

CDX-51/51RF

SONY

SERVICE MANUAL

*US Model
Canadian Model
AEP Model
UK Model
E Model*

SUPPLEMENT-4

File this supplement with the service manual.

Subject: Optical Pick-up Block Modification

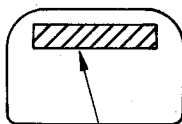
(ENG-96025)

Optical pick-up block was been changed from MG-153CD-131 to MG-154CD-131 in the midst of production. At the same time, servo board was been changed.

1. NEW/FORMER DISCRIMINATION

• Optical Pick-up

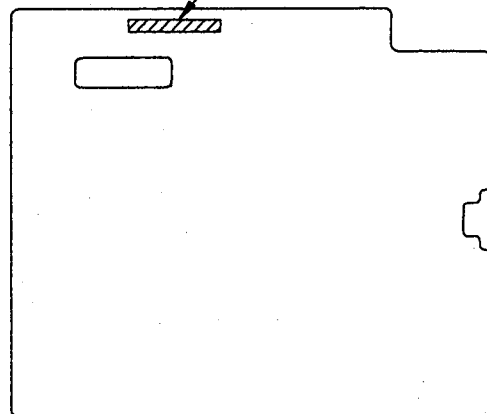
Label stuck outside of the optical pick-up



Former : KSS-410A
New : KSS-520A

• Servo Board – Conductor Side –

Former : 1-659-707-00
New : 1-662-974-11



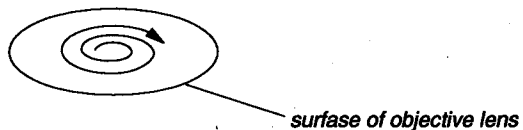
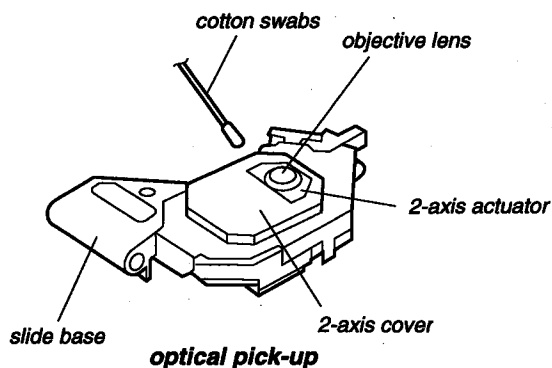
2. SERVICING NOTES

NOTES ON PICK-UP FLEXIBLE BOARD

The pick-up flexible board in this set is secured to the optical pick-up with an adhesive tape. Once the tape is removed, an adhering force becomes weak, and it cannot be reused.

Therefore, if the optical pick-up is replaced, replace also the pick-up flexible board with a new one.

NOTES ON CLEANING THE OBJECTIVE LENS



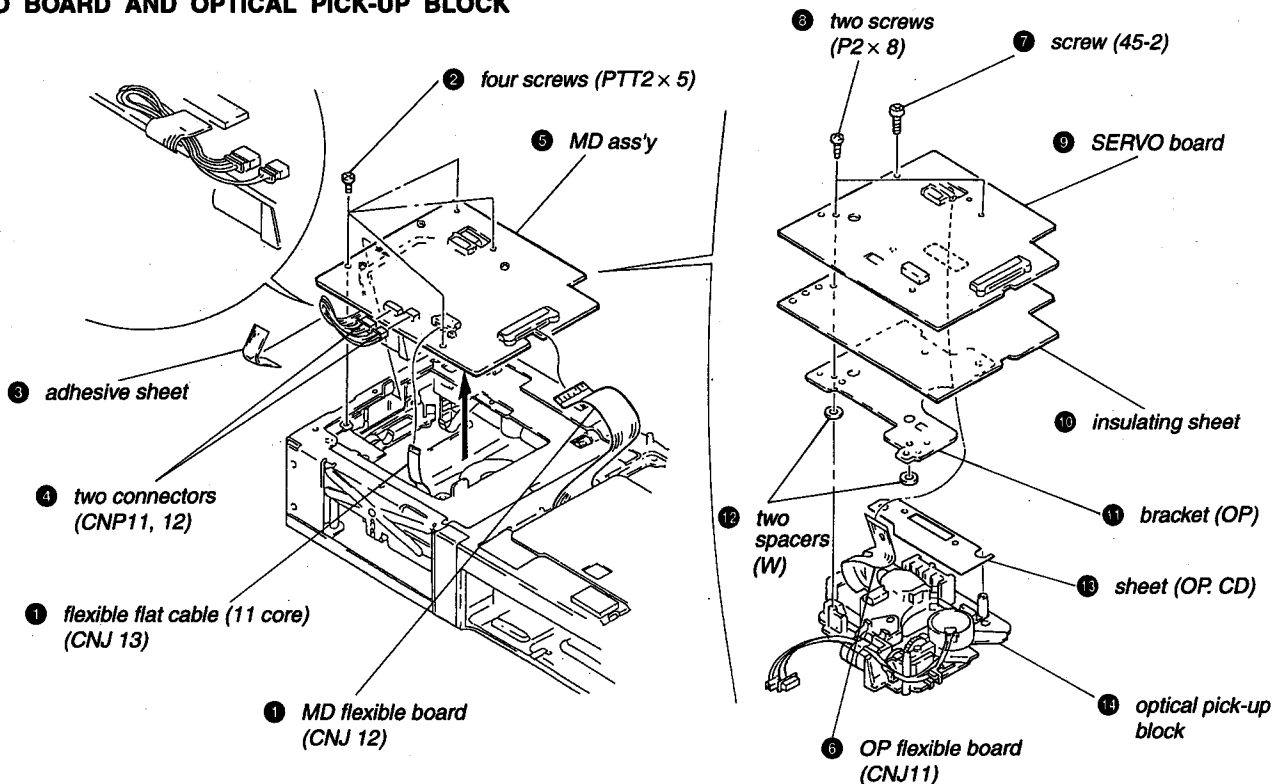
Notes:

Do not force to push the objective lens. Otherwise, the plate spring supporting the objective lens will be bent, causing a deteriorated RF waveform.

Never touch anything other than the objective lens. Otherwise, a significant deterioration occurs in the RF waveform.

3. DISASSEMBLY

SERVO BOARD AND OPTICAL PICK-UP BLOCK



5. EXPLODED VIEWS

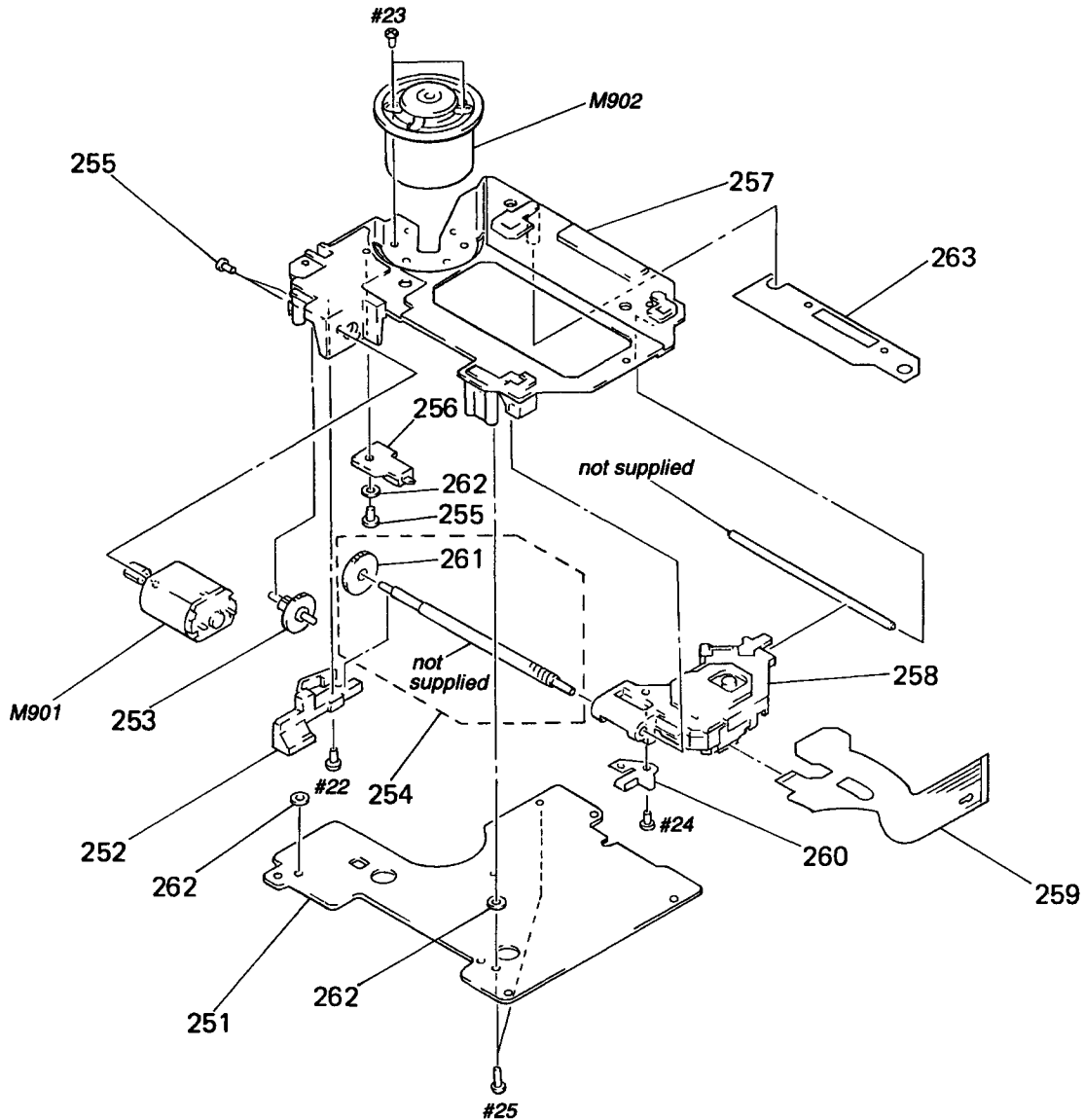
NOTE:

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by mark Δ or dotted line with mark Δ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque Δ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

OPTICAL PICK-UP SECTION (MG-154CD-131)



Ref. No.	Part No.	Description	Remark
* 251	3-908-094-02	BRACKET (OP)	
252	3-008-800-01	HOLDER, GEAR	
253	3-908-091-01	GEAR (MID)	
254	A-3291-896-A	GEAR (SLED) ASSY	
255	3-910-519-01	SCREW (SL)	
* 256	1-664-104-11	SW BOARD	
* 257	3-008-798-01	CHASSIS (O/S)	
Δ 258	8-848-402-02	OPTICAL PICK-UP KSS-520A/J-N	
259	1-662-948-11	OP FLEXIBLE BOARD	
260	3-931-834-01	SPRING (FEED), PLATE	

Ref. No.	Part No.	Description	Remark
261	3-908-092-01	GEAR (SLED)	
262	3-387-948-01	SPACER (W)	
263	3-926-531-01	SHEET (OP. CD)	
M901	A-3291-895-A	MOTOR (SLED) ASSY	
M902	A-3291-897-A	MOTOR (SP) ASSY (SPINDLE)	
#22	7-685-104-19	SCREW +P 2X6 TYPE2 NON-SLIT	
#23	7-627-552-07	SCREW, PRECISION +P 1.7X2.5 NON-SLIT	
#24	7-627-553-37	SCREW, PRECISION +P 2X3	
#25	7-685-105-19	TAPPING +P 2X8 NON-SLIT	

6. ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
All resistors are in ohms.
METAL: Metal-film resistor.
METAL OXIDE: Metal oxide-film resistor.
F: nonflammable

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

● SEMICONDUCTORS

In each case, $u:\mu$, for example:

$$\mu A \dots \mu A.. \quad \mu PA \dots \mu PA..$$
$$\mu_{PB} \dots \mu_{PB} \quad \mu_{PC} \dots \mu_{PC} \quad \mu_{PD} \dots \mu_{PD} \dots$$

● CAPACITORS

$$\mathbf{uF}: \mu F$$

● COILS

 $\nu\text{H: } \mu\text{H}$

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description	Remark		Ref. No.	Part No.	Description	Remark	
A-3309-932-A SERVO BOARD, COMPLETE					C48	1-110-454-11	SOLID CHIP	10uF	20% 16V
*****					C49	1-107-826-11	CERAMIC CHIP	0.1uF	10% 16V
< CAPACITOR >					C50	1-164-156-11	CERAMIC CHIP	0.1uF	25V
C11	1-163-038-00	CERAMIC CHIP	0.1uF	25V	C51	1-162-927-11	CERAMIC CHIP	100PF	5% 50V
C12	1-163-038-00	CERAMIC CHIP	0.1uF	25V	C52	1-162-965-11	CERAMIC CHIP	0.0015uF	10% 50V
C13	1-164-232-11	CERAMIC CHIP	0.01uF	50V	C53	1-164-361-11	CERAMIC CHIP	0.047uF	16V
C14	1-163-038-00	CERAMIC CHIP	0.1uF	25V	C54	1-107-826-11	CERAMIC CHIP	0.1uF	10% 16V
C16	1-110-450-11	SOLID CHIP	100uF	20% 6.3V	C55	1-162-967-11	CERAMIC CHIP	0.0033uF	10% 50V
C17	1-110-569-11	TANTAL. CHIP	47uF	20% 6.3V	C56	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V
C18	1-163-038-00	CERAMIC CHIP	0.1uF	25V	C59	1-164-156-11	CERAMIC CHIP	0.1uF	25V
C21	1-165-176-11	CERAMIC CHIP	0.047uF	10% 16V	C61	1-164-156-11	CERAMIC CHIP	0.1uF	25V
C22	1-164-227-11	CERAMIC CHIP	0.022uF	10% 25V	C62	1-110-449-11	SOLID CHIP	47uF	20% 6.3V
C25	1-162-927-11	CERAMIC CHIP	100PF	5% 50V	C63	1-110-449-11	SOLID CHIP	47uF	20% 6.3V
C27	1-113-619-11	CERAMIC CHIP	0.47uF	10V	C64	1-110-449-11	SOLID CHIP	47uF	20% 6.3V
C28	1-110-569-11	TANTAL. CHIP	47uF	20% 6.3V	C65	1-164-156-11	CERAMIC CHIP	0.1uF	25V
C29	1-164-156-11	CERAMIC CHIP	0.1uF	25V	C66	1-164-156-11	CERAMIC CHIP	0.1uF	25V
C30	1-162-957-11	CERAMIC CHIP	220PF	5% 50V	C67	1-110-454-11	SOLID CHIP	10uF	20% 16V
C31	1-107-823-11	CERAMIC CHIP	0.47uF	10% 16V	C68	1-164-156-11	CERAMIC CHIP	0.1uF	25V
C32	1-110-569-11	TANTAL. CHIP	47uF	20% 6.3V	C69	1-110-449-11	SOLID CHIP	47uF	20% 6.3V
C33	1-107-826-11	CERAMIC CHIP	0.1uF	10% 16V	C70	1-110-454-11	SOLID CHIP	10uF	20% 16V
C34	1-107-826-11	CERAMIC CHIP	0.1uF	10% 16V	C71	1-110-454-11	SOLID CHIP	10uF	20% 16V
C35	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V	C72	1-110-452-11	SOLID CHIP	47uF	20% 10V
C36	1-164-245-11	CERAMIC CHIP	0.015uF	10% 25V	C73	1-110-569-11	TANTAL. CHIP	47uF	20% 6.3V
C37	1-135-181-21	TANTALUM CHIP	4.7uF	20% 6.3V	C74	1-164-156-11	CERAMIC CHIP	0.1uF	25V
C38	1-164-677-11	CERAMIC CHIP	0.033uF	10% 16V	C100	1-163-038-00	CERAMIC CHIP	0.1uF	25V
C39	1-107-826-11	CERAMIC CHIP	0.1uF	10% 16V	< CONNECTOR >				
C40	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V	CNJ11	1-764-438-21	CONNECTOR, FPC 17P		
C41	1-164-677-11	CERAMIC CHIP	0.033uF	10% 16V	CNJ12	1-770-351-11	CONNECTOR, FPC 26P		
C42	1-162-915-11	CERAMIC CHIP	10PF	0.5PF 50V	CNJ13	1-764-439-21	CONNECTOR, FPC 11P		
C43	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V	CNP11	1-580-057-11	PIN, CONNECTOR 4P		
C45	1-164-245-11	CERAMIC CHIP	0.015uF	10% 25V	CNP12	1-580-055-21	PIN, CONNECTOR 2P		
C46	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V	< DIODE >				
C47	1-115-156-11	CERAMIC CHIP	1uF	10V	D11	8-719-801-78	DIODE 1SS184		

SERVO

Ref. No.	Part No.	Description	Remark
< FERRITE BEAD >			
FB101	1-550-907-21	BEAD, FERRITE (CHIP)	
FB102	1-550-907-21	BEAD, FERRITE (CHIP)	
FB103	1-550-907-21	BEAD, FERRITE (CHIP)	
< IC >			
IC11	8-752-074-34	IC CXA1782CQ	
IC12	8-752-372-94	IC CXD2507AQ	
IC13	8-759-429-32	IC BA5941FP-E2	
IC14	8-752-882-36	IC CXP84120-059Q	
IC16	8-759-327-78	IC TC9404FN-EL	
< COIL >			
L11	1-412-985-31	INDUCTOR 3.3uH	
< PHOTO INTERRUPTER >			
PH11	8-749-925-02	PHOTO INTERRUPTER SG-223	
< TRANSISTOR >			
Q11	8-729-027-31	TRANSISTOR DTA124EKA-T146	
Q14	8-729-141-48	TRANSISTOR 2SB624-BV345	
Q16	8-729-027-52	TRANSISTOR DTC124EKA-T146	
Q17	8-729-027-23	TRANSISTOR DTA114EKA-T146	
Q19	8-729-015-39	TRANSISTOR DTC323TK	
Q20	8-729-015-39	TRANSISTOR DTC323TK	
Q22	8-729-027-31	TRANSISTOR DTA124EKA-T146	
Q23	8-729-027-31	TRANSISTOR DTA124EKA-T146	
< RESISTOR >			
R11	1-216-864-11	METAL CHIP 0 5% 1/16W	
R14	1-216-864-11	METAL CHIP 0 5% 1/16W	
R15	1-216-864-11	METAL CHIP 0 5% 1/16W	
R17	1-216-864-11	METAL CHIP 0 5% 1/16W	
R18	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R19	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R20	1-216-839-11	METAL CHIP 33K 5% 1/16W	
R21	1-216-857-11	METAL CHIP 1M 5% 1/16W	
R22	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R23	1-216-839-11	METAL CHIP 33K 5% 1/16W	
R24	1-216-839-11	METAL CHIP 33K 5% 1/16W	
R25	1-216-045-00	METAL CHIP 680 5% 1/10W	
R26	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R29	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R32	1-216-857-11	METAL CHIP 1M 5% 1/16W	
R34	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
R38	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R39	1-216-857-11	METAL CHIP 1M 5% 1/16W	
R41	1-216-840-11	METAL CHIP 39K 5% 1/16W	

Ref. No.	Part No.	Description	Remark
R42	1-216-837-11	METAL CHIP 22K 5% 1/16W	
R45	1-216-851-11	METAL CHIP 330K 5% 1/16W	
R47	1-216-849-11	METAL CHIP 220K 5% 1/16W	
R48	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
R49	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
R50	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R51	1-216-864-11	METAL CHIP 0 5% 1/16W	
R52	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
R53	1-216-158-00	METAL GLAZE 22 5% 1/8W	
R54	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R55	1-216-855-11	METAL CHIP 680K 5% 1/16W	
R56	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
R57	1-216-834-11	METAL CHIP 12K 5% 1/16W	
R58	1-216-837-11	METAL CHIP 22K 5% 1/16W	
R59	1-216-851-11	METAL CHIP 330K 5% 1/16W	
R60	1-216-847-11	METAL CHIP 150K 5% 1/16W	
R61	1-216-837-11	METAL CHIP 22K 5% 1/16W	
R63	1-218-273-11	METAL GLAZE 510K 5% 1/16W	
R64	1-216-842-11	METAL CHIP 56K 5% 1/16W	
R65	1-216-850-11	METAL CHIP 270K 5% 1/16W	
R68	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R69	1-216-849-11	METAL CHIP 220K 5% 1/16W	
R72	1-216-839-11	METAL CHIP 33K 5% 1/16W	
R73	1-216-847-11	METAL CHIP 150K 5% 1/16W	
R74	1-216-839-11	METAL CHIP 33K 5% 1/16W	
R75	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R76	1-216-856-11	METAL CHIP 820K 5% 1/16W	
R77	1-216-849-11	METAL CHIP 220K 5% 1/16W	
R78	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R79	1-216-827-11	METAL CHIP 3.3K 5% 1/16W	
R80	1-216-827-11	METAL CHIP 3.3K 5% 1/16W	
R81	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R82	1-216-813-11	METAL CHIP 220 5% 1/16W	
R83	1-216-813-11	METAL CHIP 220 5% 1/16W	
R84	1-216-813-11	METAL CHIP 220 5% 1/16W	
R88	1-216-809-11	METAL CHIP 100 5% 1/16W	
R89	1-216-809-11	METAL CHIP 100 5% 1/16W	
R90	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R91	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R92	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R93	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R98	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R103	1-216-009-00	METAL CHIP 22 5% 1/10W	
R104	1-216-813-11	METAL CHIP 220 5% 1/16W	
R105	1-216-809-11	METAL CHIP 100 5% 1/16W	
R111	1-216-837-11	METAL CHIP 22K 5% 1/16W	
R112	1-216-845-11	METAL CHIP 100K 5% 1/16W	

Ref.No.	Part No.	Description	Remark
< VARIABLE RESISTOR >			
RV11	1-238-091-11	RES, ADJ, CERMET	22K
RV12	1-238-094-11	RES, ADJ, CERMET	220K
RV13	1-238-091-11	RES, ADJ, CERMET	22K
RV14	1-238-091-11	RES, ADJ, CERMET	22K
< VIBRATOR >			
X11	1-760-479-11	VIBRATOR, CERAMIC (8.0MHz)	
X12	1-760-241-11	VIBRATOR, CERAMIC (16.934MHz)	

*	1-664-104-11	SW BOARD	

< SWITCH >			
SW1	1-572-688-11	SWITCH, PUSH (1 KEY) (LIMIT)	
