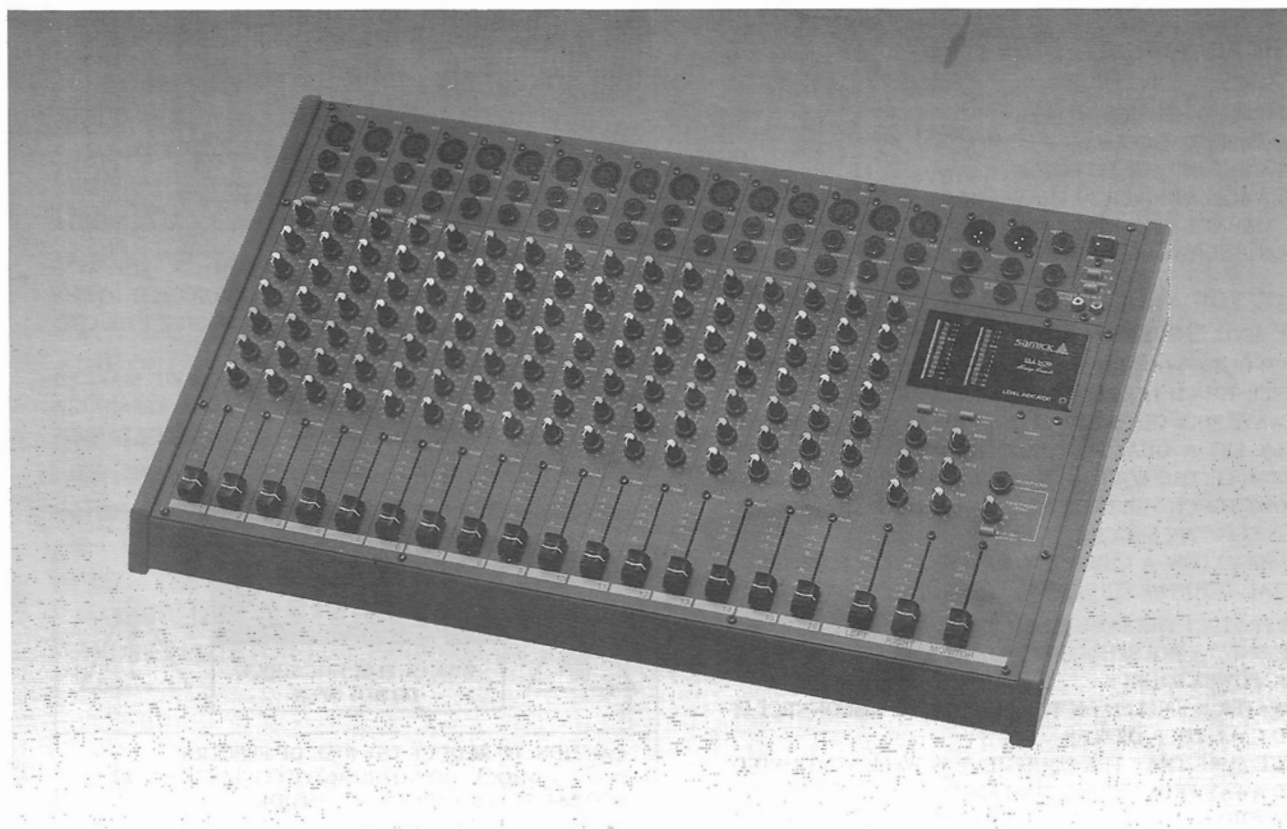


SAMICK SM SERIES STEREO AUDIO MIXERS

OWNER'S MANUAL



- SM-82 8 CHANNEL STEREO MIXER
- SM-122 12 CHANNEL STEREO MIXER
- SM-162 16 CHANNEL STEREO MIXER
- SM-242 24 CHANNEL STEREO MIXER
- SM-82P 8 CHANNEL STEREO MIXER WITH PHONO
- SM-122P 12 CHANNEL STEREO MIXER WITH PHONO
- SM-162P 16 CHANNEL STEREO MIXER WITH PHONO
- SM-242P 24 CHANNEL STEREO MIXER WITH PHONO

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 NEW SM SERIES IS 8~24 CHANNEL INPUT STEREO OUTPUT MIXING CONSOLES.
- 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.

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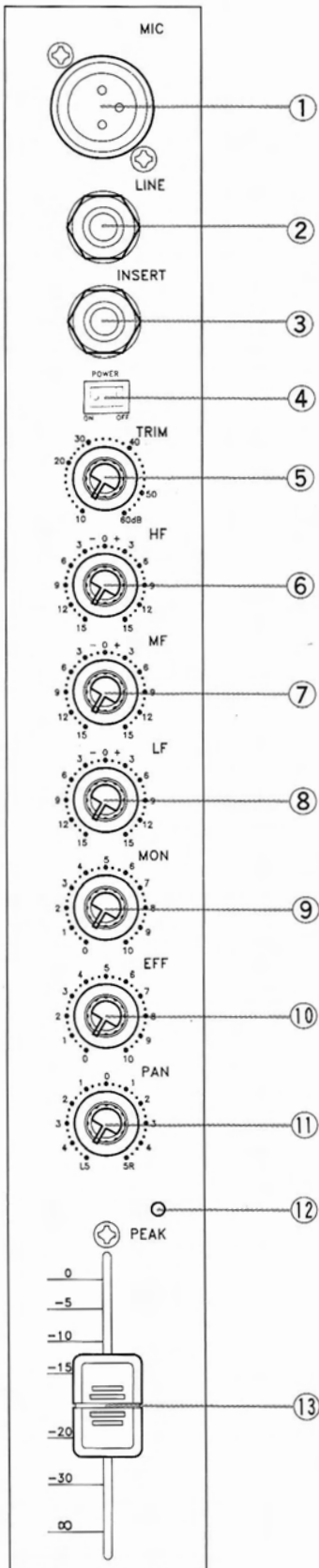
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CONTROLS AND CONNECTIONS

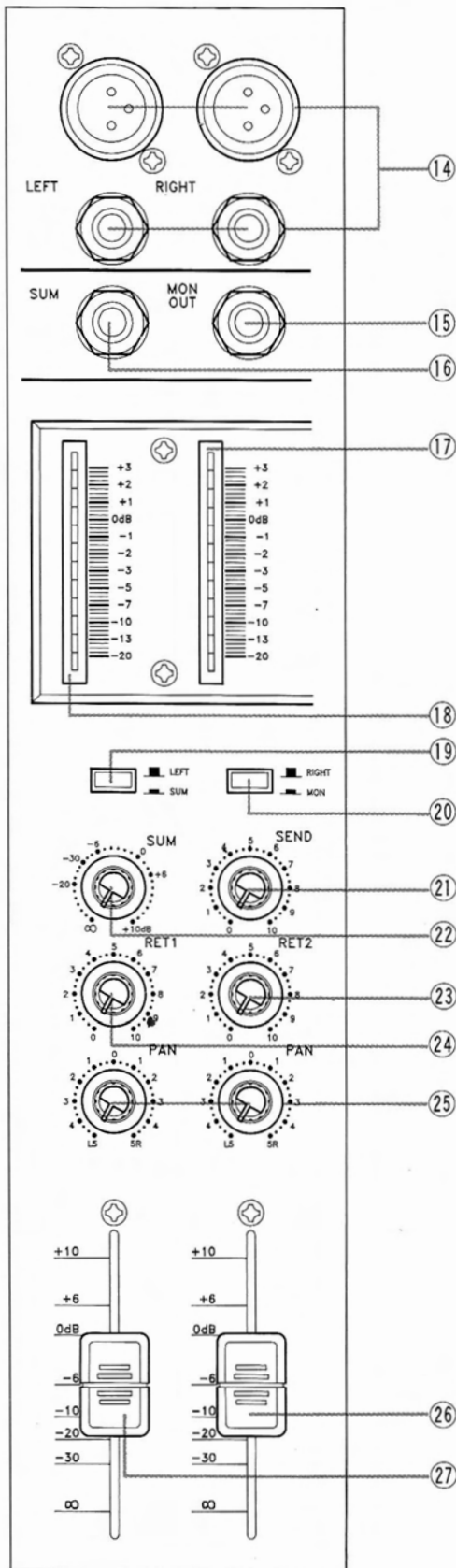


INPUT SECTION

- 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 20dB.
 - 8) **LF** : LOW FREQUENCY RANGE GAIN CONTROL KNOB AT 100Hz BOOST AND CUTTING GAIN IS 20dB.
 - 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.
 - 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 RIGHT OCCASIONALLY AT PEAK LEVEL.
 - 13) **CHANNEL FADER** : CONTROLS CHANNEL OUTPUT LEVEL.

CONTROLS AND CONNECTIONS

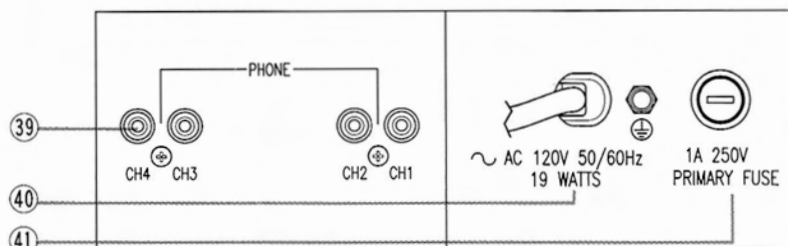
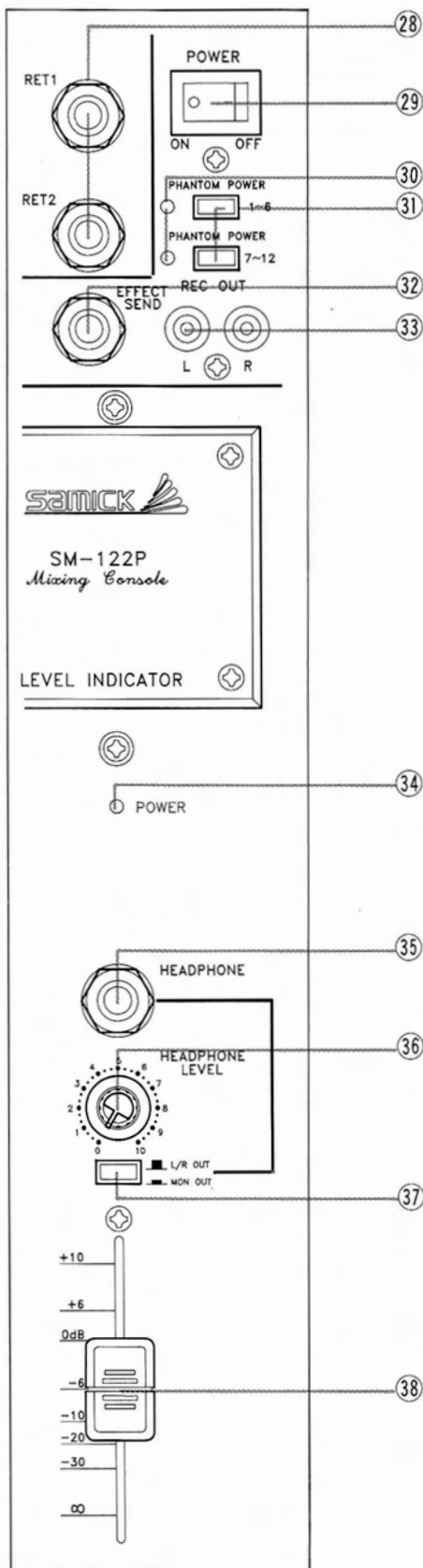
MASTER SECTIONS



- 14) **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 IT'S OUTPUT LEVEL IS +4dB & 0dB ON THE BAR GRAPHIC L. E. D
- 15) **MON OUT** : THE MONITOR OUTPUT PROVIDES SIGNALS FROM MONITOR LINE OF EACH CHANNEL AND IS CONNECTED A SEPARATE MONITOR AMPLIFIERS.
IT'S 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. IT'S OUTPUT LEVER IS +4dB & 0dB ON THE BAR GRAPHIC L. E. D
- 17) **RIGHT/MON OUTPUT INDICATOR** : 12 SEGMENT L. E. D BAR GRAPHIC METER TO INDICATE RIGHT MONITOR OUTPUT.
- 18) **LEFT/SUM OUTPUT INDICATOR** : 12 SEGMENT L. E. D GRAPHIC METER TO INDICATE LEFT/SUM OUTPUT.
- 19) **RIGHT/MON PUSH SWITCH** : RIGHT/MON OUTPUT STATES CAN BE SEEM ON BAR GRAPHIC L. E. D WITH THIS SWITCH.
- 20) **LEFT/SUM PUSH SWITCH** : LEFT/SUM OUTPUT STATES CAN BE SEEM ON BAR GRAPHIC L. E. D WITH THIS SWITCH.
- 21) **EFF SEND** : CONTROLS EFFECT SEND OUTPUT LEVEL TO THE EXTERNAL EFFECT DEVICE.
- 22) **SUM CONTROL** : CONTROLS SUM OUTPUT SIGNAL WHICH IS ADDED MASTER LEFT AND RIGHT.
- 23) **EFF RETURN2** : CONTROLS EFFECT RETURN2 LEVEL FROM EXTERNAL EFFECT DEVICE.
- 24) **EFF RETURN1** : CONTROLS EFFECT RETURN1 LEVEL FROM EXTERNAL EFFECT DEVICE.
- 25) **EFF RTN PAN** : THIS CONTROL CAN PLACE THE EXTERNAL EFFECT SIGNAL TO THE RIGHT AND LEFT.
- 26) **MASTER RIGHT FADER** : CONTROLS MASTER RIGHTS OUTPUT LEVEL.
- 27) **MASTER LEFT FADER** : CONTROLS MASTER LEFT OUTPUT LEVEL.

CONTROLS AND CONNECTIONS (REAR PANEL)

MONITOR AND HEADPHONE SECTION



- 28) **EFFECT RETURN** : THE OUTPUT FROM THE EXTERNAL EFFECT IS RETURNED TO THE MIXER VIA THIS EFFECT RETURN SOCKET.
 - 29) **POWER SWITCH** : AC POWER IS CONNECTED.
 - 30) **PHANTOM INDICATOR** : WHEN THE PHANTOM POWER IS ON, THE GREEN L. E. D INDICATOR WILL ILLUMINATE.
 - 31) **PHANTOM POWER SWITCH** : DEPRESSING THE PHANTOM POWER SWITCH 1 OR 2 WILL APPLY +48V DC TO ALL MIC INPUTS TO POWER PHANTOM POWERED MICROPHONES.
 - 32) **EFFECT SEND** : THIS OUTPUT JACK FROM THE EFFECTS BUS IS CONNECTED TO AN EXTERNAL DELAY REVERB. COMPRESSOR LIMITER.
 - 33) **REC OUTPUT LEFT & RIGHT** : THESE RCA PIN SOCKETS ARE CONNECTED ON THE LEFT AND RIGHT AUXILIARY INPUTS OF A TAPE RECORDER FOR RECORDING.
 - 34) **POWER INDICATOR** : GREEN COLORED L. E. D INDICATE POWER SWITCH'S ON AND OFF STATE.
 - 35) **HEADPHONE** : THIS OUTPUT JACK WORKS EVEN WHEN THE MASTER FADERS ARE OFF AND IS USEFUL FOR CHECKING THE SOUND AND STEREO POSITION OF EACH CHANNEL.
 - 36) **HEADPHONE LEVEL** : LEVEL CONTROL FOR THE HEADPHONE.
 - 37) **H/P SELECT SWITCH** : SELECTS L/R OR MONITOR SIGNAL TO THE HEADPHONE OUTPUT.
 - 38) **MONITOR FADER** : THE OUTPUT CONTROL FADER FOR MONITOR LINE CONTROLS SIGNAL FROM EACH MONITOR CONTROL TO OUTPUT TO MONITOR OUT.
- REAR PANEL**
- 39) **PHONO INPUT('P'MODEL)** : RCA PIN JACK, RECEIVES TRUN TABLES OUTPUT SIGNAL CH1~CH4 ONLY AND CH1~CH8 FOR SM244P.
 - 40) **POWER SUPPLY CORD** : AC CORD, SUPPLIES AC POWER.
 - 41) **FUSE HOLDER** : DO NOT OPEN IT WHEN AC POWER IS CONNECTED REPLACE IT WITH THE SAME VALUE AND TYPE.

GENERAL SPECIFICATIONS

FREQUENCY RESPONSE

20Hz~20KHz, LINE IN : +1, -3dB, +4dB OUTPUT
 20Hz~20KHz, MIC IN : +1, -3dB, +4dB OUTPUT

TOTAL HARMONIC DISTORTION

20Hz~20KHz, LESS THAN 0.1%

EQUIVALANT INPUT NOISE(JIS A)

LINE TO L. R OUT (+4dBm) : 104 dBm
 MIC TO L. R OUT (+4dBm) : 136 dBm
 LINE TO INSERT (-11dBm) : 85 dBm
 MIC TO INSERT (-10dBm) : 122 dBm

CROSSTALK

CHANNEL : 66dB at 1KHz/66dB at 10KHz
 OUTPUT : 59dB at 1KHz/40dB at 10KHz

RESIDUAL NOISE

OUTPUT	CONDITION	VALUE
LEFT	MASTER FADER MAX, ALL	- 71dBm
	CHANNEL FADER MIN	
RIGHT	MASTER FADER MAX, ALL	- 71dBm
	CHANNEL FADER MIN	
LEFT	ALL FADER MIN	-115dBm
RIGHT	ALL FADER MIN	-115dBm
SUM	FADER MIN, SUM MIN	-115dBm
SUM	FADER MAX, SUM MAX	- 65dBm
MONITOR	MONITOR MIN	- 98dBm
MONITOR	MONITOR MAX	- 76dBm
LEFT TAPE	MASTER FADER MAX	- 85dBm
RIGHT TAPE	MASTER FADER MAX	- 84dBm

INPUT CHANNEL EQUALIGATION

BASS : 100Hz -15dB +15dB
 MID : 1.5KHz -20dB +20dB
 TREBLE : 12.5KHz -15dB +15dB

VU METER

(ALL METERS CALIBRATED FOR OVU +4dBm OUTPUT)
 2 BAR LED METER (STEREO L/R, SUM/MON)

CLIP INDICATORS

LEDS FOR EACH MODULE CLIP (RED) LIGHT'S WHEN SIGNAL IS +20dBm BELOW CLIPPING

PHANTOM POWER

40V DC APPLIED TO ELECTRONICALLY BALANCED INPUTS

POWER CONSUMPTION

SM82P : 17W, SM122P : 19W
 SM162P : 22W, SM242P : 27W

DIMENSIONS (W×H×D)

SM82P : 450×105×424mm (17.7×4.1×16.7 INCH)
 SM122P : 598×105×424mm (22.7×4.1×16.7 INCH)
 SM162P : 706×105×424mm (27.7×4.1×16.7 INCH)
 SM242P : 836×105×424mm (32.9×4.1×16.7 INCH)

WEIGHT

SM82P : 7 Kg, SM122P : 9 Kg
 SM162P : 12.5 Kg, SM242P : 15 Kg

INPUT SECTION

INPUT	CONNECTOR	INPUT SOURCE IMP	IMP	NOMINAL	MAX, BEFOR CLIP
MIC	XLR (BAL)	4 KOHM 600 OHM		- 50dBm	- 30dBm
LINE	1/4"(UNBAL)	10 KOHM 600 OHM		- 20dBm	- 2dBm
CH INSERT IN	1/4"(TRS)	10 KOHM 600 OHM		- 10dBm	+ 7dBm
EFFECT RET (1, 2)	1/4"(TRS)	10 KOHM 600 OHM		- 20dBm	- 3.5dBm
PHONO INPUT	RCA JACK	10 KOHM 600 OHM		- 60dBm	- 34dBm

OUTPUT SECTION

OUTPUT	CONNECTOR	OUTPUT LOAD IMP	IMP	NOMINAL	MAX, BEFOR CLIP
STEREO OUT (L, R)	XLR (BAL)	150 OHM 600 OHM		+10dBm	+27dBm
STEREO OUT (L, R)	1/4"(UNBAL)	150 OHM 600 OHM		+ 4dBm	+21dBm
MONITOR OUT	1/4"(TRS)	150 OHM 600 OHM		+ 4dBm	+21dBm
SUM OUT	1/4"(TRS)	150 OHM 600 OHM		+ 4dBm	+21dBm
CH INSERT OUT	RCA JACK	150 OHM 10 KOHM		-11dBm	+10dBm
SEND OUT	1/4"(UNBAL)	150 OHM 600 OHM		+ 4dBm	+21dBm
TAPE OUT	RCA(STEREO)			-10dBm	+ 7dBm
HEAD PHONE OUT	1/4"(STEREO)	8 OHM			93mW×2