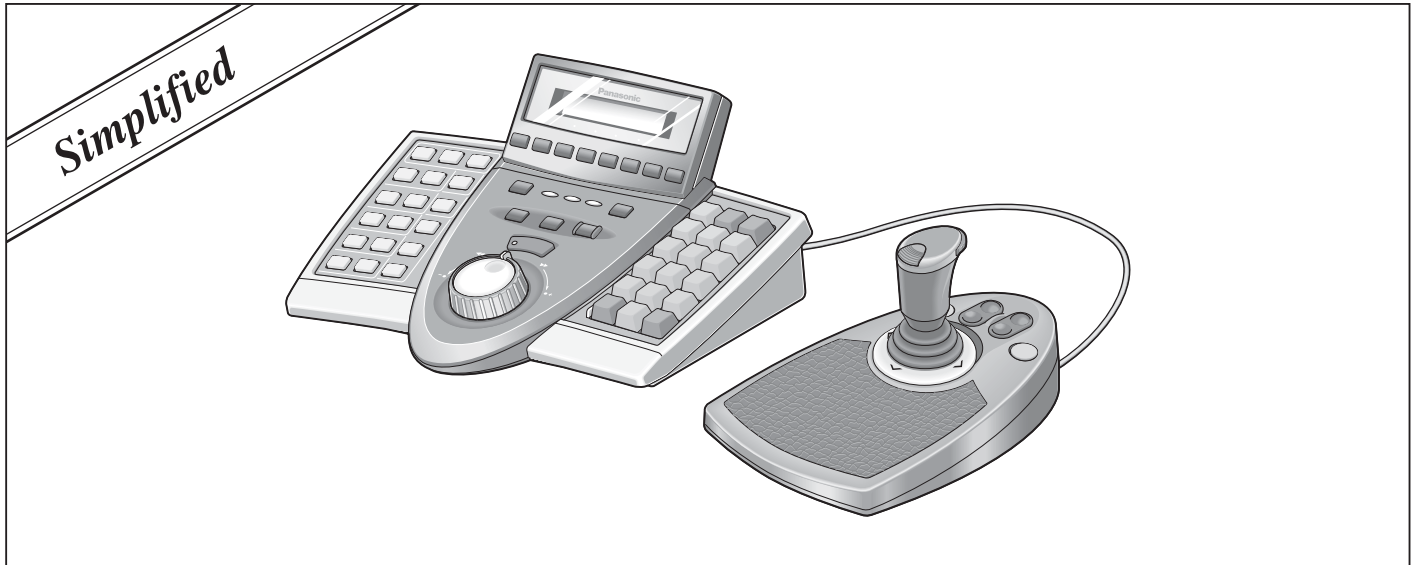


Service Manual

System Controller

Model No. **WV-CU650**



Please file and use this service manual together with the original service manual for Model No. WV-CU650, Order No. AVS0406571C0.

The Product with PbF

Panasonic®

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违者依法必究。

⚠ 警告

这个服务信息仅提供给有经验的修理人员，不适应于一般公众。
它不包含任何警告或注意，来劝告无技术的人员在打算修理产品时所具有的潜在性危险。
只有有经验的专业技术人员才能够服务或修理电动供力的产品。即使按照本服务信息来打算服务或修理产品，也有可能造成重大伤亡。



注意

为了减少触电危险，请勿移动护盖（或背盖）。内部没有用户能自行修理的零件。应由有资格的人员进行维修工作。



中断电源：不管开关在“开”或“关”的状态下，电源线插入插座后，监视器就会有电源；开关要在“开”的状态下，监视器才会有动作，将监视器电源线拔除即可中断全部电源。

请注意：

- 本设备仅供室内使用。
- 在进行本机的接线或操作之前，请阅读底面的标签。



在正三角形中闪烁的箭头符号，用以提醒用户在本产品附近出现较大的非绝缘“危险电压”足以对人体产生触电。



在正三角形中的注意号，用以提醒用户参考有关该机的重要操作与维修的文字说明。

本产品的制造号码标示于装置的背面。
请在下面空白处填上本机的制造号码，并将此说明书妥加保存，以便万一遭窃时查核。

型号：_____

制造号码：_____

警告：不可让本产品淋雨或受潮，且勿放置盛水容器于产品上，以免水滴溅人，发生火灾或触电。

重要安全通知

本设备里面，使用了很多对安全非常重要的零件。这些零件都用 ⚠ 符号来标记在概要图和替换零件单里。使用制造厂家指定的配件来替换这些重要零件，是非常重要的，因为这些配件防止X线辐射，震动，火灾，以及其它危险。

关于无铅焊剂 (PbF)

PbF PCB的发行：

使用无铅焊剂 (PbF) 制造的PCB将在PCB上刻有相应的显示标志。

注意：

- 无铅焊剂的熔点要比标准焊剂高。典型的熔点是摄氏35度-40度 (华氏95度-104度) 以上。请使用可以控制温度的焊铁，并将温度调整在摄氏360度-370度 (华氏680度-698度)。在使用高温焊铁时，请小心不要太长时间加热。
- 当加热太高温时 (摄氏600度/华氏1112度)，无铅焊剂将有可能飞溅各处。
- 在修理我们的无铅焊剂PCB时，建议使用无铅焊剂 (Sn - 3.0Ag - 0.5Cu) 或同类产品。

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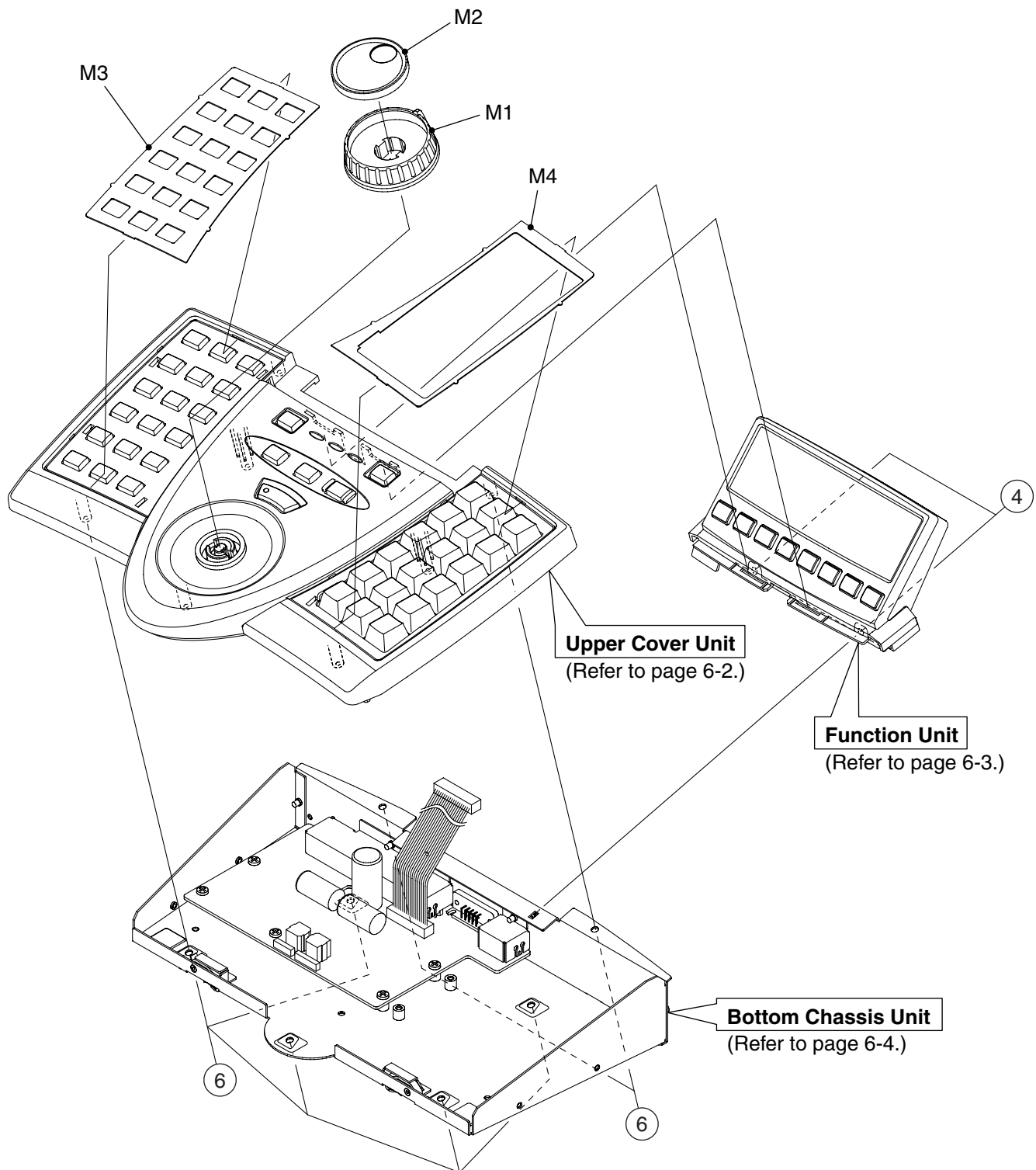
■ As for the rest of information, please refer to the original service manual.

EXPLODED VIEW (1/10)

○Numbers show screws and washers.

No.	Screws	Description
④	XSB3+6FJK	Binding Head Machine Black Screw
⑥	XTB3+8GFJK	Binding Head Tapping Black Screw

Main Unit

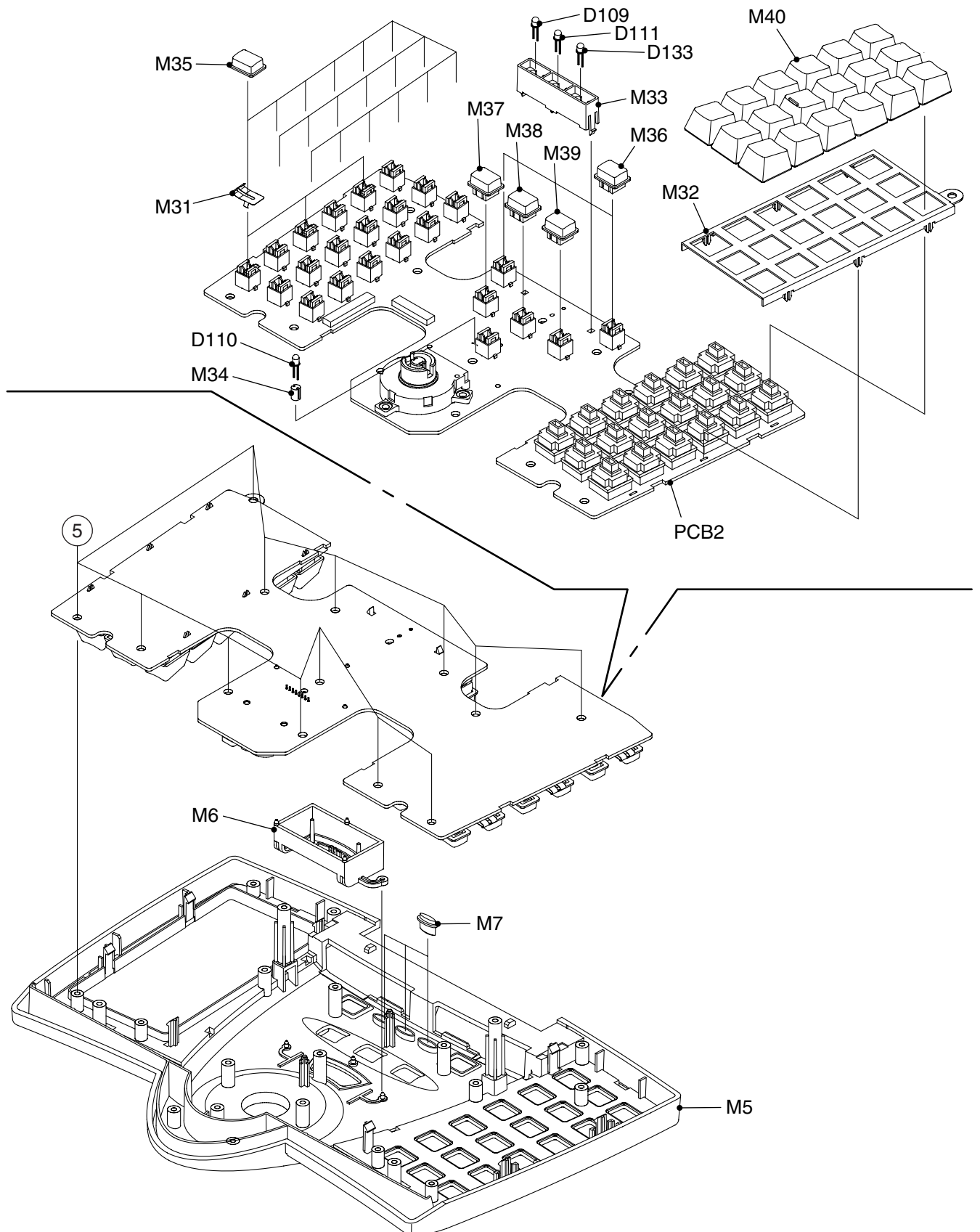


EXPLODED VIEW (2/10)

○Numbers show screws and washers.

No.	Screws	Description
⑤	XTB3+8GFJ	Binding Head Tapping Screw

Upper Cover Unit

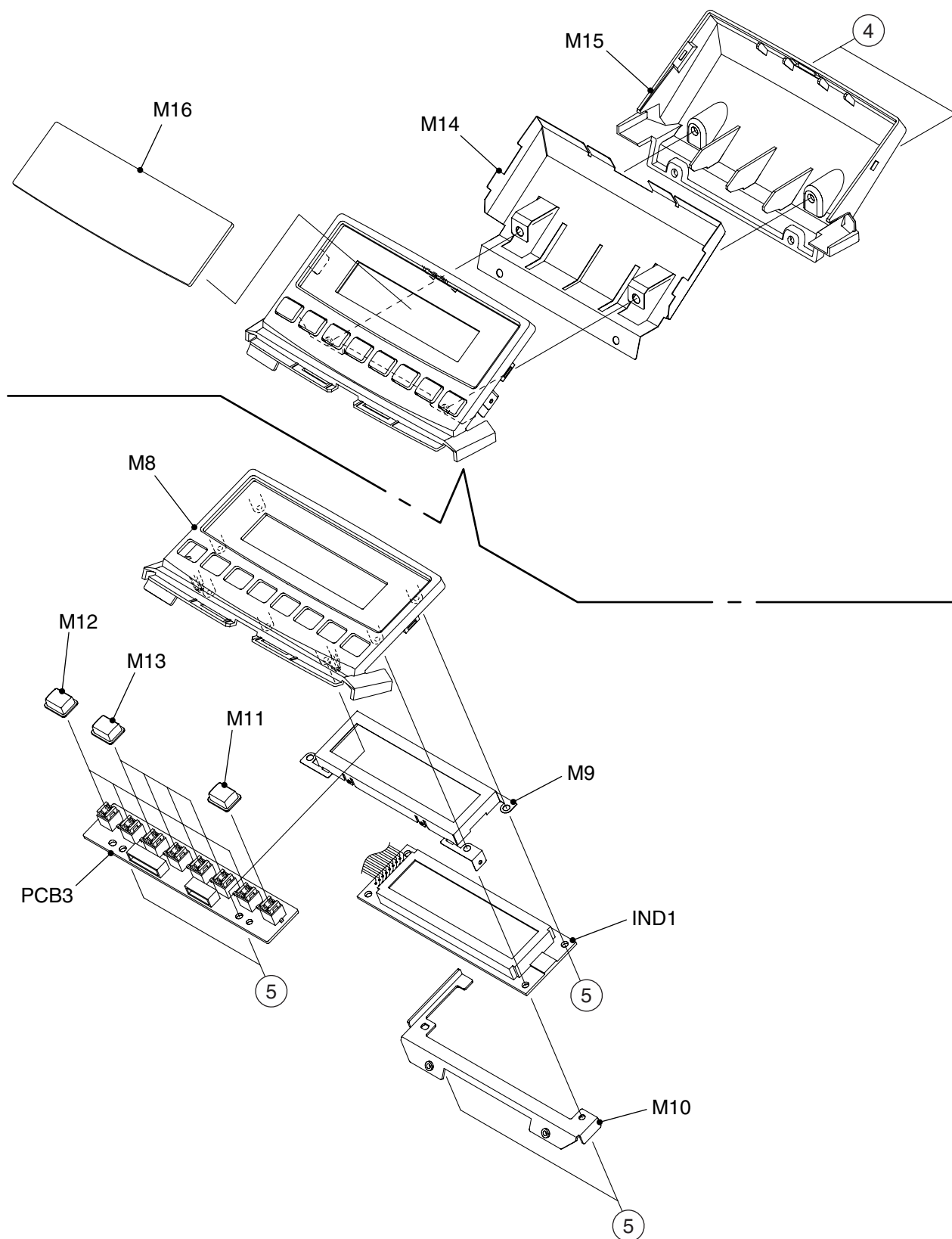


EXPLODED VIEW (3/10)

○Numbers show screws and washers.

No.	Screws	Description
④	XSB3+6FJK	Binding Head Machine Black Screw
⑤	XTB3+8GFJ	Binding Head Tapping Screw

Function Unit

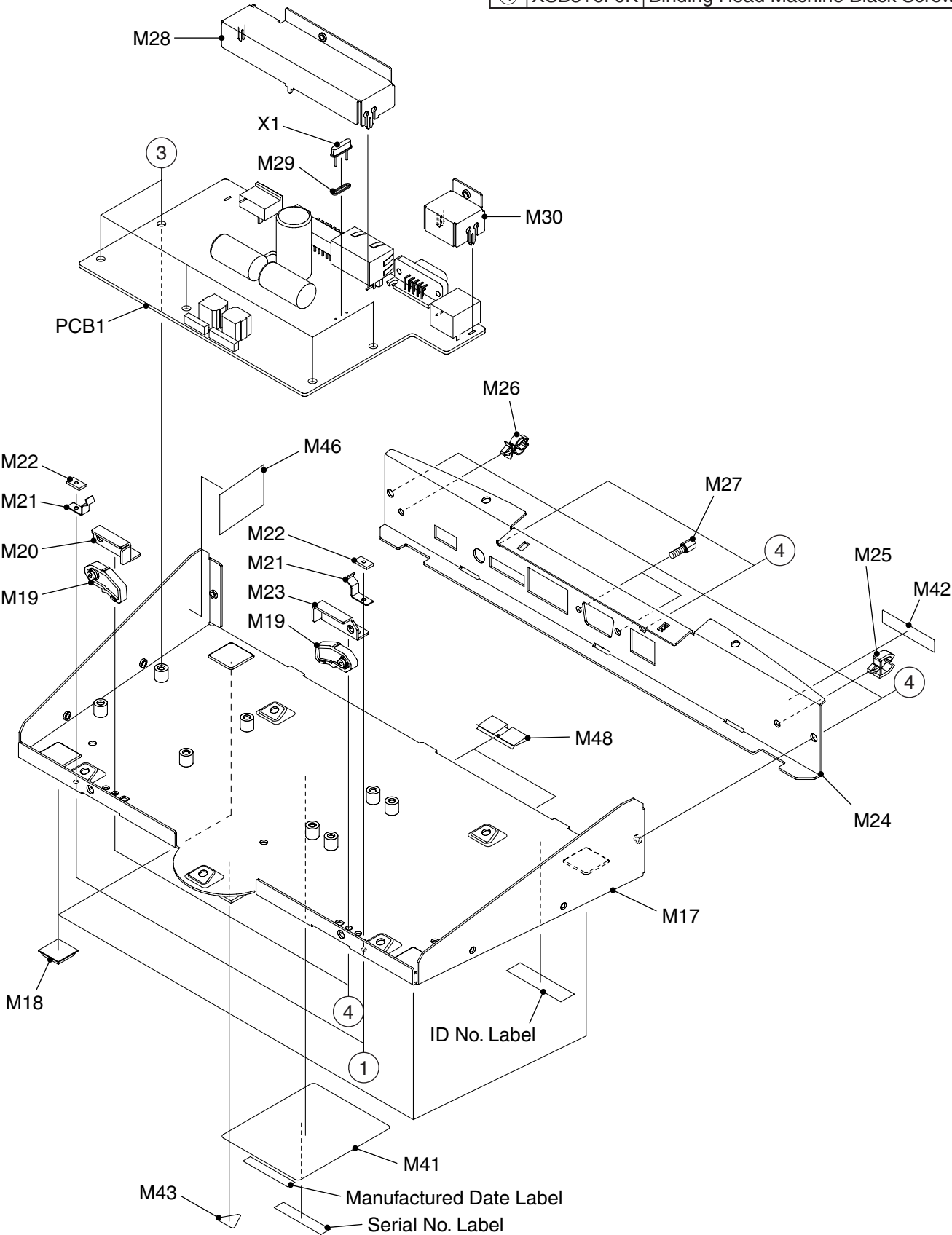


EXPLODED VIEW (4/10)

○Numbers show screws and washers.

No.	Screws	Description
①	XSB2+6FJK	Binding Head Machine Black Screw
③	XSB3+6FJ	Binding Head Machine Screw
④	XSB3+6FJK	Binding Head Machine Black Screw

Bottom Chassis Unit

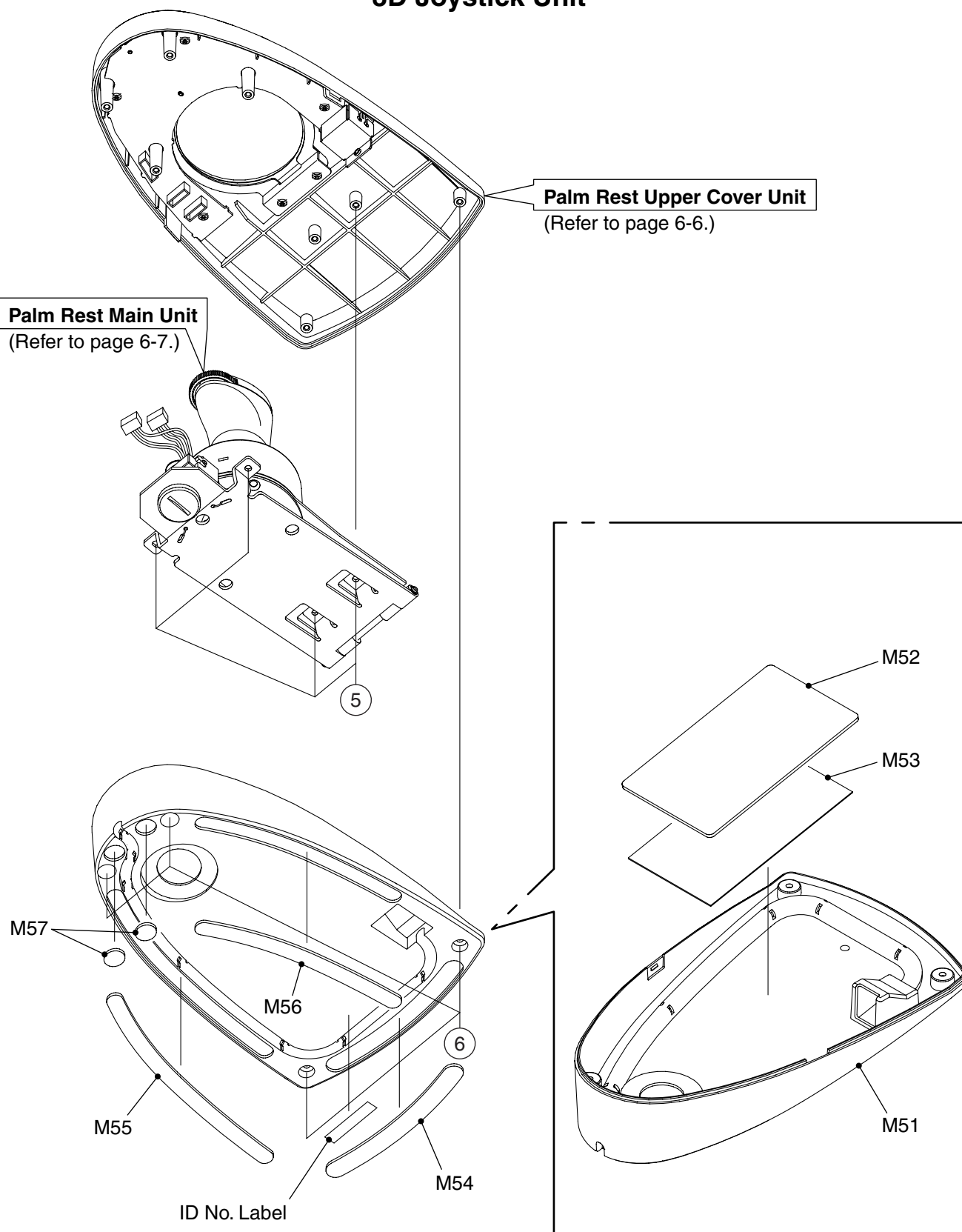


EXPLODED VIEW (5/10)

○Numbers show screws and washers.

No.	Screws	Description
⑤	XTB3+8GFJ	Binding Head Tapping Screw
⑥	XTB3+8GFJK	Binding Head Tapping Black Screw

3D Joystick Unit

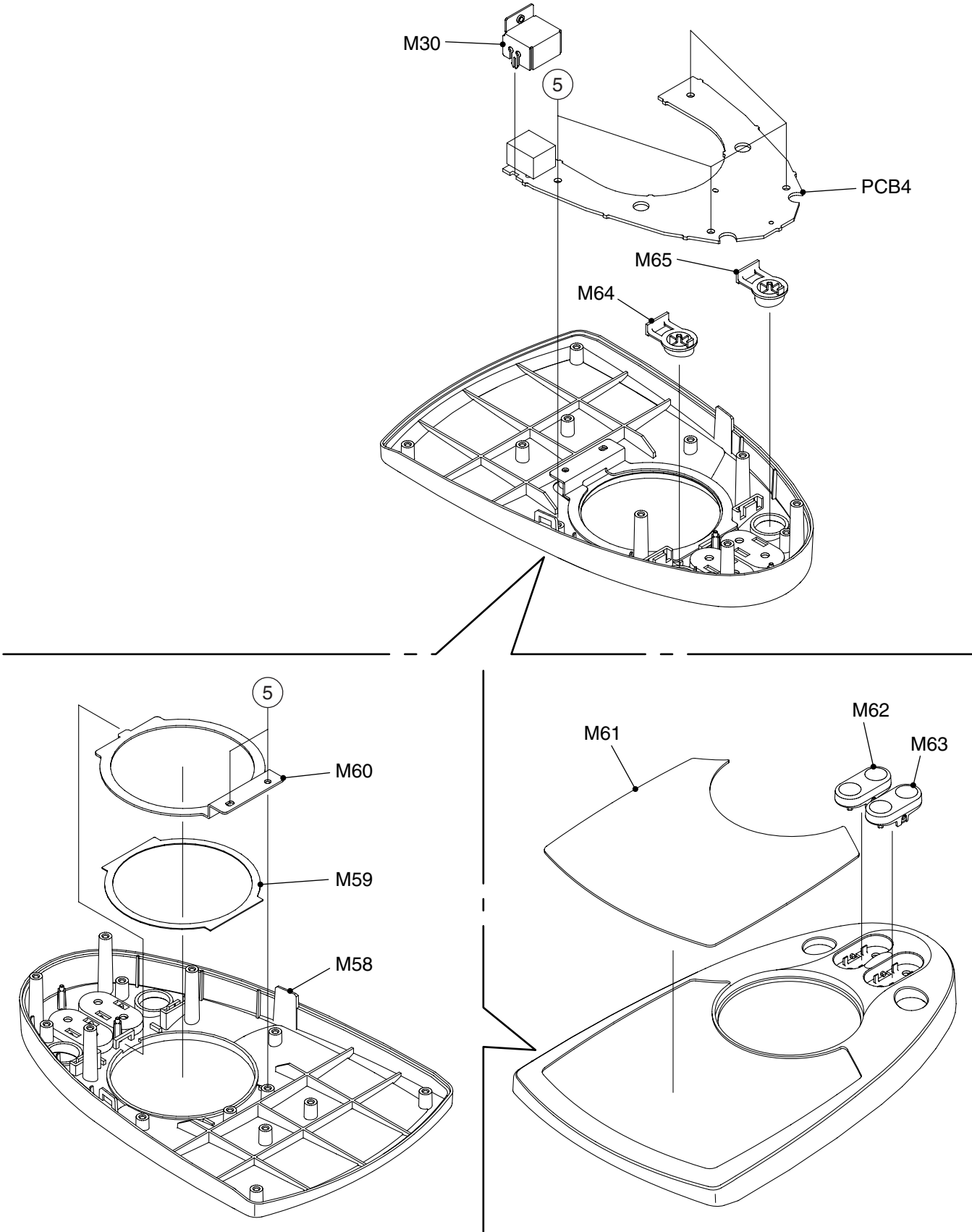


EXPLODED VIEW (6/10)

○Numbers show screws and washers.

No.	Screws	Description
⑤	XTB3+8GFJ	Binding Head Tapping Screw

Palm Rest Upper Cover Unit

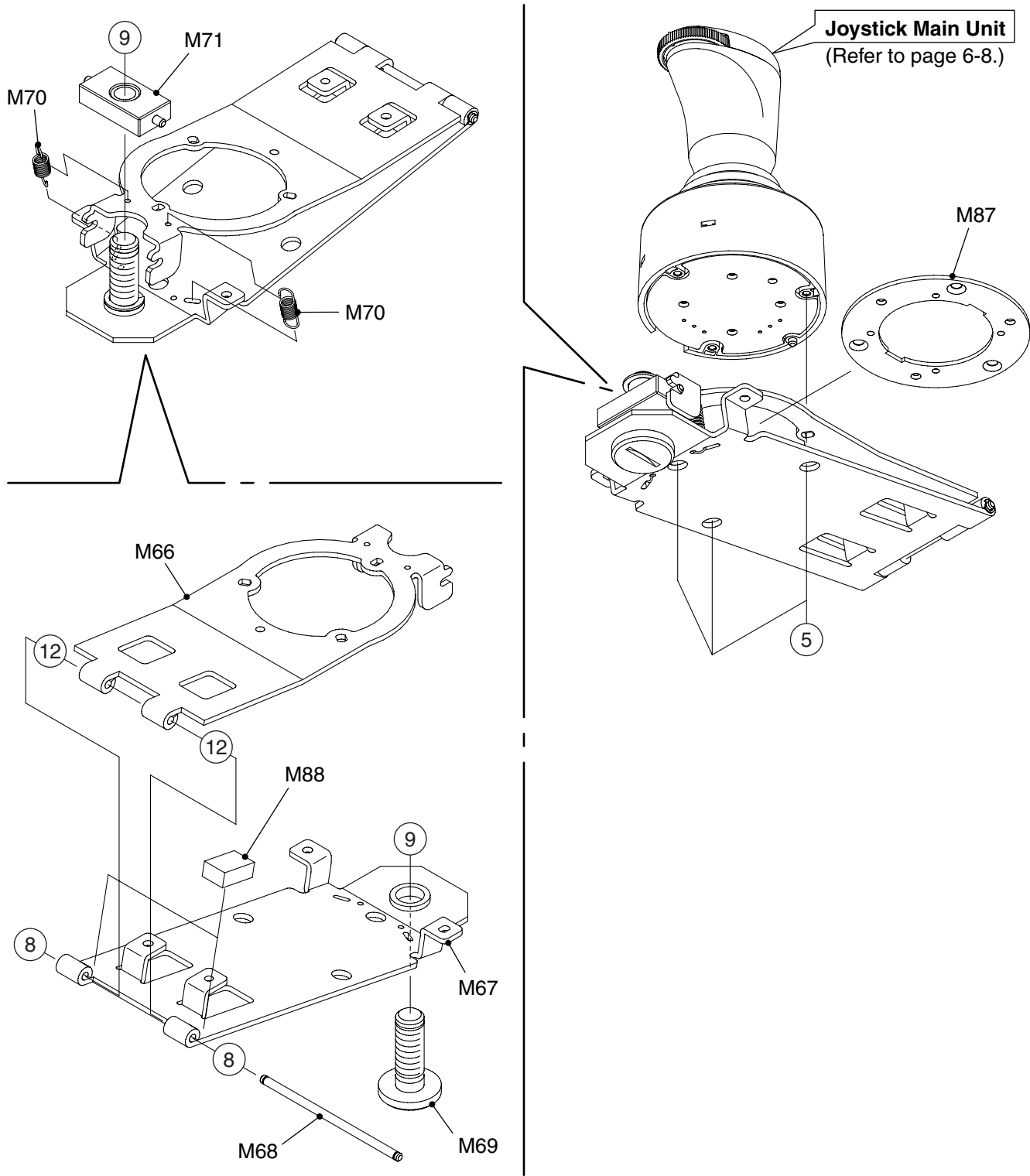


EXPLODED VIEW (7/10)

○Numbers show screws and washers.

No.	Screws	Description
⑤	XTB3+8GFJ	Binding Head Tapping Screw
⑧	XUC2FJ	Retaining Ring "Type E"
⑨	XUC7FJ	Retaining Ring "Type E"
⑫	XWG3FJ	Polished Round Plain Washer

Palm Rest Main Unit

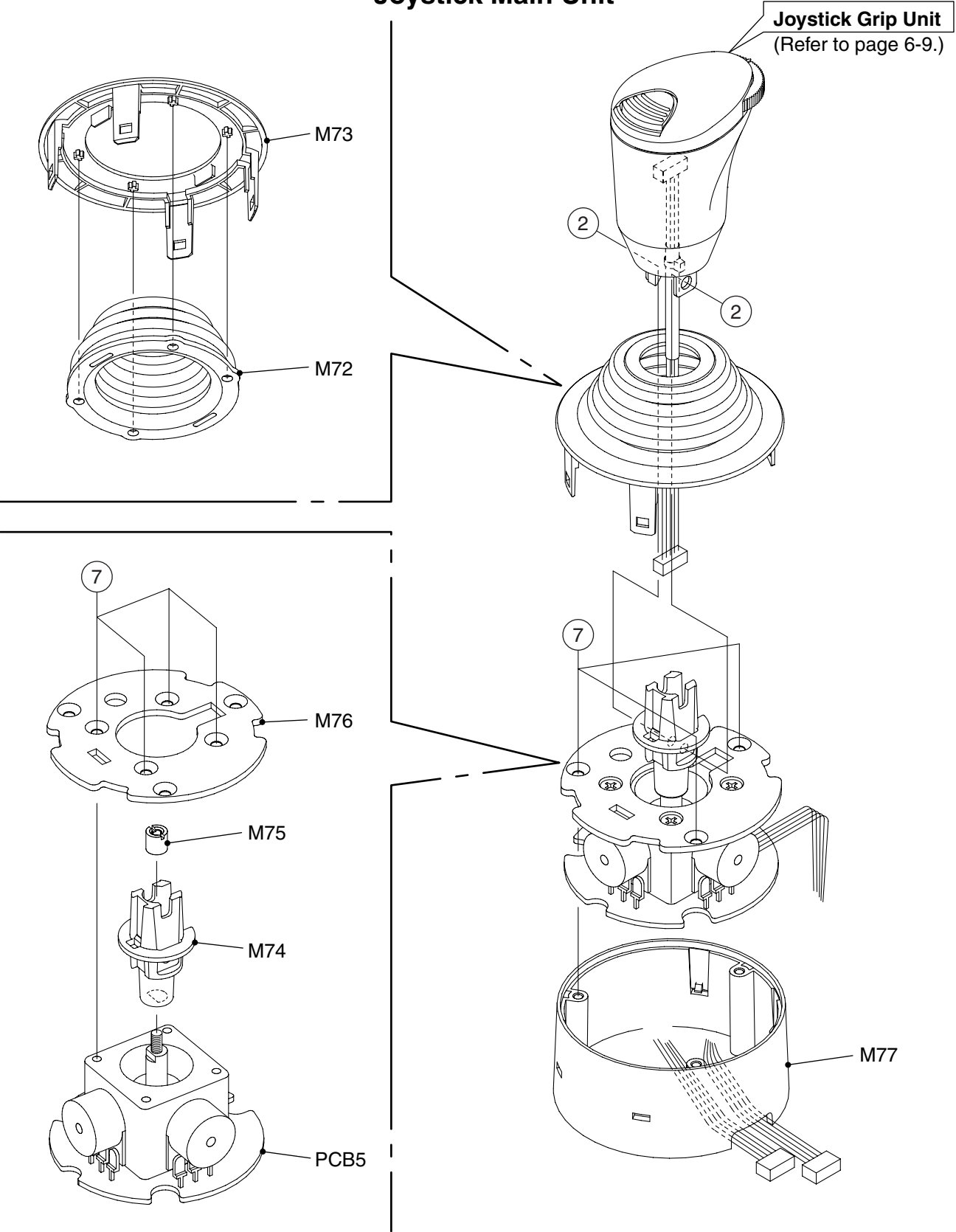


EXPLODED VIEW (8/10)

○Numbers show screws and washers.

No.	Screws	Description
②	XSB3+4FJ	Binding Head Machine Screw
⑦	XTS3+8GFJ	Flush Head Machine Screw

Joystick Main Unit

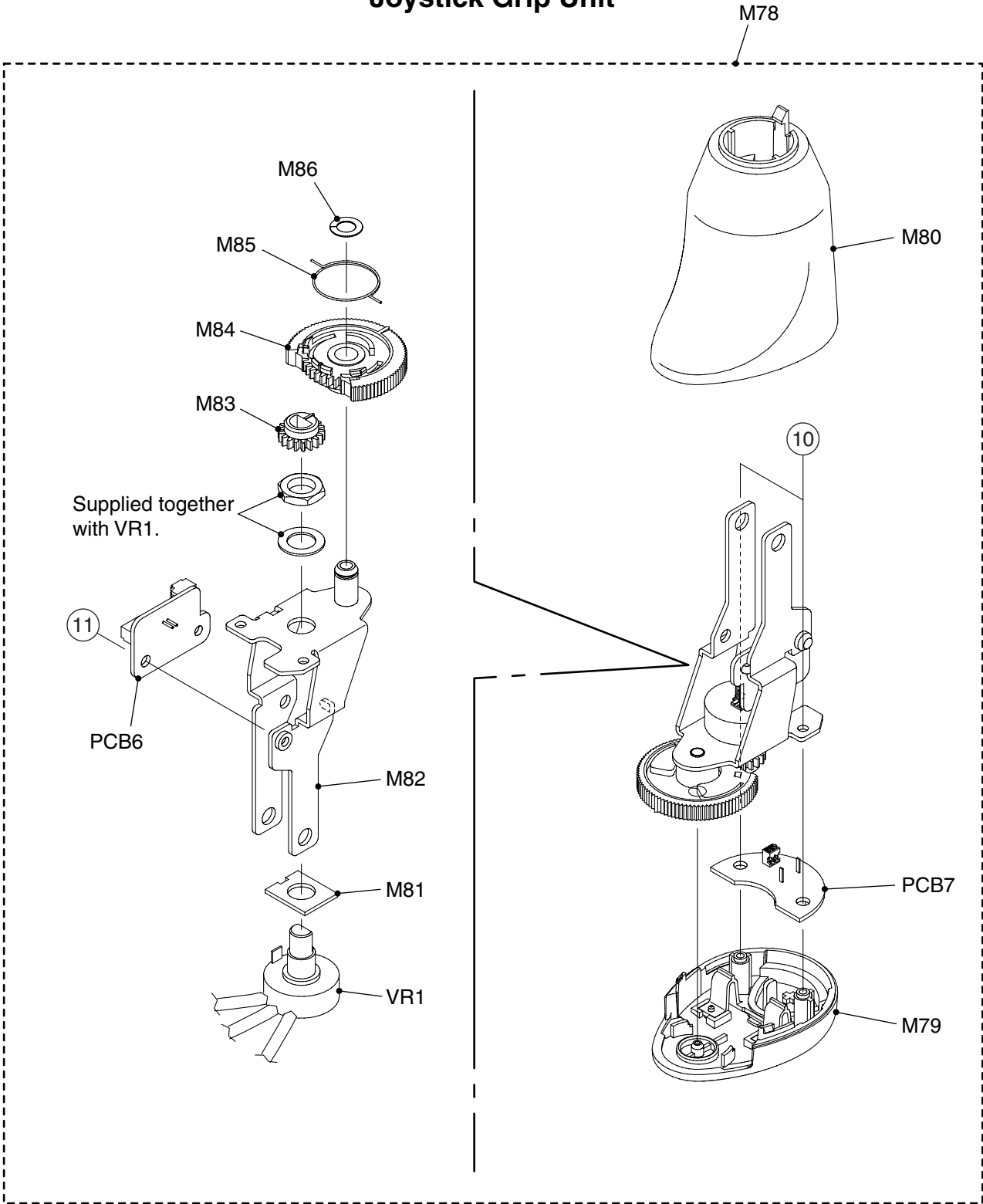


EXPLODED VIEW (9/10)

○Numbers show screws and washers.

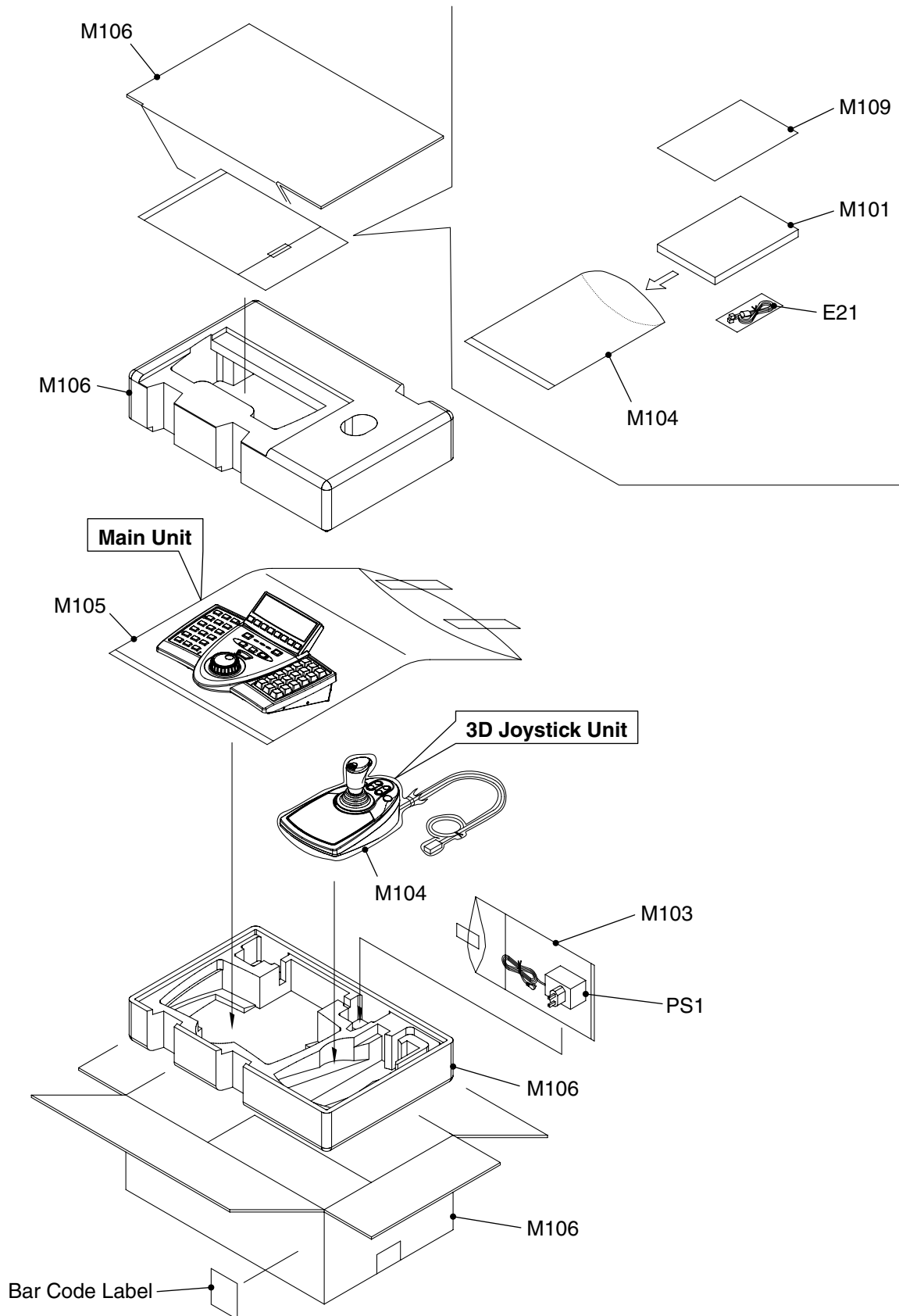
No.	Screws	Description
⑩	XTB2+8GFJ	Binding Head Tapping Screw
⑪	XYN26+J6FN	Pan Head Machine Screw and Washer Ass'y

Joystick Grip Unit



EXPLODED VIEW (10/10)

PACKAGING



REPLACEMENT PARTS LIST

Important Notice

- Components identified by $\triangle$ mark have special characteristics important for safety.
When replacing any of these components, use only manufacturer's specified parts.
- RTL : Retention Time Limited (No longer available after discontinuing product).

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
MISCELLANEOUS			M52	3EZ001171AAA	Palm Rest Weight
			M53	3AK001147AAA	Palm Rest Weight Tape
			M54	3DL001018AAA	Rubber Sheet A
			M55	3DL001019AAA	Rubber Sheet B
			M56	3DL001020AAA	Rubber Sheet C
VR1	D2EHA53B0001	Variable Resistor (Zoom Wheel Controller) (See Note below.)	M57	3DL001021AAA	Rubber Sheet D
IND1	L5DBBY00003	LCD (Liquied Crystal Display)	M58	$\triangle$ 3DA001844BAA	Palm Rest Upper Cover
E11	K2NC8AA00002	Modular Cable for Main Board CN7 and joystick Switch Board CN204	M59	$\triangle$ 3CX001291AAA	Blind Sheet
E12	VCU550CJLB01	Wire Ass'y for Joystick Switch Board CN202 and Connector Board CN1	M60	3CA002936AAA	Blind Sheet Mounting Angle
E13	VCU550CJLB02	Wire Ass'y for Connector Board E3 an Switch Board E4	M61	3NZ001008AAA	Pad
E14	VCU650L05	Wire Ass'y for Main Board CN8 and Function Switch Board CN601	M62	$\triangle$ 3MB001149AAC	Seasow Button (IRIS)
M1	$\triangle$ V9AA3280A3	Jog Shuttle Ass'y	M63	$\triangle$ 3MB001149AAD	Seasow Button (FOCUS)
M2	$\triangle$ 3MA001032AAA	Jog Shuttle Inner Knob	M64	$\triangle$ 3MB001147AAA	Round Button (A)
M3	$\triangle$ 3PE001033BAB	Operation Sheet (Left)	M65	$\triangle$ 3MB001148AAA	Round Button (B)
M4	$\triangle$ 3PE001032AAA	Operation Sheet (Right)	M66	3CC001295AAA	Lift Plate (Upper)
M5	$\triangle$ 3DA001841BAB	Upper Cover	M67	3CC001296AAA	Lift Plate (Bottom)
M6	$\triangle$ V9AB3279A2	Hinge Button Ass'y	M68	3AJ001004AAA	Hinge Shaft
M7	$\triangle$ 3HN001050AAA	LED Lens	M69	3AB001139BAA	Lift Shaft
M8	$\triangle$ 3DA001840BAB	Function Front Cover	M70	3CW001104AAA	Lift Spring
M9	3DH001378AAA	Function Front Shield Case	M71	3AE001021BAA	Slide Nut
M10	3CA002900AAA	Function Switch Board Mounting Angle	M72	3DA001016AAA	Rubber Cover
M11	$\triangle$ 3MB001143AAB	Operation Button A (Black, ENTER)	M73	$\triangle$ 3DA001843BAA	Positioner Cover
M12	$\triangle$ 3MB001143AAC	Operation Button A (Black)	M74	3CC001005BAA	Base
M13	$\triangle$ 3MB001143AAD	Operation Button A (Blue)	M75	1CJ001203AAA	Nut (M3)
M14	3DH001377AAA	Function Rear Shield Case	M76	3DA001846AAA	Upper Plate
M15	$\triangle$ 3DA001839BAA	Function Rear Cover	M77	$\triangle$ 3DA001842AAA	Joystick Cover
M16	$\triangle$ 3CF002301AAA	LCD Display Panel	M78	VU550CJA01	Joystick Unit (See Note below.)
M17	3CB002037AAA	Bottom Chassis	M79	V9AA2970B3	Joystick Upper Cover Ass'y (See Note below.)
M18	YWTM166N08	Rubber Foot	M80	3CE001024AAA	Joystick Bottom Case (See Note below.)
M19	$\triangle$ 3DL001017AAA	Foot	M81	3CX001041AAA	Dustproof Sheet (See Note below.)
M20	3CA002934AAA	Height Adjusting Angle (Left)	M82	3CB001008BAA	Joystick Chassis (See Note below.)
M21	3CW001091AAA	Height Adjusting Spring	M83	3FF001001AAA	Volume Gear (See Note below.)
M22	3AE001022AAA	Nut Plate	M84	3MA001004AAA	Zoom Lever (See Note below.)
M23	3CA002933AAA	Height Adjusting Angle (Right)	M85	3CW001003AAA	Zoom Lever Spring (See Note below.)
M24	3CF002302AAC	Rear Panel	M86	3AG001001AAB	Stop Ring (See Note below.)
M25	UAMS-07-V0	Cord Clamp (White)	M87	3DA001952AAA	CH Product Upper Plate (See Note below.)
M26	YWX43	Cable Clamp	M88	3CV001586AAA	Cushion
M27	K1YZZZ000024	D-sub Screw			
M40	$\triangle$ V9AA3278AN	Ten-key Ass'y			
M41	$\triangle$ 3PA003955AAA	Main Label			
M42	V7SA4171A4	PS•DATA Label			
M43	V7MB0103A4	Shock Mark Label			
M46	V7MA1164A4	Fuse Replacement Label			
M48	V4JA1017A4	Earth Spring			
M51	$\triangle$ 3DA001845BAA	Palm Rest Bottom Cover			
			Note: After replacing the following parts or disassembling the Joystick Unit, Calibration is required. (Refer to page 2-1 of the original service manual.) VR1, EEPROM (IC6 on the Main Board), Main Board Ass'y (PCB1), Joystick Board Ass'y (PCB5), Connector Board Ass'y (PCB6), Switch Board Ass'y (PCB7), M78-M87.		

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
MAIN BOARD			VS1-6	J0LB00000063	ZNR
PCB1 (RTL)	VCU65PKZ5A	Printed Circuit Board Ass'y (See Note of Page 7-1.)	R1	ERJ3EKF1002V	Metal 10K ohms 1/16W
IC1	C0DBAZC00010	Switching Regulator Controller	R2	ERJ3EKF1502V	Metal 15K ohms 1/16W
IC2,3	C0EBH0000550	Reset Signal Generator	R3	ERJ3EKF1002V	Metal 10K ohms 1/16W
IC4	C0JBAB000384	Hex Inverters	R4	ERJ3EKF1502V	Metal 15K ohms 1/16W
IC5	C0JBAZ002195	Single Schmitt Inverter	R5	ERJ3EKF1002V	Metal 10K ohms 1/16W
IC6	C3EBJC000064	EEPROM (See Note of Page 7-1.)	R6	ERJ3GEYJ203	Metal 20K ohms 1/10W
IC7	C0JBAM000052	Monostable Multivibrator	R7,8	ERJ3GEYJ103	Metal 10K ohms 1/10W
IC8	C1CB00002028	RS-232C Driver/Receiver	R9	D0HB223ZA002	Metal 22K ohms 1/16W
IC9,10	SN75ALS181NS	Driver/Receiver	R10,11	D0HB333ZA002	Metal 33K ohms 1/16W
IC11	C0JBAN000140	3-to-8 Line Decoder/Demultiplexer	R12	D0HB223ZA002	Metal 22K ohms 1/16W
IC12	C0JBAF000250	2-bit D-FF	R13	ERJ3GEYJ100	Metal 10 ohms 1/10W
IC13,14	C0JBAN000140	3-to-8 Line Decoder/Demultiplexer	R14	ERJ3GEYJ222	Metal 2.2K ohms 1/10W
IC15	74HC373ADTE	Octal Transparent Latch	R15-18	ERJ3GEYJ511	Metal 510 ohms 1/10W
IC16-18	C0JBAN000140	3-to-8 Line Decoder/Demultiplexer	R19,20	ERJ3GEY0R00	Metal 0 ohm 1/10W
IC19	C0JBAN000141	Decoders/Demultiplexers	R21	ERJ3RHD912	Metal 9.1K ohms 1/16W
IC20	C0JBAF000280	8-bit D-FF	R22	ERJ3RHD332V	Metal 3.3K ohms 1/16W
IC21	C0JBAA000174	2-Input Positive-AND Gate	R23	ERJ3GEYJ472	Metal 4.7K ohms 1/10W
IC22	C0JBAA000173	2-Input Positive-AND Gate	R24	ERJ3RHD682	Metal 6.8K ohms 1/16W
IC23	C3BBFC000295	SRAM	R25	ERJ3RHD332V	Metal 3.3K ohms 1/16W
IC24	C0JBAF000280	8-bit D-FF	R26,27	ERJ14YJ4R7	Metal 4.7 ohms 1/4W
IC25	C0ABBA000031	Operational Amplifier	R28	ERJ3RHD303V	Metal 30K ohms 1/16W
IC26	VCU65SA104	Flash Memory	R29	ERJ3RHD752V	Metal 7.5K ohms 1/16W
IC27	C0JBAF000280	8-bit D-FF	R30	ERJ3RHD243V	Metal 24K ohms 1/16W
IC28	C0JBAZ001003	Octal Buffers/Drivers	R31	ERJ3RHD752V	Metal 7.5K ohms 1/16W
IC29	C0JBAZ001137	Bus Transceiver	R34,35	ERJ14YJ4R7	Metal 4.7 ohms 1/4W
IC30	C3BBFC000295	SRAM	R36-40	ERJ3GEYJ103	Metal 10K ohms 1/10W
IC31	C0JBAC000158	Quad 2-input NAND Gates	R41	ERJ3GEYJ472	Metal 4.7K ohms 1/10W
IC32	C0CBCDD00004	Voltage Regulator	R42	ERJ12YJ151	Metal 150 ohms 1/2W
IC33	C0ABGA000035	Operational Amplifier	R43,44	ERJ3GEYJ222	Metal 2.2K ohms 1/10W
IC99	C2CBYF000036	16-bit Microprocessor	R45-47	ERJ3GEYJ102	Metal 1K ohms 1/10W
Q1	B1ADCF000001	Transistor	R48	ERJ3GEY0R00	Metal 0 ohm 1/10W
Q2	2SD601A-QR	Transistor	R49	ERJ3GEYJ102	Metal 1K ohms 1/10W
Q3	2SB709A-RS	Transistor	R50,51	ERJ3GEYJ363	Metal 36K ohms 1/10W
Q4	2SD601A-QR	Transistor	R52,53	ERJ3GEYJ222	Metal 2.2K ohms 1/10W
Q5	2SB709A-RS	Transistor	R54,55	ERJ3GEYJ363	Metal 36K ohms 1/10W
Q6,7	B1DDDD000007	FET	R56	ERJ3GEYJ103	Metal 10K ohms 1/10W
Q8	B1GBCFJJ0007	Transistor	R57	ERJ3GEYJ154	Metal 150K ohms 1/10W
Q9	B1ABCF000058	Transistor	R58	ERJ3GEYJ103	Metal 10K ohms 1/10W
Q10	B1ADCF000067	Transistor	R59	ERJ3GEYJ154	Metal 150K ohms 1/10W
D1,2	B0ADBJ000001	Diode	R60	ERJ3GEYJ103	Metal 10K ohms 1/10W
D3	B0JCMG000003	Diode	R61	ERJ3GEY0R00	Metal 0 ohm 1/10W
D4-7	B0ADCC000004	Diode	R62,63	ERJ3GEYJ101	Metal 100 ohms 1/10W
D8,9	B0JCRC000004	Diode	R64,65	ERJ3GEYJ102	Metal 1K ohms 1/10W
D10-13	MAZ80560ML	Diode	R66	ERJ3EKF4702V	Metal 47K ohms 1/16W
D14,15	MA8100	Diode	R67	ERJ3EKF1502V	Metal 15K ohms 1/16W
D16,17	MAZ81500ML	Diode	R68	ERJ3GEYJ103	Metal 10K ohms 1/10W
D18-21	LN1261CAL-TR	LED	R69	ERJ3GEYJ104	Metal 100K ohms 1/10W
D22	B0ADCC000004	Diode	R70	ERJ3GEYJ393	Metal 39K ohms 1/10W
D23	B0BC8R100004	Diode	R71	ERJ3GEYJ303	Metal 30K ohms 1/10W
D24-30	B0ADCC000004	Diode	R72	ERJ3GEY0R00	Metal 0 ohm 1/10W
			R74	ERJ3GEYJ103	Metal 10K ohms 1/10W
			R76	ERJ3GEYJ222	Metal 2.2K ohms 1/10W
			R77-83	ERJ3GEYJ105	Metal 1M ohms 1/10W
			R84-86	ERJ3GEYJ101	Metal 100 ohms 1/10W

REF. NO.	PART NO.	DESCRIPTION		REF. NO.	PART NO.	DESCRIPTION	
R87	K5H1023A0022	Fuse Resistor	1 A	C61	YW400225FZT	Ceramic	2.2 μ F
R88	ERJ3GEYJ103	Metal	10K ohms 1/10W	C62	MVUV1C104KBV	Ceramic	0.1 μ F
R89-95	ERJ8GEYJ2R2	Metal	2.2 ohms 1/8W	C63,64	ECST1VC335	Tantalum	3.3 μ F 35V
R96	ERJ3GEY0R00	Metal	0 ohm 1/10W	C65	YW400225FZT	Ceramic	2.2 μ F
R98-100	ERJ3GEYJ101	Metal	100 ohms 1/10W	C66-73	MCUV1E104ZFV	Ceramic	0.1 μ F
R101	ERJ6GEY0R00	Metal	0 ohm 1/8W	C74	F1J1C1050002	Ceramic	1 μ F
Z1,2	YWMNR14EJ103	Block Resistor	10K ohms	C75	MCUV1E104ZFV	Ceramic	0.1 μ F
Z3,4	D1H810140001	Block Resistor	100 ohms	C76	F1J1C1050002	Ceramic	1 μ F
Z5-10	YWMNR14EJ103	Block Resistor	10K ohms	C77-83	MCUV1E104ZFV	Ceramic	0.1 μ F
Z11-13	D1H810140001	Block Resistor	100 ohms	C84	F1J1C1050002	Ceramic	1 μ F
Z14	YWMNR14EJ103	Block Resistor	10K ohms	C85-87	MCUV1E104ZFV	Ceramic	0.1 μ F
Z15	D1H810140001	Block Resistor	100 ohms	C88	YW400225FZT	Ceramic	2.2 μ F
Z16	YWMNR14EJ103	Block Resistor	10K ohms	C89	MCUV1E104ZFV	Ceramic	0.1 μ F
Z17,18	D1H810140001	Block Resistor	100 ohms	C90	F1J1C1050002	Ceramic	1 μ F
Z19-23	YWMNR14EJ103	Block Resistor	10K ohms	C91-94	MCUV1E104ZFV	Ceramic	0.1 μ F
Z24-26	D1H810140001	Block Resistor	100 ohms	C96	F1J1C1050002	Ceramic	1 μ F
Z27	YWMNR14EJ103	Block Resistor	10K ohms	C97,98	MCUV1E104ZFV	Ceramic	0.1 μ F
Z28,29	D1H810140001	Block Resistor	100 ohms	C99	MVUV1C104KBV	Ceramic	0.1 μ F
Z30,31	YWMNR14EJ103	Block Resistor	10K ohms	C106	F1H1H103A219	Ceramic	0.01 μ F
Z32-36	D1H810140001	Block Resistor	100 ohms	C107	F1J1C1050011	Ceramic	1 μ F
C1,2	F2A1C472B121	Electrolytic	4700 μ F 16V	C108	F3H1C476A049	Tantalum	47 μ F 16V
C3	F1K1E1050002	Ceramic	1 μ F	C109	F1H1H102A219	Ceramic	1000 pF
C4	MCUV1E104ZFV	Ceramic	0.1 μ F	C110,111	F1J1C1050002	Ceramic	1 μ F
C5	F1H1H241A004	Ceramic	240 pF	C112,113	MCUV1E104ZFV	Ceramic	0.1 μ F
C6	F3F1C335A036	Tantalum	3.3 μ F 16V	C114	F3G1A336A028	Tantalum	33 μ F 10V
C7	F3H1C476A049	Tantalum	47 μ F 16V	CF1,2	J0HABC000003	EMI Suppression Filter	
C10,11	MCUV1E104ZFV	Ceramic	0.1 μ F	L1,2	G1C8R2JA0036	Coil	8.2 μ H
C12,13	F1H1A105A002	Ceramic	1 μ F	L3,4	G1A101C00011	Coil	100 μ H
C14	F3H1C476A049	Tantalum	47 μ F 16V	L5	G1C8R2JA0036	Coil	8.2 μ H
C15	F2A1A392A884	Electrolytic	3900 μ F 10V	L6-12	J0JBC0000022	Coil	
C16	MCUV1E104ZFV	Ceramic	0.1 μ F	L13,14	G1C8R2JA0036	Coil	8.2 μ H
C17,18	F2G1A471A026	Electrolytic	470 μ F 10V	X1	H0J270500101	Crystal Oscillator	27. 000 MHz
C21,22	MCUV1E104ZFV	Ceramic	0.1 μ F	F1	K5D102BK0003	Current Fuse	1 A 250V
C23	F1J1C1050002	Ceramic	1 μ F	SW1	K0N110B00012	Rotary Switch	
C24	F3H1C476A049	Tantalum	47 μ F 16V	SW2	K0C811B00009	8-bit Dip Switch	
C25,26	MCUV1E104ZFV	Ceramic	0.1 μ F	SW5	K0D141A00004	Slide Switch	
C27,28	EEFUD0J101ER	Electrolytic	100 μ F 6.3V	CN2	K1FA109B0058	9-pin D-sub Connector	
C29	YW400225FZT	Ceramic	2.2 μ F	CN5	K1KB50A00134	50-pin Connector	
C30,31	EEFUD0J101ER	Electrolytic	100 μ F 6.3V	CN7	K2LC108B00063	Modular Jack	
C34,36	MCUV1E104ZFV	Ceramic	0.1 μ F	CN8	K1KA40AA0291	40-pin Connector	
C37	YW400225FZT	Ceramic	2.2 μ F	CN9	K1KA14AA0051	14-pin Connector	
C38	MCUV1E104ZFV	Ceramic	0.1 μ F	CN10	K1KA11AA0051	11-pin Connector	
C39	YW400225FZT	Ceramic	2.2 μ F	JK1	K2LB2YYB0001	12-pin Modular Jack	
C40	F1H1H220A004	Ceramic	22 pF	JK2	YWHEC4100010	Jack	
C41	F3H1C476A049	Tantalum	47 μ F 16V	BZ1	L0DCEA000024	Buzzer	
C42	F1J1C1050002	Ceramic	1 μ F	E1-5	K4CD08000002	Ground Terminal	
C43	MCUV1E104ZFV	Ceramic	0.1 μ F	E8,9	K3GE1BB00004	Fuse Holder (for F1)	
C44	F1H1H220A004	Ceramic	22 pF	M28	3CA002899AAA	Main Board Mounting Angle	
C45-47	F1H1H101A231	Ceramic	100 pF	M29	YWX480WB01B	Cushion (for X1)	
C48	MCUV1E104ZFV	Ceramic	0.1 μ F	M30	3CA002903AAA	Modular Jack Angle	
C49	YW400225FZT	Ceramic	2.2 μ F				
C50	MCUV1E104ZFV	Ceramic	0.1 μ F				
C51	MVUV1C104KBV	Ceramic	0.1 μ F				
C53,54	ECST1VC335	Tantalum	3.3 μ F 35V				
C55-60	MCUV1E104ZFV	Ceramic	0.1 μ F				

REF. NO.	PART NO.	DESCRIPTION		REF. NO.	PART NO.	DESCRIPTION
PANEL BOARD						
PCB2 (RTL)	VCU65PKZ2A	Printed Circuit Board Ass'y		SW126-143	YWKKMJ2LINIA	Push Switch
IC102	MCHC138AE	Decoder/Demultiplexer		E101	VCU650L01	Wire Ass'y for Main Board CN9
IC103	C0JBAF000039	Octal D-Type Flip-Flop		E102	VCU650L02	Wire Ass'y for Main Board CN10
D102-108	B0ADCJ000012	Diode		M31	3CW001089BAA	Earth Spring
D109	YWSLR332MG	LED		M32	3CA002902AAA	Keyboard Angle
D110	LN38GPX	LED		M33	3CJ001181AAA	LED Spacer (for D109,111,133)
D111	YWSLR332VR	LED		M34	YWLH56	LED Spacer (6 mm, for D110)
D112,113	B0ADCJ000012	Diode		M35	3MB001143AAA	Operation Button A (Gray)
D114	MAZ80560ML	Diode		M36	3MB001146BAA	Operation Button B (Black)
D115-132	B0ADCJ000012	Diode		M37	3MB001146BAB	STOP Button
D133	YWSLR332DU	LED		M38	3MB001146BAC	PLAY/PAUSE Button
R128-130	ERJ3GEYJ103	Metal	10K ohms 1/10W	M39	3MB001146BAD	REC Button
R136	ERJ3GEYJ331	Metal	330 ohms 1/10W			
R137	ERJ3GEYJ471	Metal	470 ohms 1/10W			
R138	ERJ3GEYJ331	Metal	330 ohms 1/10W			
R140	ERJ3GEYJ271	Metal	270 ohms 1/10W			
R142	ERJ3GEYJ102	Metal	1K ohms 1/10W			
R151 (J101)	ERJ6GEY0R00	Metal	0 ohm 1/8W			
R152 (J108)	ERJ6GEY0R00	Metal	0 ohm 1/8W			
R153 (J115)	ERJ6GEY0R00	Metal	0 ohm 1/8W			
R154 (J119)	ERJ6GEY0R00	Metal	0 ohm 1/8W			
R155 (J134)	ERJ6GEY0R00	Metal	0 ohm 1/8W			
R156 (J137)	ERJ6GEY0R00	Metal	0 ohm 1/8W			
R157 (J143)	ERJ6GEY0R00	Metal	0 ohm 1/8W			
R158 (J153)	ERJ6GEY0R00	Metal	0 ohm 1/8W			
R159 (J154)	ERJ6GEY0R00	Metal	0 ohm 1/8W			
R160 (J155)	ERJ6GEY0R00	Metal	0 ohm 1/8W			
R161 (J156)	ERJ6GEY0R00	Metal	0 ohm 1/8W			
R162 (J173)	ERJ6GEY0R00	Metal	0 ohm 1/8W			
R163 (J188)	ERJ6GEY0R00	Metal	0 ohm 1/8W			
R164 (J189)	ERJ6GEY0R00	Metal	0 ohm 1/8W			
R165 (J190)	ERJ6GEY0R00	Metal	0 ohm 1/8W			
R166 (J191)	ERJ6GEY0R00	Metal	0 ohm 1/8W			
R167 (J192)	ERJ6GEY0R00	Metal	0 ohm 1/8W			
R168 (J193)	ERJ6GEY0R00	Metal	0 ohm 1/8W			
R169 (J194)	ERJ6GEY0R00	Metal	0 ohm 1/8W			
R170 (J196)	ERJ6GEY0R00	Metal	0 ohm 1/8W			
R171 (J198)	ERJ6GEY0R00	Metal	0 ohm 1/8W			
R172 (J199)	ERJ6GEY0R00	Metal	0 ohm 1/8W			
R173 (J207)	ERJ6GEY0R00	Metal	0 ohm 1/8W			
R174 (J209)	ERJ6GEY0R00	Metal	0 ohm 1/8W			
R175 (J210)	ERJ6GEY0R00	Metal	0 ohm 1/8W			
R176 (J214)	ERJ6GEY0R00	Metal	0 ohm 1/8W			
R177 (J216)	ERJ6GEY0R00	Metal	0 ohm 1/8W			
C102	F2A0J221A844	Electrolytic	220 μF 6.3V			
C103,104	MCUV1E104ZFV	Ceramic	0.1 μF			
L101	G1C8R2JA0036	Coil	8.2 μH			
SW101-120	K0H1BA000301	Tact Switch				
SW121	K0G11ZA00007	Rotary Switch				
SW122-125	K0H1BA000301	Tact Switch				
				FUNCTION SWITCH BOARD		
PCB3 (RTL)	VCU65PKD1A	Printed Circuit Board Ass'y		PCB3 (RTL)	VCU65PKD1A	Printed Circuit Board Ass'y
D601-604	B0ADCJ000012	Diode		D601-604	B0ADCJ000012	Diode
SW601-608	K0H1BA000301	Tact Switch		SW601-608	K0H1BA000301	Tact Switch
CN601	K1KA40B00088	40-pin Connector		CN601	K1KA40B00088	40-pin Connector
CN602	K1KA16BA0165	16-pin Connector		CN602	K1KA16BA0165	16-pin Connector

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
JOYSTICK SWITCH BOARD			JOYSTICK BOARD		
PCB4 (RTL)	VCU65PKB1A	Printed Circuit Board Ass'y	PCB5 (RTL)	VCU65PKC1A	Printed Circuit Board Ass'y (See Note of Page 7-1.)
IC201,202	C0ABGA000035	Operational Amplifier	R301	ERJ3GEY0R00	Metal 0 ohm 1/10W
IC203	C0JBAZ002262	Bus Buffer 3-State Output	R302	ERJ3GEYJ223	Metal 22K ohms 1/10W
D202-207	B0ADCC000004	Diode	R303,304	ERJ3GEY0R00	Metal 0 ohm 1/10W
R201	ERJ3GEY0R00	Metal 0 ohm 1/10W	R305	ERJ3GEYJ101	Metal 100 ohms 1/10W
R202,204	ERJ3GEYJ473	Metal 47K ohms 1/10W	R306	ERJ3GEYJ223	Metal 22K ohms 1/10W
R205	ERJ3GEYJ221	Metal 220 ohms 1/10W	VR301	D2FDZ1400003	Variable Resistor
R206	ERJ3GEY0R00	Metal 0 ohm 1/10W	C301-304	ECUV1H103KBV	Ceramic 0.01 μ F
R210-213	D0HB333ZA002	Metal 33K ohms 1/16W	E301	K4CD08000002	Ground Terminal
R214-217	D0HB123ZA002	Metal 12K ohms 1/16W	E303	VCU650L04	Wire Ass'y for Joystick Switch Board CN203
R219,220	ERJ3RHD473	Metal 47K ohms 1/16W	CONNECTOR BOARD		
R221	D0HB123ZA002	Metal 12K ohms 1/16W	PCB6 (RTL)	VU5CJPKZ2A	Printed Circuit Board Ass'y (See Note of page 7-1.)
R227-231	ERJ3GEY0R00	Metal 0 ohm 1/10W	R1	ERDS2TJ103	Carbon 10K ohms 1/4W
R251-253	ERJ3GEYJ911	Metal 910 ohms 1/16W	CN1	YW530480510	5-pin Connector
R254	ERJ3GEYJ750	Metal 75 ohms 1/10W	CN2	YW530470310	3-pin Connector
R255,256	ERJ3GEYJ680	Metal 68 ohms 1/10W	SWITCH BOARD		
R257,258	ERJ3GEYJ470	Metal 47 ohms 1/10W	PCB7 (RTL)	VU5CJPKZ3A	Printed Circuit Board Ass'y (See Note of page 7-1.)
R259	ERJ3GEY0R00	Metal 0 ohm 1/10W	SW1	EVQP0D07K	Tact Switch
R260	ERJ3GEYJ471	Metal 470 ohms 1/10W	ACCESSORY PARTS / PACKAGING PARTS		
R261	ERJ3GEY0R00	Metal 0 ohm 1/10W	PS1	N0JCEF000001	AC Adapter
C201,202	YW400475FZT	Ceramic 4.7 μ F	E21	K2NY6YY00002	6-conductor Modular Cable (3 m)
C203-206	MCUV1H102KBV	Ceramic 1000 pF	M101	3TR004856AAA	Printed Operating Instructions
C207-212	MCUV1E104ZFV	Ceramic 0.1 μ F	M103	PE20X35C05B	Polyethylene Bag
C213	F1J1C1050002	Ceramic 1 μ F	M104	PE26X40C05B	Polyethylene Bag
C214,215	YW400475FZT	Ceramic 4.7 μ F	M105	PE45X63C05B	Polyethylene Bag
C216,217	MCUV1E104ZFV	Ceramic 0.1 μ F	M106	V9CA5357BN	Packaging Ass'y
C220-222	MCUV1E104ZFV	Ceramic 0.1 μ F	M109	V8QA6364AN	Leaflet (for WJ-SX650)
L201	G1C8R2JA0036	Coil 8.2 μ H			
L202	G1C5R6JA0036	Coil 5.6 μ H			
SW201,202	K0H1BA000360	Tact Switch			
SW205,207	K0H1BA000360	Tact Switch			
SW209,210	K0H1BA000360	Tact Switch			
SW211	YWSSSS822AT	Slide Switch			
CN201	K1KA06AA0231	6-pin Connector			
CN202	K1KA05AA0230	5-pin Connector			
CN203	K1KA05AA0083	5-pin Connector			
CN204	K2LC108B0063	Modular Jack			
M30	3CA002903AAA	Modular Jack Angle			