



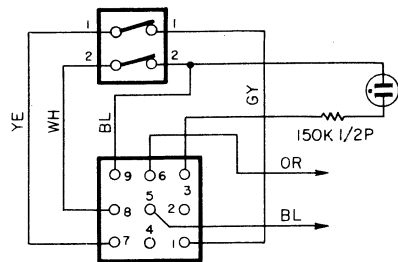
YAMAHA

RA-50 Combo Amplifier

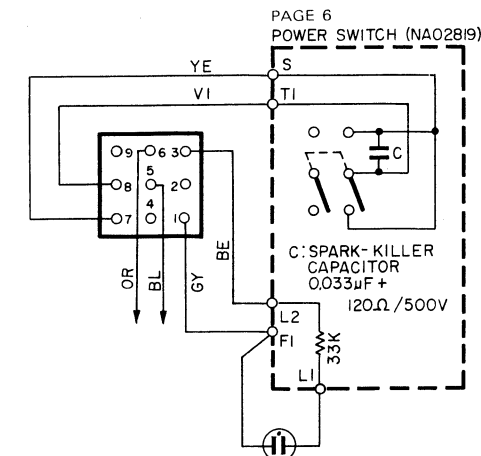
SERVICE MANUAL *(Revised)*

POWER SWITCH ARRANGEMENTS

FOR EUROPEAN & AUSTRALIAN MODELS

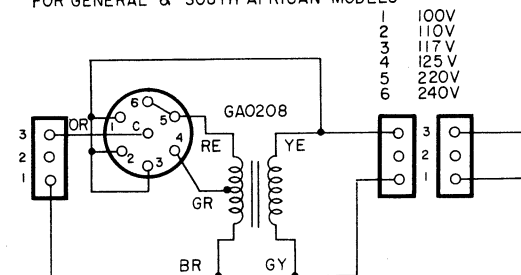


FOR U.S. & CANADIAN MODELS

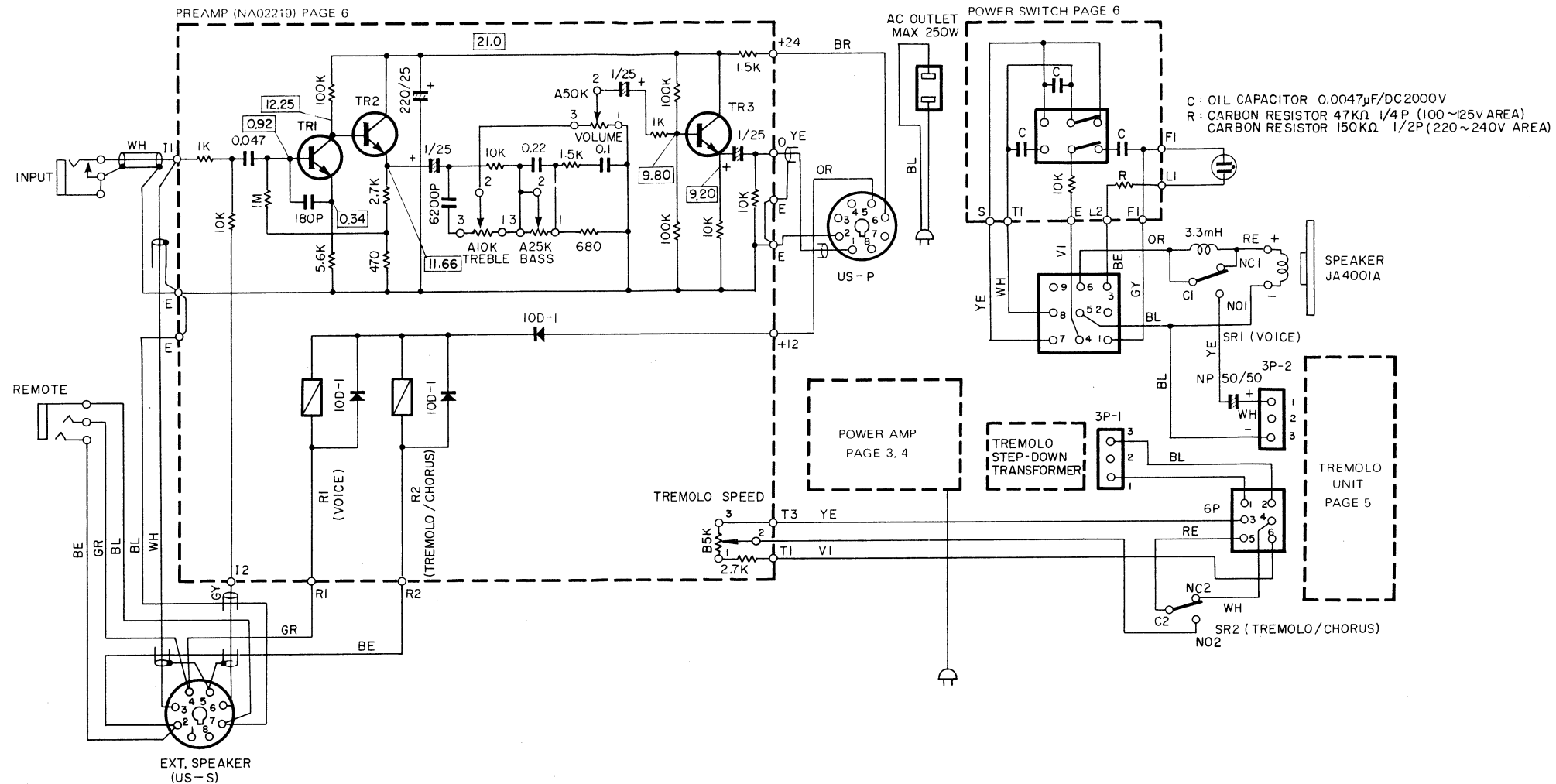
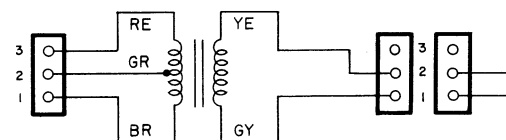


TREMOLO STEP-DOWN TRANSFORMER ARRANGEMENTS

FOR GENERAL & SOUTH AFRICAN MODELS



FOR EUROPEAN & AUSTRALIAN MODELS
GA0208



NOTES

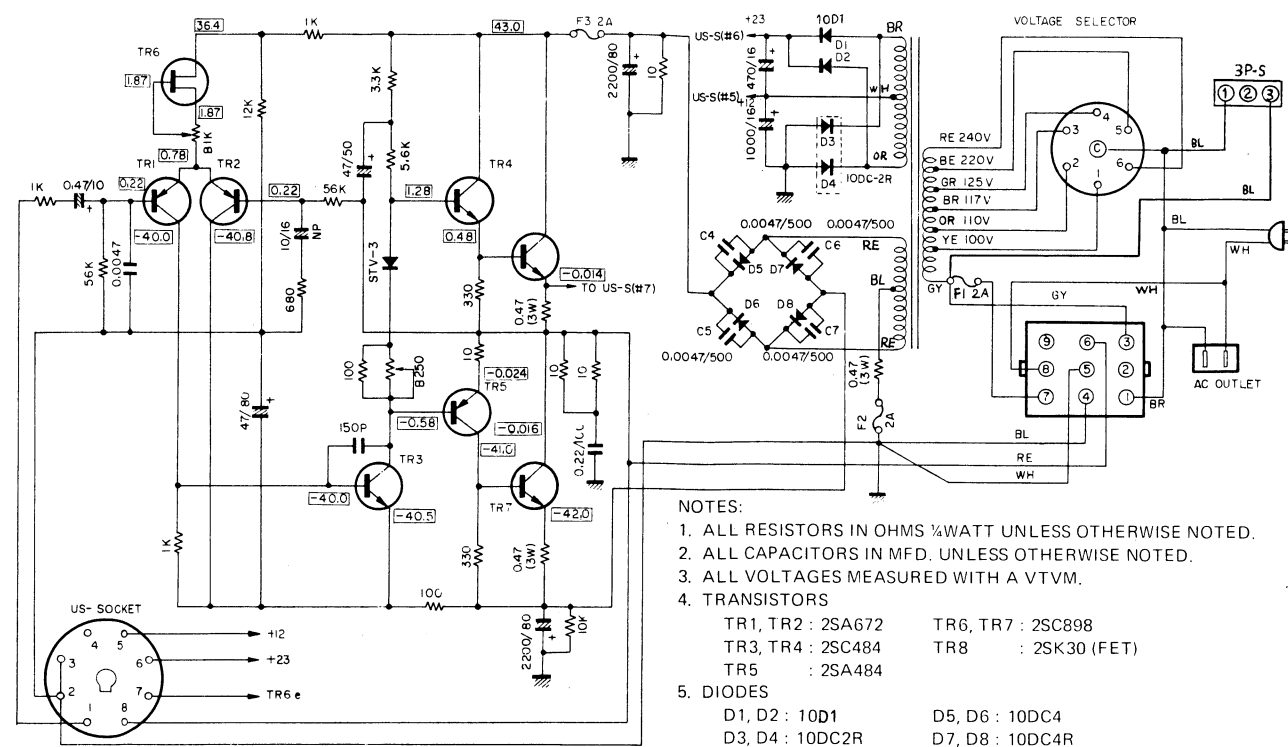
1. ALL RESISTORS IN OHMS 1/4WATT UNLESS OTHERWISE NOTED.
2. ALL CAPACITORS IN MFD. UNLESS OTHERWISE NOTED.
3. ALL VOLTAGES MEASURED WITH A VTVM, WITH ALL CONTROLS SET AT MINIMUM.
4. TRANSISTORS
TR1 - TR3 : 2SC828
5. TREMOLO STEP-DOWN TRANSFORMER
NOT PROVIDED ON U.S. & CANADIAN MODELS.
6. AC OUTLET
PROVIDED ON GENERAL MODEL ONLY.
7. WIRE COLOR ABBREVIATIONS
BL: BLACK GR: GREEN GG: LIGHT GREEN
BR: BROWN BE: BLUE SB: LIGHT BLUE
RE: RED VI: VIOLET PK: PINK
OR: ORANGE GY: GRAY TR: TRANSPARENT
YE: YELLOW WH: WHITE TP: TIN PLATED

SEMICONDUCTOR LEAD IDENTIFICATION

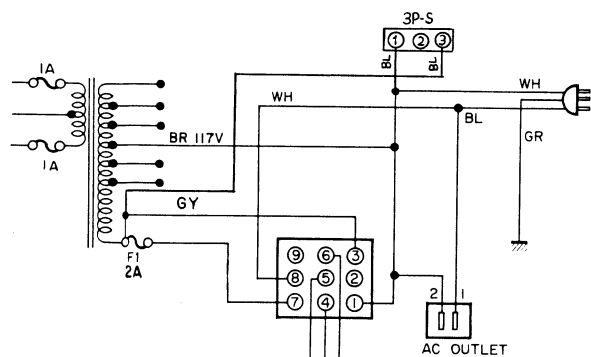


2SC828

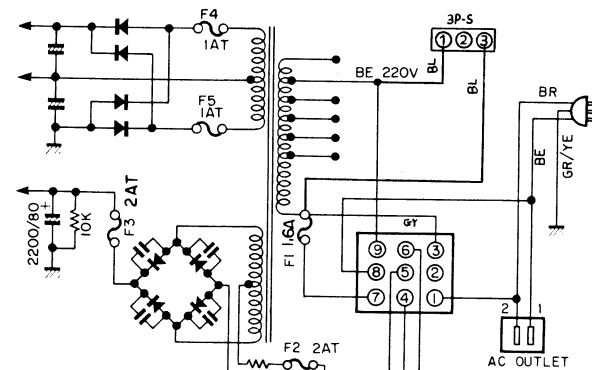
RA-50 COMBO AMPLIFIER SCHEMATIC DIAGRAM



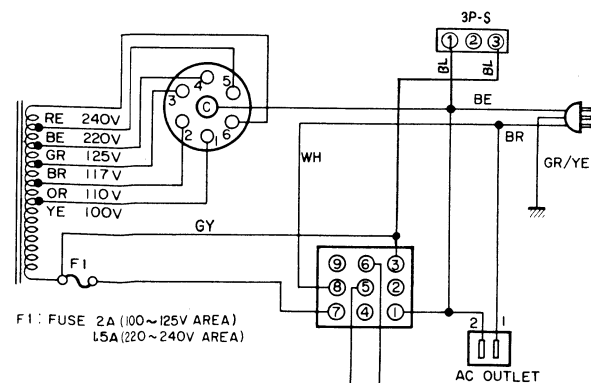
▼ FOR U.S. & CANADIAN MODELS



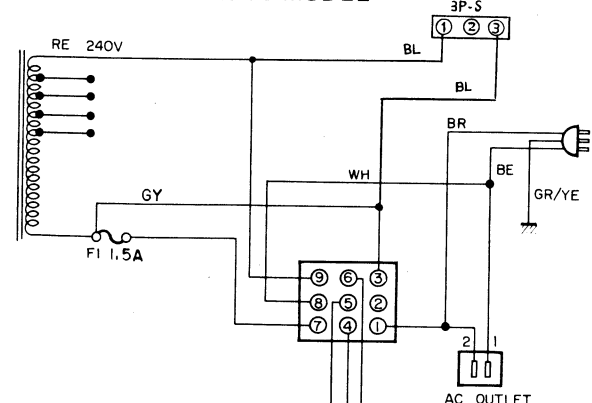
▼ FOR EUROPEAN MODEL



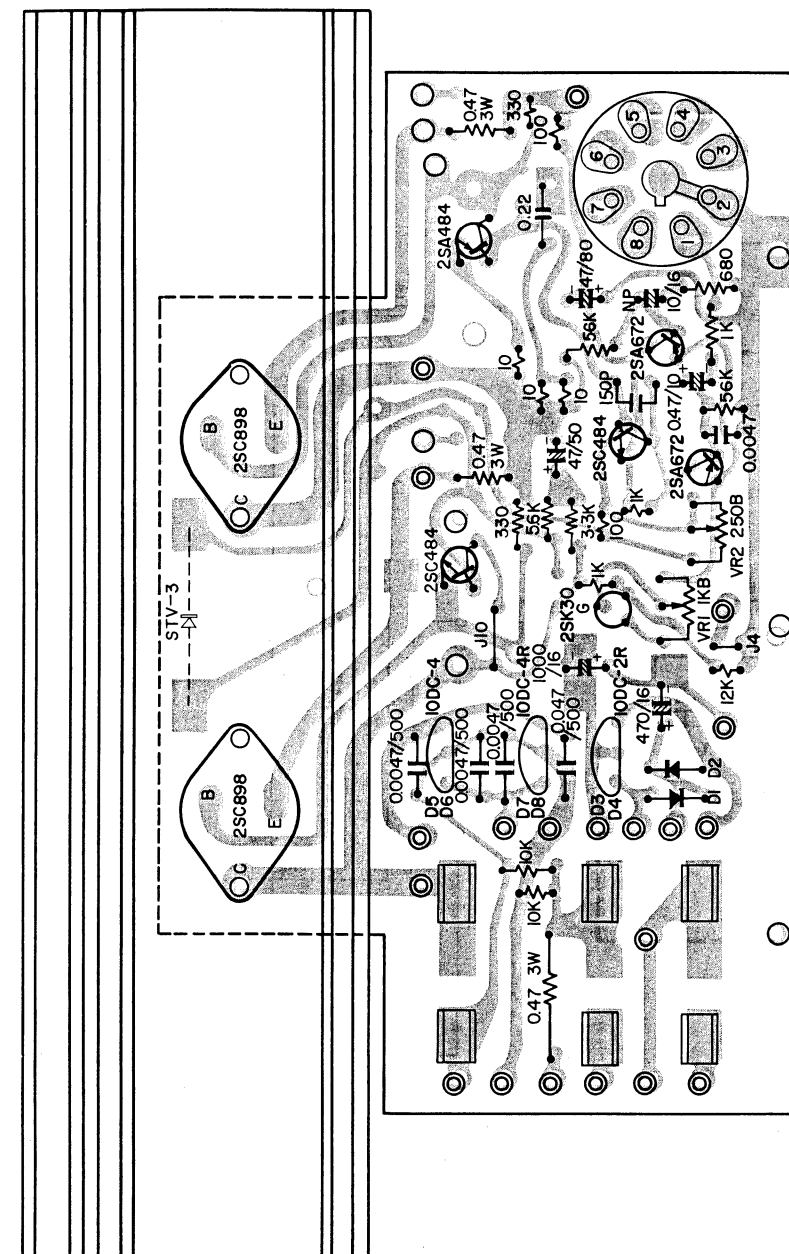
▼ FOR SOUTH AFRICAN MODEL



▼ FOR AUSTRALIAN MODEL

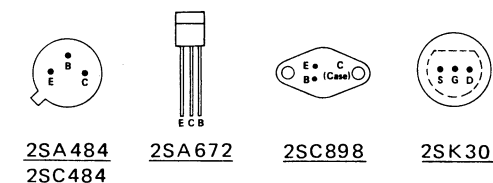


POWER AMP SCHEMATIC

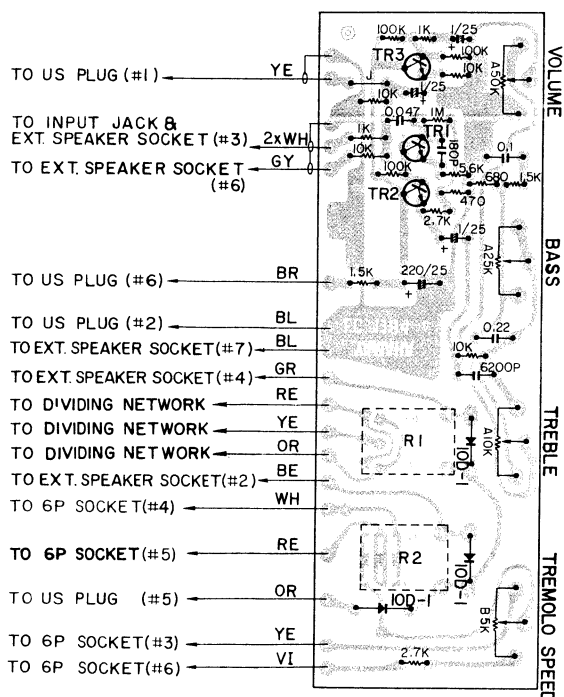


Part No.	Description
NA02240-1	PA (Power Amp) Circuit Board Ass'y, for General, U.S., Canadian, Australian & South African Models
NA02240-2	PA (Power Amp) Circuit Board Ass'y, for European Model
1A04844	Transistor 2SA484
1A06720	Transistor 2SA672
1C04844	Transistor 2SC484
1C08980	Transistor 2SC898
1E00001	FET 2SK30
1H00003	Diode 10D1
1H00013	Diode 10DC2R
1H00014	Diode 10DC4
1H00015	Diode 10DC4R
1F00023	Varistor STV3
HM53247	Cement Molded Resistor 0.47 Ω 3W
HT14013	Variable Resistor B250 Ω , 18K3-1
HT14015	Variable Resistor B1K Ω , 18K3-1
LB60004	US Socket

SEMICONDUCTOR LEAD IDENTIFICATION



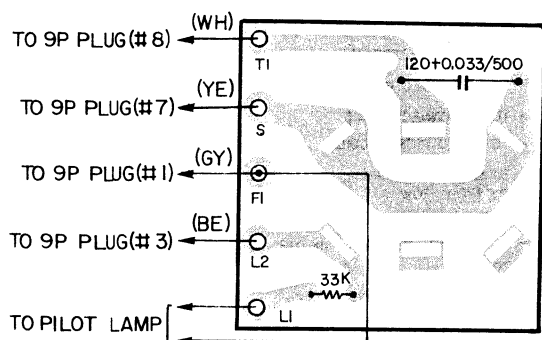
POWER AMP CIRCUIT BOARD



Part No.	Description
NA02219	Preamp Circuit Board Ass'y
IC08282	Transistor 2SC828
IH00003	Diode 10D-1
KC00007	Relay (Voice)
KC00005	Relay (Tremolo/Chorus)
HS32002	Variable Resistor A50K Ω , 24 ϕ
HS32004	Variable Resistor A25K Ω , 24 ϕ
HS32005	Variable Resistor A10K Ω , 24 ϕ
HS32008	Variable Resistor B5K Ω , 24 ϕ

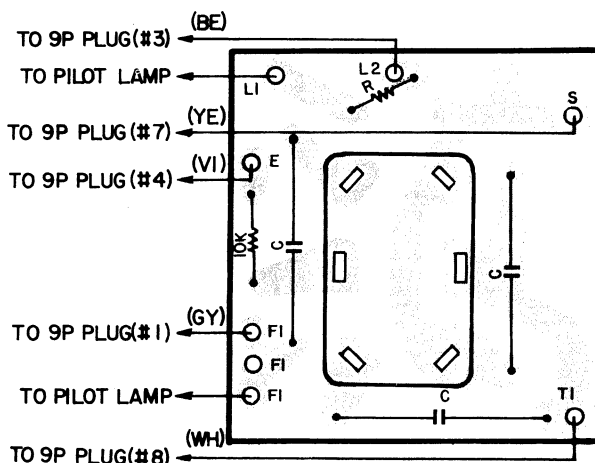
PA (PREAMP) CIRCUIT BOARD

▼ FOR U.S. & CANADIAN MODELS



Part No.	Description
NA02819	PSW (Power Switch) Circuit Board Ass'y, for U.S. & Canadian Models
KA30005	Power Switch
FZ00011	Spark-killer Capacitor 0.033 μ F + 120 Ω /500V

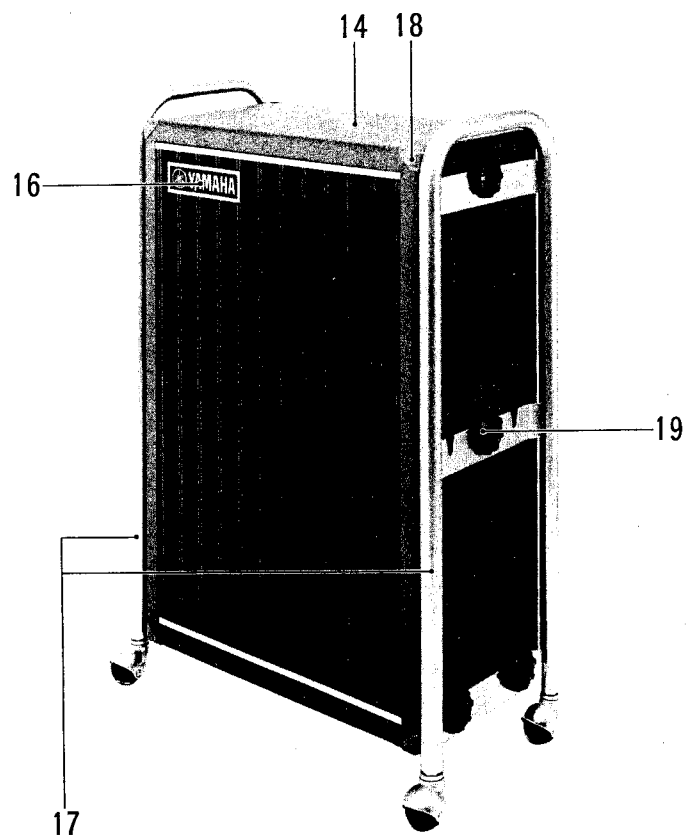
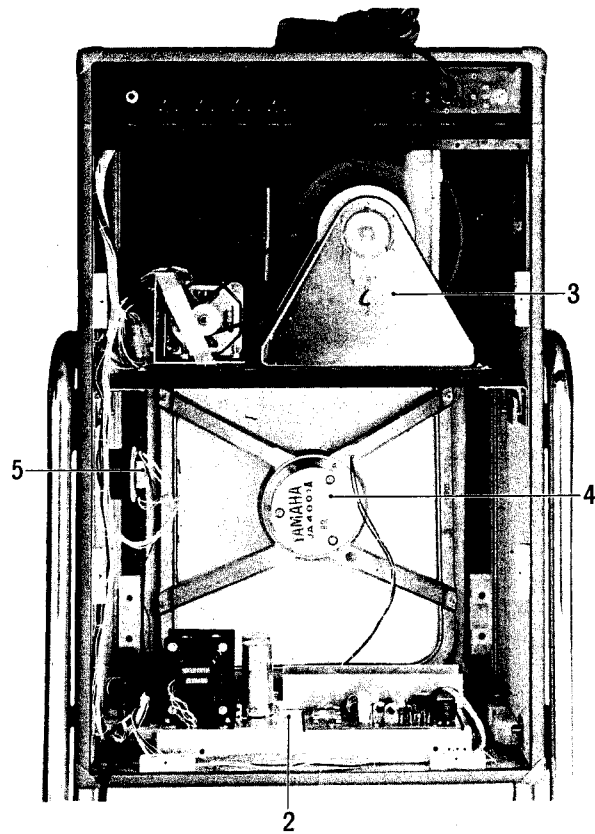
▼ FOR GENERAL & SOUTH AFRICAN MODELS

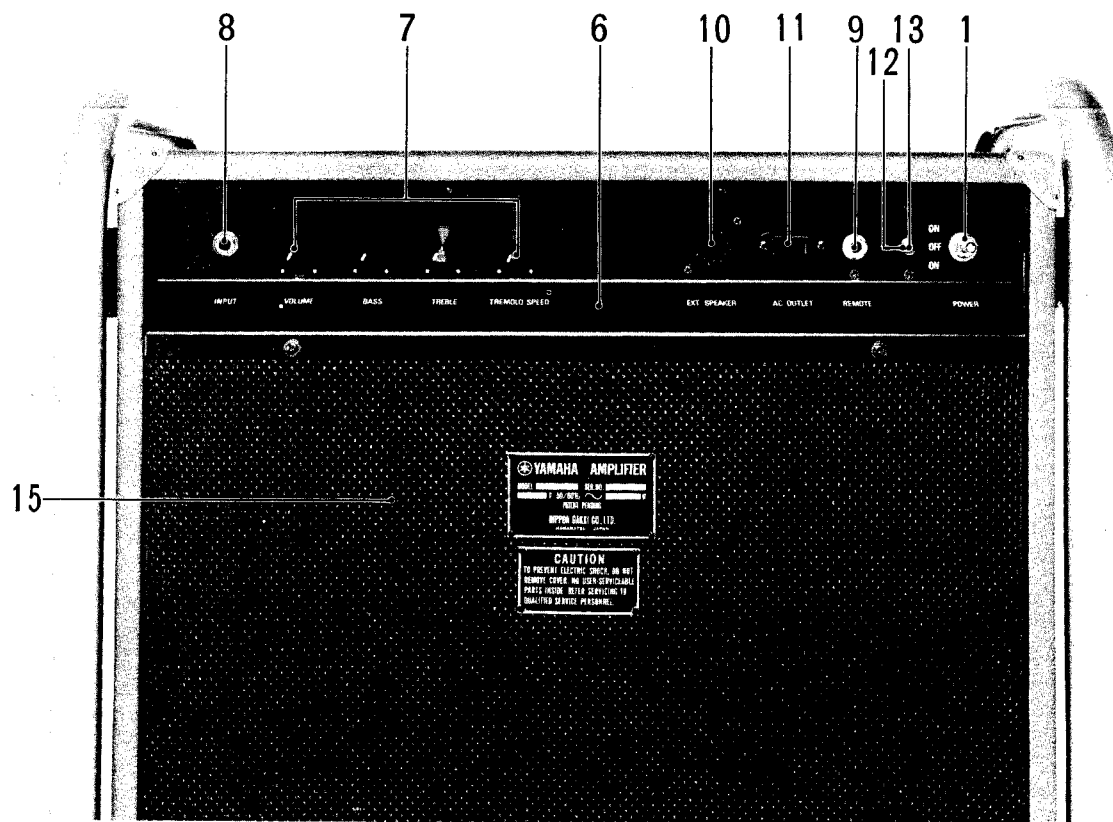


Part No.	Description
NA02220	PSW (Power Switch) Circuit Board Ass'y, for General & South African (100V~125V) Models
NA02481	PSW (Power Switch) Circuit Board Ass'y, for General & South African (220V~240V) Models
KA30005	Power Switch

PSW (POWER SWITCH) CIRCUIT BOARD

PARTS LIST





Ref. No.	Part No.	Description		Remarks	Common Models	
	NA02219	PA (Preamp) Circuit Board # 1184-6	ブリアンプシート			
1	NA02819	PSW (Power Switch) Circuit Board	パワースイッチ シート	U.S. & Canadian Models		
1	NA02220	PSW (Power Switch) Circuit Board	"	General & South African (100~125V area) Models		
1	NA02481	PSW (Power Switch) Circuit Board	"	General & South African (220~240V area) Models		
2	ND60322	Power Amplifier	メインアンプ	General Models		
2	ND60323	Power Amplifier	"	U.S. & Canadian Models		
2	ND60324	Power Amplifier	"	South African Models		
2	ND60325	Power Amplifier	"	Australian Models		
2	ND60327	Power Amplifier	"	European Models		
	GA01972	Power Transformer	電源トランス			
	NA02204-1	PA (Power Amp) Circuit Board	P A シート	Except European Models		
	NA02204-2	PA (Power Amp) Circuit Board	"	European Models		
	FL18922	Electrolytic Capacitor 2200 μ F/80V	電解コンデンサ			
	LB20022	Voltage Selector	電圧切換器			
	LB20030	AC Socket	A C ソケット			
	KB00034	Fuse 1.5A 250V	ヒューズ	General, South African (220~240V area) & Australian Models		
	KB00035	Fuse 2A 250V	"	General, U.S., Canadian, South African & Australian Models		
	KB00073	Miniature Fuse 1 AT	ミニチュア ヒューズ	European Models		
	KB00074	Miniature Fuse 1.6 AT	"	European Models		
	KB00075	Miniature Fuse 2 AT	"	European Models		
	KB00033	Fuse 1A 250V	ヒューズ	U.S. & Canadian Models		
3	NB02479	Tremolo Unit	トレモロユニット			
	JA17012	Speaker, tremolo	スピーカー			
	JC00008	Motor	モーター			
	NA02145	Tremolo Circuit Board #0967-3	トレモロシート			
	NB01165	Wheel Assembly (w/magnet)	ホイール アッセンブリー			
	NB01777	Pickup Coil Assembly	ピックアップコイル アッセンブリー			
	BC00153	Contact Leaf	ブラシリーフ			
	CB01253	Square Belt	角ベルト			
	CB00841	Contact Cover	ブラシガード			
	CB01251	Pulley, large	プーリー、大			
	CB01249	Bearing	軸受			
	CB01248	Rubber Bush	ゴムブッシュ			
4	JA40011	Speaker, main	スピーカー			
5	NB00740	Dividing Network	ディバイディング ネットワーク			
	NB02026	Tremolo Step-down Transformer Assembly	トレモロトランス アッセンブリー	European & Australian Models		
	NB02027	Tremolo Step-down Transformer Assembly	"	General & South African Models		
	GA02080	Step-down Transformer	電源トランス			
6	AA02214	Rear Panel	パネル			
7	CB00552	Knob	ツマミ			
8	LB20014	Phone Jack, input	イヤホンジャック			
9	LB30006	Phone Jack, remote	"			
10	LB60005	US Socket	U S ソケット			
11	LB20030	AC Socket	A C ソケット	General Models		

REVISED SERVICE PARTS LIST TABLE

LIGHT MUSICAL INSTRUMENTS

VS-60/90, VM-100, TS-60/90, PE-100, TA-20, TA-30, TA-60, TA-120, BS-100, BE-200, TS-100/200, TS-110, PE-200, PS-75/100, PM-200, PS-75B/100B, PM-200B, YTA-25, YTA-45, YTA-95, RA-50, RA-100, RA-200, RA-200R, YES-600, YES-900, YES-600A, YES-700, YES-900A, YES-1300, MX-4, HP-6, YBA-65, YBA-65A, WP-1, PE-200A, YTA-15, YBA-45, EM-80, EM-100, PM-400, PS-400, YHS-100.

AUDIO EQUIPMENTS

YP-70, AA-70, MC-600/600E, MSC-5B, MSC-3/3E, MC-50/50A/50B, MC-40/40Z, YP-500/700, UD-500, CA-500, CA-700, CR-500, CR-700, CT-700, CR-510LS.