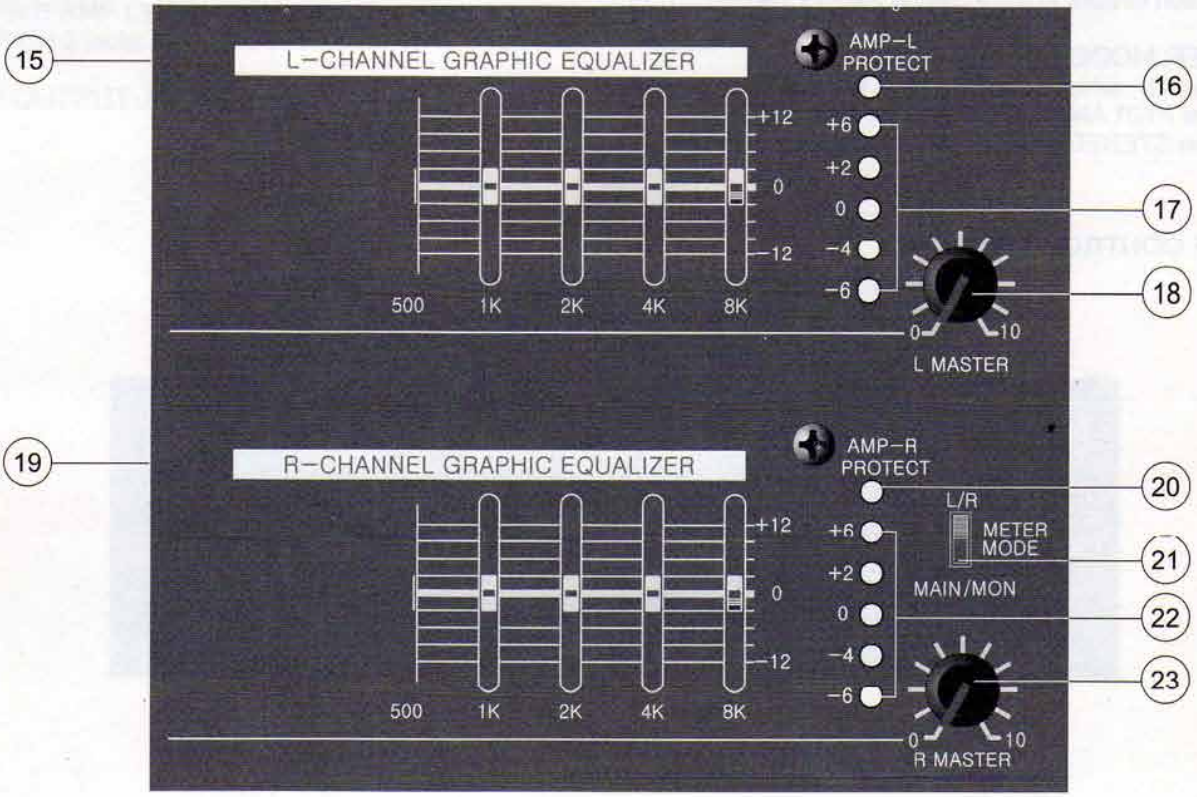
13. TIME

Select the effect TIME for the built-in digital effects according to the PROGRAM GUIDE on page 9 of this manual.

14. EFFECT ON/OFF switch

To use the built-in effects, press this switch to ON.

7- BAND STEREO GRAPHIC EQUALIZER SECT



15. L-CHANNEL GRAPHIC EQUALIZER

The 7-band L-CHANNEL GRAPHIC EQUALIZER allows you to adjust the frequency response of the L-CHANNEL and MAIN bus signal, providing a maximun of ±12dB of cut and boost for each frequency band from the flat position.
This graphic equalizer effects both the MAIN bus signal that is output to the speakers and the level signal which is output from the MIX OUT jacks (41).

16. AMP-L PROTECT

This indicator shows the operation of the protection circuits in the POWER AMP-L section.

17. LED VU METER

This will display the relative output level of the Left Master Channel. It also will display the relative output level of the speakers connected to the POWER AMP CH1 jacks(only if the PWR AMP MODE selector switch (30) is the MON/ MAIN POSITION).

18. L-MASTER

This controls the final level of the Left Master Channel bus. This control allows you to:

. Set the amount of the Master Left signal sent to the internal left power amplifier.

. Set the amount of the Master Left signal sent to external power amplifier connected to the MIX OUT jacks (41) .

19. R-CHANNEL GRAPHIC EQUALIZER

The 7-band R-CHANNEL GRAPHIC EQUALIZER allows you to adjust the frequency response of the R-CHANNEL bus, providing a maximum of ±12dB of cut and boost for each frequency band from the flat position.

20. APM-R PROTECT

This indicator shows the operation of the protection circuits in the POWER AMP-R section.

21. METER MODE

This switch , when selected in the L/R position, and the PWR AMP MODE selector switch (30) is in the STEREO position, will enable channels of the UV METER tol display the relative output level of the Left and Right Master channels.

When this switch is in the MAIN/MON position, and the PWR AMP MODE selector switch (30) is in the MON/MAIN position, the L-CHANNEL VU METER will display the relative output level of the MONITOR bus that is sent to the speakers connected to the POWER AMP CH 2 jacks, and the R-CHANNEL VU METER will display the relative output level of the MAIN bus that is sent to the speakers connected to the POWER AMP CH 1 jacks.

22. LED VU METER

This will display the relative output level of the Right Master Channel.
It also will display the relative output level of the MAIN bus that is sent to the speakers connected to the POWER AMP 1 A/B jacks(only if the PWR AMP MODE selector switch (30) is in the MON/MAIN position.)

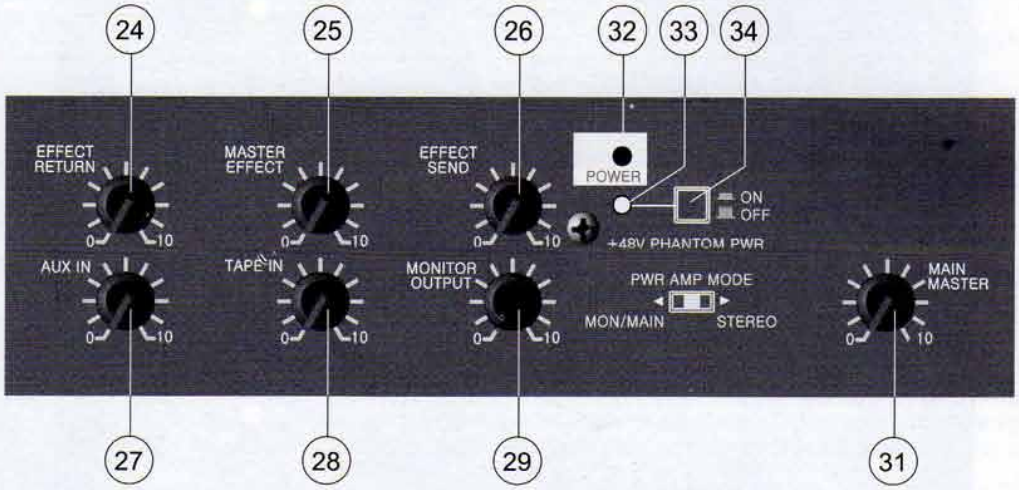
23. R-MASTER

This controls the final level of the Right Master Channel bus. This control allows you to ;

.Set the amount of the Master Right signal sent to the internal right power amplifier.

.Set the amount of the Master Right signal sent to the external power amplifier connected to the MIX OUT jacks (41) .

MASTER CONTROL SECTION



24. EFFECT RETURN

This adjusts the level of the effect signal that is sent from the external effect device connected to the EFFECT RETURN L,R jacks (36)

25. MASTER EFFECT

This adjusts the level of the effect signal from the built-in 16bit digital effect.

26 .EFFECT SEND

This adjusts the level of the input channel signal to the external effect device connected to the EFFECT SEND jacks (35)

27. AUX IN

This adjusts the amount of signal that is sent from the external device connected to AUX IN L,R jacks (38) .

28. TAPE IN

This adjusts the amount of signal that is sent from the external tape player connected to TAPE IN L,R jacks (39) .

29. MONITOR OUT

This adjusts the final level of the MONITOR bus. If affects both the MONITOR bus signal which is output to the speakers connected to the POWER AMP CH 2, and the external monitor amplifier connected to the MONITOR OUTPUT jacks (37) (only if the PWR AMP MODE selector switch (30) is in the MON/MAIN position.)

30. POWER AMP MODE

This selection allows you to select the signal that will be output from the built-in dual channel amplifier, and to select the STEREO, and MONITOR/MAIN mode.

Select one of the following three settings to specify the signals that will be output from POWER AMP CH 1, CH 2.

.STEREO

With this setting, the two power amp channels can be used independently.
The MAIN bus signal will be output from the POWER AMP CH 1 jacks and from the POWER AMP CH 2 jacks.

.MON/MAIN

With this setting, the MONITOR and MAIN section can be used independently.
The MONITOR bus signal will be output from the POWER AMP CH 2 jacks, and the MAIN bus signal will be output from the POWER AMP CH 1 jacks.

31. MAIN MASTER

This adjusts the final level of the MAIN bus that is sent to the speakers connected to the POWER AMP CH 1, CH 2.

32. POWER LED

This red LED will illuminate when the unit is switched on.

33. PHANTOM POWER LED

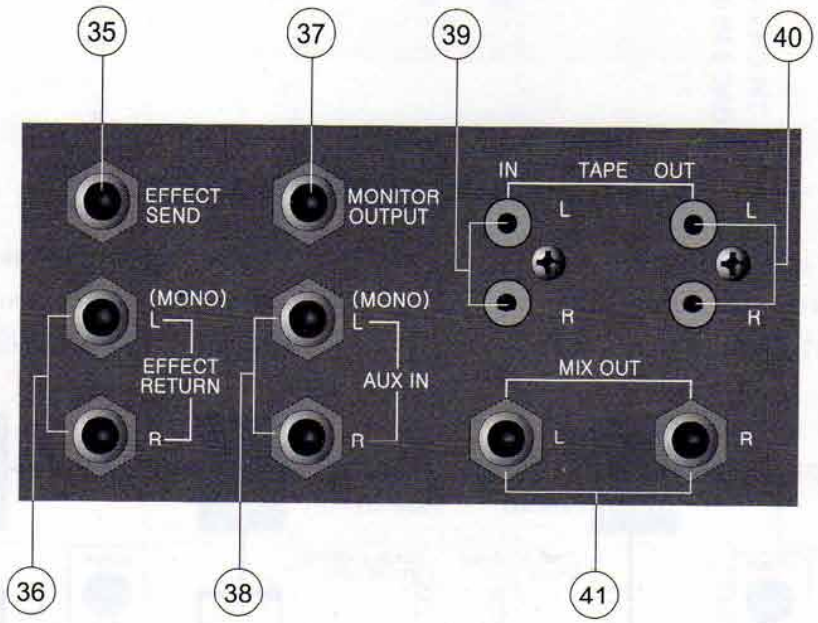
This LED will illuminate when the PHANTOM POWER switch (34) is depressed to on.

34. PHANTOM POWER ON/OFF SWITCH

When this switch is depressed +48V of phantom power will be supplied to all channels.

NOTE : DO NOT TURN ON PHANTOM POWER IF THERE ARE NO MICROPHONES PLUGGED IN AS THIS MAY DAMAGE THE SPEAKERS !

INPUT/ OUTPUT JACKS



35. EFFECT SEND JACK

This jack socket provides a mono mixed effects signal from the input channels to an external effects unit.
The signal adjusted by the EFX (3) control of each channel will be sent to the EFFECT bus, its level adjusted by the EFFECT SEND (26) control, and output from this jack.

36. EFFECT RETURN JACKS

These jack sockets will accept the return signal from on external effects unit.
The return signal is adjusted by the EFFECT RETURN (24) control.

37. MONITOR OUT jack

This jack socket provides a normal line level signal for stage monitoring purpose, its level adjusted by the MONITOR OUT (29) control.

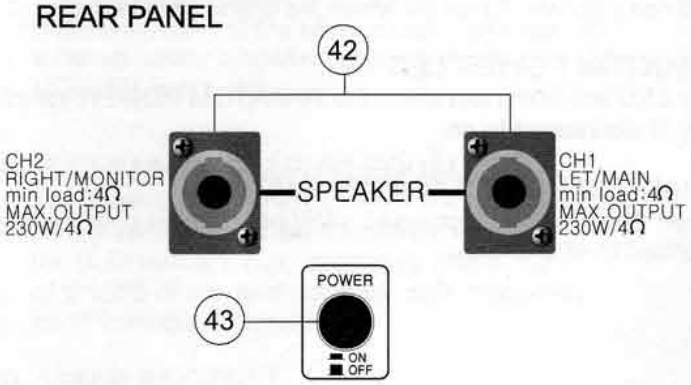
38. AUX IN jacks

These jack will accept the signal from an external device with monaural output such as a CD player. Its level is adjusted by the AUX IN (27) control.

39. TAPE IN L,R jacks

These jack sockets will accept the signal from an external device with a stereo output such as a cassette recorder. Its level is adjusted by the TAPE IN (28) control.

REAR PANEL



40. TAPE OUT L,R jacks

These jack sockets will accept an external cassette tape recorder for recording purpose.

41. MIX OUT jacks

Use these jacks to connect to on extermall power amplifier if extra output power for a larger, P.A. system is required.

If you wish to use the two channels independently, but only connect a speaker to the CH 1 or CH 2, use a 4~5 ohms speaker. When using the CH 1 and CH 2 jacks simultaneously, connect 8~16 ohms speakers.

42. SPEAKER OUTPUT jacks (POWER AMP CH 1, POWER AMP CH 2.)

Speakers can be connected to these jacks. This powered mixer contains a two-channel power amp, two channels can be used independently(maximum power output 200W+200W).

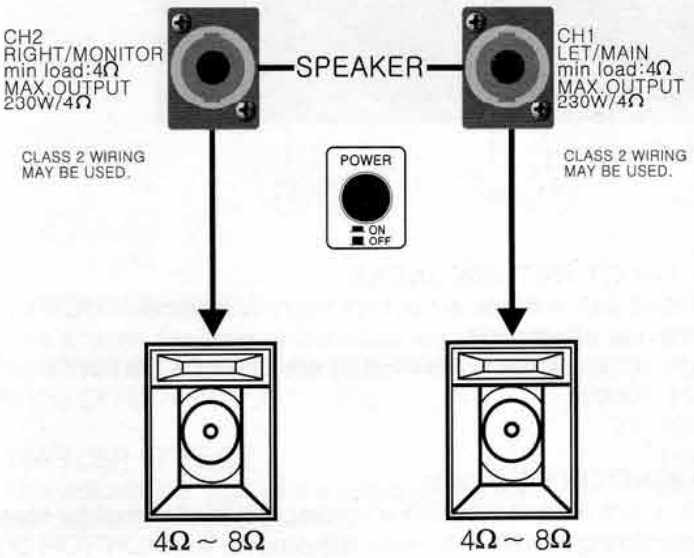
If the two channels are used independently, two speakers can be connected to the POWER AMP CH 1 jacks and two more to the POWER AMP CH 2 jacks, for a total of four speakers.

43. POWER ON/OFF SWITCH

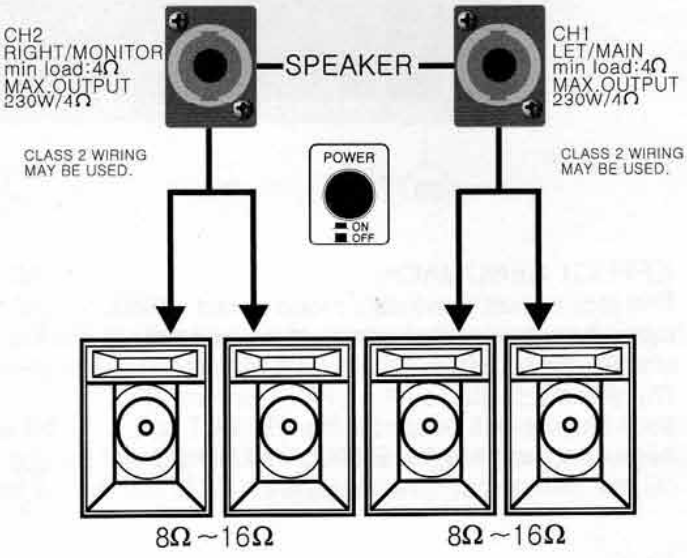
This switch turns the mains power to the unit on or off.

STEREO MODE CONNECTION EXAMPLE

Connectig one speaker to either the speaker output jack of CH1 and CH2



Connectig two speakers to either the speaker output jack of CH1 and CH2



SPECIFICATIONS

MIXER & MASTER SECTION

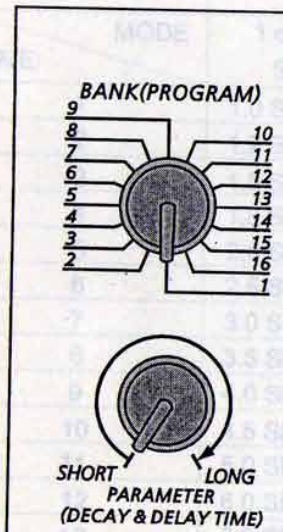
TEST ITEM	TEST SEC	TEST CONDITION	OUTPUT	SPEC	LIMIT
INPUT SENSITIVITY	MIC	CHANNEL ALL EQ CENTER, MON/EFX LEVEL CONTROL MAX	MIX OUT: +4dB AT 1 KOHM LOAD	-55dB	±2dB
	LINE	CHANNEL PADS SWITCH AT-30 dB POINT		-30dB	± 2dB
	EFX RTN	MASTER LEVEL CONTROL MAX		-10dB	± 2dB
	AUX IN	MASTER AUX, EFX RTN, TAPE IN LEVEL CONTROL MAX		-10dB	± 2dB
	TAPE IN	MASTER EQ VR ALL CENTER		-10dB	± 2dB
OUT PUT LEVEL	MIX OUT	OUTPUT AT BEFORE CLIPPING POINT	ALL MAX OUTPUT	+20dBu	± 2dB
	MONITOR	ALL OUT IMPEDANCE IS 1 KOHM LOAD		+20dBu	± 2dB
	EFX SEND			+20dBu	± 2dB
	REC OUT			+20dBu	± 2dB
CHANNEL TONE CONTROL	HIGH	12KHZ	MIX OUT	±15dB	± 2dB
	MID	2.5KHZ		±12dB	± 2dB
	LOW	80HZ		±15dB	± 2dB
MASTER EQUALIZATION		125, 250, 500, 1K, 2K, 4K, 8KHZ EQ SLIDE VR BOOST/CUT	MIX OUT	±12dB	± 2dB
FREQUENCY RESPONSE	MIX OUT	20HZ-20KHZ AT 1KOHM LOAD	ALL +4dB	0dB	± 2dB
	MON OUT			0dB	± 2dB
	EFX SEND			0dB	± 2dB
	REC OUT			0dB	± 2dB
THD	MIX OUT	20HZ-20KHZ AT 1KOHM LOAD	ALL +4dB	0.06%	0.01%
	MON OUT			0.06%	0.01%
	EFX SEND			0.06%	0.02%
	REC OUT			0.06%	0.02%
HUM & NOISE	MIX OUT	CHANNEL ALL LEVEL VR MAX		-45dB	± 3dB
	MON OUT	CHANNEL TONE CONTROL VR CENTER		-53dB	± 3dB
	EFX SEND	MASTER ALL LEVEL VR MAX		-55dB	± 3dB
	REC OUT	MASTER ALL EQ VR CENTER		-55dB	± 3dB
	MIX OUT	CHANNEL & MASTER LEVEL VR ALL MIN		-75dB	± 3dB
	MON OUT	CHANNEL TONE CONTROL VR CENTER		-85dB	± 3dB
	EFX SEND	MASTER ALL EQ VR CENTER		-90dB	± 3dB
	REC OUT	ALL OUT IMPEDANCE IS 1 KOHM LOAD		-90dB	± 3dB
PHANTOM POWER	MIC	CH1-8 MIC INPUT		DC +48VOLT	± 2V

POWER AMP SECTION

TEST ITEM	TEST SEC	TEST CONDITION	OUT PUT	SPEC	LIMIT
INPUT SENSITIVITY	AMP - 1	AMP OUTPUT : 200WATTS AT 4 OHM LOAD	SPEAKER	+4dBM	±2dB
	AMP - 2		JACK	+4dBM	±2dB
OUT PUT LEVEL	AMP - 1	IMP : 4 OHM LOAD BEFORE CLIPPING	SPEAKER	200 WATTS	
	AMP - 2	THD : 0.5%	JACK	200 WATTS	
	AMP - 1	IMP : 8 OHM LOAD BEFORE CLIPPING	SPEAKER	132 WATTS	
	AMP - 2	THD : 0.5%	JACK	132 WATTS	
	BRIDGE	IMP : 8 OHM LOAD BEFORE CLIPPING	BRD SPK	400 WATTS	
FREQUENCY RESPONSE	AMP - 1	OUTPUT : 1 WATTS AT 4 OHM LOAD	SPEAKER	0dB/-2dB	±1dB
	AMP - 2	20HZ - 20KHZ	JACK	0dB/-2dB	±1dB
T.H.D	AMP - 1	AMP OUTPUT :200 WATTS 4 OHM LOAD	SPEAKER	0.50%	0.10%
	AMP - 2		JACK	0.50%	0.10%
POWER BANDWIDTH	AMP - 1	OUTPUT : 200 WATTS 4 OHM LOAD	SPEAKER	0dB/-3dB	±1dB
	AMP - 2	FREQUENCY : 20HZ - 20KHZ	JACK	0dB/-3dB	±1dB
DAMPING FACROR	AMP - 1	OUTPUT : 200 WATTS 4 OHM LOAD	SPEAKER	110	
	AMP - 2	FREQUENCY : 100HZ	JACK	110	
SLEW RATE	AMP - 1	I KHZ INPUT	SPEAKER	25V/USEC	
	AMP - 2		JACK	25V/USEC	
HUM & NOISE	AMP - 1	POWER AMP ONLY	SPEAKER	-85dB	
	AMP - 2	INPUT LINE SHORTED	JACK	-85dB	
	AMP - 1	CHANNEL & MASTER ASS'Y	SPEAKER	-45dB	
	AMP - 2	ALL LEVEL VR MAX, ALL EQ FLAT	JACK	-45dB	

NOTE:For improvement purpose, specifications and deigns are subject to change without notice.

MULTI EFFECTS PROGRAM CHART

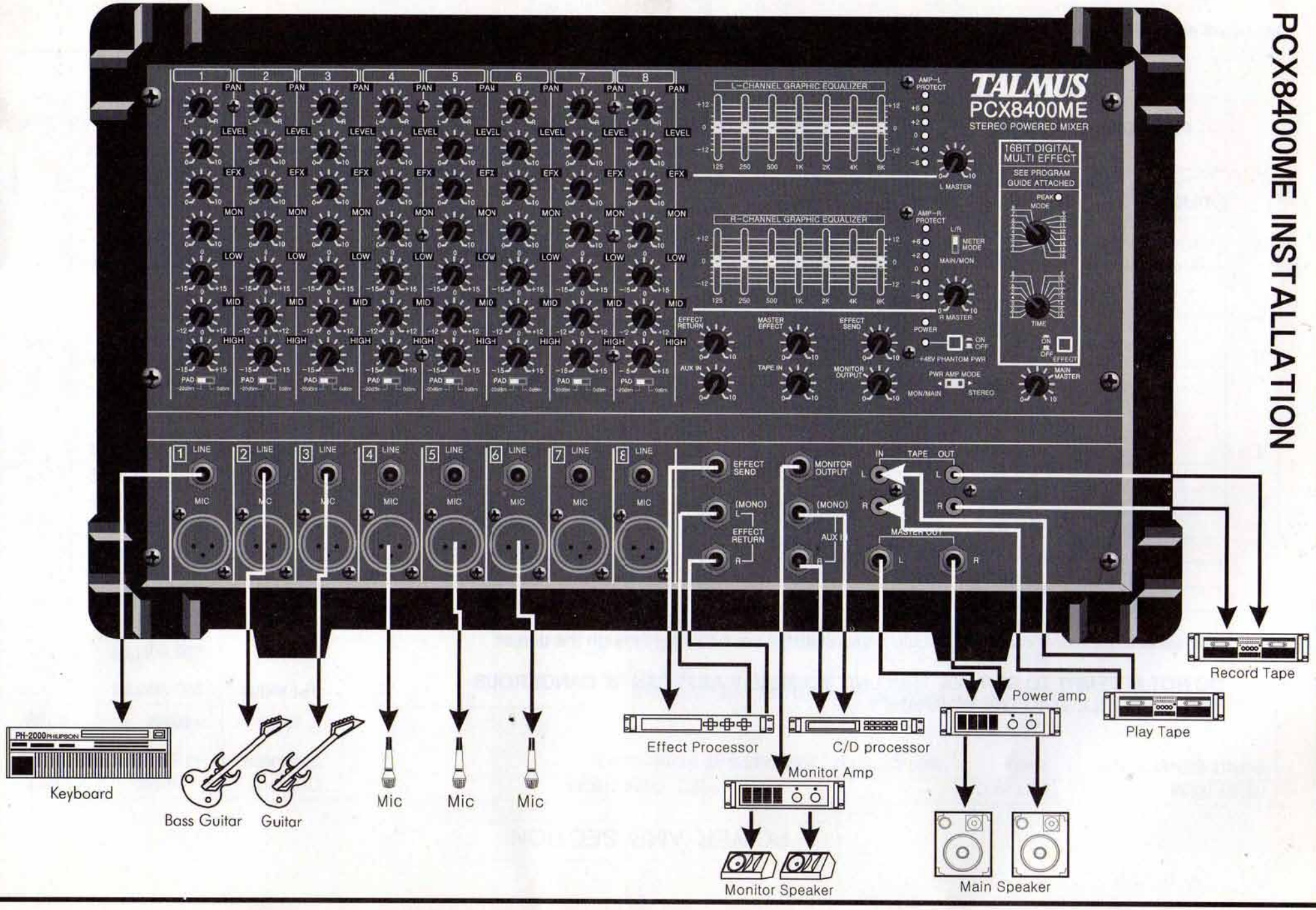


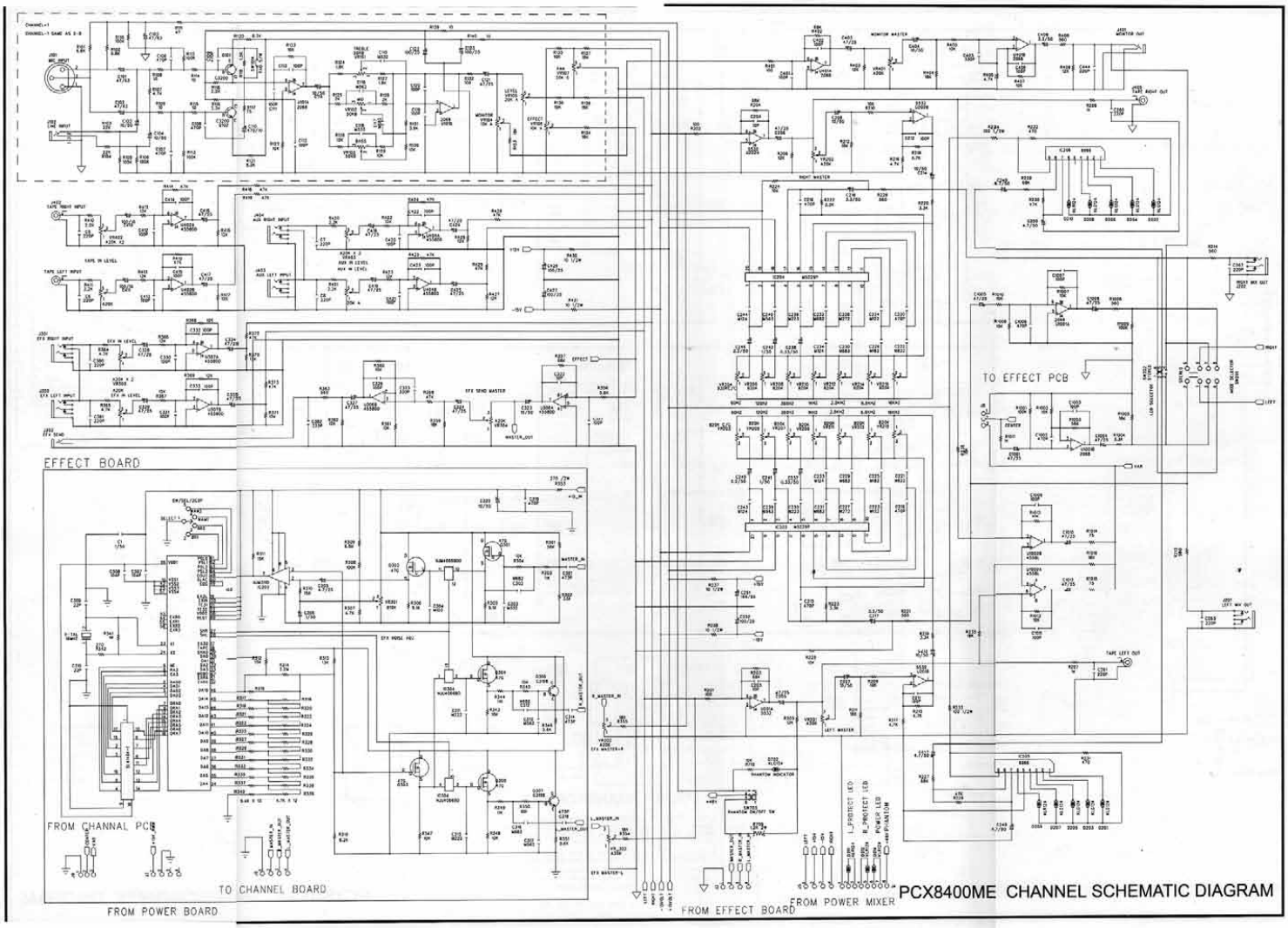
BANK NO.	EFFECT(CHARACTER)	DESCRIPTION
1	REVERB-CONCERT	SHOE BOX TYPE CONCERT HALL
2	REVERB-ARENA	BIG ARENA, DOMED STADIUM WITH HIGH DAMPING
3	REVERB-CLUB	LARGE CLUB WITH HIGH DAMPING
4	REVERB-CHAMBER	DARK, SMALL STUDIO ROOM
5	REVERB-GAREGE	TIGHT ROOM
6	REVERB-RIGHT	LARGE, BRIGHT, AMBIENT PLATE
7	REVERB-DARK	LOW PASS AND HIGH DAMPING
8	REVERB-SPRING	DARK, SLOW ATTACK
9	DELAY 1-SHORT	SHORT CUT
10	DELAY 2-SHORT	SHORT CUT
11	DELAY 3-SHORT	SHORT CUT
12	DELAY 4-SHORT	SHORT CUT
13	DELAY 5-LONG	1/16@75 BPM, 1/8@150 BPM
14	DELAY 6-LONG	1/8@100 BPM
15	DELAY 7-LONG	1/8@75 BPM
16	DELAY 8-LONG	1/8@60 BPM, 1/4@120 BPM

For service, please contact the TALMUS distributor in your country through the dealer.

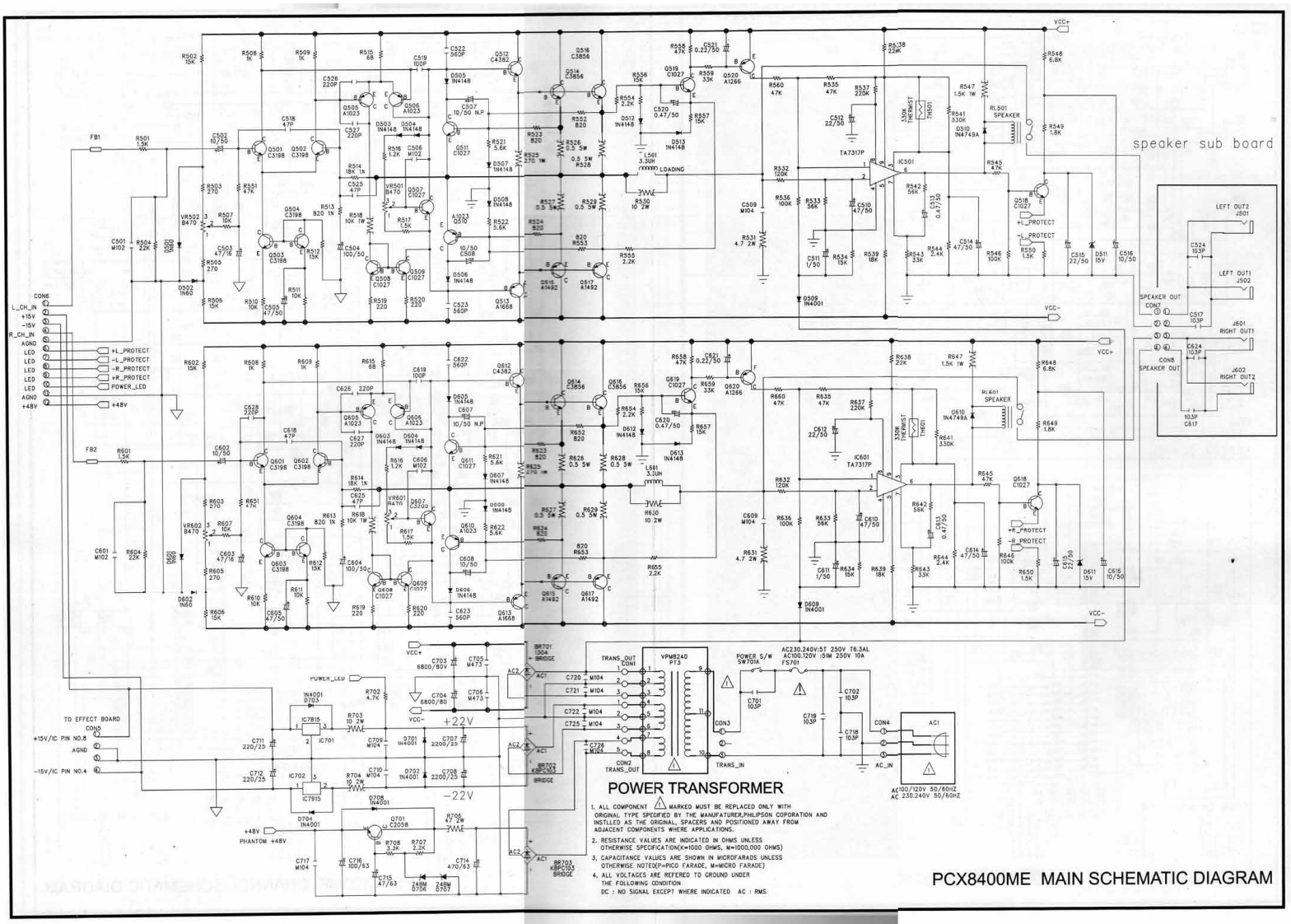
DO NOT ATTEMPT TO SERVICE THIS UNIT YOURSELF AS IT CAN BE DANGEROUS AND ALSO WILL VOID THE WARRANTY.

PCX8400ME INSTALLATION





PCX8400ME CHANNEL SCHEMATIC DIAGRAM



PCX8400ME MAIN SCHEMATIC DIAGRAM