

SERVICE MANUAL

i70



# CONTENTS

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## I . SPECIFICATION

1. CAMERA SPECIFICATION.....	4
2. SYSTEM REQUIREMENTS .....	7
3. TFT LCD PANEL MARK .....	8
4. CONNECTION DIAGRAM .....	11
5. IDENTIFICATION OF FEATURES .....	12

## II . EXPLODED VIEW AND PARTS LIST

1. MAIN ASSEMBLY .....	14
2. BODY ASSEMBLY .....	16
3. BARREL ASSEMBLY .....	20
4. BATTERY COVER ASSEMBLY .....	22
5. TOP ASSEMBLY .....	24
6. FRONT COVER ASSEMBLY.....	26
7. BACK COVER ASSEMBLY .....	28
8. PACKING ITEM .....	30

## III . ADJUSTMENT

1. FIRMWARE .....	34
2. ADJUSTMENT .....	40

## IV . PATTERN DIAGRAM

### 1. PARTS ARRANGEMENT FOR EACH PCB ASS' Y

1) MAIN_TOP.....	94
2) MAIN_BOTTOM .....	95
3) CARD_FPCB .....	96
4) CCD_FPCB .....	97
5) SUB_FPCB_TOP .....	98
6) SUB_FPCB_BOTTOM .....	99
7) USB_FPCB_TOP .....	100
8) USB_FPCB_BOTTOM .....	101
9) STROBO_FPCB_TOP .....	102
10) STROBO_FPCB_BOTTOM .....	103
11) TOP_FPCB .....	104
12) KEY_FPCB .....	105

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## V. CIRCUIT DIAGRAM

### 1. CIRCUIT DIAGRAM

1) MAIN_DSP .....	106
2) MAIN_MEMORY .....	107
3) MAIN_AFE .....	108
4) MAIN_POWER .....	109
5) MAIN_LCD .....	110
6) MAIN_SUB & SD CARD .....	111
7) MAIN_MICOM .....	112
8) MAIN_OTG .....	113
9) MAIN_AUDIO .....	114
10) MAIN_USB_27PIN .....	115
11) MAIN_MOTOR.....	116
12) TOP_FPCB .....	117
13) SD_CARD_FPCB .....	118
14) CCD_FPCB .....	119
15) SUB_FPCB .....	120
16) USB_FPCB .....	121
17) KEY_FPCB .....	122
18) MIC_FPCB .....	123
19) STROBO_FPCB .....	124

<b>VI. SERVICE INFORMATION .....</b>	<b>125</b>
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- Shooting**
- Still Image :
    - Auto, Program, ASR, Scene, Multimedia (MP3, PMP, TextViewer)
    - ※ Scene : Night, Portrait, Children, Landscape, Close-up, Text, Sunset, Dawn, Backlight, Fireworks, Beach & Snow, Self shot, Food, Cafe
    - Continuous : Single, Continuous, AEB (0.3 step, Max. 3 shots), Wise Shot
    - Self-timer : 10 sec., 2 sec., Double (10 sec. & 2 sec.)
  - Movie Clip :
    - With Audio (recording time : Depend on Storage size)
    - Size : 640x480, 320x240 (Optical 3X zoom with sound recording)
    - Frame rate : 30fps, 15fps
    - Color Effect & WB selectable
    - Movie Editing (Embedded) : Pause during recording, Still Image Capture, Time Trimming
    - ※ To record the movie, a memory card must be inserted.

- Storage**
- Media :
    - Internal memory : About 10MB
    - External memory : SD / MMC / MMC + / HSMC  
(Min. 32MB - Max. 2GB guaranteed)
    - \* Internal memory capacity is subject to change without prior notice.
  - File Format : Still Image : JPEG (DCF), EXIF 2.2, DPOF 1.1, PictBridge 1.0  
Movie Clip : AVI (MPEG-4)      Audio : WAV
  - Capacity (MMC 512MB)

	<b>7<sup>M</sup></b>	<b>5<sup>M</sup></b>	<b>3<sup>M</sup></b>	<b>1<sup>M</sup></b>	<b>5<sup>M</sup></b>	<b>3<sup>M</sup></b>	<b>1<sup>M</sup></b>	<b>6<sup>M</sup></b>
	3072x2304	2592x1944	2048x1536	1024x768	3072x1728	2560x1440	1280x720	3072x2048
Super Fine	137	189	293	930	176	256	856	154
Fine	263	359	540	1456	338	481	1402	295
Normal	380	511	750	1793	485	680	1780	425

- ※ These figures are measured under Samsung's standard conditions and may vary depending on shooting conditions and camera settings.

- Image Play**
- Type : Single image, Thumbnail, Slide show (Effect, B.G.M), Album, Movie

- Interface**
- Digital output connector : USB 2.0
  - Audio : Mono
  - Video output : NTSC, PAL (user selectable, Only in the playback mode)
  - DC power input connector : 24-pin connector

- Power Source**
- Rechargeable battery : Lithium Ion (SLB-0837, 860mAh)
  - Charger : SAC-45 KIT
  - ※ Included battery type may vary depending on sales region.

**Dimensions (WxHxD)**

89.7x61x21.5mm

**Weight**

- 161.7g (without battery & card)
- Operating Temperature : 0 ~ 40° C
- Operating Humidity : 5 ~ 85%

**Software**

- Application : Digimax Converter, Digimax Master

## I . SPECIFICATION

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### ※ MP3 Specification

<b>Audio</b>	- Frequency : 20Hz ~ 20KHz - Earphone Port : 2.5mm Port (Stereo Type) - Output : Maximum Volume Left 40mW + Right 40mW (16 $\Omega$ ) - Noise Ratio : 88 dB with 20 KHz LPF
<b>File</b>	- File Format : MP3 (MPEG-1/2/2.5 Layer 3) - Bit Rate : 48 ~ 320kbps (Including VBR)
<b>Sound Effect</b>	- SRS WOW HD, Normal, Classic, Dance, Jazz, Live, Rock
<b>Play Mode</b>	- All, Repeat One, Repeat All, Random, Random Repeat - Fast Forward / Rewind (Search function) - Slide Show selectable - Skipping in Play, Auto Skipping - MP3&Capturing (Capturing Mode is Auto Default, 5MW) - Auto reload function (Remember both the last played file and frame) - Background skin of MP3 playback using user images

### ※ PMP Specification

<b>PMP Decoder</b>	- Movie : Xvid MPEG4 (Digimax Convert S/W) - Audio : MPEG Layer 2 (Digimax Convert S/W)
<b>Play Mode</b>	- Seeking in Play, Skipping in Play - Auto skipping after one file played - Auto reload function (Remember last played frame) - Support Full Screen in Converting S/W
<b>Subtitle</b>	- Support SMI file (Using Digimax Converter S/W)

### ※ Text Specification

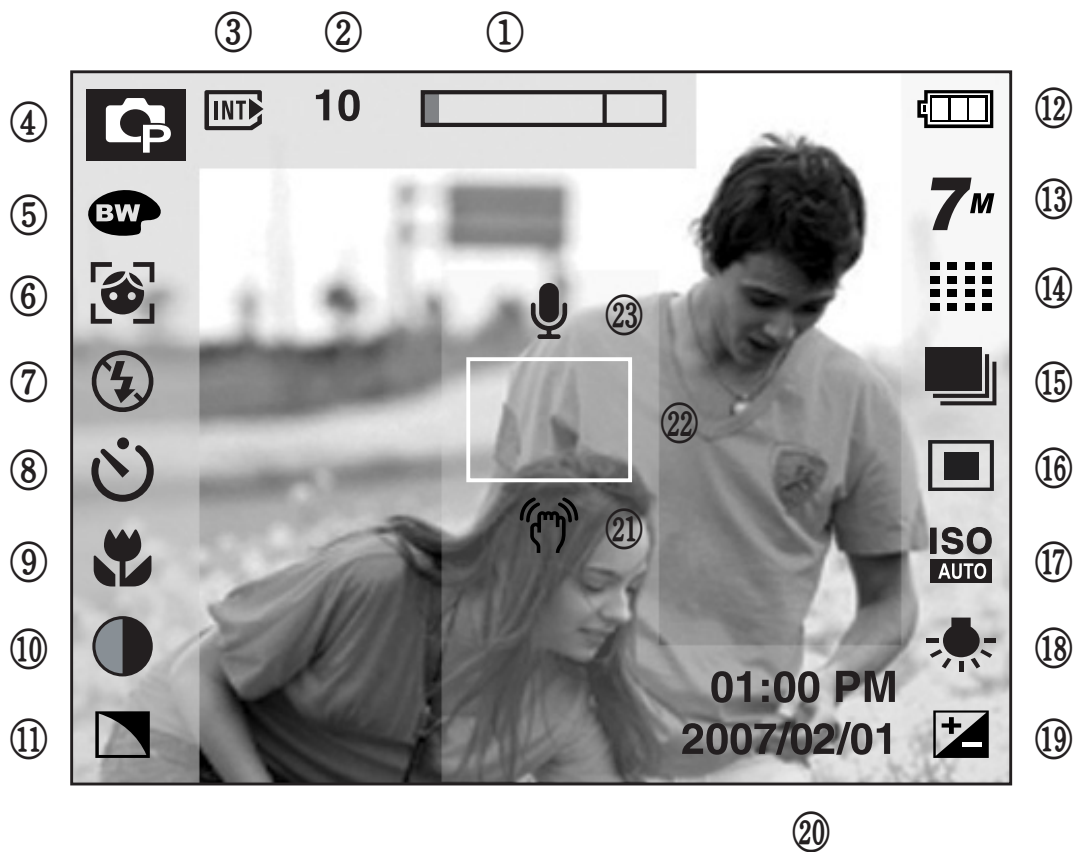
<b>File</b>	- TXT extension name, up to 99999 pages
<b>File format</b>	- Window : ANSI (Windows 98 or later), Unicode / Unicode (Big-Endian) / UTF-8 (Windows 2000/XP) - Mac : ANSI, Unicode (UTF-16)
<b>Function</b>	- Auto Scroll (0.8 sec ~ 2.0 sec) - Skipping by 1 page / 10 pages - Auto reload function (Remember last page) - Support MP3 BGM during displaying text file
<b>Language</b>	- English, Korean, French, German, Spanish, Italian, Chinese, Taiwanese, Japanese, Russian, Portuguese, Dutch, Danish, Swedish, Finnish, Bahasa, Polish, Hungarian, Czech, Turkish. * Supportable language is subject to change without prior notice.

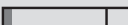





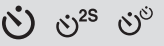




## 2. System Requirements












For Windows	For Macintosh
PC with processor better than Pentium II 450MHz (Pentium 800MHz recommended) Windows 98SE/2000/ME/XP/Vista Minimum 128MB RAM (Over 512MB recommended) 200MB of available hard disk space 1024x768 pixels, 16-bit colour display compatible monitor (24-bit colour display recommended) Microsoft DirectX 9.0	Power Mac G3 or later / Intel Processor Mac OS 10.1 ~ 10.4 Minimum 256MB RAM 110MB of available hard-disk space
※ Digimax Converter PC with processor better than Pentium III 500MHz (Pentium IV recommended) Windows 2000/XP/Vista	※ For playing back a movie clip 3ivx and QuickTime Player for QuickTime MPlayer for Intel Processor

### 3. LCD monitor indicator

- Recording mode



- ①  x5.0 : Optical / Digital Zoom bar / Digital Zoom rate
- ② 10 : Number of available shots remaining  
00:00:00 : Available recording time (Movie clip / Voice recording)
- ③  INT : Card inserted indicator
- ④  : Recording mode
- ⑤  : Colour Effect
- ⑥  : Face Recognition
- ⑦  : Flash
- ⑧  : Self-timer
- ⑨  : Macro
- ⑩  : Contrast  
 : Mic. off
- ⑪  : Sharpness

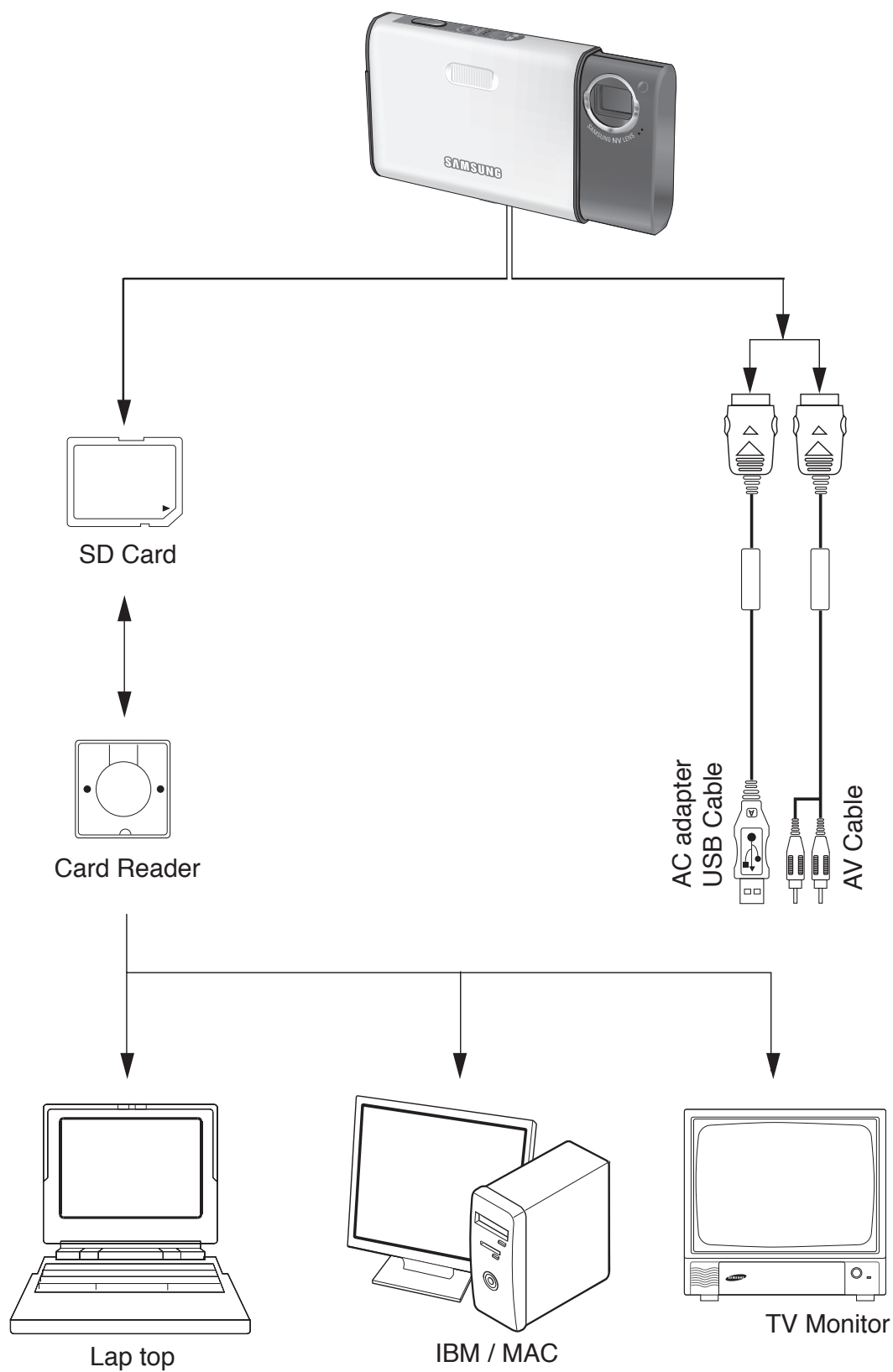
- ⑫  : Battery
- ⑬  : Image size
- ⑭  : Image quality / Frame rate
- ⑮  : Continuous shot
- ⑯  : Metering
- ⑰  : ISO
- ⑱  : White Balance
- ⑲  LT : Exposure compensation
- ⑳ 2007/02/01 01:00 PM : Date/ Time
- ㉑  : Camera shake warning
- ㉒  : Auto Focus Frame
- ㉓  : Voice memo

■ Play mode



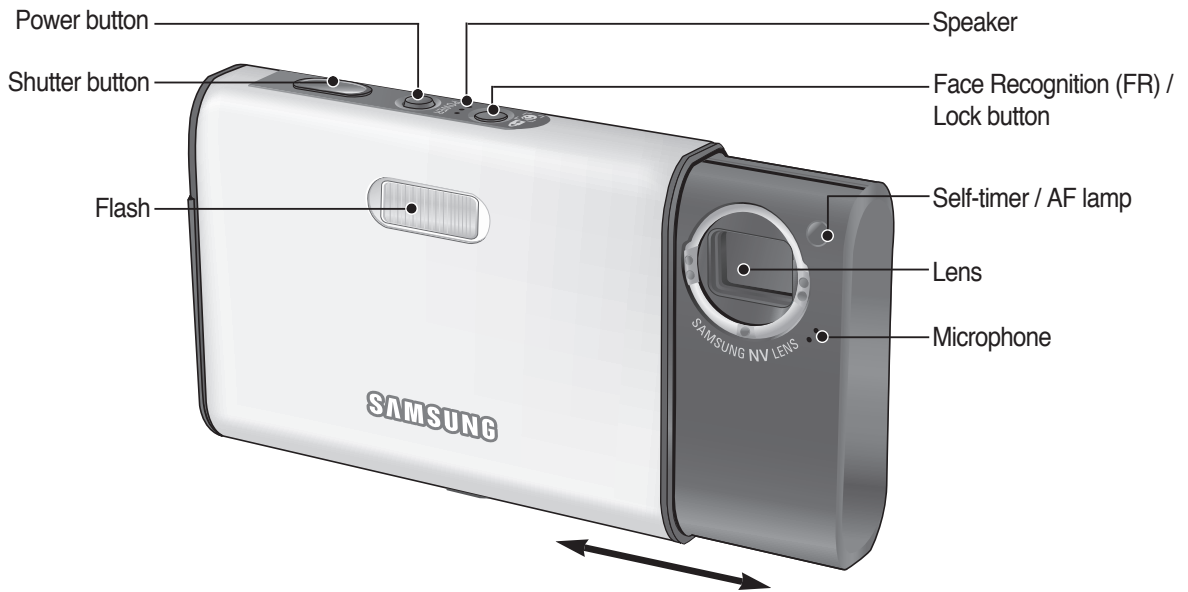
No.	Description	Icon
1	Battery	
2	Folder name & File name	100-0010
3	Memory card indicator	
4	Playback mode	
5	Voice Memo	
6	Protect	
7	DPOF	
8	Recording date	2007/02/01
9	Image size	3072X2304 ~ 256X192
10	Flash	On/Off
11	Shutter speed	16 ~ 1/2,000
12	Aperture value	F 3.5 ~ F 8.0
13	ISO	80 ~ 1000

4. CONNECTION DIAGRAM

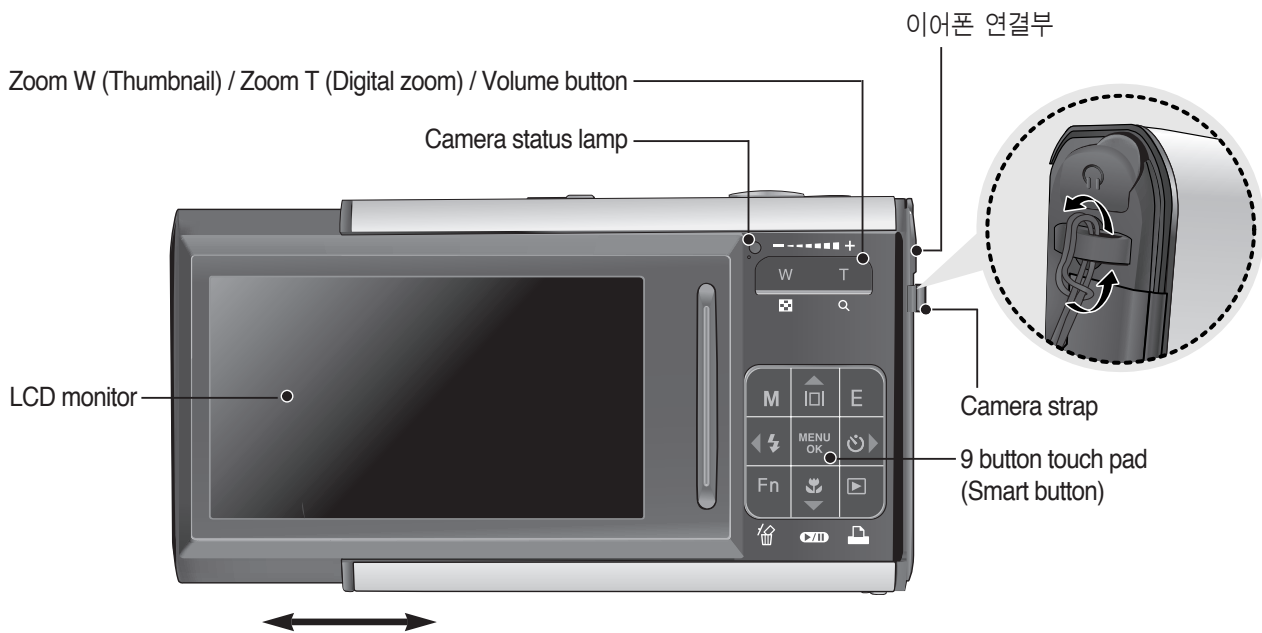


## 5. IDENTIFICATION OF FEATURES

### Front & Top

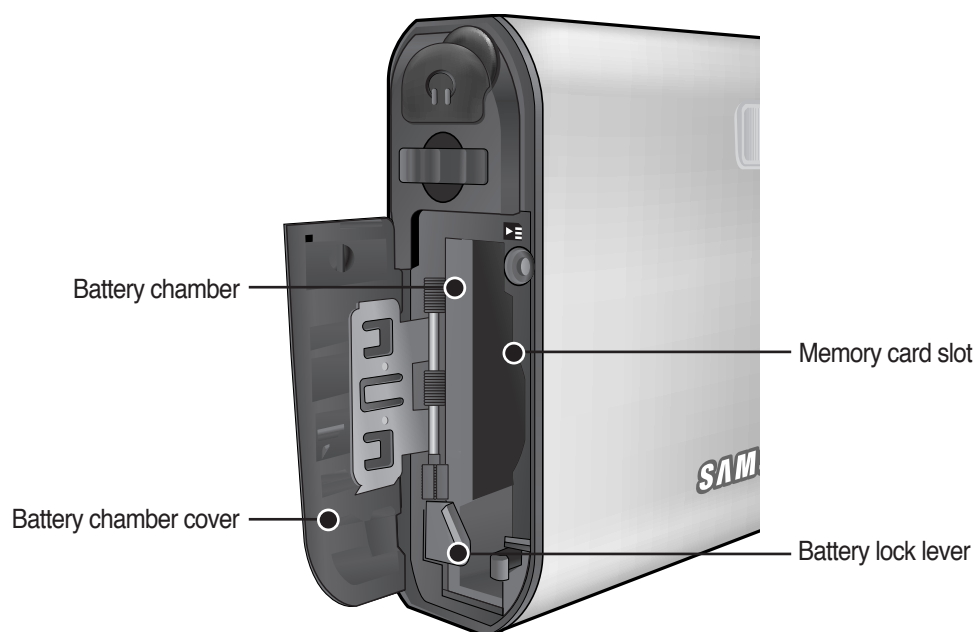


### Back

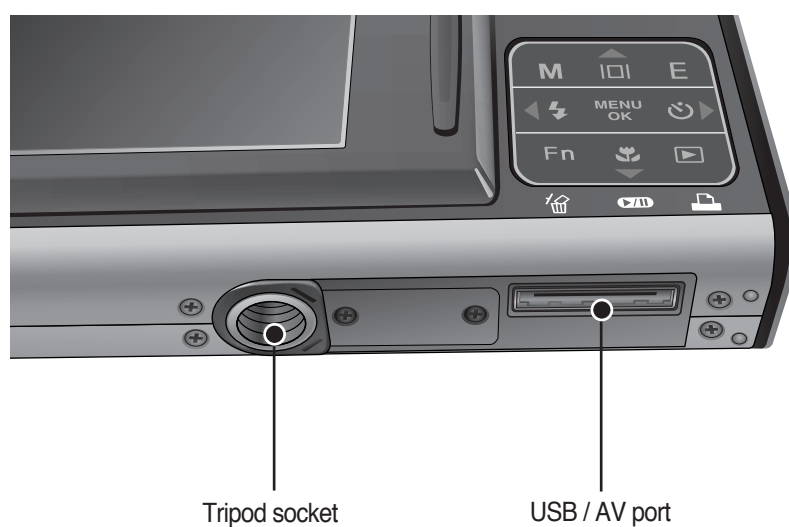




Side

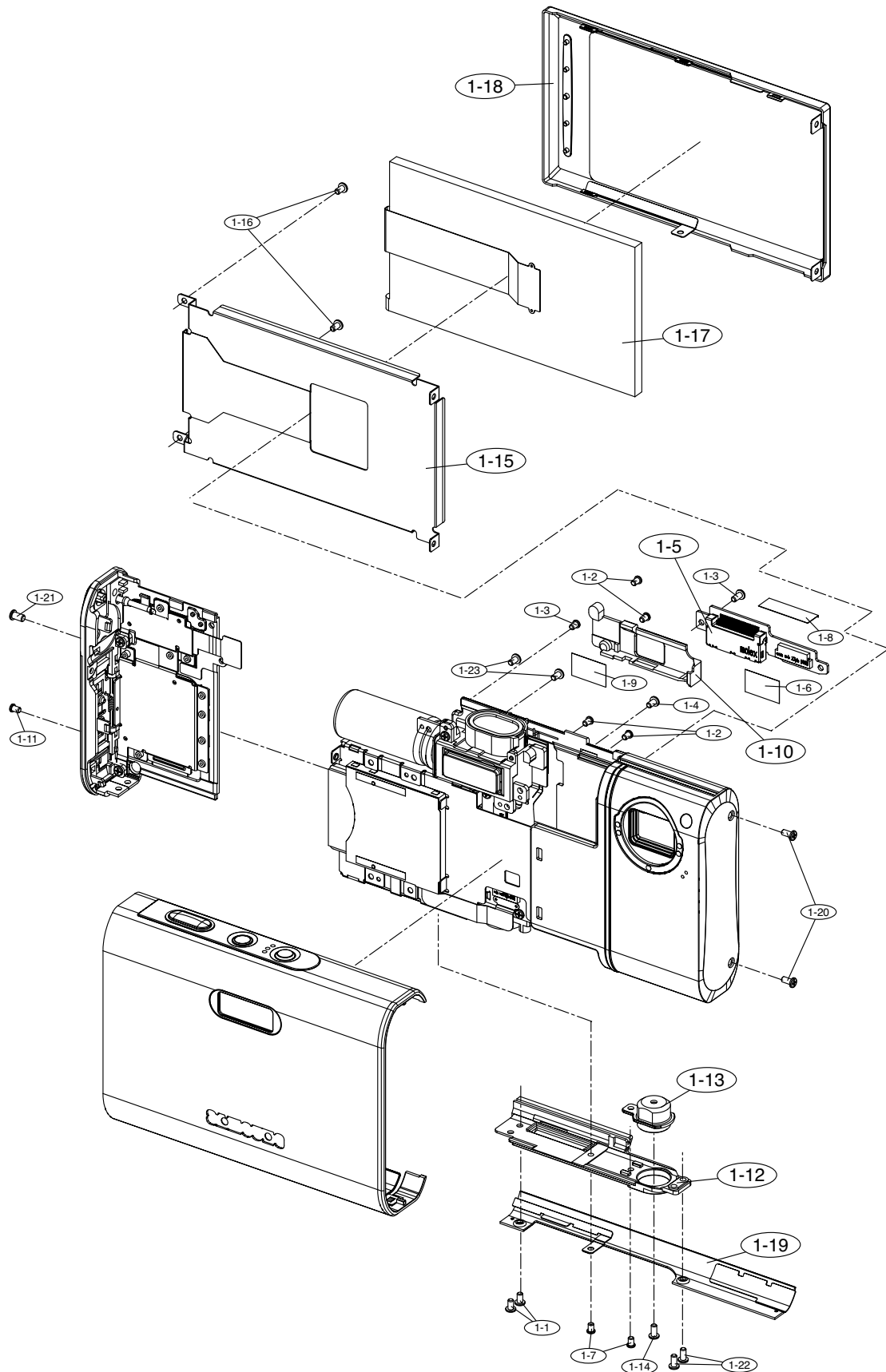


Bottom



# II . EXPLODED VIEW AND PART LIST

## 1. MAIN ASSEMBLY

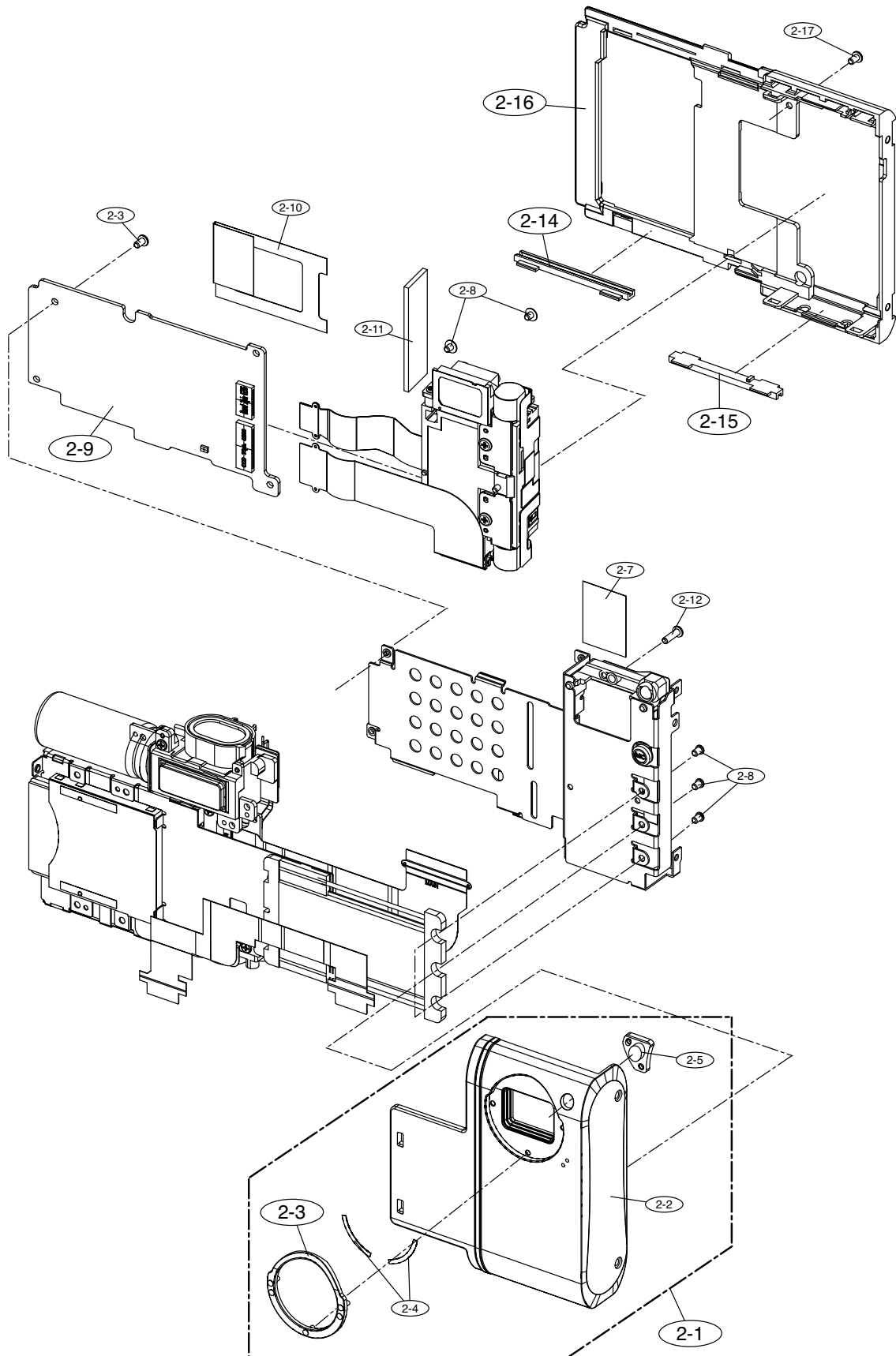


► PARTS LIST

Fig.No	Parts No.	Parts Name	Q'ty	Supply Available Parts	Remarks
1-1	Q6001017701A	SCREW	2	X	
1-2	Q9611142007	SCREW	6	X	
1-3	Q6001020701A	SCREW	3	X	
1-4	Q6001027001A	SCREW	1	X	
1-5	Q9008113001A	USB PCB ASSY	1	O	
1-6	Q7409289801A	USB COVER SHEET	1	X	
1-7	Q0961900101A	SCREW	2	X	
1-8	Q7409278101A	USB EMI TAPE	1	X	
	Q9007279801A	BACK COVER ASSY	1	X	
1-9	Q7409285901A	EAR CAP SHEET	1	X	
1-10	Q7211090101A	FPCB BRACKET	1	O	
1-11	Q6001014001A	SCREW	2	X	
1-12	Q7217396401A	MIDDLE COVER	1	O	SILVER
	Q7217396401B	MIDDLE COVER	1	O	BLACK
	Q7217396401C	MIDDLE COVER	1	O	PINK
	Q7217396401D	MIDDLE COVER	1	O	GOLD
1-13	Q7211090301A	TRIPOD CONN MOLD	1	O	
1-14	Q6003049101A	SCREW	1	X	
1-15	Q7011059202A	LCD FRAME	1	O	
1-16	Q0961900101A	SCREW	2	X	
1-17	Q9001122701A	LCD ASSY	1	O	
1-18	Q9001122801A	LCD UPPER ASSY VLUU i70	1	O	MASKING SILVER
	Q9001122801B	LCD UPPER ASSY	1	O	BLACK
	Q9001122801C	LCD UPPER ASSY	1	O	PINK
	Q9001122801D	LCD UPPER ASSY	1	O	GOLD
	Q9001122801E	LCD UPPER ASSY Samsung i70	1	O	SILVER
	Q9001122801E	LCD UPPER ASSY L-i70	1	O	SILVER
1-19	Q7017055401A	BOTTOM COVER VLUU i70	1	O	MASKING SILVER
	Q7017055401B	BOTTOM COVER	1	O	BLACK
	Q7017055402C	BOTTOM COVER	1	O	PINK
	Q7017055401D	BOTTOM COVER	1	O	GOLD
	Q7017055401E	BOTTOM COVER Samsung i70	1	O	SILVER
	Q7017055401E	BOTTOM COVER Samsung L-70	1	O	SILVER
1-20	Q6001022501A	SCREW	2	X	
1-21	Q9611173007	SCREW	1	X	
1-22	Q6003002601A	SCREW	2	X	
1-23	Q6001020701A	SCREW	2	X	

## II. EXPLODED VIEW AND PART LIST

### 2. BODY ASSEMBLY



► PARTS LIST

Fig.No	Parts No.	Parts Name	Q'ty	Supply Available Parts	Remarks
2-1	Q9001122101A	FRONT SLIDE COVER F ASSY VLUU i70	1	O	SILVER
	Q9001122101B	FRONT SLIDE COVER F ASSY VLUU i70	1	O	BLACK
	Q9001122101C	FRONT SLIDE COVER F ASSY VLUU i70	1	O	PINK
	Q9001122101D	FRONT SLIDE COVER F ASSY VLUU i70	1	O	GOLD
	Q9001122101E	FRONT SLIDE COVER F ASSY Samsung i70	1	O	SILVER
	Q9001122101F	FRONT SLIDE COVER F ASSY Samsung i70	1	O	BLACK
	Q9001122101G	FRONT SLIDE COVER F ASSY Samsung i70	1	O	PINK
	Q9001122101H	FRONT SLIDE COVER F ASSY Samsung i70	1	O	GOLD
	Q9001122101I	FRONT SLIDE COVER F ASSY L-i70	1	O	SILVER
	Q9001122101J	FRONT SLIDE COVER F ASSY L-i70	1	O	BLACK
	Q9001122101K	FRONT SLIDE COVER F ASSY L-i70	1	O	PINK
	Q9001122101L	FRONT SLIDE COVER F ASSY L-i70	1	O	GOLD
2-2	Q7217395502A	FRONT SLIDE COVER F	1	X	
2-3	Q7001009702A	LENS DECO	1	O	
2-4	Q7409271301A	LENS DECO TAPE	2	X	

## II . EXPLODED VIEW AND PART LIST

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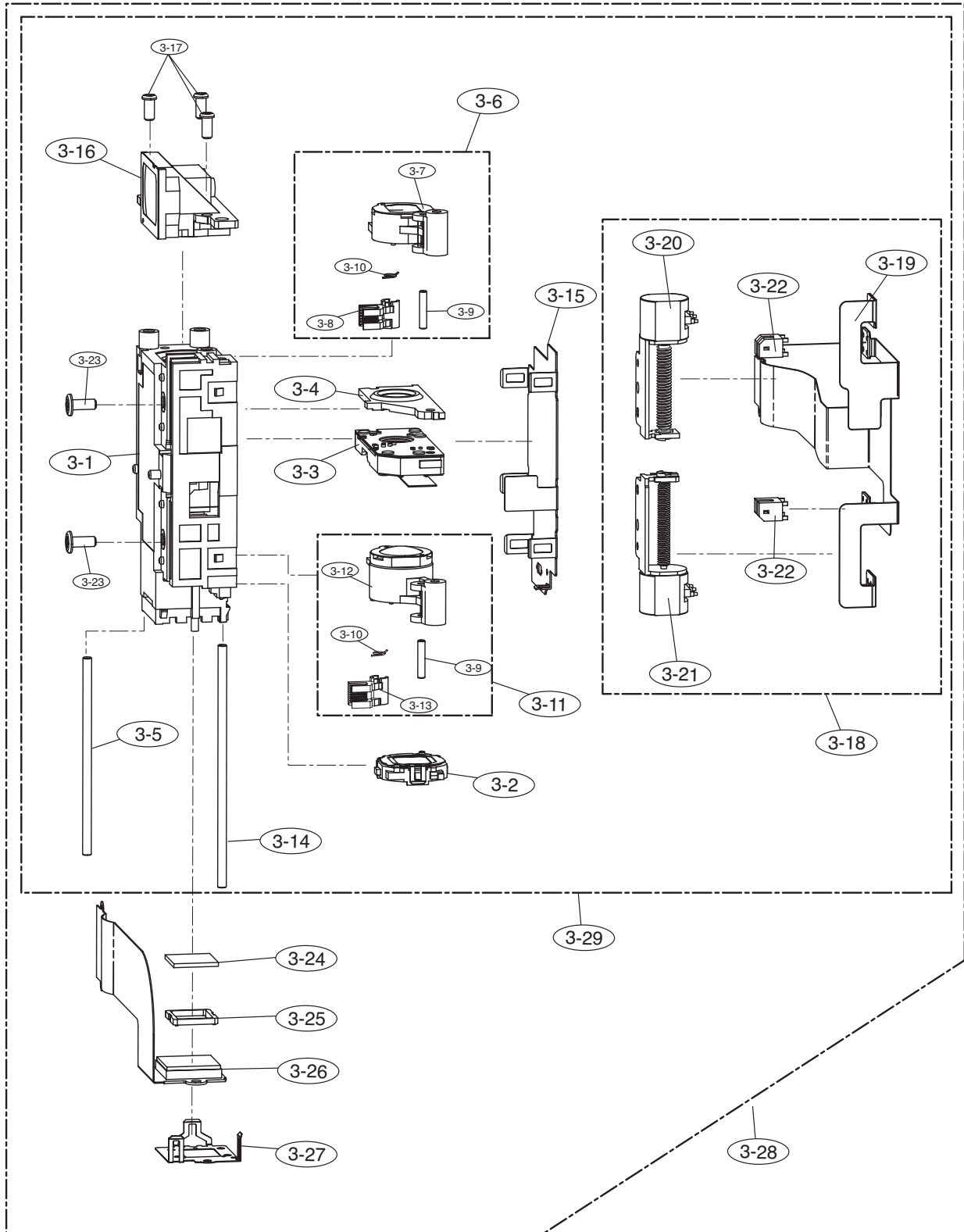
### ► PARTS LIST

Fig.No	Parts No.	Parts Name	Q'ty	Supply Available Parts	Remarks
2-5	Q7217395601A	AF LED WINDOW	1	X	
	Q9001122201A	BATTERY ASSY	1	X	
2-6	Q9001125501A	MAIN FRAME ASSY	1	O	
2-7	Q7409272101A	MAIN FRAME SUB TAPE	1	X	
	Q7409271901A	MIC FPCB TAPE	1	X	
2-8	Q6001021601A	SCREW	5	X	
	Q9001126301A	MAIN ASSY	1	X	
2-9	Q9008112802B	MAIN PCB ASSY	1	O	
2-10	Q7409281901A	SLIDE GUIDE TAPE	1	X	
2-11	Q7409176001B	BARREL TAPE	1	X	
2-12	9761-1750-07	SCREW	1	X	
2-13	Q6001018901A	SCREW	1	X	

► PARTS LIST

Fig.No	Parts No.	Parts Name	Q'ty	Supply Available Parts	Remarks
2-14	Q7217396801A	GUIDE RAIL U	1	O	SILVER
	Q7217396801B	GUIDE RAIL U	1	O	BLACK
	Q7217396801C	GUIDE RAIL U	1	O	PINK
	Q7217396801A	GUIDE RAIL U	1	O	GOLD
2-15	Q7217396901A	GUIDE RAIL B	1	O	SILVER
	Q7217396901B	GUIDE RAIL B	1	O	BLACK
	Q7217396901C	GUIDE RAIL B	1	O	PINK
	Q7217396901A	GUIDE RAIL B	1	O	GOLD
2-16	Q7217397402A	FRONT SLIDE COVER B	1	O	SILVER
	Q7217397401B	FRONT SLIDE COVER B	1	O	BLACK
	Q7217397401C	FRONT SLIDE COVER B	1	O	PINK
	Q7217397401	FRONT SLIDE COVER B	1	O	GOLD
2-17	Q6001017701A	SCREW	1	X	

### 3. BARREL ASSEMBLY

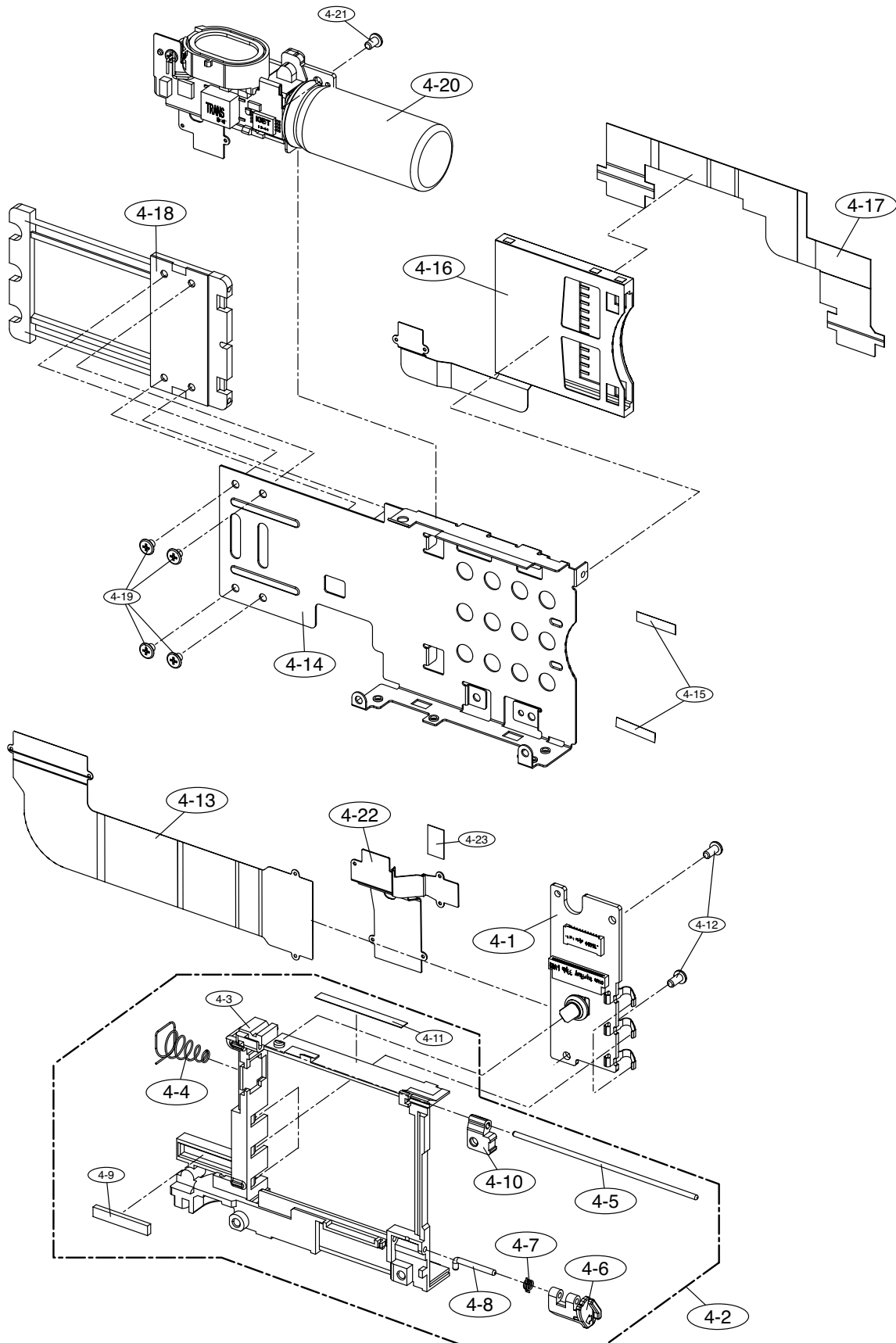




► PARTS LIST

Fig.No	Parts No.	Parts Name	Q'ty	Supply Available Parts	Remarks
3-1	Q7212193402A	LENS BASE	1	O	
3-2	Q9002149801A	5TH LENS BARREL ASSY	1	O	
3-3	Q9005163301A	SHUTTER ASS'Y	1	O	
3-4	Q9002149601A	3RD LENS BARREL ASSY	1	O	
3-5	Q7411123303A	GUIDE BAR B	1	O	
3-6	Q9002151101A	2ND CLIP ASSY	1	O	
3-7	Q9002149501A	2ND LENS BARREL ASSY	1	X	
3-8	Q7212194001A	2ND CLIP	1	X	
3-9	Q7411115701A	CLIP GUIDE BAR	2	X	
3-10	Q6107068001A	CLIP SPRING	2	X	
3-11	Q9002151201A	4TH CLIP ASSY	1	O	
3-12	Q9002149701A	4TH LENS BARREL ASSY	1	X	
3-13	Q7212194101A	4TH CLIP	1	X	
3-14	Q7411123204A	GUIDE BAR A	1	O	
3-15	Q7012090401A	BARREL COVER	1	O	
3-16	Q9002149401A	1ST LENS BARREL ASSY	1	O	
3-17	Q6003049001A	SCREW1430	3	X	
3-18	Q9002164301A	BARREL MAIN FPCB ASSY	1	O	
3-19	Q4101041001A	BARREL MAIN FPCB	1	O	
3-20	Q3104001301A	2ND MOTOR_TM	1	O	
3-21	Q3104001401A	4TH MOTOR_TM	1	O	
3-22	Q0608001001A	PHOTO INTERRUPTER	2	O	
3-23	Q6003040901A	SCREW	2	X	
3-24	Q2904003801A	IR-CUT FILTER	1	O	
3-25	Q7309048701A	IR CUSHION	1	O	
3-26	Q9008116701A	CCD FPCB SMD ASSY	1	O	
3-27	Q7012092701A	CCD PUSH PLATE A	1	O	
3-28	Q9002164501A	FULL BARREL ASSY	1	O	
3-29	Q9002164401A	BARREL ASSY	1	O	

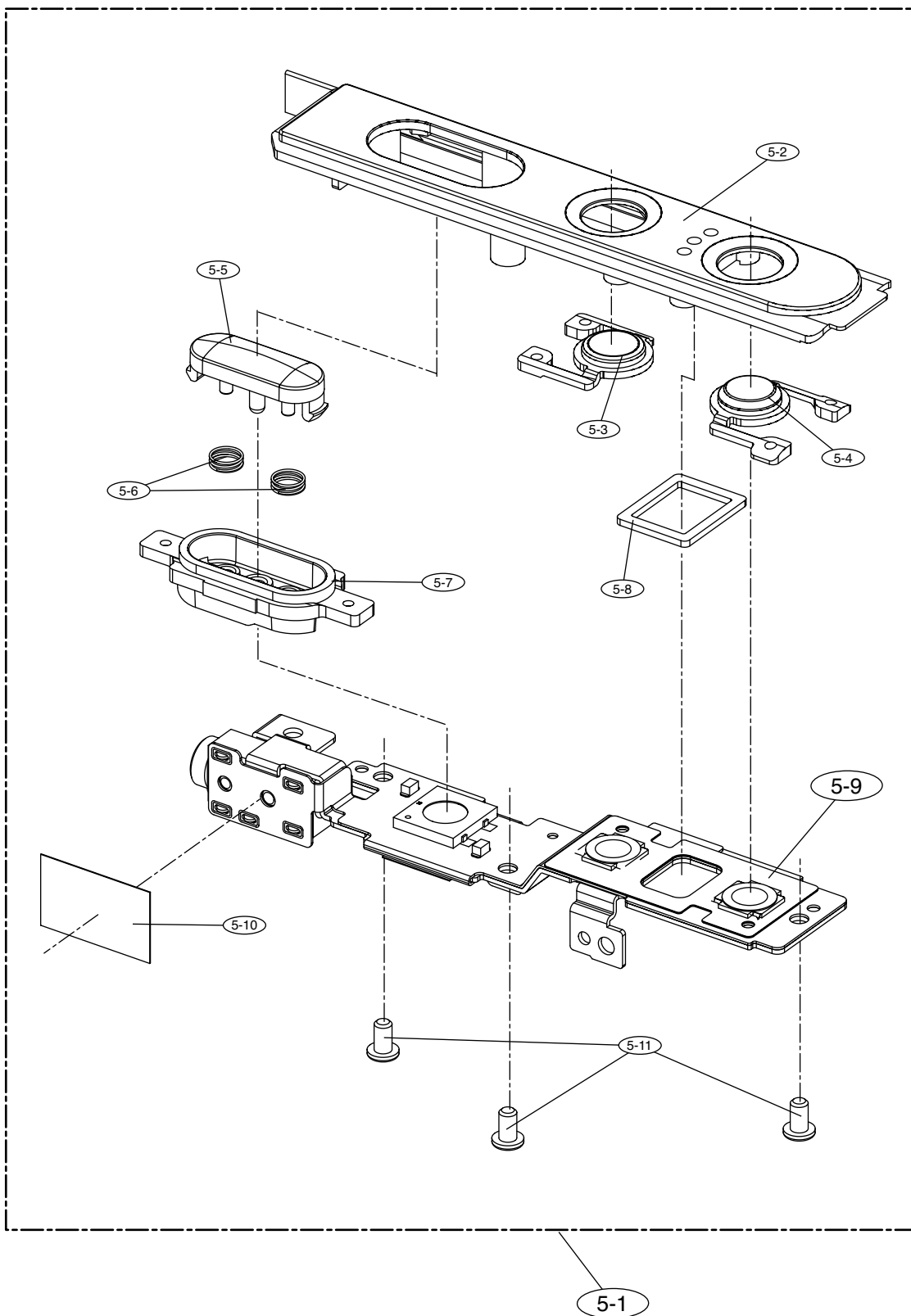
### 4. BATTERY COVER ASSEMBLY



► PARTS LIST

Fig.No	Parts No.	Parts Name	Q'ty	Supply Available Parts	Remarks
4-1	Q9008112901A	SUB PCB ASSY	1	O	
4-2	Q9001122301A	BATTERY CHAMBER ASSY	1	O	
4-3	Q7211087901A	BATTERY CHAMBER	1	X	
4-4	Q6107068702A	BATTERY PUSH SPRING	1	O	
4-5	Q8411000801A	SLIDE SHAFT	1	O	
4-6	Q7003000501A	BATTERY LOCK LEVER	1	O	
4-7	Q6107068301A	BATTERY LOCK LEVER SPRING	1	O	
4-8	Q8411000701A	LOCK HINGE	1	O	
4-9	Q3302000801A	MAGNET IC	1	O	
4-10	Q7211090201A	SLIDE GUIDE POM	1	O	
4-11	Q7409271801A	BATTERY HODER PLATE TAPE	1	X	
4-12	Q0961900101A	SCREW	3	X	
4-13	Q4101039701A	SUB FPCB	1	O	
4-14	Q7409271802A	BATTERY HOLDER PLATE	1	O	
4-15	Q7409278201A	CARD TAPE	2	X	
4-16	Q9008115001A	SD CARD ASSY	1	O	
4-17	Q4101040001A	USB FPCB	1	O	
4-18	Q7500000701A	SLIDE HINGE	1	O	
4-19	Q6001021601A	SCREW	4	X	
4-20	Q9001122401A	STROBO ASSY	1	O	
4-21	Q0961900301A	SCREW	1	X	
4-22	Q9008116601A	9KEY EXT FPCB ASSY	1	O	
4-23	Q7409290901A	9KEY FPCB STICKER	1	X	

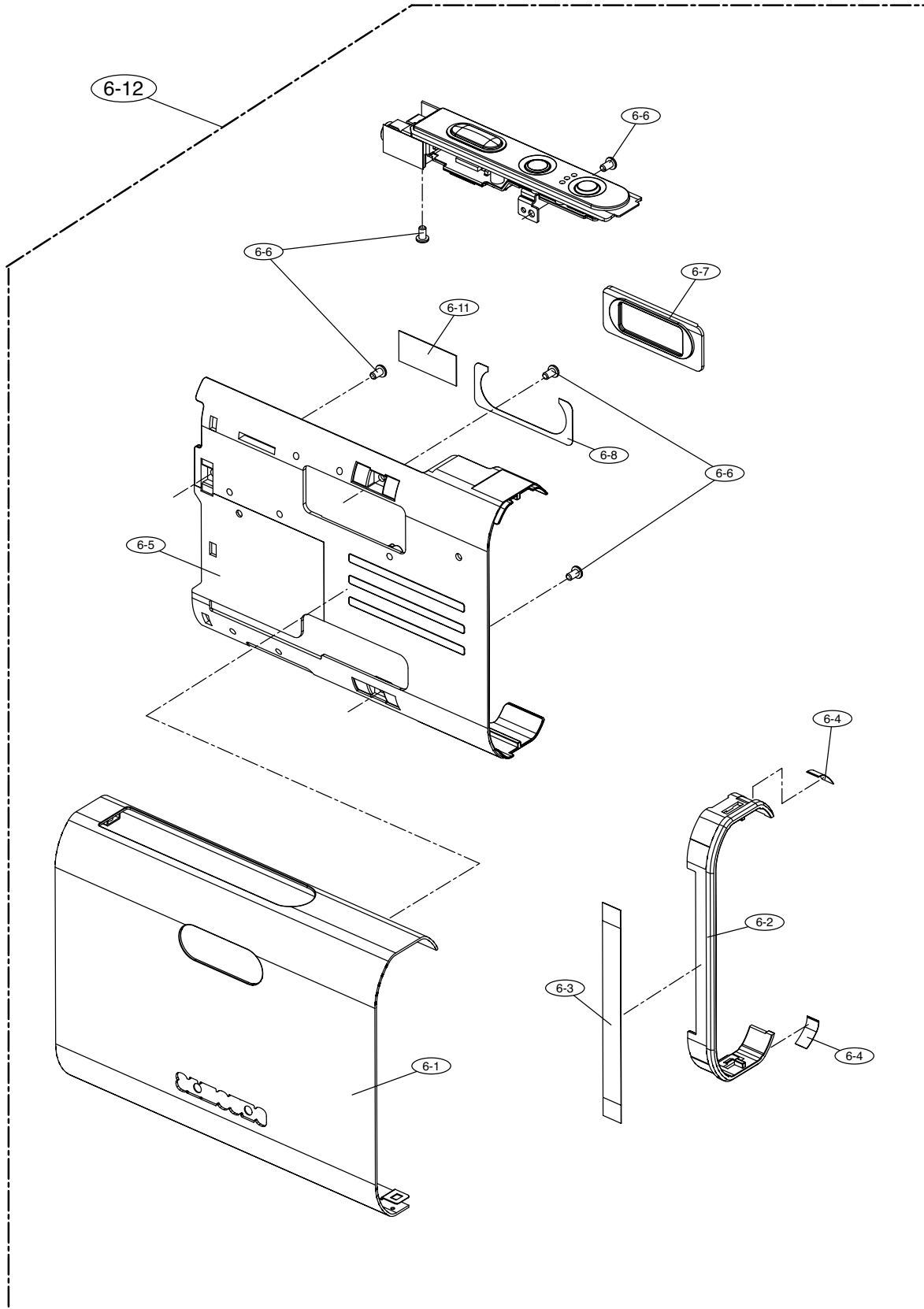
5. TOP ASSEMBLY



► PARTS LIST

Fig.No	Parts No.	Parts Name	Q'ty	Supply Available Parts	Remarks
5-1	Q9007279701A	TOP COVER ASSY	1	O	SILVER
	Q9007279701B	TOP COVER ASSY	1	O	BLACK
	Q9007279701C	TOP COVER ASSY	1	O	PINK
	Q9007279701D	TOP COVER ASSY	1	O	GOLD
5-2	Q7217396202A	TOP COVER	1	X	
5-3	Q7217397001A	POWER BUTTON	1	X	
5-4	Q7217397301A	ASR BUTTON	1	X	
5-5	Q7217397001A	RELESE BUTTON	1	X	
5-6	Q6107054301A	RELEASE SPRING	2	X	
5-7	Q7217396001A	POWER LAMP WINDOW	1	X	
5-8	Q7409269901A	SPEAKER SPONGE	1	X	
5-9	Q9008114801A	TOP FPCB ASS'Y	1	O	
5-10	Q7409285901A	EAR CAP SHEET	1	X	
5-11	Q0961900101A	SCREW	3	X	

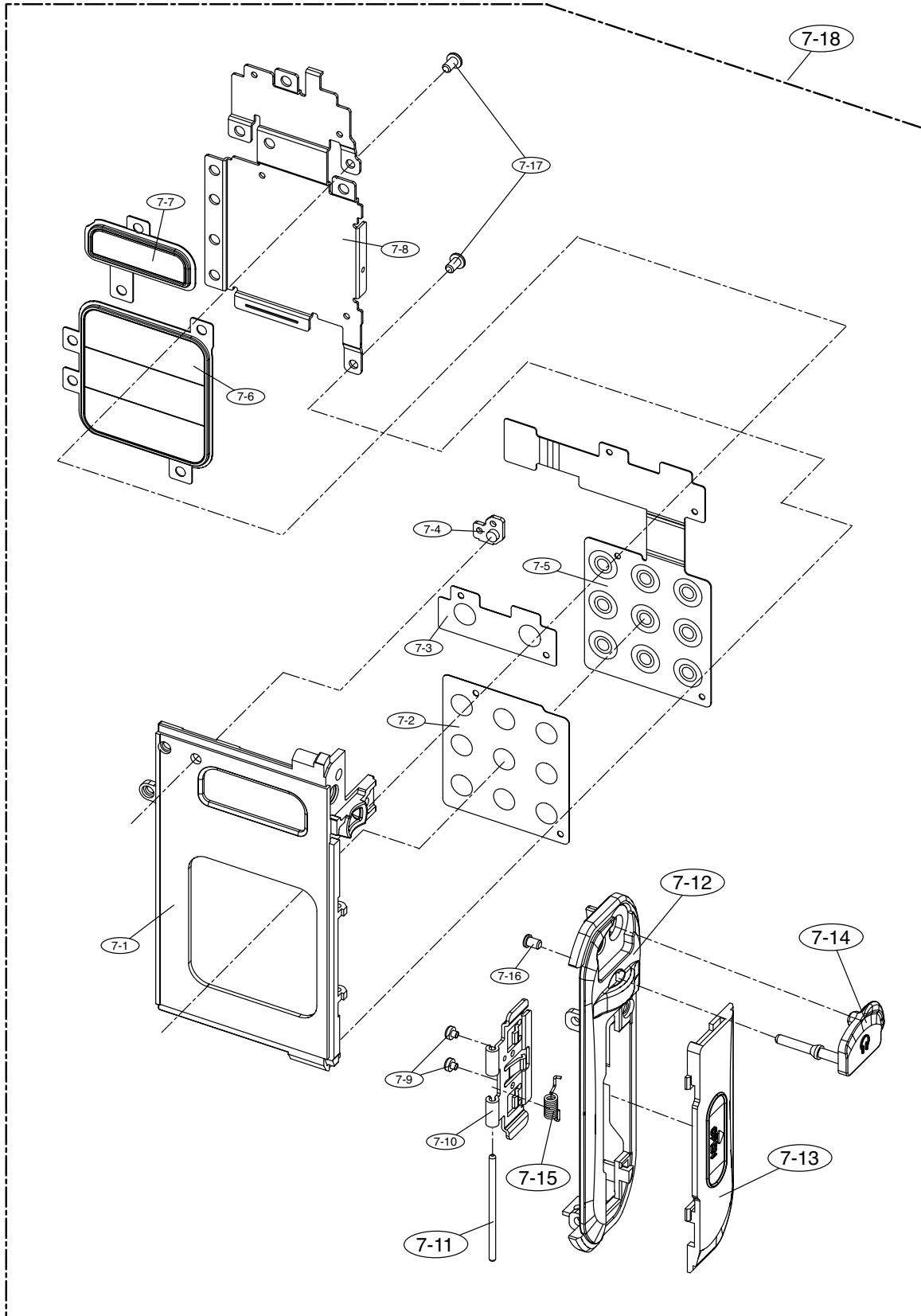
6. FRONT COVER ASSEMBLY



► PARTS LIST

Fig.No	Parts No.	Parts Name	Q'ty	Supply Available Parts	Remarks
6-1	Q7017055301A	FRONT COVER	1	X	
6-2	Q7217395902A	FRONT DECO COVER	1	X	
6-3	Q7409276001A	FRONT DECO TAPE	1	X	
6-4	Q7409277201A	FRONT DECO TAPE B	2	X	
6-5	Q7003000103A	FRONT INNER COVER	1	X	
6-6	Q6001017701A	SCREW	5	X	
6-7	Q7217396501A	STROBO DECO WINDOW	1	X	
6-8	Q7409273101A	STROBO DECO TAPE	1	X	
	Q9007279701A	TOP ASSY	1	X	
6-9	Q7409282401A	FRONT SLIDE TAPE	1	X	
6-10	Q7409284003A	SLIDE COVER SHEET	2	X	
6-11	Q7409284003A	CONDENSOR TAPE A	1	X	
6-12	Q9007279601A	FRONT COVER ASSY VLUU i70	1	O	MASKING SILVER
	Q9007279601B	FRONT COVER ASSY	1	O	BLACK
	Q9007279601C	FRONT COVER ASSY	1	O	PINK
	Q9007279601D	FRONT COVER ASSY	1	O	GOLD
	Q9007279601E	FRONT COVER ASSY Samsung i70	1	O	SILVER
	Q9007279601E	FRONT COVER ASSY L- i70	1	O	SILVER

### 7. BACK COVER ASSEMBLY

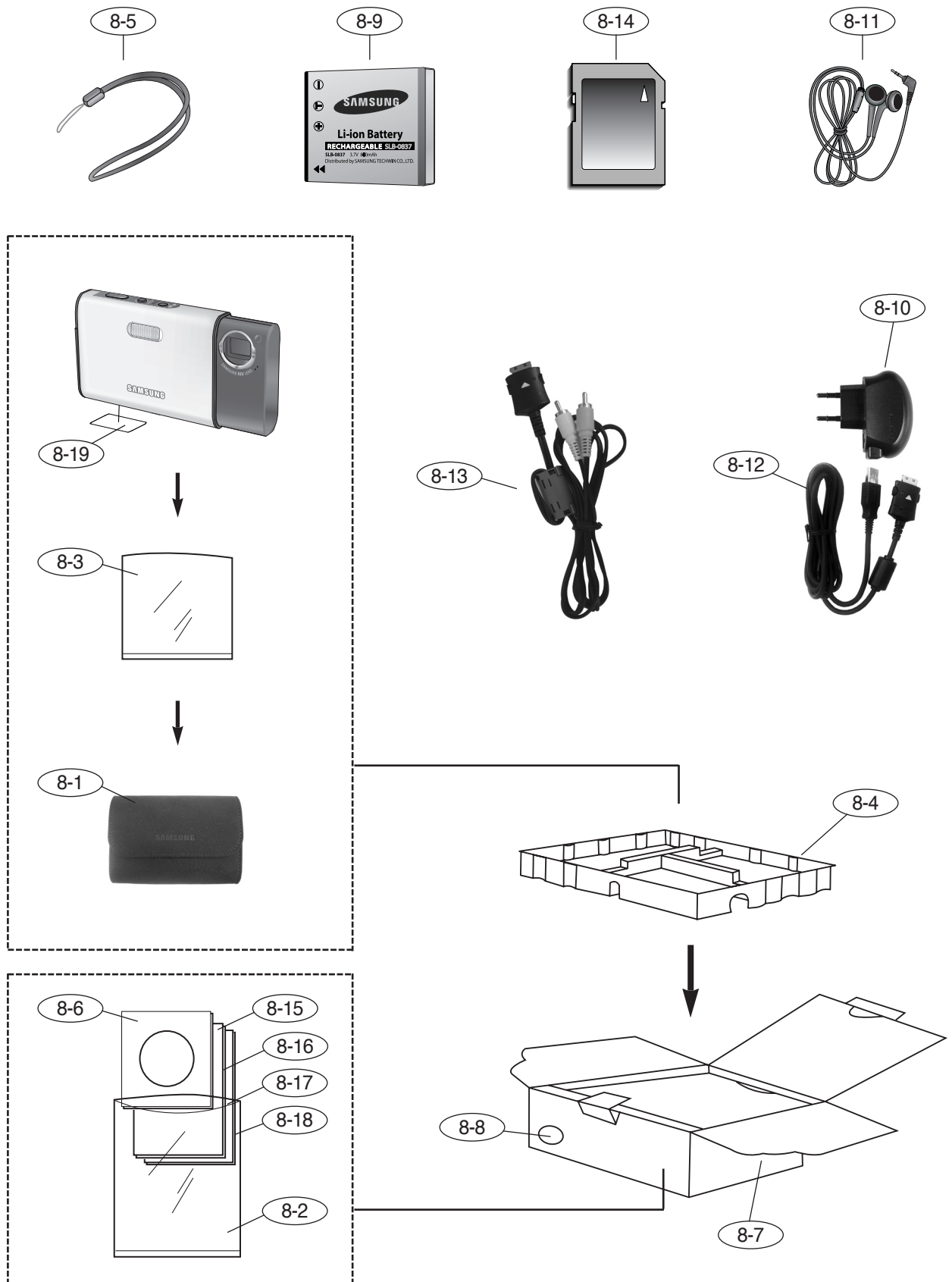




► PARTS LIST

Fig.No	Parts No.	Parts Name	Q'ty	Supply Available Parts	Remarks
7-1	Q7217399601A	BACK COVER	1	X	
7-2	Q7409269601A	9KEY METAL DOME SHEET	1	X	
7-3	Q7409269501A	ZOOM METAL DOME SHEET	1	X	
7-4	Q7217396101A	FUCTION LAMP WINDOW	1	X	
7-5	Q9008115101A	9KEY FPCB ASSY	1	X	
7-6	Q9006017901A	9KEY ASSY	1	X	
7-7	Q9006018001A	ZOOM BUTTON ASSY	1	X	
7-8	Q7011059601A	9KEY PLATE	1	X	
7-9	Q7411134001A	BATTERY STOPPER	2	X	
7-10	Q7011059301A	BATTERY PLATE	1	X	
7-11	Q8411000601A	BATTERY HINGE	1	O	
7-12	Q7217396601A	BACK COVER B	1	O	SILVER
	Q7217396601B	BACK COVER B	1	O	BLACK
	Q7217396601C	BACK COVER B	1	O	PINK
	Q7217396601D	BACK COVER B	1	O	GOLD
7-13	Q7217396301A	BATTERY COVER	1	O	SILVER
	Q7217396301B	BATTERY COVER	1	O	BLACK
	Q7217396301C	BATTERY COVER	1	O	PINK
	Q7217396301D	BATTERY COVER	1	O	GOLD
7-14	Q7217397501A	EARPHONE CAP	1	O	SILVER
	Q7217397501B	EARPHONE CAP	1	O	BLACK
	Q7217397501C	EARPHONE CAP	1	O	PINK
	Q7217397501D	EARPHONE CAP	1	O	GOLD
7-15	Q6107075501A	BATTERY HINGE SPRING	1	O	
7-16	Q6001014001A	SCREW	1	X	
7-17	Q6001017701A	SCREW	2	X	
7-18	Q9007279801A	BACK COVER ASSY	1	O	SILVER
	Q9007279801B	BACK COVER ASSY	1	O	BLACK
	Q9007279801C	BACK COVER ASSY	1	O	PINK
	Q9007279801D	BACK COVER ASSY	1	O	GOLD

8. PACKING ITEM



► PARTS LIST

Fig.No	Parts No.	Parts Name	Q'ty	Supply Available Parts	Remarks
8-1	Q6904032501A	POUCH_VLUU_i70_Silver	1	O	
8-2	Q6909018202A	PE BAG (FOR ACCESSORY)	1	O	
8-3	Q6909019001A	AIR BAG_NV3_EXP(FOR BODY)	1	O	
8-4	Q6901263201A	Pulp_mold_VLUU i70	1	O	
8-5	Q7409279501A	STRAP_Samsung_L73	1	O	
8-6	Q4609018201A	Driver_Digimax_Master_TH-73F	1	O	
8-7	Q6901263801A	GT_SLIM_PAD_VLUU_i70	1	O	
8-8	Q6901263701A	GT_BOX_VLUU i70_KOR	1	O	
	Q6901263901A	GT_BOX_i70_EX_AU_CA_Silver	1	O	
	Q6901264001A	GT_BOX_i70_USA_Silver	1	O	
8-9	Q4302001101A	LITHIUM-ION_SLB-0837	1	O	
8-10	Q4404000201A	AC_ADAPTOR_4.2V (SAC-45)	1	O	
	Q4404000301A	AC_ADAPTOR_4.2V (SAC-45)_EXP	1	O	
	Q4404000401A	AC_ADAPTOR_4.2V (SAC-45)_USA	1	O	
	Q4404000501A	AC_ADAPTOR_4.2V (SAC-45)_UK	1	O	
	Q4404000601A	AC_ADAPTOR_4.2V (SAC-45)_AUS	1	O	
	Q4404000701A	AC_ADAPTOR_4.2V (SAC-45)_CHI_TSOE	1	O	
	Q4404000801A	AC_ADAPTOR_4.2V (SAC-45)_ARG	1	O	
8-11	Q3009001301A	Earphone_VLUU i70	1	O	
8-12	Q3802006202A	24PIN USB Cable(Charger)_SUC-C2	1	O	
8-13	Q3802006301A	24PIN AV CABLE_NV3	1	O	
8-14	Q1107003201A	Multi Media Card (1GB) Samsung	1	O	

## II . EXPLODED VIEW AND PART LIST

### ► PARTS LIST

Fig.No	Parts No.	Parts Name	Q'ty	Supply Available Parts	Remarks
8-15	Q6806369501A	Q_GUIDE_VLUU_i70_KOR	1	O	
	Q6806369801A	Q_GUIDE_Samsung_i70_ENG	1	O	
	Q6806369901A	Q_GUIDE_Samsung_i70_GER	1	O	
	Q6806370001A	Q_GUIDE_Samsung_i70_FRA	1	O	
	Q6806370101A	Q_GUIDE_Samsung_i70_SPA	1	O	
	Q6806370201A	Q_GUIDE_Samsung_i70_ITA	1	O	
	Q6806370301A	Q_GUIDE_Samsung_i70_CHI_T	1	O	
	Q6806370401A	Q_GUIDE_Samsung_i70_DUT	1	O	
	Q6806370501A	Q_GUIDE_Samsung_i70_POR	1	O	
	Q6806370601A	Q_GUIDE_Samsung_i70_SWE	1	O	
	Q6806370701A	Q_GUIDE_Samsung_i70_DEN	1	O	
	Q6806370801A	Q_GUIDE_Samsung_i70_FIN	1	O	
	Q6806370901A	Q_GUIDE_Samsung_i70_RUS	1	O	
	Q6806371001A	Q_GUIDE_Samsung_i70_CHI_S	1	O	
	Q6806371101A	Q_GUIDE_Samsung_i70_TK	1	O	
	Q6806371201A	Q_GUIDE_Samsung_i70_IND	1	O	
	Q6806371301A	Q_GUIDE_Samsung_i70_ARA	1	O	
	Q6806371401A	Q_GUIDE_Samsung_i70_THA	1	O	
8-16	Q6806369601A	U_MANUAL_VLUU_i70_KOR	1	O	
	Q6806371501A	U_MANUAL_Samsung_i70_ENG	1	O	
	Q6806371601A	U_MANUAL_Samsung_i70_GER	1	O	
	Q6806371701A	U_MANUAL_Samsung_i70_FRA	1	O	
	Q6806371801A	U_MANUAL_Samsung_i70_SPA	1	O	
	Q6806371901A	U_MANUAL_Samsung_i70_ITA	1	O	
	Q6806372001A	U_MANUAL_Samsung_i70_CHI_T	1	O	
	Q6806372101A	U_MANUAL_Samsung_i70_DUT	1	O	
	Q6806372201A	U_MANUAL_Samsung_i70_POR	1	O	
	Q6806372301A	U_MANUAL_Samsung_i70_SWE	1	O	

► PARTS LIST

Fig.No	Parts No.	Parts Name	Q'ty	Supply Available Parts	Remarks
8-16	Q6806372401A	U_MANUAL_Samsung_i70_DEN	1	O	
	Q6806372501A	U_MANUAL_Samsung_i70_FIN	1	O	
	Q6806372601A	U_MANUAL_Samsung_i70_RUS	1	O	
	Q6806372701A	U_MANUAL_Samsung_i70_CHI_S	1	O	
	Q6806372801A	U_MANUAL_Samsung_i70_TK	1	O	
	Q6806372901A	U_MANUAL_Samsung_i70_IND	1	O	
	Q6806373001A	U_MANUAL_Samsung_i70_ARA	1	O	
	Q6806373101A	U_MANUAL_Samsung_i70_THA	1	O	
	Q6806373301A	U_MAN_i70_E_G_F_SP_I_DU_P_7	1	O	
	Q6806373401A	U_MAN_i70_E_G_FI_SW_DA_RU_6	1	O	
	Q6806373501A	U_MAN_i70_E_T_CH_IN_AR_TH_6	1	O	
	Q6806380801A	U_MAN_i70_EN_SP_FR_3	1	O	
8-17	Q6806380701A	QS_MANUAL_VLUU_i70	1	O	
8-18	QP955150101F	WARRANTY_CARD_KOREA	1	O	
	Q6807012301A	WARRANTY_CARD_2 YEARS	1	O	
	Q6807010903C	WARRANTY_CARD_RUS(3 YEARS)	1	O	
	Q6807011301B	WARRANTY_CARD_TSOE(CHINA)	1	O	
	Q6807009502E	CARD_PRODUCT(Mexico)	1	O	
	Q6807012101A	WARRANTY_CARD_IRAN	1	O	
	Q6807012401A	WARRANTY_CARD_TURKEY	1	O	
	Q6807012501A	SERVICE_CENTER_TURKEY	1	O	
8-19	Q7409266801A	MIC LABEL_VLUU i70 (MADE IN KOREA)	1	O	
	Q7409266701A	MIC LABEL_VLUU i70(MADE IN CHINA)	1	O	
	Q7409266901A	FCC LABEL_Samsung i70(MADE IN KOREA)	1	O	
	Q7409267001A	FCC LABEL_Samsung i70(MADE IN CHINA)	1	O	
	Q7409267101A	FCC LABEL_Samsung i70(MADE BY SAMSUNG)	1	O	

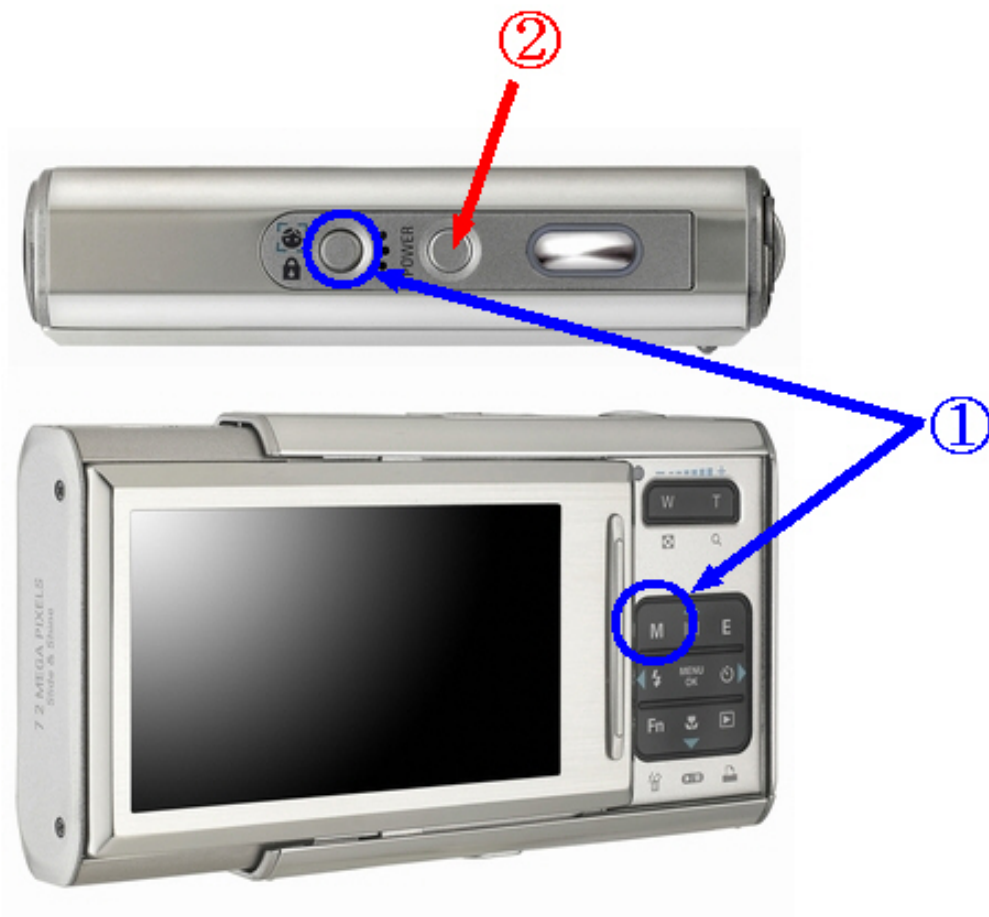
## III . ADJUSTMENT

---

### 1. FIRMWARE

#### 1) Reseting Camera

1. Remove an External Memory Card from the camera.
2. Turn-On the camera using a Full-Charged Battery or the AC Adaptor.
3. While pressed the M + FD (Face Recognition) Button, Turn-Off the camera.



4. Turn on the camera and check whether the camera is reset or not.



### III . ADJUSTMENT

---

#### 2) Checking version

1. Remove an External Memory Card from the camera.
2. Turn-On the camera, then enter the Voice Recording Mode.



3. Press the 4 function button as following order. (Left → Right → Down → Fn button)



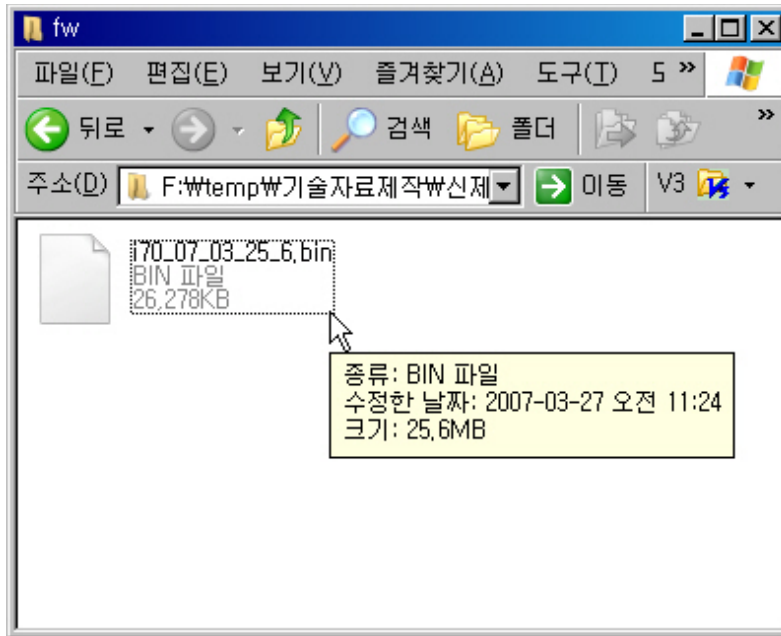


4. Shown the Running Firmware Version on the LCD.



### 3) Upgrading

1. Insert a memory card that has the Firmware File.



※ Be sure that make back-up the adjustment data, before upgraded the firmware.  
Otherwise, all adjustment data might be initialized.  
In addition, the firmware file name must be "i70\_06\_xx\_xx\_x.bin".

2. Use the AC adapter or a full- charged battery.

※ To upgrade the Firmware, all of the battery level indicator on the LCD monitor must be displayed.

3. Turn-On the camera, then enter the Voice Recording Mode.



3. Press the 4 function button as following order. (Left → Right → Down → Fn button)



5. "Firmware Upgrading... i70\_07\_03\_25\_6\_PR" message will display for about 1 sec.  
And then the firmware will be upgraded during about 30sec



6. After upgrading the firmware, the camera will be turned off automatically.

7. Turn on the camera and do the 'Reset' menu in the Setup.

## 2. ADJUSTMENT CAUTION

### 1) Basic Information of Adjustment

After changing the electronic parts of i7, the parts have to be adjusted in accordance with the adjusted items. The items listed on the table are have to be adjusted after changing.

1> To adjust the camera after changing the electronic parts, see the below table.

	MAIN PCB	POWER PCB	BARREL ASS' Y	CCD ASS' Y
FIRMWARE UPGRADE	●		●	
PUNT ADJ.	●		●	●
SHUTTER CLOSE TIME ADJ.	●		●	●
FLASH ADJ.	●	●		
BATTERY LEVEL ADJ.	●	●		
OB SETTING	●			●
BURNING TEST & CCD DEFECT CELL	●	●	●	●
EEPROM READ				
EEPROM WRITE				

### 2> Equipment

#### ▶ Equipments

- AE TESTER : AE TESET can test up to LV 16.7.
- POWER SUPPLY : 3.3V / 2A

#### ▶ Chart

- Focus Chart
- Gray Chart(18%..Reflection Paper)

### 3> Adjustment program file

To adjust all items, all kinds of code by items have to be inserted in program file and saved them to the SD card as TXT file type. The codes are listed below

< Description of TXT file >

Use the Memo pad of Basic Windows program and save it as "th73f\_adj.txt".

Use only section related to each adjustment.

```
//----- adjustmnet -----//
start total

set reset
//adj_control progress_sig_start

//----- OB -----//

adj_control check_process_id 65535 /
adj_control progress_sig_on
adj_control save_log_file

mode program
set img_size 7m
set flash off
set wb auto

adj_ob set_range 100 4000

adj_ob run

//adj_control progress_skip_sig

//----- Lens Shading -----//

adj_control progress_sig_on
adj_control save_log_file

mode program

set img_size 7m
set flash off
set wb auto
set metering spot
set iso 100
adj_lens_shading set_ratio 60
adj_lens_shading run
```

### III . ADJUSTMENT

---

```
//adj_control progress_skip_sig

//----- Battery Level -----//

adj_control progress_sig_on
adj_control save_log_file

mode playback

adj_battery check 545 585
adj_battery level_set 520 544 555 575 532 //lock, empty,low,half,start
adj_battery run

//adj_control progress_skip_sig

//----- Shutter Close Time -----//

adj_control progress_sig_on
adj_control save_log_file

mode program

set iso auto
set metering multi

adj_sh_close preview_lum 100 300
adj_sh_close init_count 15
adj_sh_close init_hd 17
adj_sh_close limit 9

adj_sh_close run

//adj_control progress_skip_sig

set delay 30 //light box

//----- Flash -----//

adj_control progress_sig_on
adj_control save_log_file

mode program
set flash fill_in
```

```
adj_flash trigger 300 800 2500
adj_flash min_limit 98 43
adj_flash mid_limit 363 117
adj_flash max_limit 805 185
adj_flash run

//adj_control progress_skip_sig

//----- AWB_H -----//

adj_control progress_sig_on
adj_control save_log_file

mode program
set ev 0
set wb auto
adj_awb run 521 643 302 335

//adj_control progress_skip_sig

set delay 20 //

//----- PUNT -----//

adj_control set_process_id 65534
adj_control progress_sig_on
adj_control save_log_file

mode program

adj_punt zoom 0 1 2 3 4 5 6 7
adj_punt focus_step_min 2 75 154 237 306 394 475 543
adj_punt focus_step_max 118 193 274 362 473 569 664 752
adj_punt focus_slope_min 48 63 66 73 76 70 57
adj_punt focus_slope_max 94 102 106 118 123 123 125

adj_punt run

//adj_control progress_skip_sig

//----- consumption current -----//
set delay 30
set zoom 0
set delay 10
set zoom 7
set delay 10
```

### III . ADJUSTMENT

---

```
mode playback
set delay 10

power off

end total
```

(Recommend that act the Burning Test with the CCD DEFECT CELL adjustment)

```
// Burn_In //

start BURNING //

burn repeat 15

adj_control check_process_id 65532 //3

format keep_adj //4

mode program //5
set reset //6

set sound_vol low //7
set img_size 7m //8
set flash off //9

// WIDE Shot //

set zoom 0 //10
set delay 10 //11
capture image //12
set delay 5 //13

// TELE flash shot //

set flash fill_in //14
set zoom 7 //15
set delay 10 //16
capture image //17
set delay 5 //18

// WIDE flash shot //
```



```
set zoom 0 //19
set delay 10 //20
capture image //21
set delay 5 //22

// WIDE IMAGE Shot //

set flash off //23
set img_size 5m_w //24
set delay 10 //25
capture image //26
set img_size 7m //27
set delay 5 //28

// ISO 1000 Shot //

set iso 1000 //29
set delay 10 //30
capture image //31
set iso auto //32
set delay 5 //33

// MACRO Shot //

set focus macro //34
set delay 10 //35
capture image //36
set focus normal //37
set delay 5 //38

// AEB Shot //

set shooting aeb //39
set delay 10 //40
capture image //41
set delay 5 //42
set shooting single //43
set delay 5 //44

// Self Timer Shot //

set self_timer 2sec //45
set delay 10 //46
capture image //47
set delay 30 //48
```

### III . ADJUSTMENT

---

```
set self_timer off //49
set delay 10 //50 //delay: 5 --> 10

// Photo Frame Shot //

capture photoframe_set //51
set delay 10 //52
capture image //53
set delay 10 //54 //delay: 5 --> 10

// division shot //

capture composite //55
set delay 10 //56

// movie clip shot //

mode movie //57
set delay 10 //58
capture video 25 //59
set delay 30 //60
mode playback //61
set delay 10 //62
movie play //63
set delay 260 //64

// MP3 play //
set mp3_volume 20 //65
set delay 10 //66
mp3 start //67
set delay 30 //68

mode playback //69
set delay 5 //70
playback right //71
set delay 5 //72
playback right //73
set delay 5 //74
playback right //75
set delay 5 //76
playback right //77
set delay 5 //78
playback right //79
set delay 5 //80
playback right //81
set delay 5 //82
```

```
playback right          //83
set delay 5             //84
playback right          //85
set delay 5             //86
playback right          //87
set delay 5             //88
playback right          //89
set delay 5             //90
playback right          //91
set delay 5             //92

mode program            //93

end BURNING

start CCDdefect

// image shot for inspeting high iso noise //

format internal
set delay 20

mount internal
set delay 20

set iso 1000

set flash fill_in
set delay 10
capture image
set delay 10

set flash off
set delay 10
capture image
set delay 10

mount card

set delay 20

set iso auto

// CCD Defect adj //

adj_control set_process_id 65528
```

### III . ADJUSTMENT

---

```
adj_control save_log_file
adj_control progress_sig_on

mode program

adj_defective_pixel ref_level1 3100
adj_defective_pixel white_defect_num 3000
adj_defective_pixel run

set delay 30

power off

end CCDdefect
```

※ SD Card, which will be used, have to be formatted on the PC.

## 2) OB SETTING

After changing the MAIN PCB, adjust the black color.

<How to adjust>

a...Download the adjustment file and save it to SD memory card.

b...Insert the SD memory card that has the program file and turn on the camera.

c...Adjustment will be done automatically.

d...After completed the adjustment, the camera is turned off automatically.

<Description of TXT file>

When modify the program, use the Memo Pad of Windows and save it as "th73f\_adj.txt".

Use only section related to each adjustment.

```
//----- adjustmnet-----//  
  
start total  
  
set reset  
//adj_control progress_sig_start  
  
//----- OB -----//  
  
adj_control check_process_id 65535 //  
adj_control progress_sig_on  
adj_control save_log_file  
  
mode program  
set img_size 7m  
set flash off  
set wb auto  
  
adj_ob set_range 100 4000
```

### III . ADJUSTMENT

---

```
adj_ob run

//adj_control progress_skip_sig

//----- Lens Shading -----//

adj_control progress_sig_on
adj_control save_log_file

mode program

set img_size 7m
set flash off
set wb auto
set metering spot
set iso 100
adj_lens_shading set_ratio 60
adj_lens_shading run

//adj_control progress_skip_sig

//----- Battery Level -----//

adj_control progress_sig_on
adj_control save_log_file

mode playback

adj_battery check 545 585
adj_battery level_set 520 544 555 575 532 //lock, empty,low,half,start
adj_battery run

//adj_control progress_skip_sig

//----- Shutter Close Time -----//

adj_control progress_sig_on
adj_control save_log_file

mode program

set iso auto
set metering multi

adj_sh_close preview_lum 100 300
adj_sh_close init_count 15
```

```
adj_sh_close init_hd 17
adj_sh_close limit 9

adj_sh_close run

//adj_control progress_skip_sig

set delay 30 //

//----- Flash -----//

adj_control progress_sig_on
adj_control save_log_file

mode program
set flash fill_in

adj_flash trigger 300 800 2500
adj_flash min_limit 98 43
adj_flash mid_limit 363 117
adj_flash max_limit 805 185
adj_flash run

//adj_control progress_skip_sig

//----- AWB_H -----//

adj_control progress_sig_on
adj_control save_log_file

mode program
set ev 0
set wb auto
adj_awb run 521 643 302 335

//adj_control progress_skip_sig

set delay 20 //

//----- PUNT -----//

adj_control set_process_id 65534
adj_control progress_sig_on
adj_control save_log_file

mode program
```

### III . ADJUSTMENT

---

```
adj_punt zoom 0 1 2 3 4 5 6 7
adj_punt focus_step_min 2 75 154 237 306 394 475 543
adj_punt focus_step_max 118 193 274 362 473 569 664 752
adj_punt focus_slope_min 48 63 66 73 76 70 57
adj_punt focus_slope_max 94 102 106 118 123 123 125

adj_punt run

//adj_control progress_skip_sig

//----- consumption current -----//
set delay 30
set zoom 0
set delay 10
set zoom 7
set delay 10
mode playback
set delay 10

power off

end total
```

※ SD Card, which will be used, have to be formatted on the PC.



### 3) LENS SHADING

This menu adjust the brightness gaps between center of the lens and around the lens.

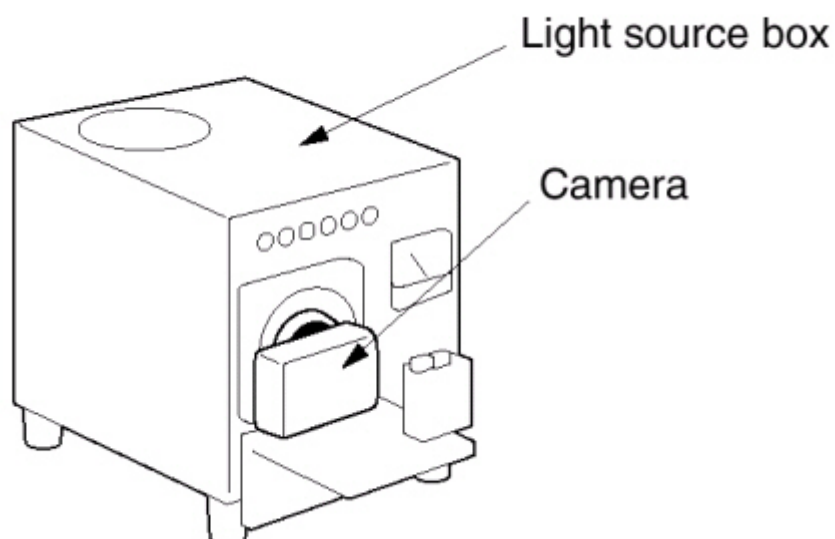
Required Equipment : AE TESTER(LV: 8.2, 3300K)

<How to adjust>

a...Download the adjustment file and save it to SD memory card.

b...Insert the SD memory card that has the program file and attach the camera to the AE TESTER.

c...Set the LV to 8.2.



d...Turn on the camera.

e...The adjustment will be done automatically.

f...After completed the adjustment, the camera is turned off automatically.

### III . ADJUSTMENT

---

<Description of TXT file>

When modify the program, use the Memo Pad of Windows and save it as "th73f\_adj.txt".

Use only section related to each adjustment.

```
//----- adjustmnet -----//  
  
start total  
  
set reset  
//adj_control progress_sig_start  
  
//----- OB -----//  
  
adj_control check_process_id 65535 //  
adj_control progress_sig_on  
adj_control save_log_file  
  
mode program  
set img_size 7m  
set flash off  
set wb auto  
  
adj_ob set_range 100 4000  
  
adj_ob run  
  
//adj_control progress_skip_sig  
  
//----- Lens Shading -----//  
  
adj_control progress_sig_on  
adj_control save_log_file  
  
mode program  
  
set img_size 7m  
set flash off  
set wb auto  
set metering spot  
set iso 100  
adj_lens_shading set_ratio 60  
adj_lens_shading run
```

```
//adj_control progress_skip_sig

//----- Battery Level -----//

adj_control progress_sig_on
adj_control save_log_file

mode playback

adj_battery check 545 585
adj_battery level_set 520 544 555 575 532 //lock, empty,low,half,start
adj_battery run

//adj_control progress_skip_sig

//----- Shutter Close Time -----//

adj_control progress_sig_on
adj_control save_log_file

mode program

set iso auto
set metering multi

adj_sh_close preview_lum 100 300
adj_sh_close init_count 15
adj_sh_close init_hd 17
adj_sh_close limit 9

adj_sh_close run

//adj_control progress_skip_sig

set delay 30 //

//----- Flash -----//

adj_control progress_sig_on
adj_control save_log_file

mode program
set flash fill_in
```

### III . ADJUSTMENT

---

```
adj_flash trigger 300 800 2500
adj_flash min_limit 98 43
adj_flash mid_limit 363 117
adj_flash max_limit 805 185
adj_flash run

//adj_control progress_skip_sig

//----- AWB_H -----//

adj_control progress_sig_on
adj_control save_log_file

mode program
set ev 0
set wb auto
adj_awb run 521 643 302 335

//adj_control progress_skip_sig

set delay 20 //

//----- PUNT -----//

adj_control set_process_id 65534
adj_control progress_sig_on
adj_control save_log_file

mode program

adj_punt zoom 0 1 2 3 4 5 6 7
adj_punt focus_step_min 2 75 154 237 306 394 475 543
adj_punt focus_step_max 118 193 274 362 473 569 664 752
adj_punt focus_slope_min 48 63 66 73 76 70 57
adj_punt focus_slope_max 94 102 106 118 123 123 125

adj_punt run

//adj_control progress_skip_sig

//----- consumption current -----//
set delay 30
set zoom 0
set delay 10
set zoom 7
```

```
set delay 10
mode playback
set delay 10

power off

end total
```

※ SD Card, which will be used, have to be formatted on the PC.

### III . ADJUSTMENT

---

#### 4) B/T LEVEL ADJ

After changing the MAIN PCB, adjust the Standard Voltage LEVEL.

##### <How to adjust>

a...Prepare the POWER SUPPLY.

b...Connect the camera to the POWER SUPPLY.

c...Set the voltage to 2.71V.

d...Download the adjustment file and save it to SD memory card.

e...Insert the SD memory card that has the program file and turn on the camera.

f...Adjustment will be done automatically. (There are no information on the LCD)

g...After completed the adjustment, the camera is turned off automatically.

##### <Description of TXT file>

When modify the program, use the Memo Pad of Windows and save it as "th73f\_adj.txt".  
Use only section related to each adjustment.

```
//----- adjustmnet -----//  
  
start total  
  
set reset  
//adj_control progress_sig_start  
  
//----- OB -----//  
  
adj_control check_process_id 65535 //  
adj_control progress_sig_on  
adj_control save_log_file
```

```
mode program
set img_size 7m
set flash off
set wb auto

adj_ob set_range 100 4000

adj_ob run

//adj_control progress_skip_sig

//----- Lens Shading -----//

adj_control progress_sig_on
adj_control save_log_file

mode program

set img_size 7m
set flash off
set wb auto
set metering spot
set iso 100
adj_lens_shading set_ratio 60
adj_lens_shading run

//adj_control progress_skip_sig

//----- Battery Level -----//

adj_control progress_sig_on
adj_control save_log_file

mode playback

adj_battery check 545 585
adj_battery level_set 520 544 555 575 532 //lock, empty,low,half,start
adj_battery run

//adj_control progress_skip_sig

//----- Shutter Close Time -----//

adj_control progress_sig_on
adj_control save_log_file
```

### III . ADJUSTMENT

---

```
mode program

set iso auto
set metering multi

adj_sh_close preview_lum 100 300
adj_sh_close init_count 15
adj_sh_close init_hd 17
adj_sh_close limit 9

adj_sh_close run

//adj_control progress_skip_sig

set delay 30 //

//----- Flash -----//

adj_control progress_sig_on
adj_control save_log_file

mode program
set flash fill_in

adj_flash trigger 300 800 2500
adj_flash min_limit 98 43
adj_flash mid_limit 363 117
adj_flash max_limit 805 185
adj_flash run

//adj_control progress_skip_sig

//----- AWB_H -----//

adj_control progress_sig_on
adj_control save_log_file

mode program
set ev 0
set wb auto
adj_awb run 521 643 302 335

//adj_control progress_skip_sig
```



```
set delay 20 //

//----- PUNT -----//

adj_control set_process_id 65534
adj_control progress_sig_on
adj_control save_log_file

mode program

adj_punt zoom 0 1 2 3 4 5 6 7
adj_punt focus_step_min 2 75 154 237 306 394 475 543
adj_punt focus_step_max 118 193 274 362 473 569 664 752
adj_punt focus_slope_min 48 63 66 73 76 70 57
adj_punt focus_slope_max 94 102 106 118 123 123 125

adj_punt run

//adj_control progress_skip_sig

//----- consumption current -----//
set delay 30
set zoom 0
set delay 10
set zoom 7
set delay 10
mode playback
set delay 10

power off

end total
```

※ SD Card, which will be used, have to be formatted on the PC.

#### 5) SHUTTER CLOSE TIME ADJ

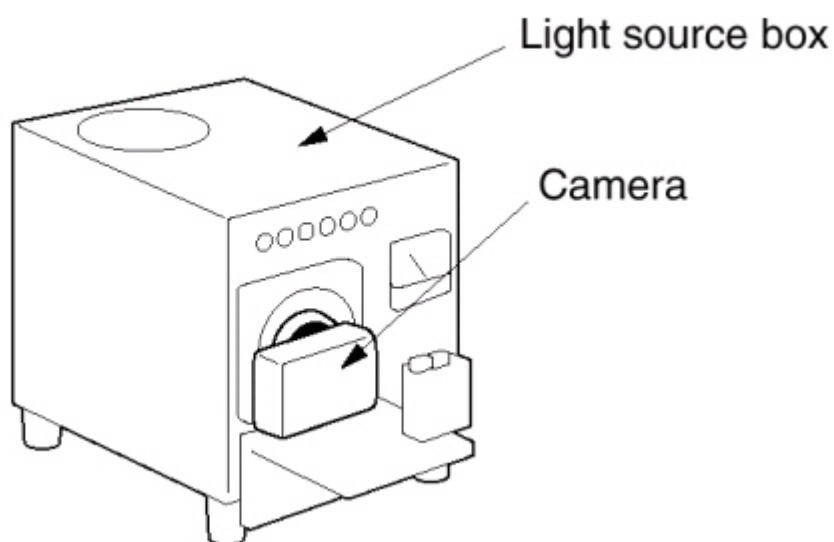
Adjust the Close Timing of each camera's mechanical shutter.

Required Equipment : AE TESTER(LV: 13, 3300K)

<How to adjust>

a...Prepare AE TESTER that can be test up to LV 13.

b...Attach the camera to the AE TESTER.



c...Set the LV to 13.

d...Download the adjustment file and save it to SD memory card.

e...Insert the SD memory card that has the program file and turn on the camera.

f...Adjustment will be done automatically.

g...After completed the adjustment, the camera is turned off automatically.

<Description of TXT file>

When modify the program, use the Memo Pad of Windows and save it as "th73f\_adj.txt".

Use only section related to each adjustment.

```
//----- adjustmnet -----//  
  
start total  
  
set reset  
//adj_control progress_sig_start  
  
//----- OB -----//  
  
adj_control check_process_id 65535 //  
adj_control progress_sig_on  
adj_control save_log_file  
  
mode program  
set img_size 7m  
set flash off  
set wb auto  
  
adj_ob set_range 100 4000  
  
adj_ob run  
  
//adj_control progress_skip_sig  
  
//----- Lens Shading -----//  
  
adj_control progress_sig_on  
adj_control save_log_file  
  
mode program  
  
set img_size 7m  
set flash off  
set wb auto  
set metering spot  
set iso 100  
adj_lens_shading set_ratio 60  
adj_lens_shading run  
  
//adj_control progress_skip_sig
```

### III . ADJUSTMENT

---

```
//----- Battery Level -----//

adj_control progress_sig_on
adj_control save_log_file

mode playback

adj_battery check 545 585
adj_battery level_set 520 544 555 575 532 //lock, empty,low,half,start
adj_battery run

//adj_control progress_skip_sig

//----- Shutter Close Time -----//

adj_control progress_sig_on
adj_control save_log_file

mode program

set iso auto
set metering multi

adj_sh_close preview_lum 100 300
adj_sh_close init_count 15
adj_sh_close init_hd 17
adj_sh_close limit 9

adj_sh_close run

//adj_control progress_skip_sig

set delay 30 //

//----- Flash -----//

adj_control progress_sig_on
adj_control save_log_file

mode program
set flash fill_in
```

```
adj_flash trigger 300 800 2500
adj_flash min_limit 98 43
adj_flash mid_limit 363 117
adj_flash max_limit 805 185
adj_flash run

//adj_control progress_skip_sig

//----- AWB_H -----//

adj_control progress_sig_on
adj_control save_log_file

mode program
set ev 0
set wb auto
adj_awb run 521 643 302 335

//adj_control progress_skip_sig

set delay 20 //

//----- PUNT -----//

adj_control set_process_id 65534
adj_control progress_sig_on
adj_control save_log_file

mode program

adj_punt zoom 0 1 2 3 4 5 6 7
adj_punt focus_step_min 2 75 154 237 306 394 475 543
adj_punt focus_step_max 118 193 274 362 473 569 664 752
adj_punt focus_slope_min 48 63 66 73 76 70 57
adj_punt focus_slope_max 94 102 106 118 123 123 125

adj_punt run

//adj_control progress_skip_sig

//----- consumption current -----//
set delay 30
set zoom 0
set delay 10
set zoom 7
set delay 10
```

### III . ADJUSTMENT

---

```
mode playback
set delay 10

power off

end total
```

※ SD Card, which will be used, have to be formatted on the PC.

## 6) CCD GAIN ADJ

This adjustment is for minimizing the gaps of CCD saturation level of each camera.

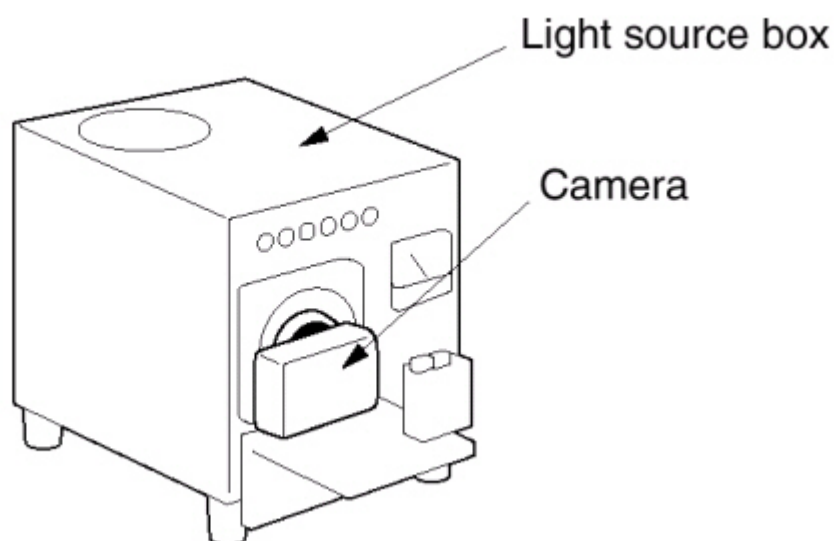
Required Equipment : AE TESTER(LV: 13, 3300K)

<How to adjust>

a...Download the adjustment file and save it to SD memory card.

b...Insert the SD memory card that has the program file and attach the camera to the AE TESTER.

c...Set the LV to 13.



d...Turn on the camera.

e...The adjustment will be done automatically.

f...After completed the adjustment, the camera is turned off automatically.

### III . ADJUSTMENT

---

<Description of TXT file>

When modify the program, use the Memo Pad of Windows and save it as "th73f\_adj.txt".

Use only section related to each adjustment.

```
//----- adjustmnet -----//

start total

set reset
//adj_control progress_sig_start

//----- OB -----//

adj_control check_process_id 65535 //
adj_control progress_sig_on
adj_control save_log_file

mode program
set img_size 7m
set flash off
set wb auto

adj_ob set_range 100 4000

adj_ob run

//adj_control progress_skip_sig

//----- Lens Shading -----//

adj_control progress_sig_on
adj_control save_log_file

mode program

set img_size 7m
set flash off
set wb auto
set metering spot
set iso 100
adj_lens_shading set_ratio 60
adj_lens_shading run

//adj_control progress_skip_sig
```



```
//----- Battery Level -----//  
  
adj_control progress_sig_on  
adj_control save_log_file  
  
mode playback  
  
adj_battery check 545 585  
adj_battery level_set 520 544 555 575 532 //lock, empty,low,half,start  
adj_battery run  
  
//adj_control progress_skip_sig  
  
//----- Shutter Close Time -----//  
  
adj_control progress_sig_on  
adj_control save_log_file  
  
mode program  
  
set iso auto  
set metering multi  
  
adj_sh_close preview_lum 100 300  
adj_sh_close init_count 15  
adj_sh_close init_hd 17  
adj_sh_close limit 9  
  
adj_sh_close run  
  
//adj_control progress_skip_sig  
  
set delay 30 //  
  
//----- Flash -----//  
  
adj_control progress_sig_on  
adj_control save_log_file  
  
mode program  
set flash fill_in
```

### III . ADJUSTMENT

---

```
adj_flash trigger 300 800 2500
adj_flash min_limit 98 43
adj_flash mid_limit 363 117
adj_flash max_limit 805 185
adj_flash run

//adj_control progress_skip_sig

//----- AWB_H -----//

adj_control progress_sig_on
adj_control save_log_file

mode program
set ev 0
set wb auto
adj_awb run 521 643 302 335

//adj_control progress_skip_sig

set delay 20 //

//----- PUNT -----//

adj_control set_process_id 65534
adj_control progress_sig_on
adj_control save_log_file

mode program

adj_punt zoom 0 1 2 3 4 5 6 7
adj_punt focus_step_min 2 75 154 237 306 394 475 543
adj_punt focus_step_max 118 193 274 362 473 569 664 752
adj_punt focus_slope_min 48 63 66 73 76 70 57
adj_punt focus_slope_max 94 102 106 118 123 123 125

adj_punt run

//adj_control progress_skip_sig

//----- consumption current -----//
set delay 30
set zoom 0
set delay 10
```

```
set zoom 7
set delay 10
mode playback
set delay 10

power off

end total
```

※ SD Card, which will be used, have to be formatted on the PC.

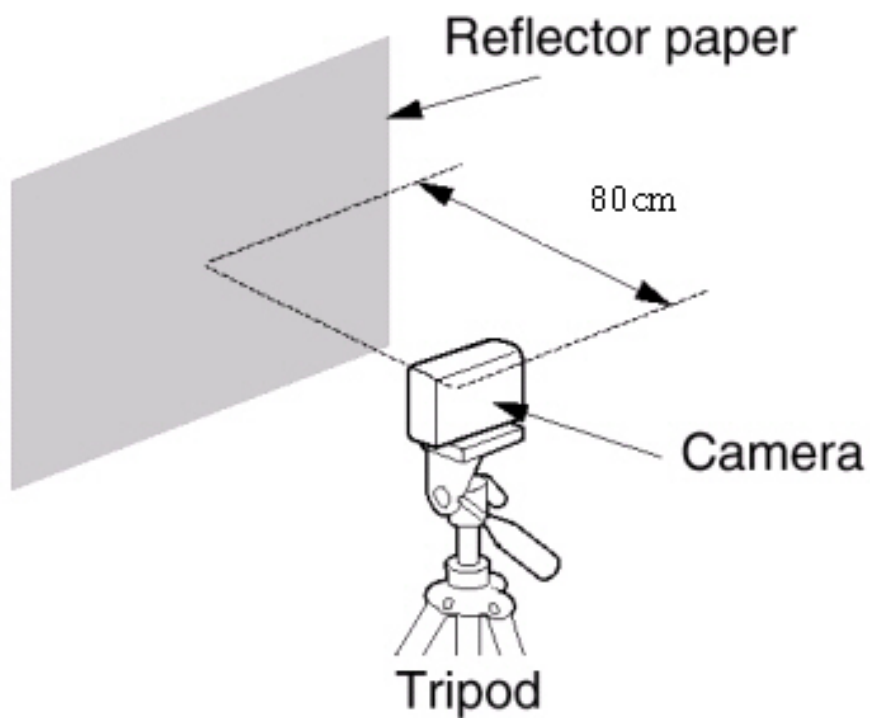
### III . ADJUSTMENT

---

#### 7) FLASH ADJ

<How to adjust>

- a...Arrange a 18% reflect chart in a darkroom.
- b...Arrange a camera in a darkroom. (Use TRIPOD)
- c...The distance between the reflect chart and the camera should be 80cm.



- d...Download the adjustment file and save it to SD memory card.
- e...Insert the SD memory card that has the program file and turn on the camera.
- f...Adjustment will be done automatically.
- g...After completed the adjustment, the camera is turned off automatically.

<Description of TXT file>

When modify the program, use the Memo Pad of Windows and save it as "th73f\_adj.txt".

Use only section related to each adjustment.

```
//----- adjustmnet -----//

start total

set reset
//adj_control progress_sig_start

//----- OB -----//

adj_control check_process_id 65535 //
adj_control progress_sig_on
adj_control save_log_file

mode program
set img_size 7m
set flash off
set wb auto

adj_ob set_range 100 4000

adj_ob run

//adj_control progress_skip_sig

//----- Lens Shading -----//

adj_control progress_sig_on
adj_control save_log_file

mode program

set img_size 7m
set flash off
set wb auto
set metering spot
set iso 100
adj_lens_shading set_ratio 60
adj_lens_shading run
```

### III . ADJUSTMENT

---

```
//adj_control progress_skip_sig

//----- Battery Level -----//

adj_control progress_sig_on
adj_control save_log_file

mode playback

adj_battery check 545 585
adj_battery level_set 520 544 555 575 532 //lock, empty,low,half,start
adj_battery run

//adj_control progress_skip_sig

//----- Shutter Close Time -----//

adj_control progress_sig_on
adj_control save_log_file

mode program

set iso auto
set metering multi

adj_sh_close preview_lum 100 300
adj_sh_close init_count 15
adj_sh_close init_hd 17
adj_sh_close limit 9

adj_sh_close run

//adj_control progress_skip_sig

set delay 30 //

//----- Flash -----//

adj_control progress_sig_on
adj_control save_log_file

mode program
set flash fill_in
```

```
adj_flash trigger 300 800 2500
adj_flash min_limit 98 43
adj_flash mid_limit 363 117
adj_flash max_limit 805 185
adj_flash run

//adj_control progress_skip_sig

//----- AWB_H -----//

adj_control progress_sig_on
adj_control save_log_file

mode program
set ev 0
set wb auto
adj_awb run 521 643 302 335

//adj_control progress_skip_sig

set delay 20 //

//----- PUNT -----//

adj_control set_process_id 65534
adj_control progress_sig_on
adj_control save_log_file

mode program

adj_punt zoom 0 1 2 3 4 5 6 7
adj_punt focus_step_min 2 75 154 237 306 394 475 543
adj_punt focus_step_max 118 193 274 362 473 569 664 752
adj_punt focus_slope_min 48 63 66 73 76 70 57
adj_punt focus_slope_max 94 102 106 118 123 123 125

adj_punt run

//adj_control progress_skip_sig

//----- consumption current -----//
set delay 30
set zoom 0
set delay 10
set zoom 7
```

### III . ADJUSTMENT

---

```
set delay 10
mode playback
set delay 10

power off

end total
```

※ SD Card, which will be used, have to be formatted on the PC.



## 8) FOCUS ADJ

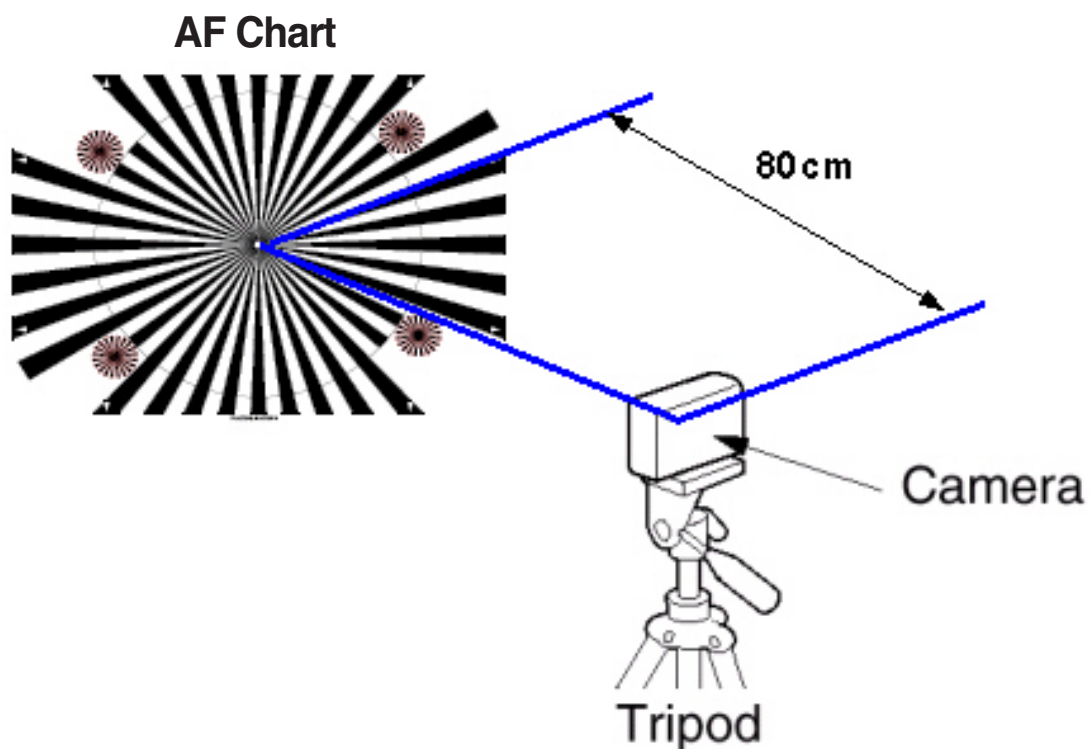
Adjust the Focus Range.

< How to adjust >

a...Arrange a chart for adjust the FOCUS.

b...Attach the camera to the tripod.

c...The distance between the chart and the camera should be 80cm.



d...Download the adjustment file and save it to SD memory card.

e...Insert the SD memory card that has the program file and turn on the camera.

f...Adjustment will be done automatically.

g...After completed the adjustment, the camera is turned off automatically.

### III . ADJUSTMENT

---

<Description of TXT file>

When modify the program, use the Memo Pad of Windows and save it as "th73f\_adj.txt".

Use only section related to each adjustment.

```
//----- adjustmnet -----//  
  
start total  
  
set reset  
//adj_control progress_sig_start  
  
//----- OB -----//  
  
adj_control check_process_id 65535 //  
adj_control progress_sig_on  
adj_control save_log_file  
  
mode program  
set img_size 7m  
set flash off  
set wb auto  
  
adj_ob set_range 100 4000  
  
adj_ob run  
  
//adj_control progress_skip_sig  
  
//----- Lens Shading -----//  
  
adj_control progress_sig_on  
adj_control save_log_file  
  
mode program  
  
set img_size 7m  
set flash off  
set wb auto  
set metering spot  
set iso 100  
adj_lens_shading set_ratio 60  
adj_lens_shading run
```

```
//adj_control progress_skip_sig

//----- Battery Level -----//

adj_control progress_sig_on
adj_control save_log_file

mode playback

adj_battery check 545 585
adj_battery level_set 520 544 555 575 532 //lock, empty,low,half,start
adj_battery run

//adj_control progress_skip_sig

//----- Shutter Close Time -----//

adj_control progress_sig_on
adj_control save_log_file

mode program

set iso auto
set metering multi

adj_sh_close preview_lum 100 300
adj_sh_close init_count 15
adj_sh_close init_hd 17
adj_sh_close limit 9

adj_sh_close run

//adj_control progress_skip_sig

set delay 30 //

//----- Flash -----//

adj_control progress_sig_on
adj_control save_log_file

mode program
set flash fill_in
```

### III . ADJUSTMENT

---

```
adj_flash trigger 300 800 2500
adj_flash min_limit 98 43
adj_flash mid_limit 363 117
adj_flash max_limit 805 185
adj_flash run

//adj_control progress_skip_sig

//----- AWB_H -----//

adj_control progress_sig_on
adj_control save_log_file

mode program
set ev 0
set wb auto
adj_awb run 521 643 302 335

//adj_control progress_skip_sig

set delay 20 //

//----- PUNT -----//

adj_control set_process_id 65534
adj_control progress_sig_on
adj_control save_log_file

mode program

adj_punt zoom 0 1 2 3 4 5 6 7
adj_punt focus_step_min 2 75 154 237 306 394 475 543
adj_punt focus_step_max 118 193 274 362 473 569 664 752
adj_punt focus_slope_min 48 63 66 73 76 70 57
adj_punt focus_slope_max 94 102 106 118 123 123 125

adj_punt run

//adj_control progress_skip_sig
```

```
//----- consumption current -----//  
set delay 30  
set zoom 0  
set delay 10  
set zoom 7  
set delay 10  
mode playback  
set delay 10  
  
power off  
  
end total
```

※ SD Card, which will be used, have to be formatted on the PC.

#### 9) BURNING TEST

Check whether the camera operates correctly or not.

a...Download the adjustment file and save it to SD memory card.

b...Insert the SD memory card that has the program file and turn on the camera.

c...Adjustment will be done automatically.

※ After completing the functions, "Burning END" message will display and the camera turn off automatically.

<Description of TXT file>

When modify the program, use the Memo Pad of Windows and save it as "th73f\_adj.txt".

Use only section related to each adjustment.

(After done the Burning Test, It will be better to make this adjustment)

```
// Burn_In //  
  
start BURNING //  
  
burn repeat 15  
  
adj_control check__process__id 65532 //3  
  
format keep__adj //4  
  
mode program //5  
set reset //6  
  
set sound__vol low //7  
set img__size 7m //8  
set flash off //9  
  
// WIDE Shot //  
  
set zoom 0 //10  
set delay 10 //11  
capture image //12  
set delay 5 //13
```

```
// TELE flash shot //

set flash fill_in //14
set zoom 7 //15
set delay 10 //16
capture image //17
set delay 5 //18

// WIDE flash shot //

set zoom 0 //19
set delay 10 //20
capture image //21
set delay 5 //22

// WIDE IMAGE shot //

set flash off //23
set img_size 5m_w //24
set delay 10 //25
capture image //26
set img_size 7m //27
set delay 5 //28

// ISO 1000 shot //

set iso 1000 //29
set delay 10 //30
capture image //31
set iso auto //32
set delay 5 //33

// MACRO shot //

set focus macro //34
set delay 10 //35
capture image //36
set focus normal //37
set delay 5 //38

// AEB shot //

set shooting aeb //39
set delay 10 //40
capture image //41
```

### III . ADJUSTMENT

---

```
set delay 5 //42
set shooting single //43
set delay 5 //44

// Self Timer shot //

set self_timer 2sec //45
set delay 10 //46
capture image //47
set delay 30 //48
set self_timer off //49
set delay 10 //50 //delay: 5 --> 10

// Photo Frame shot //

capture photoframe__set //51
set delay 10 //52
capture image //53
set delay 10 //54 //delay: 5 --> 10

// division shot //

capture composite //55
set delay 10 //56

// movie clip shot //

mode movie //57
set delay 10 //58
capture video 25 //59
set delay 30 //60
mode playback //61
set delay 10 //62
movie play //63
set delay 260 //64

// MP3 play //

set mp3__volume 20 //65
set delay 10 //66
mp3 start //67
set delay 30 //68

mode playback //69
set delay 5 //70
playback right //71
```



```
set delay 5 //72
playback right //73
set delay 5 //74
playback right //75
set delay 5 //76
playback right //77
set delay 5 //78
playback right //79
set delay 5 //80
playback right //81
set delay 5 //82
playback right //83
set delay 5 //84
playback right //85
set delay 5 //86
playback right //87
set delay 5 //88
playback right //89
set delay 5 //90
playback right //91
set delay 5 //92

mode program //93

end BURNING

start CCDdefect

// image shot for inspeting high iso noise //

format internal
set delay 20

mount internal
set delay 20

set iso 1000

set flash fill_in
set delay 10
capture image
set delay 10

set flash off
set delay 10
```

### III . ADJUSTMENT

---

```
capture image
set delay 10

mount card

set delay 20

set iso auto

// CCD Defect adj //

adj_control set__process__id 65528
adj_control save__log__file
adj_control progress__sig__on

mode program

adj_defective__pixel ref__level1 3100
adj_defective__pixel white__defect__num 3000
adj_defective__pixel run

set delay 30

power off

end CCDdefect
```

※ SD Card, which will be used, have to be formatted on the PC.

## 10) CCD DEFECT CELL

After changing the MAIN PCB and CCD, adjust the defect of the CCD CELL.

<How to adjust>

- a...Download the adjustment file and save it to SD memory card.
- b...Insert the SD memory card that has the program file and turn on the camera.
- c...Adjustment will be done automatically.
- d...After completed the adjustment, the camera is turned off automatically.

<Description of TXT file>

When modify the program, use the Memo Pad of Windows and save it as "th73f\_adj.txt".

Use only section related to each adjustment.

(After done the Burning Test, It will be better to make this adjustment)

```
// Burn_In //  
  
start BURNING //  
  
burn repeat 15  
  
adj_control check_process_id 65532 //3  
  
format keep_adj //4  
  
mode program //5  
set reset //6  
  
set sound_vol low //7  
set img_size 7m //8  
set flash off //9  
  
// WIDE shot //  
  
set zoom 0 //10  
set delay 10 //11
```

### III . ADJUSTMENT

---

```
capture image //12
set delay 5 //13

// TELE flash shot //

set flash fill_in //14
set zoom 7 //15
set delay 10 //16
capture image //17
set delay 5 //18

// WIDE flash shot //

set zoom 0 //19
set delay 10 //20
capture image //21
set delay 5 //22

// WIDE IMAGE shot //

set flash off //23
set img_size 5m_w //24
set delay 10 //25
capture image //26
set img_size 7m //27
set delay 5 //28

// ISO 1000 shot //

set iso 1000 //29
set delay 10 //30
capture image //31
set iso auto //32
set delay 5 //33

// MACRO shot //

set focus macro //34
set delay 10 //35
capture image //36
set focus normal //37
set delay 5 //38

// AEB shot //
```

```
set shooting aeb //39
set delay 10 //40
capture image //41
set delay 5 //42
set shooting single //43
set delay 5 //44

// Self Timer shot //

set self_timer 2sec //45
set delay 10 //46
capture image //47
set delay 30 //48
set self_timer off //49
set delay 10 //50 //delay: 5 --> 10

// Photo Frame shot //

capture photoframe_set //51
set delay 10 //52
capture image //53
set delay 10 //54 //delay: 5 --> 10

// division shot //

capture composite //55
set delay 10 //56

// movie clip shot //

mode movie //57
set delay 10 //58
capture video 25 //59
set delay 30 //60
mode playback //61
set delay 10 //62
movie play //63
set delay 260 //64

// MP3 play//
set mp3_volume 20 //65
set delay 10 //66
mp3 start //67
set delay 30 //68
```

### III . ADJUSTMENT

---

```
mode playback //69
set delay 5 //70
playback right //71
set delay 5 //72
playback right //73
set delay 5 //74
playback right //75
set delay 5 //76
playback right //77
set delay 5 //78
playback right //79
set delay 5 //80
playback right //81
set delay 5 //82
playback right //83
set delay 5 //84
playback right //85
set delay 5 //86
playback right //87
set delay 5 //88
playback right //89
set delay 5 //90
playback right //91
set delay 5 //92

mode program //93

end BURNING

start CCDdefect

// image shot for inspeting high iso noise //

format internal
set delay 20

mount internal
set delay 20

set iso 1000

set flash fill_in
set delay 10
capture image
set delay 10
```

```
set flash off
set delay 10
capture image
set delay 10

mount card

set delay 20

set iso auto

// CCD Defect adj //

adj_control set__process__id 65528
adj_control save__log__file
adj_control progress__sig__on

mode program

adj_defective__pixel ref__level1 3100
adj_defective__pixel white__defect__num 3000
adj_defective__pixel run

set delay 30

power off

end CCDdefect
```

※ SD Card, which will be used, have to be formatted on the PC.

#### 11) EEPROM READ

Make the adjustment data file by reading them in the camera.

<How to Read>

- a...Download the adjustment file and save it to SD memory card.
- b...Insert the SD memory card that has the program file and turn on the camera.
- c...Turn on the camera and the DATA in the EEPROM will be copied in the SD card.
- d...Turn off the camera after reading and saving the data.
- e... If you read the SD card in your PC, you can check the EEPROM DATA.



## 12) EEPROM WRITE

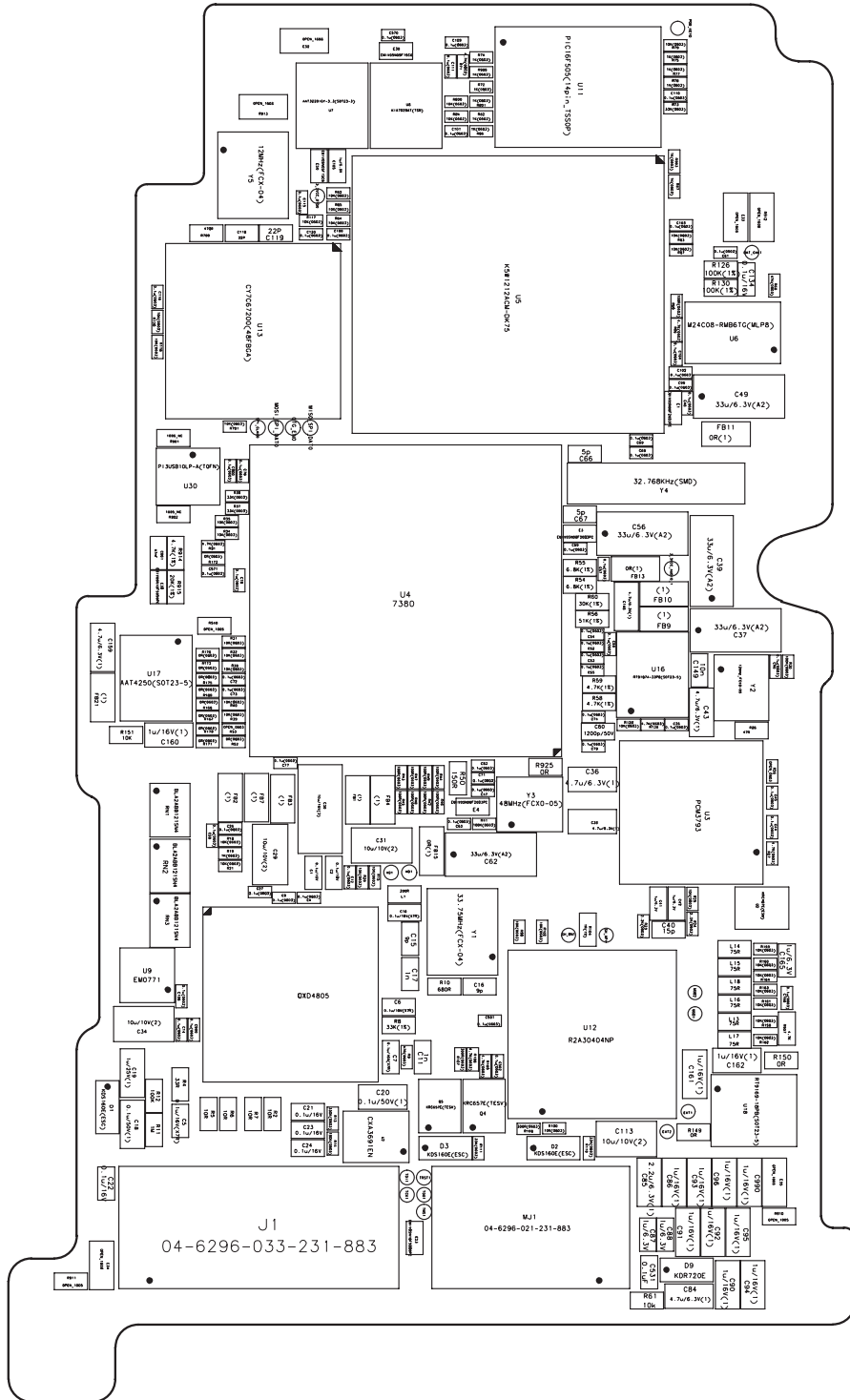
If you want to write the DATA of EEPROM, do as follows.

<How to Write>

- a...Download the adjustment file and save it to SD memory card.
- b...Insert the SD memory card that has the program file and turn on the camera.
- c...Turn on the camera and the data of EEPROM will be copied to the camera.
- d...When the copy is complete, the camera is turned off automatically.



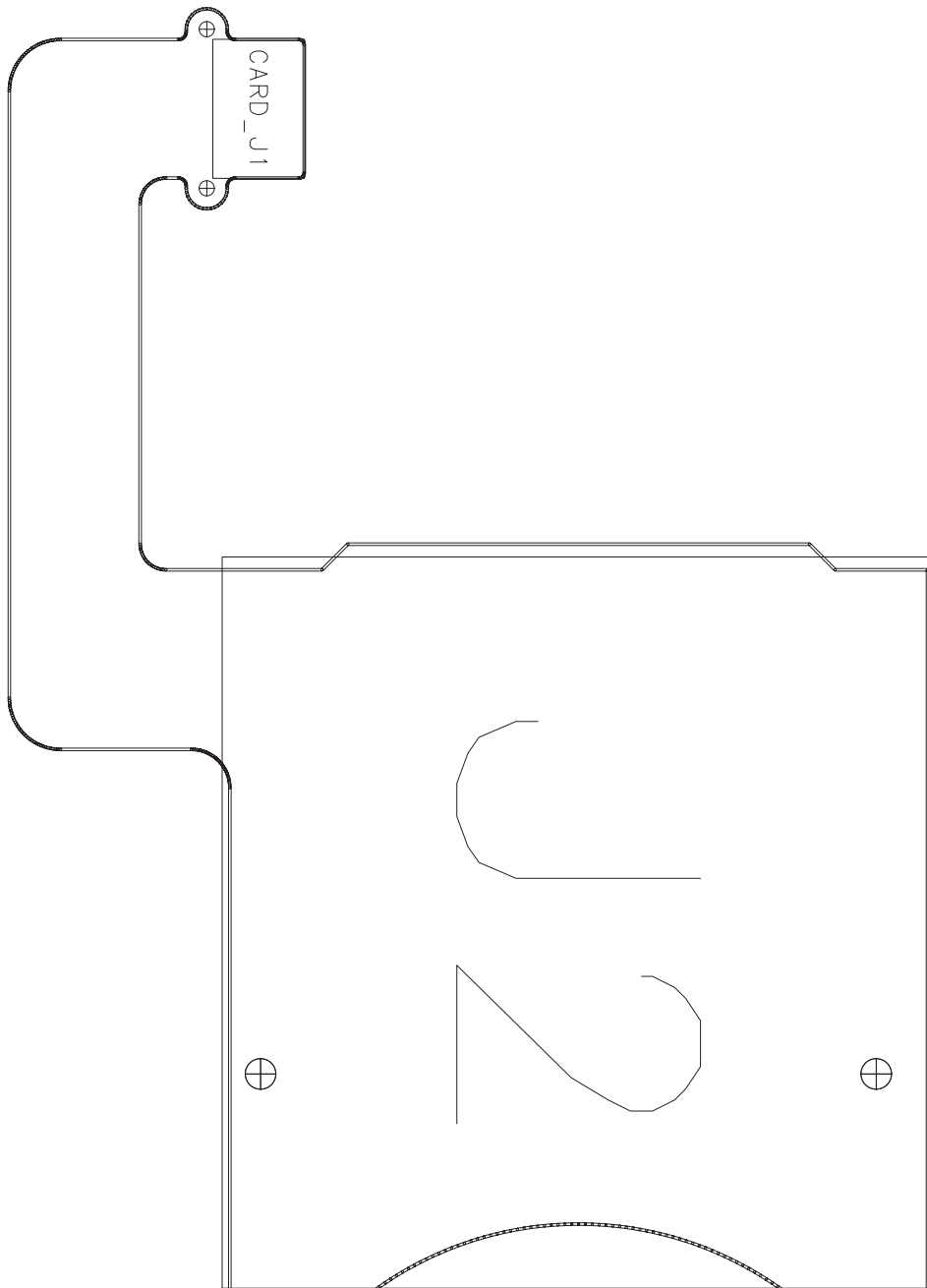
2) MAIN\_BOTTOM



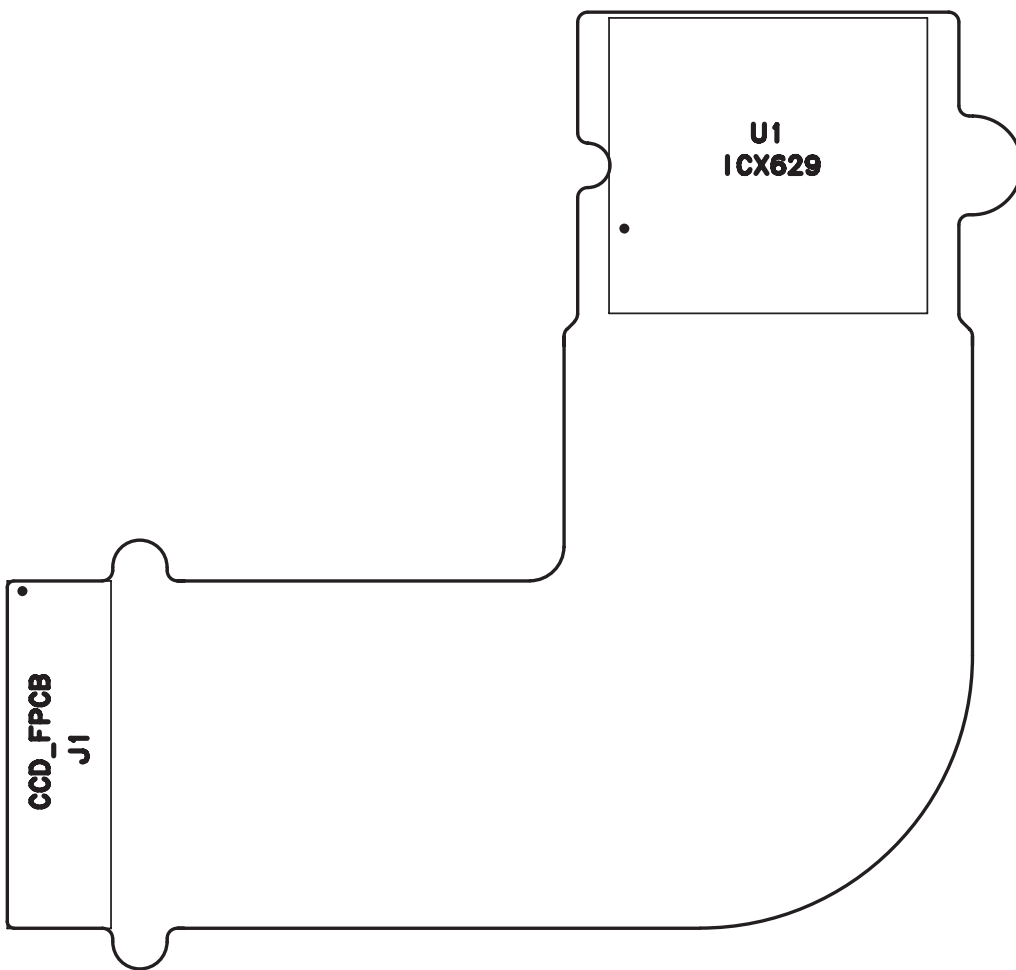
IV. PATTERN DIAGRAM

---

3) CARD\_FPCB

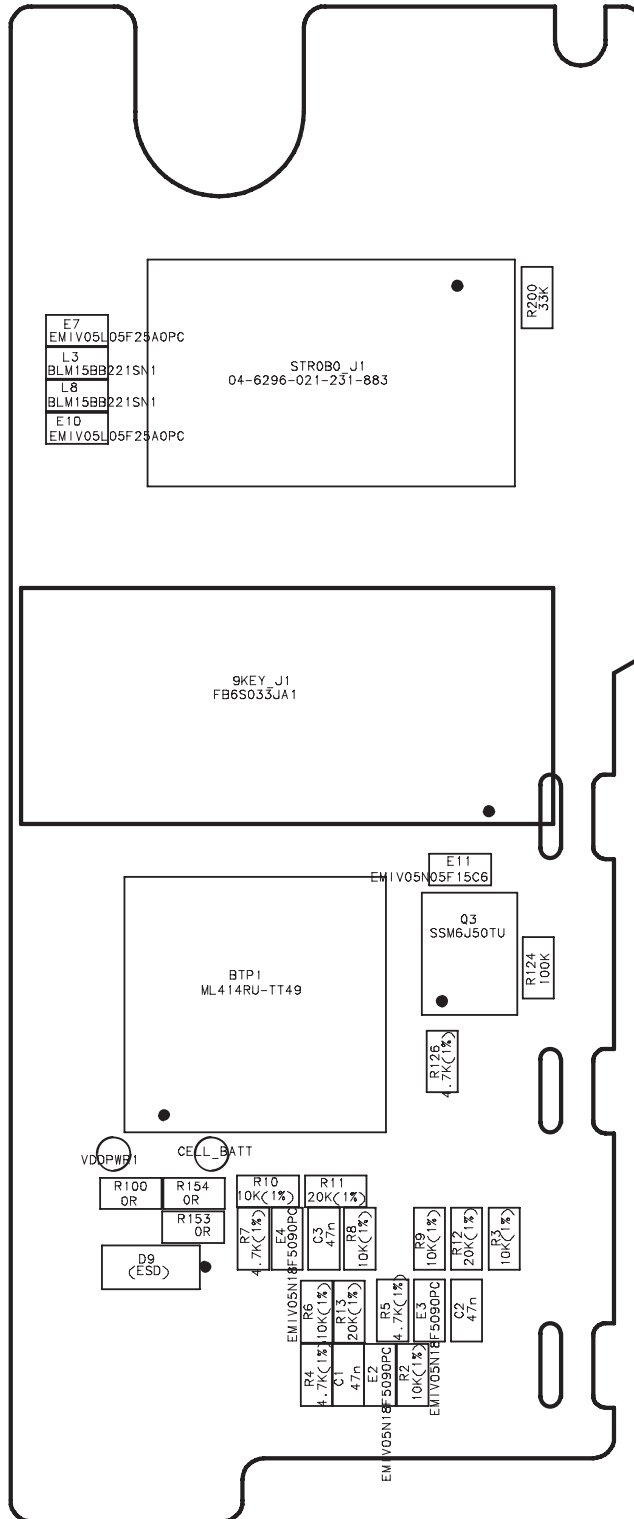


4) CCD\_FPCB

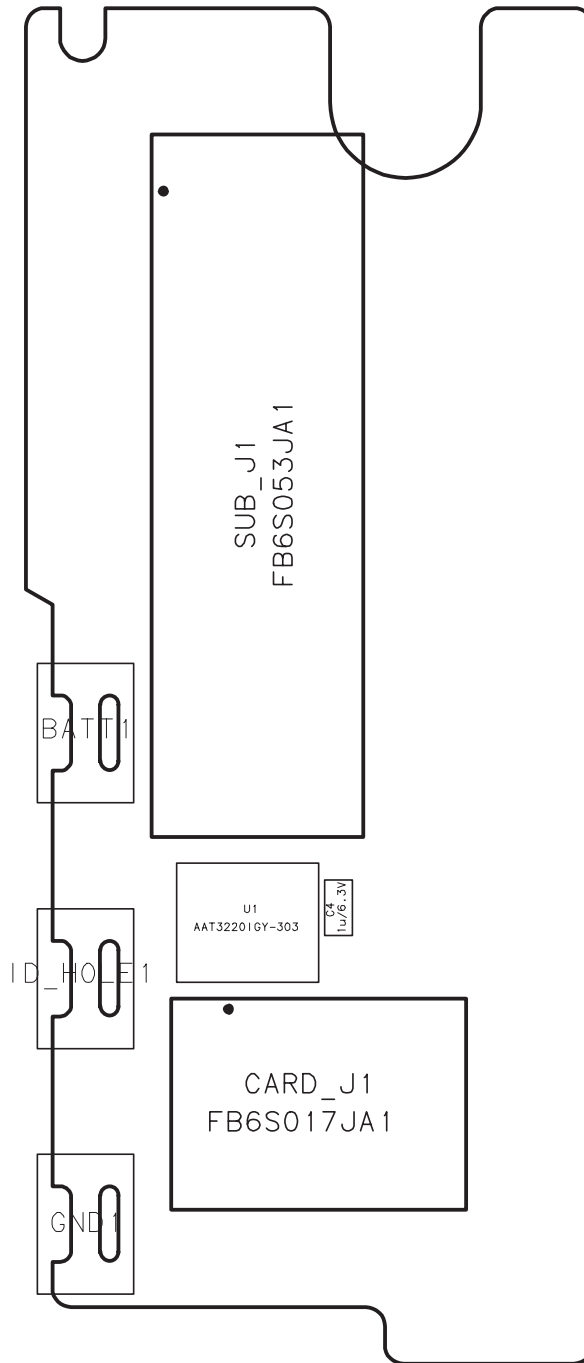


# IV. PATTERN DIAGRAM

## 5) SUB\_FPCB\_TOP



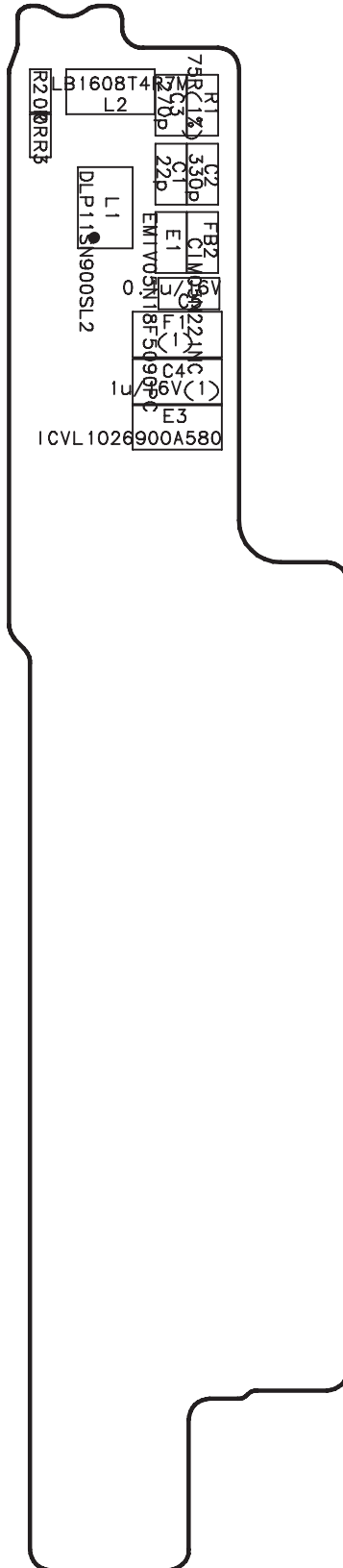
6) SUB\_FPCB\_BOTTOM



IV. PATTERN DIAGRAM

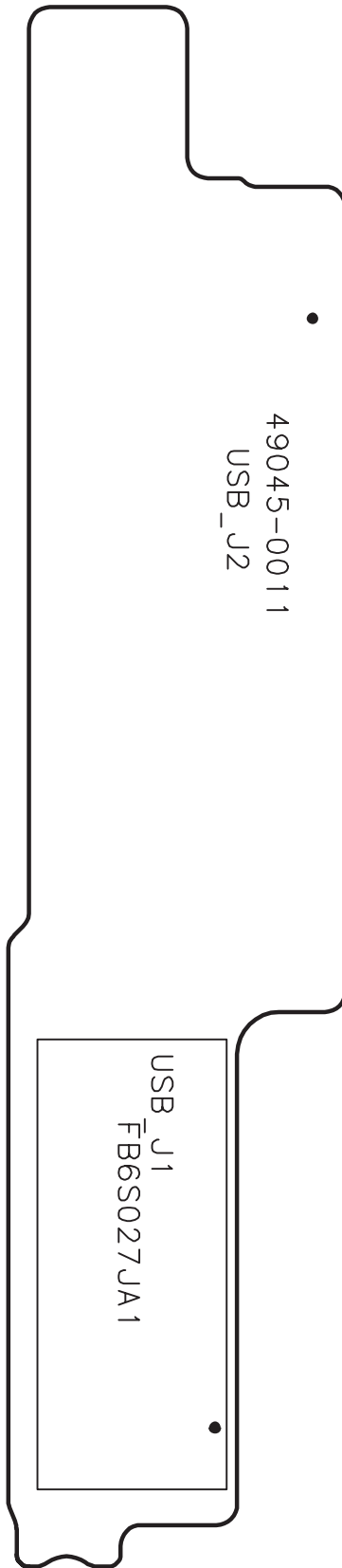
---

7) USB\_FPCB\_TOP





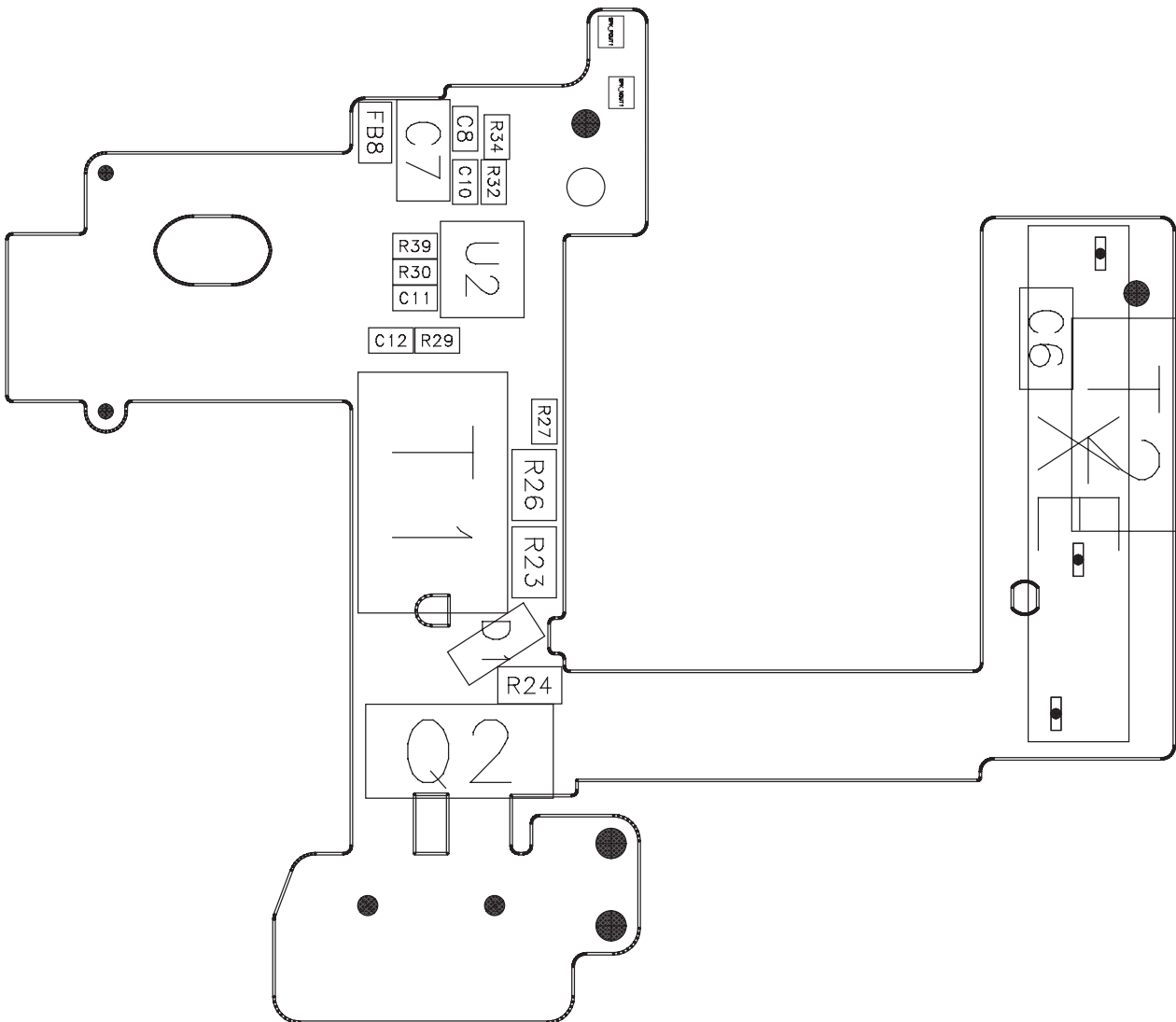
8) USB\_FPCB\_BOTTOM



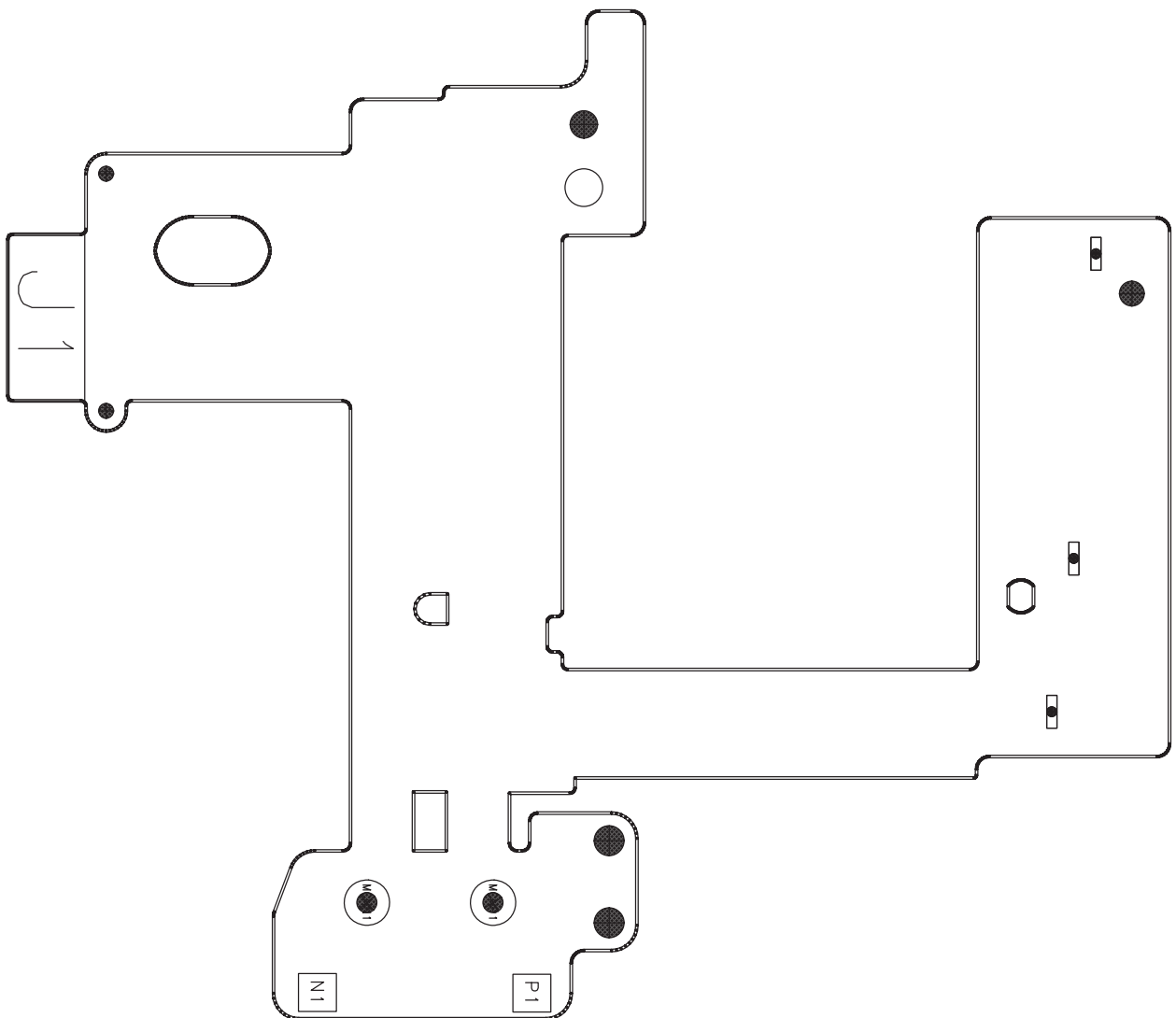
#### IV. PATTERN DIAGRAM

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##### 9) STROBO\_FPCB\_TOP

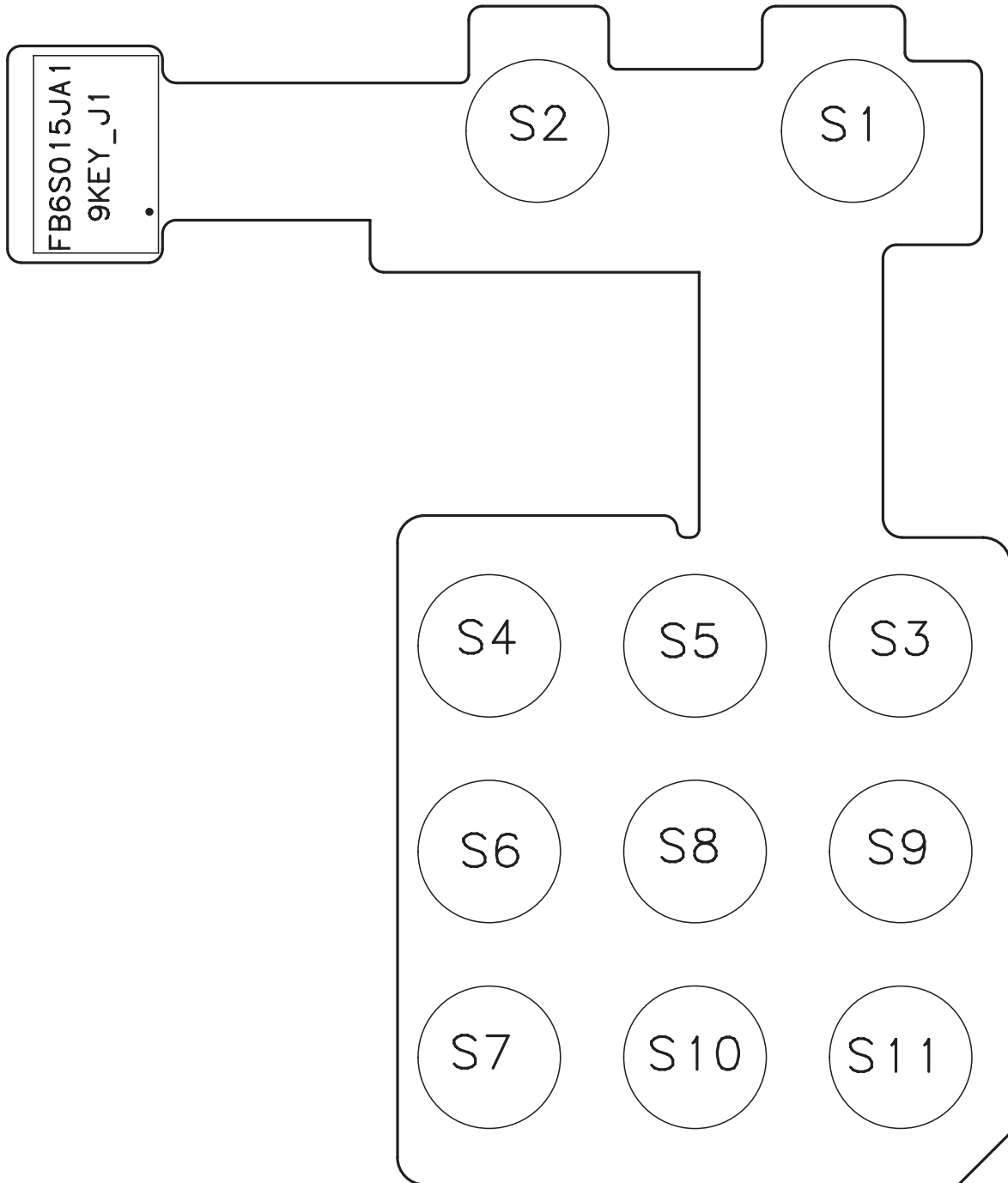


10) STROBO\_FPCB\_BOTTOM





12) KEY\_FPCB



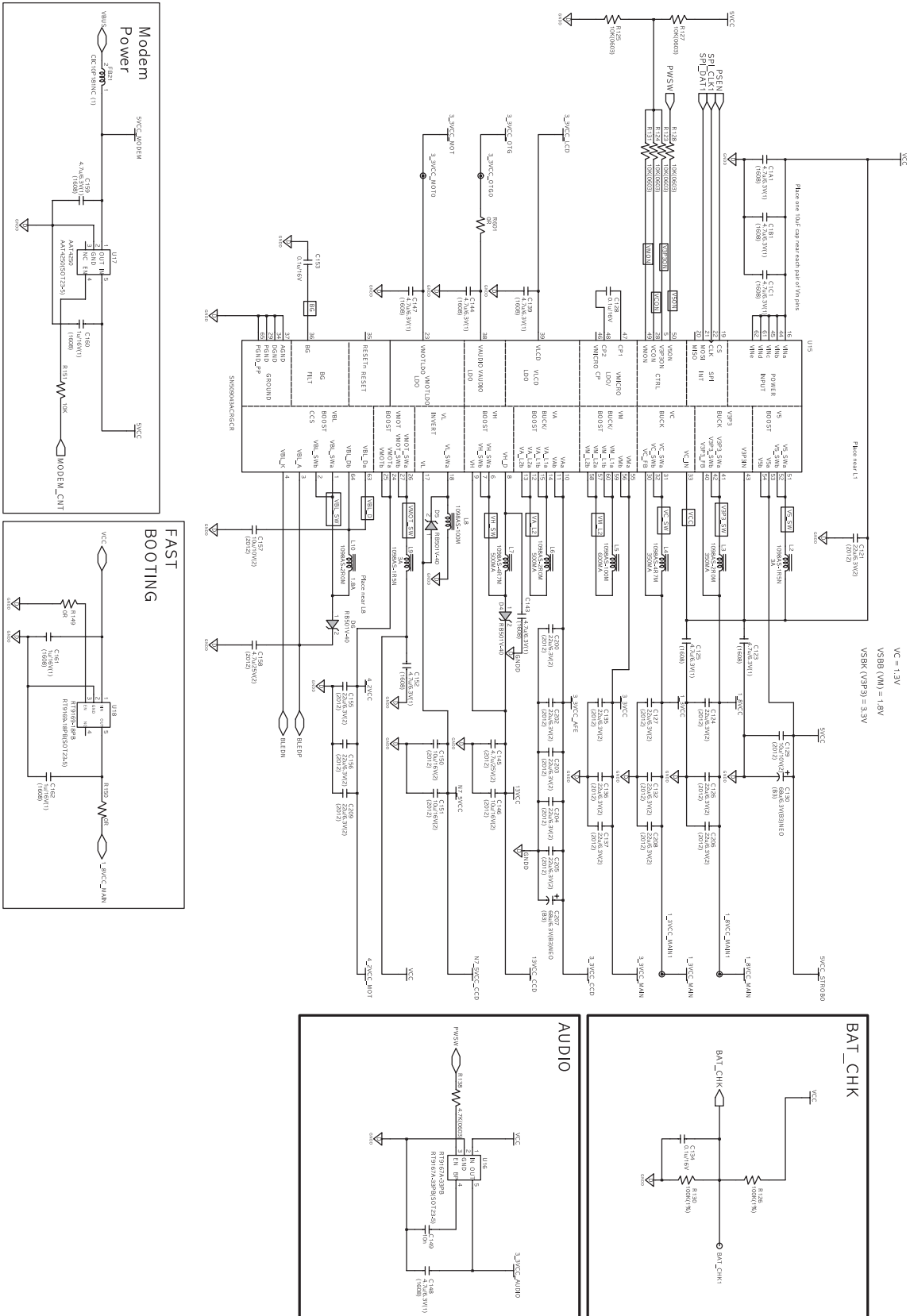






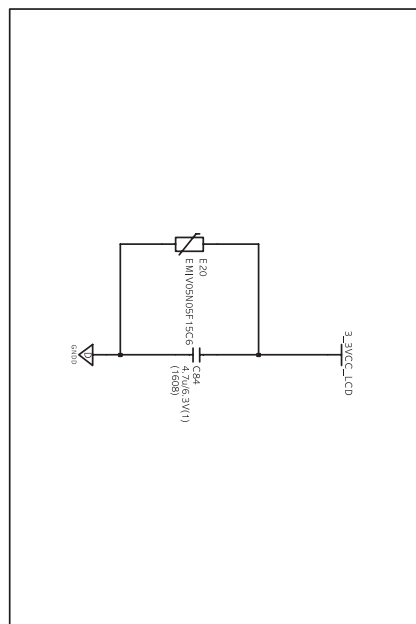
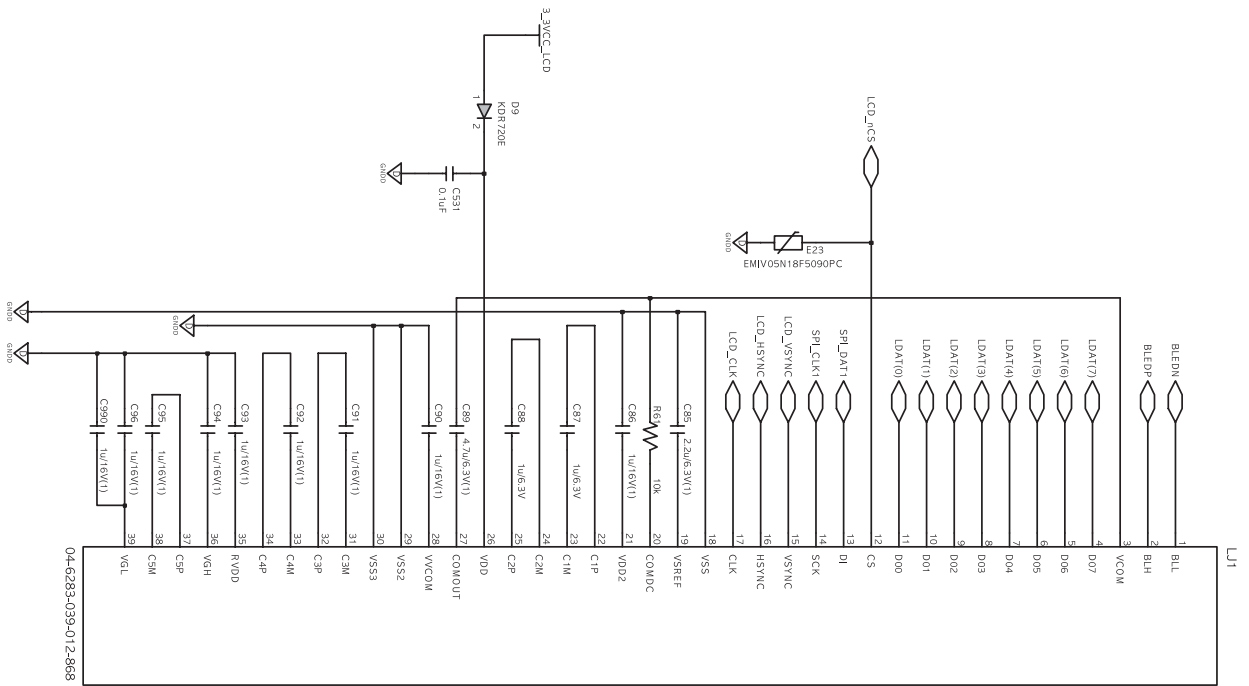


4) MAIN\_POWER



# V. CIRCUIT DIAGRAM

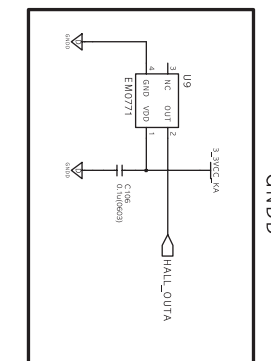
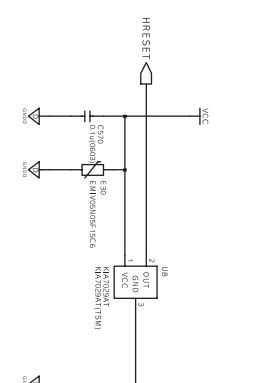
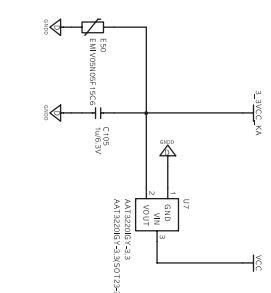
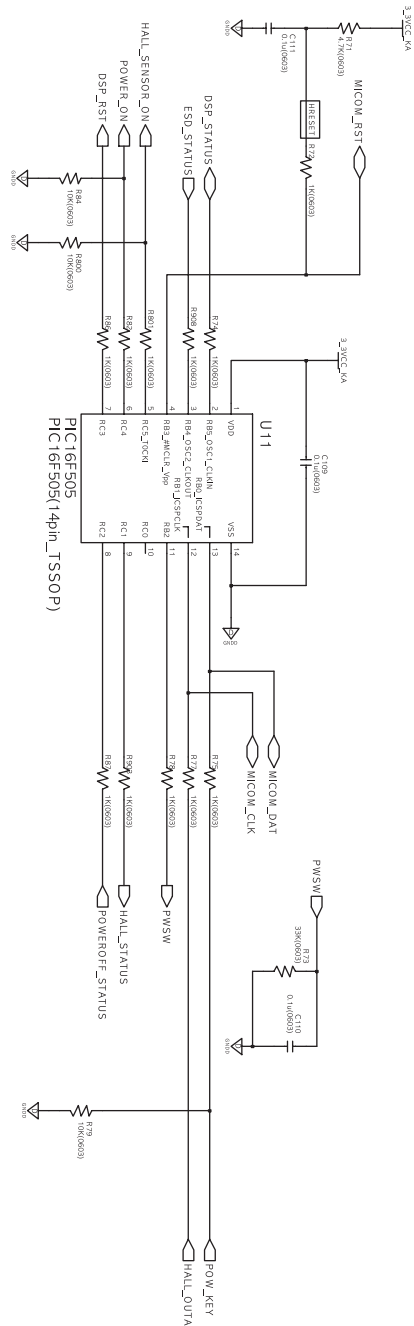
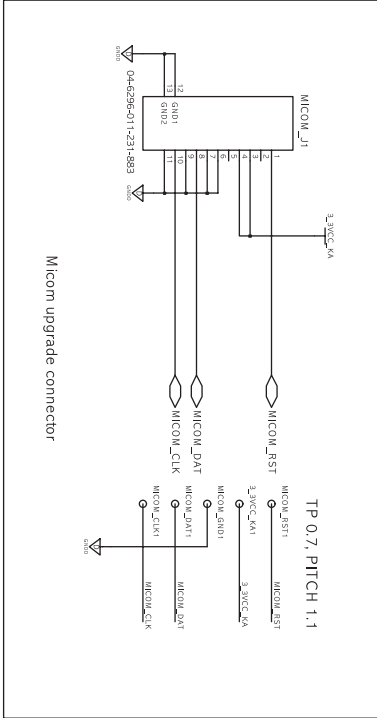
## 5) MAIN\_LCD





# V. CIRCUIT DIAGRAM

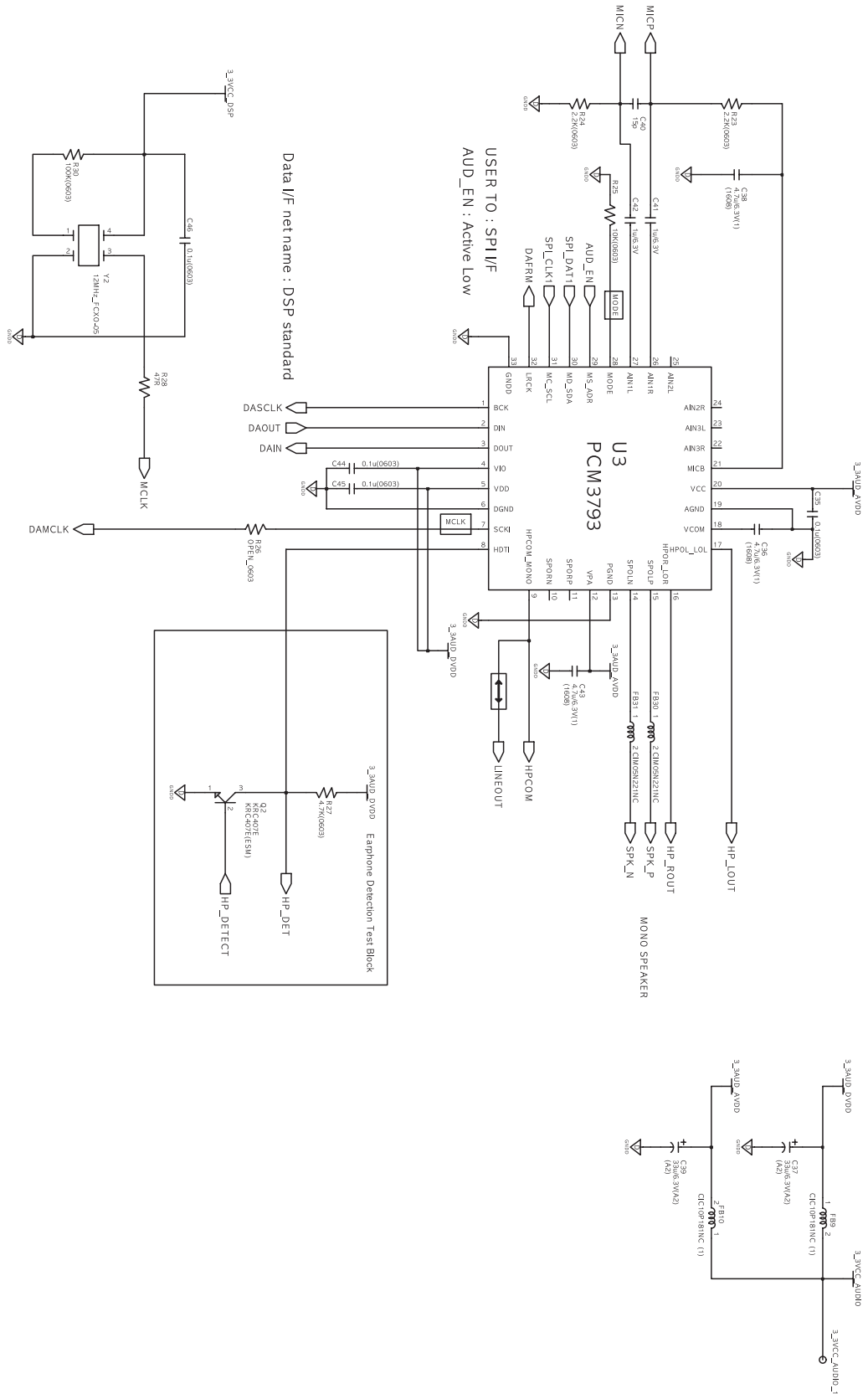
## 7) MAIN\_MICOM



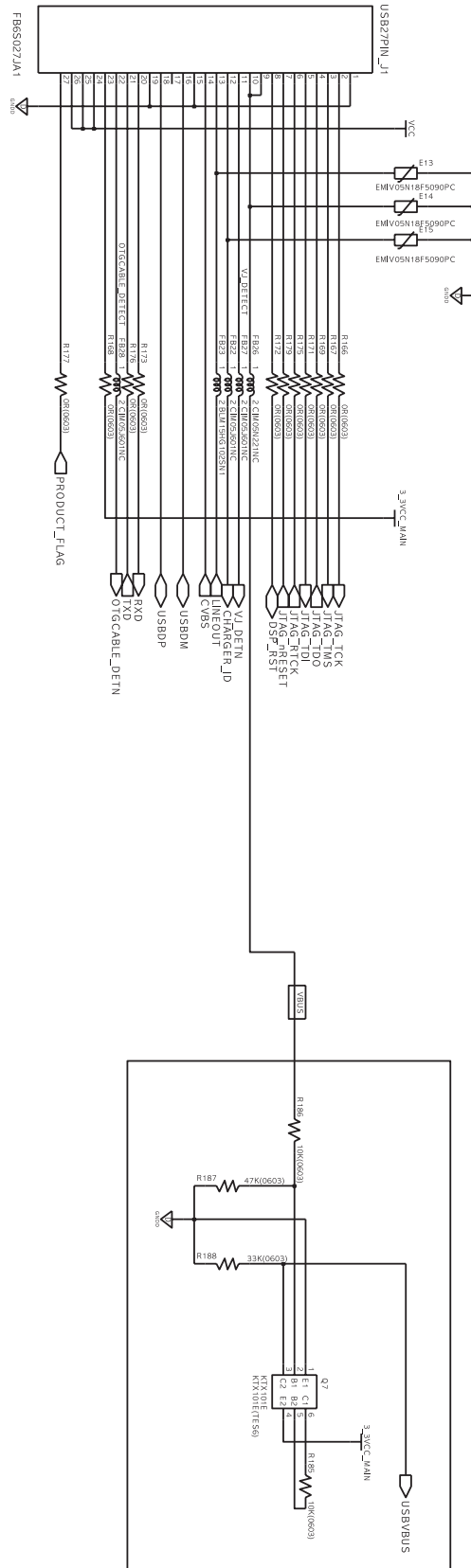


# V. CIRCUIT DIAGRAM

## 9) MAIN\_AUDIO

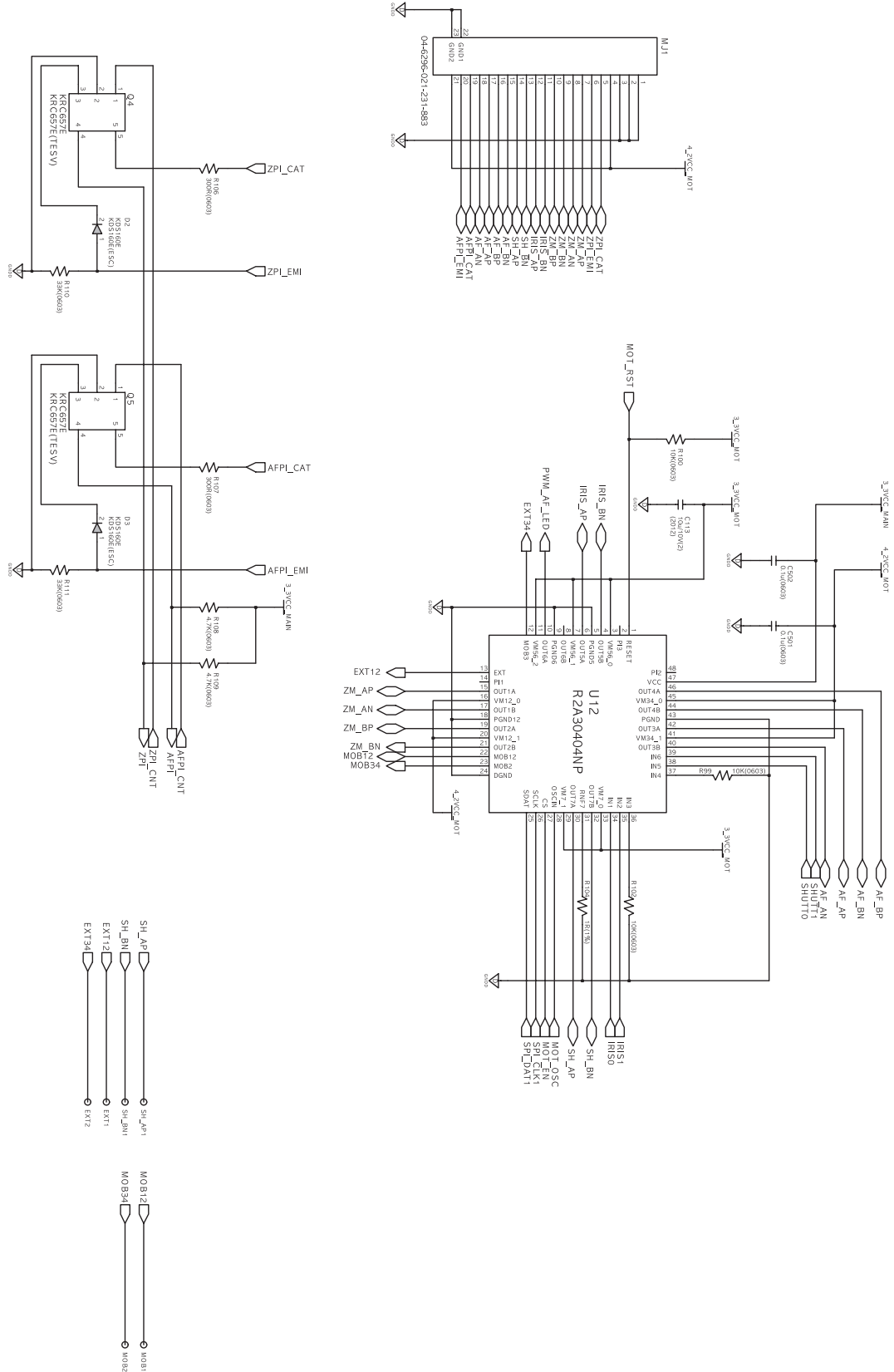


10) MAIN\_USB\_27PIN



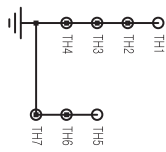
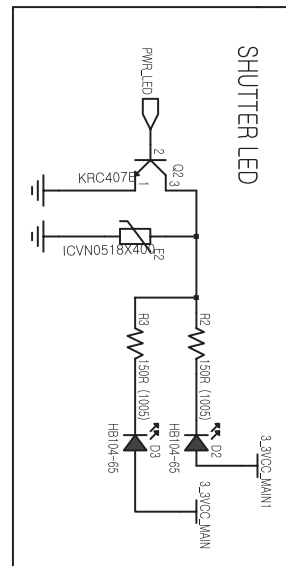
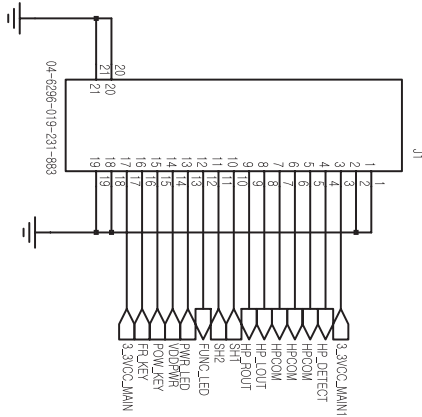
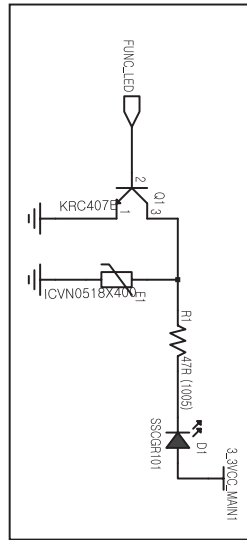
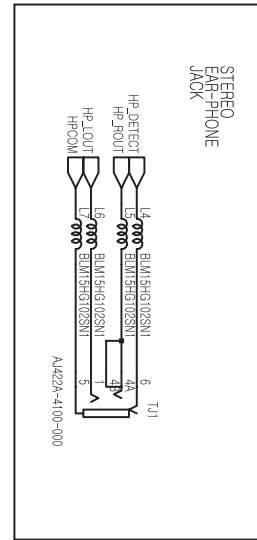
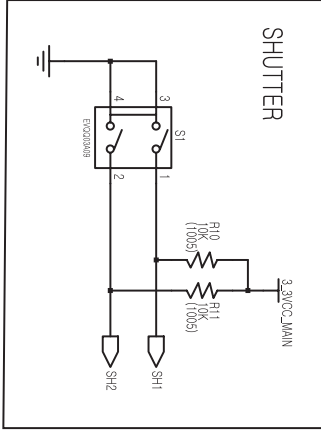
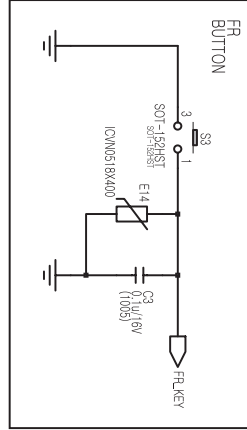
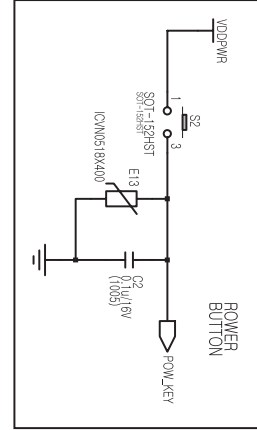
# V. CIRCUIT DIAGRAM

## 11) MAIN\_MOTOR



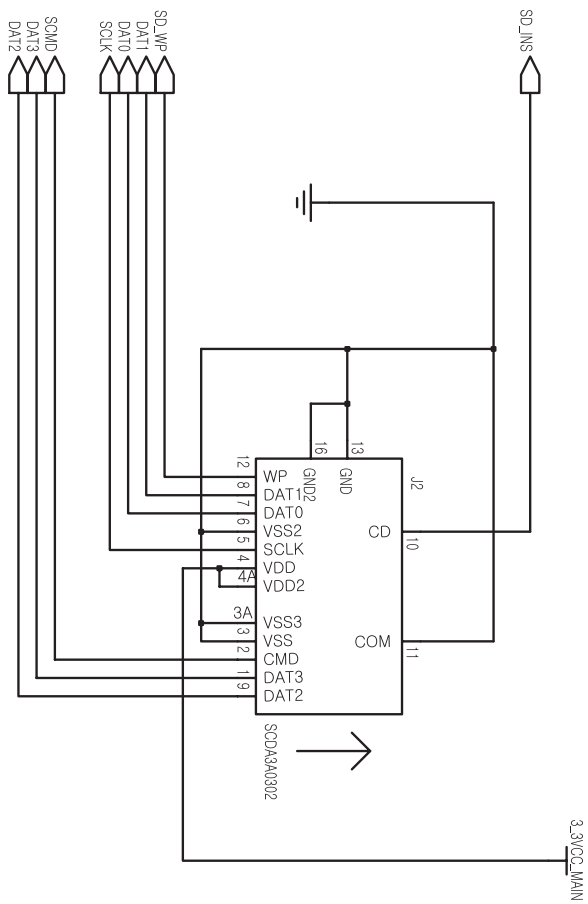
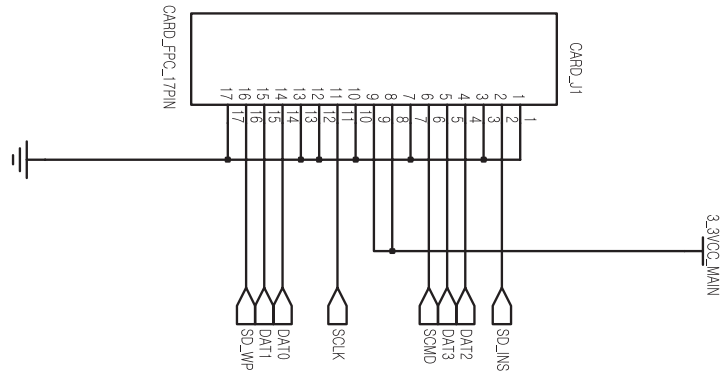


12) TOP\_FPCB

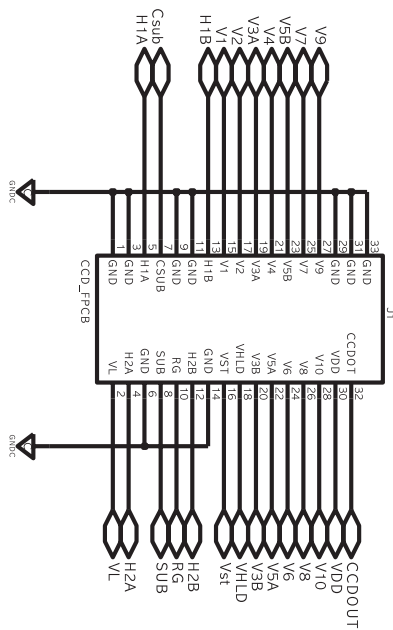
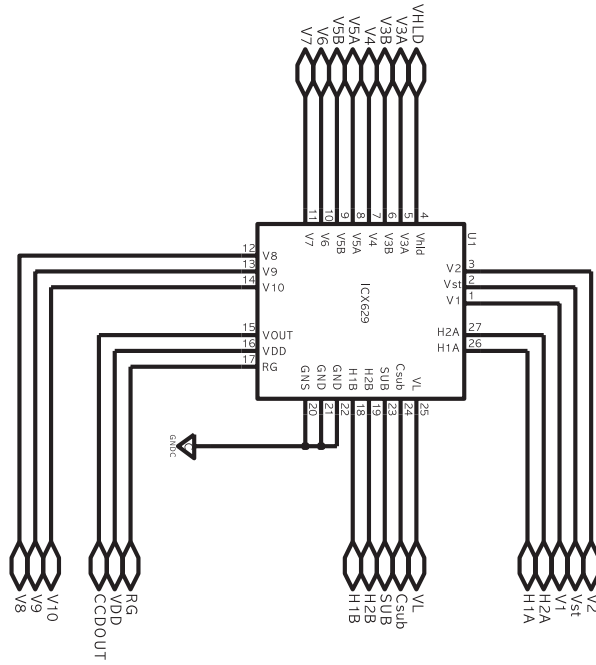


V. CIRCUIT DIAGRAM

13) SD CARD\_FPCB

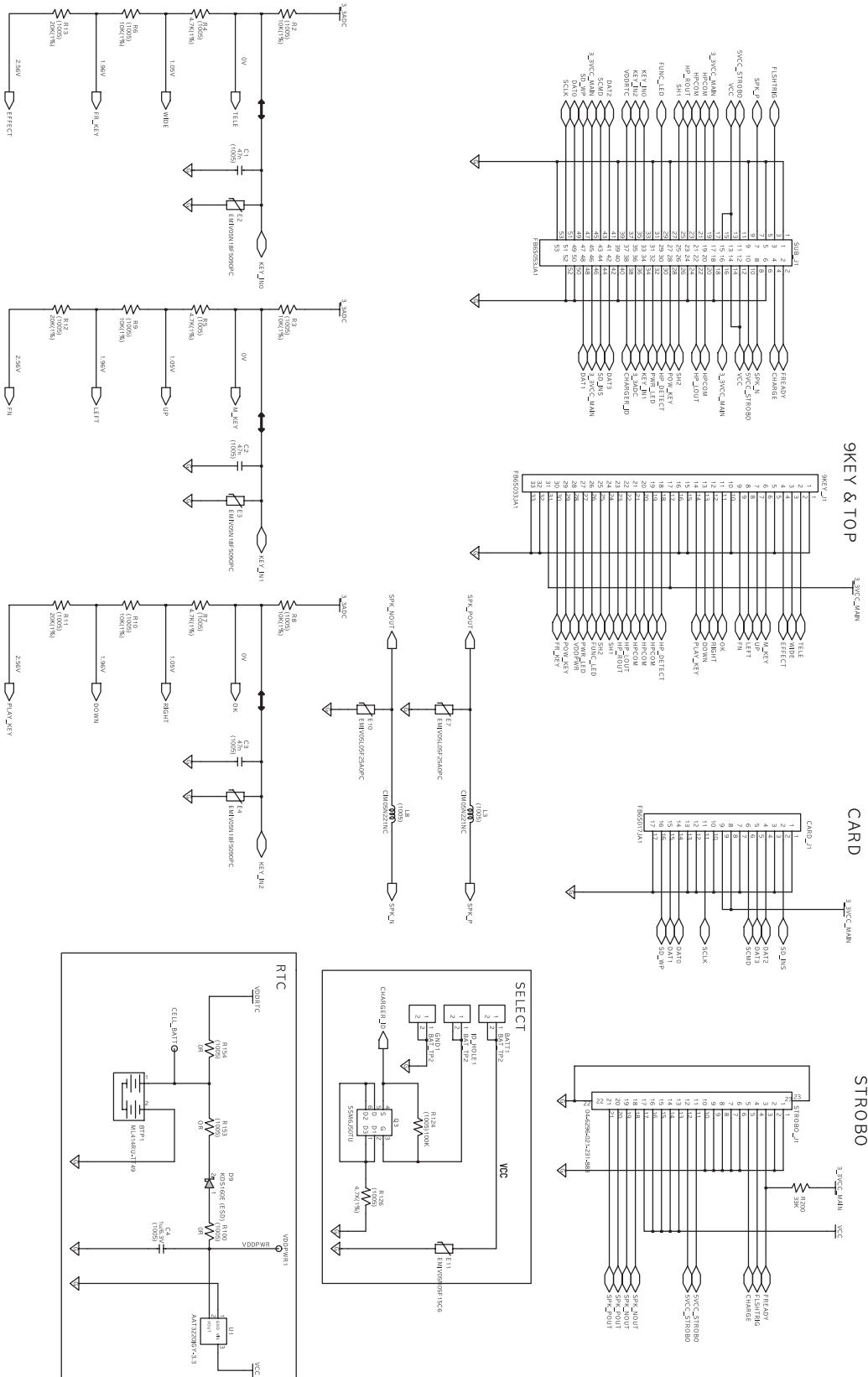


14) CCD\_FPCB

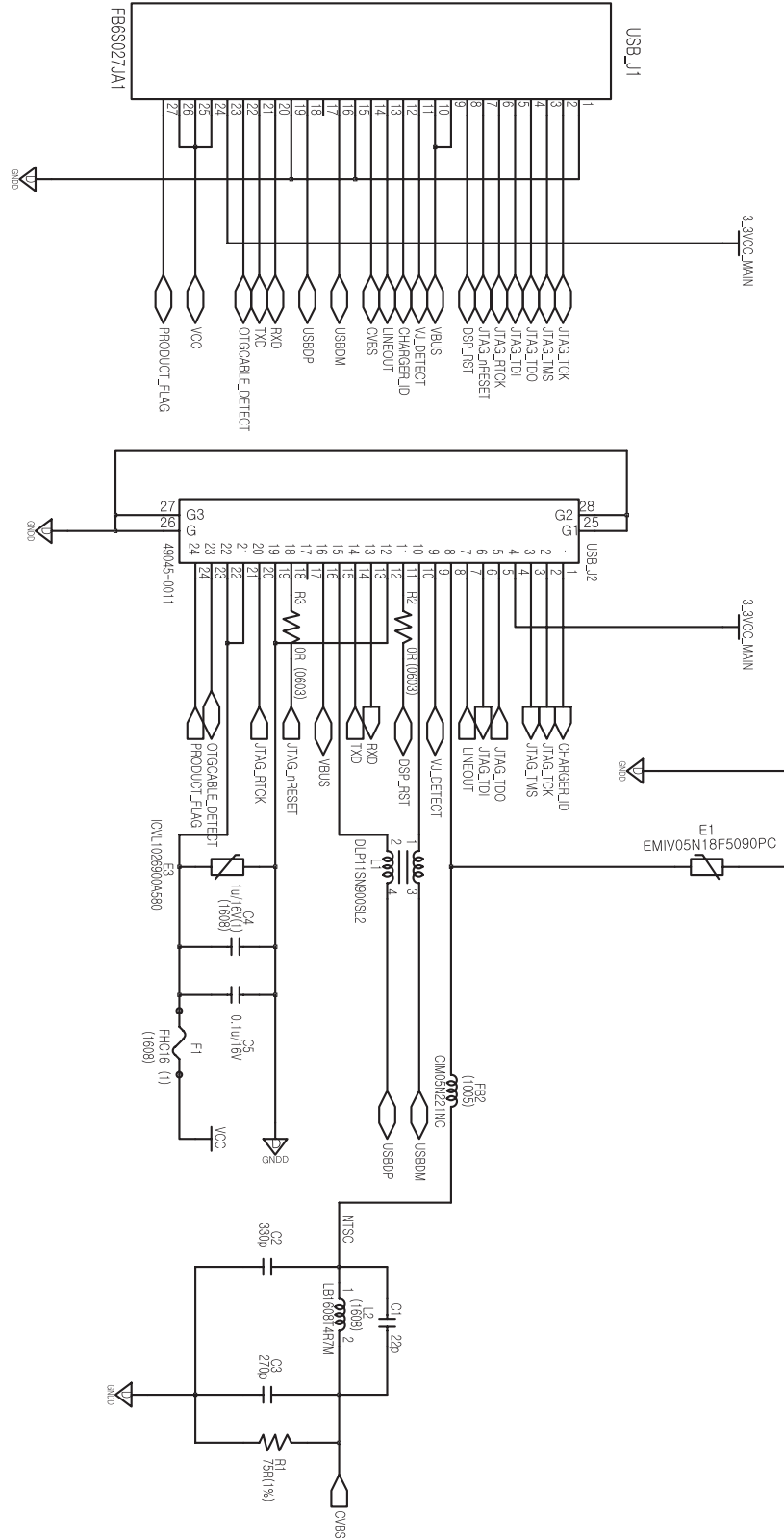


V. CIRCUIT DIAGRAM

15) SUB\_FPCB

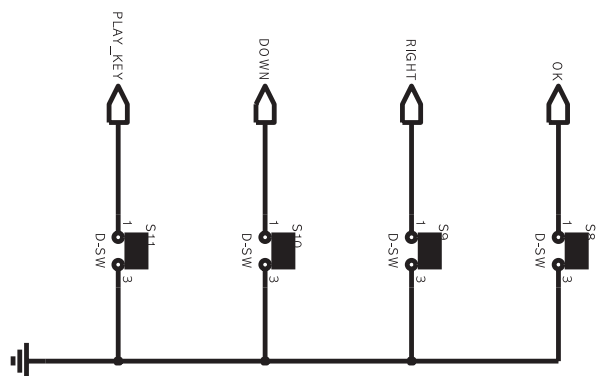
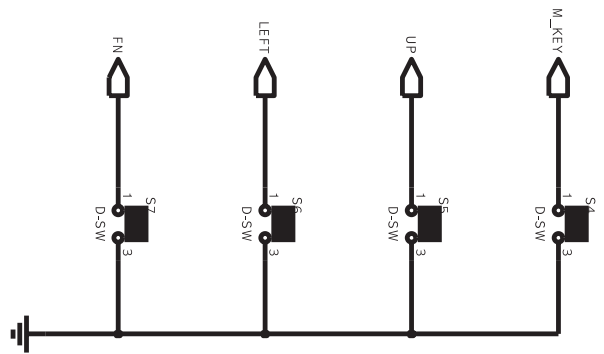
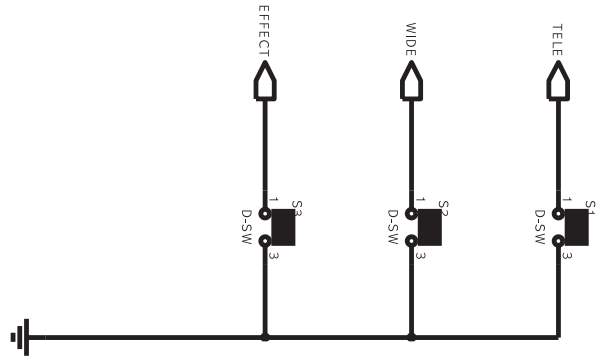
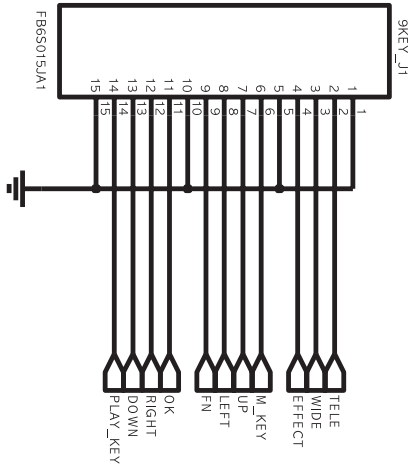


16) USB\_FPCB

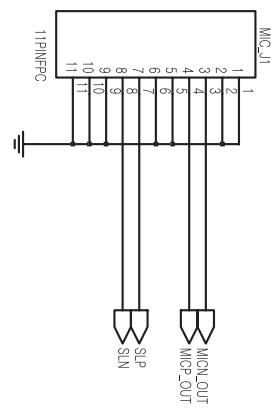
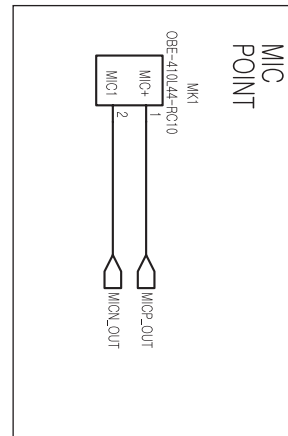
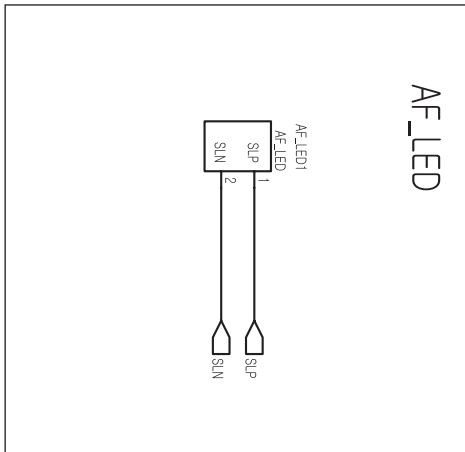


17) KEY\_FPCB

# 9KEY & W/T

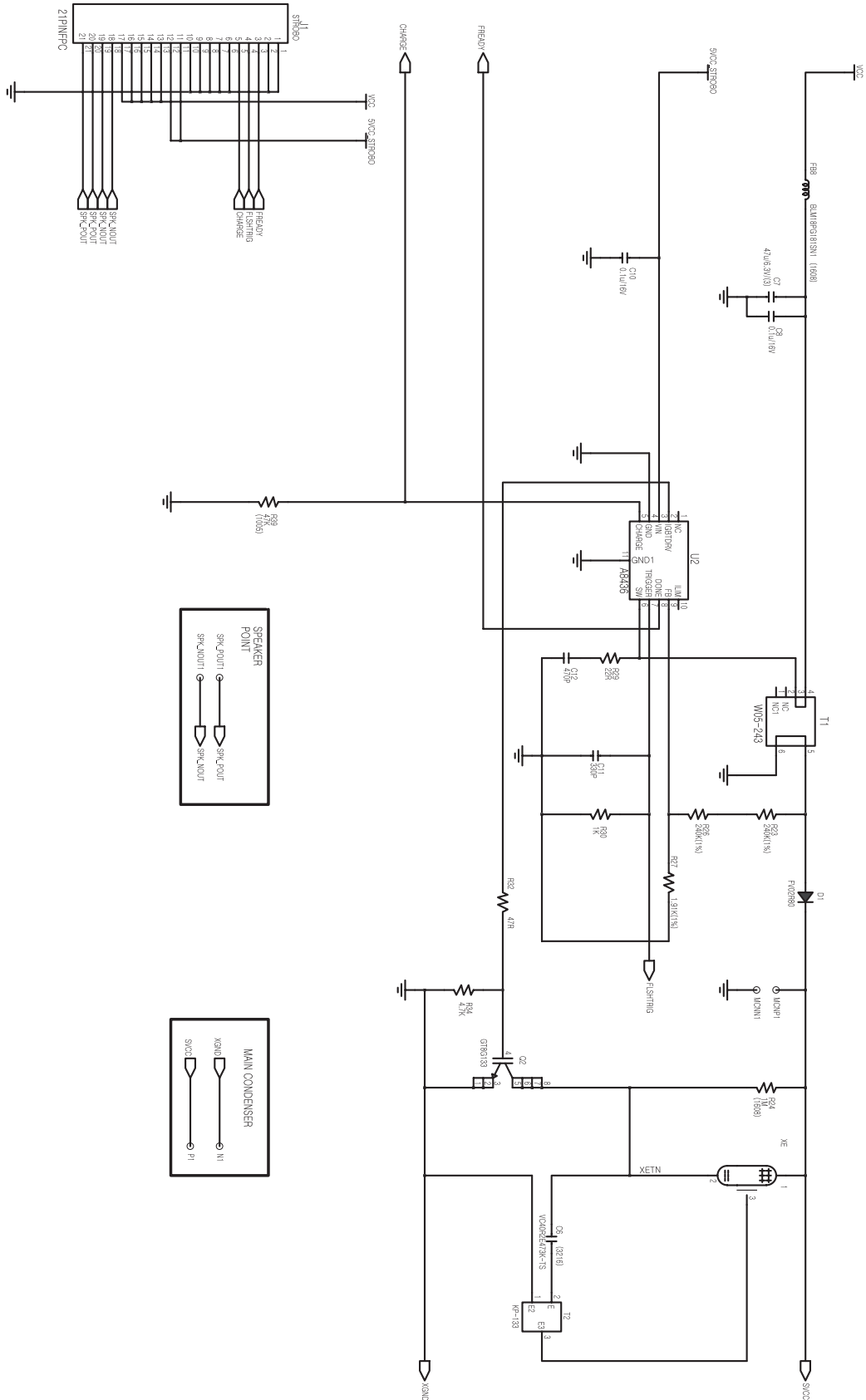


18) MIC\_FPCB



# V. CIRCUIT DIAGRAM

## 19) STROBO\_FPCB





## VI. SERVICE INFORMATION

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### 1. The order of disassembly and assembly

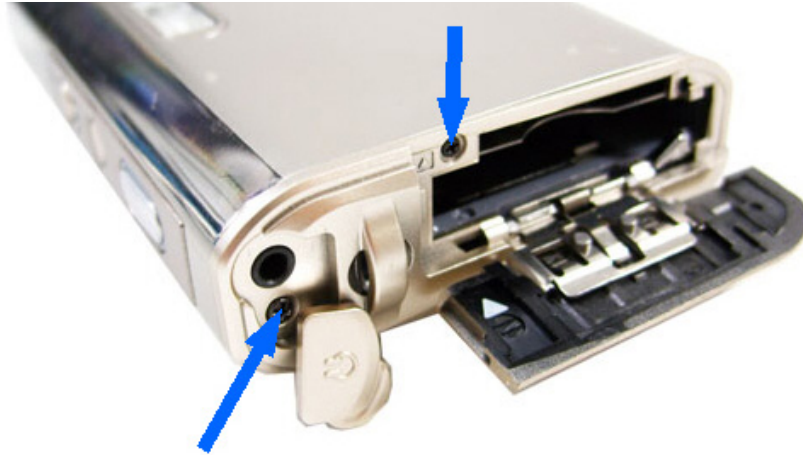
#### ■ Caution

1. Do the disassembling and assembling camera where the blocking static electricity mat is on the table.
2. When handling the major PCBs of camera, please wearing the band which cuts off the electric current on the wrist.
3. When handling the major parts, be careful of below caution.

Parts	Caution
F PCB type	When assembling the F PCB to the CONNECTOR by using pincette, be careful of tearing and hooking.
CCD & IR CUT	Be careful of the handprinting while handling them. Using the pincette which has soft tip. The spot will be shown by using normal alcohol when cleaning them. Do the repairing where is no dust.
PCB type	Wearing the band which cuts off the electric current and do the repairing where the blocking static electricity mat is on by preventing the defect of parts.
CONTACT type	Be careful of defect and change by pincette.

■ Disassembly

1. Remove 2 screws.



2. Remove 6 screws.



3. Remove 2 screws.



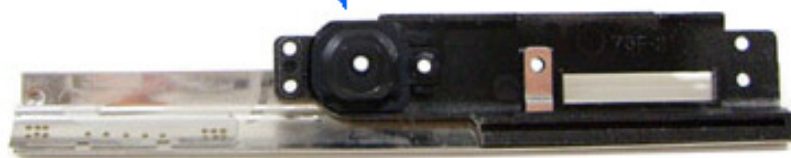
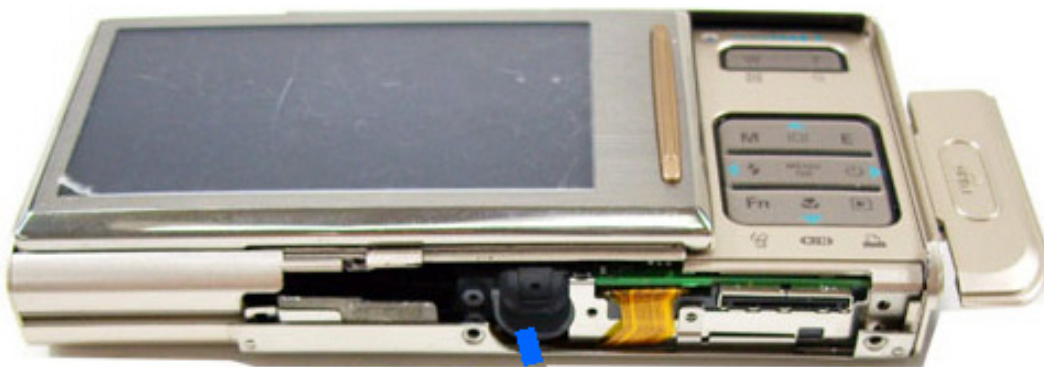
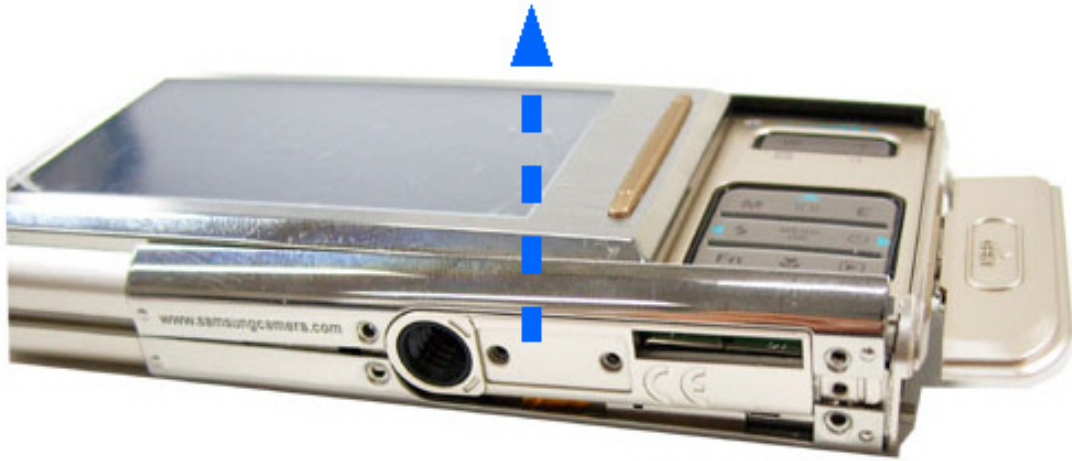
4. Disassemble the Side Cover.



## VI. SERVICE INFORMATION

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5. Disassemble the Bottom Cover.



6. Remove 1 screw.



7. Disassemble the LCD Cover.

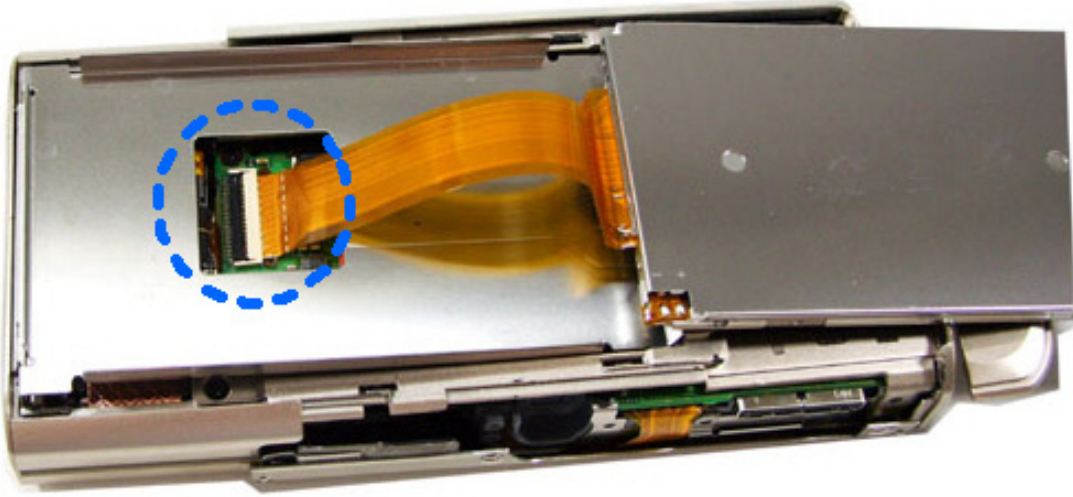




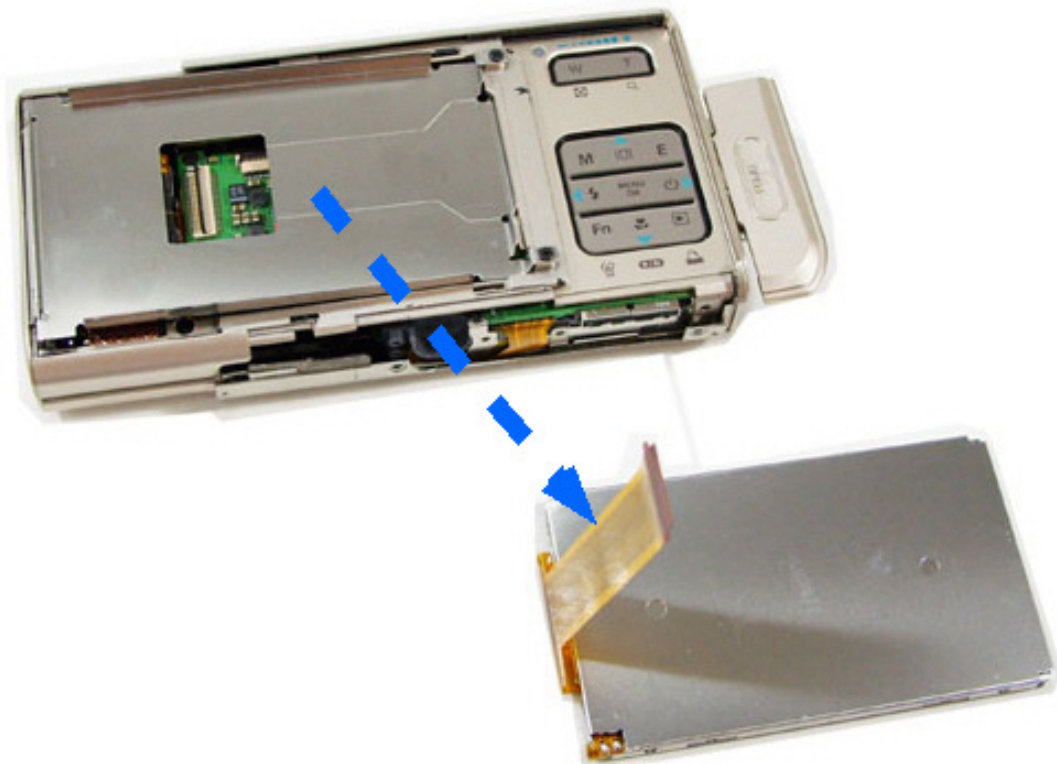
## VI. SERVICE INFORMATION

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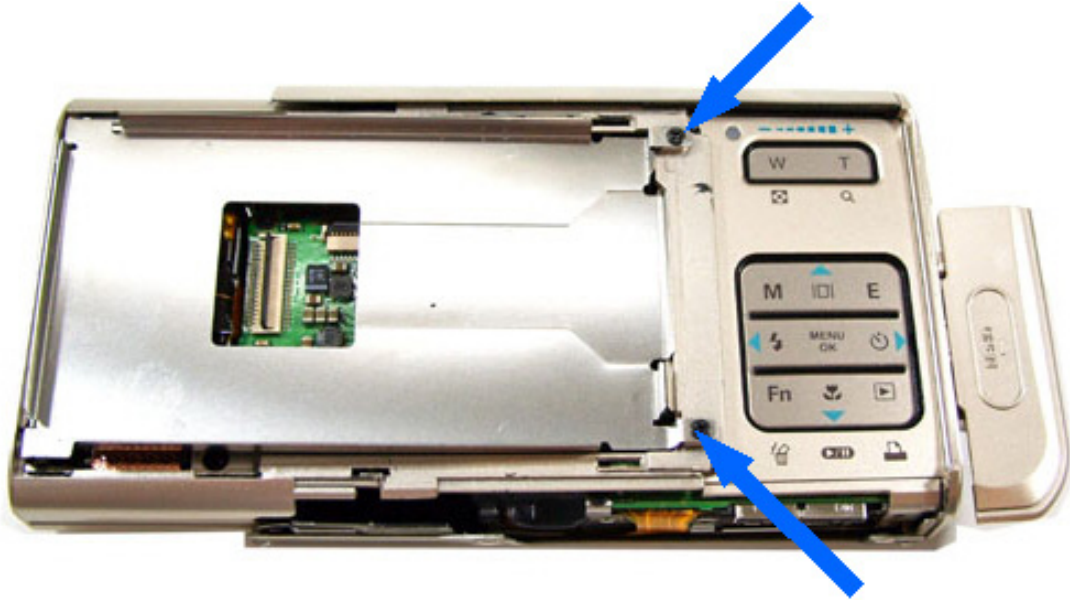
8. Disconnect the PCB from the connector.



9. Disassemble the LCD A'SSY.



10. Remove 2 screws.



11. Remove 1 screw.



## VI. SERVICE INFORMATION

---

12. Remove 1 screw.

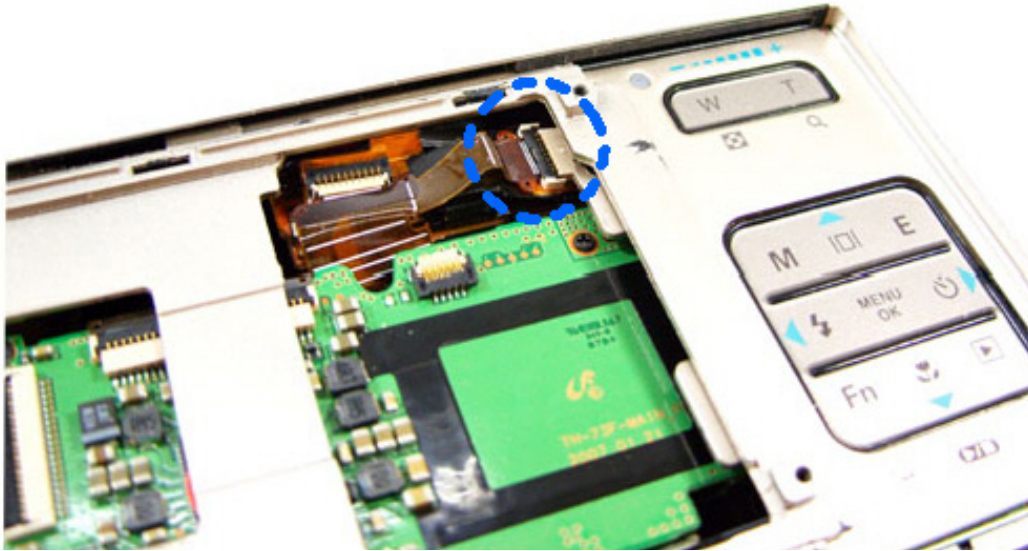


13. Disassemble the below Cover.

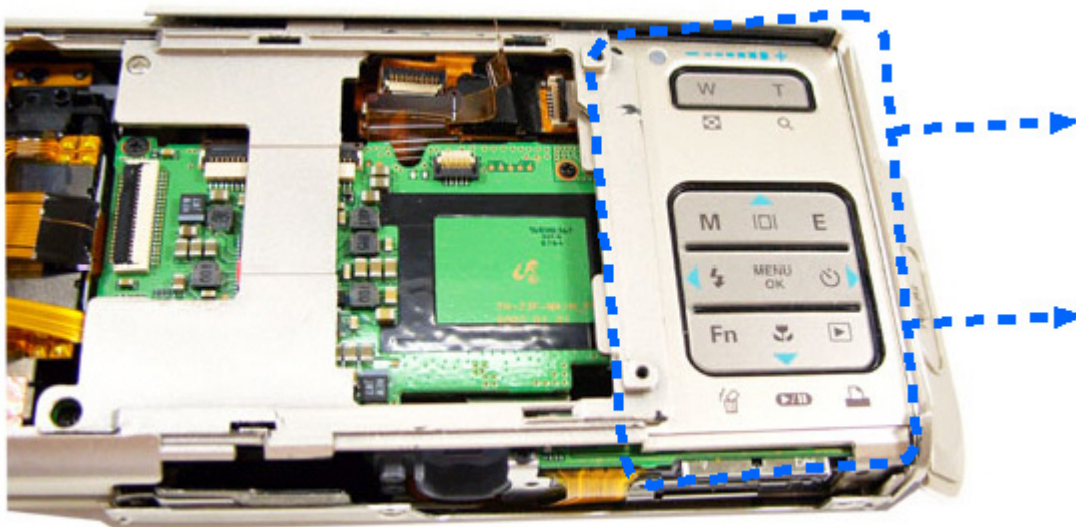




14. Disconnect the PCB from the connector.

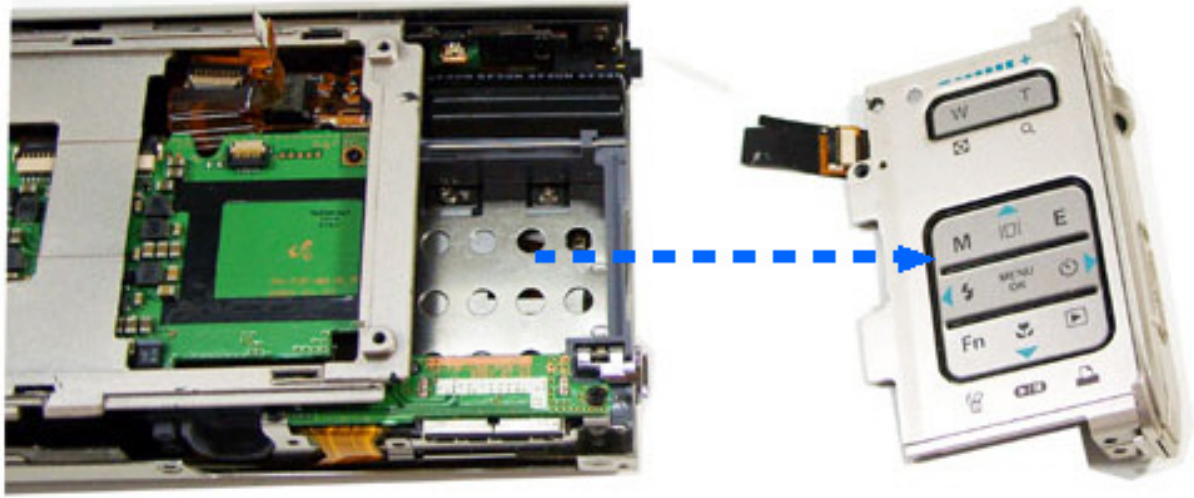


15. Disassemble the KEY pad A'SSY.

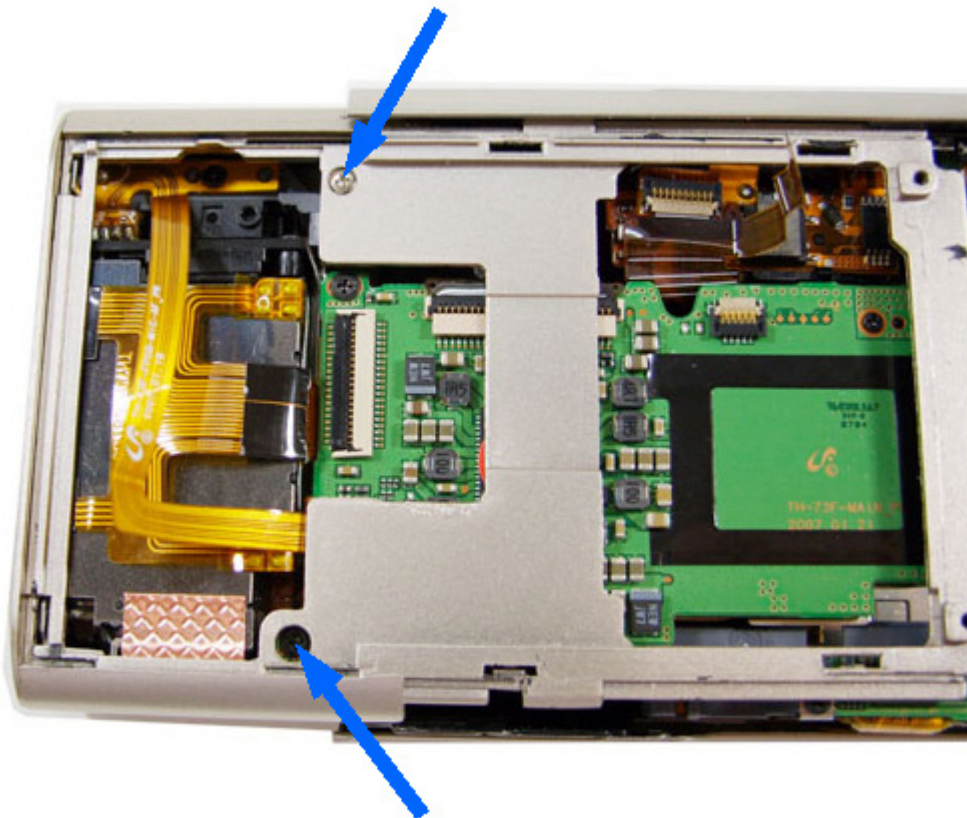


VI. SERVICE INFORMATION

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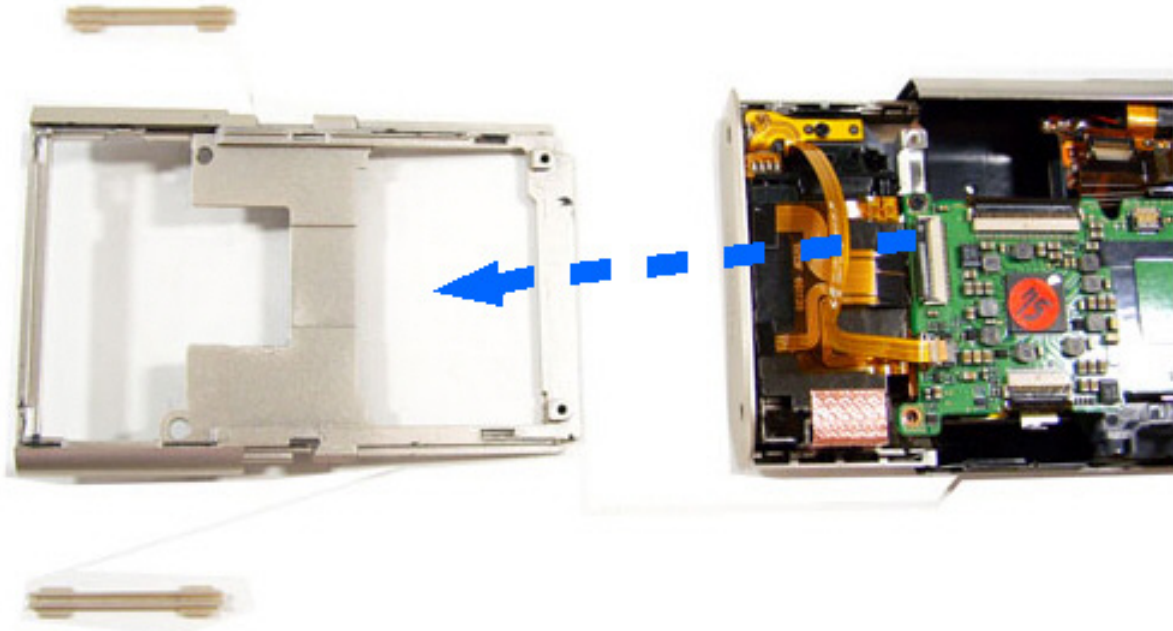


16. Remove 2 screws.

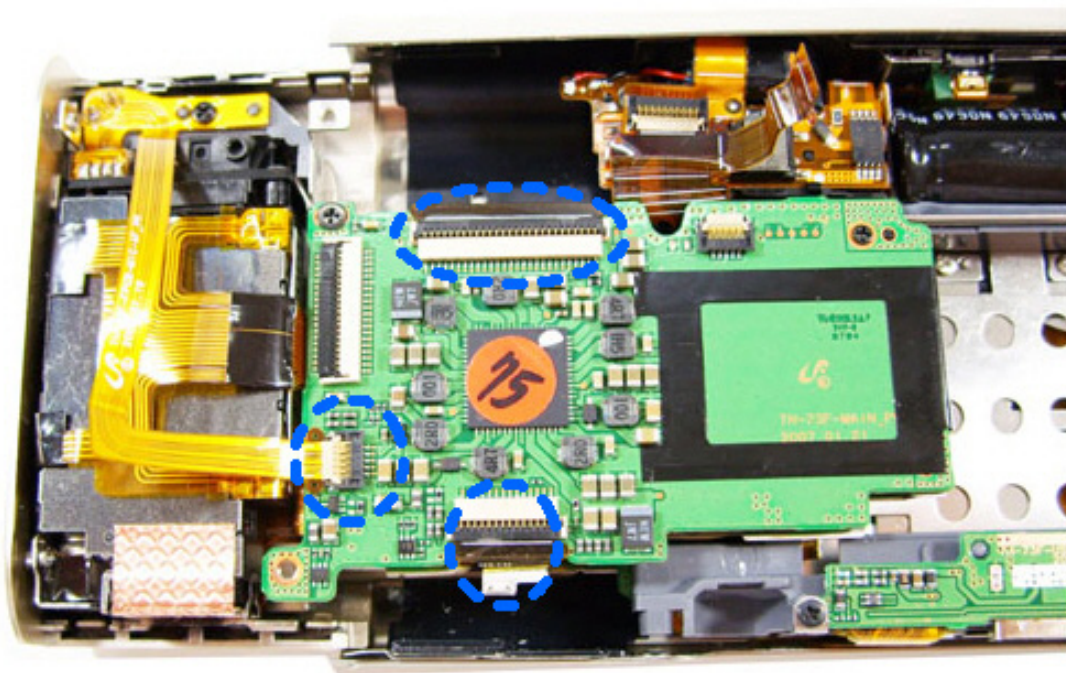




17. Disassemble the Slide Cover.



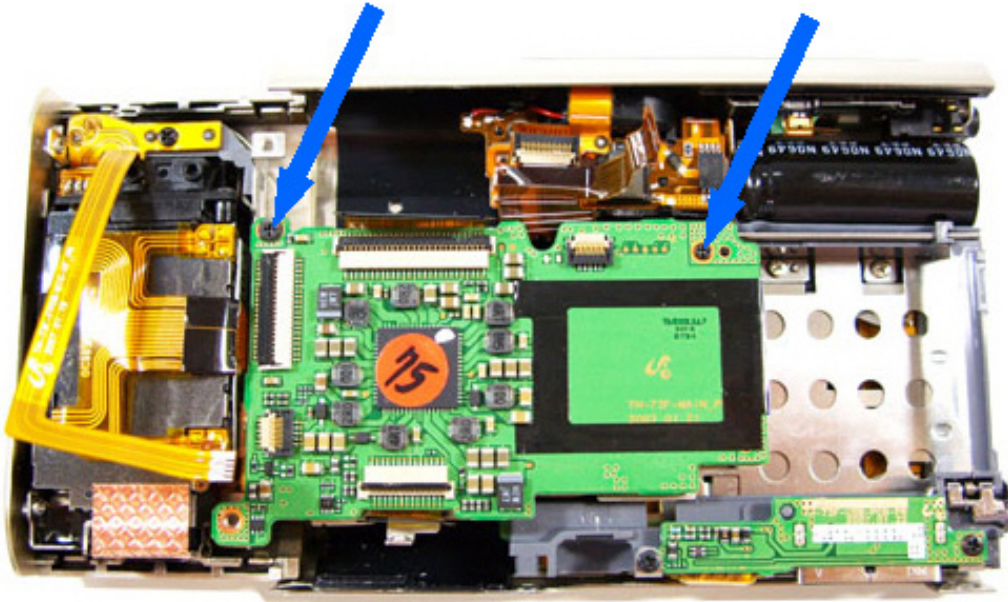
18. Disconnect 3 PCBs from each connector.



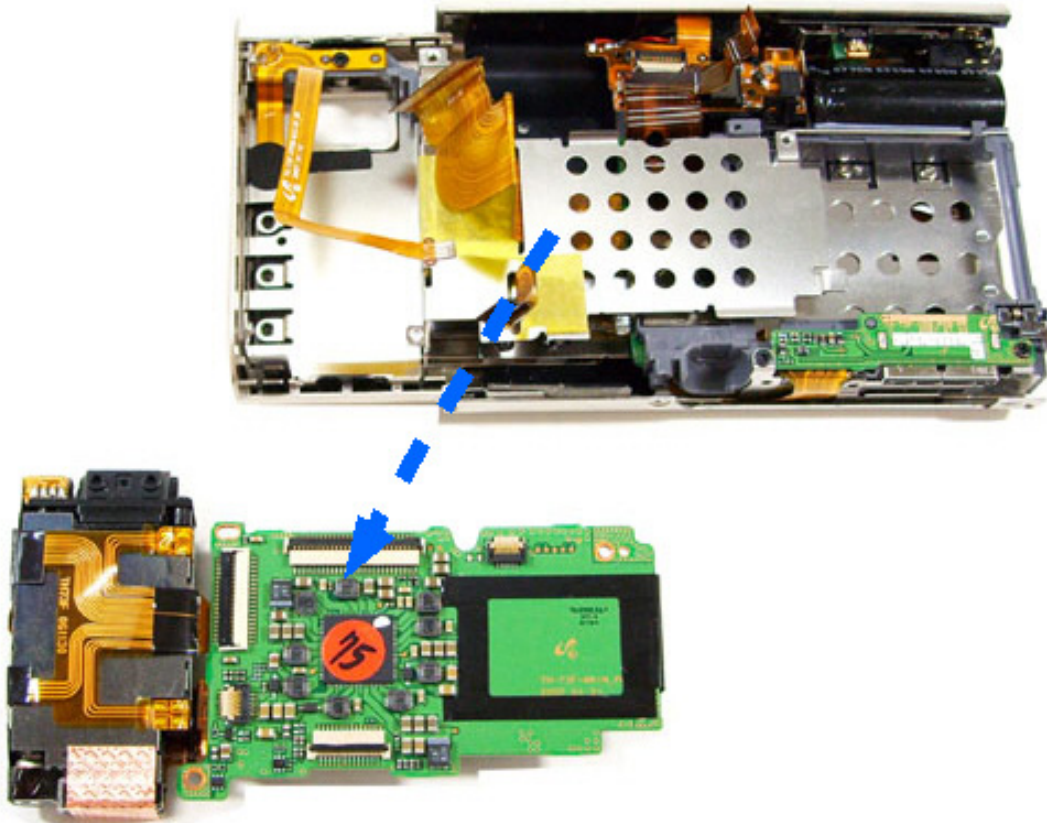
## VI. SERVICE INFORMATION

---

19. Remove 2 screws.

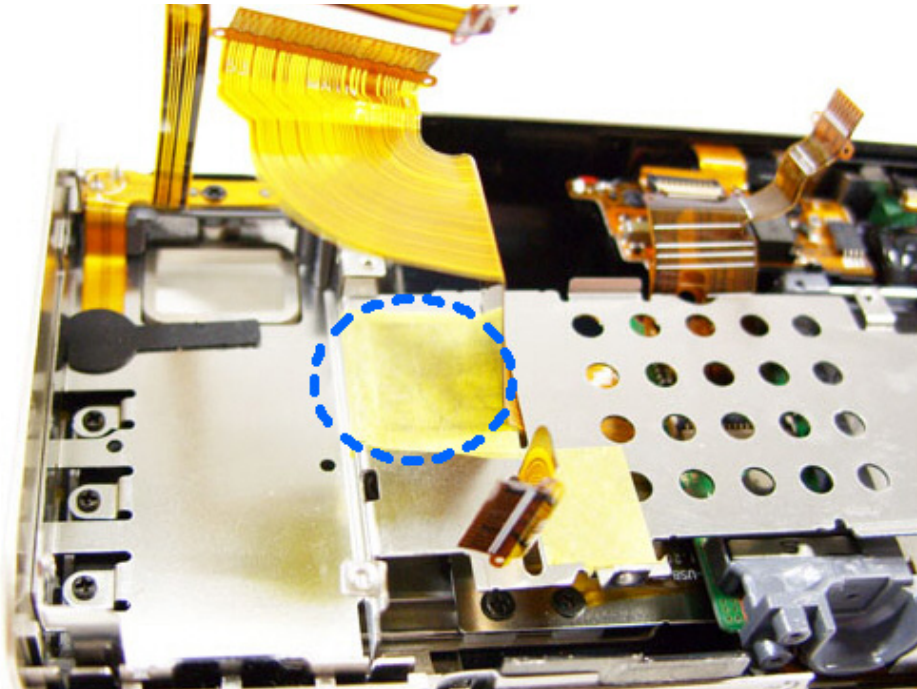


20. Disassemble the Main PCB & BARREL A'SSY.

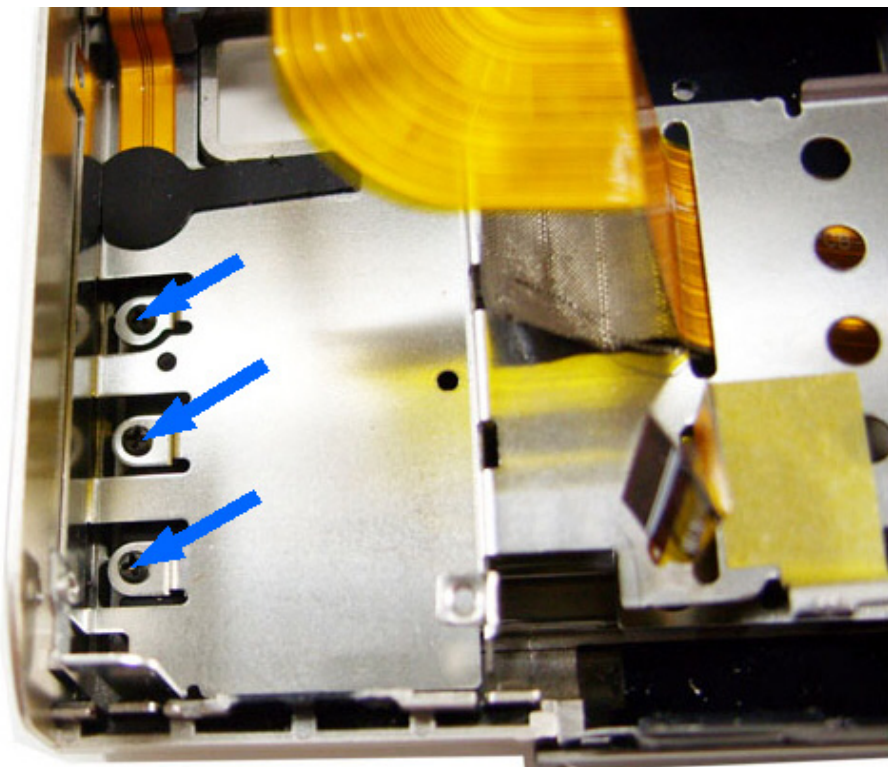




21. Detach the below sticker.



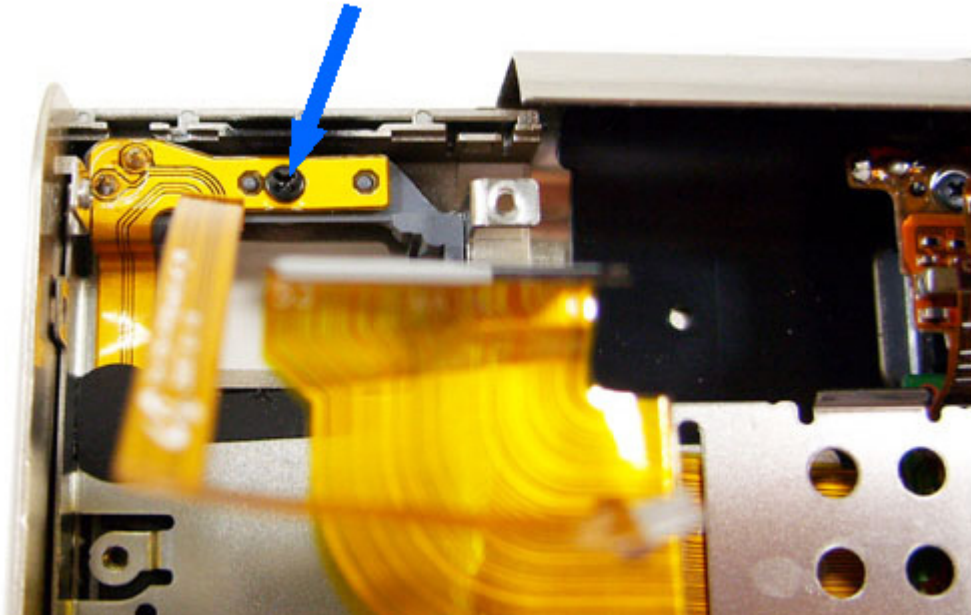
22. Remove 3 screws.



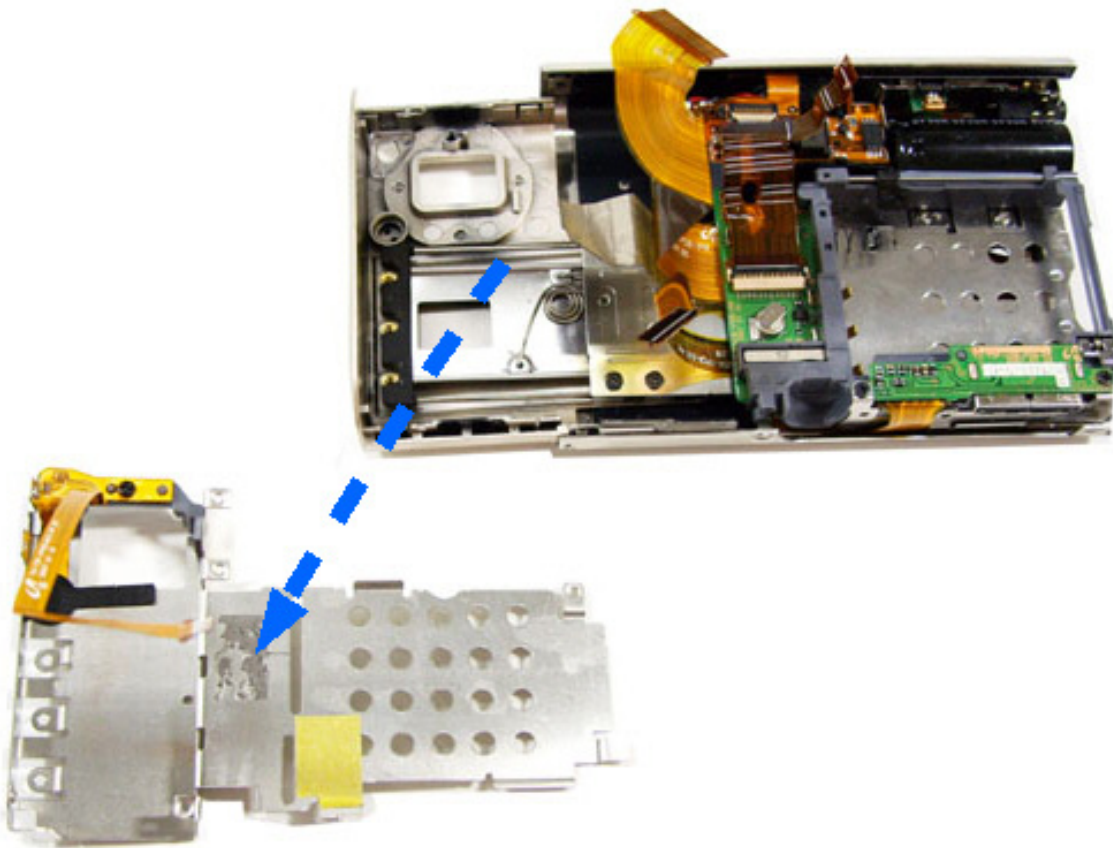
VI. SERVICE INFORMATION

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23. Remove 1 screw.

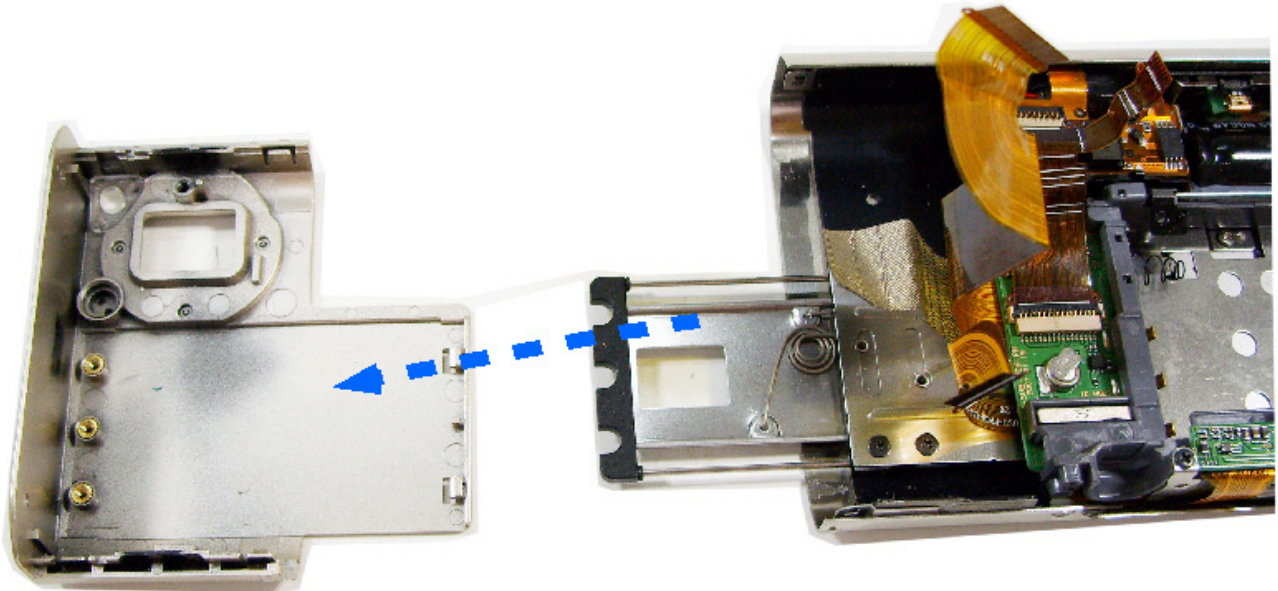


24. Disassemble the Slide Plate.

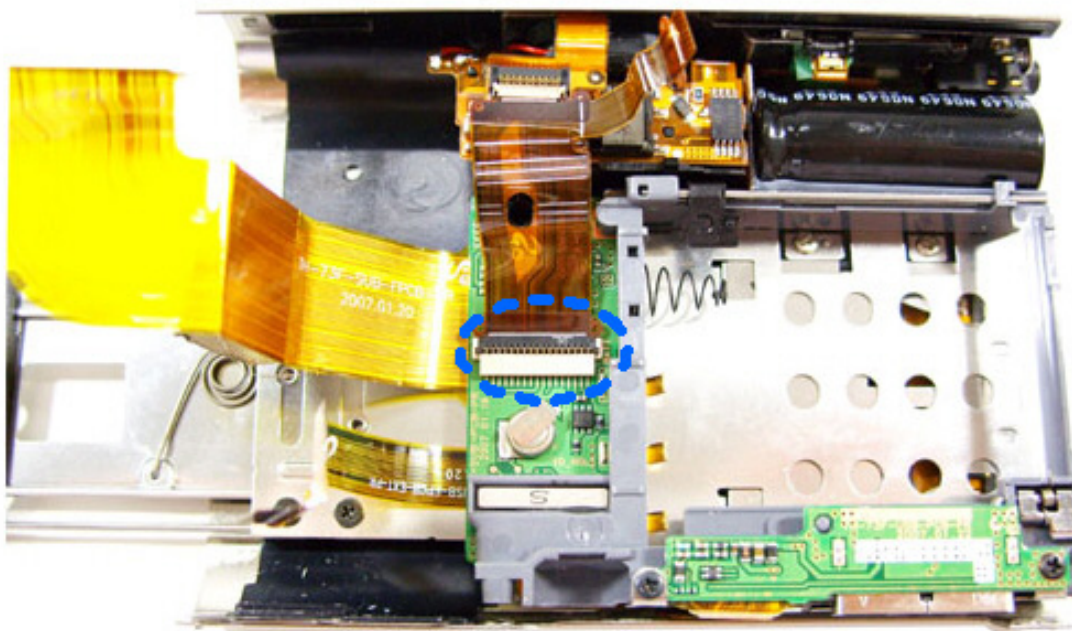




25. Disassemble the Slide's Front Cover.



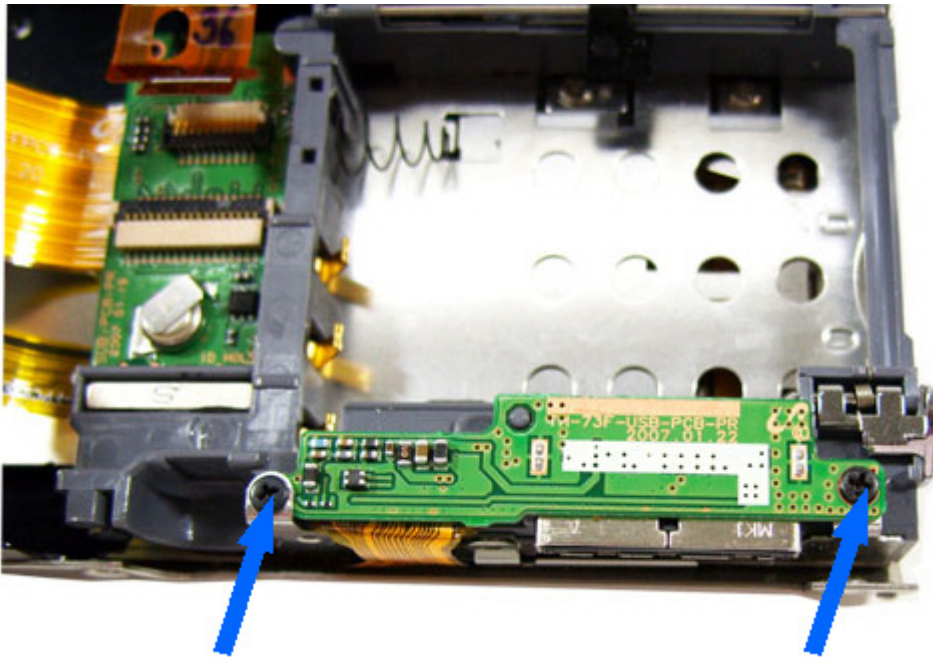
26. Disconnect the PCB from the connector.



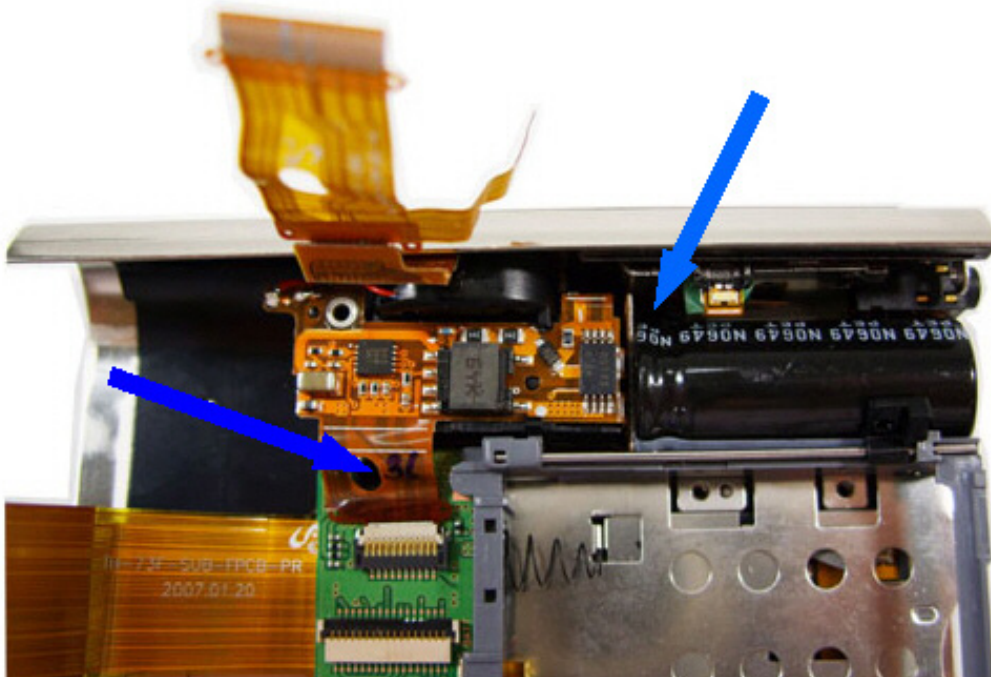
## VI. SERVICE INFORMATION

---

27. Remove 2 screws.

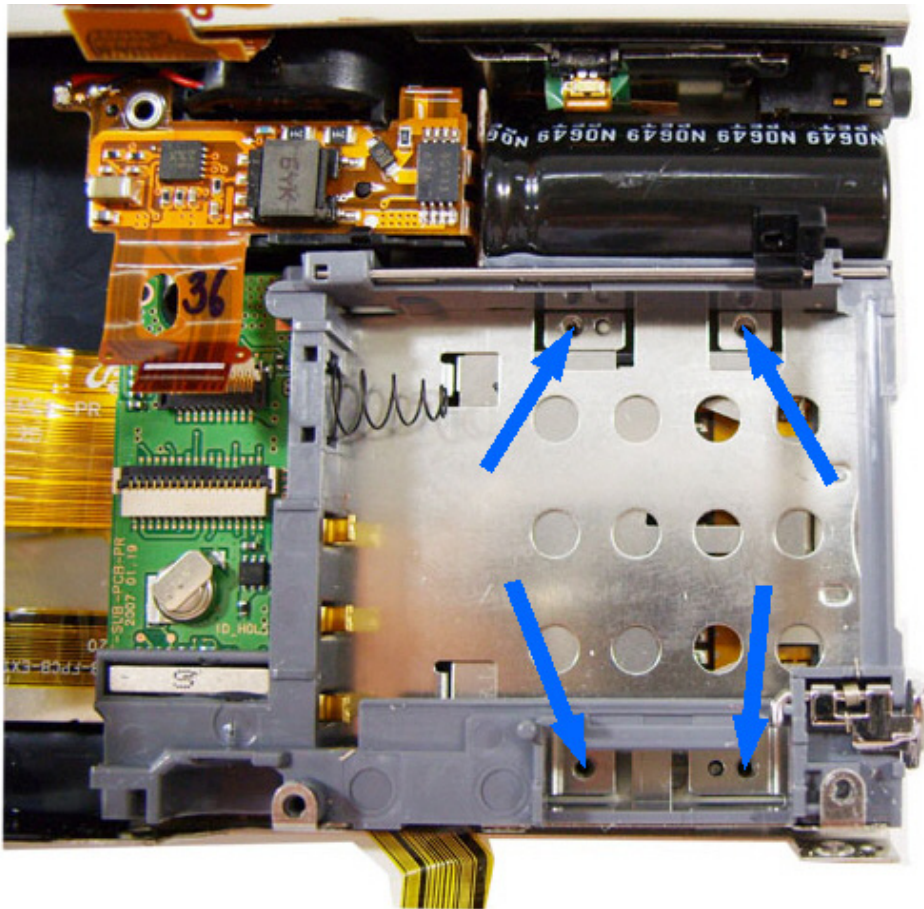


28. Remove 2 screw.

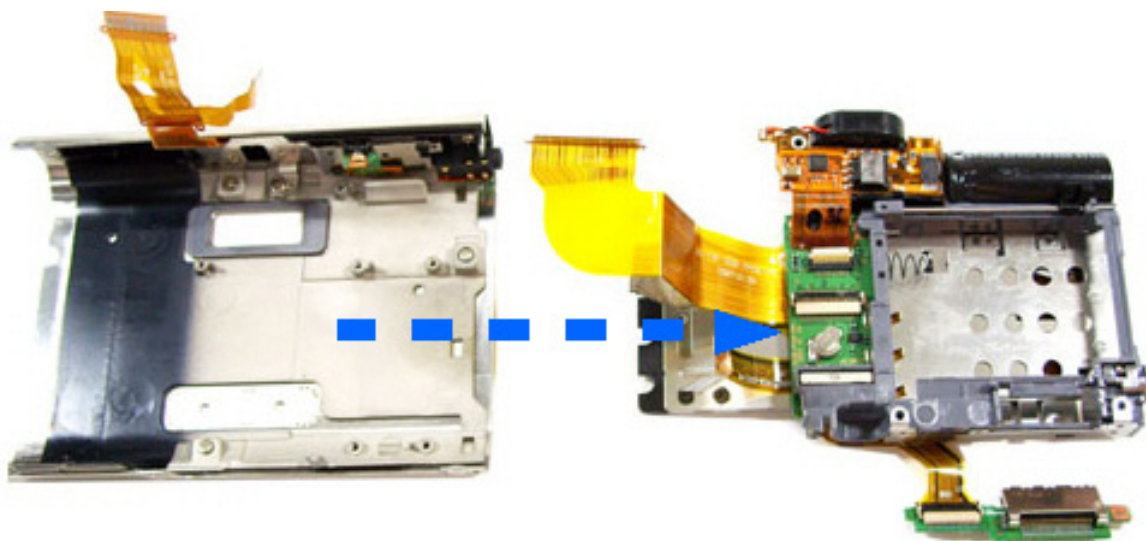


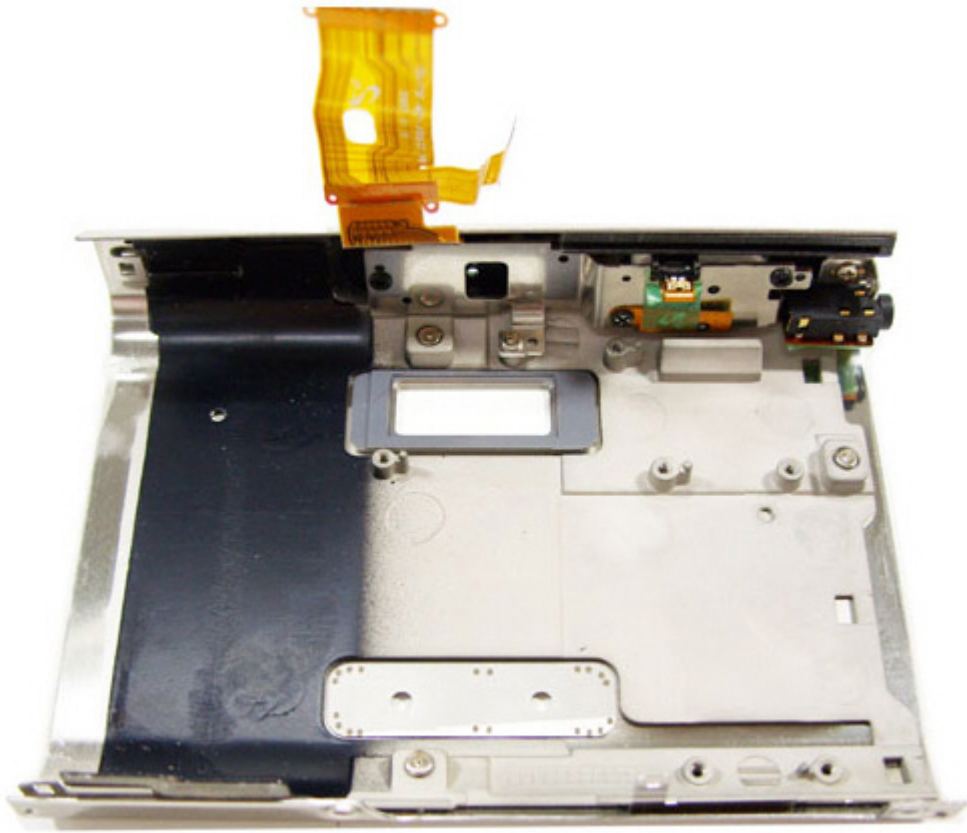


29. Remove 4 screws.

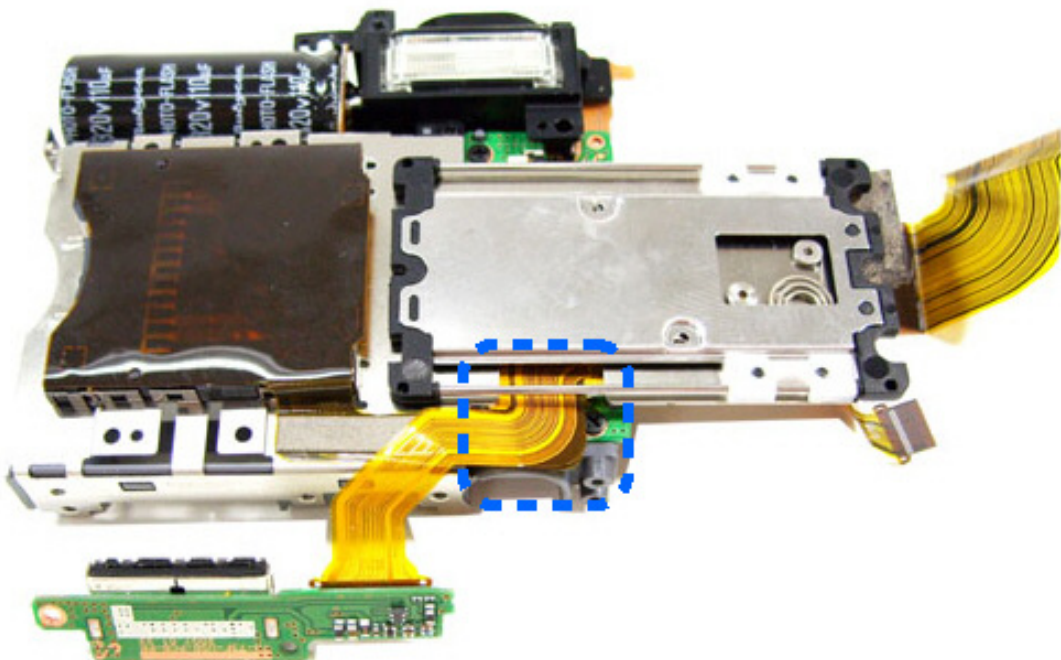


30. Disassemble the Front Cover.

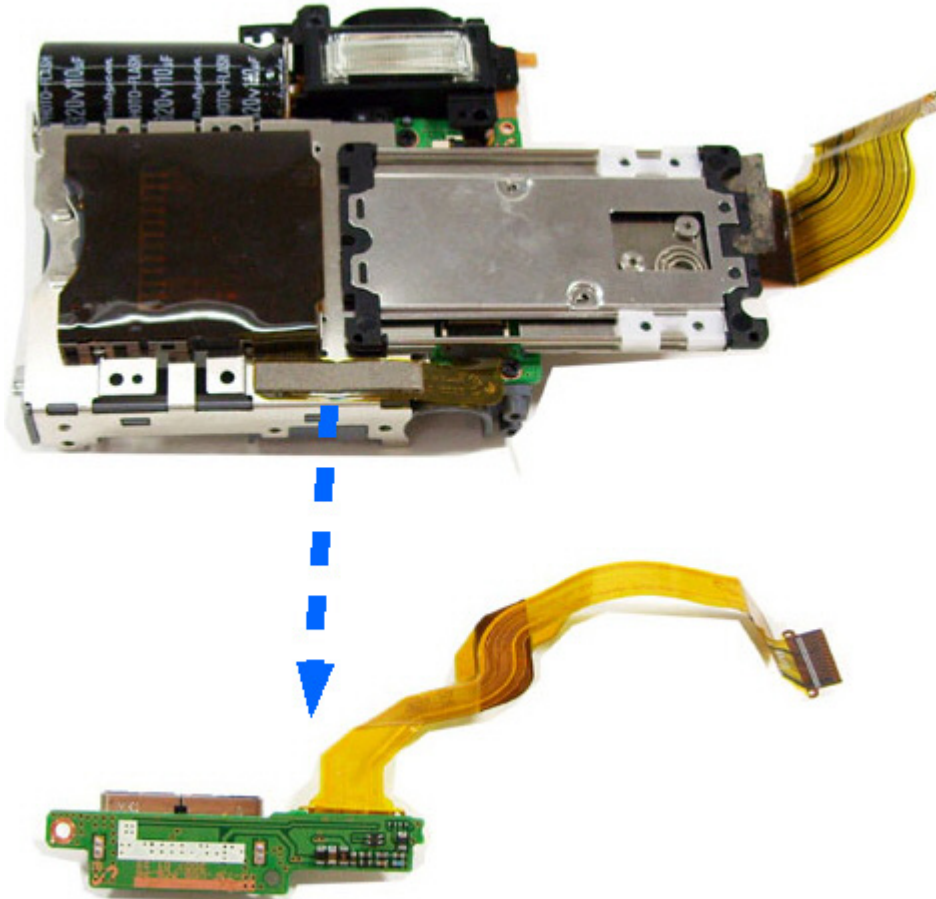




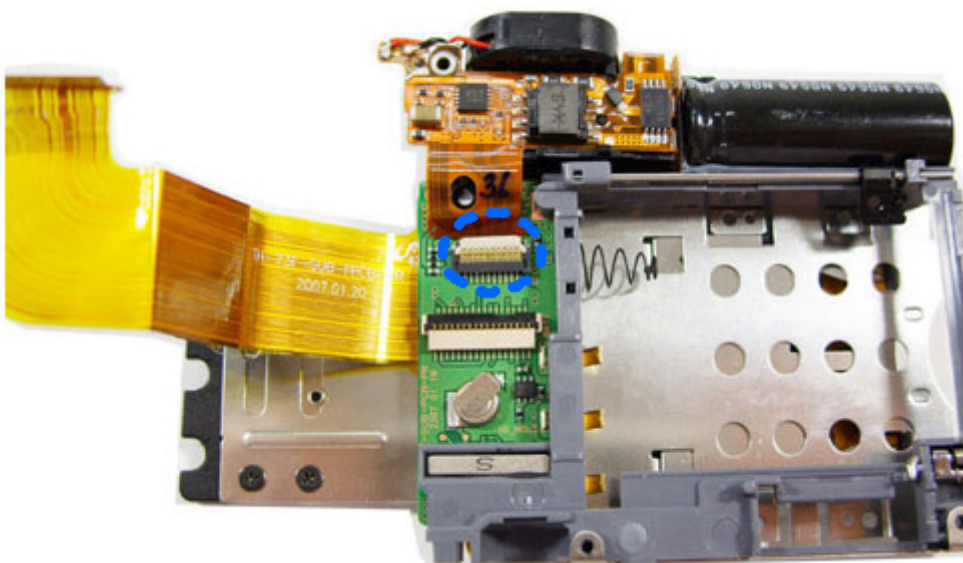
31. Detach the double-sticker.



32. Disassemble the Outer Connector A'SSY.



33. Disconnect the PCB from the connector.

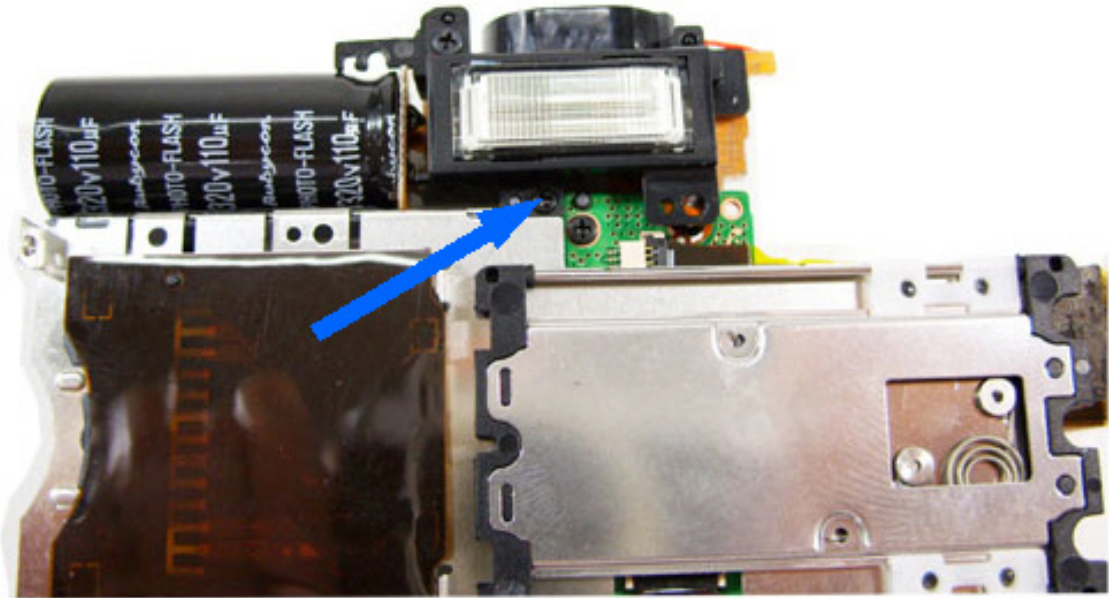




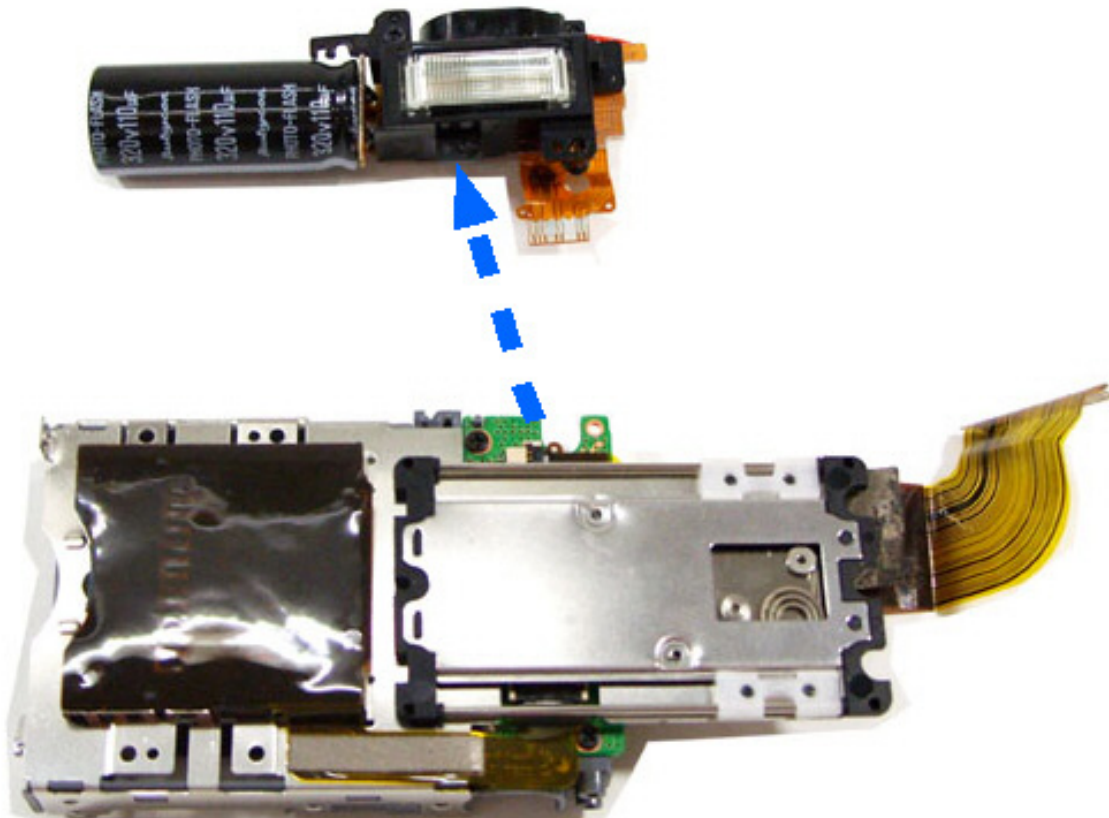
## VI. SERVICE INFORMATION

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34. Remove 1 screw.



35. Disassemble the FLASH PCB.



36. Finished

