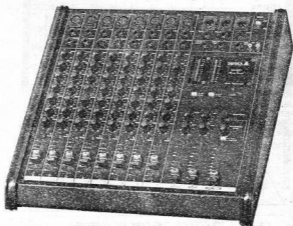


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SAMICK 

OPERATING AND SERVICE MANUAL



STEREO MIXING CONSOLE

SM820/SM1200/SM1600

SM820P/SM1200P/SM1600P

DEAR CUSTOMERS

THANK YOU VERY MUCH FOR PURCHASING OUR AUDIO MIXING CONSOLE. YOU WILL FIND YOUR NEW SAMICK MIXER HAVE A GREAT FLEXIBILITY AND PERFORMANCE, FOR THAT WE SUGGEST YOU TO STUDY THIS OPERATION MANUAL TO BECOME FAMILIAR WITH IT'S LONGEVITY, DO NOT TOUCH THE INSIDE OF THE MIXER, AND FOR SERVICING CONTACT LOCAL DISTRIBUTOR NEARBY.

FEATURES

- * THE SAMICK SM-820P, SM-1200P, SM1600P IS 8-16 CHANNEL INPUT STEREO OUTPUT MIXING CONSOLE.
- * THE SAMICK MIXER CAN EASILY BE CONNECTED TO MICROPHONE (BALANCED) TYPE, ALL TYPES OF KEYBOARDS, GUITARS, AND LINES.
- * EACH INPUT CHANNEL INCLUDES 3-BAND EQ, EFFECTS, MONITOR BUS AND TRIM ADJUST WITH L.E.D INDICATOR.
- * THE OUTPUT SECTION PROVIDES LEFT AND, RIGHT OUT, SUM OUT MONITOR OUT, PRIORITY HEADPHONE LISTENING ABILITY, USER TO LISTEN TO THE LEFT AND RIGHT OUTPUT OR MONITOR BUS, EFFECTS RETURNS SWITCHABLE L.E.D LADDER OUTPUT INDICATORS.
- * ALSO, THE SM-820P IS THE RACKMOUNT TYPE, MAKING IT COMPACT, EASILY TRANSFERABLE AND PERFECT FOR LIVE PERFORMANCE.



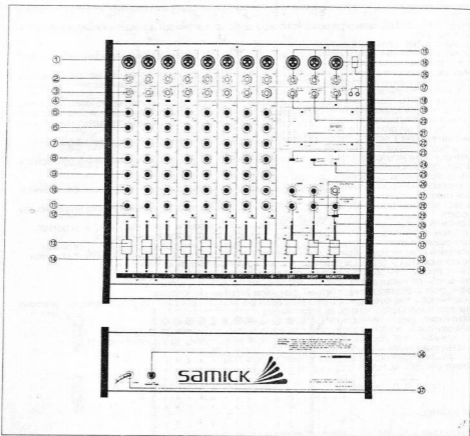
CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK).

NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

CONTROLS AND CONNECTORS FOR EACH CHANNEL.



- 1) MIC — ACCEPTS LOW IMPEDANCE MICROPHONE OF 600 ohms OR LESS.
- 2) LINE — 1/4" (6.35mm) ACCEPTS HIGH IMPEDANCE MICROPHONE ANY HIGH IMPEDANCE SOURCE INCLUDING.
 - * RADIO RECEIVER.
 - * RHYTHM BOX
 - * PHASER, FLANGER ECHO, ETC.
 - * INSTRUMENT PICK UP (A SIGNAL BOOST MAY BE NEEDED TO MATCH SIGNAL STRENGTH)
- NOTE: IF OVERLOAD DISTORTION SHOULD OCCUR FROM OTHER THAN A MICROPHONE THE HIGH OUTPUT SIGNAL SOURCES SHOULD BE TURNED DOWN.
- 3) INSERT — 1/4" (6.35mm) 3-CIRCUIT PHONE JACK TO INSERT EXTERNAL EFFECTORS SIGNAL EXCLUSIVELY (TIP: SEND, RING: RETURN, SLEEVE: COMMON)
- 4) MIC/PHONO ("P" MODEL) — INPUT SELECT PUSH SWITCH.
- 5) TRIM — ADJUST INPUT SIGNAL.
IF INPUT SIGNAL IS EXTREMELY LOW OR HIGH USE THIS CONTROL KNOB FOR PROPER GAIN WITHOUT OVERLOAD OR DISTORTION.
- 6) HF — HIGH FREQUENCY RANGE GAIN CONTROL KNOB AT 10kHz BOOST AND CUTTING GAIN IS 20dB.
- 7) MF — MIDDLE FREQUENCY RANGE GAIN CONTROL KNOB AT 1kHz BOOST AND CUTTING GAIN IS 20 dB.
- 8) LF — LOW FREQUENCY RANGE GAIN CONTROL KNOB AT 100Hz BOOST AND CUTTING GAIN IS 20 dB.
- 9) MON — THE VOLUME CONTROL FOR MONITOR LINE USEFUL FOR STAGE MONITOR OR RECORDING THIS DESIGN IS PRE-FADER IT'S OUTPUT IS TAKEN OUT OF THE PRE-CHANNEL FADER OUTPUT CAN BE SENT TO EFFECT LINE WITHOUT CONNECTION TO CHANNEL.
- 10) EFF — THE VOLUME CONTROL FOR EFFECT LINE OUTPUT SIGNAL CONNECTED TO EXTERNAL EFFECT UNIT SUCH AS DELAY/COMPRESSOR LIMITER CAN CONTROLLED IN EACH CHANNEL IF CHANNEL FADER IS TURNED DOWN, NO EFFECT OUTPUT IS PRODUCED.

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- 11) **PAN** — THIS ALLOWS YOU TO CHANGE THE PLACEMENT OF SIGNAL FROM LEFT, CENTER TO RIGHT AND SEND TO MASTER L OR R.
 - 12) **PEAK** — L.E.D INDICATES WHEN INPUT SIGNAL REACH PEAK LEVEL. SET THE TRIM SO L.E.D WILL ONLY LIGHT OCCASIONALLY AT PEAK LEVEL.
 - 13) **CHANNEL FADER** — CONTROLS CHANNEL OUTPUT LEVEL.
 - 14) **MONITOR FADER** — THE OUTPUT CONTROL FADER FOR MONITOR LINE CONTROLS SIGNAL FROM EACH MONITOR CONTROL TO OUTPUT TO MONITOR OUT.
 - 15) **MASTER OUTPUT LEFT & RIGHT** — THE MASTER OUTPUTS DELIVER SIGNAL FROM MASTER LINE AND ARE CONNECTED TO THE LEFT AND RIGHT INPUTS OF THE POWER AMPLIFIERS. BOTH MASTER OUTPUTS ARE EQUIPPED WITH XLR CONNECTOR AND 1/4" PHONE JACK ITS OUTPUT LEVEL IS +4dB & 0dB ON THE BAR GRAPHIC L.E.D
 - 16) **SUM OUTPUT** — SUM OUTPUT PROVIDES MIX OF BOTH LEFT AND RIGHT MASTER SIGNAL FOR FEED TO VARIOUS EXTERNAL DEVICE. THIS SUM ALLOWS TAPE RECORDING WHILE THE NORMAL MAIN OUTPUTS ARE BEING USED FOR OTHER PURPOSES BOTH SUM OUTPUTS ARE EQUIPPED WITH XLR JACK CONNECTOR AND 1/4" PHONE JACK. ITS OUTPUT LEVEL IS +4dB & 0dB ON THE BAR GRAPHIC L.E.D
 - 17) **REC OUTPUT LEFT & RIGHT** — THESE RCA PIN SOCKETS ARE CONNECTED ON THE LEFT AND RIGHT AUXILIARY INPUTS OF A TAPE RECORDER FOR RECORDING.
 - 18) **MON OUT** — THE MONITOR OUTPUT PROVIDES SIGNALS FROM MONITOR LINE OF EACH CHANNEL AND IS CONNECTED A SEPARATE MONITOR AMPLIFIERS. ITS OUTPUT LEVEL IS +4dB & 0dB ON THE BAR GRAPHIC L.E.D
 - 19) **EFFECT SEND** — THIS OUTPUT JACK FROM THE EFFECTS BUS IS CONNECTED TO AN EXTERNAL DELAY REVERB. COMPRESSOR LIMITER.
 - 20) **EFFECT RETURN** — THE OUTPUT FROM THE EXTERNAL EFFECT IS RETURNED TO THE MIXER VIA THIS EFFECT RETURN SOCKET.
 - 21) **RIGHT/MON OUTPUT INDICATOR** — 12 SEGMENT L.E.D BAR GRAPHIC METER TO INDICATE RIGHT MONITOR OUTPUT.
 - 22) **LEFT/SUM OUTPUT INDICATOR** — 12 SEGMENT L.E.D GRAPHIC METER TO INDICATE LEFT/SUM OUTPUT.
 - 23) **LEFT/SUM PUSH SWITCH** — LEFT/SUM OUTPUT STATES CAN BE SEEN ON BAR GRAPHIC L.E.D WITH THIS SWITCH.
 - 24) **RIGHT/MON PUSH SWITCH** — RIGHT/MON OUTPUT STATES CAN BE SEEN ON BAR GRAPHIC L.E.D WITH THIS SWITCH.
 - 25) **POWER INDICATOR** — GREEN COLORED L.E.D INDICATE POWER SWITCH'S ON AND OFF STATE.
 - 26) **H/P SELECT SWITCH** — SELECTS L/R OR MONITOR SIGNAL TO THE HEADPHONE OUTPUT.
 - 27) **EFF SEND** — CONTROLS EFFECT SEND CUE PUT LEVEL TO THE EXTERNAL EFFECT DEVICE.
 - 28) **EFF RETURN** — CONTROLS EFFECT RETURN LEVEL FROM EXTERNAL EFFECT DEVICE.
 - 29) **HEAD PHONE** — THIS OUTPUT JACK WORKS EVEN WHEN THE MASTER FADERS ARE OFF AND IS USEFUL FOR CHECKING THE SOUND AND STEREO POSITION OF EACH CHANNEL.
 - 30) **HEAD PHONE LEVEL** — LEVEL CONTROL FOR THE HEADPHONE.
 - 31) **SUM CONTROL** — CONTROLS SUM OUTPUT SIGNAL WHICH IS ADDED MASTER LEFT AND RIGHT.
 - 32) **EFF RTN PAN** — THIS CONTROL CAN PLACE THE EXTERNAL EFFECT SIGNAL TO THE RIGHT AND LEFT.
 - 33) **MASTER RIGHT FADER** — CONTROLS MASTER RIGHTS OUTPUT LEVEL.
 - 34) **MASTER LEFT FADER** — CONTROLS MASTER LEFT OUTPUT LEVEL.
 - 35) **POWER SWITCH** — AC POWER IS CONNECTED.

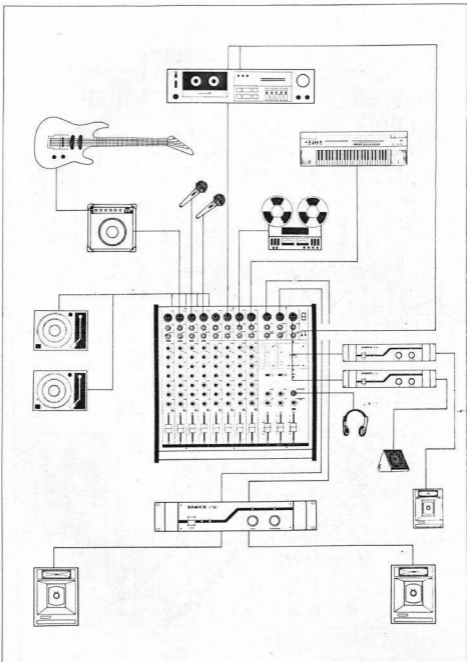
BACK PANNEL

- 36) **FUSE HOLDER** — DO NOT OPEN IT WHEN AC POWER IS CONNECTED REPLACE IT WITH THE SAME VALUE AND TYPE.
- 37) **POWER SUPPLY CORD** — AC CORD, SUPPLIES AC POWER
- 38) **PHONO INPUT (P MODEL)** — RCA PIN JACK, RECEIVES TURN TABLES OUTPUT SIGNAL CH1-CH4 ONLY

GENERAL OPERATION

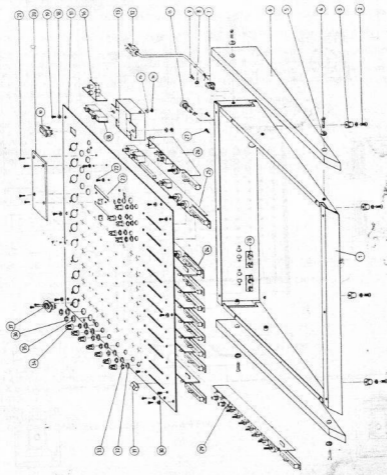
1. CONNECTING IN/OUTPUT JACKS AND CONNECTORS WITH EXTERNAL INSTRUMENTS.
2. INSERT POWER PLUG TO CONNECT
3. TURN ON THE POWER S/W.
4. CHECK A EXTERNAL SOURCE'S OPERATION.
5. CONTROL A VOLUME OF MAIN AMPLIFIER.
6. GAIN CONTROL
7. EQ CONTROL.
8. MASTER VOLUME CONTROL
9. CONTROL THE EACH CHANNELS VOLUME AND OTHER FUNCTION S/W.

TYPICAL SET-UP



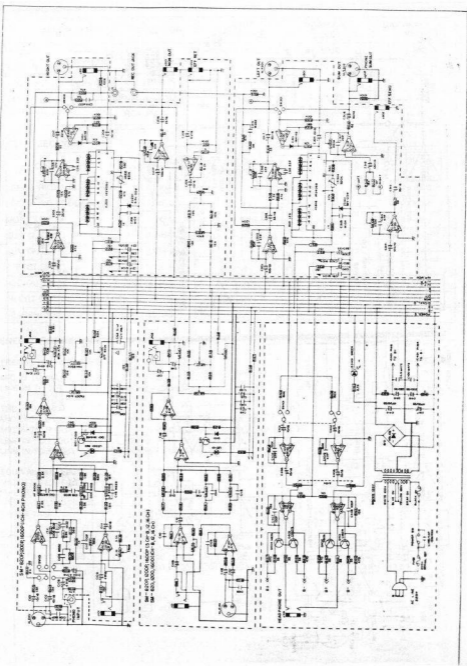
EXPOSED VIEW

NO.	DESCRIPTION	QUANTITY	UNIT	REMARKS
1	WOOD COMB	1	PC	
2	WOOD COMB	1	PC	
3	WOOD COMB	1	PC	
4	WOOD COMB	1	PC	
5	WOOD COMB	1	PC	
6	WOOD COMB	1	PC	
7	WOOD COMB	1	PC	
8	WOOD COMB	1	PC	
9	WOOD COMB	1	PC	
10	WOOD COMB	1	PC	
11	WOOD COMB	1	PC	
12	WOOD COMB	1	PC	
13	WOOD COMB	1	PC	
14	WOOD COMB	1	PC	
15	WOOD COMB	1	PC	
16	WOOD COMB	1	PC	
17	WOOD COMB	1	PC	
18	WOOD COMB	1	PC	
19	WOOD COMB	1	PC	
20	WOOD COMB	1	PC	
21	WOOD COMB	1	PC	
22	WOOD COMB	1	PC	
23	WOOD COMB	1	PC	
24	WOOD COMB	1	PC	
25	WOOD COMB	1	PC	
26	WOOD COMB	1	PC	
27	WOOD COMB	1	PC	
28	WOOD COMB	1	PC	
29	WOOD COMB	1	PC	
30	WOOD COMB	1	PC	
31	WOOD COMB	1	PC	
32	WOOD COMB	1	PC	
33	WOOD COMB	1	PC	
34	WOOD COMB	1	PC	
35	WOOD COMB	1	PC	
36	WOOD COMB	1	PC	
37	WOOD COMB	1	PC	
38	WOOD COMB	1	PC	
39	WOOD COMB	1	PC	
40	WOOD COMB	1	PC	
41	WOOD COMB	1	PC	
42	WOOD COMB	1	PC	
43	WOOD COMB	1	PC	
44	WOOD COMB	1	PC	
45	WOOD COMB	1	PC	
46	WOOD COMB	1	PC	
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50	WOOD COMB	1	PC	

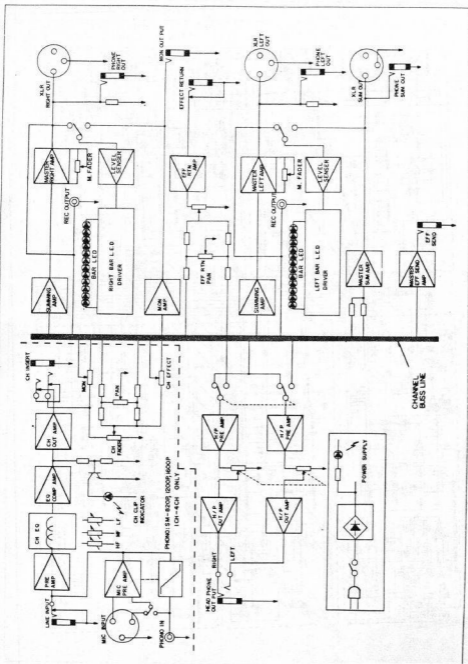


PACBON
 G-13-11-22

SCHEMATIC DIAGRAM



BLOCK DIAGRAM



SPECIFICATION (SM-820, 1200, 1600, SM-820P, 1200P, 1600P)

INPUT SECTION

INPUT	CONNECTOR	INPUT IMPEDANCE	NORMAL LEVEL	MAX. INPUT LEVEL
MIC IN	XLR (BAL)	600 ohm	-50dB	-32dB
LINE IN	1/4" (UNBAL)	10 kohm	-20 dB	-4 dB
CH. INSERT (RETURN)	1/4" (TRS)	10 kohm	-7 dB	+12 dB
EFFECT RETURN	1/4" (UNBAL)	10 kohm	-25 dB	-8 dB
PHONO INPUT	RCA JACK	10 kohm	-60 dB	-42 dB

OUTPUT SECTION

OUTPUT	CONNECTOR	OUTPUT IMPEDANCE	NORMAL LEVEL	MAX. OUTPUT LEVEL
LEFT & RIGHT OUT	XLR (UNBAL)	600 ohm	+4 dBm	+21 dBm
LEFT & RIGHT OUT	1/4" (UNBAL)	600 ohm	+4 dBm	+21 dBm
MON OUTPUT	1/4" (UNBAL)	600 ohm	+4 dBm	+16 dBm
SUM OUTPUT	1/4" (UNBAL)	600 ohm	+6 dBm	+21 dBm
SUM OUT	XLR (UNBAL)	600 ohm	+6 dBm	+21 dBm
EFFECT SEND OUT	1/4" (UNBAL)	600 ohm	-10 dBm	+16 dBm
REC OUT	RCA JACK	600 ohm	-10 dBm	+21 dBm
INSERT OUT	1/4" (TRS)	600 ohm	-4 dBm	+16 dBm
HEADPHONES	1/4" (STEREO)	8 ohm		100mW x 2

GENERAL SPECIFICATION

• FREQUENCY RESPONSE

MIC IN TO L R OUT : 25Hz - 20KHz, ± 3 dB
 LINE IN TO L R OUT : 18Hz - 25KHz, ± 3 dB

• THD

MIC IN TO L OUT : 0.13% (-40dB INPUT LEVEL)
 MIC IN TO R OUT : 0.15% (-40dB INPUT LEVEL)
 LINE IN TO L OUT : 0.07% (-10dB INPUT LEVEL)
 LINE IN TO R OUT : 0.13% (-10dB INPUT LEVEL)

• EQUIVALENT INPUT NOISE

MIC IN TO L R OUT : -123 dB
 LINE TO L R OUT : -83 dB

• CROSS TALK

: 55dB (1KHz)

• EQUALIZER

HF : 10 KHz ± 17 dB
 MF : 1.5KHz ± 12 dB
 LF : 20 Hz ± 13 dB

• DIMENSIONS (W x H x D)

SM820, 820P : 450 x 105 x 424
 SM1200, 1200P : 578 x 105 x 424
 SM1600, 1600P : 706 x 105 x 424

• WEIGHT

SM820, 820P : 7 Kg
 SM1200, 1200P : 9 Kg
 SM1600, 1600P : 12.5 Kg