



4-TRACK 2-CHANNEL STEREO/MONO TAPE DECK

**Dokorder<sup>®</sup>**  
**model 1120**

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**SERVICE MANUAL**

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## SERVICE DATA

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### —MECHANICAL—

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Recording/Playback System:	4-track 2-channel Stereophonic 4-track 1-channel Monophonic
Tape Width:	Standard 1/4 inch tape
Reel Capacity:	10-1/2" or 7"
Motor:	Three (One 4/8 pole hysteresis synchronous for capstan, Two 6 pole induction type for reels)
Heads:	Three (One erase, one record, one playback)
Tape speed:	19 cm/sec (7-1/2 ips) $\pm 1.0\%$ (10-1/2" or 7") 9.5 cm/sec (3-3/4 ips) $\pm 1.0\%$ (10-1/2" or 7")
Wow and flutter:	Playback (RMS) 19 cm/sec (7-1/2 ips) 0.15% (10-1/2" or 7") 9.5 cm/sec (3-3/4 ips) 0.18% (10-1/2" or 7")
Fast winding time:	120 seconds for 7" reel (1800-foot tape, 60 Hz) 100 seconds for 10-1/2" reel (2500-foot tape, 60 Hz)
Operation position:	Vertical
Monitoring:	Full tape/source
Level indication:	2 illuminated VU meters and 2 peak indicator lamps
Power requirements:	U.S.A. type 117V (60 Hz) Universal type 110, 117, 125, 200, 220 or 240V (50/60 Hz)
Power consumption:	190W
Weight:	59.5 lbs.
Dimensions:	452 m/m (17-3/4") H X 430 m/m (16-7/8") W X 172 m/m (6-3/4") D

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**ELECTRICAL**

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Circuit Complement: 2 IC, 38 Transistors, 62 diodes

Equalization: NAB

Bias frequency: 130 KHz  $\pm$ 10 KHz Push-pull oscillator

Frequency response: Overall  
30 Hz – 20 KHz  $\pm$ 3 dB at 19 cm (7-1/2 ips)  
30 Hz – 10 KHz  $\pm$ 3 dB at 9.5cm (3-3/4 ips)

Playback  
50 Hz – 15 KHz  $\pm$ 3 dB at 19 cm (7-1/2 ips)  
50 Hz – 7.5 KHz  $\pm$ 3 dB at 9.5cm (3-3/4 ips)

Signal to noise ratio: Over all 48 dB (RMS)  
Playback 50 dB (RMS)

Crosstalk: Better than 45 dB at 1 KHz

Channel separation: Better than 40 dB at 1 KHz

Erase efficiency: 65 dB at 1 KHz

Input, per channel: Microphone  
Sensitivity ..... 0.5 mV Impedance ..... 600 ohms  
Line  
Sensitivity ..... 80 mV Impedance ..... 100 K ohms

Output, per channel: Line  
Sensitivity ..... 1.2 V Impedance ..... 10 K ohms  
Headphones ..... 2 mW Impedance ..... 8 ohms

Rec/P.B. Connector: Din input  
Sensitivity ..... 30 mV Impedance ..... 80 K ohms  
Din output  
Sensitivity ..... 1.2 V Impedance ..... 10 K ohms

Note: Specification are subject to change without notice for purpose of improvement.

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## EXPLODED VIEWS AND PARTS LISTS

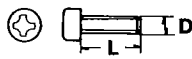


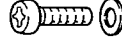




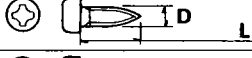
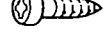
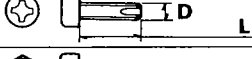
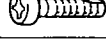

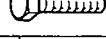

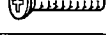
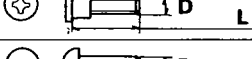
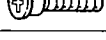

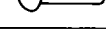

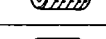
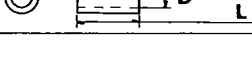
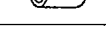
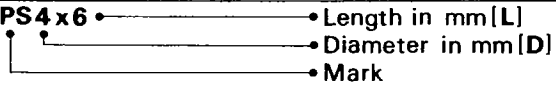
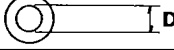

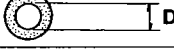

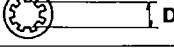

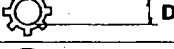

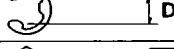

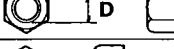

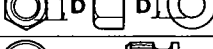

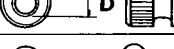

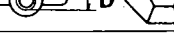


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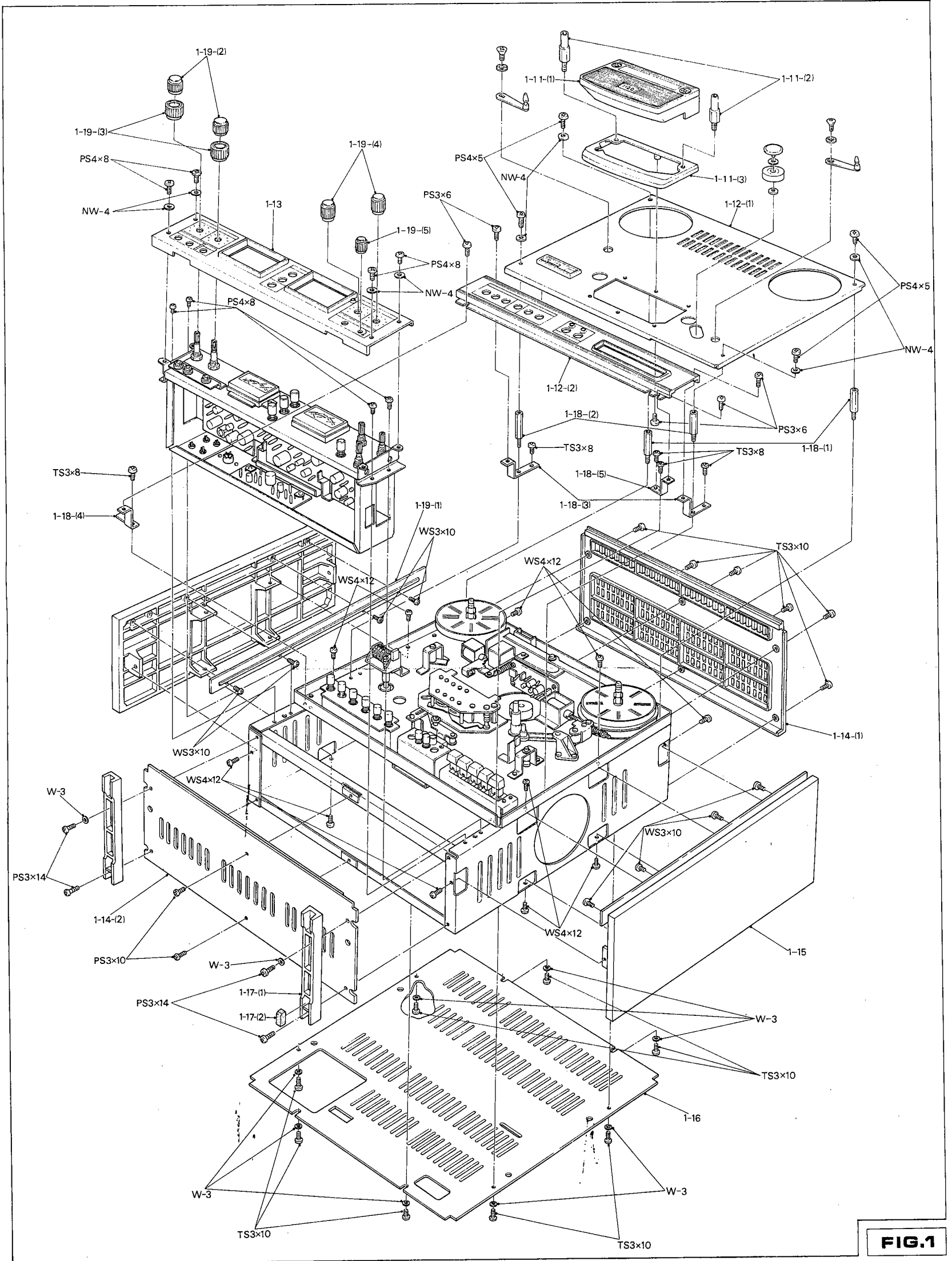
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## PARTS NOMECLATURE

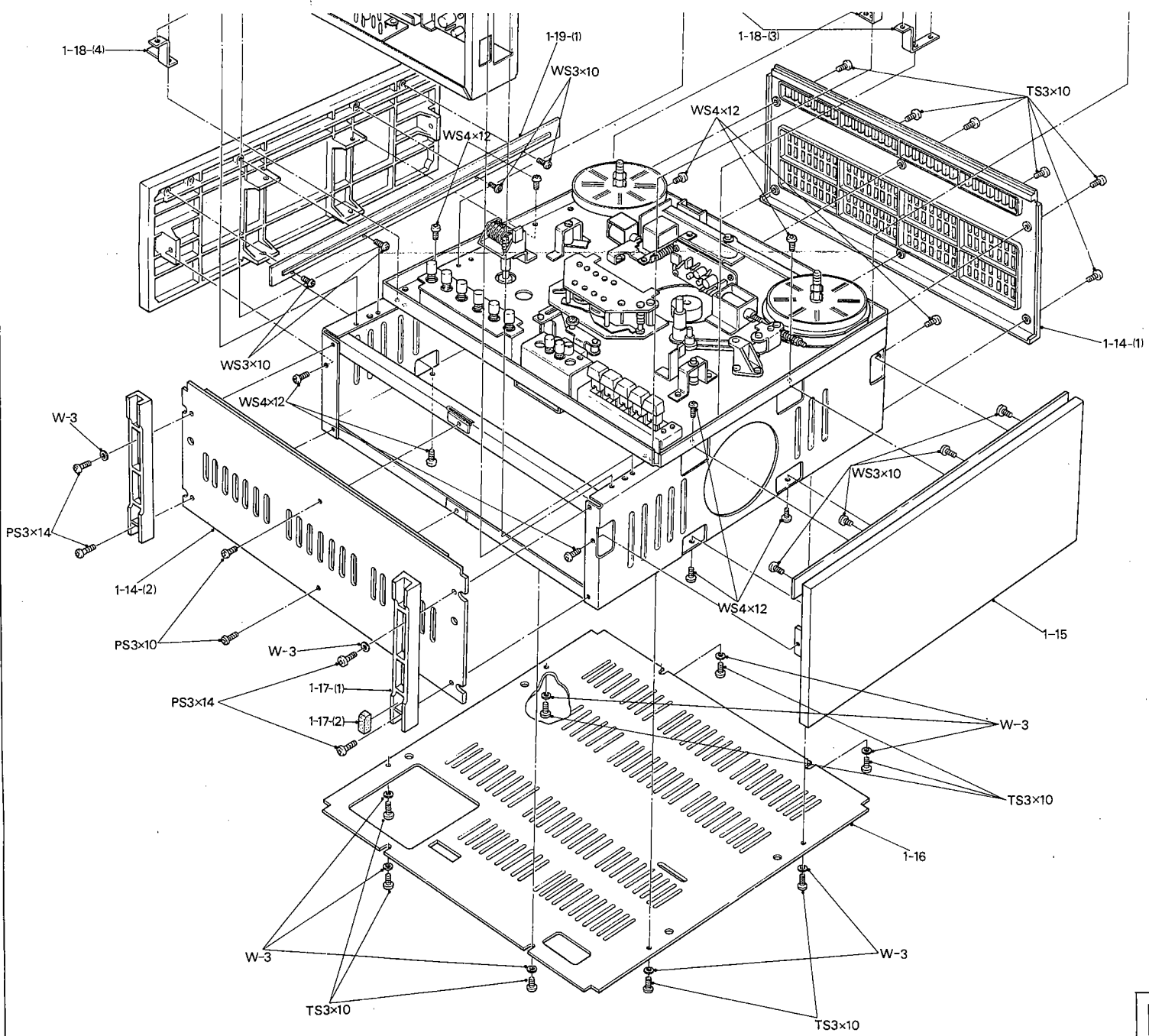
Mark	Name	Shape	Illustration	Remarks
<b>PS</b>	Pan Head Screw			
<b>PF</b>	Pan Head Screw with Flat Washer			with Spring Washer = <b>PG</b>
<b>BH</b>	Binding Head Screw			
<b>TS</b>	Taping Screw			
<b>WS</b>	Wood Screw			
<b>BS</b>	Binding Screw			
<b>HB</b>	Hexagon Bolt			
<b>FS</b>	Flat Countersunk Head Screw			
<b>LS</b>	Lock Screw			
<b>R</b>	Rivet			
<b>AS</b>	Allen Hex. Screw			
<b>S</b>	Spacer			
<b>Example</b>		 <ul style="list-style-type: none"> <li>• Length in mm [L]</li> <li>• Diameter in mm [D]</li> <li>• Mark</li> </ul>		
<b>NW</b>	Nylon Washer			
<b>FW</b>	Fibre Washer			
<b>IL</b>	Internal Lock Washer			
<b>EL</b>	External Lock Washer			
<b>E</b>	Retaining Ring [EWasher]			
<b>N</b>	Nut			
<b>NF</b>	Nut with Flat Washer			with Spring Washer = <b>NG</b>
<b>K</b>	Knurled Thumb Nut			
<b>WN</b>	Wing Nut			
<b>Example</b>		 <ul style="list-style-type: none"> <li>• Diameter in mm [D]</li> <li>• Mark</li> </ul>		

# CABINET EXPLODED VIEW



**FIG.1**

REF	N
1-11-(1)	
1-11-(2)	
1-11-(3)	
1-12-(1)	
1-12-(2)	
1-13	
1-14-(1)	
1-14-(2)	
1-15	
1-16	
1-17-(1)	
1-17-(2)	
1-18-(1)	
1-18-(2)	
1-18-(3)	
1-18-(4)	
1-18-(5)	
1-19-(1)	
1-19-(2)	
1-19-(3)	
1-19-(4)	
1-19-(5)	



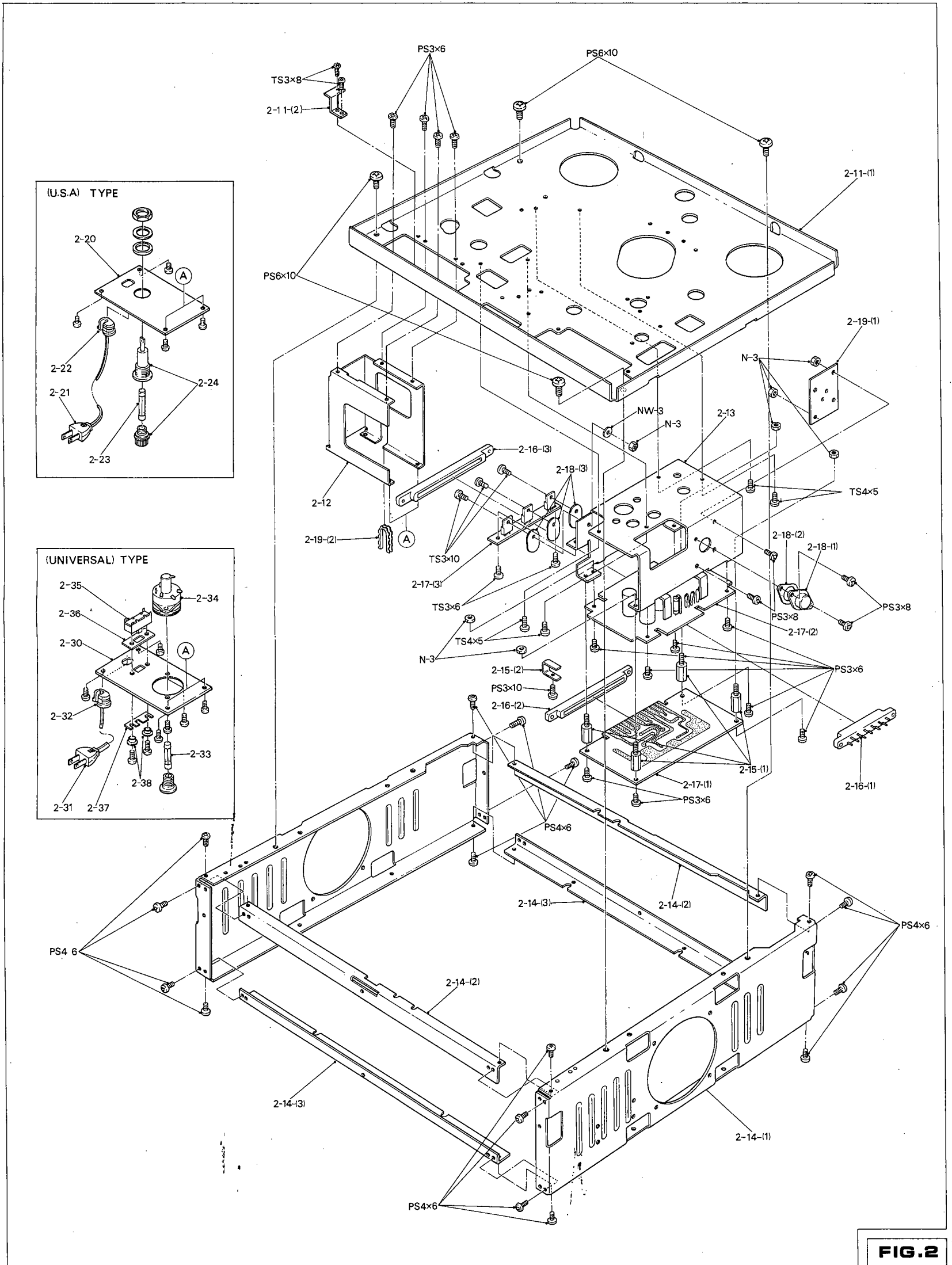
**FIG.1**

**CABINET EXPLODED VIEW**

REFERENCE NO.	DESCRIPTION	USER PRICE (\$)
1-11-1	HEAD COVER ASS'Y	6.90
1-11-2	HEAD COVER BOSS	0.90
1-11-3	HEAD PANEL	2.90
1-12-1	FRONT PANEL ASS'Y	13.30
1-12-2	CONTROL PANEL ASS'Y	13.70
1-13	AMP PANEL ASS'Y	14.10
1-14-1	TOP BOARD ASS'Y	5.20
1-14-2	BOTTOM BOARD	4.75
1-15	SIDE BOARD	22.65
1-16	BACK PANEL	2.90
1-17-1	MOUNTING FOOT	2.15
1-17-2	RUBBER FOOT	0.25
1-18-1	FRONT PANEL BOSS (B)	0.95
1-18-2	FRONT PANEL BOSS (A)	0.85
1-18-3	CONTROL PANEL MOUNT (B)	0.50
1-18-4	CONTROL PANEL MOUNT (C)	0.30
1-18-5	CONTROL PANEL MOUNT (A)	0.75
1-19-1	SIDE BEZEL	7.90
1-19-2	POTENTIOMETER KNOB (INNER)	2.10
1-19-3	POTENTIOMETER KNOB (OUTER)	2.10
1-19-4	POTENTIOMETER KNOB (LARGE)	2.15
1-19-5	POTENTIOMETER KNOB (SMALL)	2.00

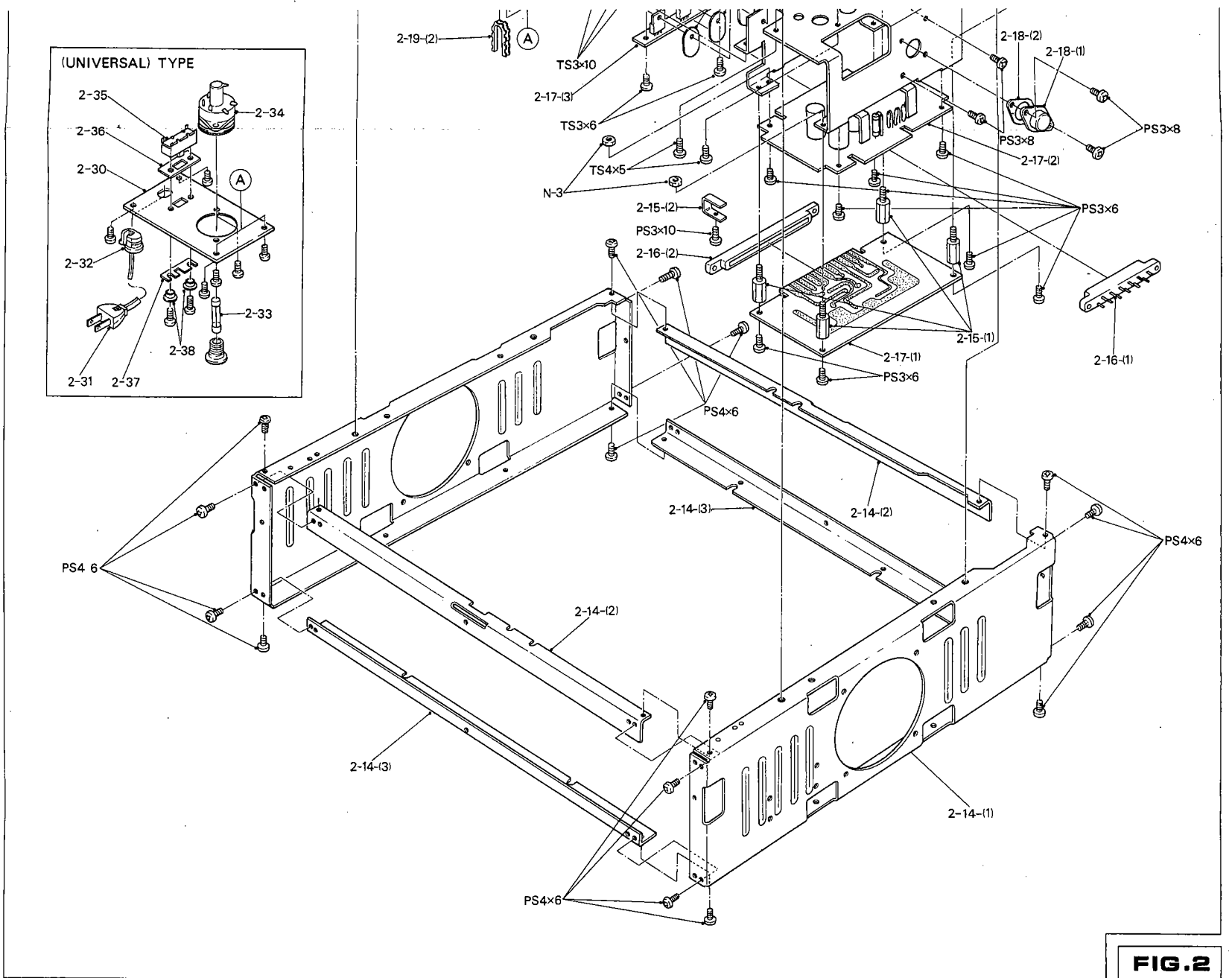


# FLAME WORK EXPLODED VIEW



**FIG. 2**

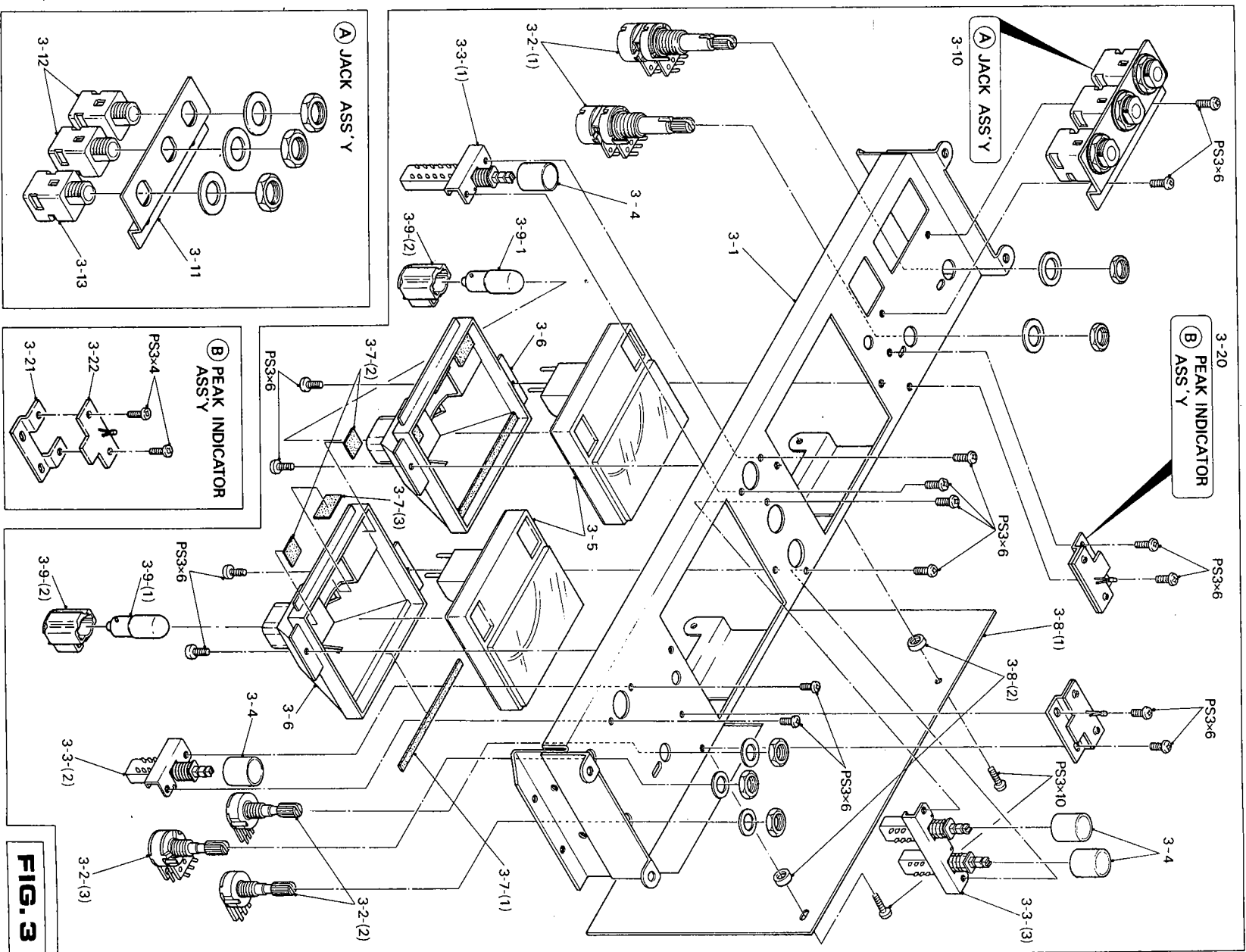
REFERENCE NO.	REFERENCE NO.
2-20	2-11-(1)
2-21	2-11-(2)
2-22	2-12
2-23	2-13
2-24	2-14-(1)
	2-14-(2)
	2-14-(3)
	2-15-(1)
	2-15-(2)
	2-16-(1)
	2-16-(2)
	2-16-(3)
	2-17-(1)
	2-17-(2)
	2-17-(3)
	2-18-(1)
	2-18-(2)
	2-18-(3)
	2-19-(1)
	2-19-(2)
	2-20
	2-21
	2-22
	2-23
	2-24
	2-30
	2-31
	2-32
	2-33
	2-34
	2-35
	2-36
	2-37
	2-38



**FIG. 2**

REFERENCE NO.	DESCRIPTION	USER PRICE (\$)
2-11-(1)	DECK CHASSIS	16.10
2-11-(2)	6-GANG SWITCH HOLDER MOUNT	0.45
2-12	POWER SUPPLY CHASSIS HOLDER	3.30
2-13	HEAT SINK	11.50
2-14-(1)	DECK HOLDER (A)	12.15
2-14-(2)	DECK ANGLE (A)	1.65
2-14-(3)	DECK ANGLE (B)	1.65
2-15-(1)	PC BOARD SPACER BOSS	0.55
2-15-(2)	CONNECTOR STOPPER	0.65
2-16-(1)	10P CONNECTOR	3.40
2-16-(2)	18P CONNECTOR	5.20
2-16-(3)	BIAS OSC PC BOARD ASS'Y (PCM-327)	5.20
2-17-(1)	CONTROL PC BOARD ASS'Y (PCM-325)	10.00
2-17-(2)	POWER TRANSISTOR PC BOARD ASS'Y (PCM-319)	37.60
2-17-(3)	POWER TRANSISTOR (2SC-793Y)	4.90
2-18-(1)	MYLAR SHEET (2SC-793Y)	7.50
2-18-(2)	MYLAR SHEET (2SD-243Y)	0.10
2-18-(3)	TRANSISTOR SOCKET	0.10
2-19-(1)	CORD BUSHING	0.95
2-19-(2)		0.10
<b>(U.S.A.) TYPE</b>		
2-20	POWER SUPPLY CHASSIS (A)	0.75
2-21	AC CORD	2.10
2-22	CORD STOPPER	0.30
2-23	FUSE (3A)	0.10
2-24	FUSE HOLDER	2.10
<b>(UNIVERSAL) TYPE</b>		
2-30	POWER SUPPLY CHASSIS (B)	1.00
2-31	AC CORD	2.10
2-32	CORD STOPPER	0.35
2-33	FUSE (3A)	0.10
2-34	CHANGEOVER SOCKET WITH FUSE HOLDER	2.20
2-35	SLIDE SWITCH	1.50
2-36	SLIDE SWITCH INSULATOR	0.20
2-37	SLIDE SWITCH LOCKING PLATE	0.15
2-38	STEPPED WASHER	0.10

# AMP EXPLODED VIEW (1)

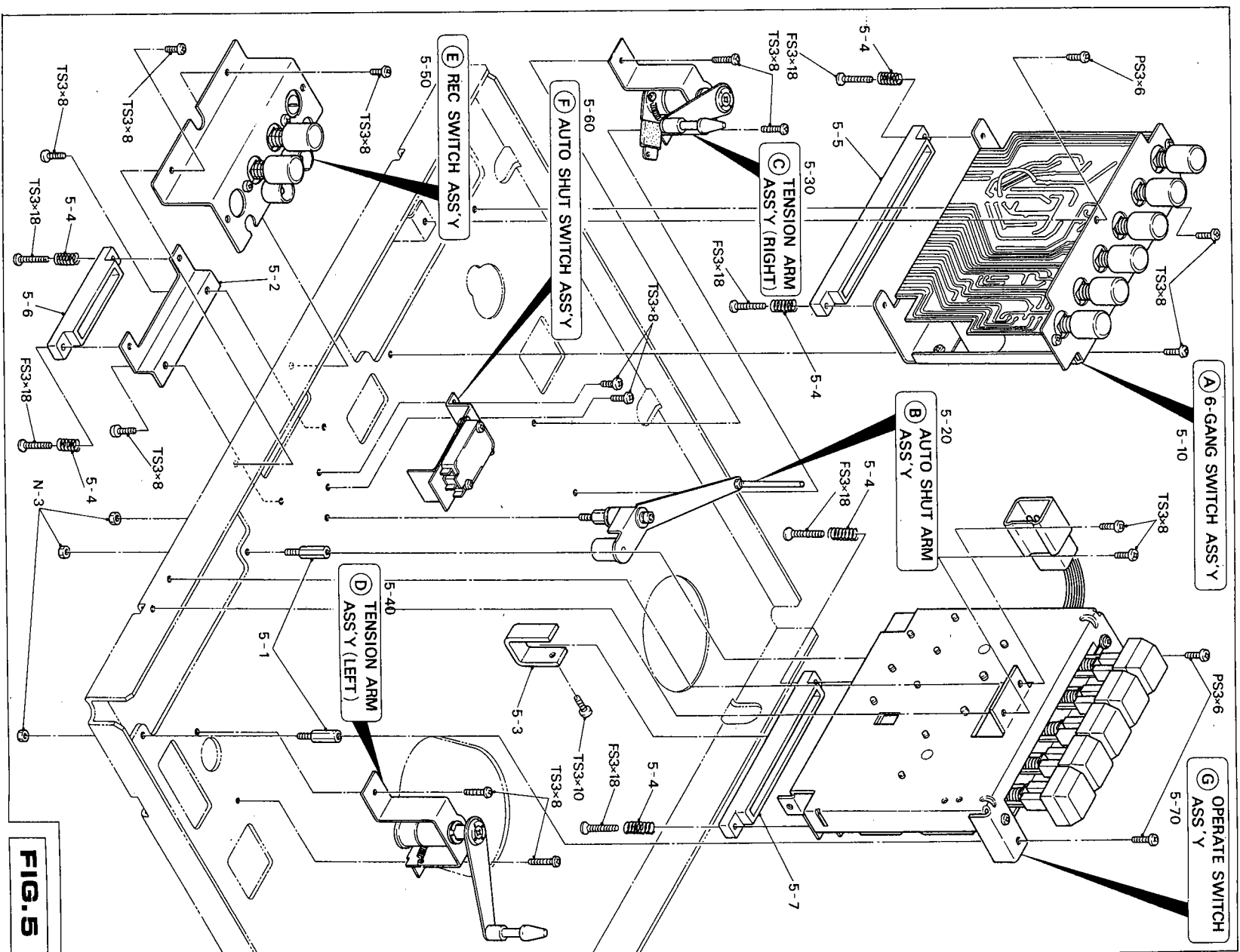


**FIG. 3**

REFERENCE NO.	DESCRIPTION	USER PRICE (\$)
3-1	AMP CHASSIS (A)	7.80
3-2-(1)	2-SHAFT 2-GANG POTENTIOMETER	5.55
3-2-(2)	SINGLE-GANG POTENTIOMETER	1.25
3-2-(3)	1-SHAFT 2-GANG POTENTIOMETER	3.50
3-3-(1)	SINGLE-GANG MINIATURE PUSHBUTTON SWITCH	1.60
3-3-(2)	MINIATURE PUSHBUTTON SWITCH	1.65
3-3-(3)	2-GANG MINIATURE PUSHBUTTON SWITCH	3.15
3-4	ROUND BUTTON (BLACK)	0.20
3-5	VU METER	14.70
3-6	LAMP SHADE	1.15
3-7-(1)	METER RUBBER (3)	0.10
3-7-(2)	METER RUBBER (4)	0.05
3-7-(3)	METER RUBBER (2)	0.10
3-8-(1)	AMP SHIELD PLATE	1.35
3-8-(2)	SHIELD PLATE WASHER	0.45
<b>A JACK ASS'Y</b>		
3-10	JACK ASS'Y	3.00
3-11	JACK MOUNT	0.65
3-12	MIC JACK	1.50
3-13	HEADPHONE JACK	1.95
<b>B PEAK INDICATOR ASS'Y</b>		
3-20	PEAK INDICATOR ASS'Y	1.70
3-21	INDICATOR MOUNT	0.40
3-22	LIGHT-EMITTING DIODE PC BOARD ASS'Y (PCM-318)	1.40



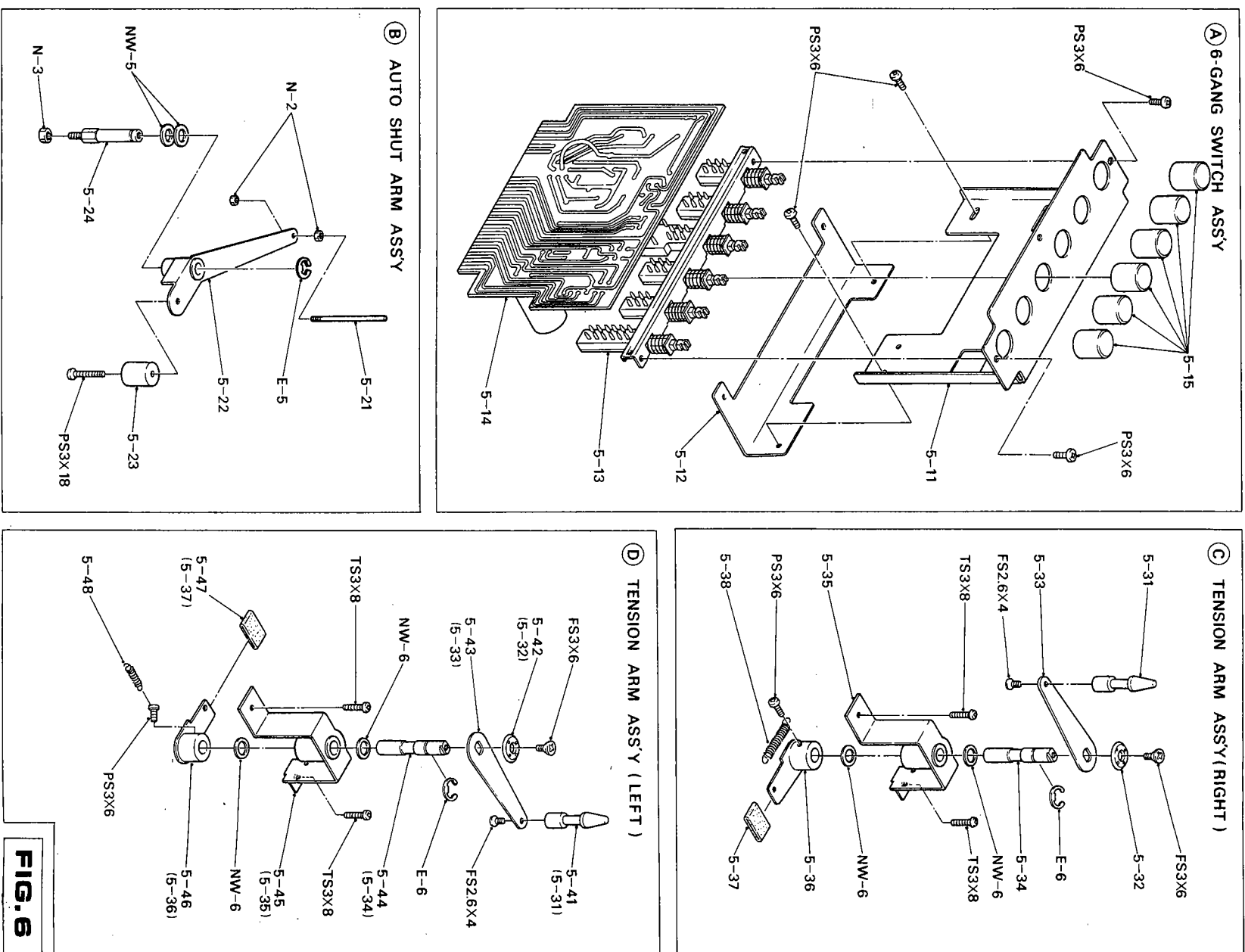
# MECHANISM EXPLODED VIEW(1)



**FIG. 5**

REFERENCE NO.	DESCRIPTION	USER PRICE (\$)
5-1	OPERATE BUTTONS HOLDER BOSS	0.50
5-2	REC CONNECTOR HOLDER	0.60
5-3	CONNECTOR STOPPER	0.65
5-4	CONNECTOR SPRING	0.15
5-5	22P CONNECTOR	6.00
5-6	10P CONNECTOR	3.40
5-7	18P CONNECTOR	5.20

# PARTIAL EXPLODED VIEW(1)

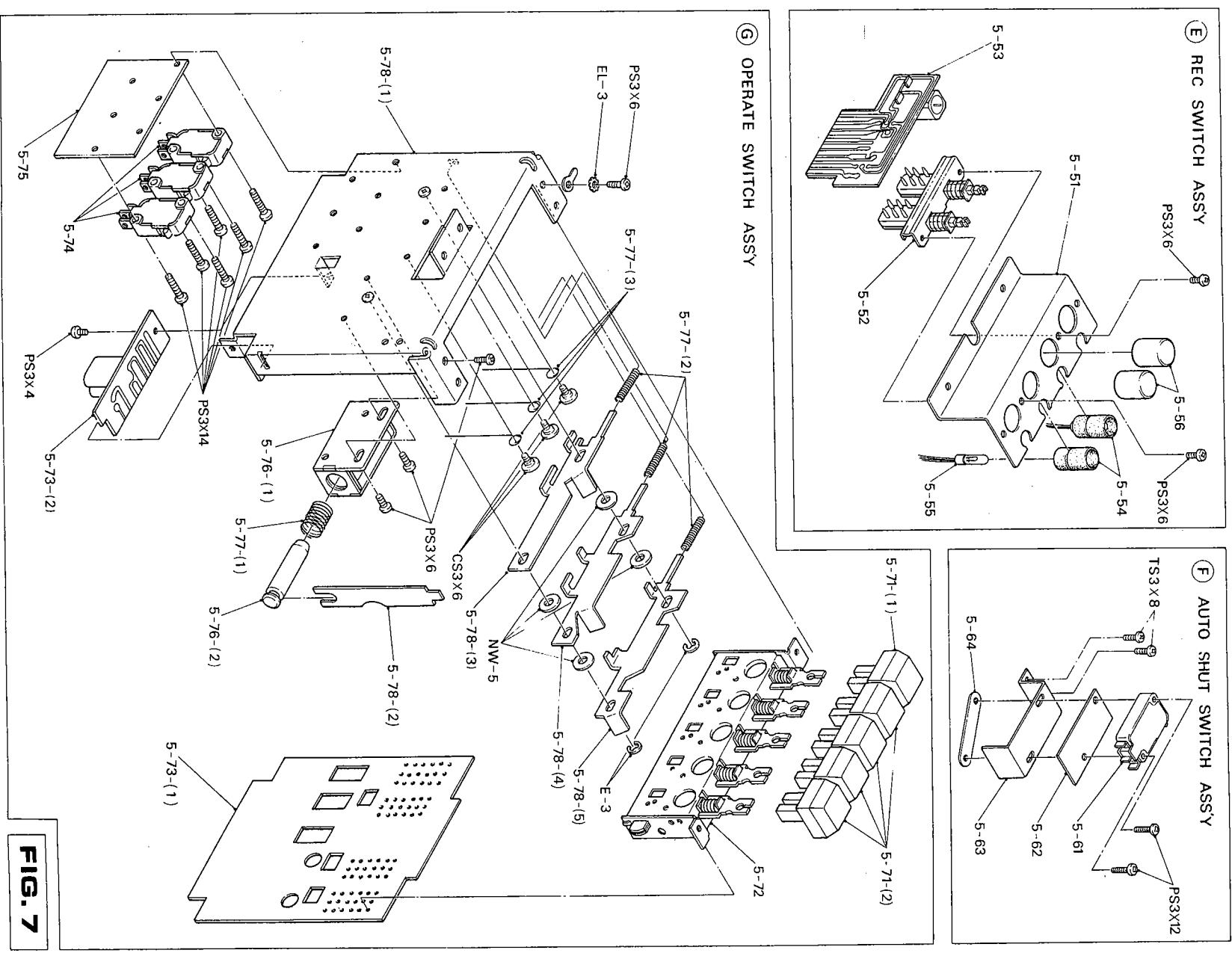


**FIG. 6**

## PARTIAL EXPLODED VIEW (1)

Part Number	Description	Quantity
5-10	6-GANG SWITCH ASS'Y	45.00
5-11	6-GANG SWITCH ASS'Y	2.00
5-12	6-GANG SWITCH HOLDER	1.15
5-13	6-GANG SWITCH CONNECTOR HOLDER	33.95
5-14	6-GANG SWITCH PC BOARD ASS'Y (PCM-326)	10.65
5-15	ROUND BUTTON (BLACK)	0.20
<b>B AUTO SHUT ARM ASS'Y</b>		
5-20	AUTO SHUT ARM ASS'Y	2.40
5-21	AUTO SHUT PIN	0.55
5-22	AUTO SHUT ARM	1.55
5-23	AUTO SHUT WEIGHT	0.50
5-24	AUTO SHUT SHAFT	1.40
<b>C TENSION ARM ASS'Y (RIGHT)</b>		
5-30	TENSION ARM ASS'Y (RIGHT)	5.75
5-31	TENSION ARM GUIDE	2.35
5-32	TENSION DRESSING WASHER	1.55
5-33	TENSION ARM	0.75
5-34	TENSION ARM SHAFT	2.45
5-35	TENSION ARM MOUNT	1.40
5-36	TENSION ARM CONTROL PLATE	1.30
5-37	TENSION ARM DAMPER	0.20
5-38	TENSION ARM SPRING (RIGHT)	0.45
<b>D TENSION ARM ASS'Y (LEFT)</b>		
5-40	TENSION ARM ASS'Y (LEFT)	5.75
5-41	TENSION ARM GUIDE	2.35
5-42	TENSION DRESSING WASHER	1.55
5-43	TENSION ARM	0.75
5-44	TENSION ARM SHAFT	2.45
5-45	TENSION ARM MOUNT	1.40
5-46	TENSION ARM CONTROL PLATE	1.30
5-47	TENSION ARM DAMPER	0.20
5-48	TENSION ARM SPRING (LEFT)	0.45

# PARTIAL EXPLODED VIEW (2)



**FIG. 7**

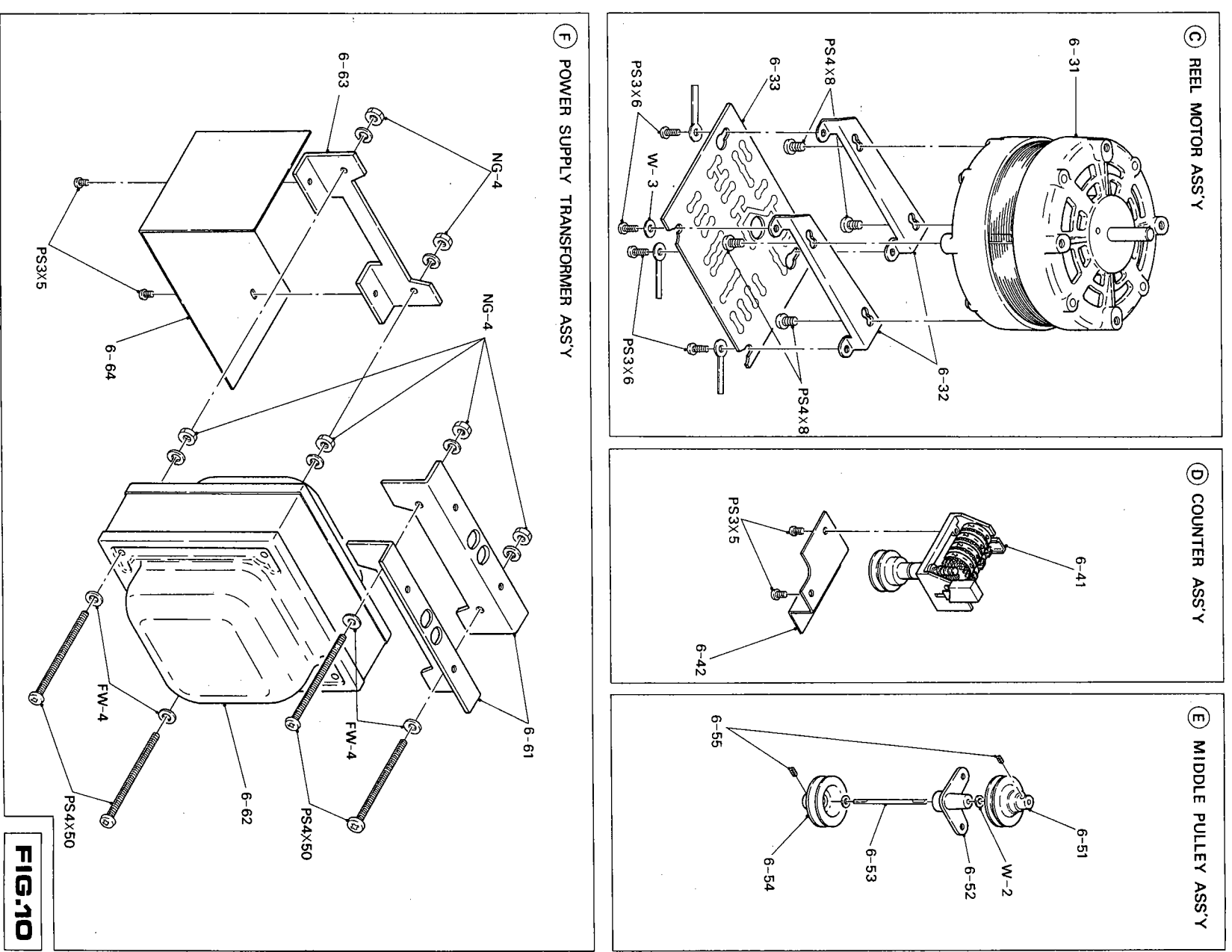
REFERENCE NO.	DESCRIPTION	USER PRICE (\$)
<b>E REC SWITCH ASS'Y</b>		
5-50	REC SWITCH ASS'Y	6.20
5-51	REC SWITCH HOLDER	0.95
5-52	2-GANG MINIATURE PUSHBUTTON SWITCH	3.15
5-53	REC SWITCH PC BOARD ASS'Y (PCM-330, 321)	2.90
5-54	RUBBER BUSHING (A) FOR LAMP	0.35
5-55	REC LAMP	1.25
5-56	ROUND BUTTON (RED)	0.20
<b>F AUTO SHUT SWITCH ASS'Y</b>		
5-60	AUTO SHUT SWITCH ASS'Y	2.80
5-61	MICRO-SWITCH	2.25
5-62	MICRO-SWITCH INSULATOR PAPER	0.10
5-63	AUTO SHUT SWITCH HOLDER	0.50
5-64	AUTO SHUT SWITCH MOUNT	0.15
<b>G OPERATE SWITCH ASS'Y</b>		
5-70	OPERATE SWITCH ASS'Y	35.40
5-71-(1)	OPERATE BUTTON ASS'Y (RED)	0.80
5-71-(2)	OPERATE BUTTON ASS'Y (BLACK)	3.20
5-72	5-GANG SWITCH	13.40
5-73-(1)	OPERATE SWITCH PC BOARD ASS'Y (PCM-323)	5.10
5-73-(2)	SPARK KILLER PC BOARD ASS'Y (PCM-215)	1.30
5-74	MICRO-SWITCH	2.25
5-75	MICRO-SWITCH INSULATOR PAPER	0.10
5-76-(1)	OPERATE BUTTONS SOLENOID	6.25
5-76-(2)	OPERATE BUTTONS SOLENOID PLUNGER	2.00
5-77-(1)	SOLENOID SPRING	0.15
5-77-(2)	SLIDING LINKAGE SPRING	0.20
5-77-(3)	ACTUATOR SPRING	0.15
5-78-(1)	OPERATE BUTTONS HOLDER	4.70
5-78-(2)	SOLENOID LEVER	0.50
5-78-(3)	SLIDING LINKAGE (UPPER)	1.35
5-78-(4)	SLIDING LINKAGE (MIDDLE)	1.35
5-78-(5)	SLIDING LINKAGE (LOWER)	1.35







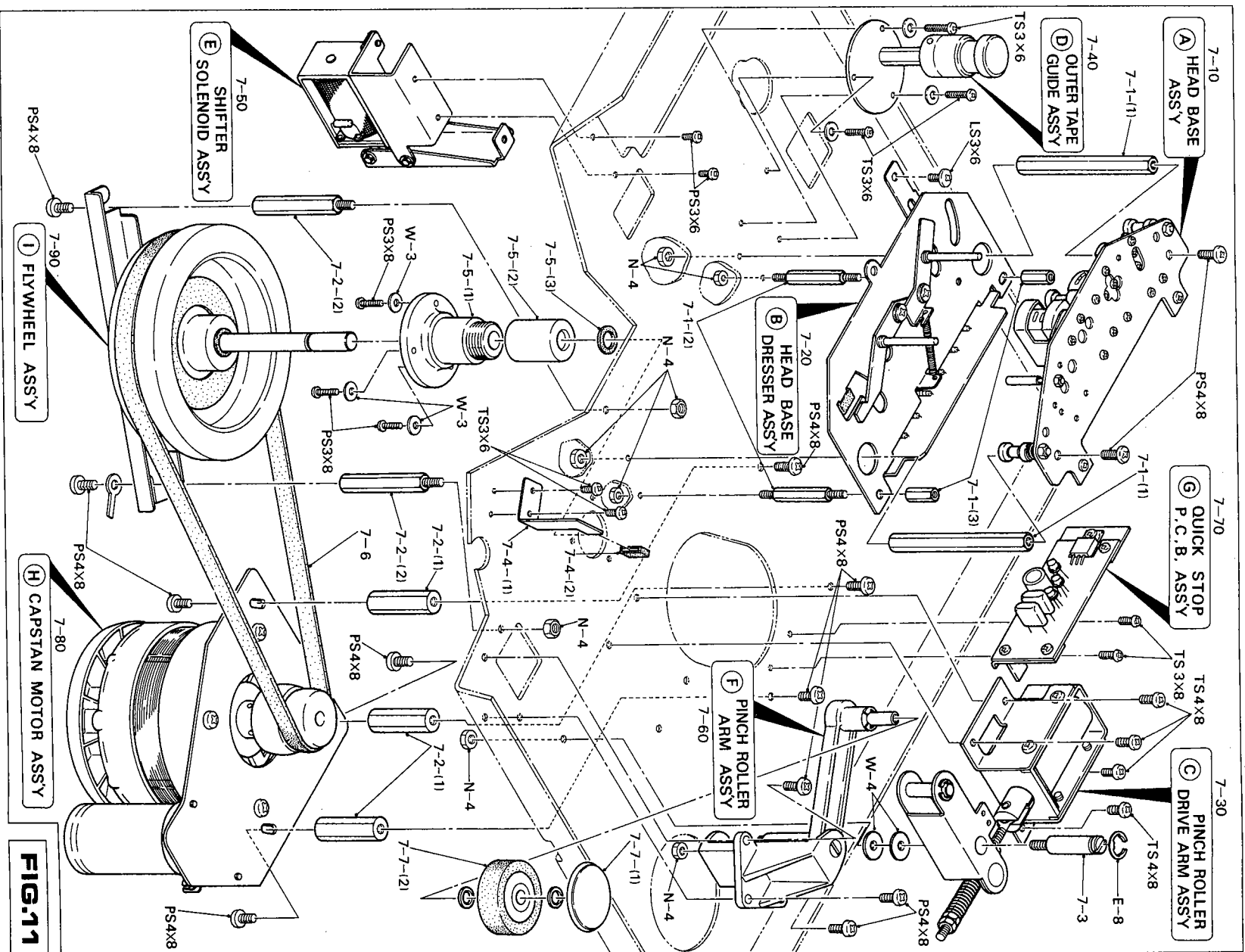
**PARTIAL EXPLODED VIEW(2)**



**FIG.10**

REFERENCE NO.	DESCRIPTION	USER PRICE (\$)
<b>C REEL MOTOR ASS'Y</b>		
6-30	REEL MOTOR ASS'Y	78.00
6-31	REEL MOTOR	73.85
6-32	AC TERMINAL PC BOARD HOLDER	0.55
6-33	AC TERMINAL PC BOARD ASS'Y (PCM-322)	6.10
<b>D COUNTER ASS'Y</b>		
6-40	COUNTER ASS'Y	7.50
6-41	TAPE COUNTER	7.35
6-42	TAPE COUNTER MOUNT	0.50
<b>E MIDDLE PULLEY ASS'Y</b>		
6-50	MIDDLE PULLEY ASS'Y	7.00
6-51	MIDDLE PULLEY (A)	2.50
6-52	MIDDLE PULLEY BEARING	0.65
6-53	MIDDLE PULLEY SHAFT	1.40
6-54	MIDDLE PULLEY (B)	2.50
6-55	SET SCREW WITH HEXAGONAL HOLE	0.20
<b>F POWER SUPPLY TRANSFORMER ASS'Y</b>		
6-60	POWER SUPPLY TRANSFORMER ASS'Y	90.00
6-61	TRANSFORMER MOUNT	1.20
6-62	POWER SUPPLY TRANSFORMER	88.95
6-63	TRANSFORMER SHIELD PLATE MOUNT	1.10
6-64	TRANSFORMER SHIELD PLATE	1.10

# MECHANISM EXPLODED VIEW(3)



**FIG.11**

REFERENCE NO.	DESCRIPTION	USER PRICE (\$)
7-1-(1)	HEAD POST	1.25
7-1-(2)	HEAD COVER POST (LOWER)	1.10
7-1-(3)	HEAD COVER POST (UPPER)	0.40
7-2-(1)	MOTOR POST	0.65
7-2-(2)	FLYWHEEL POST	0.55
7-3	PINCH ROLLER DRIVE ARM SHAFT	0.75
7-4-(1)	PINCH ROLLER ARM STOPPER	0.30
7-4-(2)	DAMPER FOR PINCH ROLLER ARM	0.10
7-5-(1)	CAPSTAN BEARING	7.15
7-5-(2)	CAPSTAN BEARING CAP	2.20
7-6	DRIVE BELT (SMALL)	1.40
7-7-(1)	PINCH ROLLER DRESSING SCREW	2.35
7-7-(2)	PINCH ROLLER	3.25



# PARTIAL EXPLODED VIEW(2)

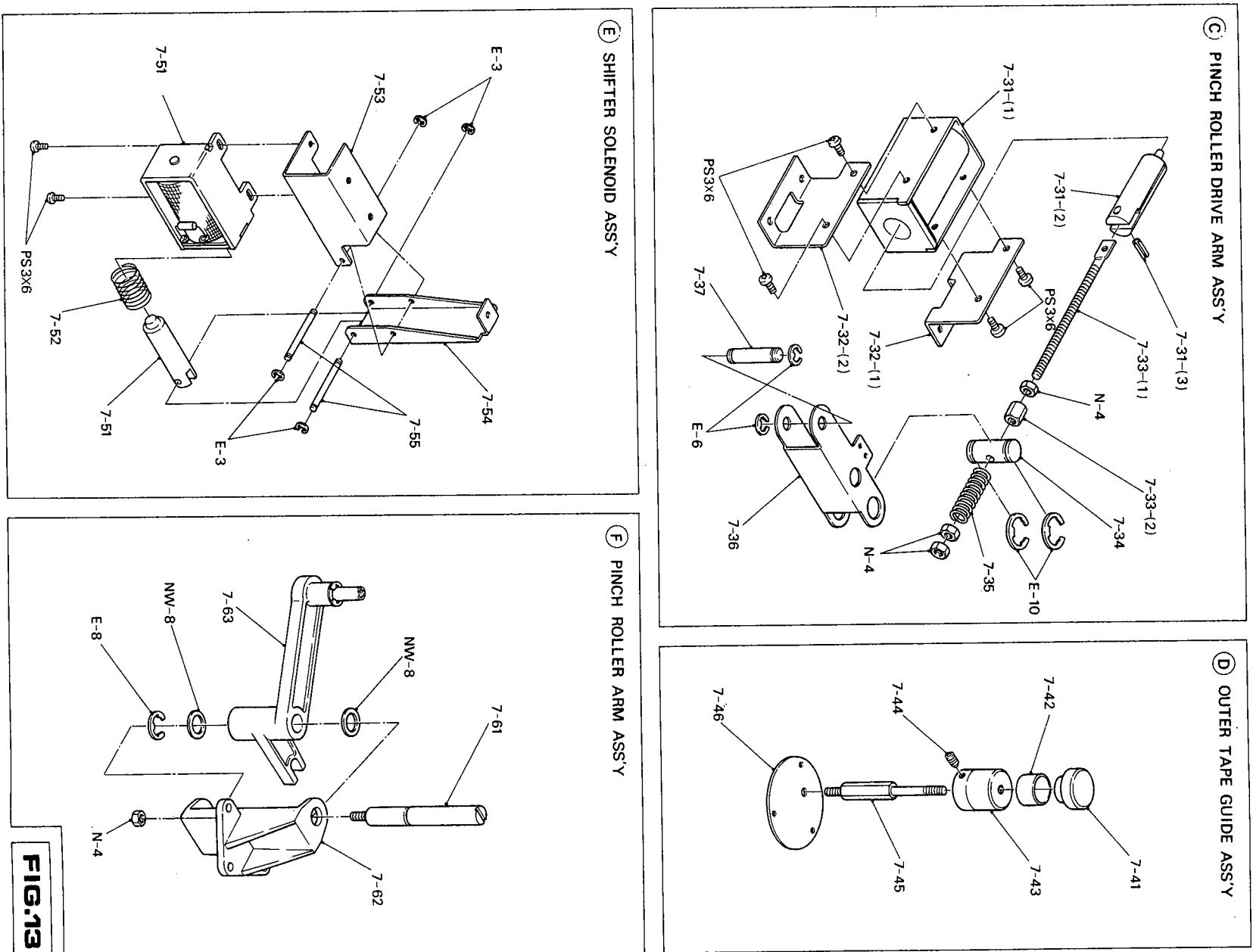
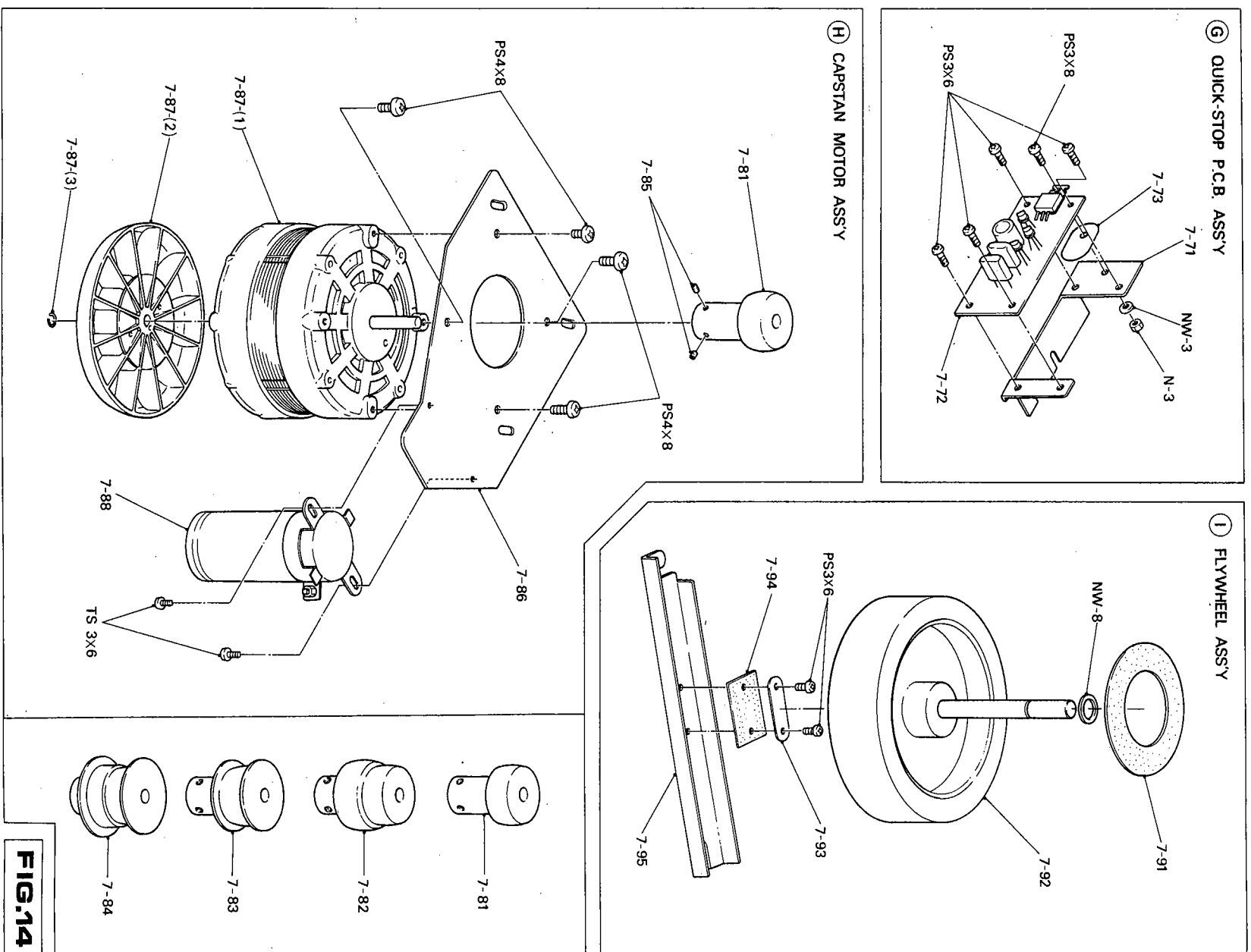


FIG.13

REFERENCE NO.	DESCRIPTION	USER PRICE (\$)
<b>C PINCH ROLLER DRIVE ARM ASS'Y</b>		
7-30	PINCH ROLLER DRIVE ARM ASS'Y	16.50
7-31-(1)	PINCH ROLLER PRESSURE SOLENOID	11.45
7-31-(2)	PRESSURE SOLENOID PLUNGER	(11.45)
7-31-(3)	SPRING PIN	0.10
7-32-(1)	PRESSURE SOLENOID MOUNT (R)	0.85
7-32-(2)	PRESSURE SOLENOID MOUNT (L)	0.85
7-33-(1)	PINCH ROLLER LINKAGE SCREW (S)	0.90
7-33-(2)	PINCH ROLLER PRESSURE ADJUSTING NUT	0.35
7-34	PINCH ROLLER SOLENOID SHAFT	1.10
7-35	PINCH ROLLER SPRING	0.20
7-36	PINCH ROLLER DRIVE ARM	0.95
7-37	PINCH ROLLER DRIVE ARM PIN	0.55
<b>D OUTER TAPE GUIDE ASS'Y</b>		
7-40	OUTER TAPE GUIDE ASS'Y	8.00
7-41	OUTER TAPE GUIDE (UPPER)	1.85
7-42	OUTER TAPE GUIDE RING	2.50
7-43	OUTER TAPE GUIDE (LOWER)	1.90
7-44	SET SCREW WITH HEXAGONAL HOLE	0.20
7-45	OUTER TAPE GUIDE BOSS	1.50
7-46	OUTER TAPE GUIDE DISC	0.40
<b>E SHIFTER SOLENOID ASS'Y</b>		
7-50	SHIFTER SOLENOID ASS'Y	9.00
7-51-(1)	SHIFTER SOLENOID	7.70
7-51-(2)	SHIFTER SOLENOID PLUNGER	(7.70)
7-52	SHIFTER SOLENOID RETURN SPRING	0.15
7-53	SHIFTER SOLENOID HOLDER	0.65
7-54	SHIFTER SOLENOID LINKAGE BAR	0.30
7-55	SHIFTER SOLENOID ARM	---
<b>F PINCH ROLLER ARM ASS'Y</b>		
7-60	PINCH ROLLER ARM ASS'Y	5.00
7-61	PINCH ROLLER ARM SHAFT (S)	2.60
7-62	PINCH ROLLER ARM MOUNT	0.85
7-63	PINCH ROLLER ARM	2.05

# PARTIAL EXPLODED VIEW (3)



**FIG.14**

REFERENCE NO.	DESCRIPTION	USER PRICE (\$)
<b>G QUICK-STOP P.C.B. ASS'Y</b>		
7-70	QUICK-STOP P.C. BOARD ASS'Y	6.00
7-71	HEAD SINK	1.00
7-72	QUICK-STOP P.C. BOARD ASS'Y	5.15
7-73	MYLAR SHEET (2SD-234Y)	0.10
<b>H CAPSTAN MOTOR ASS'Y</b>		
7-80	CAPSTAN MOTOR ASS'Y	120.00
7-81	MOTOR PULLEY (U.S.A. TYPE A)	6.65
7-82	MOTOR PULLEY (UNIVERSAL TYPE B)	6.65
7-83	MOTOR PULLEY (U.S.A. TYPE A)	8.95
7-84	MOTOR PULLEY (UNIVERSAL TYPE B)	8.95
7-85	SET SCREW WITH HEXAGONAL HOLE	0.20
7-86	MOTOR CHASSIS	2.15
7-87-(1)	CAPSTAN MOTOR	92.50
7-87-(2)	MOTOR FAN	2.00
7-87-(3)	FAN SPRING	0.40
7-88	PHASE ADVANCING CAPACITOR 2.8μF + 1μF 250WV	6.45
<b>I FLYWHEEL ASS'Y</b>		
7-90	FLYWHEEL ASS'Y	18.00
7-91	OIL STOPPER	0.20
7-92	FLYWHEEL	16.80
7-93	THRUST STOPPER	0.10
7-94	LUBRICATION FELT	0.20
7-95	FLYWHEEL HOLDING	0.95

# Dokorder

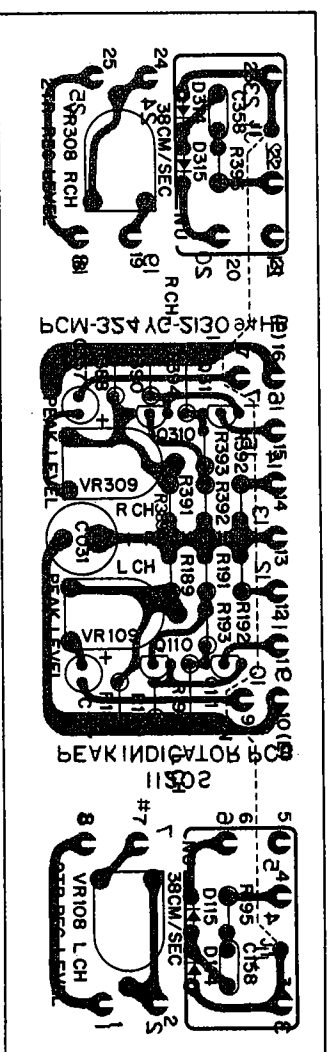
SERVICE MANUAL  
SM-0120-00  
MODEL 1120

## PRINTED CIRCUIT BOARDS AND PARTS LIST

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## PEAK INDICATOR P.C.B. ASS'Y (PCM-324)



### PEAK INDICATOR P.C.B. ASS'Y

REFERENCE NO.	DESCRIPTION	USER PRICE (\$)
PCM-324	P.C.B. Complete Ass'y	4.50
	TRANSISTORS	
Q-110, Q-111, Q-310, Q-311	Silicon 2SC-373	0.60
	RESISTORS	
	(All Resistors 1/4W unless Otherwise Stated)	
R-189, R-389	Carbon 180K	0.10
R-188, R-388	Carbon 15K	0.10
R-191, R-391	Carbon 10K	0.10
R-193, R-393	Carbon 8.2K	0.10
R-194, R-394	Carbon 1.8K	0.10
R-192, R-392	Carbon 680Ω	0.10
R-190, R-390	Carbon 39Ω	0.10
	CAPACITORS	
C-031	Elect. 100μF 25WV	0.40
C-157, C-357	Elect. 4.7μF 25WV	0.25
	MISCELLANEOUS	
VR-109, VR-309	Semi-Fixed Resistor 50K (B)	0.60
VR-108, VR-308	Semi-Fixed Resistor 20K (B)	0.60
	(38 cm/sec ONLY)	
	DIODES	
D-114, D-115		
D-314, D-315		
	RESISTORS	
R-195, R-395		
	CAPACITORS	
C-158, C-358		





### AMP P.C.B. ASS'Y

REFERENCE NO.	DESCRIPTION	USER PRICE (\$)
PCM-328	P.C.B. Complete Ass'y	62.90
TRANSISTORS		
Q-101, Q-102, Q-103, Q-105, Q-301, Q-302, Q-303, Q-305	Silicon 2SC-1000 (GR)	0.90
Q-104, Q-304	Silicon 2SC-499 (Y)	2.30
Q-106, Q-306	Silicon 2SC-373	0.65
Q-108, Q-308	Silicon 2SC-734 (Y)	1.00
Q-109, Q-309	Silicon 2SA-561 (Y)	1.20
Q-107, Q-307	Silicon 2SC-734 (Y) (Q)	1.00
IC & DIODES		
IC-101, IC-301	TA-7122 AP	3.15
D-101, D-102, D-103, D-104, D-105, D-106, D-107, D-108, D-109, D-301, D-302, D-303, D-304, D-305, D-306, D-307, D-308, D-309	Silicon IS-2473	0.30
D-110, D-111, D-310, D-311	Germanium IS-188 (IN-60)	0.30
RESISTORS		
(All Resistors 1/4W unless Otherwise Stated)		
R-162, R-362	Carbon 470K	0.10
R-145, R-345	Carbon 330K	0.10
R-140, R-143, R-340, R-343	Carbon 220K	0.10
R-139, R-142, R-339, R-342	Carbon 180K	0.10
R-104, R-172, R-304, R-372	Carbon 150K	0.10
R-117, R-317	Carbon 120K	0.10
R-102, R-106, R-128, R-132, R-146, R-158, R-164, R-169, R-174, R-302, R-306, R-328, R-332, R-346, R-358, R-364, R-369, R-374, R-201, R-202, R-401, R-402	Carbon 100K	0.10
R-138, R-338	Carbon 82K	0.10
R-186, R-386	Carbon 68K	0.10
R-171, R-371	Carbon 56K	0.10
R-187, R-387	Carbon 47K	0.10
R-108, R-114, R-308, R-314	Carbon 33K	0.10

R-105, R-111, R-141, R-305, R-311, R-341	Carbon	27K	0.80
R-116, R-123, R-126, R-160, R-185, R-316, R-323, R-326, R-360, R-385	Carbon	22K	0.10
R-115, R-163, R-315, R-363	Carbon	15K	0.10
R-112, R-113, R-120, R-122, R-147, R-149, R-150, R-151, R-152, R-153, R-154, R-155, R-170, R-312, R-313, R-320, R-322, R-347, R-349, R-350, R-351, R-352, R-353, R-354, R-355, R-370	Carbon	10K	0.10
R-118, R-127, R-318, R-327	Carbon	8.2K	0.10
R-124, R-144, R-159, R-324, R-344, R-359, R-032, R-200, R-400	Carbon	5.6K	0.10
R-119, R-156, R-319, R-356	Carbon	4.7K	0.10
R-161, R-361	Carbon	3.9K	0.10
R-024, R-025, R-136, R-336	Carbon	3.3K	0.10
R-109, R-121, R-309, R-321	Carbon	2.7K	0.10
R-135, R-137, R-157, R-335, R-337, R-357, R-031, R-033	Carbon	2.2K	0.10
R-129, R-176, R-329, R-376	Carbon	1.8K	0.10
R-107, R-125, R-130, R-148, R-166, R-168, R-177, R-307, R-325, R-330, R-348, R-366, R-368, R-377, R-023, R-027, R-035	Carbon	1K	0.10
R-103, R-303	Carbon	820Ω	0.10
R-175, R-375	Carbon	680Ω	0.10
R-165, R-167, R-030, R-365, R-367	Carbon	560Ω	0.10
R-131, R-331	Carbon	470Ω	0.10
R-026, R-133, R-333	Carbon	330Ω	0.10
R-134, R-334	Carbon	220Ω	0.10
R-181, R-183, R-028, R-381, R-383	Carbon	100Ω	0.10
R-110, R-310	Carbon	68Ω	0.10
R-180, R-380	Carbon	47Ω	0.10
R-173, R-373	Carbon	15Ω	0.10
R-178, R-179, R-034, R-378, R-379	Carbon	10Ω	0.10

R-182, R-382	Carbon	8.2Ω		0.10
R-029	Carbon	100Ω	½W	0.10

CAPACITORS

C-020	Elect.	100μF	100WV	1.25
C-120, C-320	Elect.	2.2μF	100WV	0.40
C-024, C-025, C-029	Elect.	220μF	25WV	0.55
C-023, C-026, C-027, C-030, C-153, C-353	Elect.	100μF	25WV	0.40
C-152, C-352	Elect.	47μF	25WV	0.40
C-021, C-022, C-028, C-107, C-137, C-307, C-337	Elect.	33μF	25WV	0.35
C-143, C-343	Elect.	10μF	25WV	0.30
C-101, C-102, C-104, C-108, C-114, C-118, C-129, C-136, C-138, C-139, C-140, C-141, C-142, C-148, C-150, C-151, C-154, C-301, C-302, C-304, C-308, C-314, C-318, C-329, C-336, C-338, C-339, C-340, C-341, C-342, C-348, C-350, C-351, C-354	Elect.	4.7μF	25WV	0.25
C-115, C-315	Elect.	1μF	25WV	0.25
C-122, C-322	Elect.	33μF	16WV	0.30
C-119, C-319	Elect.	47μF	10WV	0.30
C-106, C-112, C-135, C-306, C-312, C-335	Elect.	220μF	6.3WV	0.40
C-111, C-149, C-311, C-349	Elect.	33μF	6.3WV	0.30
C-125, C-325	Mylar	0.018μF	50WV	0.25
C-134, C-334	Mylar	0.01μF	50WV	0.20
C-126, C-157, C-326, C-357	Mylar	0.0082μF	50WV	0.20
C-124, C-133, C-324, C-333	Mylar	0.0056μF	50WV	0.20
C-121, C-321	Mylar	0.0033μF	50WV	0.20
C-123, C-323	Mylar	0.0015μF	50WV	0.20
C-156, C-356	Ceramic	680pF	50WV	0.10
C-155, C-355	Ceramic	220pF	50WV	0.10
C-132, C-332	Ceramic	180pF	50WV	0.10
C-130, C-330	Ceramic	150pF	50WV	0.10
C-146, C-346	Ceramic	120pF	50WV	0.10
C-105, C-110, C-117, C-147, C-305, C-310, C-317, C-347	Ceramic	100pF	50WV	0.10
C-103, C-303	Ceramic	82pF	50WV	0.10
C-127, C-145, C-327, C-345	Ceramic	47pF	50WV	0.10
C-109, C-116, C-309, C-316	Ceramic	4.7pF	50WV	0.10
C-113, C-114, C-313,	Tantalum	2.2μF	25WV	0.75

C-314				
C-128, C-328	Tantalum	0.33 $\mu$ F	35WV	0.75

MISCELLANEOUS

L-101, L-102, L-301, L-302	Coil, Peaking	(L-9-3)		1.10
L-103, L-303	Coil, Bias Trap 1	(1028)		1.10
L-104, L-304	Coil, Bias Trap 2	(1028)		1.10
VR-102, VR-302	Semi-Fixed Resistor	22K $\Omega$	(B)	0.80
VR-103, VR-104, VR-105, VR-106, VR-303, VR-304, VR-305, VR-306	Semi-Fixed Resistor	10K $\Omega$	(B)	0.80
VR-107, VR-307	Semi-Fixed Resistor	4.7K $\Omega$	(B)	0.80
VR-101, VR-301	Semi-Fixed Resistor	1K $\Omega$	(B)	0.80



CONTROL P.C.B. ASS'Y

REFERENCE NO.	DESCRIPTION	USER PRICE (\$)				
PCM-325	P.C.B. Complete Ass'y	37.60				
TRANSISTORS						
Q-501, Q-502, Q-503, Q-504, Q-505	Silicon 2SC-734 (Y) (GR)	1.00				
Q-506, Q-507	Silicon 2SD-234Y	2.70				
Q-508	Silicon 2SC-793Y	7.50				
DIODES						
D-003, D-004, D-005, D-503, D-504, D-505, D-506, D-507, D-508, D-509, D-510, D-511, D-512, D-513, D-514, D-515, D-516, D-517, D-518, D-519, D-520, D-521, D-522	Silicon SIB-01-02	0.50				
D-001, D-002	Silicon 3DZ61	2.90				
D-501, D-502	Silicon IS-2473	0.30				
D-006	Zener EQA01-24R	1.15				
RESISTORS (All Resistors 1/4W unless Otherwise Stated)						
R-547, R-548, R-549	Cement 1K 2W	0.60				
R-002	Metal Oxide Film 2.2K 2W	0.35				
R-001, R-530	Carbon 22K 1/4W	0.10				
R-525	Carbon 15K 1/2W	0.10				
R-526, R-536, R-537, R-535	Carbon 100K	0.10				
R-528	Carbon 82K	0.10				
R-517, R-521	Carbon 47K	0.10				
R-513, R-515, R-531	Carbon 39K	0.10				
R-519, R-523, R-533	Carbon 27K	0.10				
R-510, R-512, R-540, R-543, R-546	Carbon 22K	0.10				
R-518, R-522	Carbon 5.6K	0.10				
R-514	Carbon 3.9K	0.10				
R-005	Carbon 1.5K	0.10				
R-527, R-532	Carbon 1K	0.10				
R-003, R-004, R-511, R-516, R-520, R-524, R-529, R-534	Carbon 100Ω	0.10				
R-539, R-542, R-545	Carbon 33Ω	0.10				
R-007	Carbon 22Ω	0.10				
R-008, R-009, R-010, R-538, R-541, R-544	Carbon 10Ω	0.10				
R-006	Carbon 2.2Ω	0.10				
CAPACITORS						
C-005	Elect. 100μF 100WV	1.25				
C-006	Elect. 470μF 50WV	1.80				
C-502, C-503, C-504, C-505, C-506	Elect. 47μF 50WV	0.45				
C-008	Elect. 220μF 25WV	0.55				
C-007	Elect. 100μF 25WV	0.40				
C-501	Elect. 10μF 25WV	0.30				
C-003, C-004, C-001, C-002	Ceramic 0.01μF 250WV	0.15				
C-007	Ceramic 0.01μF 50WV	0.15				
MISCELLANEOUS						
CR-7, CR-8	C.R Module 1201A	1.00				
Relay	Relay MY-2-0-US	13.60				

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## **SCHEMATIC DIAGRAMS**

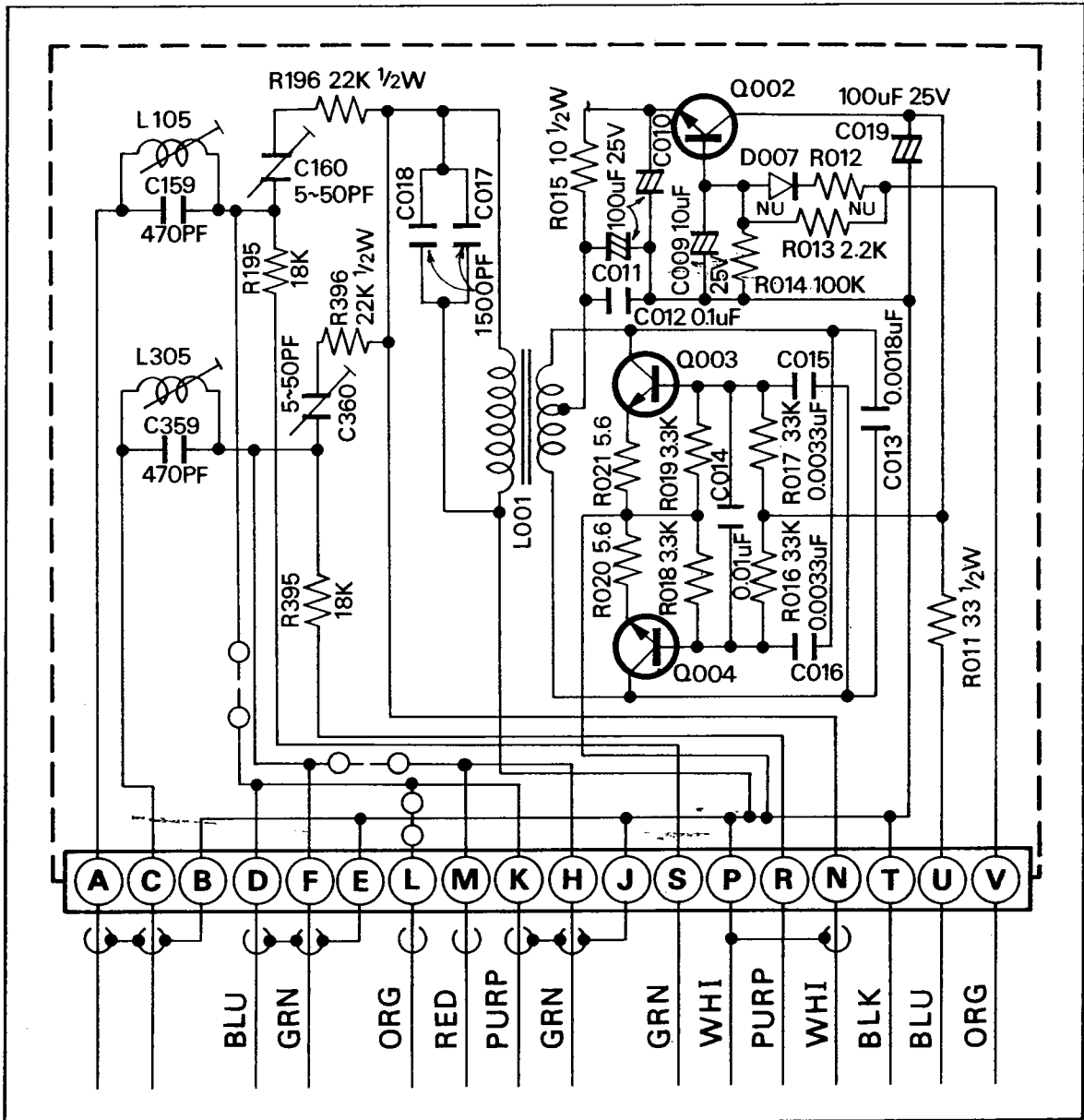
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QUICK STOP P.C.B. (PCM-331)  
REC SWITCH P.C.B. (PCM-320)  
BLOCK DIAGRAM (DECK)  
SCHEMATIC DIAGRAM (AMP)

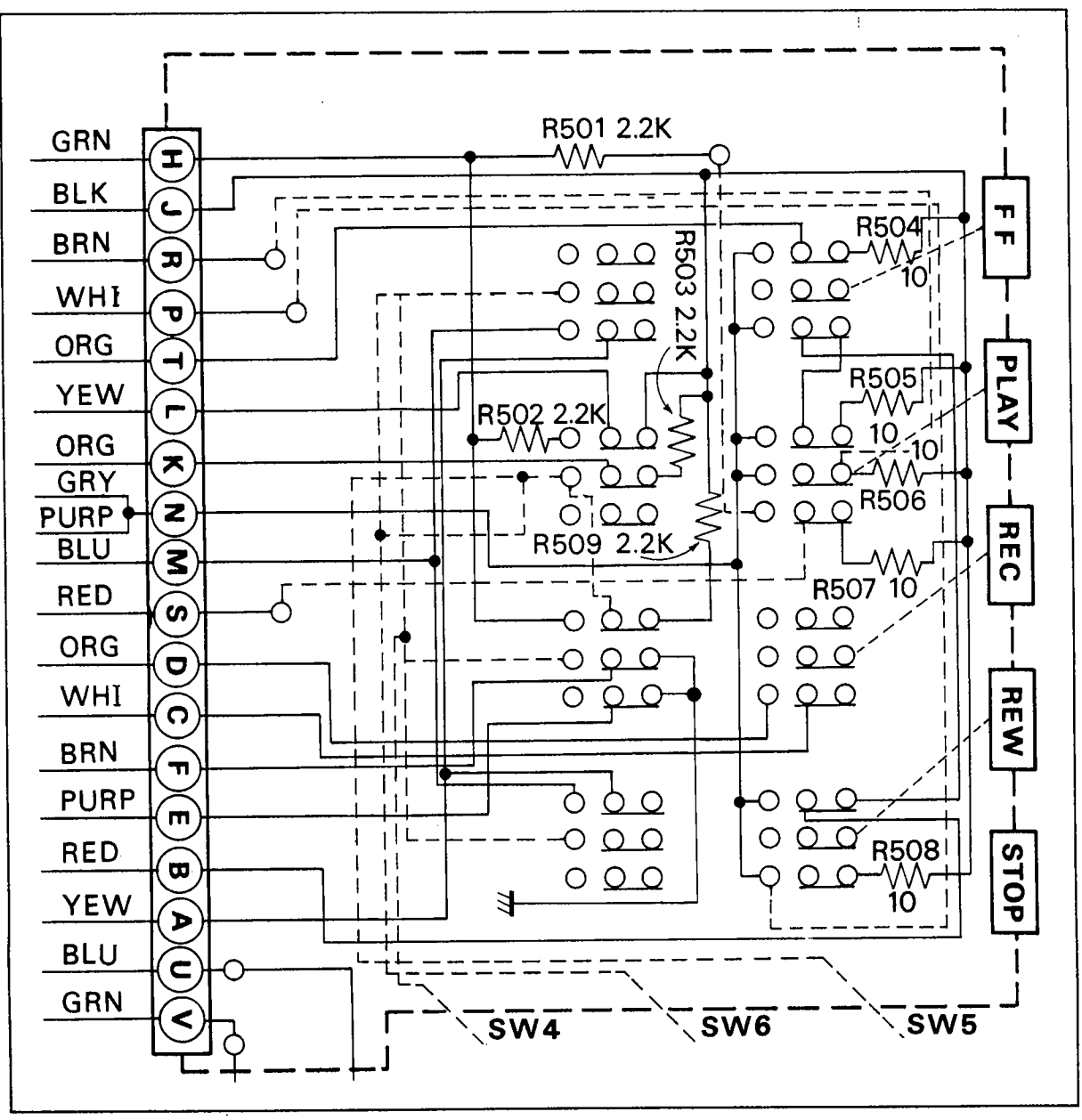
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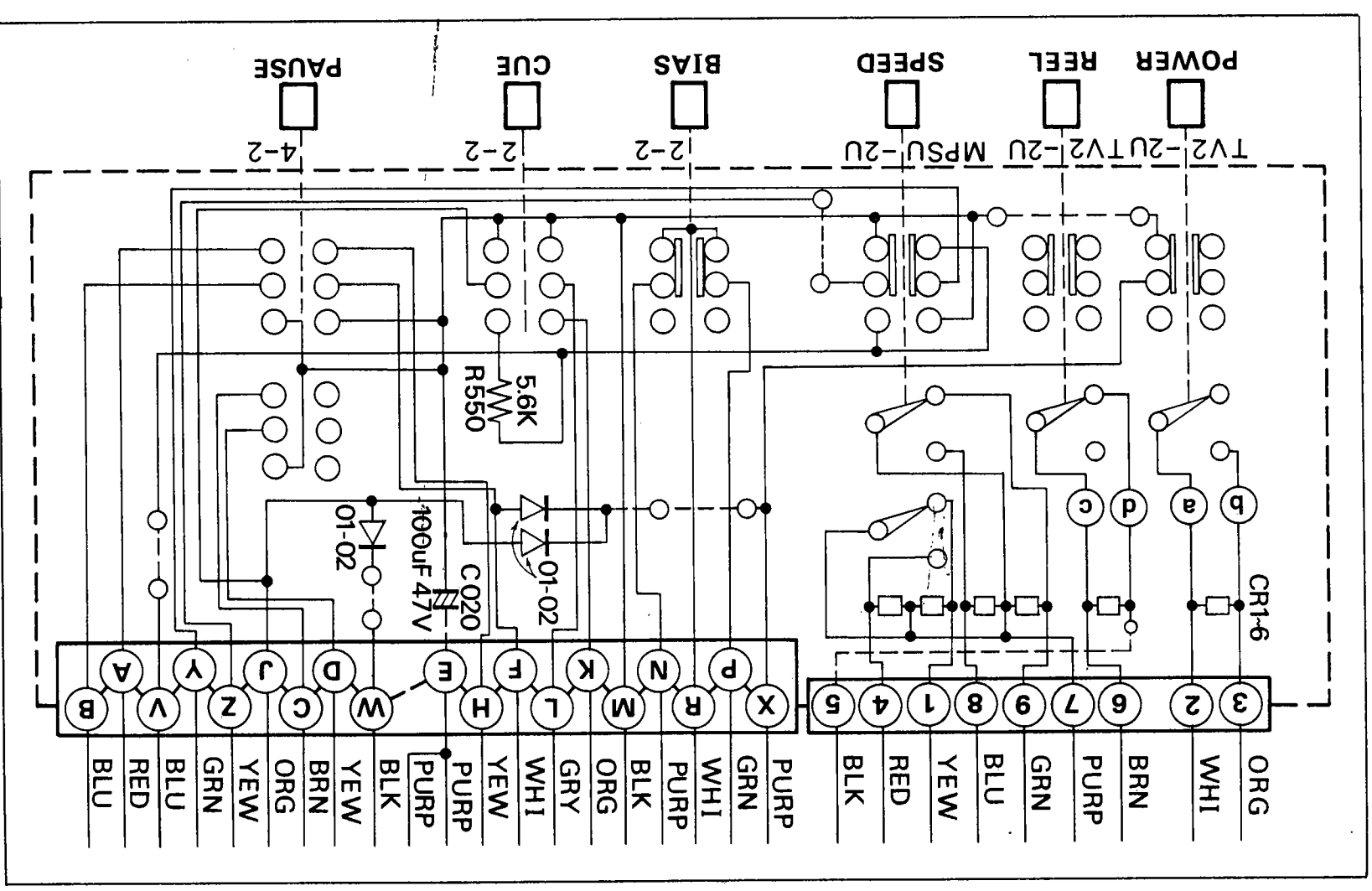




OPERATE SWITCH P.C.B. (PCM-297)

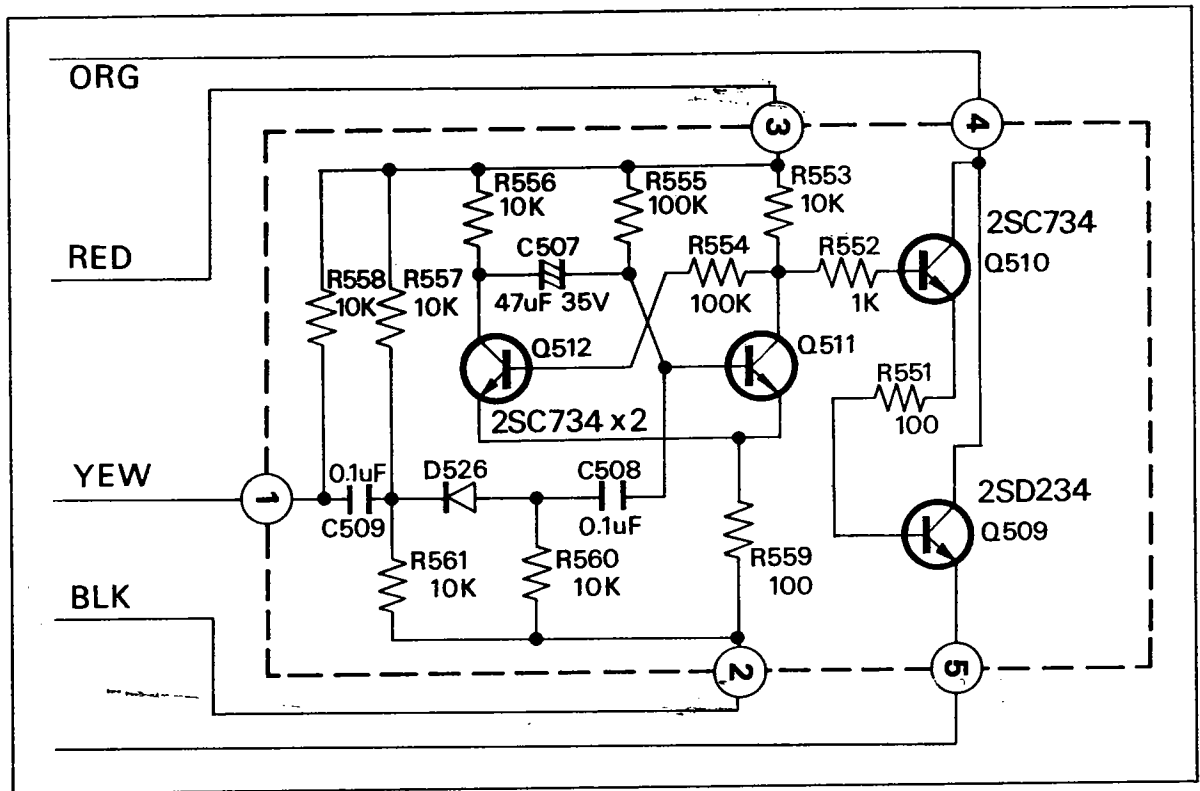


6-GANG SWITCH P.C.B. (PCM-326)

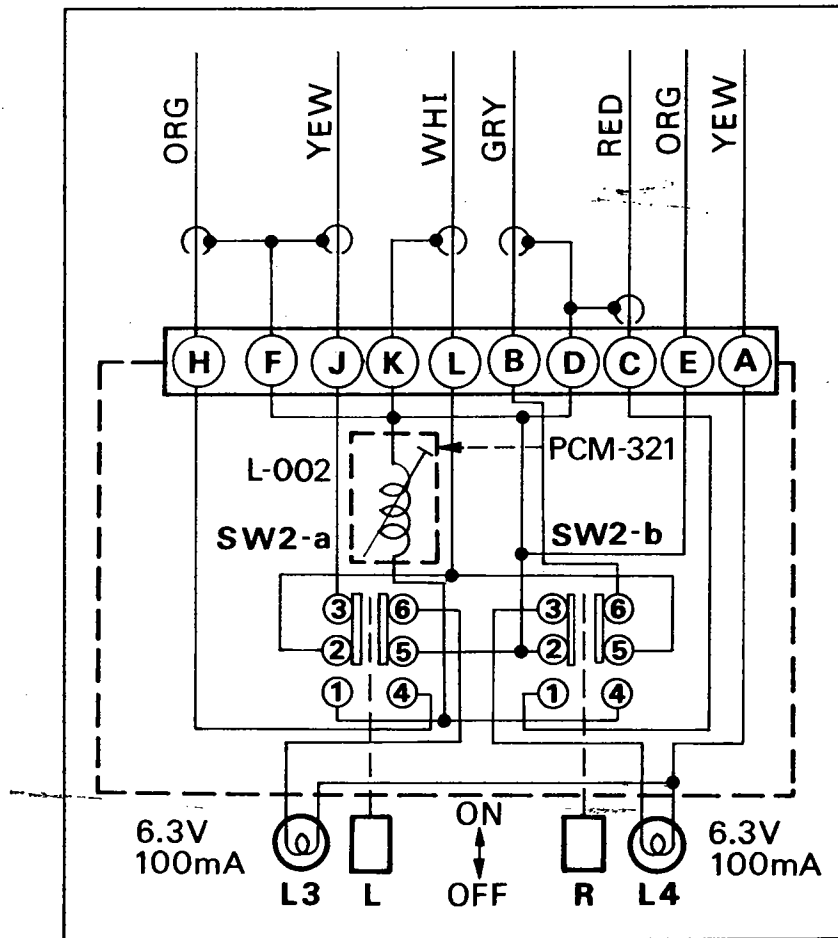




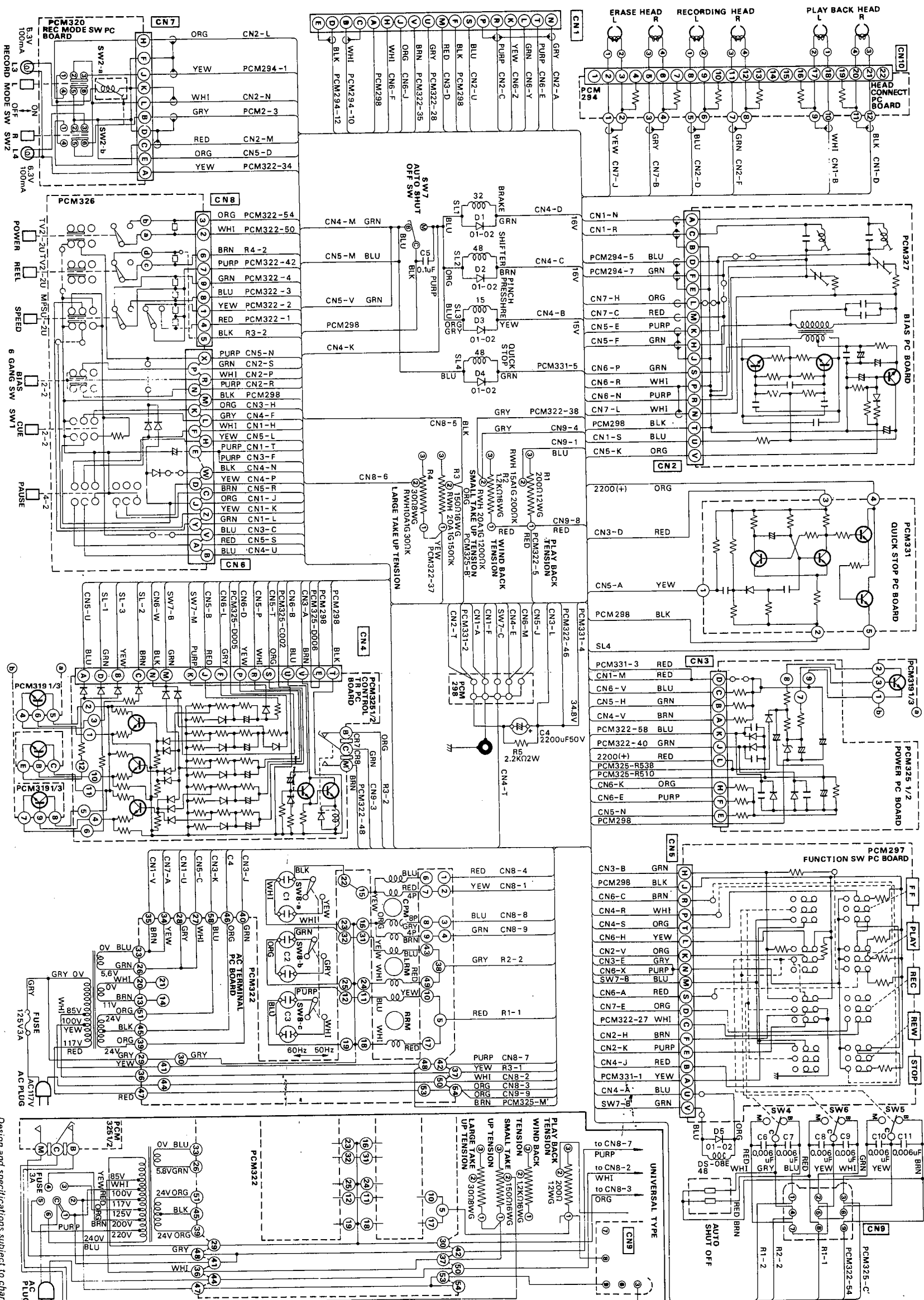
# QUICK STOP P.C.B. (PCM-331)



# REC SWITCH P.C.B. (PCM-320)



# BLOCK DIAGRAM (DECK)



Design and specifications subject to change without notice.

# SCHEMATIC DIAGRAM (AMP)

