SERVICE MANUAL

PMX-350

Professional Mixer



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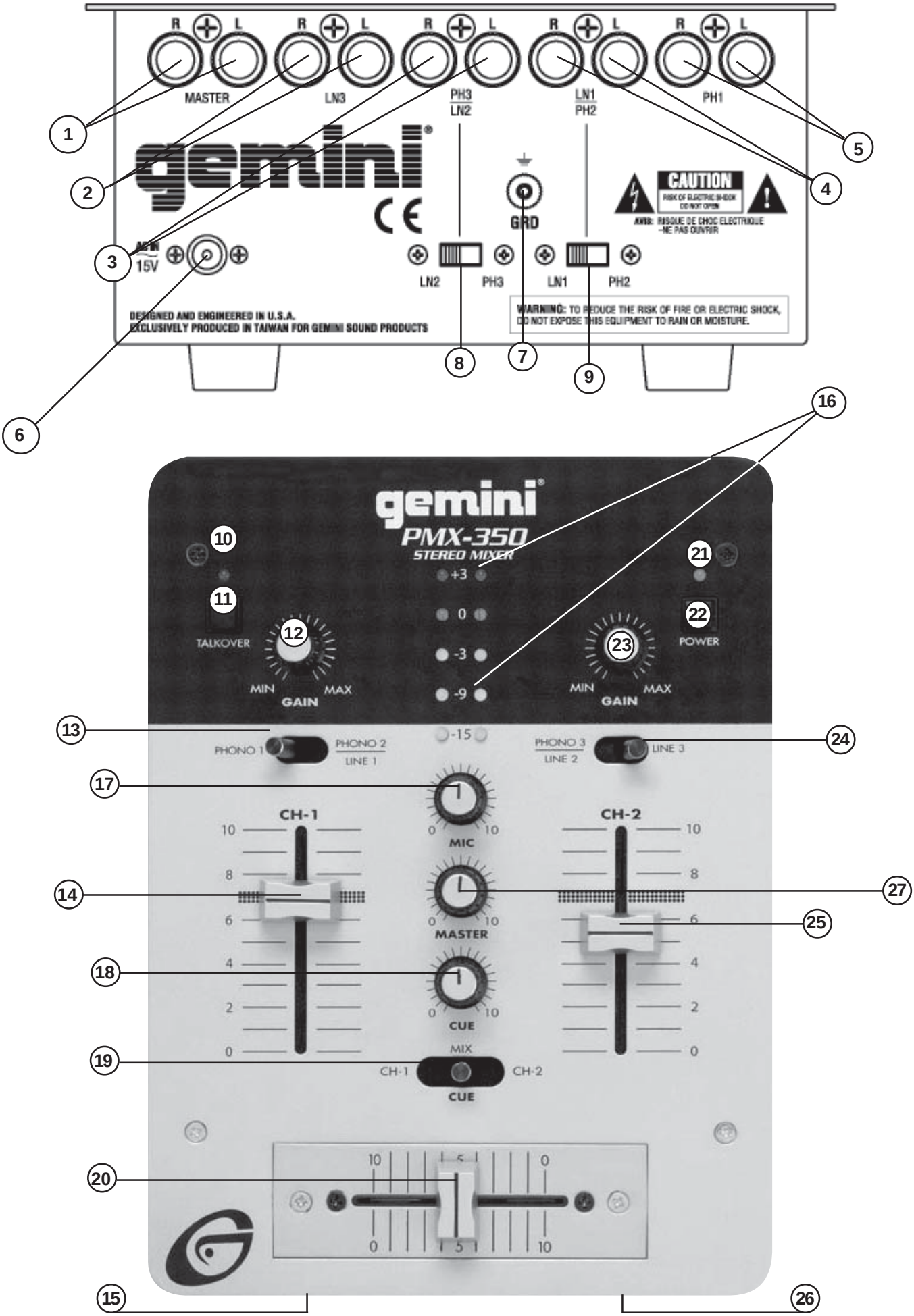
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gemini
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CAUTION
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DESIGNED AND ENGINEERED IN U.S.A.
EXCLUSIVELY PRODUCED IN TAIWAN FOR GEMINI SOUND PRODUCTS
WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK,
DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.
gemini
PMX-350
STEREO MIXER
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0
-3
-9
TALKOVER
MIN
MAX
GAIN
POWER
-15
PHONO 1
PHONO 2
LINE 1
PHONO 3
LINE 2
LINE 3
CH-1
CH-2
MIC
MASTER
CUE
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CUE
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Introduction

Congratulations on purchasing a Gemini model PMX®-350 mixer. This-state-of-the-art mixer includes the latest features and is backed by a three year warranty, excluding crossfader and channel slides. Prior to use, we suggest that you carefully read all the instructions.

Features

- 2 Phono/Line Convertible, 1 Phono, 1 Line and 1 Mic input
- Gain controls for each channel
- Removable Crossfader
- Cue Section

Cautions

1. All operating instructions should be read before using this equipment.
2. To reduce the risk of electrical shock, do not open the unit. There are NO USER REPLACEABLE PARTS INSIDE. Please refer servicing to a qualified service technician.

In the USA: If you experience problems with this unit, call 1 (732) 738-9003 for Gemini Customer Service. Do not attempt to return this equipment to your dealer.

3. Do not expose this unit to direct sunlight or to a heat source such as a radiator or stove.
4. This unit should be cleaned only with a damp cloth. Avoid solvents or other cleaning detergents.
5. When moving this equipment, it should be placed in its original carton and packaging. This will reduce the risk of damage during transit.
6. DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.
7. DO NOT USE SPRAY CLEANERS OR LUBRICANTS ON CONTROLS OR SWITCHES.

Connections

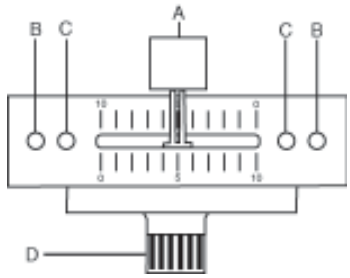
1. Make sure that the **POWER (22)** switch is in the off position.
2. This unit comes supplied with a 15 volt AC adaptor. Plug the male pin of the adaptor into the rear panel **POWER JACK (6)**. Then plug the adaptor into a proper power source.
3. To connect the mixer to your amplifier, use the **MASTER (1)** jacks on the rear panel.
4. The unit is equipped with one microphone input. The **MIC JACK (15)** is a 1/4" (6.35 mm) and is located on the front panel.
5. On the rear panel are 2 stereo **PHONO/LINE (3, 4)** inputs, 1 stereo **PHONO (5)** input and 1 stereo **LINE (2)** input. The **PHONO/LINE SWITCHES (8, 9)** enable you to set the **(3, 4)** inputs to Phono or Line. The **PHONO (5)** input will accept turntable inputs only. A **GROUND (7)** screw for you to ground your turntables is located on the rear panel. The stereo **LINE (2)** input will accept any line level input such as a CD player or a cassette player.
6. Headphones can be plugged into the front panel mounted **HEADPHONE (26)** jack.

Operation

1. POWER ON: Once you have made all the equipment connections to your mixer, press the **POWER (22)** switch. The power will turn on and the **POWER LED (21)** will glow RED.
2. CHANNEL 1: The **GAIN (12)** control allows you to individually adjust the gain of Channel 1. Switch **(13)** allows you to select **PHONO 1 (5)** or the **LINE 1/PHONO 2 (4)** inputs. **CHANNEL SLIDE (14)** controls the input level of this channel.
3. CHANNEL 2: The **GAIN (23)** control allows you to individually adjust the gain of Channel 2. Switch **(24)** allows you to select the **LINE 2/ PHONO 3 (3)** or the **LINE 3 (2)** input. The **CHANNEL SLIDE (25)** controls the input level of this channel.
4. CROSSFADER SECTION: The **CROSSFADER (20)** allows the mixing of one source into another. The left side of the **CROSSFADER** is CHANNEL 1 and the right side is CHANNEL 2. The **CROSSFADER** in your unit is removable and, should the need arise, can be easily replaced. Crossfader units are available in two varieties: part RF-45 (which is identical to the crossfader supplied with this mixer) has a 45 mm travel from side-to-side, while the PSF-45 is equipped with a special “curve” designed for scratch mixing.

   To install a new crossfader:

   1. Unscrew the outside FADER plate screws (B). Do not touch the INSIDE SCREWS (C).
   2. Carefully lift the fader and unplug the CABLE (D).
   3. Plug the new fader into the cable and place it back in the mixer.
   4. Screw the fader to the mixer.



5. TALKOVER SECTION: The purpose of the talkover section is to allow the program playing to be muted so that the mic can be heard above the music. When the **TALKOVER (11)** button is pushed, the **TALKOVER INDICATOR (10)** will glow and the volume of all sources except MIC are reduced by -16 dB. **MIC (17)** controls the level of the talkover MIC.
6. CUE SECTION: By connecting a set of headphones **(26)**, you can monitor either Channel 1 or Channel 2. Select Channel 1 by moving the **CUE** SWITCH **(19)** to the left. Move to the right for Channel 2. Use the **CUE (18)** control to adjust the headphone volume without affecting the overall mix.
7. DISPLAY: The **DISPLAY (16)** indicates the **MASTER** output left and right levels as controlled by the **MASTER** LEVEL **(27)**.

Specifications

INPUTS:

Mic.....1.5mV 600 Ohm

Phono.....3 mV 47 kOhm

Line.....150 mV 27 kOhm

OUTPUTS:

Amp.....0 dB 1V 400 Ohm

Max.....20V Peak to Peak

GENERAL:

Gain (Channels 1 - 2).....0 to -20 dB

Frequency Response.....20 Hz - 20 kHz +/- 2 dB

Distortion.....0.02%

S/N Ratio.....better than 80 dB

Talkover Attenuation.....-16 dB

Headphone Impedance.....16 Ohm

Power Source.....115V/15V AC 7.5 W

230V/15V AC 7.5 W

Dimensions.....6.5" x 9" x 3" (165 x 221 x 85 mm)

Weight.....3 lbs. (1.3 kg)

Parts Lists

Cabinet Parts and Packing

Item #	Description	Part #
1	PANEL CONTROL	FACEPPMX350
2	PANEL REAR	034-010
3	BOTTOM COVER	032-018
4	BRACKET VR (SUB CHASSIS)	021-774
5	HOLDER FADER	022-366
6	KNOB SWING (LONG)	023-674
7	KNOB PUSH (SMALL)	002-531
8	KNOB BUSHING (SMALL)	002-532
9	KNOB SLIDE (BIG)	002-724
10	KNOB ROTARY (B TYPE)	003-110
11	INLAY KNOB (SILVER)	148-312
12	INLAY KNOB (RED)	148-238
13	TRIM VR	003-970
14	HOLDER LED (3f 17mm)	003-969
15	PAD FOOT	049-206
16	DUST PROOF CLOTE-VR	159-171
17	SWING DUST PROOF CLOTH	159-216
18	CLIP WIRE	049-190
19	GND SCREW	146-710
20	SCREEN	046-027
21	SNAP RIVET	003-612

Parts Lists - PCB

Printed Circuit Boards

Item #	Description	Part #
1	PRINTED CIRCUIT BOARD PMX40-1	262-057
2	PRINTED CIRCUIT BOARD PMX40-2	262-058
3	PRINTED CIRCUIT BOARD PMX40-3	262-067
4	PRINTED CIRCUIT BOARD PMX40-4	262-068

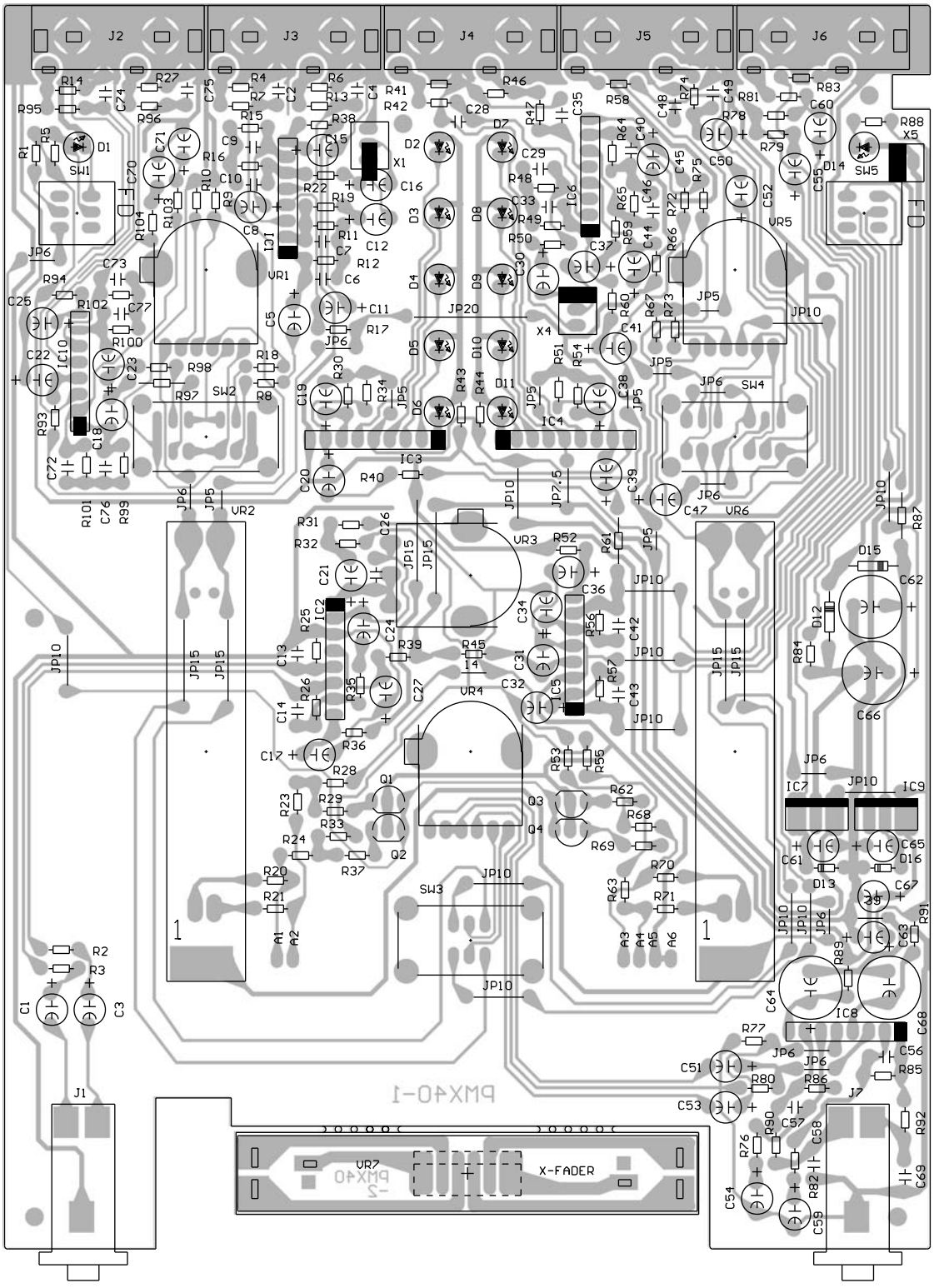
ICs

Item #	Designators	Description	Part #
1	IC3, IC4	INTEGRATED CIRCUIT LB1423N	074-154
2	1C1-2, IC5-6, IC10	INTEGRATED CIRCUIT NJM2068LD	074-145
3	IC8	INTEGRATED CIRCUIT NJM4556L	074-113
4	IC7	INTEGRATED CIRCUIT NJM7912FA	074-114
5	IC9	INTEGRATED CIRCUIT NJM7812FA	074-107

Electrical Parts

Item #	Designators	Description	Part #
1	Q1-4	TRANSISTOR DTC114TS	076-094
2	D12, D15	RECTIFIER DIODE 1N4002 (1N4003,1N4004)	079-027
3	D13, D16	ZENER DIODE 1/2W 12V	079-012
4	D1-3, D7-8, D14	LIGHT EMITTING DIODE (RED) 3.15f	080-091
5	D4-6, D9-10, D11	LIGHT EMITTING DIODE (GREEN) 3.15f	080-104
6	J1, J7	PHONE JACK 6.3f MIC,PHONES	092-078
7	VR2, VR6	SLIDE VR 45mm CH1/CH2 50KA×2	072-035
8	SW6, SW7	SLIDE SWITCH 2P2C	081-004
9	SW3	LEVER SWITCH 2P2C CUE CH1/CH2	082-018
10	SW2, SW4	LEVER SWITCH 4P2C PHONO/LINE	082-019
11	SW1, SW5	PUSH SWITCH 2P2C L=12.5 POWER,TALKOVER	083-080
12	VR3	ROTARY VR 16f L=20 MIC 50KA	071-066
13	VR1, VR5	ROTARY VR 16f L=20 GAIN 10KA×2	071-161
14	VR4	ROTARY VR 16f L=20 CUE 50KA×2	071-084
15	X-FADER	RAILGLIDE VR45mm X-FADER 100KX2	072-113

PCB



Schematic

