

SERVICE MANUAL & PARTS LIST (without price)

LABEL PRINTER KL-760RS (ZX-205A)

MAY 1999



KL-760RS

CASIO®

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1. SPECIFICATIONS

Input

Keyboard Layout: Typewriter (QWERTY)

Character Types

Alpha (Russian & Others): 151

Numbers: 10

Symbols: 63

Display

Type: Liquid crystal display

Columns: 4

Character matrix: 5×7 dot

Printing

Type: Thermal transfer

Speed: Approximately 6.67 mm/second

Width: 4 mm (6 mm tape) or 8 mm (other tape - 9, 12 or 18mm)

Character matrix: 24×24 -dot

Character fonts: Sans-serif

Character effects: Shade, underline, box

Character sizes: 1×1 , 1×2 , 1×3 , 2×1 , 2×2 , 2×3

Number of lines: 1 (6 mm tape); 1 or 2 (other tapes)

Memory

Text: Up to approximately 126 characters (total storage for AREA 1 and AREA 2)

General

Power supply: Eight AA-size batteries or optional AD-A95100 AC adaptor

Battery life: Approximately 1 tape cartridge (continuous printing)

Power consumption: 9 W

Auto power off: Approximately six minutes after last key operation

Dimensions: $44.6 \text{ (H)} \times 174 \text{ (W)} \times 212 \text{ (D)} \text{ mm}$
($1 \frac{3}{4}'' \text{ H} \times 6 \frac{7}{8}'' \text{ W} \times 8 \frac{3}{8}'' \text{ D}$)

Weight: 452 g (1 lb)

Ambient temperature: $10^\circ\text{C} \sim 35^\circ\text{C}$

Threshold of voltage detection

Low battery: $V_{\text{bat+}} = 6.2 \sim 6.25 \text{ V}$

Forced power off: $V_{\text{bat+}} = 4.50 \text{ V}$

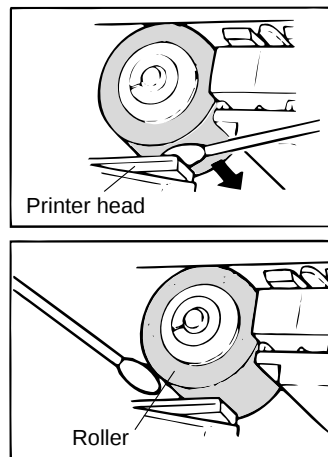
Note: $V_{\text{bat+}}$ is the voltage of **BT+** pad in Main PCB. Refer to page 3 in this manual.

2. CLEANING THE PRINTER HEAD AND ROLLER

A dirty printer head and roller can result in poor printing quality. If you have problems with print quality, use the following procedure to clean the printer head and roller.

To clean the printer head and roller

1. Make sure the Label Printer is turned off.
2. Press the tape cartridge compartment cover release and open the compartment cover.
3. Remove the tape cartridge.
4. Use a cotton swab dipped in alcohol to clean the printer head and roller as shown in the illustration.



5. Replace the tape cartridge and close the compartment cover.

3. RESET OPERATION

1. Make sure that Label Printer power is off.
2. While holding down ПЕЧАТЬ and ФУНК-БЫХ keys, press ВКЛ key to power on.
3. Keeping ПЕЧАТЬ and ФУНК-БЫХ keys held down, release ВКЛ key only.
4. Press ВВОД to initialize the Label Printer or ФУНК-БЫХ to abort the reset operation without initializing anything.



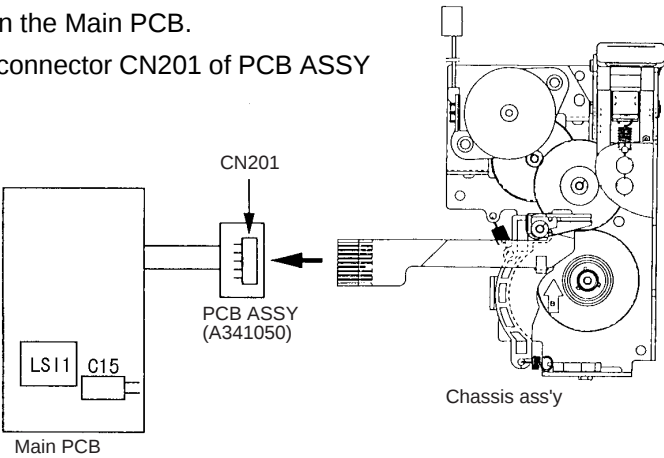
- **Information on the initial default settings of the Label Printer following the reset operation**

Item	Power On
SIZE	2X2
EFFECT	CANCEL
MIRROR	OFF
M-FEED	NO
6mm	OFF

4. PRECAUTIONS

To prevent damage of the thermal head caused by static electricity when assembling the chassis ass'y into the unit, the following steps must be followed;

1. Turn the power switch off.
2. Discharge the capacitor C15 (2200 μ F) on the Main PCB.
3. Connect the FPC of chassis ass'y into a connector CN201 of PCB ASSY (A341050).
4. Assemble the chassis ass'y.
5. Turn the power switch on.

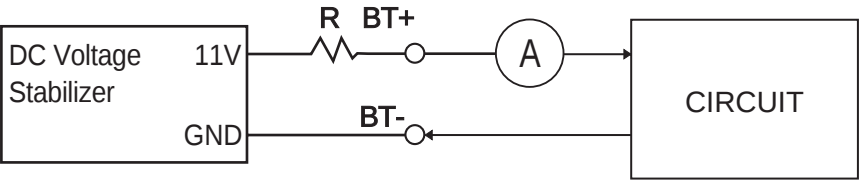


5. MEASUREMENT

Voltage input terminals: BT $\pm$ (Battery terminals)

Input voltage: 11.0V $\pm$ 2%

■ The following resistor **R** (1 Ω / 2W) is necessary for these measurements.



Current:

Condition	Current value	
	Typical	Maximum
After turning power on	11mA	20mA
At the time of printing with PR2 of Diagnostic Program	600mA	700mA
After turning power off	60 A	80 A

Interior Voltage (Refer to SCHEMATIC DIAGRAM):

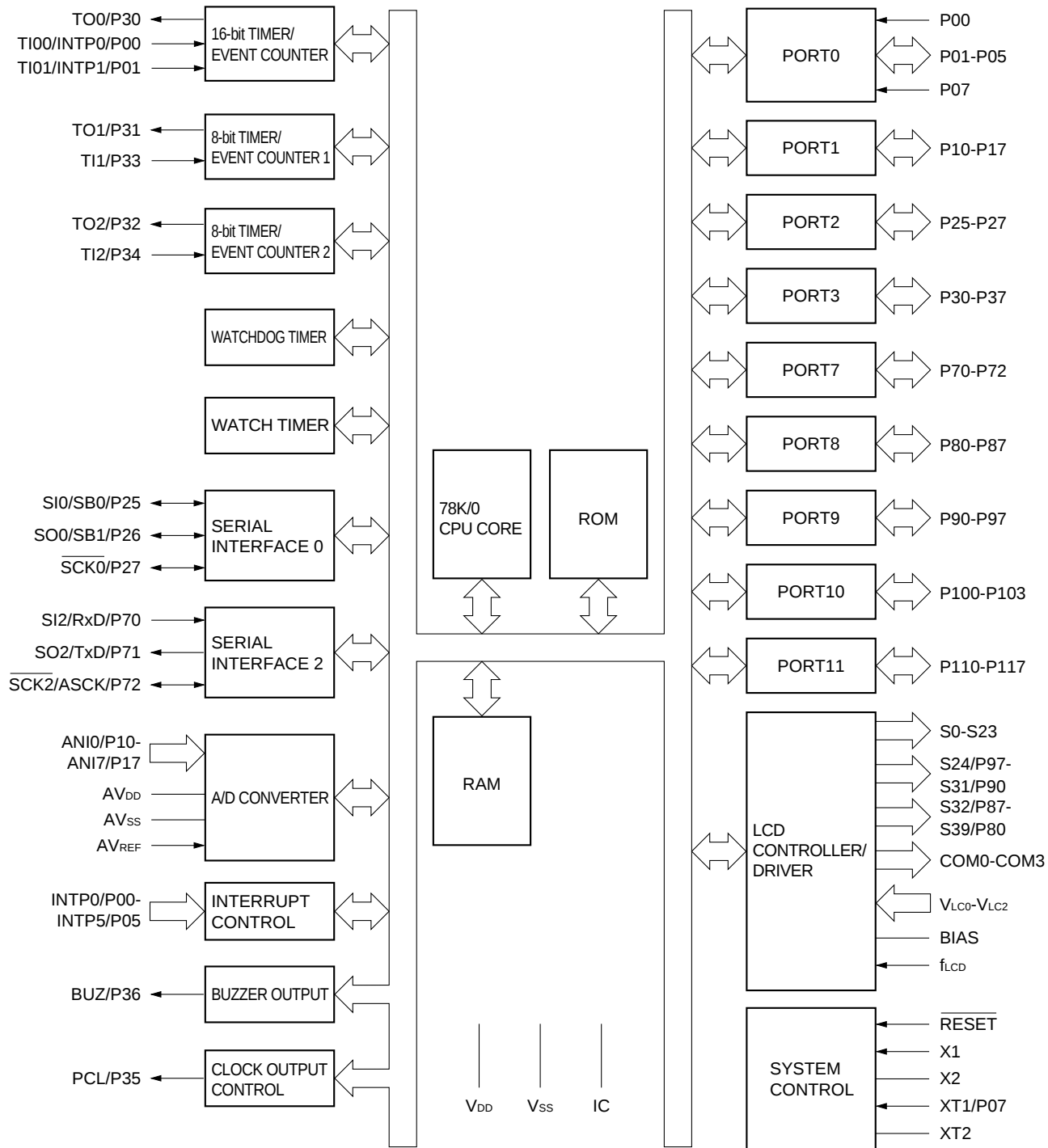
Condition	Voltage
ICC=30mA	VCC=4.875~5.125V
IP=300mA	VP=10.78~11.22V

6. LSI PIN FUNCTION

CPU + ROM + RAM (UPD78064GC): LSI1

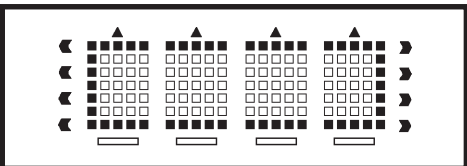
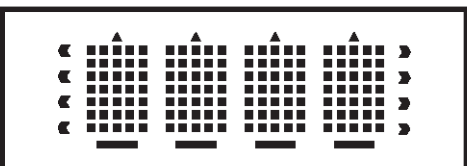
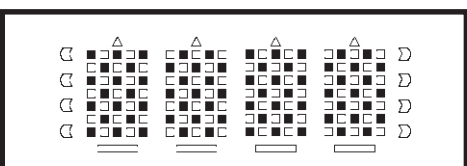
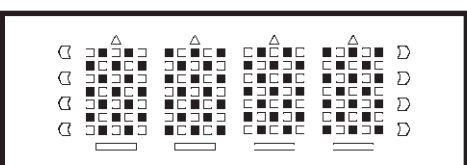
Pin No.	Name	I/O	Function
1	ANT1	O	Timing signal detecting low battery voltage
2~5	P12~P15	I/O	I/O port(not use)
6~7	P16~P17	I	Setting for thermal head rank
8	AVDD	I	Analog power supply for A/D converter of LSI1
9	AVREF	I	Analog reference voltage for A/D converter of LSI1
10	P100	O	Control signal for analog reference voltage
11	P101	I/O	I/O port(not use)
12	VSS	—	Digital ground for LSI1
13~14	P102~P103	I/O	I/O port(not use)
15~21	P30~P36	O	Key common signals(KO0~KO6)
22	P37	I/O	I/O port(not use)
23~26	COM0~COM3	O	Common signals for LCD
27	BIAS	—	LCD power supply bias control
28	VLCD0	I	LCD power supply
29	VLCD1	I	LCD power supply
30	VLCD2	I	LCD power supply
31	VSS	—	Digital ground for LSI1
32~71	S0~S39	O	Segment signals for LCD
72	SI0	O	Latch signal for thermal head
73	SO0	O	Serial data signal for thermal head
74	SCK0	O	Clock pulse for thermal head
75	P70	O	Strobe signal for thermal head
76~77	P71~P72	I/O	I/O port(not use)
78	IC	—	Internally connected
79	X2	O	Main system clock
80	X1	I	Main system clock
81	VDD	I	Power supply for LSI1(VCC)
82	XT1/P07	I	Subsystem clock(not use)
83	XT2	O	Subsystem clock (not use)
84	RESET	I	System reset for LSI1
85	INTP0	I	Power off signal from power switch
86	INTP1	I	Voltage detecting signal for low power(VCC)
87~90	P02~P05	O	Motor drive signals
91~98	P110~P117	I	Key input signals
99	AVSS	—	Analog ground for A/D converter of LSI1
100	ANI0	I	Voltage detecting signal for low battery

7. BLOCK DIAGRAM (LSI1)



8. DIAGNOSTIC PROGRAM

Note: Make the reset operation after ROM check, because the ROM check break the data stored in RAM.

Check item	Operation	Display	Note
(BOOT)	Press В К Л key while pressing keys (Я + X + Ъ) at the same time.		Main menu
LCD CHECK	Press (v) key.		
	Press В В О Д key.		
	Press В В О Д key.		All dots
	Press В В О Д key.		Checker
	Press В В О Д key.		Reversed checker
	Press В В О Д key.		Main menu
KEY CHECK	Press (v) key twice.		

Check item	Operation	Display	Note
KEY CHECK	Press ВВОД key.		Refer to Figure-3 .
	Press 1 , 2 , 3 , ... keys in succession.		Press the keys according to what is appeared on the LCD.
	... ФУНК-ВЫХ + ПЕЧАТЬ, (↑), (↓), (→)		
	Press (←) key.		
	Press any key.		Main menu
HEAD RANK CHECK	Press (↓) key three times.		
	Press ВВОД key.	For example, 	Check the rank of the thermal head employed in the unit. (RANK = A ~ D) Refer to 17 page.
	Press any key.		Main menu

Check item	Operation	Display	Note
ROM CHECK	Press (v) key four times.	ROM	
	Press B B O Д key.	For example, E6E9	Sum check
	Press any key.	ALL	Main menu
PRINT CHECK-1	Press (v) key five times.	PRI1	
	Press B B O Д key.	PRNT	Refer to the following Figure-1
	No operation	ALL	Main menu
PRINT CHECK-2	Press (v) key six times.	PR2	
	Press B B O Д key.	PRNT	Refer to the following Figure-2

Check item	Operation	Display	Note
PRINT CHECK-2	No operation	ALL	Main menu

● PR-1 (Normal printing result)



Figure-1

● PR-2 (Normal printing result)



Figure-2

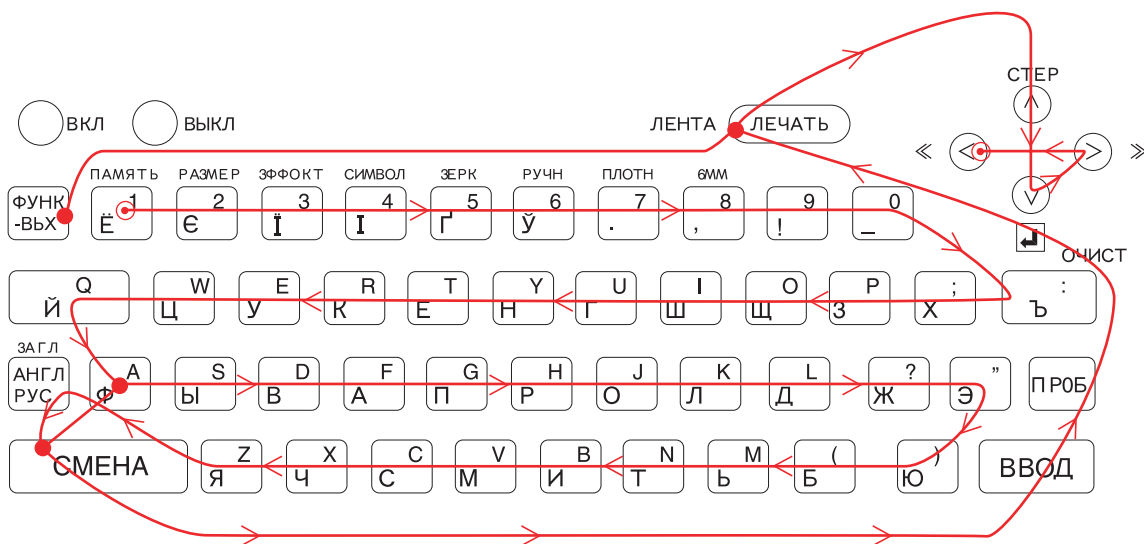


Figure-3

9. MESSAGES

Problem	Possible Cause	Action
ОШ! message on the display.	• Attempt to input two ↵ marks within the same text. • Attempt to input ↵ mark while 6 mm is specified as the tape width. • Label text containing a ↵ mark was input and then tape width specification was changed to 6 mm. (ОШ! message appears when you try to perform a print operation.) • Text that is longer than 5.5 cm when stamp printing is selected. • Attempt to print a stamp while 6 mm is specified for the tape width.	• Use only one ↵ mark. Only two lines of text can be input, so text can contain only one ↵ mark. • Do not use ↵ marks. 6 mm tape can have only one line of text, so text cannot contain any ↵ marks. • Delete the ↵ mark to print on 6 mm tape or switch back to a wider tape. • Shorten the text to be printed and try again. • Change the tape width setting to OFF and try printing the stamp again.
ПЛН! message on the display.	• Both text memory areas (AREA 1 and AREA 2) already contain text.	• Delete text from one of the text memory areas and then store the new text.
БАТ message on the display.	• Battery power is too low.	• Replace batteries.
ОШ! message on the display.	• Memory data has become corrupted for some reason.	• Initialize the Label Printer.

10. DISASSEMBLY PROCEDURE

1. Remove the tape cartridge.
(Refer to Figure-1)
2. Remove the cutter cartridge by pulling up it, while leaning the tiny lever to the cutter lever slightly.
(Refer to Figure-2)
3. Remove the battery cover (BC), then remove 7 screws (S1).
(Refer to Figure-3)
4. Re-solder 2 wires from Main PCB.
5. Take out the socket (SO1) from the connector (CN202) on PCB ASSY (A341050).
6. Remove 2 screws (S2) holding PCB ASSY (A341050).
7. Take out FPC from the connector (CN201).
8. Remove 3 screws (S4) holding the chassis ass'y.
9. Remove the chassis ass'y.
(Refer to Figure-3 and Figure-4)
10. Peel off the display plate (DP), then peel off LCD (LCD) carefully.
11. Remove 6 screws (S3) holding Main PCB.
12. Remove Main PCB.

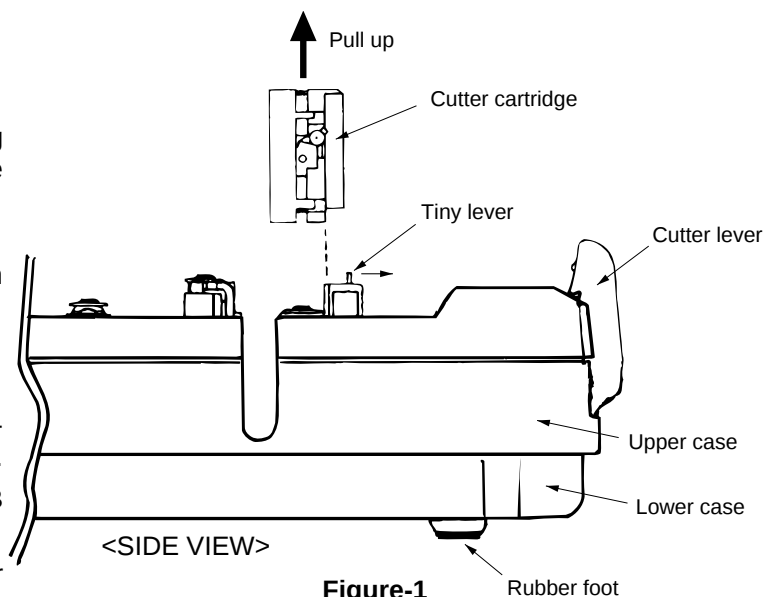


Figure-1

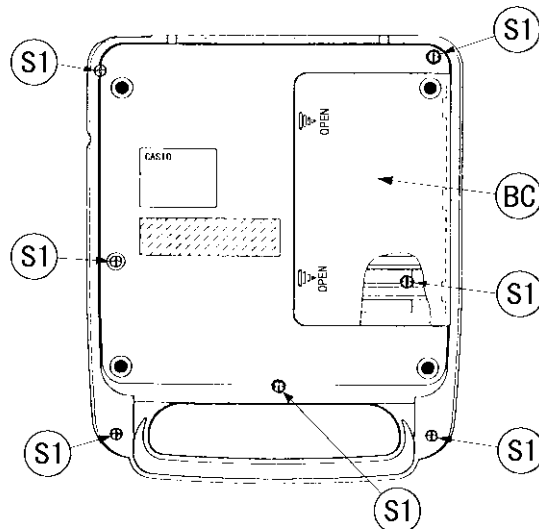


Figure-2

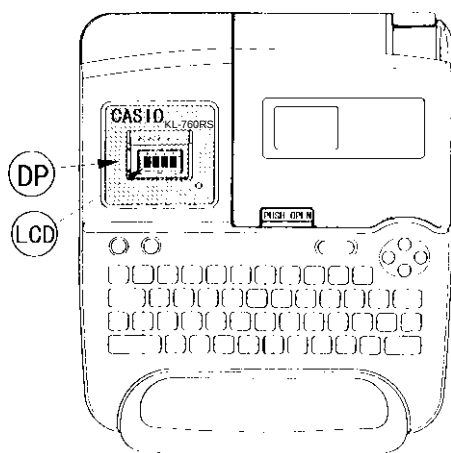


Figure-4

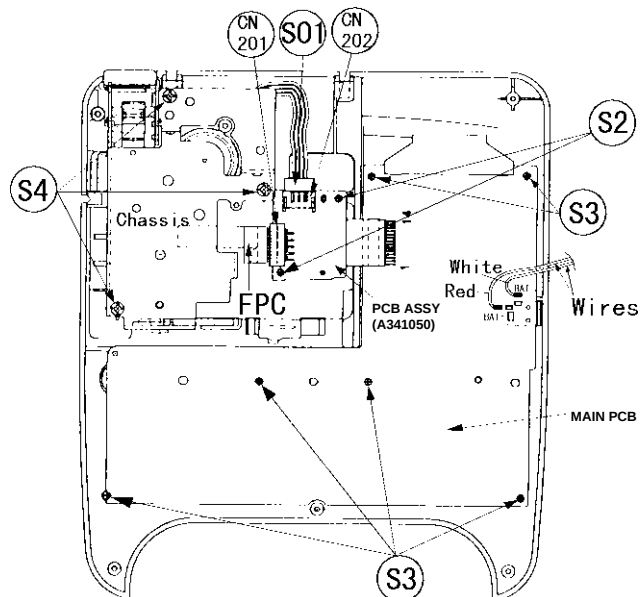
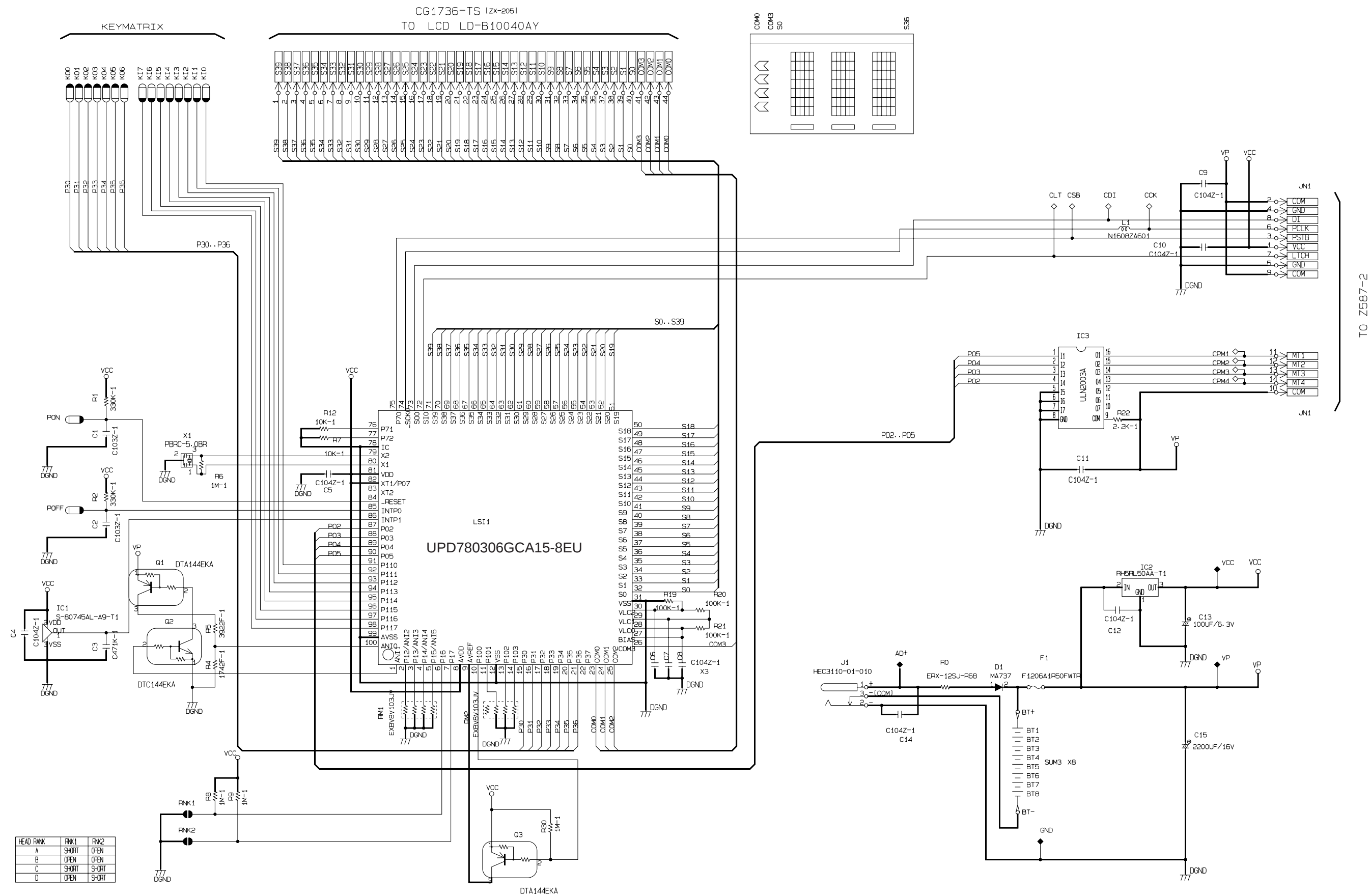


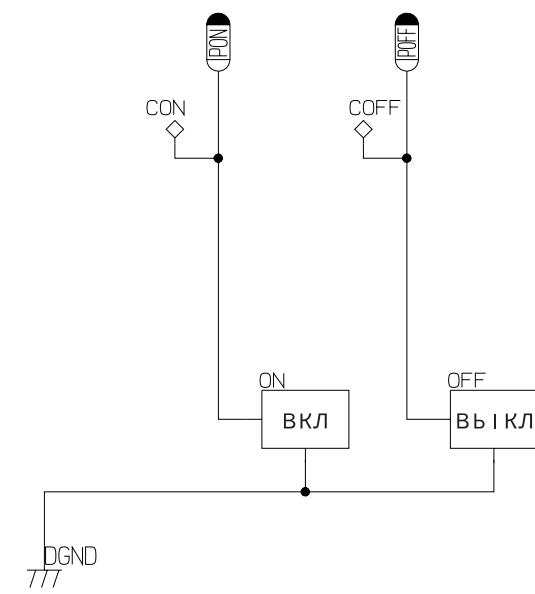
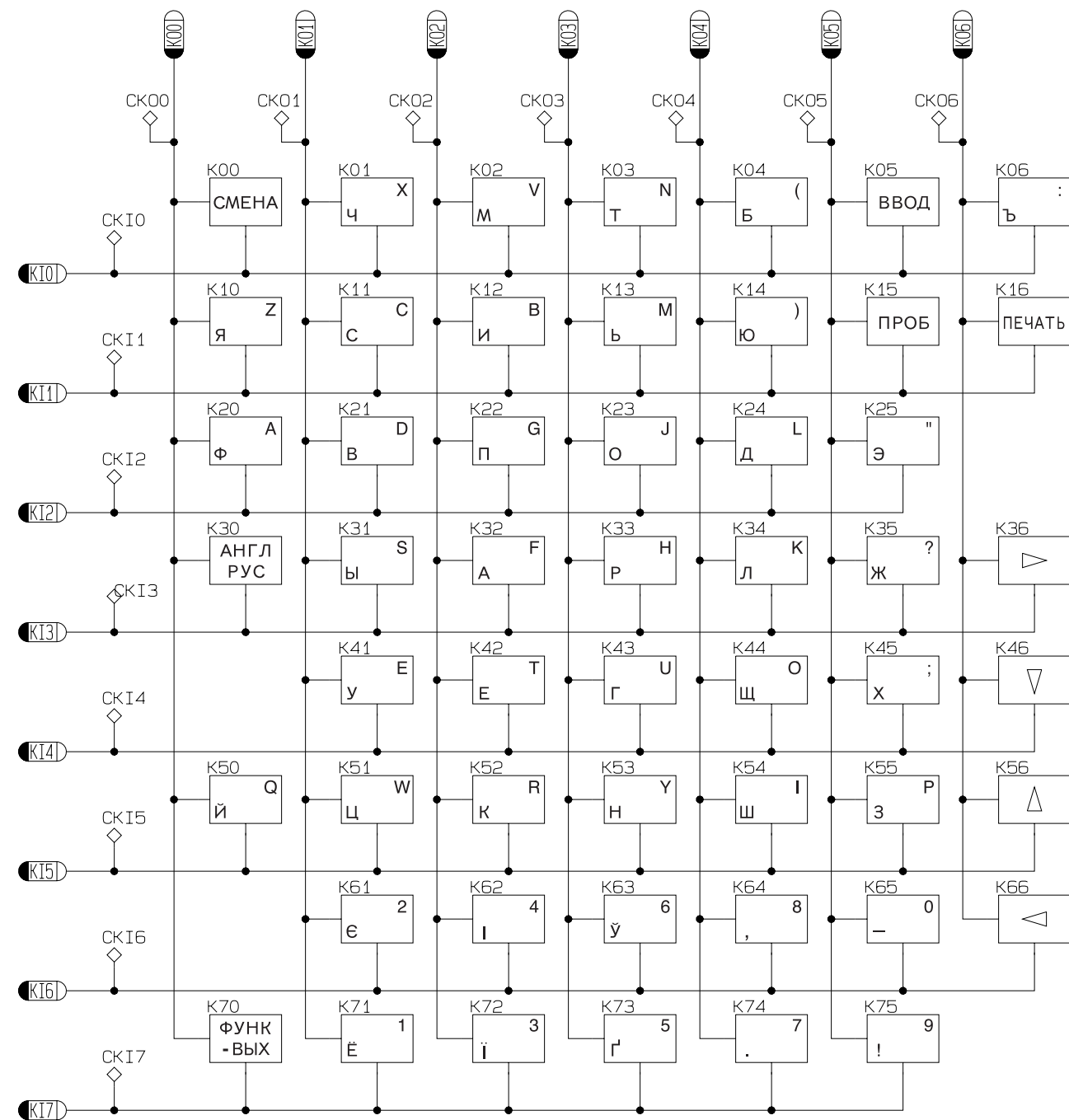
Figure-3

11. SCHEMATIC DIAGRAMS

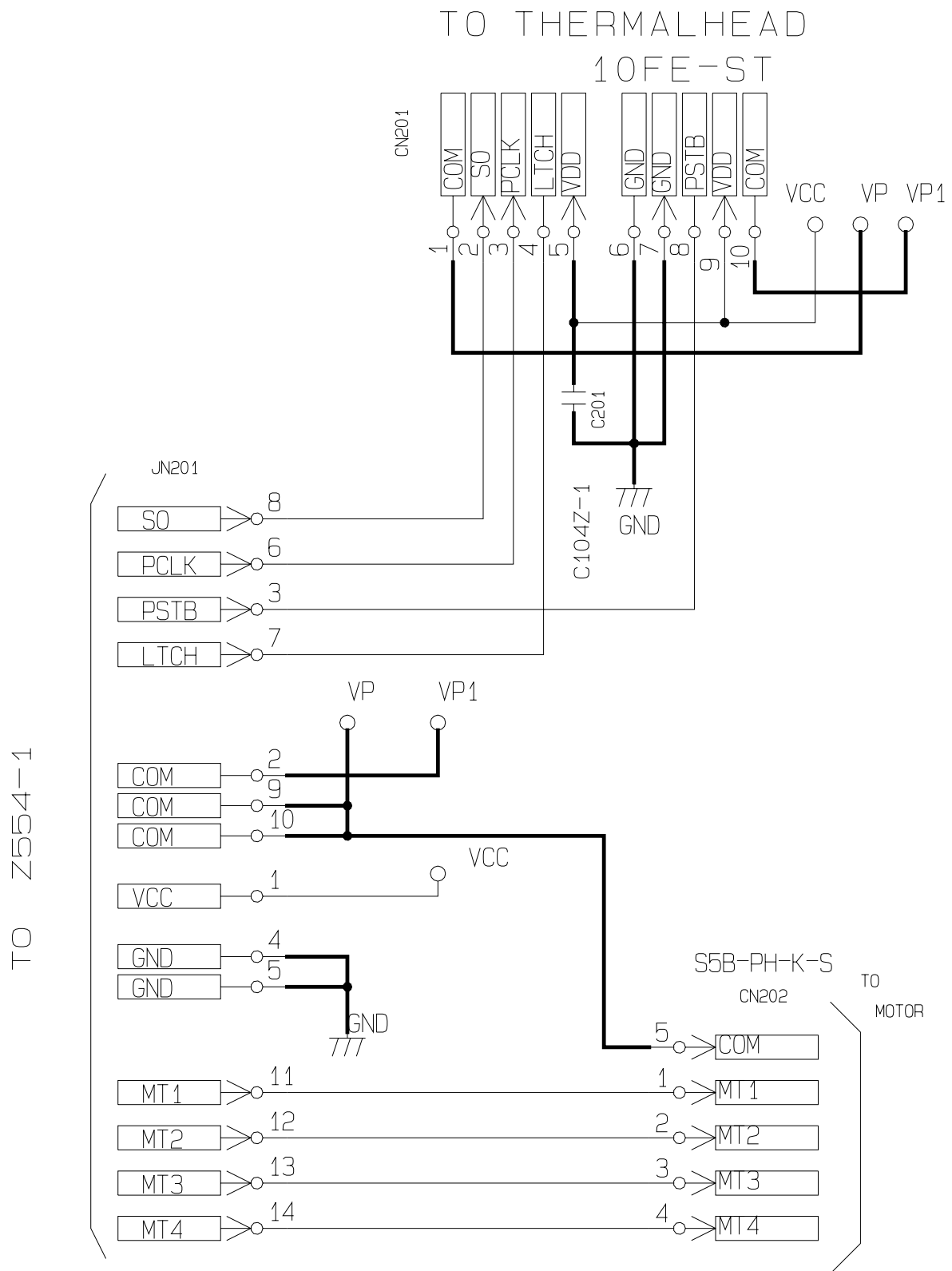
Main PCB (1/2)



Main PCB (2/2)



PCB ASSY (A341050)



12. PARTS LIST

12-1. PARTS LIST (COMPONENTS)

N	Item	Code No.	Parts Name	Specification	Q	R
PCB ASSY/MAIN						
N	LSI1	2012 6421	LSI/MC	UPD780306GCA15-8EU	1	B
	IC1	2105 6275	IC/MOS	S-80745AL-A9-T1	1	C
	IC2	2105 2737	IC/MOS	RH5RL50AA-T1	1	C
	IC3	2114 2436	IC/LINEAR	BA12003	1	C
	X1	2590 2450	OSCILLATOR/CERAMIC	PBRC-5.0BR	1	C
	Q1	2259 0420	TRANSISTOR/DIGITAL	DTA144EKT-96	1	C
	Q2	2259 0889	TRANSISTOR/DIGITAL	DTC144EKT-96	1	C
	D1	2390 1827	DIODE/SCHOTTKY	MA737-(TX)	1	C
	F1	3632 0637	FUSE/CHIP	F1206A1R50FWTR	1	B
	1	3335 6758	LCD	CG1736-TS	1	B
	2	6423 7790	HEAT SEAL	A342751-1	1	B
	J1	3501 5103	JACK/POWER	HEC3110-01-010	1	C
	3	6418 0470	ADHESIVE TAPE	A441930-1	2	B
	4	6423 7800	TAPE	A444044-1	1	B
	CN201	3502 1893	CONNECTOR/FPC	10FE-ST-VK-N	1	C
	CN202	3501 6307	CONNECTOR	S5B-PH-K-S	1	C
	5	6417 0630	CABLE/JOINT	A441633-1	1	C
	6	6419 4620	PCB ASSY	A341050A*4	1	B
* Item CN201, 202 and 5 are included in PCB ASSY (A341050A*4)						
COMPONENTS						
N	7	6424 6982	CASE/UPPER	A140386B-10	1	X
N	8	6424 7001	CASE/LOWER	A140387A-8	1	X
N	9	6424 7280	CHASSIS ASSY	A140395P*12 A	1	C
N	10	6424 6990	RUBBER/KEY	A140380-10	1	C
	11	6420 9800	KNOB	A240593-8	1	C
	12	6420 9810	HOOK/CASSETTE	A341030-8	1	C
	13	6417 0640	SPRING	A441642-1	1	C
	14	6410 6980	SPRING/BATTERY	C413502-1	1	X
	15	6410 6990	SPRING/BATTERY	C413503-1	1	X
	16	6324 9297	SPRING/BATTERY	A43733A-1	3	X
	17	6328 1560	SPRING/BATTERY	A44683A-1	4	X
	18	6420 9740	COVER/BATTERY	C211542-15	1	C
N	19	6424 6941	COVER/CASSETTE	A240582A-8	1	C
N	20	6424 6950	PANEL/DISPLAY	A341522-5	1	B
	21	6408 9950	RUBBER/FOOT	A414533-1	4	X
	22	6417 5650	CUTTER SUB ASSY	A341198*1	1	X
N	23	6424 6930	PCB ASSY/MAIN	A140614F*6 A	1	B
Parts Prices will be informed separately by Parts Price List.						

Notes: **N** - New parts

R - Rank

R- **A** : Essential

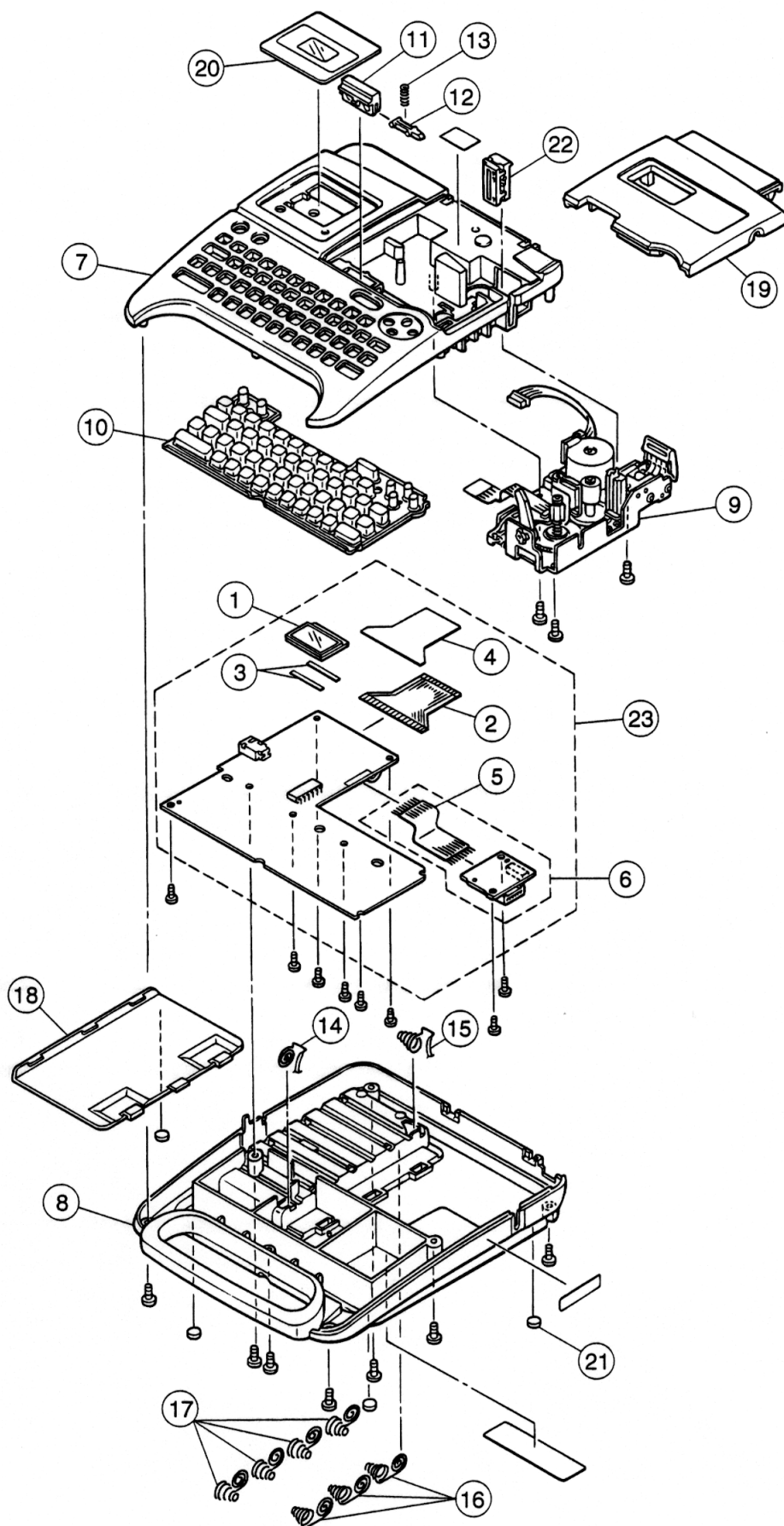
B : Stock recommended

C : Others

X : No stock recommended

13. DISASSEMBLY VIEW

13-1-1. Exploded view (Component)



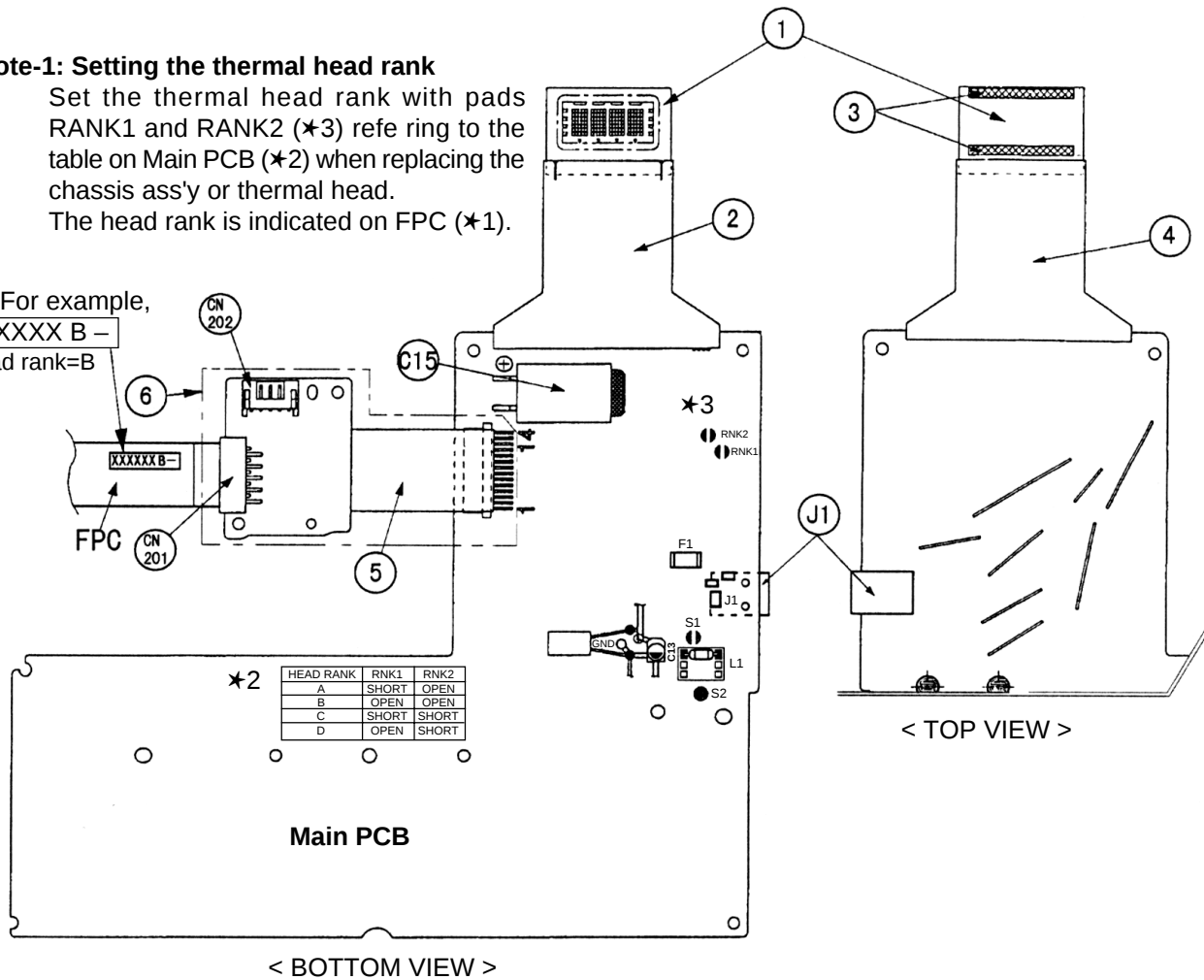
13-1-2. Disassembly view (PCB ASSY/MAIN)

Note-1: Setting the thermal head rank

Set the thermal head rank with pads RANK1 and RANK2 (★3) refering to the table on Main PCB (★2) when replacing the chassis ass'y or thermal head.

The head rank is indicated on FPC (★1).

★1 For example,
XXXXXX B -
Head rank=B



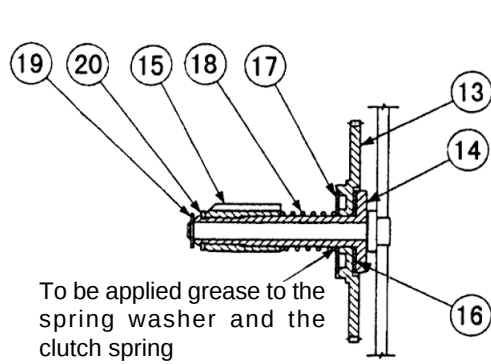
12-2. PARTS LIST (CHASSIS ASSY)

N	Item	Code No.	Parts Name	Specification	Q	R
CHASSIS ASSY						
	1	6417 0521	CHASSIS ASSY	A240571A*1	1	X
	2	6420 9830	HOLDER/CUTTER	A240583-10	1	X
	3	6417 0560	LEVER/CUTTER	A240595-1	1	X
	4	6417 0580	GEAR/CUTTER	A341032-1	1	X
	5	6417 0610	SHAFT/CUTTER	A441612-1	2	X
	6	6417 0650	SPRING	A441643-1	1	X
	7	6410 8092	PLATEN	C312242B-1	1	X
	8	6421 0390	HEAD/ARM	A240993-1	1	X
	9	6413 9330	GEAR	A340279-1	1	X
	10	6400 9780	SPRING/HEAD	A412366-1	1	X
	11	6413 9340	SPRING/HEAD	A440434-1	1	X
	12	6420 9840	LEVER/SWITCH	C312240-23	1	X
	13	6410 2770	GEAR	A313765-1	1	X
	14	6400 9640	PLATE/CLUCH	A311853-1	1	X
	15	6400 9650	REEL TOP	A311854-1	1	X
	16	6400 9710	FELT	A412350-1	1	X
	17	6400 9720	WASHER	A412351-1	1	X
	18	6400 9730	SPRING/CLUTCH	A412352-1	1	X
	19	6400 9750	WASHER	A412353-2	5	X
	20	6400 9760	WASHER	A412353-3	1	X
	21	6405 2850	ADHESIVE TAPE	A413501-1	1	X
	22	1013 8689	PRINT HEAD/THERMAL	KSH64FK-CA	1	B
	23	3222 0049	MOTOR/STEPPING	27S1N18ECNU	1	X
	24	1909 1944	SCREW	M3X5 ZMC-3	2	X
Parts Prices will be informed separately by Parts Price List.						

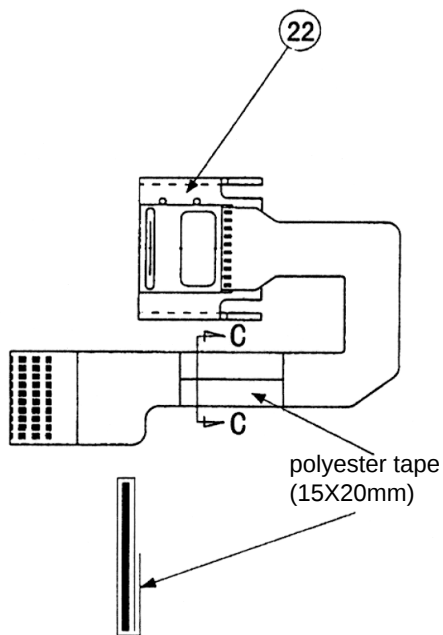
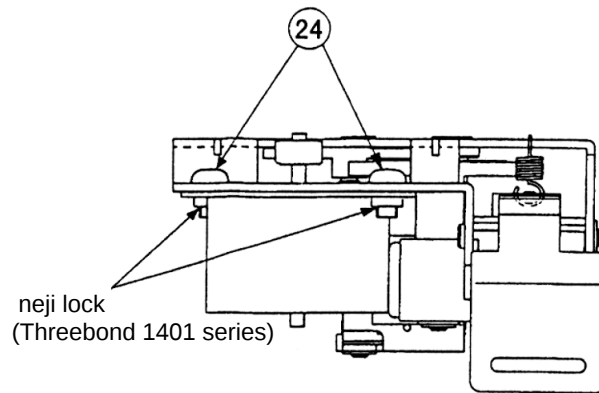
Notes: **N** - New parts
R - Rank

R- **A** : Essential
B : Stock recommended
C : Others
X : No stock recommended

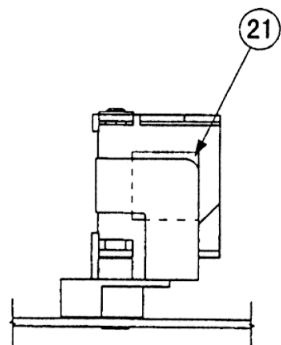
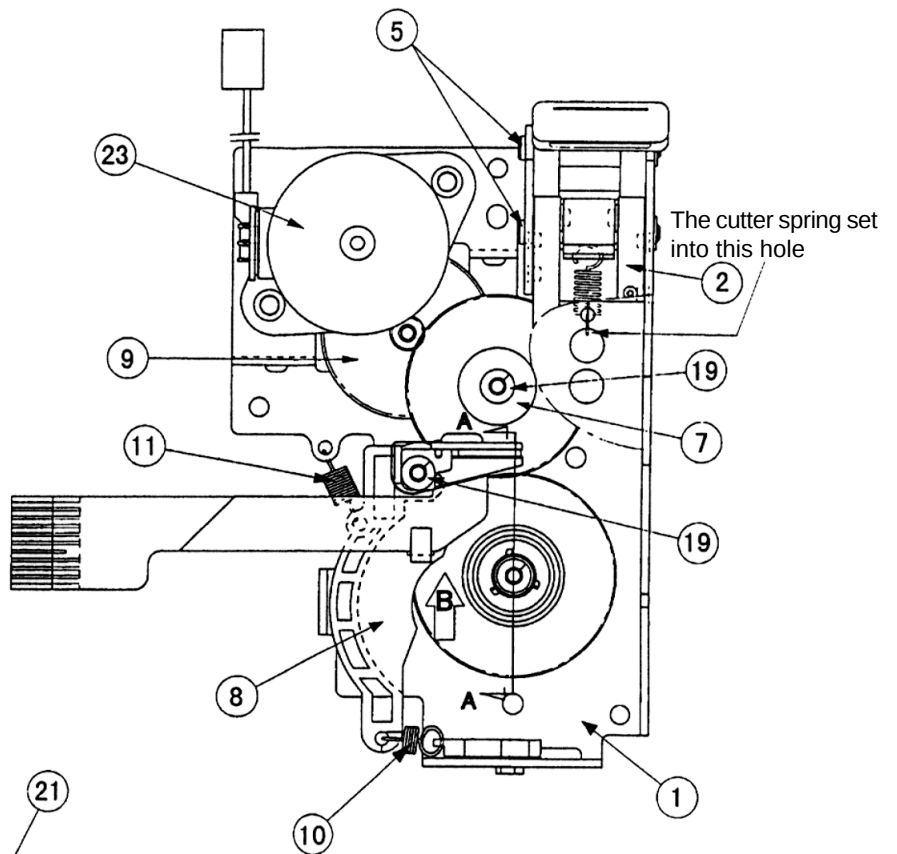
13-2-1. Disassembly view (Chassis ass'y-1)



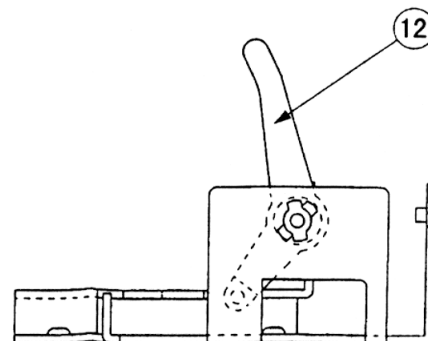
SECTION A-A



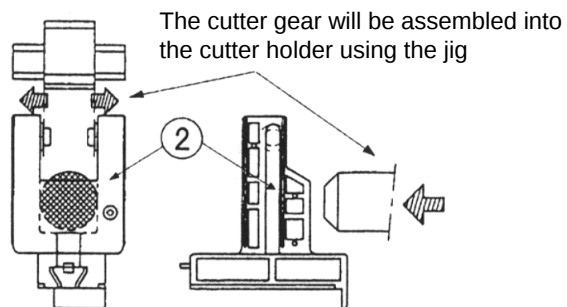
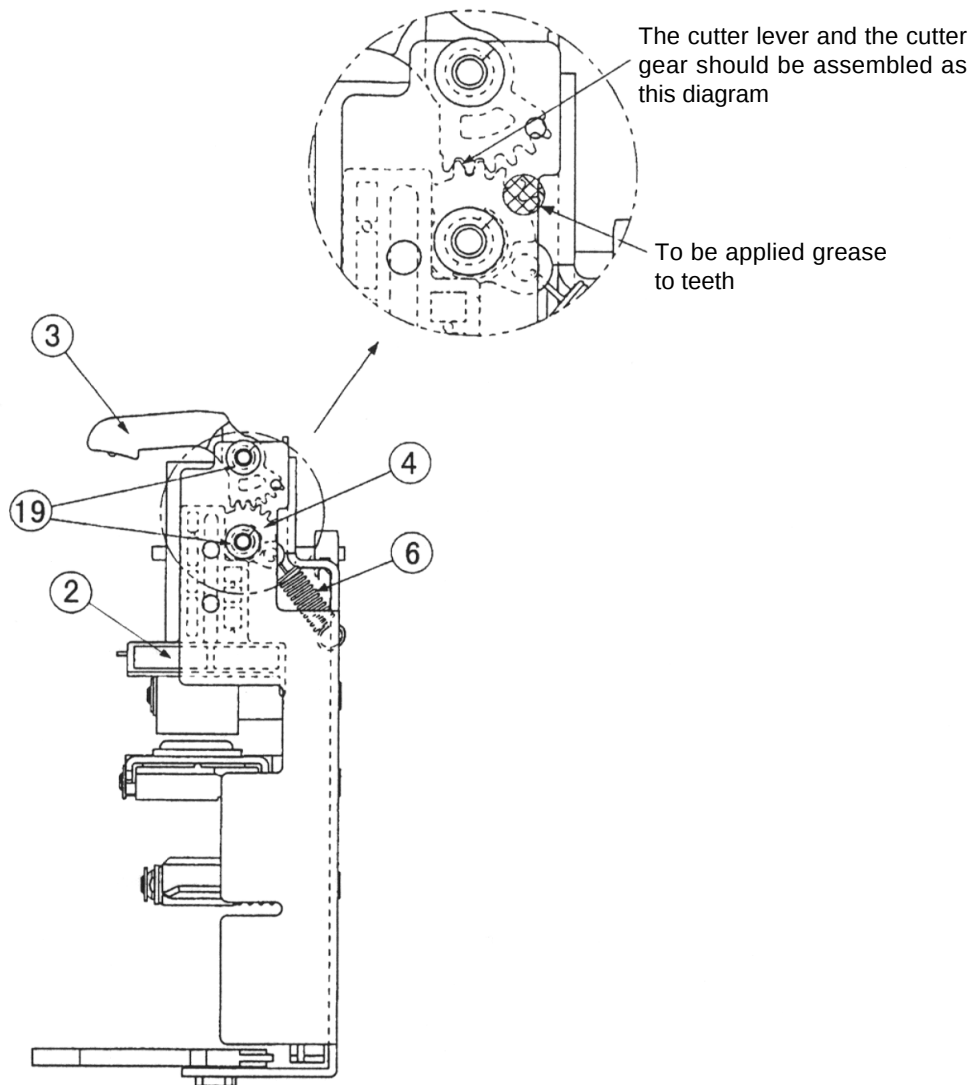
SECTION C-C



"B" ARROW DIAGRAM



13-2-2. Disassembly view (Chassis ass'y-2)



CASIO TECHNO CO.,LTD.
Overseas Service Division

Nishi-Shinjuku Kimuraya Bldg. 1F
5-25, Nishi-Shinjuku 7-Chome
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