

SHARP SERVICE MANUAL

C0DE: 00ZER4230FSME



ELECTRONIC CASH REGISTER

FLAT KEYBOARD.

MODEL ER-4230F

PRINTER: Model-220F(Z)

SRV KEY: LKGIM6861RCZZ
(No Mode Key No.)

CAUTION

EXTREME CAUTION MUST BE TAKEN WHEN SERVICING THIS MACHINE. EVEN THOUGH THE MODE SWITCH IS IN THE OFF POSITION, VOLTAGE IS STILL SUPPLIED TO THE ENTIRE MACHINE. WHEN WORKING ON THIS MACHINE MAKE SURE THAT THE POWER CORD IS REMOVED FROM THE WALL OUTLET.

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*DATASYM ALSO MADE FLAT KEYBOARD FOR THIS MODEL
42 HB OR 42 KBT . SHARP & DATASYM WILL NOT WORK
COMBINED.*

SHARP CORPORATION

1. Introduction

The ER-4230F Service Manual describes only those differences from the ER-4230 Service manual.

The ER-4230 Service manual must also be referred to in conjunction with this ER-4230F Service Manual for servicing.

2. General

- (1) The ER-4230F is a flat key board version of the ER-4230*.
The table below shows how the ER-4230F differs from the ER-4230.
For detail, please refer to Parts Guide.

Table 1

Model	ER-4230M (US version) ER-4230 (other export version)	ER-4230F
Keyboard structure	Standard type keytops	Flat keyboard, waterproof
Printer	M-220F (KI-OB6674RCZZ)	M-220F(Z) (KI-OB6674RC01)
Nos. of departments	30 departmants, standard Expandable up to 126 departments if ER-36KP1, ER-36KP2 used.	Fixed to 62 departments. Option not available.
Mode keys	Normal type mode keys. OP: LKGIM6858RCZZ SM: LKGIM6859RCZZ MA: LKGIM6860RCZZ	Watertight mode keys. OP: LKGIM6858RCN1 SM: LKGIM6859RCN1 MA: LKGIM6860RCN1
Model name plate	ER-4230M (HBDGD6774RCZZ) ER-4230 (HBDGD6773RCZZ)	ER-4230F (HBDGD6814RCZZ)
Key interface PWB	---	CPWBN6874RC01 CPWBF7036RCZZ
ROM version	VHITM24645078 VHITM24645079 VHITM24645080 VHITM24647103	VHITM24645080 VHI2764/R351A VHI2764/R332A VHI2764/R333A
Cashier LED	Red	Green

NOTE(*):

ER-4230: The USA version is a revision from the ER-4230M.
Other export versions are revision from the ER-4230.

- (2) For the ER-4230F, it is possible to use almost all of the options used by the ER-4230, except for the following:

ER-36KP1 ER-42DT5 ER-11KT
ER-36KP1 ER-11DK

3. Reference documents

- (1) ER-4230 Service Manual (00ZER4230SM-E)
- (2) ER-4230M Service Manual (00ZER4230MSME)
- (3) M-220F Printer Manual (00ZM220F/SM-E)
- (4) ER-4230 Options Manual

4. SRV mode setting

Since the department amount has been expanded to 62 departments for the ER-4230F. The service programming for JOB 901-CD must be set to 12. All other programming modes are identical to those of the ER-4230.

(Job #901)

Key operation

MRS: 0012

901 → **RFND** → **#/SBTL** → **A B C D** → **CA/AT/NS**

See the ER-4230 Service Manual

"12" must be entered.

Page 26 and 27.

Do not enter any other number.

Program reading (Job #900)

Print example

(C004) (M000-1X) (X) 100000

6:11AM 08/21/00

000#0002 A 0001

#0900

F01 0012

F02 0000

F03 0000

F04 0000

F05 0000

F06 0000

F07 0000

F08 0000

F09 0000

F10 0000

F11 0000

F12 0000

F13 0000

F14 0000

Z1 0000

Z2 0000

GT1

\$0000000000.00

GT2

\$0000000000.00

GT3

\$0000000000.00

5. Test functions in the SRV mode

5-1. Key test-1 (Job #104)

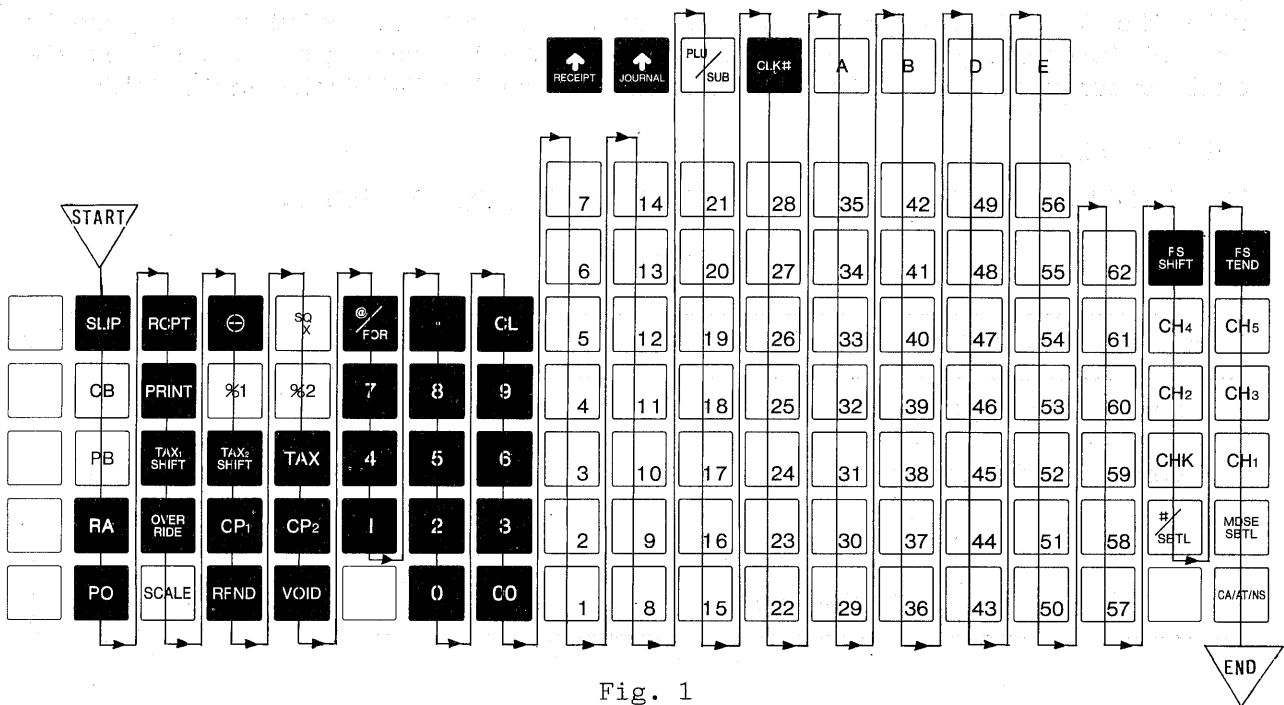


Fig. 1

5-2. Key test-2 (Job #105)

This test has been discontinued.

6. Circuit description

Key and switch scan

More keys are used for the ER-4230F than on the ER-4230(M) keyboard; from 83 keys to 115 keys. Therefore, the BPR interface (CPWBN6874RC01) of the ER-36KP1 (BPR) is used to cover it. BPR is used for departments 8 to 62 to scan key. So, it does not permit to expand department; the ER-36KP1, ER-36KP2, ER-42DT5 are not usable.

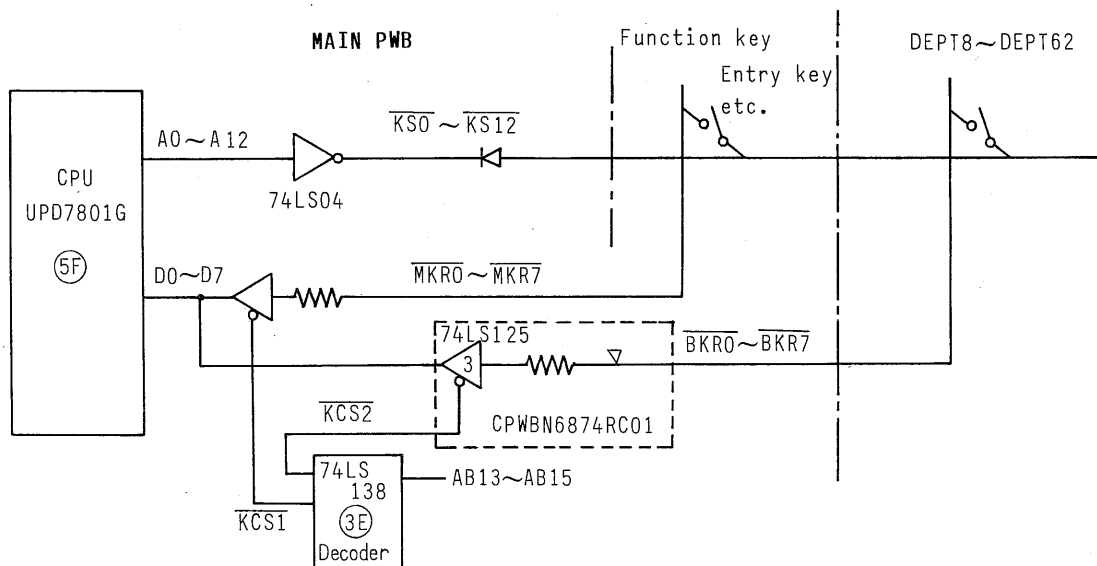


Fig. 2

7. Printer M-220F(Z)

The M-220F (KI-OB6674RCZZ) is used for the ER-4230(M), but the M-220F(Z) (KI-OB6674RC01) is used for the ER-4230F. The M-220F is interchangeable with the M-220F(Z) as a unit. However, some of the individual components are not interchangeable. See Table 1 for the interchangeability of individual components. For individual component, see the M-220F(Z) Parts Guide.

Printer label

The M-220F can be identified from the M-220F(Z) by the label.

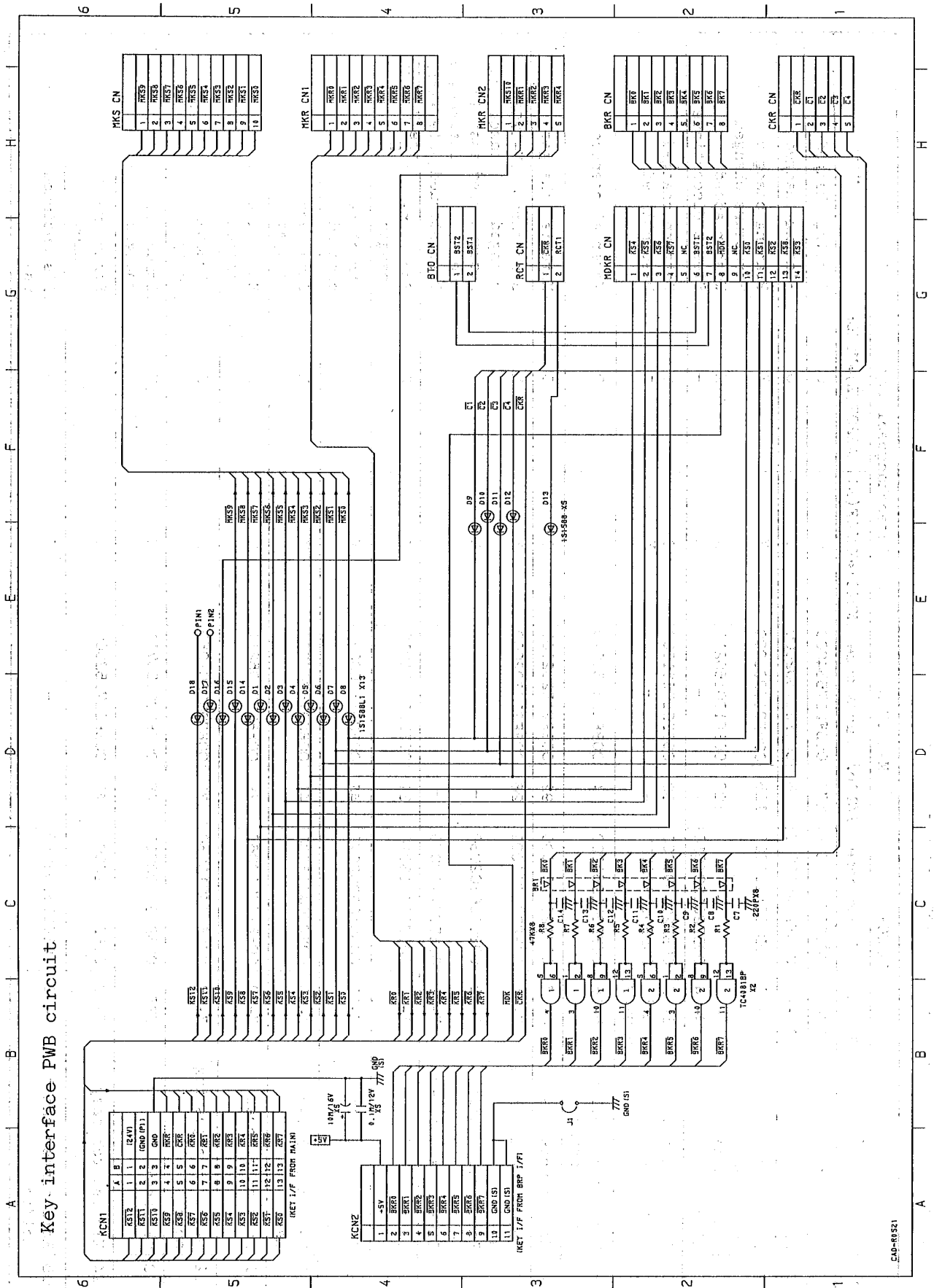
Table 1

Label	M-220F	M-220F(Z)
Black	Model-220F	Discontinued
Paper	220F xxxxxxxxxxxxxx Spec ← Lot No. Sub-code	M-220F Zxxxxxxxxxxxxx Spec ← Lot No. Sub-code

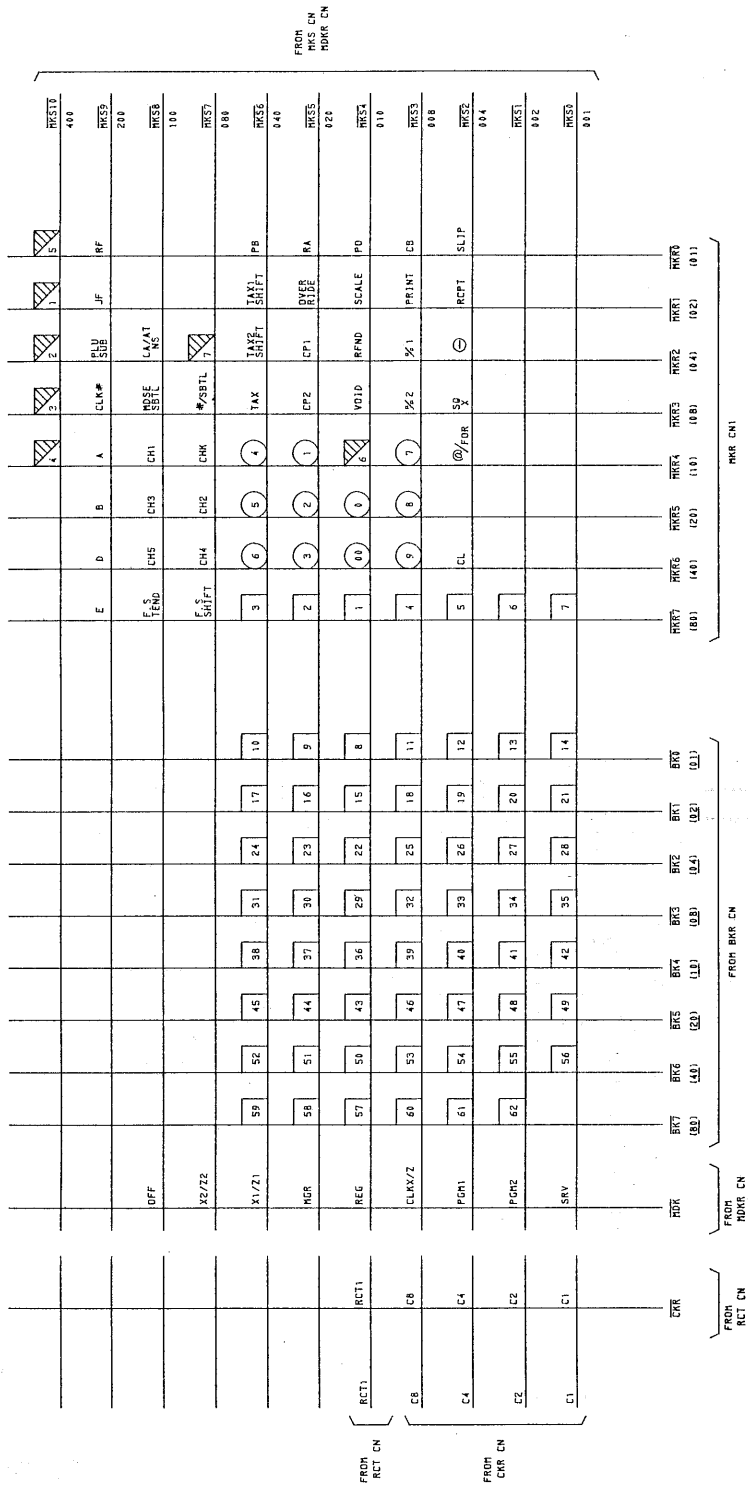
PRINTER PARTS COMPARISON TABLE (M-220F, M-220F(Z))

No.	Item	M-220F		M-220F(Z)		Interchangeability		NOTE
		P/G No.	Parts code	P/G No.	Parts code	M220F→M220F(Z)	M220F(Z)→M220F	
1	Head cover	10- 1	00BF204531000	127	00BF217554000	0	0	Plating changed
2	Covering	10- 2	00BF204511000	8	00BF217502000	0	0	Plating changed
3	Carrier driving lever assy Plain washer Sleeve	4- 3	00BF204101000	125	00BF215201000	X	X	Plating changed Structure changed
		-	-	122	00BF100150212	X	X	Washer added
4	Circuit board assy Plain washer	4- 4	00BF201204010	-	-	X	-	Sleeve discontinued
		8- 2 PW (3-08-8)	00BF204390000 00BB010350111	99 -	00BF217601000 -	0 X	0 -	Pattern changed Discontinued
5	Paper feed roller Shaft bearing	5-18	00BF201251020	4	00BF215251010	0	0	Material changed
6	Head carrier assy	4- 7	00BF201201000	92	00BF215202000	0	0	Material changed
7	Paper takeup frame assy Paper roll shaft holder Takeup belt cover	7- 1	00BF204711001	28	00BF217302000	X	X	Structure changed M-220F takeup unit assy is interchange- able with the M-220F (Z)
		7- 2	00BC106302080	-	-	X	-	Discontinued use
8	Detection frame J	7-19	00BF204710070	-	-	X	-	Discontinued
		7- 7	00BF204713010	31	00BF217151010	X	X	Structure changed
9	Detection lever spring	7-11	00BC109302070	42	00BC915303030	X	X	Structure changed
10	Detection lever assy	7-10	00BF204715000	41	00BC915303020	X	X	Structure changed
11	Adjusting screw	7- 9	00BF204710060	29	00BB010105211	X	X	Structure changed
12	Detector adjusting screw	7- 8	00BF204710050	30	00BC901301050	X	X	Structure changed
13	CP screw	CPS	00BB030103711	48	00BB030150711	X	X	Structure changed
14	Microswitch assy	7-12	00BF204714000	43	00BF217152000	X	X	Structure changed
15	Roll papaer shaft holder	7- 2	00BC106302080	-	-	X	-	Discontinued use

8.Circuit diagram and PWB layout

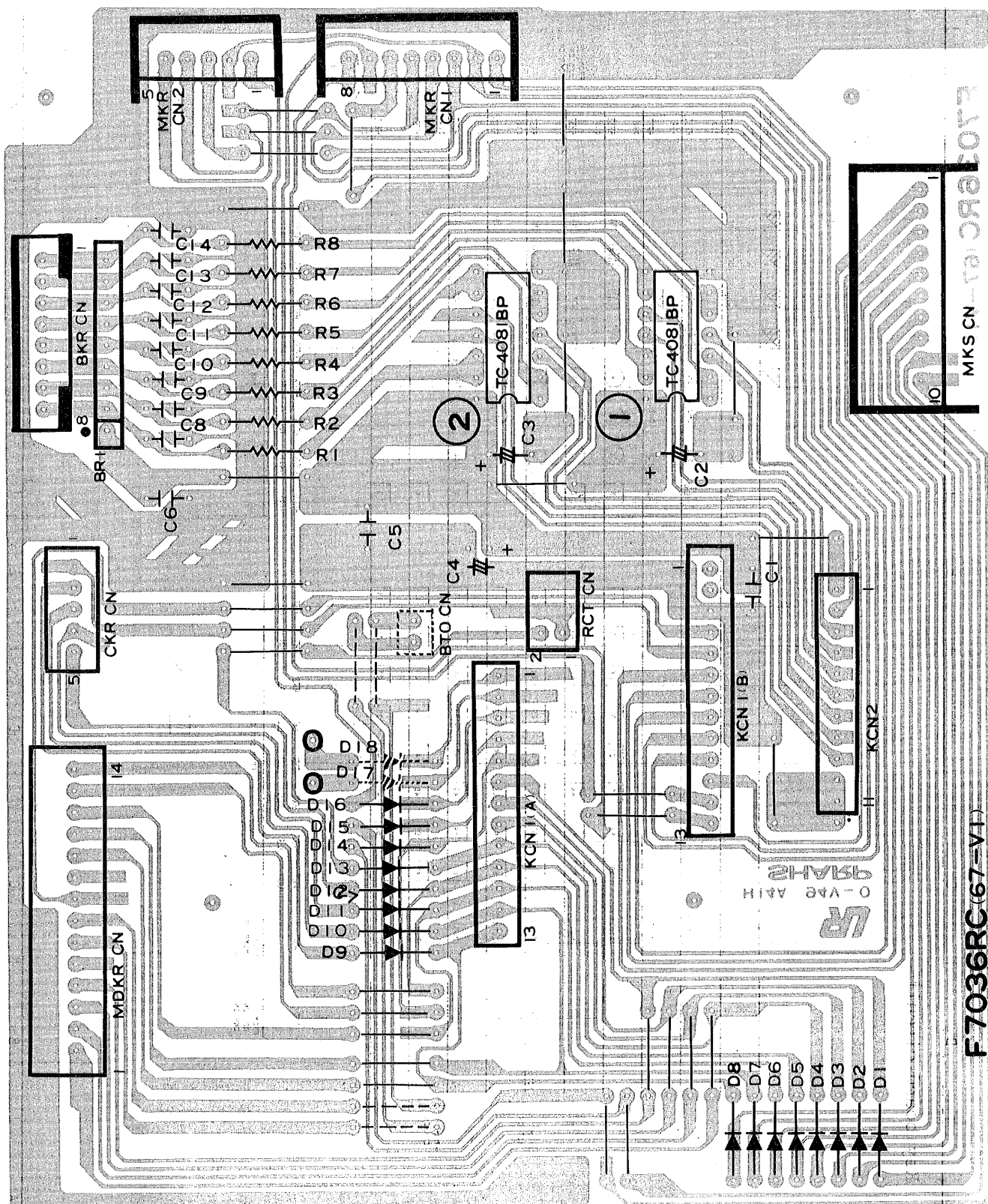


Key board circuit



1 : DP KEY

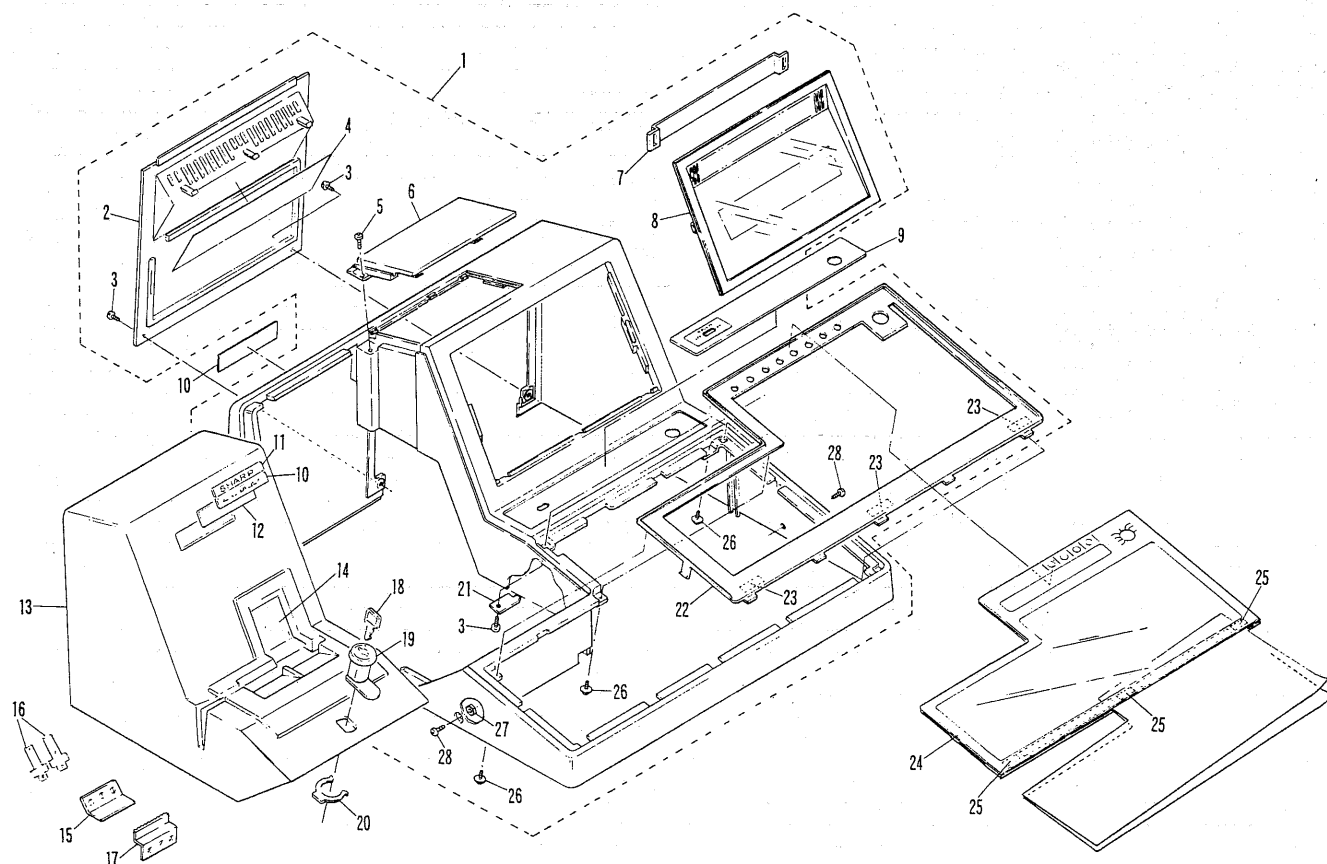
Key interface PWB layout



9. Parts guide

1 Cabinet etc.

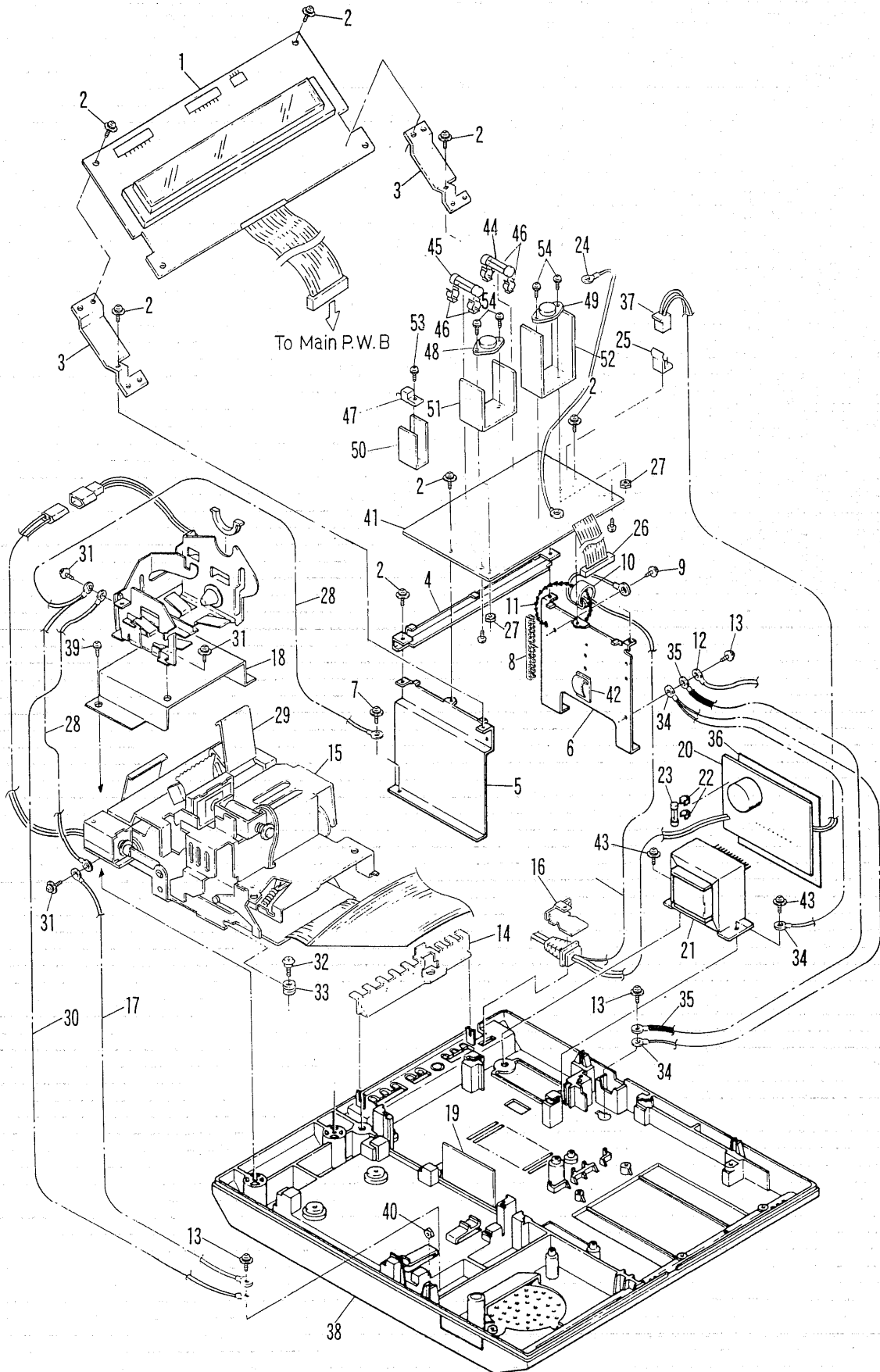
NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	CCABB6903RCZZ	BK	N	D	Top cabinet unit
2	GFTAR6682RCZZ	AP		D	Rear cover
3	XUPSD30P08000	AA		C	Screw (3×8)
4	PFILW6718RCZZ	AG		D	Filter (Rear)
5	XBBSC30P06000	AA		C	Screw (3×6)
6	GFTAT6681RCZZ	AG		D	Customer cover
7	GCOVD6806RCZZ	AK		D	Filter mask
8	PFILW6726RCZZ	AV		C	Filter (Front)
9	HDECE6729RCZZ	AH		C	Receipt switch panel
10	HBDGD6814RCZZ	AC	N	C	Model badge
11	HBDGD6664RCZZ	AG		D	SHARP badge
12	GDAI-6629RCZZ	AC		C	Badge fitting plate
13	GCOVA6804RCZZ	AV		D	Printer cover
14	PFILW6727RCZZ	AD		D	Jurnal filter
15	GITAR6694RCZZ	AS		D	Plate for printer cover
16	LANGT6634RCZZ	AC		C	Angle for filter
17	PCUT-6631RCZZ	AC		D	Paper cutter
18	LKGIM6784RCZZ	AD		B	Printer cover key (IPC)
19	LKGIW6783RCZZ	AM		B	Lock
20	MSPRK6660RCZZ	AC		C	Lock spring
21	LANGH7218RCZZ	AE		C	Angle
22	HPNLC6728RCZZ	AS		C	Key panel
23	LPLTZ6634RCZZ	AC		C	Plate
24	GCOVH6863RCZZ	BM	N	C	Key cover
25	PMAGZ6630RCZZ	AD		C	Magnet
26	XUPSD30P08000	AA		C	Screw (3×8)
27	XNESD30-24000	AA		C	Nut (3NS)
28	XBBSC30P10000	AA		C	Screw (3×10)



2 Printer and other interior parts

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	CPWBF6892RC01	BY		E	Display PWB unit
2	XBPSD30P06KS0	AA		C	Screw (3×6KS)
3	LANGK7163RCZZ	AE		C	Display PWB holder angle
4	LANGK7137RCZZ	AD		C	PWB angle
5	LANGK7134RCZZ	AG		C	PWB holder angle (Left)
6	LANGK7135RCZZ	AG		C	PWB holder angle (Right)
7	XUPSD30P10000	AA		C	Screw (3×10)
8	LBSHC0006RCZZ	AE		C	Bushing
9	XBPBZ40P06K00	AA		C	Screw (4×6K)
10	RCORF6629RCZZ	AQ		C	Core (ESD-R-25L) (U.S.A. only)
11	LBNDJ0004UCZZ	AA		C	Cable band
12	QCNCW-7000RCZZ	AD		C	Earth wire
13	XBPSD30P08KS0	AA		C	Screw (3×8KS)
14	LANGK7127RCZZ	AE		C	Option cable angle
15	KI-OB6674RC01	CC		E	Printer (M-222F(Z))
16	LANGK7162RCZZ	AD		C	Angle for AC cord
17	QCNCW-6817RCZZ	AD		C	Earth wire (Printer → Drawer)
18	GDAI-6652RCZZ	AF		C	Winder fitting angle
19	GITAR6629RCZZ	AD		C	Shield plate
20	CPWBF6871RC05	BG		E	Noise filter PWB unit (Include No.21~23,55)
21	RTRNP6716RCZZ	BA		B	Power transformer
22	QFSHB1003CCZZ	AB		C	Fuse holder (SN-3E)
23	QFS-B1002CCZZ	AE		A	Fuse (1.5A 125V)
24	QCNCW-6779RCZZ	AB		C	Lead wire (SI8243→PS PWB, SI8053B→PS PWB)
25	QCNCM6837RC0B	AB		B	Connector (2pin)
26	QCNCW-6825RCZZ	AK		C	Connector with cable (Main PWB → Power supply)
27	XNESD30-24000	AA		C	Nut (3NS)
28	QCNCW-6820RCZZ	AB		C	Earth wire (PWB Angle→Winder→Printer)
29	GDAI-6655RCZZ	AG		C	Writing board
30	QCNCW-6818RCZZ	AE		C	Earth wire (Winder → Chassis)
31	XBPSD40P08KS0	AA		C	Screw (4×8KS)
32	LX-BZ1007CCZZ	AB		C	Screw
33	PCUS-4101CCZZ	AB		C	Printer cushion
34	QCNCW-6999RCZZ	AC	N	C	Earth wire (PWB Angle Right→Trans.→Drawer)
35	QCNCW-6838RCZZ	AE		C	Earth wire (PWB Angle Right → Chassis)
36	PSHEP6656RCZZ	AF		C	Insulator
37	QCNCW6835RC02	AE		B	Connector (2pin)
38	GCABA6834RCZZ	BE		D	Bottom cabinet
39	XBPSD40P10KS0	AA		C	Screw (4×10KS)
40	XNESD30-24000	AA		C	Nut (3NS)
41	CPWBF6893RC01	BS		E	Power supply PWB unit (Include No.24~27,44~54)
42	LHLDW2334RCZZ	AC		C	Wire holder
43	XUPSD30P08000	AA		C	Screw (3×8)
44	QFS-A0016HCZZ	AC		A	Fuse (3A/125V)(100V series)
45	QFS-A0038HCZZ	AD		A	Fuse (0.5A)
46	QFSHA1002CCZZ	AB		C	Fuse holder (SN5053 MINI TYPE)
47	VS2SC2334-/-1	AL		B	Transistor (2SC2334)
48	VHISI8243B/-1	AQ		B	IC (SI8243B)
49	VHISI8053B/-1	AQ		B	IC (SI8053B)
50	PRDAF6630RCZZ	AB		C	Heat sink (for transistor)
51	PRDAF2317RCZZ	AG		C	Heat sink
52	PRDAF6636RCZZ	AG		C	Heat sink for SI8253
53	XBPSD30P08K00	AA		C	Screw (3×8K)
54	XBPSD30P10K00	AA		C	Screw (3×10K)

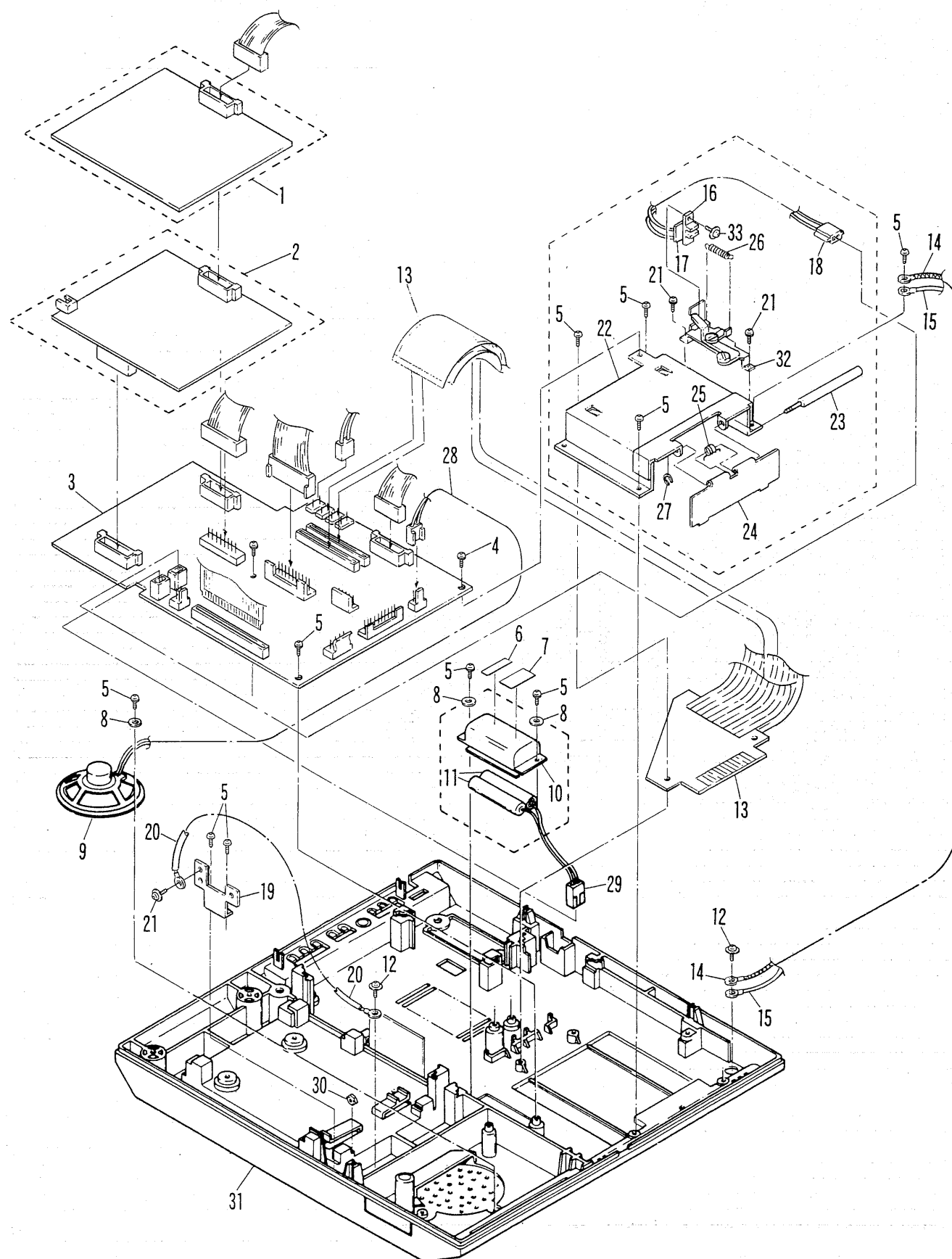
2 Printer and other interior parts



Section 809

-12-

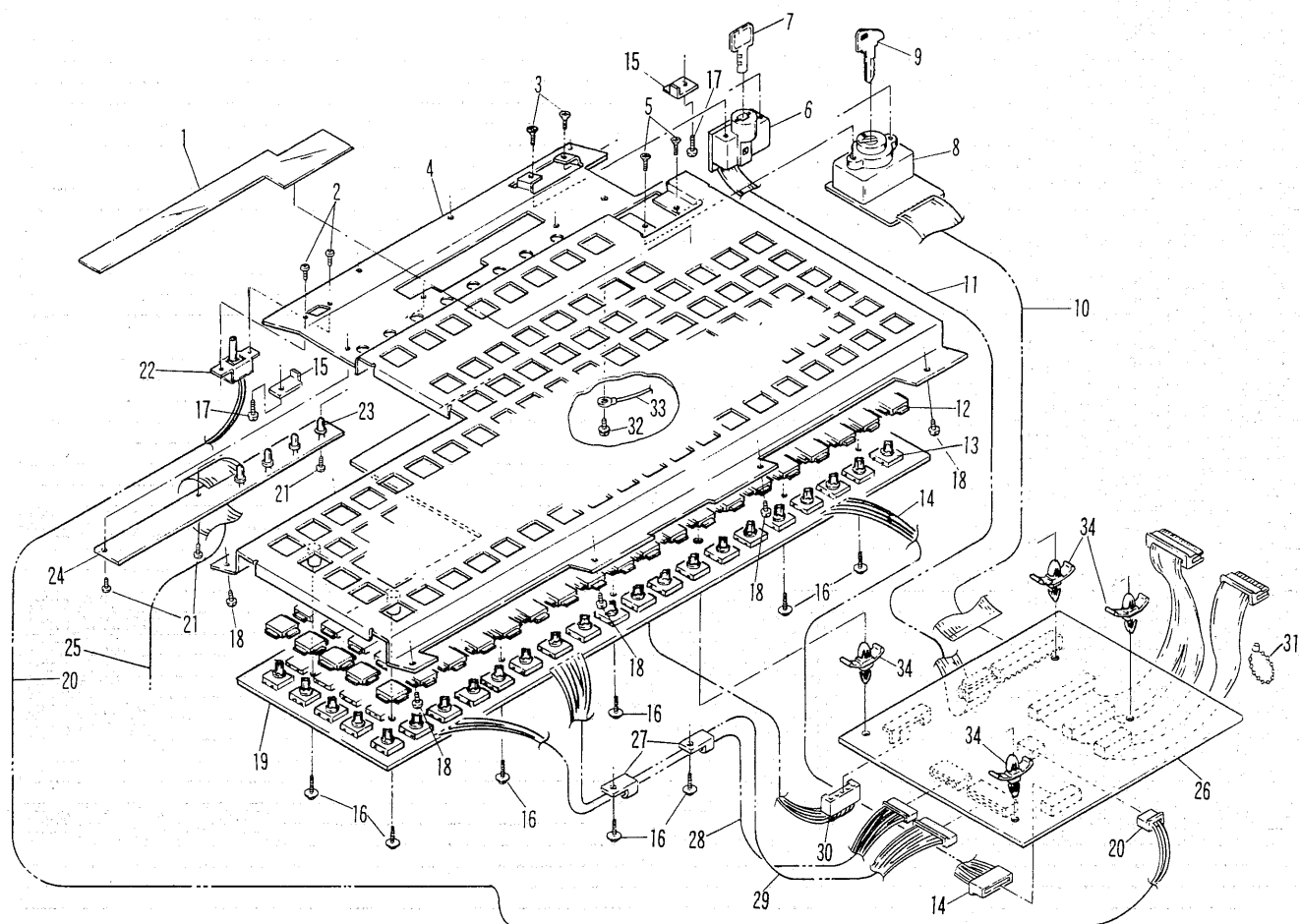
3 PWB etc.



4 Keyboard unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	0AL113KFT-007	AH		C	Sheet (113KFT-007-90R)
2	XBPSD20P04000	AA		C	Screw (2×4)
3	XUPSD26P06000	AA		C	Screw (2.6×6)
4	0AL501KFT-091	BF		C	Frame (501KFT-091-90R)
5	XUPSD30P06000	AA		C	Screw (3×6)
6	LKGIW6852RCZZ	AW		B	Clerk switch
7	LKIGM6853RCZZ	AG		B	Clerk key A (2pcs/set)
	LKIGM6854RCZZ	AG		B	Clerk key B (2pcs/set)
	LKIGM6855RCZZ	AG		B	Clerk key D (2pcs/set)
	LKIGM6856RCZZ	AG		B	Clerk key E (2pcs/set)
	LKIGM6857RCZZ	AG		B	Clerk key H (2pcs/set)
	LKIGM6864RCZZ	AG		B	Clerk key K (2pcs/set)
	LKIGM6869RCZZ	AG		B	Clerk key L (2pcs/set)
	LKIGM6870RCZZ	AG		B	Clerk key M (2pcs/set)
	LKIGM6871RCZZ	AG		B	Clerk key N (2pcs/set)
	LKIGM6872RCZZ	AG		B	Clerk key P (2pcs/set)
	LKIGM6873RCZZ	AG		B	Clerk key Q (2pcs/set)
	LKIGM6874RCZZ	AG		B	Clerk key R (2pcs/set)
	LKIGM6875RCZZ	AG		B	Clerk key S (2pcs/set)
	LKIGM6876RCZZ	AG		B	Clerk key T (2pcs/set)
	LKIGM6877RCZZ	AG		B	Clerk key U (2pcs/set)
8	LKGIW7101RCZZ	AV	N	B	Mode switch
9	LKIGM6858RCN1	AE		B	Operator key (OP)(for mode switch)(2PCS/Set)
	LKIGM6859RCN1	AE		B	Sub master key (SM)(for mode switch)(2PCS/Set)
	LKIGM6860RCN1	AE		B	Master key (MA)(for mode switch)(2PCS/Set)
10	QCNW-6959RCZZ	AF		C	Lead wire (for mode switch)
11	QCNW-6958RCZZ	AD		C	Lead wire (for clerk switch)
12	0AL305KFT-048	AA		C	Key top (305KFT-048-90)
13	0ALJPM1020030	AE		B	Tact switch (JPM1020-0301)
14	0ALHLP0310090	AM	N	C	Harness (A) (HLP0310-0901)
15	LANGH7218RCZZ	AE		C	Angle
16	0ALAAA2008122	AA		C	Screw (AAA2008-122001)
17	XUPSD30P08000	AA		C	Screw (3×8)
18	XUPSD30P06000	AA		C	Screw (3×6)
19	0ALKF0590E66R	BS	N	E	PWB unit (KFT0590E0066R)
20	QCNW-6995RCZZ	AC	N	C	Connector (2pin)
21	XBPSD30P06000	AA		C	Screw (3×6)
22	QSW-S6708RCZZ	AH		B	Slide switch
23	VHPGL5PG24/-1	AB		B	Photo transistor (GL5PG24)
24	QPWBF7002RCZZ	AE		C	LED-PWB (W/O parts)
25	QCNW-6993RCZZ	AF	N	C	Connector (5pin)
26	CPWBF7036RC01	BS	N	E	Key I/F PWB unit
27	0ALEAA0247001	AA	N	C	Wire holder (E-AA0247-001)
28	0ALHLP0305070	AK	N	C	Harness (D) (HLP0305-0701)
29	0ALHLP0308100	AY	N	C	Harness (B) (HLP0308-1001)
30	0ALHLP0908010	AM	N	C	Harness (C) (HLP0908-0101)
31	LBNDJ0004UCZZ	AA		C	Cable band
32	XBPSD30P06K00	AA		C	Screw (3×6K)
33	QCNW-7000RCZZ	AD	N	C	Earth wire
34	LBSHZ2029SCZZ	AB		C	PWB holder
(Unit)					
901	DUNTK8167RCZZ	BR	N	E	Keyboard unit

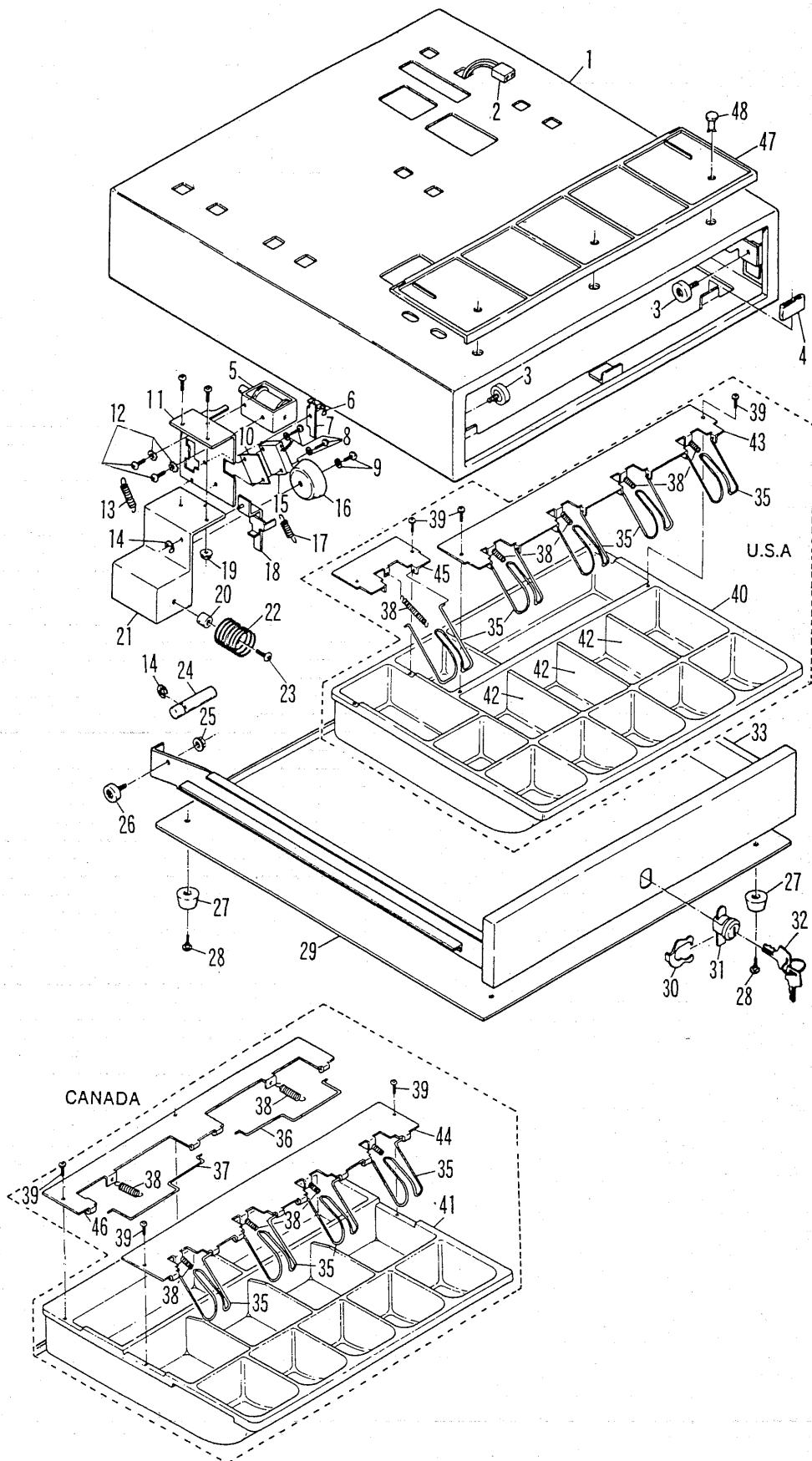
4 Keyboard unit



5 Drawer box unit

[illegible]

5 Drawer box unit



6 Packing material & Accessories

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	GC0VD6784RCZZ	AR		D	Dust cover
2	PRBN-2314RCZZ	**		S	Cassette ink ribbon
3	PTM-6267RCZZ	AV		D	Stamp (THANK YOU)
4	QACCD8411QCZZ	AN		B	AC cord (6A Bush 2.5M)
5	SPAKA7056RCZZ	AN		D	Packing cushion (Left)
6	SPAKA7057RCZZ	AN		D	Packing cushion (Right)
7	SPAKC7510RCZZ	AU	N	D	Packing case
8	SSAKA0001SCZZ	AA		D	Vinyl bag (200×300mm)
9	SSAKA0005WCZZ	AA		D	Vinyl bag (160×260mm)
10	SSAKA2012KCZZ	AF		D	Vinyl bag (600×540×510mm)
11	SSAKH3015CCZZ	AA		D	Vinyl bag (260×360mm)
12	SSAKA5004CCZZ	AA		D	Vinyl bag (100×300mm)
13	TCADH6653RCZZ	AB		D	Caution card (U.S.A. only)
	TCADH6654RCZZ	AB		D	Caution card (CANADA only)
	TINSE6998RCZZ	AY	N	D	Instruction book (U.S.A. only)
14	TINSK6999RCZZ	BQ	N	D	Instruction book (CANADA only)
15	UINK-1001CCZZ	AK		S	Ink
16	UBNDA1008CCZZ	AA		C	AC cord band
17	TCADH6704RCZZ	AE		D	Operation card for printer (CANADA only)
18	LKGI6861RCZZ	AG		B	Service key (SRV)
19	PSHEK6679RCZZ	AM		C	Key sheet (No printed)
20	PSHEK6685RCZZ	AT	N	C	Key sheet (Printed)

10 Main PWB unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	QCNCM2334RC0E	AC		C	Connector (5pin)
2	QCNCM6699RCZZ	AC		B	Connector (3pin)
3	QCNCM6766RC0C	AF		B	Connector (3pin)
4	QCNCW6766RC0B	AF		B	Connector (2pin)
5	QCNCM6775RC0B	AB		B	Connector (2pin)
6	QCNCM6780RC2F	AH		C	Connector (26pin)
7	QCNC-6786RC3J	AQ		C	Connector (30pin)
8	QCNCM6802RC0B	AC		B	Connector (2pin)
9	QCNCM6823RC1C	AE		C	Connector (13pin)
10	QCNCM1244CC1H	AH		C	Connector (18pin)
11	QCNCM6828RC0D	AB		C	Connector (4pin)
12	QCNCM6832RC0G	AD		C	Connector (7pin)
13	QCNCW6836RC2J	AE		C	Connector (20pin)
14	QCNCM6851RC0C	AC		B	Connector (3pin)
15	QCNCW6854RC3A	AH		C	Connector (31pin)
16	QCNW-6845RCZZ	AC		C	Jumper wire CPU1
17	QCNW-6846RCZZ	AA		C	Jumper wire CPU2
18	QCNW-6866RCZZ	AC		C	Earth wire
19	QFS-A1024CCZZ	AC		A	Fuse (2A)
20	QFSHA1002CCZZ	AB		C	Fuse holder (SN5053 MINI TYPE)
21	QSOCZ6424A0ZZ	AE		C	IC socket (24pin)
22	RC-KZ1018CCZZ	AE		C	Capacitor (250WV 25pF)
23	RCRSP1003CCZZ	AT		B	Crystal (32KHz)
24	RCRSP6631RCZZ	AE		B	Crystal (3.0MHz)
25	RCRSP6633RCZZ	AE		B	Crystal (6MHz)
26	RMPTC6333QCKB	AC		B	Block resistor (33KΩ×6 1/8W ±10%)
27	RMPTC7102QCKB	AC		B	Block resistor (1KΩ×7 1/8W ±10%)
28	RMPTC7223QCKB	AC		B	Block resistor (22KΩ×7 1/8W ±10%)
29	RMPTC8103QCKB	AD		B	Block resistor (10KΩ×8 1/8W ±10%)
30	RMPTC8223QCKB	AD		B	Block resistor (22KΩ×8 1/8W ±10%)
31	VCCCPU1HH390J	AA		C	Capacitor (50WV 39pF)
32	VCCCPU1HH101J	AB		C	Capacitor (50WV 100pF)
33	VCCCPU1HH220J	AA		C	Capacitor (50WV 22PF)
34	VCEAAU1CW106Q	AB		C	Capacitor (16WV 10μF)
35	VCEAAU1HW105Q	AB		C	Capacitor (50WV 1.0μF)
36	VCEAAU1HW225Q	AB		C	Capacitor (50WV 2.2μF)
37	VCEAAU1VW107Q	AC		C	Capacitor (35WV 100μF)
38	VCKYPU1HB101K	AA		C	Capacitor (50WV 100pF)
39	VCKYPU1HB102K	AA		C	Capacitor (50WV 1000pF)
40	VCKYPU1HB103K	AA		C	Capacitor (50WV 0.010μF)
41	VCKYPU1HB222K	AA		C	Capacitor (50WV 2200pF)
42	VCKYPU1HB331K	AA		C	Capacitor (50WV 330pF)
43	VCKYPU1HB471K	AA		C	Capacitor (50WV 470pF)
44	VCQYKU1HM103K	AB		C	Capacitor (50WV 0.01μF)
45	VCQYKU1HM222K	AA		C	Capacitor (50WV 2200PF)
46	VCQYKU1HM332K	AA		C	Capacitor (50WV 3300pF)
47	VCQYKU1HM333K	AB		C	Capacitor (50WV 0.033μF)
48	VCQYKU1HM104K	AB		C	Capacitor (50WV 0.1μF)
49	VCQYKU1HM683K	AB		C	Capacitor (50WV 0.068μF)
50	VCSATU1AE226M	AD		C	Capacitor (10WV 22μF)

10 Main PWB unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
51	VCSATU1CE475M	AD		C	Capacitor (16WV 4.7 μ F)
52	VCTYPU1NX104M	AB		C	Capacitor (12WV 0.10 μ F)
53	VHDDS1588L2-1	AB		B	Diode (DS1588L2)
54	VHD10D1-1	AD		B	Diode (10D1)
55	VHERD30EB5-1	AC		B	Zener diode (RD30EB5)
56	VHiHD14503B-1	AH		B	IC (HD14503B)
57	VHiM5L8041114	AT		B	IC (M5L8041114)
58	VHiM5T4044S30	AS		B	IC (M5T4044S30)
59	VHiM54532P-1	AU		B	IC (M54532P)
60	VHiNJM2903N-1	AH		B	IC (NJM2903N)
61	VHiSN74LS00-1	AE		B	IC (SN74LS00)
62	VHiSN74LS04-1	AE		B	IC (SN74LS04)
63	VHiSN74LS05-1	AE		B	IC (SN74LS05)
64	VHiSN74LS08-1	AE		B	IC (SN74LS08N)
65	VHiSN74LS09-1	AE		B	IC (SN74LS09N)
66	VHiSN74LS122N	AH		B	IC (SN74LS122N)
67	VHiSN74LS138N	AG		B	IC (SN74LS138N)
68	VHiSN74LS157N	AK		B	IC (SN74LS157N)
69	VHiSN74LS244N	AS		B	IC (SN74LS244N)
70	VHiSN74LS245N	AR		B	IC (SN74LS245N)
71	VHiSN74LS32-1	AF		B	IC (SN74LS32N)
72	VHiSN74LS33-1	AE		B	IC (SN74LS33)
73	VHiTC40H002P1	AF		B	IC (TC40H002P1)
74	VHiTC40H004PN	AF		B	IC (TC40H004P)
75	VHiTC4011BP-1	AF		B	IC (TC4011BP)
76	VHiTM24645080	AZ		B	IC
77	VHiUPD1990ACC	AT		B	IC (UPD1990ACC)
78	VHiUPD449D-1	BH		B	L.S.I (UPD449D)
79	VHiUPD8041045	AY		B	IC (μ PD804045)
80	VHi2764/R331A	BE		B	IC (2764/R331A)
	VHi2764/R332A	BE			IC (2764/R332A)
	VHi2764/R333A	BE			IC (2764/R333A)
81	VHi7801G096-1	BH		B	L.S.I (7801G096)
82	VRD-ST2EY000J	AA		C	Resistor (1/4W 0 Ω $\pm$ 5%)
83	VRD-ST2EY101J	AA		C	Resistor (1/4W 100 Ω $\pm$ 5%)
84	VRD-ST2EY102J	AA		C	Resistor (1/4W 1K Ω $\pm$ 5%)
85	VRD-ST2EY103J	AA		C	Resistor (1/4W 10K Ω $\pm$ 5%)
86	VRD-ST2EY104J	AA		C	Resistor (1/4W 100K Ω $\pm$ 5%)
87	VRD-ST2EY105J	AA		C	Resistor (1/4W 1.0M Ω $\pm$ 5%)
88	VRD-ST2EY123J	AA		C	Resistor (1/4W 12K Ω $\pm$ 5%)
89	VRD-ST2EY151J	AA		C	Resistor (1/4W 150 Ω $\pm$ 5%)
90	VRD-ST2EY183J	AA		C	Resistor (1/4W 18K Ω $\pm$ 5%)
91	VRD-ST2EY221J	AA		C	Resistor (1/4W 220 Ω $\pm$ 5%)
92	VRD-ST2EY222J	AA		C	Resistor (1/4W 2.2K Ω $\pm$ 5%)
93	VRD-ST2EY223J	AA		C	Resistor (1/4W 22K Ω $\pm$ 5%)
94	VRD-ST2EY272J	AA		C	Resistor (1/4W 2.7K Ω $\pm$ 5%)
95	VRD-ST2EY303G	AA		C	Resistor (1/4W 30K Ω $\pm$ 2%)
96	VRD-ST2EY332J	AA		C	Resistor (1/4W 3.3K Ω $\pm$ 5%)
97	VRD-ST2EY333J	AA		C	Resistor (1/4W 33K Ω $\pm$ 5%)
98	VRD-ST2EY334G	AA		C	Resistor (1/4W 330K Ω $\pm$ 2%)
99	VRD-ST2EY392J	AA		C	Resistor (1/4W 3.9K Ω $\pm$ 5%)
100	VRD-ST2EY394G	AA		C	Resistor (1/4W 390K Ω $\pm$ 2%)
101	VRD-ST2EY471J	AA		C	Resistor (1/4W 470 Ω $\pm$ 5%)
102	VRD-ST2EY472J	AA		C	Resistor (1/4W 4.7K Ω $\pm$ 5%)
103	VRD-ST2EY473J	AA		C	Resistor (1/4W 47K Ω $\pm$ 5%)
104	VRD-ST2EY474J	AA		C	Resistor (1/4W 470K Ω $\pm$ 5%)
105	VRD-ST2EY561J	AA		C	Resistor (1/4W 560 Ω $\pm$ 5%)
106	VRD-ST2EY562J	AA		C	Resistor (1/4W 5.6K Ω $\pm$ 5%)
107	VRD-ST2EY563J	AA		C	Resistor (1/4W 56K Ω $\pm$ 5%)
108	VRD-ST2EY682J	AA		C	Resistor (1/2W 6.8K Ω $\pm$ 5%)
109	VRD-ST2HY220J	AB		C	Resistor (1/2W 22 Ω $\pm$ 5%)
110	VRD-SU2EY181J	AA		C	Resistor (1/4W 180 Ω $\pm$ 5%)
111	VRD-SU2EY273J	AA		C	Resistor (1/4W 27K Ω $\pm$ 5%)
112	VRD-SU2EY393J	AA		C	Resistor (1/4W 39K Ω $\pm$ 5%)
113	VRD-SU2EY560J	AA		C	Resistor (1/4W 56 Ω $\pm$ 5%)
114	VRD-SU2EY821J	AA		C	Resistor (1/4W 820 Ω $\pm$ 5%)
115	VRD-PT3AB181K	AB		C	Resistor (1W 180 Ω $\pm$ 10%)
116	VSJA101-1	AB		B	Transistor (JA101)
117	VSJC501-1	AB		B	Transistor (JC501)
118	VS2SA673-C-1	AE		B	Transistor (2SA673-C)
119	VS2SB881-1	AH		B	Transistor (2SB881)
120	VS2SC1472K-1	AE		B	Transistor (2SC1472K)
121	VS2SD1191-1	AH		B	Transistor (2SD1191)
122	VS2SD1309-1	AG		B	Transistor (2SD1309)
123	VS2SD985-1	AF		B	Transistor (2SD985)
124	XBPSD30P08K00	AA		C	Screw (3 $\times$ 8K)
125	XNESD30-24000	AA		C	Nut (3NS)
(Unit)					
901	CPWBS6987RC04	CM	N	E	Main PWB unit

11 Power supply PWB unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	LBNDJ0004UCZZ	AA		C	Band,cable (for Ring core)
2	PRDAF2317RCZZ	AG		C	Heat sink
3	PRDAF6630RCZZ	AB		C	Heat sink (for transistor)
4	PRDAF6636RCZZ	AG		C	Heat sink for SI8253
5	QCNCM6837RC0B	AB		B	Connector (2pin)
6	QCNW-6779RCZZ	AB		C	Chopper wire (Key I/F ← Clerk)
7	QCNW-6825RCZZ	AK		C	
8	QCNW-6836RCZZ	AG		C	Lead wire (Display → Power supply)
9	QFS-A0016HCZZ	AC		A	Fuse (3A/125V)(100V series)
10	QFS-A0038HCZZ	AD		A	Fuse (0.5A)
11	QFSHA1002CCZZ	AB		C	Fuse holder (SN5053 MINI TYPE)
12	QLUGE0002WCZZ	AB		C	Terminal
13	RC-EZL688RCHL	AR		C	Capacitor (55WV 6800μF)
14	RC-EZ0099FCZZ	AF		C	Capacitor (35WV 1000μF)
15	RC-EZ1042CCZZ	AD		C	Capacitor (35WV 470μF)
16	RC-FZJ337RCZZ	AD		C	Capacitor (63WV 33μF)
17	RC-FZ6626RCZZ	AE		C	Capacitor (35WV 2200μF)
18	RCILC6632RCZZ	AQ		C	Coil
19	RCILC6633RCZZ	AL		C	Coil
20	RTRNH6720RCZZ	AR		B	Converter transformer
21	VCEAAU1HW105Q	AB		C	Capacitor (50WV 1.0μF)
22	VCEAAU1HW226Q	AC		C	Capacitor (50WV 22μF)
23	VCEAAU2AW226Q	AC		C	Capacitor (100WV 22μF)
24	VCEAAU2AW335Q	AB		C	Capacitor (100WV 3.3μF)
25	VCKYPU1HB101K	AA		C	Capacitor (50WV 100pF)
26	VCKYPU1HB102K	AA		C	Capacitor (50WV 1000pF)
27	VCQYKU1HM152K	AA		C	Capacitor (50WV 1500pF)
28	VCQYKU1HM683K	AB		C	Capacitor (50WV 0.068μF)
29	VHDBB1////-1	AD		B	Diode (BB1)
30	VHDBB2////-1	AE		B	Diode (BB2)
31	VHDDS1588L2-1	AB		B	Diode (DS1588L2)
32	VHDS4VB10////-1	AL		B	Diode (S4VB10F)
33	VHEHZ6C1////-1	AB		B	Zener diode (HZ6C1)
34	VHERD62E4////-1	AD		B	Zener diode (RD62E4)
35	VHINJM2903N-1	AH		B	IC (NJM2903N)
36	VHISI8053B/-1	AQ		B	IC (SI8053B)
37	VHISI8243B/-1	AQ		B	IC (SI8243B)
38	VRD-ST2EY100J	AA		C	Resistor (1/4W 10Ω ±5%)
39	VRD-ST2EY101J	AA		C	Resistor (1/4W 100Ω ±5%)
40	VRD-ST2EY102G	AA		C	Resistor (1/4W 1KΩ ±2%)
41	VRD-ST2EY103J	AA		C	Resistor (1/4W 10KΩ ±5%)
42	VRD-ST2EY104J	AA		C	Resistor (1/4W 100KΩ ±5%)
43	VRD-ST2EY122J	AA		C	Resistor (1/4W 1.2KΩ ±5%)
44	VRD-ST2EY123G	AA		C	Resistor (1/4W 12KΩ ±2%)
45	VRD-ST2EY153G	AA		C	Resistor (1/4W 15KΩ ±2%)
46	VRD-ST2EY153J	AA		C	Resistor (1/4W 15KΩ ±5%)
47	VRD-ST2EY272J	AA		C	Resistor (1/4W 2.7KΩ ±5%)
48	VRD-ST2EY273J	AA		C	Resistor (1/4W 27KΩ ±5%)
49	VRD-ST2EY274J	AA		C	Resistor (1/4W 270KΩ ±5%)
50	VRD-ST2EY472J	AA		C	Resistor (1/4W 4.7KΩ ±5%)
51	VRD-ST2EY562J	AA		C	Resistor (1/4W 5.6KΩ ±5%)
52	VRD-ST2EY563J	AA		C	Resistor (1/4W 56KΩ ±5%)
53	VRD-ST2EY821G	AA		C	Resistor (1/4W 820Ω ±2%)
54	VRS-PT3AB272K	AA		C	Resistor (1W 2.7KΩ ±10%)
55	VRS-PT3AB392K	AB		C	Resistor (1W 3.9KΩ ±10%)
56	VRW-PT3LW1R0K	AD		C	Resistor (3W 1.0Ω ±10%)
57	VRW-PT3MWR47K	AG		C	Resistor (6.0W 0.47Ω ±10%)
58	VS2SA733-R/-1	AE		B	Transistor (2SA733R) duction
59	VS2SC2334-/-1	AL		B	Transistor (2SC2334)
60	VS2SC641KC/-1	AE		B	Transistor (2SC641KC)
61	VS2SC945-P/QC	AC		B	Transistor (2SC945-P/QC)
62	VS2SD667-/-1	AD		B	Transistor (2SD667)
63	XBPSD30P08K00	AA		C	Screw (3×8K)
64	XBPSD30P10K00	AA		C	Screw (3×10K)
65	XNESD30-24000	AA		C	Nut (3NS)
(Unit)					
901	CPWBF6893RC01	BS		E	Power supply PWB unit

12 Noise filter PWB unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	QCNCW6835RC02	AE		B	Connector (2pin)
2	QFS-B1002CCZZ	AE		A	Fuse (1.5A 125V)
3	QFSHB1003CCZZ	AB		C	Holder,fuse (SN-3E)
4	RC-FZ6030RCZZ	AH		C	Capacitor (125WV 0.1μF)
5	RCILC6575RCZZ	AN		C	Coil (for line filter)

12 Noise filter PWB unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
6	RTRNP6716RCZZ	BA		B	Power transformer
7	VRD-ST2HY394J	AB		C	Resistor (1/2W 390KΩ ±5%)
8	QPWBF6871RCZZ	AG		C	PWB (w/o parts)
	(Unit)				
901	CPWBF6871RC05	BG		E	Noise filter PWB unit

13 Display PWB unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	LBNDJ0004UCZZ	AA		C	Band,cable (for Ring core)
2	QCNCM6852RC0D	AB		C	Connector (4pin)
3	QCNCM6852RC1B	AE		C	Connector (12pin)
4	QCNCM6853RC1C	AE		C	Connector (13pin)
5	QCNCW-6824RCZZ	AK		C	Connector 13pin with wires (Main ↔ Display)
6	RMPTC8104QCKB	AD		B	Block resistor (100KΩ×8 1/8W ±10%)
7	RMPTC9104QCKB	AD		B	Block resistor (100KΩ×9 1/8W ±10%)
8	RMPTC9473QCKB	AD		B	Block resistor (47KΩ×9 1/8W ±10%)
9	RMPTC9562QCKB	AD		B	Block resistor (5.6KΩ×9 1/8W ±10%)
10	VCEAAU1AW226Q	AB		C	Capacitor (10WV 22μF)
11	VCEAAU1CW106Q	AB		C	Capacitor (16WV 10μF)
12	VCEAAU1HW106Q	AC		C	Capacitor (50WV 10μF)
13	VCKYPU1HB331K	AA		C	Capacitor (50WV 330pF)
14	VCTYPU1NX104M	AB		C	Capacitor (12WV 0.10μF)
15	VHEHZ9C1///-1	AB		B	Zener diode (HZ9C1)
16	VHILI2047///-1	BB		B	IC (LI2047)
17	VHISN74LS173N	AL		B	IC (SN74LS173AN)
18	VHISN74154N-1	AR		B	IC (74154)
19	VHITD62703/-1	AN		B	IC (TD62703)
20	VHIUPD8243/-1	AP		B	IC (UPD8243)
21	VRD-ST2EY103J	AA		C	Resistor (1/4W 10KΩ ±5%)
22	VRD-ST2EY123J	AA		C	Resistor (1/4W 12KΩ ±5%)
23	VRD-ST2EY153J	AA		C	Resistor (1/4W 15KΩ ±5%)
24	VRD-ST2EY222J	AA		C	Resistor (1/4W 2.2KΩ ±5%)
25	VRD-ST2EY273J	AA		C	Resistor (1/4W 27KΩ ±5%)
26	VRD-ST2EY3R3J	AA		C	Resistor (1/4W 3.3Ω ±5%)
27	VRD-ST2EY392J	AA		C	Resistor (1/4W 3.9KΩ ±5%)
28	VRD-ST2EY473J	AA		C	Resistor (1/4W 47KΩ ±5%)
29	VRS-PT3AB272K	AA		C	Resistor (1W 2.7KΩ ±10%)
30	VS2SA675-///-1	AD		B	Transistor (2SA675)
31	VS2SC945-P/QC	AC		B	Transistor (2SC945-P/QC)
32	VVDDC1612C2-1	BN		B	Display tube (DC1612C2)
	(Unit)				
901	CPWBF6892RC01	BY		E	Display PWB unit

14 Preset loder PWB unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	QCNCW-6815RCZZ	AZ		C	PWB connector with wire
2	VRD-ST2EY121J	AA		C	Resistor (1/4W 120Ω ±5%)

15 I/F PWB unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	QCNCM6769RC2D	AH		C	Connector (24pin)
2	QCNC-6786RC3J	AQ		C	Connector (30pin)
3	QCNCM6794RC0B	AC		B	Connector (2pin)
4	VCEAAU1CW106Q	AB		C	Capacitor (16WV 10μF)
5	VCTYPU1NX104M	AB		C	Capacitor (12WV 0.10μF)
6	VHISN74LS00-1	AE		B	IC (SN74LS00)
7	VHISN74LS125N	AK		B	IC (SN74LS125N)
8	VHISN74LS32-1	AF		B	IC (SN74LS32N)
9	VHISN74LS365N	AH		B	IC (SN74LS365N)
10	VHIUPD449D/-1	BH		B	L.S.I (UPD449D)
11	VRD-ST2EY221J	AA		C	Resistor (1/4W 220Ω ±5%)
	(Unit)				
901	CPWBN6874RC01	BT		E	I/F PWB unit

16 Memory PWB unit (U.S.A. only)

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	QCNC-6786RC3J	AQ		C	Connector (30pin)
2	QCNCM6794RC0B	AC		B	Connector (2pin)
3	QSOCZ6424ACZZ	AE		C	IC socket (24pin)
4	QSOCZ6428ACZZ	AE		C	IC socket (28pin)
5	RR-CZ6633RCZZ	AD		C	Resistor (120Ω × 4)
6	VCEAAU1CW106Q	AB		C	Capacitor (16WV 10μF)
7	VCTYPU1NX104M	AB		C	Capacitor (12WV 0.10μF)
8	VHISN74LS02-1	AE		B	IC (SN74LS02)
9	VHISN74LS137N	AN		B	IC (SN74LS137N)
10	VHISN74LS139N	AL		B	IC (74LS139P)
11	VHISN74LS244N	AS		B	IC (SN74LS244N)
12	VRD-ST2EY221J	AA		C	Resistor (1/4W 220Ω ±5%)
13	VRD-ST2EY562J	AA		C	Resistor (1/4W 5.6KΩ ±5%)
	(Unit)				
901	CPWBN6904RC02	BY		E	Memory PWB unit

17 Key I/F unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	QCNCW6882RC0E	AC		C	Connector (5pin)
2	QCNCW6883RC1D	AD		C	Connector (14pin)
3	QCNCM6890RC0B	AA		B	Connector (2pin)
4	QCNCM6894RC0E	AC	N	C	Connector (5pin)
5	QCNCM6894RC0H	AD		C	Connector (8pin)
6	QCNCM6894RC1J	AD		C	Connector (10pin)
7	QCNCM6906RC0H	AD	N	C	Connector
8	QCNW-6994RCZZ	AN	N	C	Lead wire (Key ← I/F PWB)
9	QCNW-6996RCZZ	AS	N	C	Lead wire (Key I/F ← CPU)
10	RMPTC8473QCKB	AC		B	Block resistor (47KΩ × 8 1/8W ±10%)
11	VCEAGU1CW106M	AA		C	Capacitor (16WV 10μF)
12	VCKYPU1HB221K	AB		C	Capacitor (50WV 220pF)
13	VCTYPU1NX104M	AB		C	Capacitor (12WV 0.10μF)
14	VHDDS1588L2-1	AB		B	Diode (DS1588L2)
15	VHITC4081BP-1	AE		B	IC (TC4081BP)
16	VRD-ST2EY473J	AA		C	Resistor (1/4W 47KΩ ±5%)
	(Unit)				
901	CPWBF7036RC01	BS	N	E	Key I/F unit

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PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK	
[C]					
CCABB6903RCZZ	1- 1	BK	N	D	
CPWBF6871RC05	2- 20	BG		E	
//	12- 901	BG		E	
CPWBF6892RC01	2- 1	BY		E	
//	13- 901	BY		E	
CPWBF6893RC01	2- 41	BS		E	
//	11- 901	BS		E	
CPWBF7036RC01	4- 26	BS	N	E	
//	17- 901	BS	N	E	
CPWBN6874RC01	3- 1	BT		E	
//	15- 901	BT		E	
CPWBN6904RC02	3- 2	BY		E	
//	16- 901	BY		E	
CPWBS6987RC04	3- 3	CM	N	E	
//	10- 901	CM	N	E	
[D]					
DUNTK8167RCZZ	4- 901	BR	N	E	
DUNTM7545RCZZ	3- 32	AR		E	
[G]					
GBOXD6802RCZZ	5- 901	BU		E	
GBOXD6803RCZZ	5- 901	BU		E	
GCABA6834RCZZ	2- 38	BE		D	
//	3- 31	BE		D	
GCABM6807RCZZ	5- 1	BF	N	D	
GCASP6643RCN1	5- 41	AW		C	
GCASP6651RCZZ	3- 10	AE		C	
GCOVA6804RCZZ	1- 13	AV		D	
GCOVA6805RCZZ	3- 24	AH		C	
GCOVD6784RCZZ	6- 1	AR		D	
GCOVD6806RCZZ	1- 7	AK		D	
GCOVH6863RCZZ	1- 24	BM	N	C	
GDAI-6629RCZZ	1- 12	AC		C	
GDAI-6652RCZZ	2- 18	AF		C	
GDAI-6655RCZZ	2- 29	AG		C	
GFTAR6682RCZZ	1- 2	AP		D	
GFTAT6681RCZZ	1- 6	AG		D	
GITAR6694RCZZ	1- 15	AS		D	
GITAR6698RCZZ	2- 19	AD		C	
GITAU6656RCZZ	5- 29	AU		D	
GTOP-6626RCZZ	5- 47	AN		C	
[H]					
HBDGD6664RCZZ	1- 11	AG		D	
HBDGD6814RCZZ	1- 10	AC	N	C	
HDECE6729RCZZ	1- 9	AH		C	
HPNLC6728RCZZ	1- 22	AS		C	
[K]					
KI-OB6674RC01	2- 15	CC		E	
[L]					
LANGH7218RCZZ	1- 21	AE		C	
//	4- 15	AE		C	
LANGK7127RCZZ	2- 14	AE		C	
LANGK7134RCZZ	2- 5	AG		C	
LANGK7135RCZZ	2- 6	AG		C	
LANGK7137RCZZ	2- 4	AD		C	
LANGK7162RCZZ	2- 16	AD		C	
LANGK7163RCZZ	2- 3	AE		C	
LANGK7164RCZZ	3- 22	AL		C	
LANGK7232RCZZ	3- 19	AQ	N	C	
LANGT6634RCZZ	1- 16	AC		C	
LBNDJ0004UCZZ	2- 11	AA		C	
//	4- 31	AA		C	
//	11- 1	AA		C	
//	13- 1	AA		C	
LBRC-6638RCZZ	5- 44	AQ		C	
LBRC-6639RCZZ	5- 46	AH		C	
LBSHC0006RCZZ	2- 8	AE		C	
LBSHZ2029SCZZ	4- 34	AB		C	
LHLDW2334RCZZ	2- 42	AC		C	
LKIGM6784RCZZ	1- 18	AD		B	
LKIGM6858RCN1	4- 9	AE		B	
LKIGM6859RCN1	4- 9	AE		B	
LKIGM6860RCN1	4- 9	AE		B	
LKIGM6861RCZZ	6- 18	AG		B	
LKIGW6783RCZZ	1- 19	AM		B	
LKIGW6852RCZZ	4- 6	AW		B	
LKIGW7101RCZZ	4- 8	AV	N	B	
LKIGM6853RCZZ	4- 7	AG		B	
LKIGM6854RCZZ	4- 7	AG		B	
LKIGM6855RCZZ	4- 7	AG		B	

PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK	
LKIGM6856RCZZ	4- 7	AG		B	
LKIGM6857RCZZ	4- 7	AG		B	
LKIGM6864RCZZ	4- 7	AG		B	
LKIGM6869RCZZ	4- 7	AG		B	
LKIGM6870RCZZ	4- 7	AG		B	
LKIGM6871RCZZ	4- 7	AG		B	
LKIGM6872RCZZ	4- 7	AG		B	
LKIGM6873RCZZ	4- 7	AG		B	
LKIGM6874RCZZ	4- 7	AG		B	
LKIGM6875RCZZ	4- 7	AG		B	
LKIGM6876RCZZ	4- 7	AG		B	
LKIGM6877RCZZ	4- 7	AG		B	
LPINS6633RCZZ	5- 48	AB		C	
LPLTZ6634RCZZ	1- 23	AC		C	
LX-BZ1007CCZZ	2- 32	AB		C	
[M]					
MLEV-6644RCZZ	5- 36	AE		C	
MLEV-6645RCZZ	5- 37	AG		C	
MLOKS6629RCZZ	5- 11	BA		B	
MSPRC6672RCZZ	3- 25	AC		C	
MSPRK6660RCZZ	1- 20	AC		C	
MSPRT2316RCZZ	3- 26	AD		C	
[N]					
NSFTZ6639RCZZ	3- 23	AD		C	
[P]					
PCUS-4101CCZZ	2- 33	AB		C	
PCUT-6631RCZZ	1- 17	AC		D	
PFILW6718RCZZ	1- 4	AG		D	
PFILW6726RCZZ	1- 8	AV		C	
PFILW6727RCZZ	1- 14	AD		D	
PMAGZ6630RCZZ	1- 25	AD		C	
PRBN-2314RCZZ	6- 2	**		S	
PRDAF2317RCZZ	2- 51	AG		C	
//	11- 2	AG		C	
PRDAF6630RCZZ	2- 50	AB		C	
//	11- 3	AB		C	
PRDAF6636RCZZ	2- 52	AG		C	
//	11- 4	AG		C	
PSHEK6679RCZZ	6- 19	AM		C	
PSHEK6685RCZZ	6- 20	AT	N	C	
PSHEP6656RCZZ	2- 36	AF		C	
PSTM-6267RCZZ	6- 3	AV		D	
[Q]					
QACCD8411QCZZ	6- 4	AN		B	
QCNC-6786RC3J	10- 7	AQ		C	
//	15- 2	AQ		C	
//	16- 1	AQ		C	
QCNCM1244CC1H	10- 10	AH		C	
QCNCM2334RC0E	10- 1	AC		C	
QCNCM6699RCZZ	10- 2	AC		B	
QCNCM6766RC0C	10- 3	AF		B	
QCNCM6769RC2D	15- 1	AH		C	
QCNCM6775RC0B	10- 5	AB		B	
QCNCM6780RC2F	10- 6	AH		C	
QCNCM6794RC0B	15- 3	AC		B	
//	16- 2	AC		B	
QCNCM6802RC0B	10- 8	AC		B	
QCNCM6823RC1C	10- 9	AE		C	
QCNCM6828RC0D	10- 11	AB		C	
QCNCM6832RC0G	10- 12	AD		C	
QCNCM6837RC0B	2- 25	AB		B	
//	11- 5	AB		B	
QCNCM6851RC0C	10- 14	AC		B	
QCNCM6852RC0D	13- 2	AB		C	
QCNCM6852RC1B	13- 3	AE		C	
QCNCM6853RC1C	13- 4	AE		C	
QCNCM6890RC0B	17- 3	AA		B	
QCNCM6894RC0E	17- 4	AC	N	C	
QCNCM6894RC0H	17- 5	AD		C	
QCNCM6894RC1J	17- 6	AD		C	
QCNCM6906RC0H	17- 7	AD	N	C	
QCNCW6645RC04	5- 2	AK		B	
QCNCW6766RC0B	10- 4	AF		B	
QCNCW6774RC09	3- 28	AL		B	
QCNCW6816RC03	3- 29	AC		B	
QCNCW6835RC02	2- 37	AE		B	
//	12- 1	AE		B	
QCNCW6836RC2J	10- 13	AE		C	
QCNCW6854RC3A	10- 15	AH		C	
QCNCW6882RC0E	17- 1	AC		C	

PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK	
QCNCW6883RC1D	17- 2	AD		C	
QCNCW-6779RCZZ	2- 24	AB		C	
//	11- 6	AB		C	
QCNCW-6787RCZZ	3- 14	AE		C	
QCNCW-6790RCZZ	3- 15	AB		C	
QCNCW-6815RCZZ	3- 13	AZ		C	
//	14- 1	AZ		C	
QCNCW-6816RCZZ	3- 18	AE		B	
QCNCW-6817RCZZ	2- 17	AD		C	
QCNCW-6818RCZZ	2- 30	AE		C	
QCNCW-6820RCZZ	2- 28	AB		C	
QCNCW-6824RCZZ	13- 5	AK		C	
QCNCW-6825RCZZ	2- 26	AK		C	
//	11- 7	AK		C	
QCNCW-6836RCZZ	11- 8	AG		C	
QCNCW-6837RCZZ	3- 20	AD		C	
QCNCW-6838RCZZ	2- 35	AE		C	
QCNCW-6845RCZZ	10- 16	AC		C	
QCNCW-6846RCZZ	10- 17	AA		C	
QCNCW-6866RCZZ	10- 18	AC		C	
QCNCW-6958RCZZ	4- 11	AD		C	
QCNCW-6959RCZZ	4- 10	AF		C	
QCNCW-6993RCZZ	4- 25	AF	N	C	
QCNCW-6994RCZZ	17- 8	AN	N	C	
QCNCW-6995RCZZ	4- 20	AC	N	C	
QCNCW-6996RCZZ	17- 9	AS	N	C	
QCNCW-6999RCZZ	2- 34	AC	N	C	
QCNCW-7000RCZZ	2- 12	AD		C	
//	4- 33	AD	N	C	
QFS-A0016HCZZ	2- 44	AC		A	
//	11- 9	AC		A	
QFS-A0038HCZZ	2- 45	AD		A	
//	11- 10	AD		A	
QFS-A1024CCZZ	10- 19	AC		A	
QFS-B1002CCZZ	2- 23	AE		A	
//	12- 2	AE		A	
QFSHA1002CCZZ	2- 46	AB		C	
//	10- 20	AB		C	
//	11- 11	AB		C	
QFSHB1003CCZZ	2- 22	AB		C	
//	12- 3	AB		C	
QLUGE0002WCZZ	11- 12	VAB		C	
QPWBF6871RCZZ	12- 8	AG		C	
QPWBF6889RCZZ	3- 17	AA		C	
QPWBF7002RCZZ	4- 24	CAE		C	
QSOCZ6424ACZZ	10- 21	AE		C	
//	16- 3	AE		C	
QSOCZ6428ACZZ	16- 4	AE		C	
QSW-S6708RCZZ	4- 22	AH		B	
(R)					
RC-EZL688RCHL	11- 13	AR		C	
RC-EZ0099FCZZ	11- 14	AF		C	
RC-EZ1042CCZZ	11- 15	AD		C	
RC-FZJ337RCZZ	11- 16	AD		C	
RC-FZ6030RCZZ	12- 4	AH		C	
RC-FZ6626RCZZ	11- 17	AE		C	
RC-KZ1018CCZZ	10- 22	DAE		C	
RCILC6575RCZZ	12- 5	AN		C	
RCILC6632RCZZ	11- 18	BAQ		C	
RCILC6633RCZZ	11- 19	BAL		C	
RCORF6629RCZZ	2- 10	BAQ		C	
RCSRSP1003CCZZ	10- 23	BAT		B	
RCSRSP6631RCZZ	10- 24	DAE		B	
RCSRSP6633RCZZ	10- 25	DAE		B	
RMPTC6333QCKB	10- 26	AC		B	
RMPTC7102QCKB	10- 27	AC		B	
RMPTC7223QCKB	10- 28	AC		B	
RMPTC8103QCKB	10- 29	AD		B	
RMPTC8104QCKB	13- 6	AD		B	
RMPTC8223QCKB	10- 30	AD		B	
RMPTC8473QCKB	17- 10	AC		B	
RMPTC9104QCKB	13- 7	AD		B	
RMPTC9473QCKB	13- 8	AD		B	
RMPTC9562QCKB	13- 9	AD		B	
RR-CZ6633RCZZ	16- 5	AD		C	
RTRNH6720RCZZ	11- 20	AR		B	
RTRNP6716RCZZ	2- 21	BA		B	
//	12- 6	BA		B	
(S)					
SPAKA7056RCZZ	6- 5	AN		D	

PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK	
SPAKA7057RCZZ	6- 6	AN		D	
SPAKC7510RCZZ	6- 7	AU	N	D	
SSAKA0001SCZZ	6- 8	AA		D	
SSAKA0005WCZZ	6- 9	AA		D	
SSAKA2012KCZZ	6- 10	AF		D	
SSAKA5004CCZZ	6- 12	AA		D	
SSAKH3015CCZZ	6- 11	AA		D	
(T)					
TCADH6653RCZZ	6- 13	AB		D	
TCADH6654RCZZ	6- 13	AB		D	
TCADH6704RCZZ	6- 17	AE		D	
TCAUS1003RCZZ	3- 7	AC		D	
TCAUS6650RCZZ	3- 6	AB		D	
TINSE6998RCZZ	6- 14	AY	N	D	
TINSK6999RCZZ	6- 14	BQ	N	D	
(U)					
UBATN6627RCZZ	3- 11	AV		B	
UBND1008CCZZ	6- 16	AA		C	
UINK-1001CCZZ	6- 15	AK		S	
(V)					
VCCCPU1HH101J	10- 32	AB		C	
VCCCPU1HH220J	10- 33	AA		C	
VCCCPU1HH390J	10- 31	AA		C	
VCEAAU1AW226Q	13- 10	AB		C	
VCEAAU1CW106Q	10- 34	AB		C	
//	13- 11	AB		C	
//	15- 4	AB		C	
//	16- 6	AB		C	
VCEAAU1HW105Q	10- 35	AB		C	
//	11- 21	AB		C	
VCEAAU1HW106Q	13- 12	AC		C	
VCEAAU1HW225Q	10- 36	AB		C	
VCEAAU1HW226Q	11- 22	AC		C	
VCEAAU1VW107Q	10- 37	AC		C	
VCEAAU2AW226Q	11- 23	AC		C	
VCEAAU2AW335Q	11- 24	AB		C	
VCEAGU1CW106M	17- 11	AA		C	
VCKYPU1HB101K	10- 38	AA		C	
//	11- 25	AA		C	
VCKYPU1HB102K	10- 39	AA		C	
//	11- 26	AA		C	
VCKYPU1HB103K	10- 40	AA		C	
VCKYPU1HB221K	17- 12	AB		C	
VCKYPU1HB222K	10- 41	AA		C	
VCKYPU1HB331K	10- 42	AA		C	
//	13- 13	AA		C	
VCKYPU1HB471K	10- 43	AA		C	
VQYKU1HM103K	10- 44	AB		C	
VQYKU1HM104K	10- 48	AB		C	
VQYKU1HM152K	11- 27	AA		C	
VQYKU1HM222K	10- 45	AA		C	
VQYKU1HM332K	10- 46	AA		C	
VQYKU1HM333K	10- 47	AB		C	
VQYKU1HM683K	10- 49	AB		C	
//	11- 28	AB		C	
VCSATU1AE226M	10- 50	AD		C	
VCSATU1CE475M	10- 51	AD		C	
VCTYPU1NX104M	10- 52	AB		C	
//	13- 14	AB		C	
//	15- 5	AB		C	
//	16- 7	AB		C	
//	17- 13	AB		C	
VHDBB1////-10	11- 29	AD		B	
VHDBB2////-10	11- 30	AE		B	
VHDDS1588L2-10	10- 53	AB		B	
//	11- 31	AB		B	
//	17- 14	AB		B	
VHDS4VB10/-1	11- 32	AL		B	
VHD10D1////-1	10- 54	AD		B	
VHEHZ6C1////-1	11- 33	AB		B	
VHEHZ9C1////-1	13- 15	AB		B	
VHERD30EB5/-1	10- 55	AC		B	
VHERD62E4/-1	11- 34	AD		B	
VH1HD14503B-1	10- 56	AH		B	
VH1Li2047/-1	13- 16	BB		B	
VH1M5L8041114	10- 57	AT		B	
VH1M5T4044S30	10- 58	AS		B	
VH1M54532P/-1	10- 59	AU		B	
VH1NJM2903N-1	10- 60	AH		B	
//	11- 35	AH		B	

PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK	
VHISI8053B/-1	2- 49	AQ		B	
"	11- 36	AQ		B	
VHISI8243B/-1	2- 48	AQ		B	
"	11- 37	AQ		B	
VHISN74LS00-1	10- 61	AE		B	
"	15- 6	AE		B	
VHISN74LS02-1	16- 8	AE		B	
VHISN74LS04-1	10- 62	AE		B	
VHISN74LS05-1	10- 63	AE		B	
VHISN74LS08-1	10- 64	AE		B	
VHISN74LS09-1	10- 65	AE		B	
VHISN74LS122N	10- 66	AH		B	
VHISN74LS125N	15- 7	AK		B	
VHISN74LS137N	16- 9	AN		B	
VHISN74LS138N	10- 67	AG		B	
VHISN74LS139N	16- 10	AL		B	
VHISN74LS157N	10- 68	AK		B	
VHISN74LS173N	13- 17	AL		B	
VHISN74LS244N	10- 69	AS		B	
"	16- 11	AS		B	
VHISN74LS245N	10- 70	AR		B	
VHISN74LS32-1	10- 71	AF		B	
"	15- 8	AF		B	
VHISN74LS33-1	10- 72	AE		B	
VHISN74LS365N	15- 9	AH		B	
VHISN74154N-1	13- 18	AR		B	
VHITC40H002P1	10- 73	AF		B	
VHITC40H004PN	10- 74	AF		B	
VHITC4011BP-1	10- 75	AF		B	
VHITC4081BP-1	17- 15	AE		B	
VHITD62703/-1	13- 19	AN		B	
VHITM24645080	10- 76	AZ		B	
VHIUPD1990ACC	10- 77	AT		B	
VHIUPD449D/-1	10- 78	BH		B	
"	15- 10	BH		B	
VHIUPD8041045	10- 79	AY		B	
VHIUPD8243/-1	13- 20	AP		B	
VHI2764/R331A	10- 80	BE		B	
VHI2764/R332A	10- 80	BE			
VHI2764/R333A	10- 80	BE			
VHI7801G096-1	10- 81	BH		B	
VHPGL5PG24/-1	4- 23	AB		B	
VHPGP411///-1	3- 16	AM		B	
VRD-ST2EY000J	10- 82	AA		C	
VRD-ST2EY100J	11- 38	AA		C	
VRD-ST2EY101J	10- 83	AA		C	
"	11- 39	AA		C	
VRD-ST2EY102G	11- 40	AA		C	
VRD-ST2EY102J	10- 84	AA		C	
VRD-ST2EY103J	10- 85	AA		C	
"	11- 41	AA		C	
"	13- 21	AA		C	
VRD-ST2EY104J	10- 86	AA		C	
"	11- 42	AA		C	
VRD-ST2EY105J	10- 87	AA		C	
VRD-ST2EY121J	14- 2	AA		C	
VRD-ST2EY122J	11- 43	AA		C	
VRD-ST2EY123G	11- 44	AA		C	
VRD-ST2EY123J	10- 88	AA		C	
"	13- 22	AA		C	
VRD-ST2EY151J	10- 89	AA		C	
VRD-ST2EY153G	11- 45	AA		C	
VRD-ST2EY153J	11- 46	AA		C	
"	13- 23	AA		C	
VRD-ST2EY183J	10- 90	AA		C	
VRD-ST2EY221J	10- 91	AA		C	
"	15- 11	AA		C	
"	16- 12	AA		C	
VRD-ST2EY222J	10- 92	AA		C	
"	13- 24	AA		C	
VRD-ST2EY223J	10- 93	AA		C	
VRD-ST2EY272J	10- 94	AA		C	
"	11- 47	AA		C	
VRD-ST2EY273J	11- 48	AA		C	
"	13- 25	AA		C	
VRD-ST2EY274J	11- 49	AA		C	
VRD-ST2EY3R3J	13- 26	AA		C	
VRD-ST2EY303G	10- 95	AA		C	
VRD-ST2EY332J	10- 96	AA		C	
VRD-ST2EY333J	10- 97	AA		C	

PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK	
VRD-ST2EY334G	10- 98	AA		C	
VRD-ST2EY392J	10- 99	AA		C	
"	13- 27	AA		C	
VRD-ST2EY394G	10- 100	AA		C	
VRD-ST2EY471J	10- 101	AA		C	
VRD-ST2EY472J	10- 102	AA		C	
"	11- 50	AA		C	
VRD-ST2EY473J	10- 103	AA		C	
"	13- 28	AA		C	
"	17- 16	AA		C	
VRD-ST2EY474J	10- 104	AA		C	
VRD-ST2EY561J	10- 105	AA		C	
VRD-ST2EY562J	10- 106	AA		C	
"	11- 51	AA		C	
"	16- 13	AA		C	
VRD-ST2EY563J	10- 107	AA		C	
"	11- 52	AA		C	
VRD-ST2EY682J	10- 108	AA		C	
VRD-ST2EY821G	11- 53	AA		C	
VRD-ST2HY220J	10- 109	AB		C	
VRD-ST2HY394J	12- 7	AB		C	
VRD-SU2EY181J	10- 110	AA		C	
VRD-SU2EY273J	10- 111	AA		C	
VRD-SU2EY393J	10- 112	AA		C	
VRD-SU2EY560J	10- 113	AA		C	
VRD-SU2EY821J	10- 114	AA		C	
VRS-PT3AB181K	10- 115	AB		C	
VRS-PT3AB272K	11- 54	AA		C	
"	13- 29	AA		C	
VRS-PT3AB392K	11- 55	AB		C	
VRW-PT3LW1R0K	11- 56	AD		C	
VRW-PT3MWR47K	11- 57	AG		C	
VSJA101-///-1	10- 116	AB		B	
VSJC501-///-1	10- 117	AB		B	
VSP0080PB508N	3- 9	AN		B	
VS2SA673-C/-1	10- 118	AE		B	
VS2SA675-/-1	13- 30	AD		B	
VS2SA733-R/-1	11- 58	AE		B	
VS2SB881-///-1	10- 119	AH		B	
VS2SC1472K/-1	10- 120	AE		B	
VS2SC2334-/-1	2- 47	AL		B	
"	11- 59	AL		B	
VS2SC641KC/-1	11- 60	AE		B	
VS2SC945-P/QC	11- 61	AC		B	
"	13- 31	AC		B	
VS2SD1191-/-1	10- 121	AH		B	
VS2SD1309-/-1	10- 122	AG		B	
VS2SD667-///-1	11- 62	AD		B	
VS2SD985-///-1	10- 123	AF		B	
VVDDC1612C2-1	13- 32	BN		B	
{X}					
XBBSC30P06000	1- 5	AA		C	
XBBSC30P10000	1- 28	AA		C	
XBPBZ40P06K00	2- 9	AA		C	
XBPSD20P04000	4- 2	AA		C	
XBPSD20P08KS0	3- 33	AA		C	
XBPSD30P06KS0	2- 2	AA		C	
"	3- 21	AA		C	
XBPSD30P06K00	3- 4	AA		C	
"	4- 32	AA		C	
XBPSD30P06000	4- 21	AA		C	
XBPSD30P08KS0	2- 13	AA		C	
"	3- 12	AA		C	
XBPSD30P08K00	2- 53	AA		C	
"	10- 124	AA		C	
"	11- 63	AA		C	
XBPSD30P10K00	2- 54	AA		C	
"	11- 64	AA		C	
XBPSD40P08KS0	2- 31	AA		C	
XBPSD40P10KS0	2- 39	AA		C	
XNESD30-24000	1- 27	AA		C	
"	2- 27	AA		C	
"	2- 40	AA		C	
"	3- 30	AA		C	
"	10- 125	AA		C	
"	11- 65	AA		C	
XRESJ15-04000	3- 27	AA		C	
XUPSD26P06000	4- 3	AA		C	
XUPSD30P06000	4- 5	AA		C	
"	4- 18	AA		C	

SHARP

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