SERVICE MANUAL

for

CHINON CP-7m
MULTI-PROGRAM

CHINON INDUSTRIES INC.

INTRODUCTION

Information contained in this service manual refers to the CHINON CP-7m MUITI-PROGRAM camera and is prepared to aid repair and maintenance service at authorised service stations.

The information and specifications in this service manual are the most up-to-date at the time of publication. However, the Research, engineering, and QA Department of CHINON are constantly making efforts to further improve the products manufactured by the company. Modification, therefore, may become inevitable and we reserve the right to make any changes without further notice.

Before making attempts to repair or adjust the unit, read the manual thoroughly. Specifications and adjust procedures are described in detail and trouble-shooting may be used diagnose problems. Electrical data and parts information are filed at the end of this service manual.

For technical inquires and further assistance write to:

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Service Manual
for
CHINON CP-7m MULTI-PROGRAM CAMERA

1st edition, May 1986

CHINON INDUSTRIES INC.
Service Department.

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HOW TO USE THIS SERVICE MANUAL

Chinon Service manual consists of the following seven sections: General, Repair Guide, Service Tool List, Electrical Data, Parts Information, Price List of the Spare Parts, and Service Manual Report. These seven sections are divided by index sheets for easy identification.

GENERAL

The General section consists of information useful to the repairman. It may consists of any or all of the following: technical specifications, design Principals, new or unusual repair technics, or any other information useful to the repairman.

REPAIR GUIDE

1. The Repair Guide contains the necessary instructions for complate repair and adjustment.
2. It may consist of circuit and/or mechanism explanations.

SERVICE TOOLS LIST

1. This list all special tools and test equipment required for service after sales and their uses.
2. For specifications, detailed explanation, and price of these, please refer to the distributed lists of "TOOLS & INSTRUMENTS".
3. Please typeout the tool No. and the necessary quantity on the orther sheets when you order the special tools or test equipment.

ELECTRICAL DATA

The Electrical Data consists of the schematic diagram, wiring diagram, and component location useful to the repairman.

PARTS INFORMATION

1. The Parts Information consists of the exploded view and containing parts list.
2. The parts list for each exploded view is on the facing page and botf pages have the same number.
3. The exploded views are arranged in the correct sequence of disassembly and/ or assembly.
4. The parts list consists of five columns. The function of each column is:

   Column 1. ORDER QTY: Please fill-in the necessary quantity in this column when you order the spare parts, and typeout your name and Order No. on the parts list.
   Column 2. Parts name in Japanese.

PRICE LIST

1. Price List of Spare Parts presents the unitprice of the service parts you receive from us.

2. The page number on the parts information in which each part is described is shown on the right side of each part so that you may easily identify.

3. All the price of the spare parts on the price list section are subject to change without notice.

SERVICE MANUAL REPORT

In keeping with our policy of the best service after sale, we issur the Service Manual Reports and/or Technical Modification on Product when any change is made in the product such as design or production changes, added capabilities, or appearance changes. Please fill-in the these reports in this section.

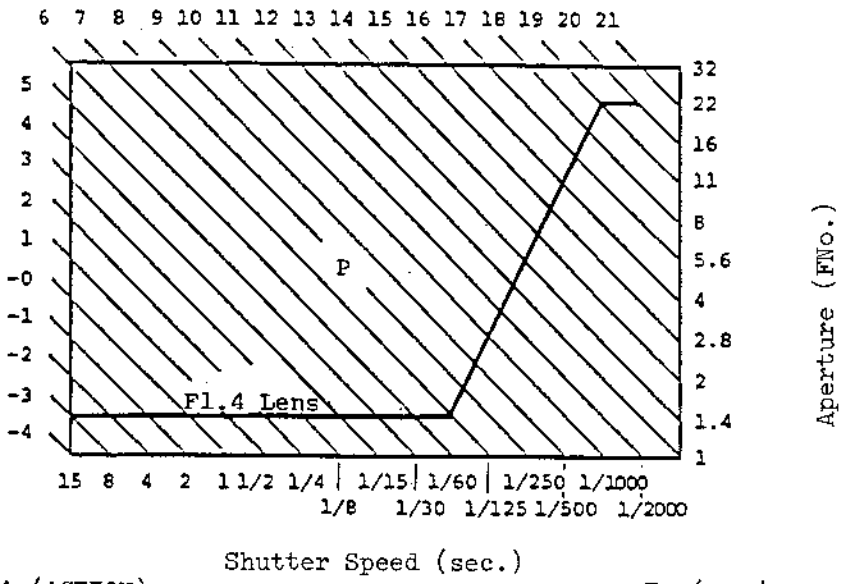
SPECIFICATIONS

TECHNICAL SPECIFICATION	CHINON CP-7m
Type:	Three stage program AE, Aperture priority system AE and manual exposure system Micro computer controlled.
Picture Mount:	24 x 36 mm
Lens Mount:	Chinon bayonet mount
Mirror:	Swing back, quick return and Large mirror
Focusing Aid:	Penta prism, Split-micro screen system
Viewfinder Coverage:	Approx. 92%
Viewfinder Magnification:	Approx. 0.87 times with 50mm lens infinity setting.
Viewfinder Indication: Shutter	18 digital LEDs indicate for shutter speeds and changed three color 1/2000-1/60 sec. shutter speed: Green LED 1/30-1 sec. slow shutter speed warning: Orange LED, Over/Under exposure warning: Red LED Flash Position: Red LED Program: P, PA and PC indication
L C D Panel:	Shutter speed, Film speed(ASA/ISO), Film counter Self timer operation time(sec), Battery checker and Photo mode(Program: P, PA, PC.,AE, M and B)
Shutter: Shutter speed	Electro-magnet vertical focal plane Manual speed: Bulb, 8-1/2000 sec. 15 steps Auto speed: 8-1/2000 sec. AE section: 15 sec. maximum
Synchronization:	"X" strobe synchro At 1/100 set-Automatic Manual mode only-1/60 sec. under
Release Wire release Release lock	Electro magnet type Built-in Built-in(Main switch)
Self timer:	Electronically controlled Self LED, LCD panel indication 1 sec-90 minute(usually 10 sec) Cancel: possible
Exposure mode:	Three stage program AE, Aperture priority system AE and Manual exposure
Photo cell:	1 x silicon photo diode EV +1 ∿ EV +20(F 1.4/50 mm ISO 100)

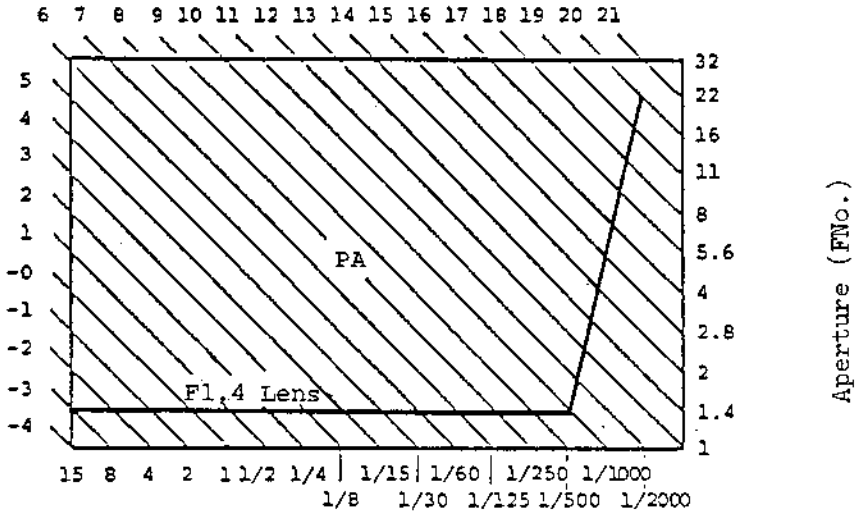
Film speed:	ISO 25-500 with 1/3 EV segment DX priority, Automatic-DX coded film
AE lock:	Built-in exposure memory lock system
Exposure compensation:	-4EV ∿ +4EV 1/2 Step Indication of LCD is DX film only
Multi-exposure:	Slide switch system (infinity multi-exposure)
Film loading:	Automatic film loading system
Film winding: Winding speed	Automatic winding, Single frame/Continuation Maximum 2 frame sec.
Film rewinding:	Automatic rewinding with push on the rewinding button
Film counter:	LCD panel indication with automatic
Interval timer:	Electronically controlled from 1 sec.to 90 minute.
Mode reset:	First position(return the first mode) that push the reset button
Battery on:	Keeped 12 sec.
Back cover:	Posible-Charnge Film check window Draw the program(P, PA and PC)
Battery checker:	Built-in L C D panel indication
Power source:	AM3 1.5V x 4 Battery and Lithium Battery(6V)
Dimensions:	152.5(W) x 89(H) x 51(D) mm
Weight:	520 g

THREE-STAGE PROGRAM AE CURVE
OF
CHINON CP-7m

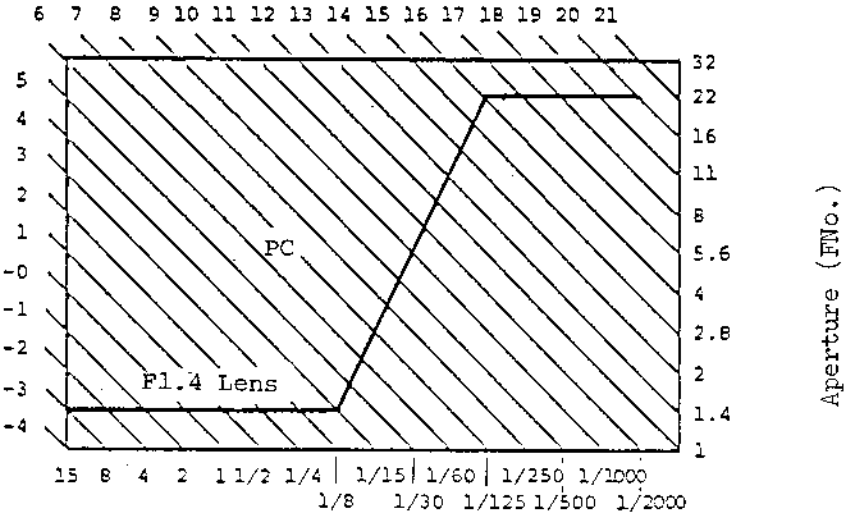
Program P (NORMAL)



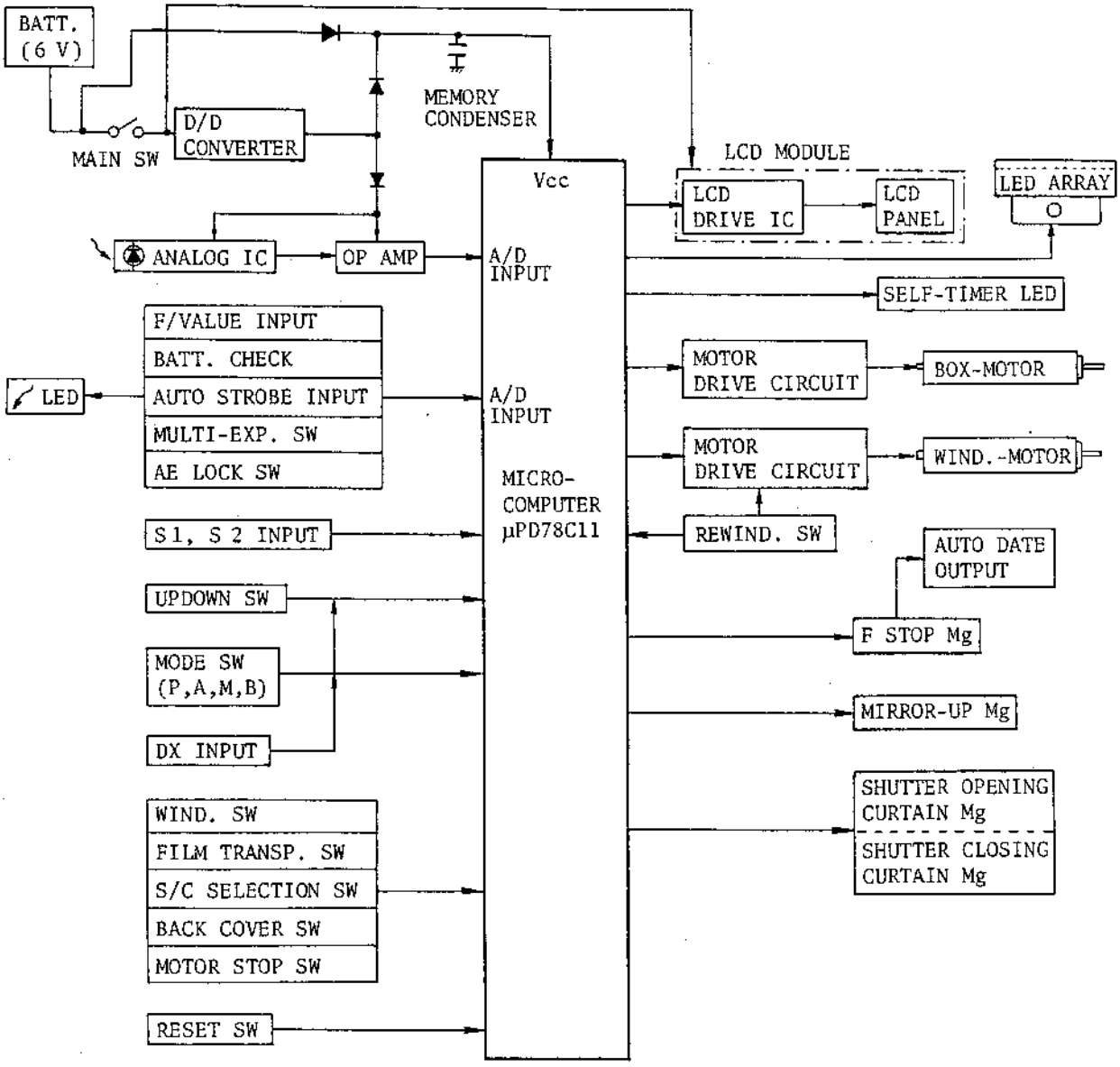
Program PA (ACTION)



Program PC (CREATIVE)



MICRO-COMPUTER SYSTEM'S BLOCK DIAGRAM
OF
CHINON CP-7m



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I. DISASSENBLY PROCEDURE

A. Top Cover, Bottom Cover & Front Cover Removal

In case of top cover removal.

① name plate 1471B0C-1085A ② Screw 117-40014 x 2 ③ Screw 117-40045 x 2 ④ Screw 124-40014

⑤ Screw 127-30045 ⑥ Screw 117-18014 ⑦ Screw 317-18014

⑧ Top cover 1471B0CS1061A

If you remove the top cover completry, unsolder the following three lead-wires from flexible pattern A and body side.

⑨ Green lead-wire ⑩ White lead-wire ⑪ Black lead-wire

In case of bottom cover removal.

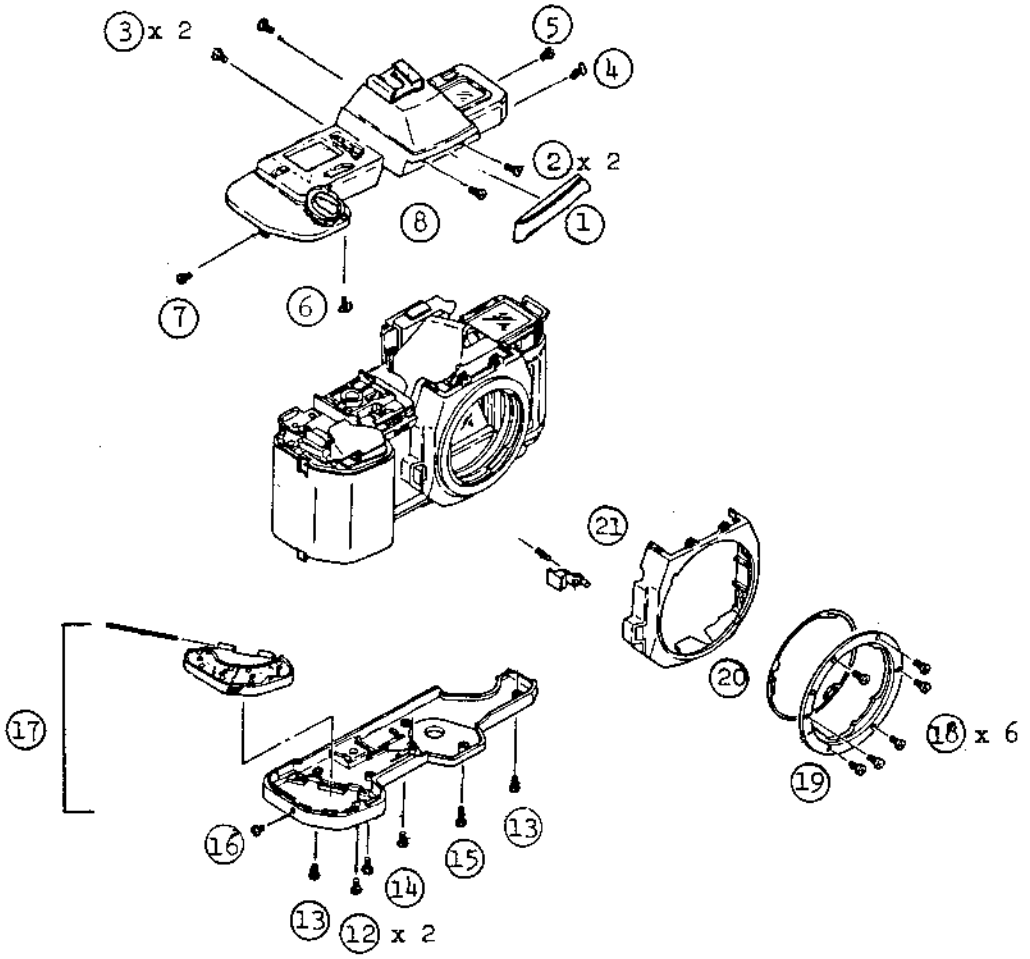
⑫ Screw 117-35114 x 2 ⑬ Screw 127-40114 x 2 ⑭ Screw 117-25114 ⑮ Screw 112-60114

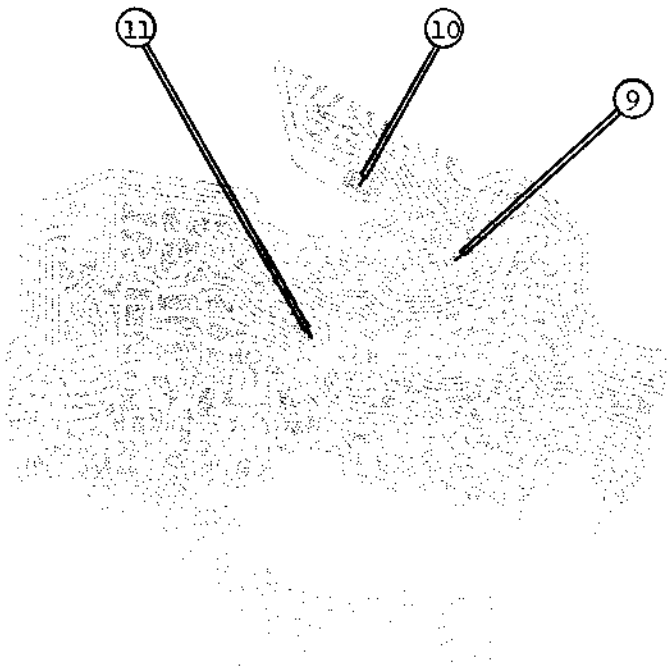
⑯ Screw 117-15114 ⑰ Bottom cover 1471B0CS1051A with Battery cap 1471B0CS1221A and Battery cap shaft 1471B0C-1224A

In case of front cover removal.

⑱ Screw 112-35134 x 6 ⑲ Bayonet mount 0971B0C-4201A ⑳ Mount ring 0971B0C-4202A

㉑ Front cover 1471B0C-4205A with Mount lock button 1471B0CS4215A and Mount lock spring 0971B0C-4218A


3 x 2
5
4
2 x 2
8
1
7
6
21
20
18 x 6
19
17
16
15
13
14
13
12 x 2


11
10
9

B. Mirror Housing and Frensnel lens box Removal.

Follow the top, bottom and front covers removal. Then,

(1) Front decoration plate (R) 1471B0CS4209A (2) Front decoration plate (L) 1471B0CS4210A

(3) Screw 312-40121 x 4 (4) Screw 322-40114 (5) Tripod baseplate 1471B0CS1003A (6) Screw 112-30121

(7) Screw 112-22114 (8) Gum pressure plate 1471B0C-2071A (9) Gum 1471B0C-2072A

(10) Screw 114-20514 x 2 (11) Screw 127-35114 x 2 (12) AN baseplate 1471B0CS2001A

(13) Screw 117-30114 x 2 (14) Collar 117;B0C-4014A (15) Screw 122-40114 x 5

If you remove the mirror housing unit completely, unsolder the thirteen lead-wires from the Flexible pattern A side and P.C.Board D side with following procedures.

(16) Black lead-wire (17) Pink lead-wire (18) Blue lead-wire

(19) Sky blue lead-wire (20) Gray lead-wire (21) Orange lead-wire

(22) Black lead-wire (23) Brown lead-wire (24) Brown lead-wire

(25) Blue lead-wire (26) Yellow green lead-wire (27) Yellow lead-wire

(28) Red lead-wire

Then, disconnect the position (29) (30) (31) (32) (33) (34) (35) (36) (37) (38)

(39) Screw 124-30114 (40) Mirror housing 1471B0CS4000A with Penta prism 1471B0CS4301A and Screw 127-40114 x 4

and Flexible pattern A 1471B0CSEP27A and Flexible pattern B 1471B0CSEP28A and Shielding plate 1471B0C-1502A

Procedure (41) to (54) shows the lead-wires for Flexible pattern A removal. And frensnel lens box.

(41) White lead-wire (42) Black lead-wire (43) Black lead-wire

(44) Yellow lead-wire (45) Blue lead-wire (46) Pink lead-wire

(47) Red lead-wire (48) White lead-wire (49) Red lead-wire

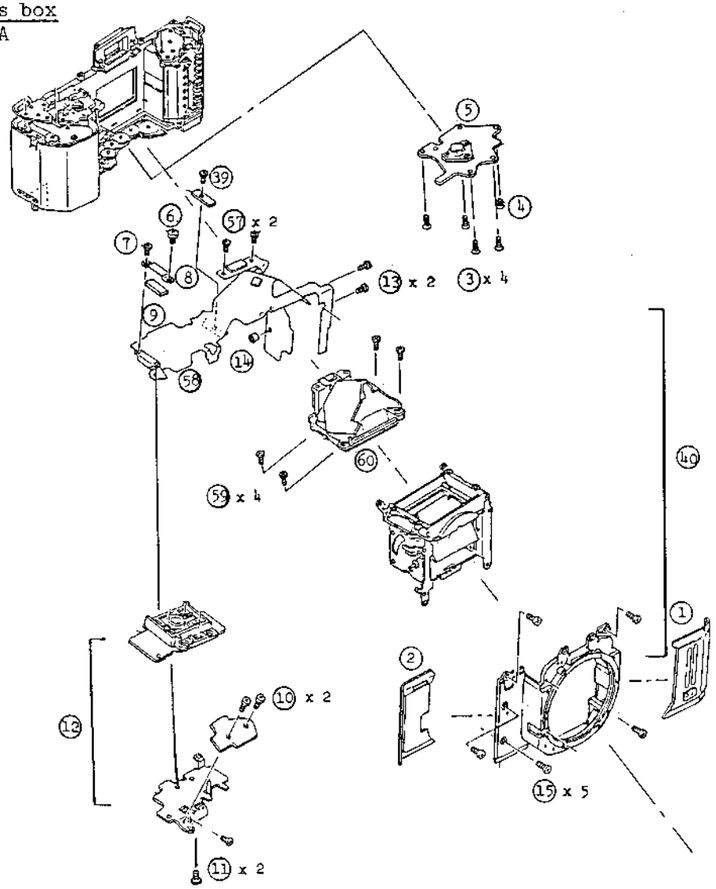
(50) Gray lead-wire (51) Sky blue lead-wire (52) Red lead-wire

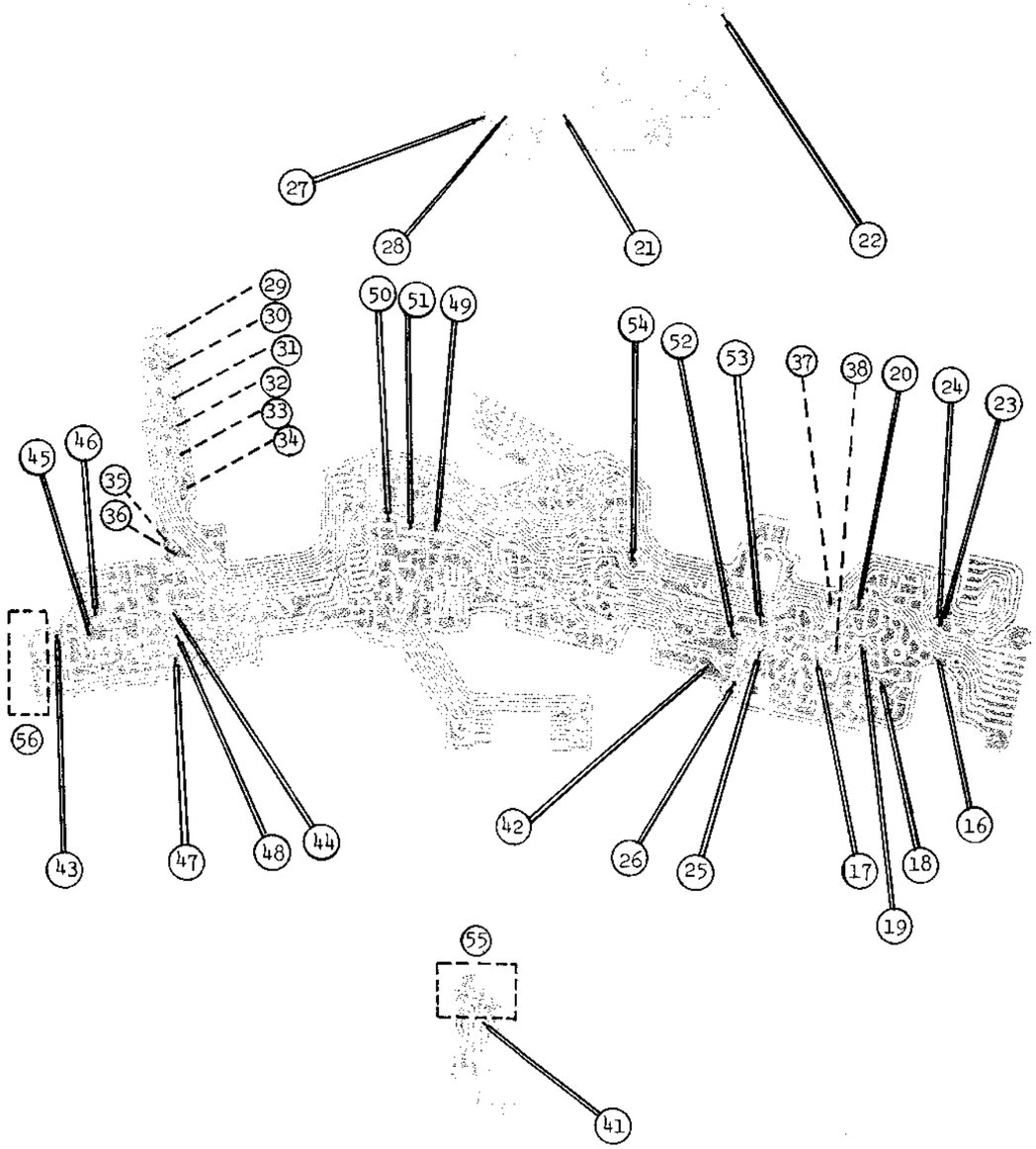
(53) White lead-wire (54) Green lead-wire

Then, disconnect the position (55) x 4 and (56) x 4

(57) Screw 127-20014 x 2 (58) Flexible pattern A 1471B0CSEP27A (59) Screw 127-40114 x 4

(60) Frensnel lens box 1471B0CS4301A



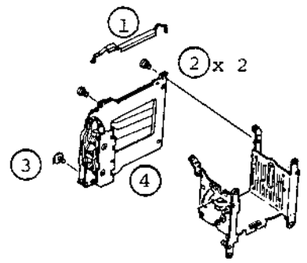


C. Shutter Removal

Refer following procedure after Body side removal.

① Shieding plate 1471B0C-1502A ② Screw 112-20121 x 2 ③ Screw 917-20514

④ Shutter 1471B0CS1501A

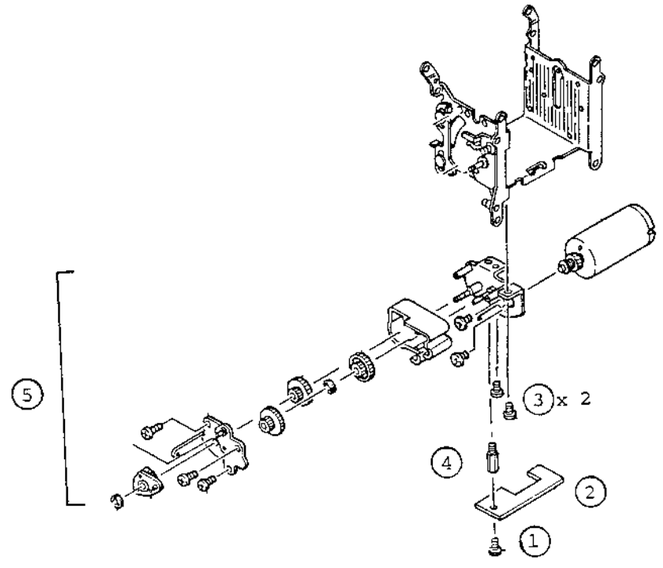


D. Box Motor Removal

Follow the Shutter removal. Then,

① Screw 117-30114 ② P.C.Board A 1471B0CSEP01A ③ Screw 117-18114

④ M Box pattern holder A 1471B0C-4013A ⑤ Box motor 1471B0CSEM01A



E. Sprocket Removal

Follow the Top cover, Flexible pattern A and Bottom removal. then,

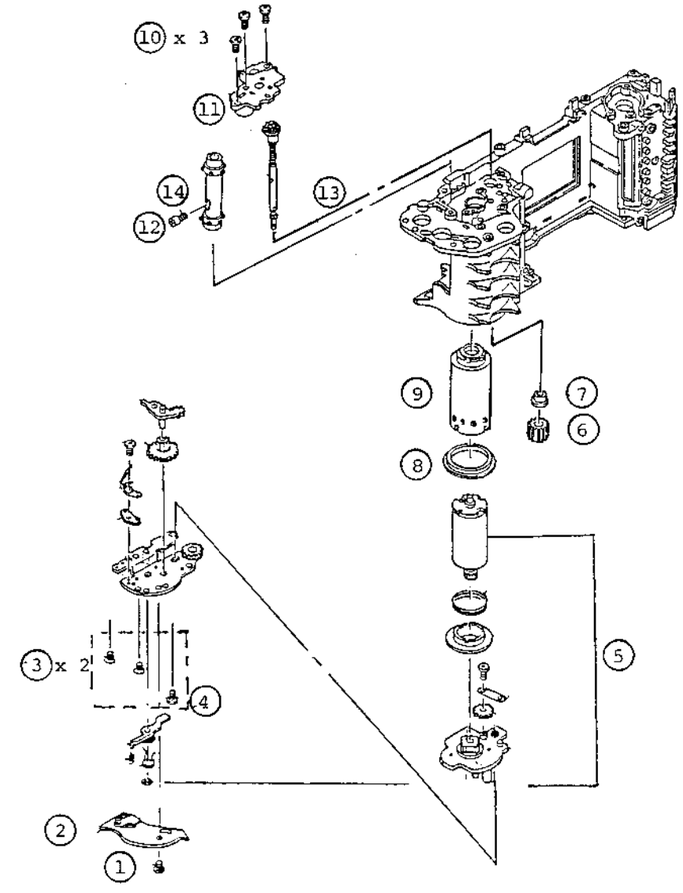
① Screw 117-15014 ② Batt. cap shaft retainer 1471B0C-1220A ③ Screw 327-28014 x 2

④ Screw 127-25014 ⑤ Winding baseplate 1471B0CS3001A ⑥ Sprocket A gear 1471B0C-3054A

⑦ Sprocket shaft holder 1471B0C-3053A ⑧ Reel sleeve 1471B0C-3073A ⑨ Take-up spool 1471B0C-3071A

⑩ Screw 127-35014 x 3 ⑪ Counter baseplate 1471B0C-2301A ⑫ Screw 0271W0C-0153A

⑬ Sprocket shaft 1471B0CS3052A ⑭ Sprocket 1471B0C-3051A

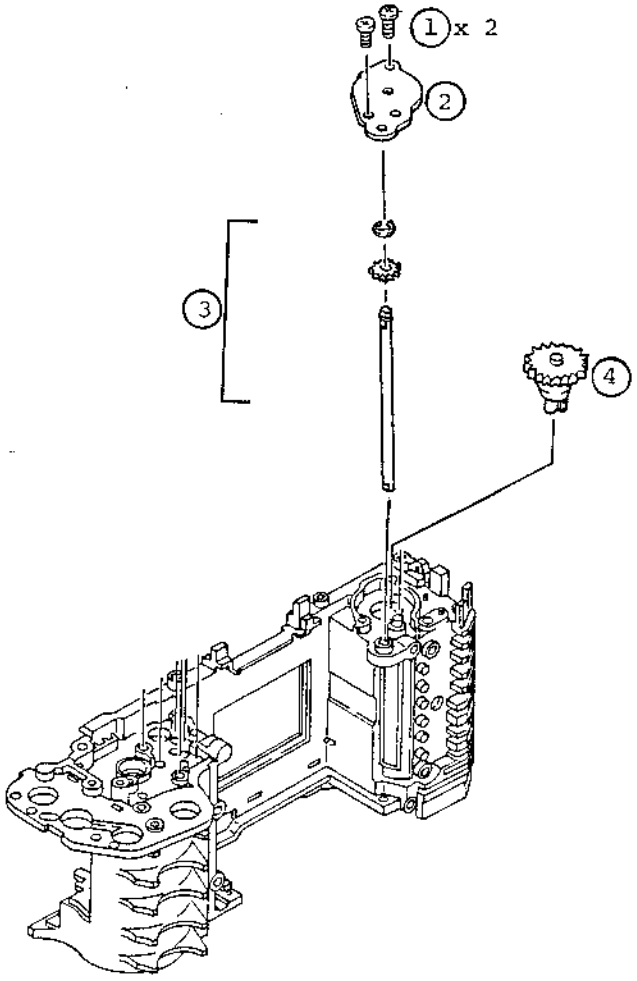


F. Rewinding Gear Removal

If you remove the rewinding gear.

① Screw 127-35114 x 2 ② Rewinding baseplate 1471B0C-3141A ③ Coupling shaft 1471B0C-3120A

with E ring XRET-01310 and R7 B-Gear 1471B0C-3131A ④ Rewinding gear 1471B0CS3133A



II. SHUTTER UNIT

A. Electro-Mechanical Shutter

Shutter speed, program AE, aperture-priopity system AE and manual, are controlled by electromagnet system. In auto mode, shutter speed automatically and steplessly changes from 8 sec. to 1/2000 sec. depending upon film speed, F number and luminance of the subject. fifteen different shutter speed, B, 8 sec., to 1/2000 sec ., are provided in manual mode.

The following supplies information about minute adjustment only to aid the reader to gain deeper understanding of the shutter mechanism. A shutter as spare parts is factory adjusted, and further adjustment need not be performed.

a. Curtain speed
the curtain speed is adjusted to neighborhood 7.8 m sec
to need not the curtain speed adjustment.

b. Trigger switch
After connecting the standard control circuit adjust the eccentric adjustment screw to obtain correct shutter speed at 1/2000 sec.
Trigger switch adjusting screw has to adjust the factory, there is a defective, it is able to change the shutter unit.

c. Synchro contact adjustment
The adjustment is made by bending the contact "C" so that synchronization is made without fault at "X" (1/100 sec.) speed setting. The contact must be free from dust and corrosion.
There is synchro contact "ON" condition with shutter charge before, "OFF" condition with shutter charge start to end. See Fig. II-1.

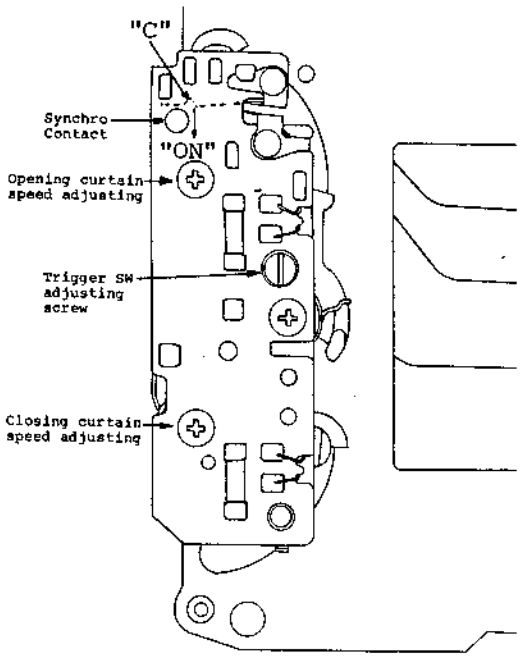


Fig. II-1.

Synchro time lag.
At slow speed of 10 m sec. long more, full open picture frame(vertical 24mm), fire contact 0.6m sec less and full open time of contact 1m sec more.
See Fig. II-2.

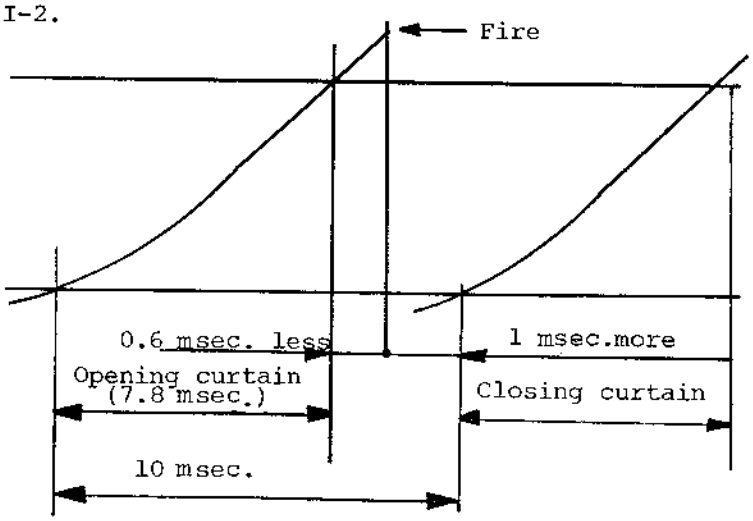
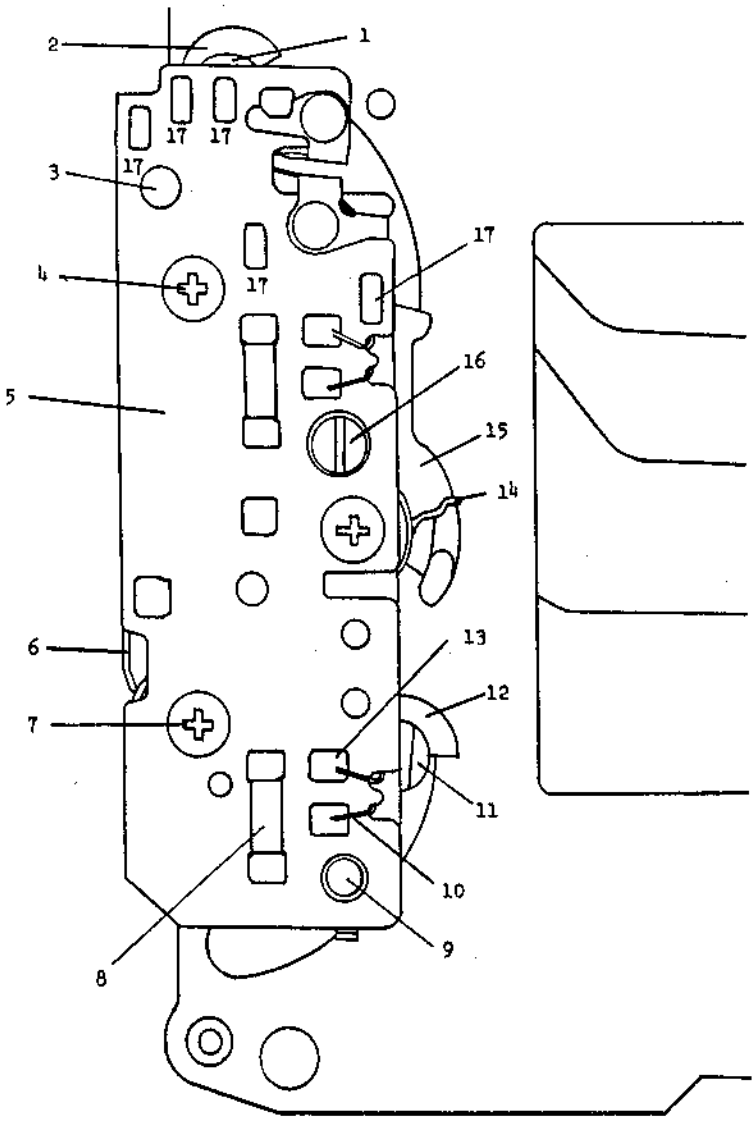


Fig. II-2.

B. Shutter Trouble-Shooting

DEFECTS	DESCRIPTION	CAUSE
Synchro contact efficiency defective		a. synchro contact dirty b. Worn out contact
Shutter curtain sunburnt	Sunshine	Keeped the mirror-up condition
Shutter curtain dirty	Dusts or finger prints on curtain	Wipe of the dust, Use cleaner of thin rubber
Shutter stays open		a. Set lever spring loose or bent b. P.C.Board defective C. Closing curtain lever spring loose
Shutter Speed too slow or too fast		L.C.D.panel IC or switch defective. Shutter speed is controlled the cause may be found in electronic components and adjustment
Shutter will not charge		Winding motor stoped, Shutter release lever spring loose
L.C.D.panel defective		Spring weak of L.C.D.panel switch, Out'side power or movement



1. Opening curtain lever
2. Opening curtain band protection rubber
3. Synchro contact
4. Opening curtain speed adjusting screw
5. P.C.Board
6. Shutter curtain stopping plate
7. Closing curtain speed adjusting screw
8. Condenser
9. Magnet shaft
10. Magnet lead wire
11. Closing curtain lever
12. Closing curtain band protection rubber
13. Magnet lead contact
14. Set lever spring
15. Set lever
16. Trigger Switch adjusting screw
17. Flexible pattern C, connecting contact

C. Modulate (LCD Panel)

a. Give an outline of modulation and indication of camera informed.
There is the drive signal from camera side.
See Fig. II-3.

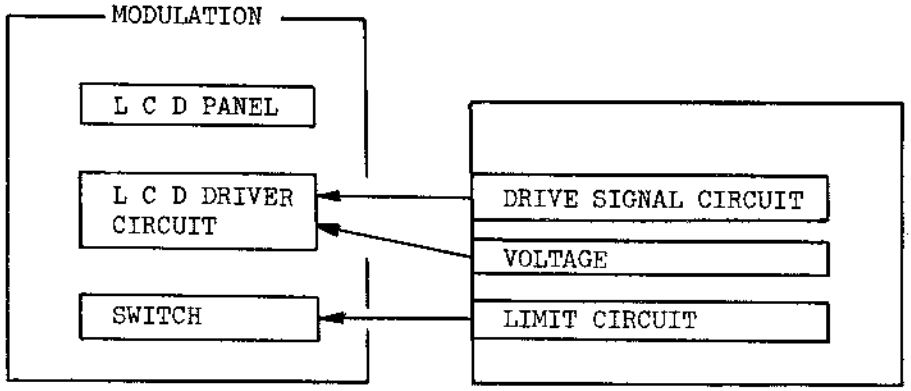
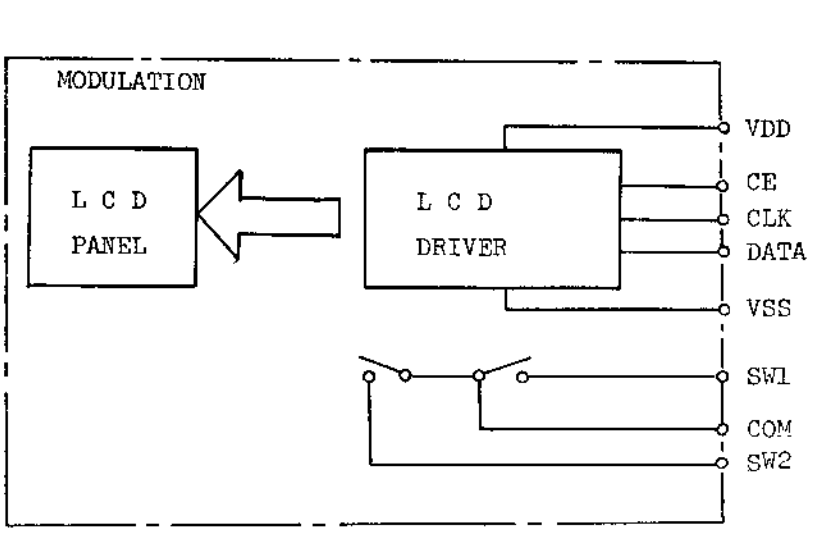


Fig. II-3.

b. L C D Connection



: Switch ON/OFF

VDD: Electric Power (+)

VSS: Electric Power (-)

CE : Drive Input Signal (Data Terminal)

CLK; Drive Input Signal (Data Terminal)

DATA: Drive Input Signal (Data Terminal)

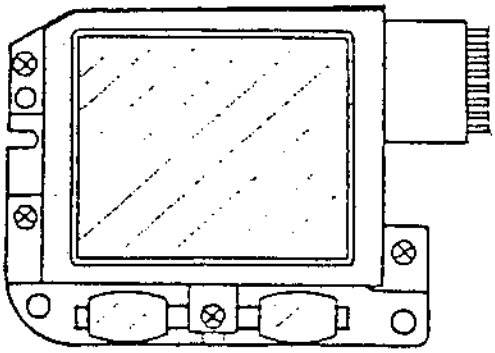
SW1:Switch Output Signal (Switch Terminal)

SW2: Switch Output Signal (Switch Terminal)

COM: Switch Output Signal

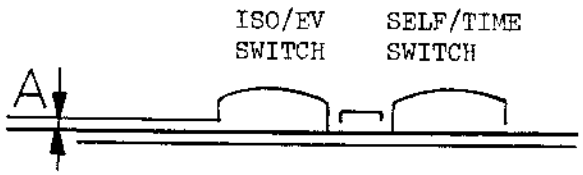
Fig. II-4.

c. Switching Contacts



ISO/EV SWITCH SELF/TIME SWITCH

Fig. II-5



A: Maximum 1.5 mm

Fig. II-6

d. LCD Circuit

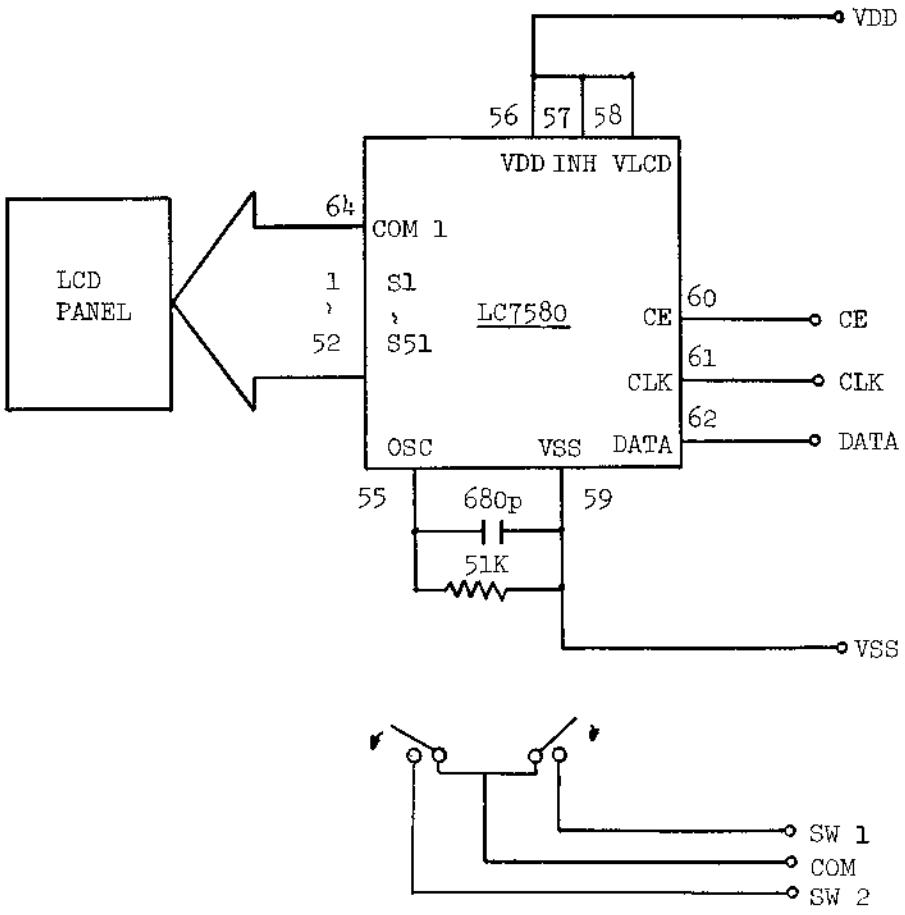


Fig. II-7

III. MIRROR HOUSING UNIT

MIRROR HOUSING

The mirror housing is one of the major components of the camera and it has many important function.
When the shutter release is depressed mirror opens the light path to the shutter.
As this mirror up is completed the mirror housing release a shutter trigger signal.
When the shutter is closed the mirror release lever is actuated and starts mirror return.
The mirror housing also consists of lens diaphragm stop-down mechanism.
Moreever, CHINON CP-7m is equiped the multi-exposure controlled system, it say program "AE" (Automatic exposure).
For multi systems, the mirror housing is equiped the "F-Stop" mechanism.
Further more, the housing vital to the flange back focus and the viewfinder focus.
The focus adjustment procedure will be explained in later.
Each element of the mirror housing supplied as a spare part is factory adjusted and further adjustment need not be performed.
The information contained in the elements description is for the extensive repair only.

A. Mirror-up Magnet

General electric magnet works as magnet by magnetizing the iron core of coil with electricity.
The mirror-up magnet will turned "ON" by the shutter release and the armature lever will leave.
So during above operation F-Value is determined and mirror-up magnet will turned "ON" again.
Then, armature lever will leave again and mirror up will begin.

B. F Stop magnet

The CHINON CP-7m camera is designed with multi-program AE mode and new AE system is controlled by the Micro-Computer perfectry.
The F stop magnet determines the hour of the F Stop-Down systems activation by the Micro-Computers commond.
When Aperture-Priority AE mode and manual exposure mode occur, the F stop magnet operates the F Stop-Down system by constant hour.

C. Mirror Housing Operation

Mirror housing mechanism operate by mirror box motor plate (1471B0CS4101A).

1. Operation of mirror housing charge

Mirror charge lever (1471B0CS4125A) will be actuated by the mirror lever (1471B0CS4033A). See Fig. III-1.
The mirror charge lever will be locked by the M4 Gear in the mirror box motor plate. See Fig. III-2.

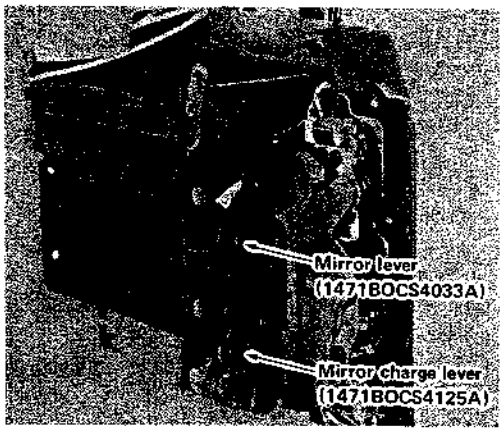


Fig. III-1

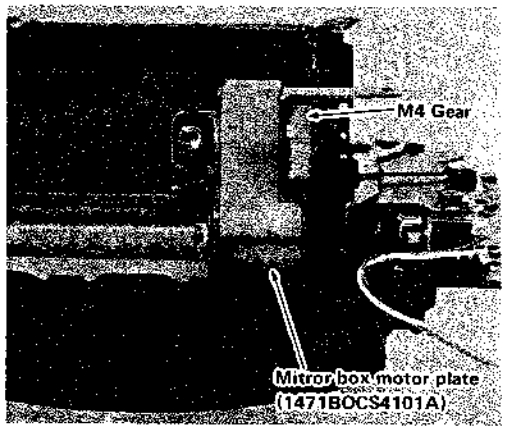


Fig. III-2

2. Operation of the F stop

When the mirror-up magnet is turned "ON", the mirror armature lever will be release from the mirror up magnet and push the mirror operation lever (1471B0CS4035A). See Fig. III-3.
Then, the mirror charge lever (1471B0CS4125A) operation and the Stop-Down baseplate A (1471B0CS4151A) is pushed by F/stop lever. See Fig. III-4.

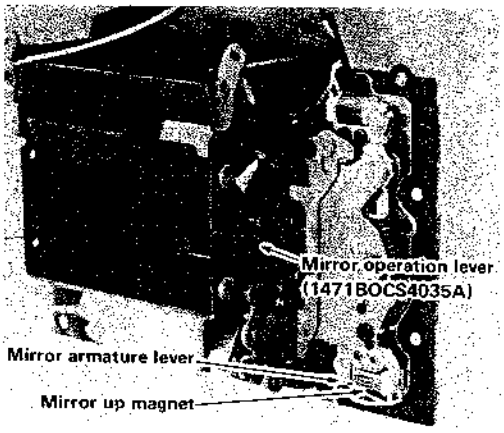


Fig. III-3

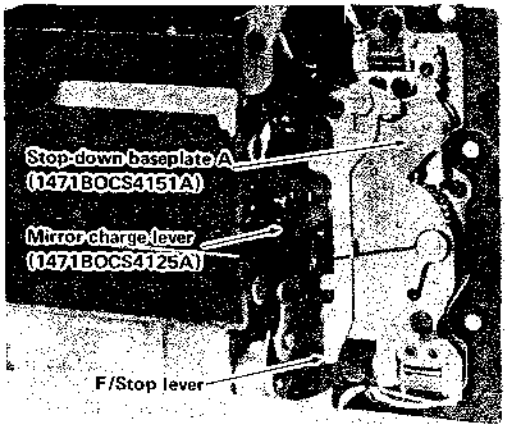


Fig. III-4

The F stop magnet is turned "ON" the moment that the shutter is release and the F armature lever A will be leaved. See Fig. III-5.
Then, the F setting gear A moves the F value position and controlled.
See Fig. III-6.

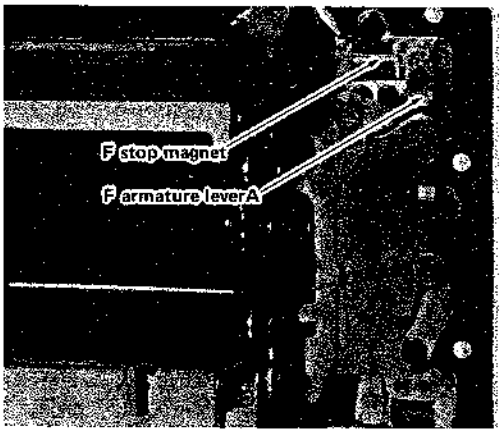


Fig. III-5

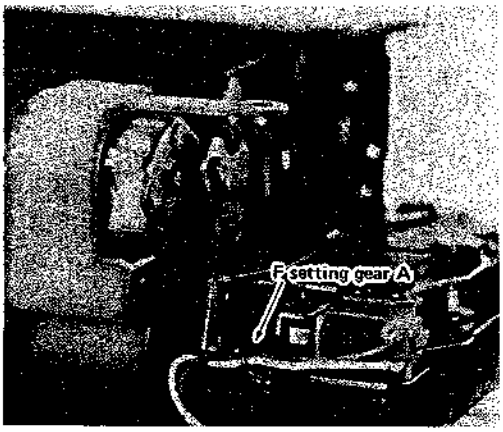


Fig. III-6

3. Operation of mirror-up

When the mirror-up magnet is turned "ON" again, the mirror armature lever will be released from the mirror up magnet and push the mirror operation lever by the box motor.
then, lock of the mirror lever (1471B0CS4033A). See Fig. III-7.
The mirror operation lever (1471B0CS4035A) lift up the mirror system, when the mirror up operation will come to an end.
Also the shutter charge lever and shutter function are sequenced to actuate the opening curtain lever. See Fig. III-8.

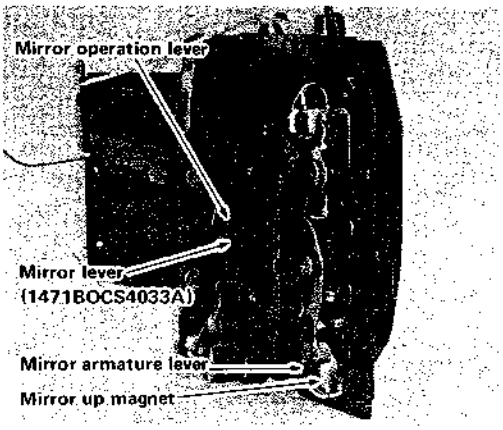


Fig. III-7

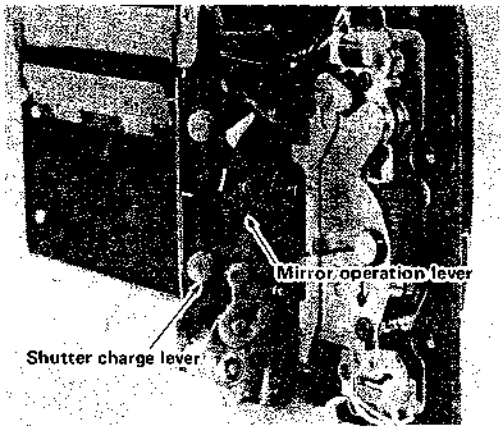


Fig. III-8

4. Operation of mirror-down

The shutter closing curtain release lever presses the shutter charge lever there by actuating the shutter charge lever position A and B in sequence. The mirror operation lever (1471B0CS4035A) should be released from the shutter charge lever position B. See Fig. III-9.

Also the housing will return the first position, when it will be finished all of the operations (mirror charge, F stop, mirror up and mirror down).

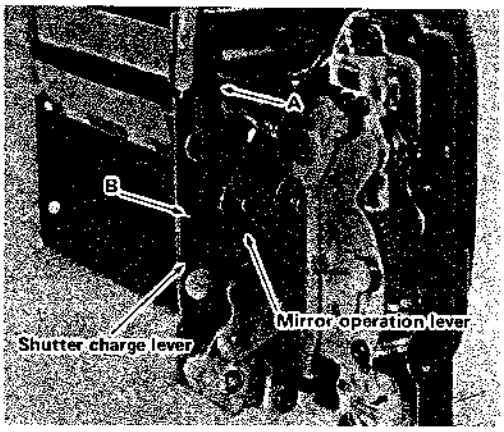


Fig. III-9

IV. WINDING MECHANISM

A. Operation of Winding Mechanism

Winding mechanism actuated by the winding motor (1471B0CSEM02A) and mirror housing mechanism actuated by the box motor (1471B0CSEM01A) with set the shutter.

The sprocket A gear (1471B0C-3054A) and Winding baseplate (1471B0CS3001A) should be connected with winding motor. See Fig. IV-1.

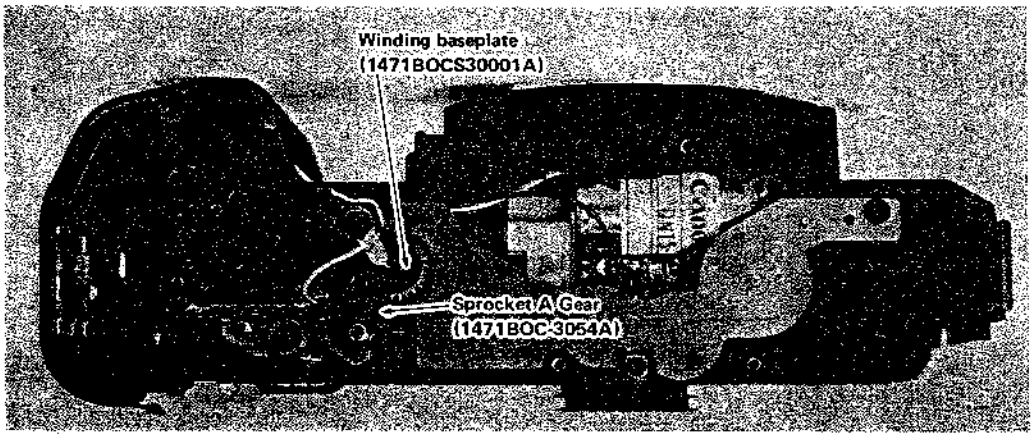


Fig. IV-1

By charging the mirror housing, the box motor to connected the mirror charge lever (1471B0CS4125A) will move and controlled the motor stop switch (1471B0CS4056A). See Fig. IV-2.

By charging the winding, the winding motor to connected the take-up spool (1471B0C-3071A) will move and controlled the winding switch (1471B0CSES02A). See Fig. IV-3.

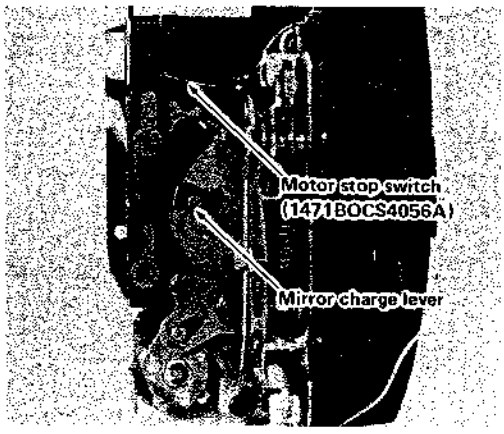


Fig. IV-2

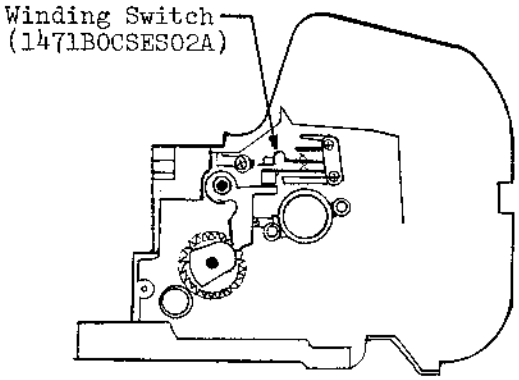


Fig. IV-3

V. FOCUS ADJUSTMENT

To the quality of the picture produced by at SLR camera, two focus adjustment is vital (excluding lens focus). One is called the "Flange Back Focus" and the other is called the "Viewfinder Focus".
The flange back focus is the distance between the lens mount hardware surface and the film plane. The distance should be correctly adjusted in order to focus clearly with any kind of interchangeable lenses. Improper adjustment of this focus will affect the viewfinder focus , too.
The viewfinder focus must be adjusted correctly so that film plane image precisely coinside. If this poorly adjusted, whenever focused through the viewfinder, the results on the film will be out focus in actual picture taking. See Fig. V-1.

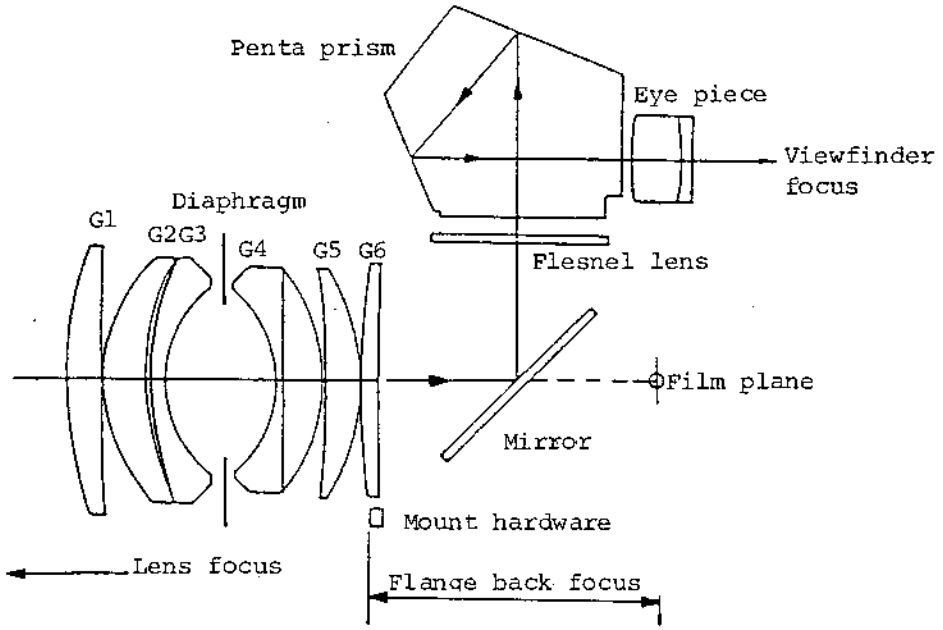


Fig. V-1

A. Flange Back Check and Adjustment

Tools Used: Dial gauge (T2-202)

a. Place the camera on a dial gauge (T2-202) and insert a block gauge between the camera and dial gauge. Rotate the camera. See Fig. V-2.
The dial gauge reading should be:
55.5 $^{-0.01}_{-0.04}$ mm (45.5 $^{-0.01}_{-0.04}$ mm + Block gauge 10.0 mm)

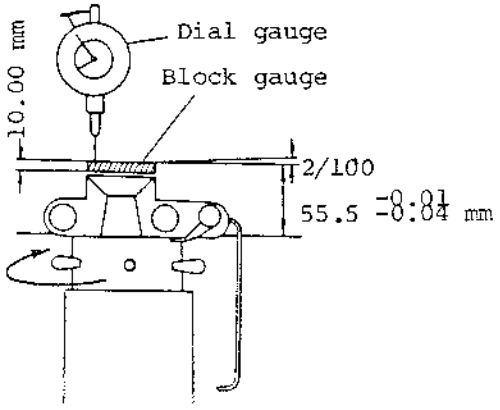


Fig. V-2

b. The reading should not fluctuate more than 0.02 mm even it is within the specified range.
When adjustment is necessary, loosen the six set screws of the mount and insert or with draw the mount washers.
Three kinds of washers are available: 0.03, 0.05, 0.07 mm.
Tighten the six set screws securely after the adjustment.
See Fig. V-3.

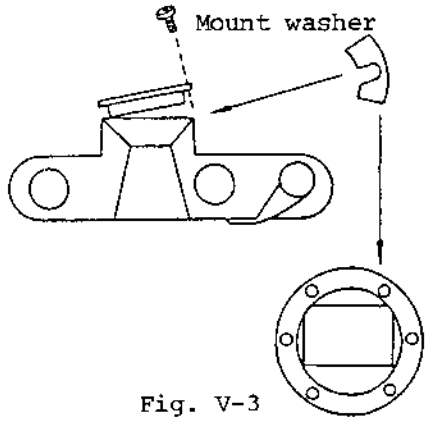


Fig. V-3

B. Viewfinder Focus Adjustment

Tools used: Infinity collimator (T0-055)
Focus calibrated lens (f=50 mm lens)

a. Mount the lens to the body and turn the lens focusing ring to obtain sharpest collimator image on the viewfinder screen.
If the collimator is not available aim at a distant object more than 250 m away (with f=50 mm lens).

b. When the sharpest image is obtained at near distance side of the focus ring, turn the three adjustment screws clockwise.

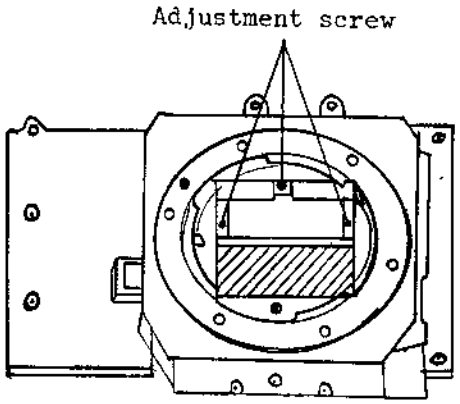


Fig. V-4

c. When the sharpest image is not obtained even at "∞" position, turn the three adjustment screws counterclockwise.
See Fig. V-4.

d. The image should be sharpest at the focus ring at "∞" position.
After the adjustment, release the shutter several times and check focus again.

e. After adjustment, lock these screw with glue.

VI. EXPOSURE CONTROL

The Chinon CP-7m feature Multi-Program automatic exposure controlled system. Once the lens F stop is set to F/22 (50mm F/1.4 lens), the shutter speed and F stop most of the controlling circuit is integrated into the Micro-Computer.

A. Manual Shutter Speed Confirmation

Connect the DC connector to camera and set the power supply voltage to 5.0 V ±0.1.

Check the manual shutter speed with the shutter speed tester, so that the reading becomes within nominal ±0.3 EV without 1/1000 sec. and 1/2000 sec. The 1/1000 sec., so that the reading becomes within nominal ±0.35 EV. and the 1/2000 sec., so that the reading becomes within nominal ±0.45 EV.

Center of Shutter Speed (msec.)

EV / Speed	-0.3EV	Nominal	+0.3EV
1/500	1.58	1.95	2.40
1/250	3.18	3.91	4.18
1/125	6.34	7.81	9.62
1/60	12.7	15.6	19.2
1/30	25.4	31.3	38.5
1/15	50.8	62.5	76.9
1/8	102	125	154
1/4	203	250	308
1/2	406	500	616
1	812	1000	1231
2	1625	2000	2462
4	3250	4000	4925
8	6498	8000	9849

1/1000 sec.: 0.77 msec.(-0.35EV), 0.98 msec.(Nominal), 1.25 msec.(+0.35EV)
1/2000 sec.: 0.33 msec.(-0.45EV), 0.49 msec.(Nominal), 0.71 msec.(+0.45EV)

B. Automatic Shutter Speed Adjustment

1. Connect the DC connector to camera and set the power supply voltage to 5.0 V ±0.1.

2. Off-Set Adjustment for SPD Input-Ope.-Amp.
   Connect the voltmeter to Pin 9 of TA8623F and also Pin 10 of TA8623F and measure the Voltages. Adjust the potentiometer VR1 so that the voltage of Pin 9 becomes as belows.
   See Fig. VI-1, Fig. VI-2.

(V9) = (V10) ±1 mV

With 50mm F/1.4 lens, LV=15

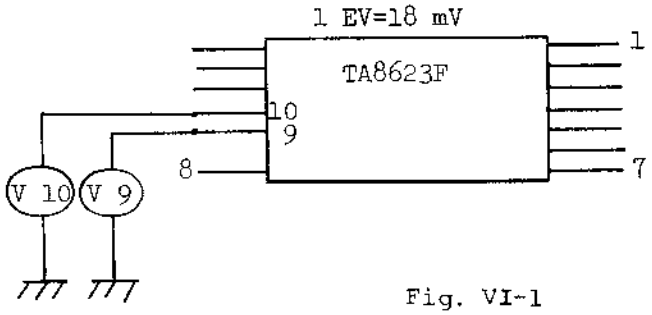


Fig. VI-1

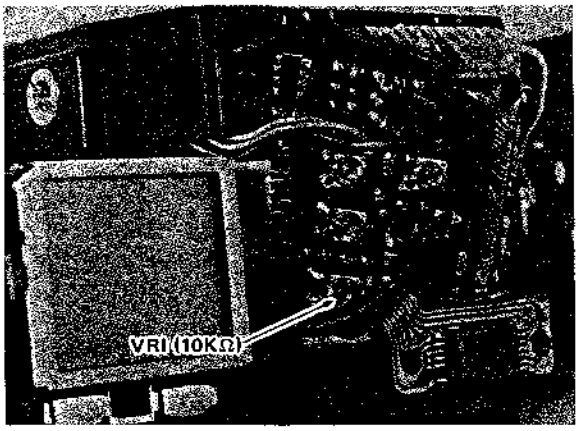


Fig. VI-2

3. γ Adjustment of A/D Compensation

a. Adjusting condition
Light source: LV 15, F/Number: F/5.6.
Adjust the potentiometer VR2 so that the reading becomes shutter speed 1/1000 sec. See Fig. VI-3.

b. LV 6 setting, adjust the potentiometer VR3 so that becomes shutter speed 1/2 sec. See Fig. VI-3.
Shutter speed confirm the LCD panel (0.5 EV steps).

LV 15(F5.6)	LV 6(F5.6)
LCD Panel 1/1000	LCD Panel 1/2

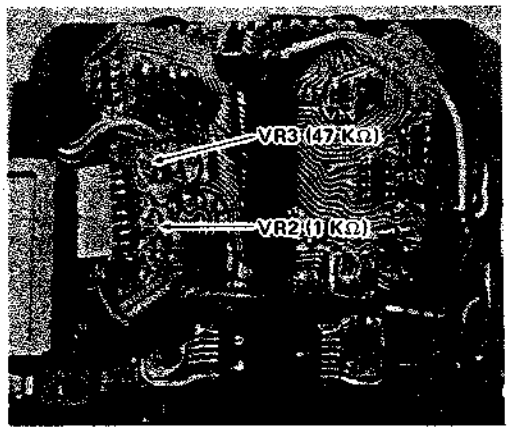


Fig. VI-3

4. γ Adjustment of F/No. VR.

a. Adjusting condition
Light source: LV 9, F/Number: F/2.
Adjust the potentiometer VR2 so that the reading becomes shutter speed 1/125 sec. See Fig. VI-4.

b. F/16 setting, adjust the potentiometer VR4 so that the reading becomes shutter speed 1/2 sec. See Fig. VI-4.

LV 9(F2)	(F16)
LCD panel 1/125	LCD panel 1/2

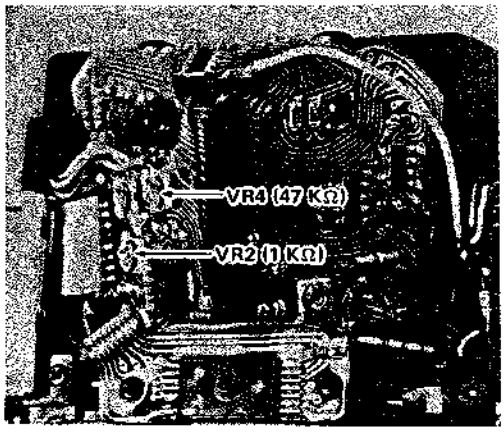


Fig. VI-4

5. Adjustment of Battery Checker Voltage

Adjust the potentimeter VR5 for battery checker voltage.
Checker Voltage 4.0V ±0.1.

Set the power supply voltage 4.0 V and adjust the potentiometer VR5 that the LCD panel switch ON/OFF stare "OFF" moment by shutter release button. See Fig. VI-5.

Checker Voltage	LCD Switch "ON"	4.4 V. Over
	LCD Switch "ON/OFF"	4.2 - 4.1 V
	LCD Switch "OFF"	3.9 V Less

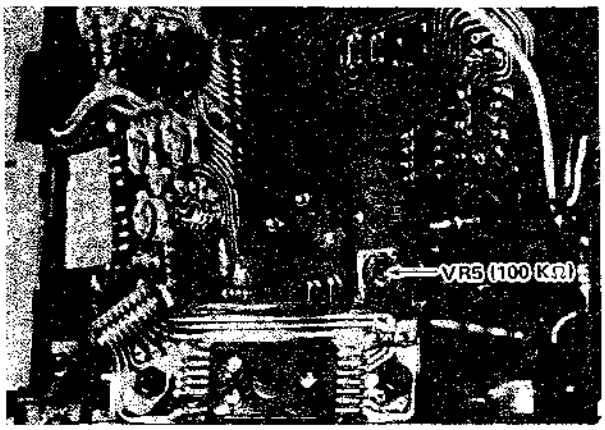


Fig. VI-5.

6. γ Fine adjustment of A/D compensation (with EE camera tester).

a. Adjusting condition
Light source: LV 12, Film speed: ASA/ISO 100, F/Number: F/5.6.
Adjust the potentiometer VR2 so that the reading becomes within nominal ±0.15 EV. See Fig. VI-6.

Shutter Speed 1/125 sec.

LV	-0.15 EV	0 EV	+0.15 EV
12	7.04msec.	7.81msec.	8.66msec.

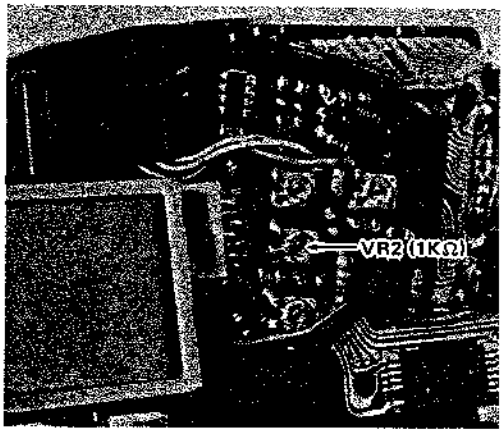
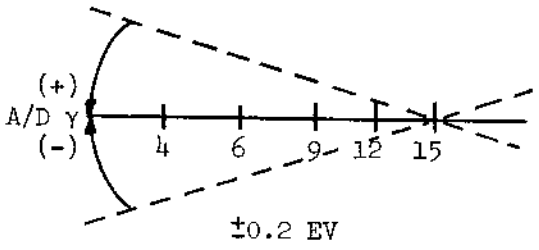


Fig. VI-6

b. Adjusting condition
Film Speed: ASA/ISO 100, F/Number: F/5.6.
Adjust the potentiometer VR3 so that the reading becomes each light source of LV 15, LV 12, LV 9, and LV 6. See Fig. VI-7.



±0.2 EV

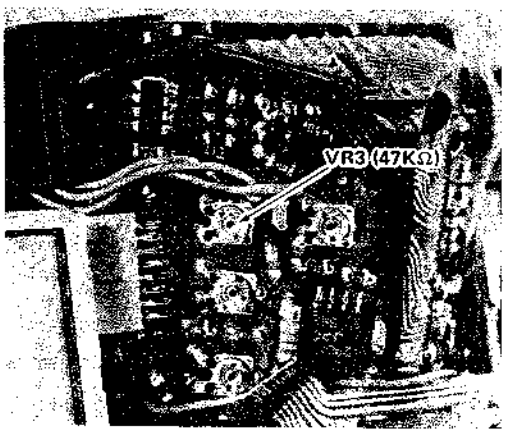


Fig. VI-7

Shutter Speed (msec.)

LV	-0.2 EV	0 EV	+0.2 EV	Shutter Speed
15	0.85	0.98	1.12	1/1000
12	6.80	7.81	8.97	1/125
9	54.4	62.5	71.8	1/15
6	435	500	574	1/2
4	1741	2000	2297	2 sec.

7. γ Fine adustment of F/No. compensation

a. Adjusting condition
Light source: LV 9, Film speed: ASA/ISO 100.
Set the apeture F/2,adjust the potentiometer VR2 so that the reading becomes nominal ±0.2 EV.

b. Next set the apeture F/16, adjust the potentiometer VR4 so that the reading becomes nominal ±0.2 EV.
See Fig. VI-8.

Shutter Speed (msec.)

F	-0.2 EV	0 EV	+0.2 EV
2	6.80	7.81	8.97
5.6	54.4	62.0	71.8
16	435	500	574

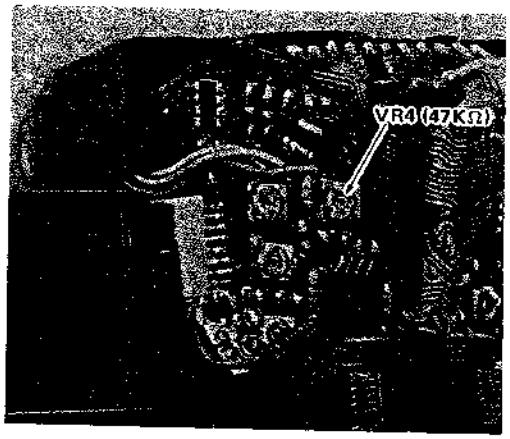


Fig. VI-8

8. Final Confirmation of AE

Then, change the light source (LV), F/No. and film speed of each combination that the reading becomes within nominal ±0.3 EV in the range of interlocked operation.
If it is not correctly, repeat from procedure 6 and 7.

Change the LV.
Set the ASA/ISO 100, and F/5.6. (msec.)

LV	-0.3 EV	0 EV	+0.3 EV
15	0.79	0.98	1.20
12	6.35	7.81	9.62
9		62.5	
6	406	500	616
4	1625	2000	2462

Change the F/No.
Set the ASA/ISO 100, and LV 9. (msec.)

F/No	-0.3 EV	0 EV	+0.3 EV
2	6.35	7.81	9.62
5.6		62.5	
16	406	500	616

9. Program Mode AE Confirmation

Set the 50mm F/1.4 lens at F/22 position, change the light source to LV4, 6, 9, 12, and 15 at P-mode, confirm the AE so that the reading becomes with ±0.5 EV in the range of interlocked oprating and confirm the P, PA and PC-Mode, then, it is right that -0.55 EV limited to LV9 at P-Mode, LV12 at PA-Mode, and LV6 at PC-Mode.
If it is not correctly, repeat from 6 and 7 and 8.

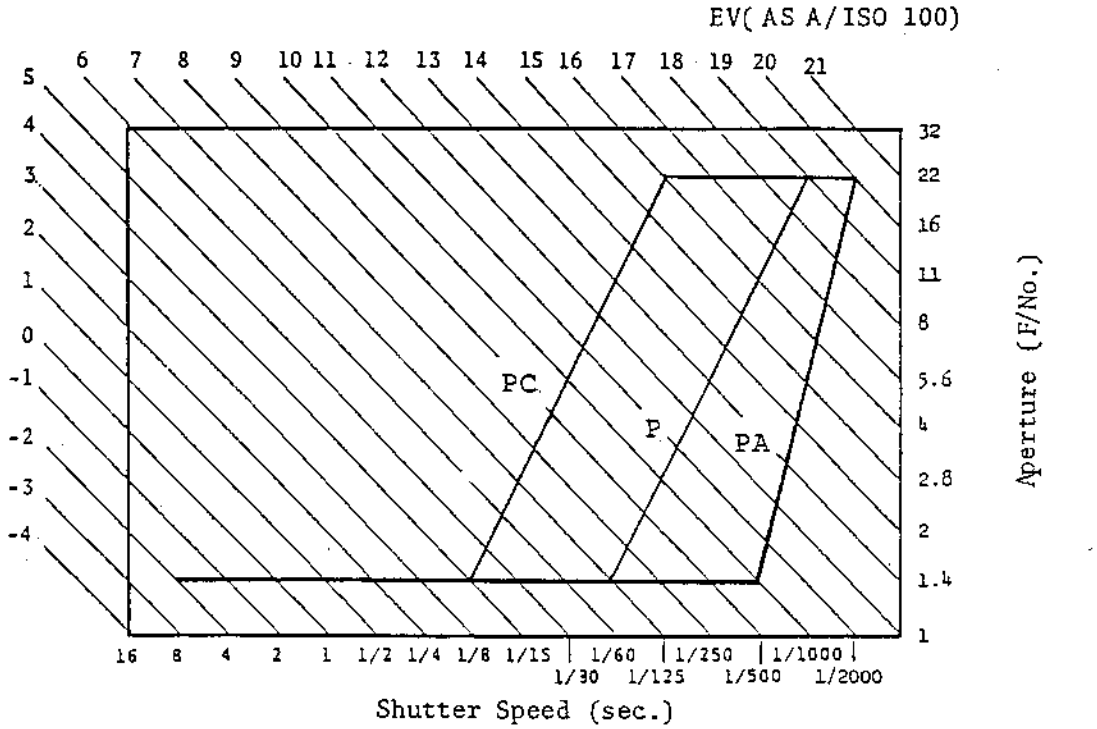
10. Program-Mode P, PA and PC for Shutter Speed.

With 50mm F/1.4 lens, ASA/ISO 100

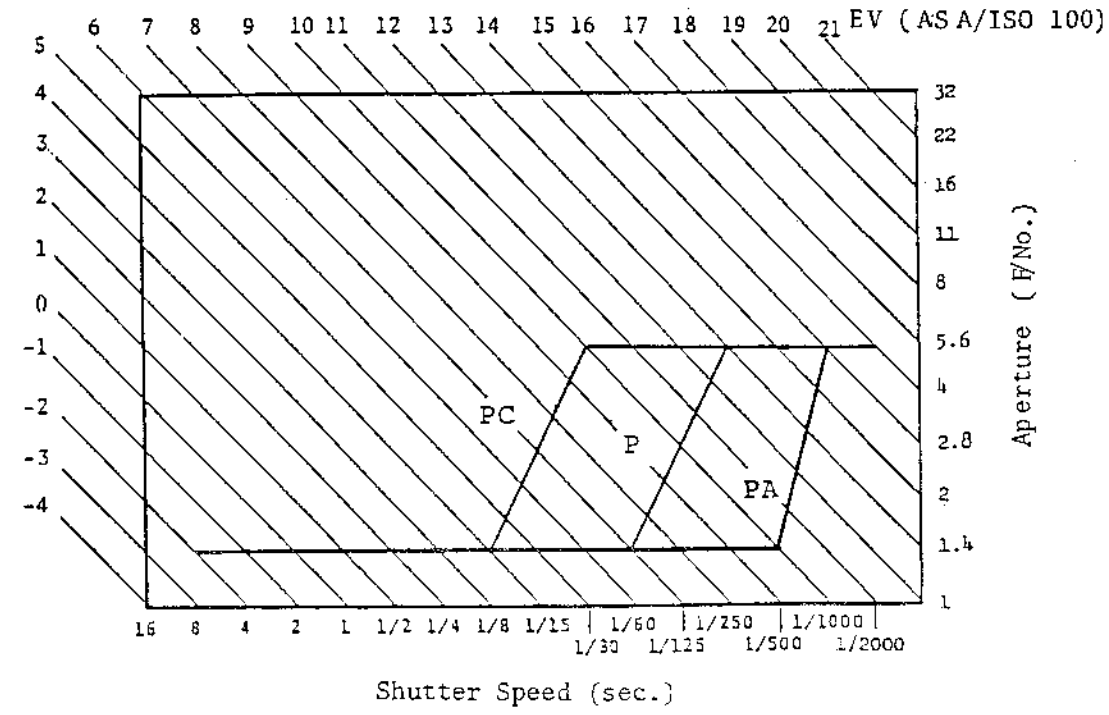
LV	EV Range	Shutter speed (msec.)		
		P	PA	PC
4	±0.7	125	125	125
6	±0.7	31.3	31.3	77.1
9	±0.7	9.58	3.91	38.4
12	±0.7	4.81	1.72	19.2
15	±0.7	2.40	0.98	9.61

C. PROGRAM CURVE

1. Program P, PA and PC (With 50mm F/1.4 lens, it is aperture set at F/22.)



2. Program P, PA and PC (With 50mm F/1.4 lens, it is aperture set at F/5.6)



D. Exposure Control Indication

1. Shutter speed control indication

Shutter speed indication, LED of 1 step within viewfinder and LED 1/2 step within LCD panel. but the manual position of LCD panel is 1 step.

LCD Panel	LED Indication	LCD Panel	LED Indication	LCD Panel	LED Indication
2000	2000	90		4	4
1450		60	60	3	
1000	1000	45		2	2
750		30	30	1	1
500	500	20		2 sec	A,Program
350		15	15	3 sec	light ON
250	250	10		4 sec	Manual
180		8	8	6 sec	ON/OFF
125	125	6		8 sec	

2. Aperture-Priority system AE-Mode Checking

Check the aperture ring.

LV	Master Lens	Shutter Speed	EV Range
6	F/5.6	2	±0.5
9	F/5.6	15	±0.5
12	F/5.6	125	±0.5
15	F/5.6	1000	±0.5

3. Program AE-Mode

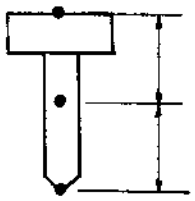
Aperture set at F/22 With 50mm F/14 Lens.

LV	Shutter Speed						EV Limit
	PA		P		PC		
	LED	LCD	LED	LCD	LED	LCD	
6	30	30	30	30	15	10	±1 step
9	250	250	125	90	30	20	
12	500	750	250	180	60	45	
15	1000	1000	500	350	125	90	

VII. SHUTTER RELEASE MECHANISM

CHINON CP-7m camera is furnished with electromagnetic shutter repease system. The electromagnetic shutter release, which enable us to take picture intantly without any time lag mode by long stroke of traditional cameras.
Sine the electromagnetic shutter release can cocked only with slight touch, we can prevent shutter blurring.

Release stroke (Standard)



Release reset position

Start exposure reading

Release switch start position

SERVICE TOOLS LIST
OF
CHINON CP-7m

Tool No.	Tool Name	Application
TO-001	(-)Screwdriver set (#1 - 6)	Excellent for all fine work.
TO-002	(+)Screwdriver set (#4 - 6)	
TO-003A	Screwdriver handle: Type A	Interchangeable with various bits.
TO-003B	Screwdriver handle: Type B	"
TO-004A	Screwdriver bit: Type A	For very fine work.
TO-004B	Screwdriver bit: Type B	For fine work.
TO-004C	Screwdriver bit: Type C	For very fine work with long shaft.
TO-011	Precision set	For delicate work.
TO-013	Micro nipper	
TO-015	Plier	
TO-019A	Tweezers: Type A	"AA" size for fine work.
TO-019B	Tweezers: Type B	"MM" size for very fine work.
TO-025	Blower	Safely clean lens surface.
TO-027	Injecter	For oiling or glueing.
TO-028	Glue	Special glue for screws bolts.
TO-029A	Cement: Type A	For bonding the metals.
TO-029B	Cement: Type B	"
TO-032	Cement	For light intercepting
TO-050	Auto collimator (f=80 mm)	For very short focus lenses.
TO-051	Auto collimator (f=120 mm)	For short focus lenses.
TO-052	Auto collimator (f=193.5 mm)	For all lenses.
TO-053	Auto collimator (f=300 mm)	For long focus lenses.
TO-054	Auto collimator (f=500 mm)	For very long focus lenses.
TO-055	Infinity collimatcr	Checking or adjusting viewfinder focus.
TO-056	Lens micro-meter	Equiped with auto collimator.
TO-057	DC power source (2A)	Regulated DC power supply.
TO-058	Tester	All purpose.
TO-059	Digital multimeter	For measuring the voltage and resistance
TO-060	Mega ohm tester	For checking electric leakage.
TO-064	Shutter tester	For measuring the shutter speed.
TO-065	Multi camera tester	For measuring the exposure.
TO-066	EE tester	"
TO-067	F number tester	Measuring the difference of value against the standard F.
T2-201	Camera stand	
T2-202	Dial gauge	For checking the level of camera mount.
T2-204B	Flange back gauge: Type B	For bayonet mount.
T2-205	Mirror stand	For checking or adjusting focus and equipped with auto collimator.
T2-301	DC connector	For much easy using this connector with Combination of the stabilized power supply.

* For specifications, detailed explanation, and price of these, please refer to already distributed lists of "TOOLS & INSTRUMENTS".

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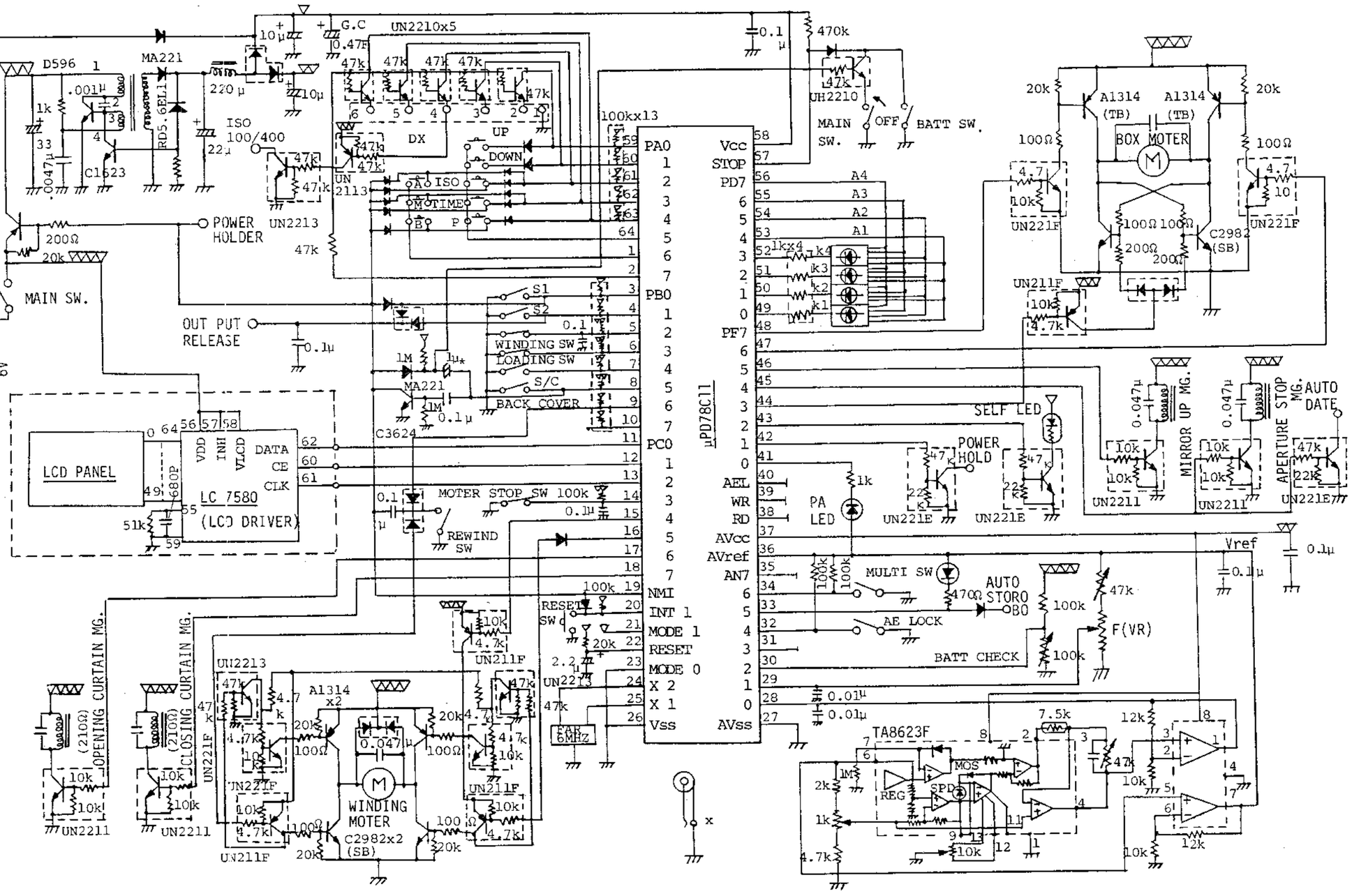
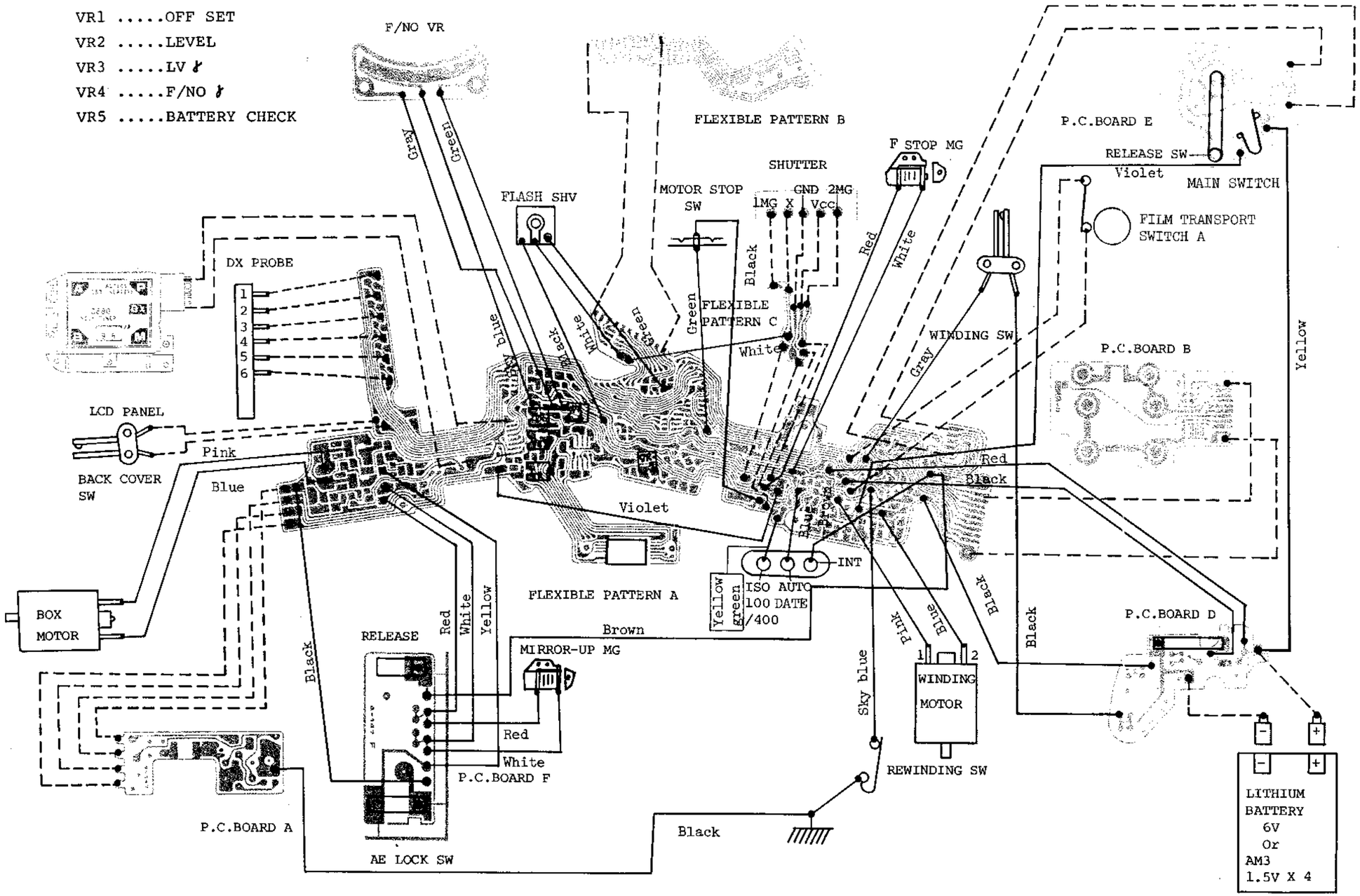
SCHEMATIC DIAGRAM

CHINON CP-7m



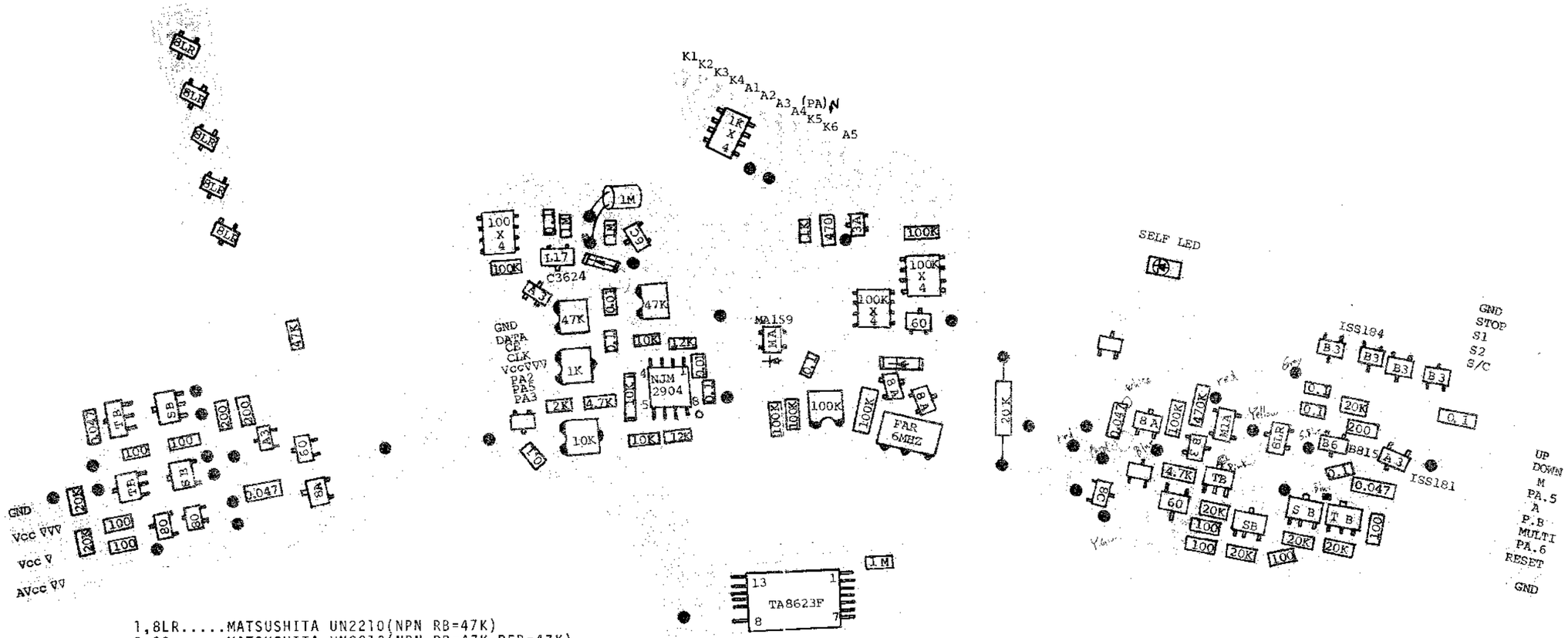
*Bipolar condencer

VR1 .....OFF SET
VR2 .....LEVEL
VR3 .....LV ∛
VR4 .....F/NO ∛
VR5 .....BATTERY CHECK



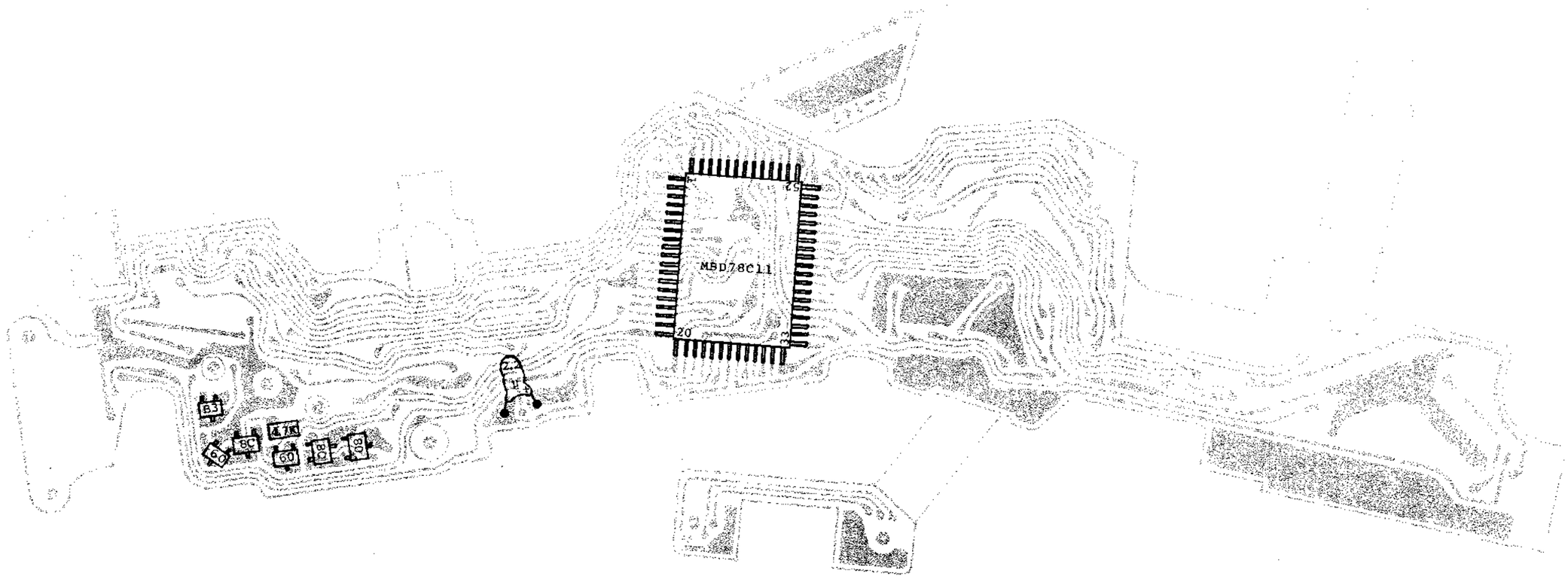
FLEXIBLE PATTERN A

CHINON CP-7m



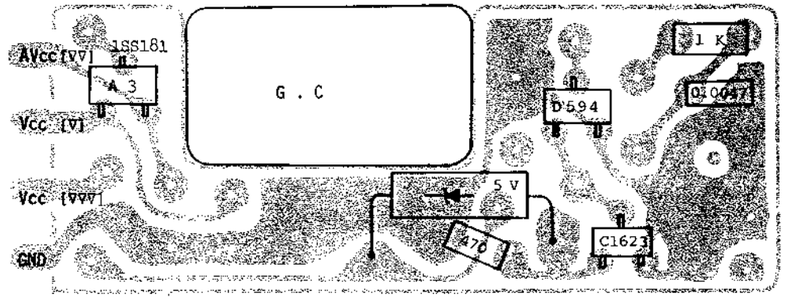
1,8LR.....MATSUSHITA UN2210(NPN RB=47K)
2,8C .....MATSUSHITA UN2213(NPN RB=47K,REB=47K)
3,8O .....MATSUSHITA UN221F(NPN RB=4.7K,REB=10K)
4,6O .....MATSUSHITA UN211F(PNP RB=4.7K,REB=10K)
5,8A .....MATSUSHITA UN2211(NPN RB=10K,REB=10K)
6,NO MARK.MATSUSHITA UN221E(NPN RB=47K,REB=22K)
7,6C .....MATSUSHITA UN2113(PNP RB=47K,REB=47K)
TB .....TOSHIBA 2SA1314(HEF RANK B,C)
SB .....TOSHIBA 2SC2982(HEF RANK B,C)

(Front view)

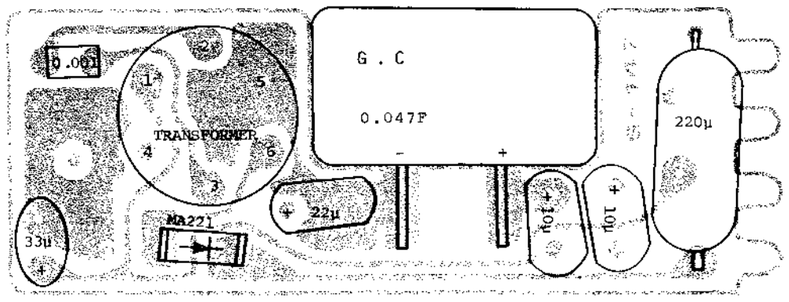


(Rear view)

P.C.BOARD A

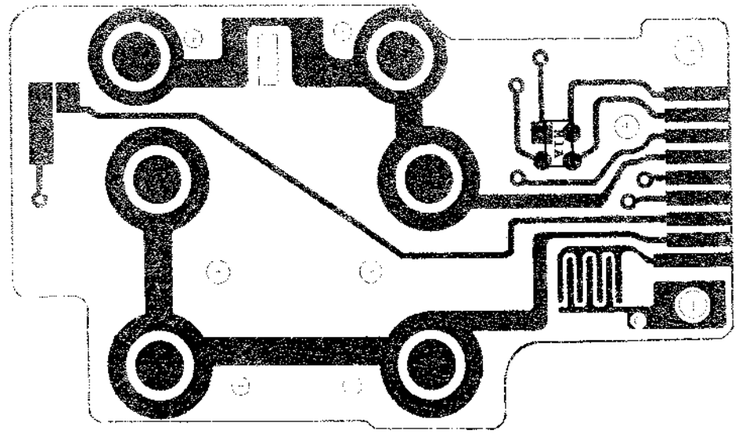


P.C.BOARD A (Front View)

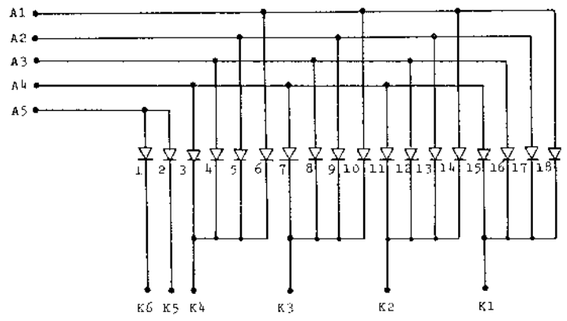


P.C.BOARD A (Rear View)

P.C.BOARD B

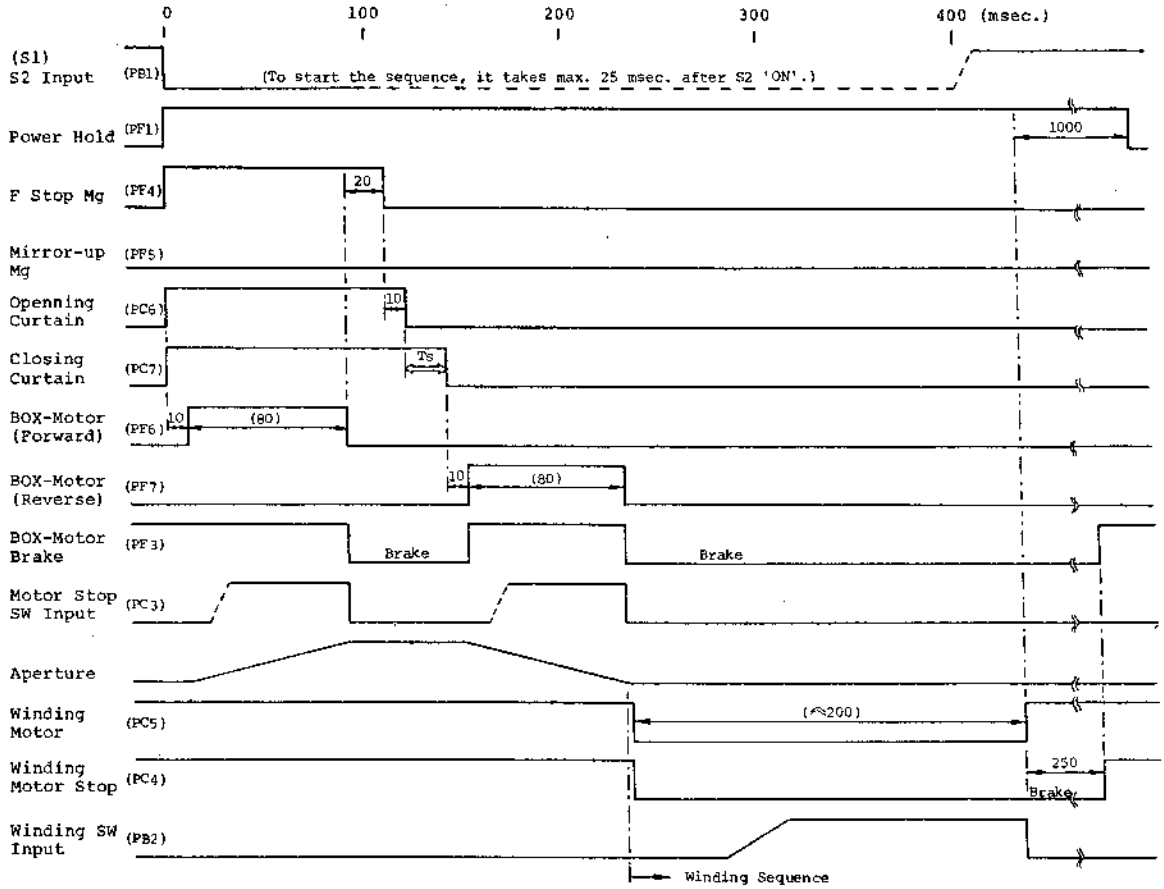


CONNECTION OF FLEXIBLE PATTERN B AND 18 DOT LEDs

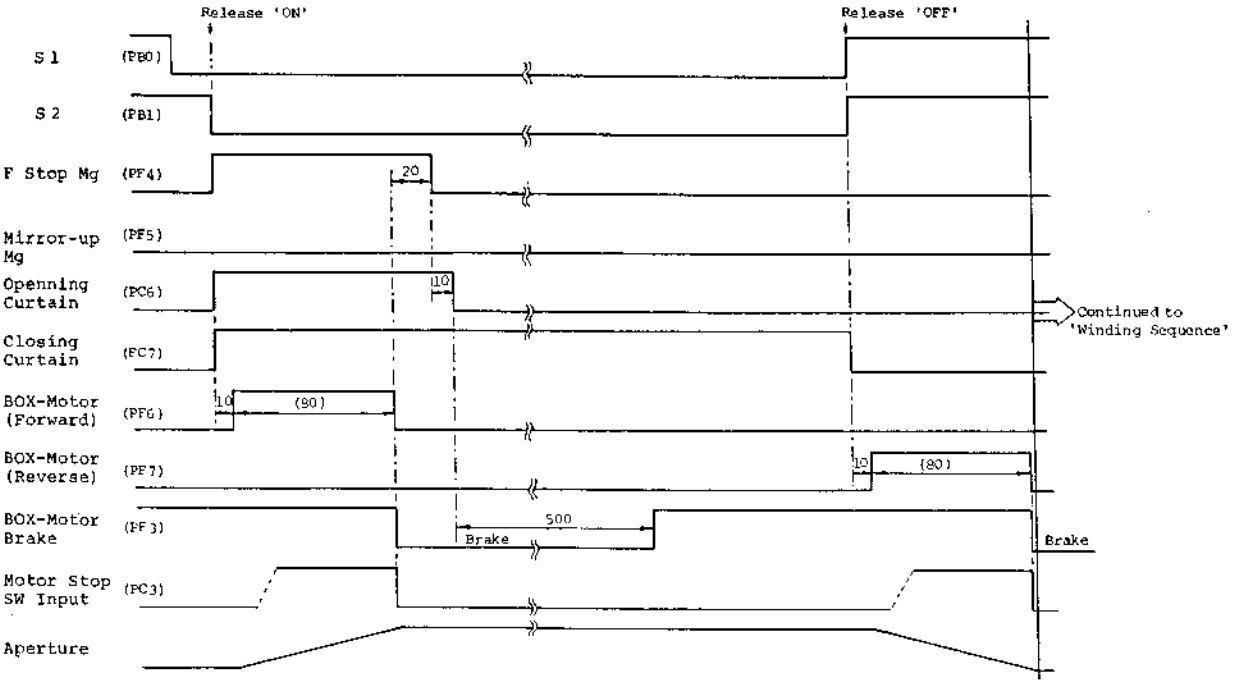


TIMING CHART

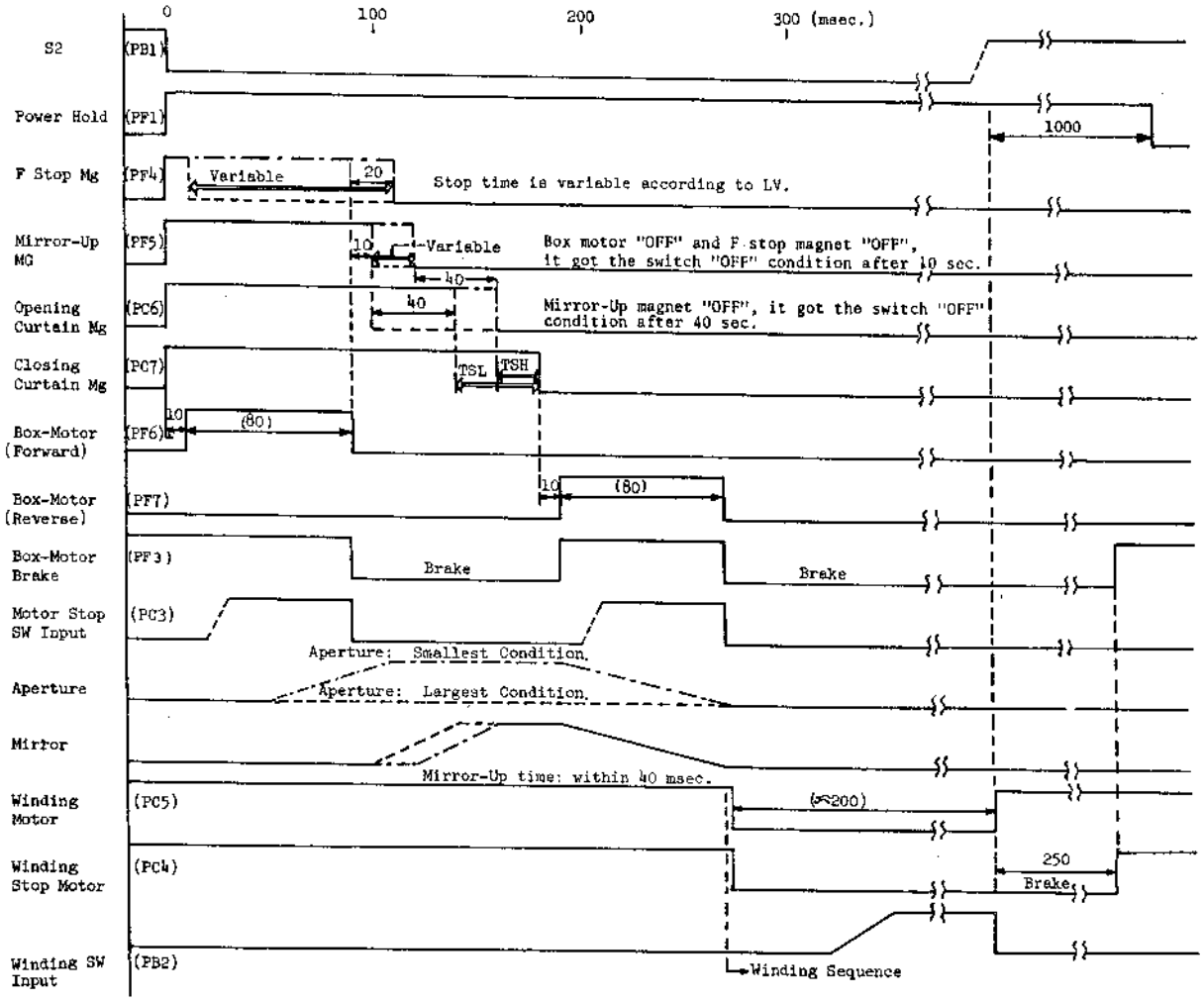
Mode: M(Manual) & A(Auto)



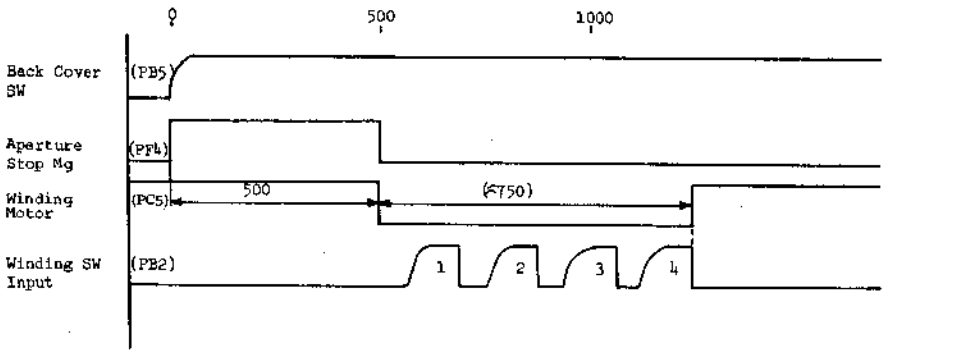
Mode: B(Bulb)

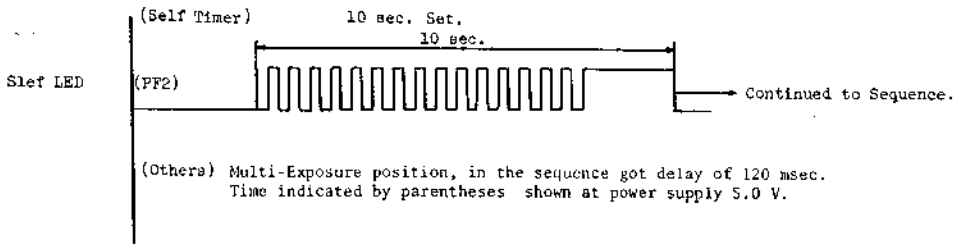


Mode: P(Program)



Mode: Loading





(Others) Multi-Exposure position, in the sequence got delay of 120 msec.
Time indicated by parentheses shown at power supply 5.0 V.

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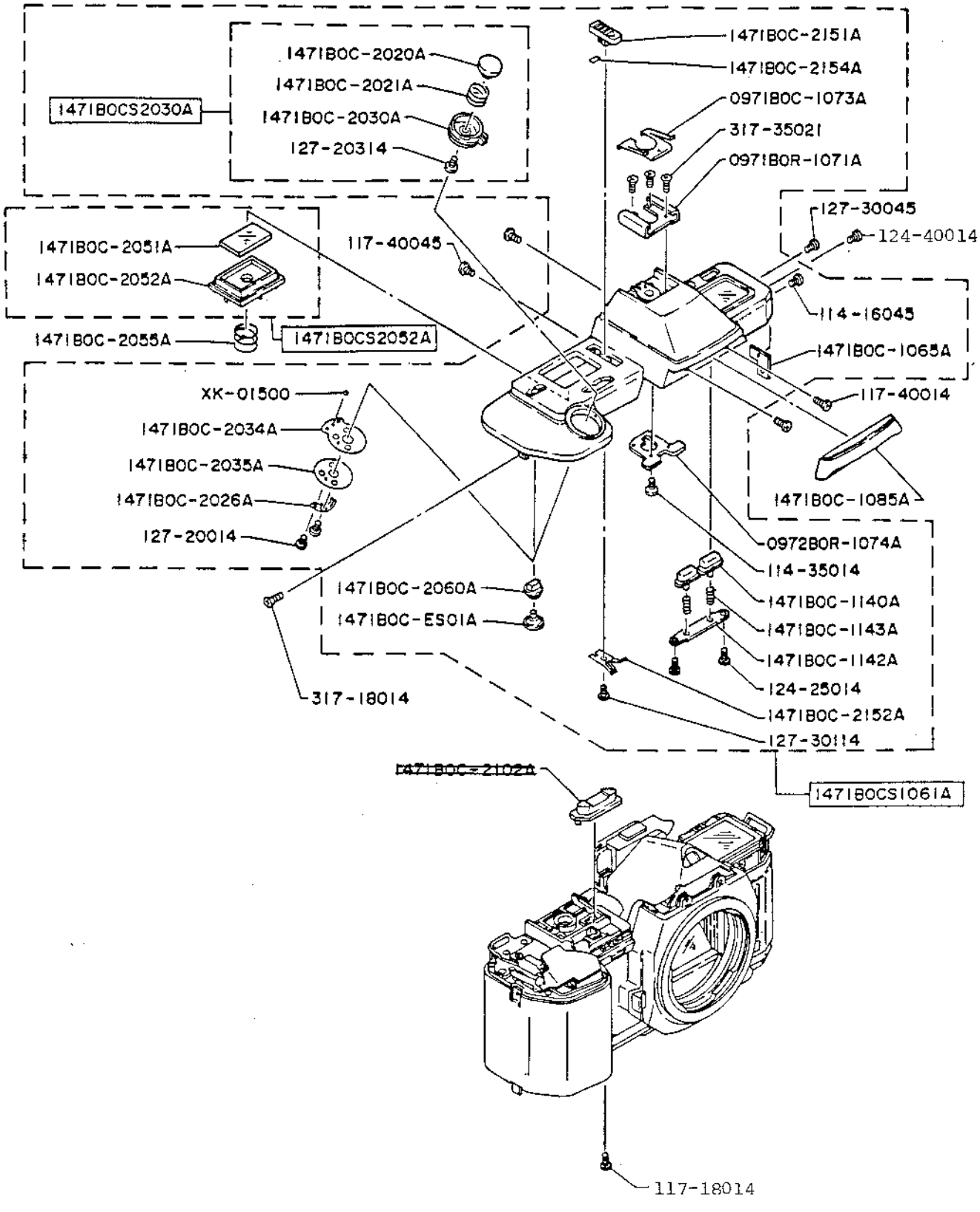
1

EXPLODED VIEW
OF
CHINON CP-7M MULTI PROGRAM

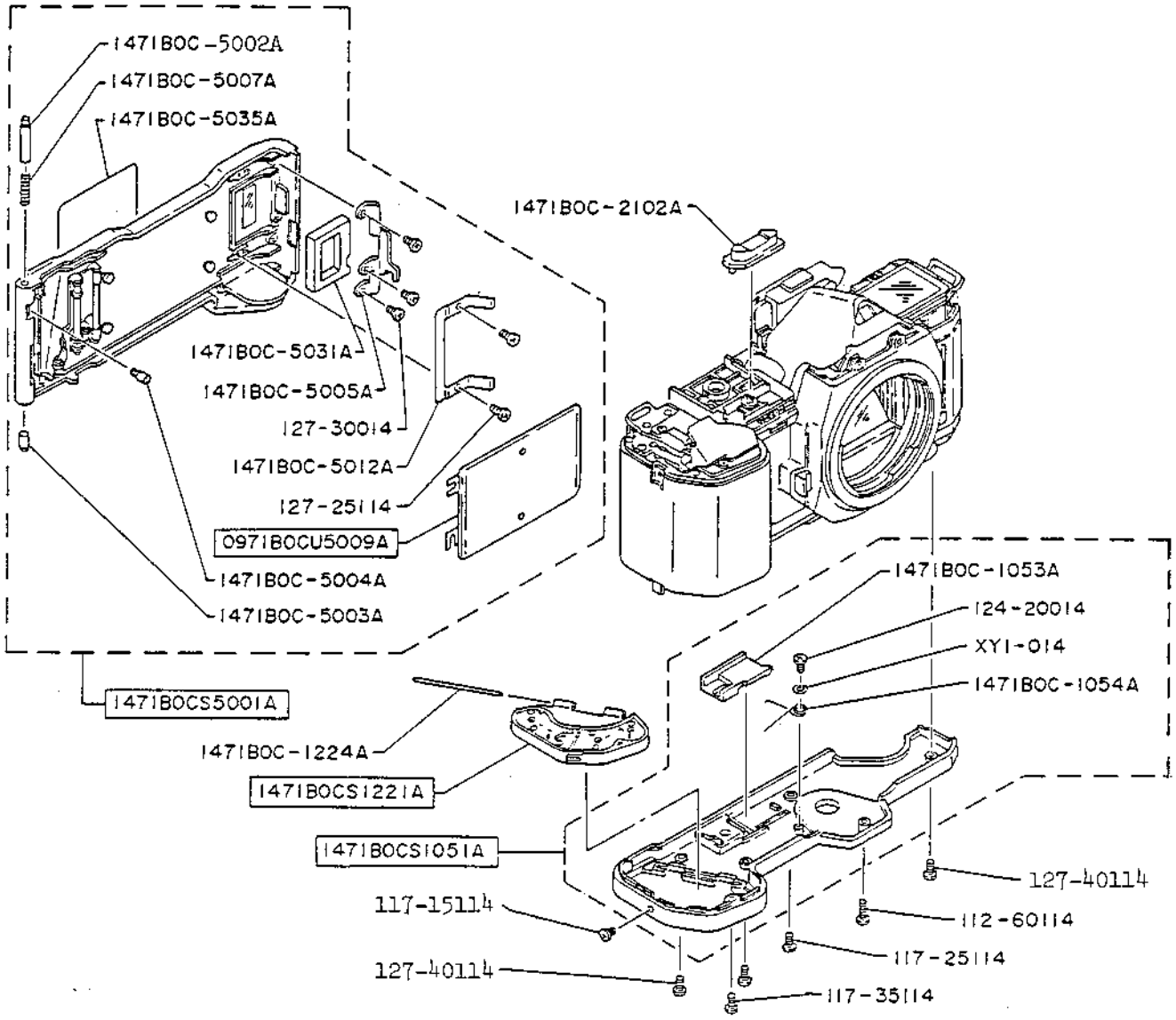


OUTER COVER(TOP COVER)

ORDER Q'TY	部 品 名 称	PARTS CODE	QTY	PARTS NAME
	ｳﾜｶﾊﾞｰ ｾｯﾄ	1471B0CS1061A	1	Top cover
	SCｷﾘｶｴﾀﾞｲﾔﾙ ｾｯﾄ	1471B0CS2030A	1	SC change dial
	ﾓｰﾄﾞﾎﾞﾀﾝ ｾｯﾄ	1471B0CS2052A	1	Mode button
	ｳﾜｶﾊﾞｰﾄﾒｲﾀ	1471B0C-1065A	1	Top cover set plate
	ACｼｭｰ	0971B0R-1071A	1	Hot shoe
	ｼｭｰﾊﾞﾈ	0971B0C-1073A	1	Hot shoe spring
	ｼｭｰﾄﾘﾌﾞｸﾀﾞ	0971B0C-1074A	1	Hot shoe mount base
	ﾌﾞﾗﾝﾄﾞﾊﾟﾝ	1471B0C-1085A	1	Name plate
	ITﾎﾞﾀﾝ	1471B0C-1140A	1	IT button
	ITﾌﾞﾚｰﾄ	1471B0C-1142A	1	IT Plate
	ITﾎﾞﾀﾝSP	1471B0C-1143A	2	IT button spring
	ﾚﾘｰｽﾞﾎﾞﾀﾝ	1471B0C-2020A	1	Release button
	ﾚﾘｰｽﾞﾎﾞﾀﾝSP	1471B0C-2021A	1	Release button spring
	SCｷﾘｶｴｾｯﾍﾟﾝ	1471B0C-2026A	1	SC change-over contact
	SCｷﾘｶｴﾀﾞｲﾔﾙ	1471B0C-2030A	1	SC change-over dial
	ｸﾘｯｸｵｻｴｲﾀ	1471B0C-2034A	1	Click pressure plate
	ﾓｼﾞｴﾝｼｰﾄ	1471B0C-2035A	1	Insulation sheet
	ﾓｰﾄﾞﾊﾟﾝ	1471B0C-2051A	1	Mode plate
	ﾓｰﾄﾞﾎﾞﾀﾝ	1471B0C-2052A	1	Mode button
	ﾓｰﾄﾞﾎﾞﾀﾝSP	1471B0C-2055A	1	Mode button spring
	ﾘｾｯﾄﾎﾞﾀﾝ	1471B0C-2060A	1	Reset button
	ﾀｼﾞｭｳﾎﾞﾀﾝ	1471B0C-2151A	1	Multi-exposure button
	ﾀｼﾞｭｳSWｾｯﾍﾟﾝ	1471B0C-2152A	1	Multi-exposure SW. contact
	ﾀｼﾞｭｳﾒｲﾊﾟﾝ	1471B0C-2154A	1	Multi-exposure trim plate
	ﾗﾊﾞｰｷｰ	1471B0C-ES01A	1	Rubber key
	ｽﾁｰﾙﾎﾞｰﾙ 1.5	XK-01500	1	Steel ball
	PHK1.4X1.6-2.5X0.5	114-16045	1	Screw
	PHK1.4X3.5-2.5X0.5	114-35014	1	Screw
	PHK1.7X1.8-2.5X0.5	117-18014	2	Screw
	PHK1.7X4.0-2.5X0.5	117-40014	2	Screw
	THK1.7X4.0-2.5X0.5	117-40045	2	Screw
	THK1.4X2.5-2.5X0.5	124-25014	2	Screw
	THK1.4X4.0-2.5X0.5	124-40014	1	Screw
	THK1.7X2.0-2.5X0.5	127-20014	2	Screw
	THK1.7X2.0-4.0X0.8	127-20314	1	Screw
	THK1.7X3.0-2.5X0.5	127-30045	1	Screw
	THK1.7X3.0-3.0X0.6	127-30114	1	Screw
	PSK1.7X1.8-2.5X0.5	317-18014	1	Screw
	PSK1.7X3.5-2.5X0.5	317-35021	3	Screw

2

EXPLODED VIEW
OF
CHINON CP-7M MULTI PROGRAM

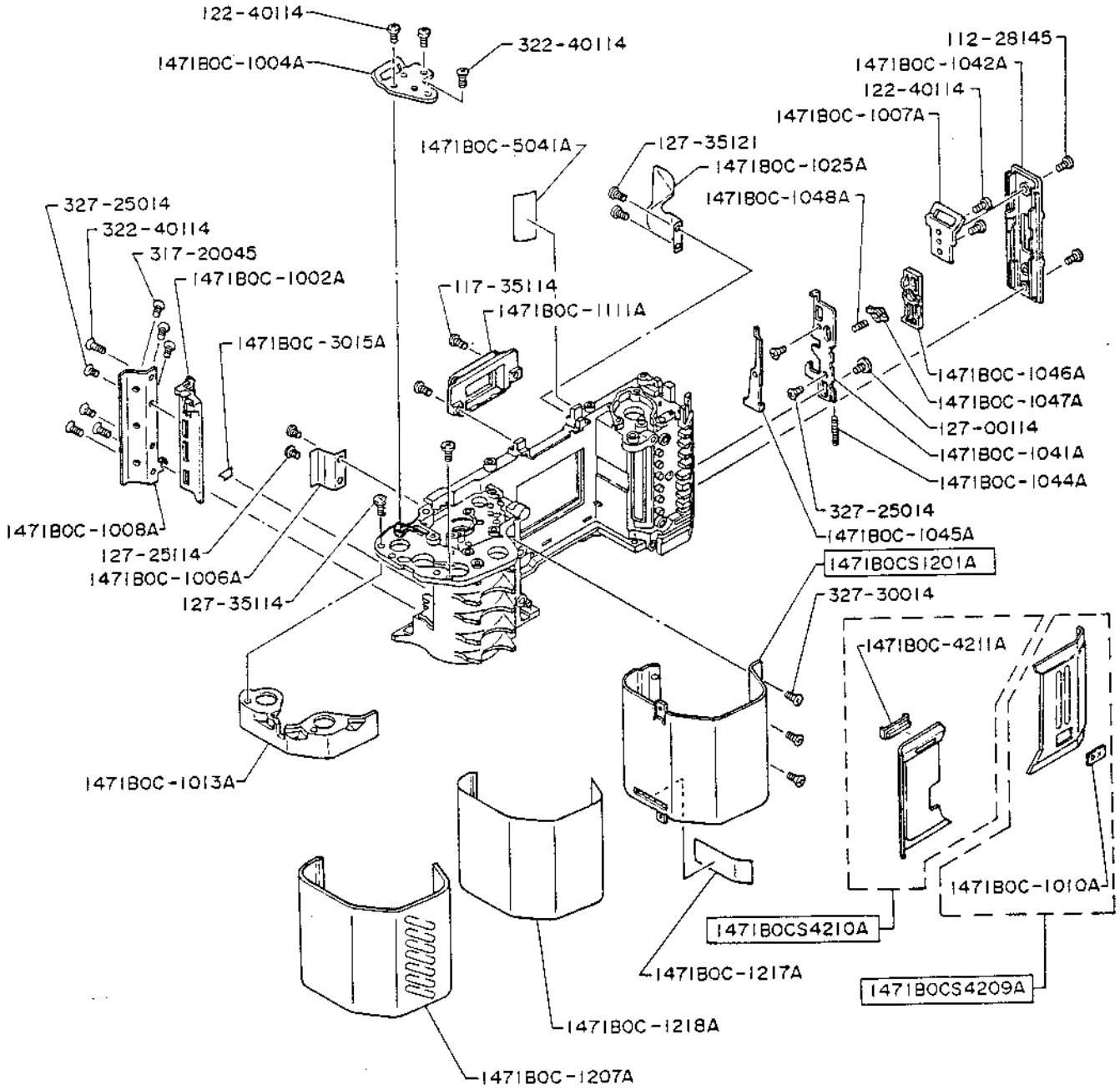


OUTER COVERS(BOTTOM & BACK COVERS)

ORDER Q'TY	部 品 名 称	PARTS CODE	QTY	PARTS NAME
	シタカバー セット	1471B0CS1051A	1	Bottom cover
	デンチキャップ セット	1471B0CS1221A	1	Battery cap
	ウラブタ セット	1471B0CS5001A	1	Back cover
	アッパン セット	0971B0CU5009A	1	Pressure plate
	スプロカバー	1471B0C-1053A	1	Sprocket cover
	スプロカバー-SP	1471B0C-1054A	1	Sprocket cover spring
	デンチキャップジク	1471B0C-1224A	1	Battery cap shaft
	UP DOWN ボタン	1471B0C-2102A	1	Up-down button
	チョウバンジクA	1471B0C-5002A	1	Hinge shaft A
	チョウバンジクB	1471B0C-5003A	1	Hinge shaft B
	ウラブタジクビス	1471B0C-5004A	1	Hinge shaft screw
	ウラブタツメ	1471B0C-5005A	1	Back cover claw
	ウラブタジクSP	1471B0C-5007A	1	Hinge shaft spring
	パトロ-ネオサエ	1471B0C-5012A	1	Patrone holder
	フイルムマドパッキン	1471B0C-5031A	1	Sponge
	ウラブタヒョウジバン	1471B0C-5035A	1	Program indication plate
	ワッシャー 1.5X4.0-0.2	XY1-014	1	Washer
	PHK2.0X6.0-3.0X0.6	112-60114	1	Screw
	PHK1.7X1.5-3.0X0.6	117-15114	1	Screw
	PHK1.7X2.5-3.0X0.6	117-25114	1	Screw
	PHK1.7X3.5-3.0X0.6	117-35114	2	Screw
	THK1.4X2.0-2.5X0.5	124-20014	1	Screw
	THK1.7X2.5-3.0X0.5	127-25114	2	Screw
	THK1.7X3.0-2.5X0.5	127-30014	3	Screw
	THK1.7X4.0-3.0X0.6	127-40114	2	Screw

3

EXPLODED VIEW
OF
CHINON CP-7M MULTI PROGRAM



BATTERY CASE & DOOR LATCH

ORDER Q'TY	部 品 名 称	PARTS CODE	QTY	PARTS NAME
	ｸﾘｯﾌﾟｷﾍﾞﾝ ｾｯﾄ	1471B0CS1201A	1	Grip baseplate
	ﾏｴｶｻﾘｲﾀﾐｷ ｾｯﾄ	1471B0CS4209A	1	Front decoration plate (R)
	ﾏｴｶｻﾘｲﾀﾋﾀﾘ ｾｯﾄ	1471B0CS4210A	1	Front decoration plate (L)
	ﾌｨﾙﾑｼﾂｶﾊﾞｰ	1471B0C-1002A	1	Film chamber cover
	ﾂﾘｶﾝA	1471B0C-1004A	1	Wrist strap lug A
	ﾌｨﾙﾑｶﾞｲﾄﾞC	1471B0C-1006A	1	Film guide C
	ﾂﾘｶﾝB	1471B0C-1007A	1	Wrist strap lug B
	ｳﾗﾌﾞﾀｼﾞｸｳｹ	1471B0C-1008A	1	Back cover shaft holder
	DXﾏｰｸ	1471B0C-1010A	1	DX mark
	ﾎﾝﾀｲﾃﾞﾝﾁｶﾞｲﾄﾞ	1471B0C-1013A	1	Battery guide
	ﾊﾄﾛｰﾈﾊﾞﾈ	1471B0C-1025A	1	Patrone spring
	ｳﾗﾌﾞﾀｶｲﾍｲﾚﾊﾞｰ	1471B0C-1041A	1	Door latch lever
	ｶｲﾍｲｶﾊﾞｰ	1471B0C-1042A	1	Door latch cover
	ｳﾗﾌﾞﾀｶｲﾍｲﾚﾊﾞｰSP	1471B0C-1044A	1	Door latch lever spring
	ｳﾗﾌﾞﾀﾛｯｸﾊﾟﾝ	1471B0C-1045A	1	Door lock plate
	ｳﾗﾌﾞﾀｶｲﾍｲﾊﾟﾝ	1471B0C-1046A	1	Door latch plate
	ﾛｯｸｶｲｼﾞｮﾎﾞﾀﾝ	1471B0C-1047A	1	Door latch button
	ﾛｯｸｶｲｼﾞｮﾎﾞﾀﾝSP	1471B0C-1048A	1	Door latch button spring
	ｾﾂｶﾞﾝｻﾞ	1471B0C-1111A	1	Eyepiece baseplate
	ｸﾘｯﾌﾟﾗﾊﾞｰ	1471B0C-1207A	1	Grip rubber
	ｸﾘｯﾌﾟｼｰﾙ	1471B0C-1217A	1	Grip seal
	ｸﾘｯﾌﾟﾃｰﾌﾟ	1471B0C-1218A	1	Tape
	W4ｷﾔｷﾍﾞﾝ	1471B0C-3015A	1	W4 gear plate
	ｾﾙﾌﾏﾄﾞ	1471B0C-4211A	1	Selftimer window
	FNﾏｰｸ	1471B0C-5041A	1	FM mark
	THK2.0X2.8-3.0X0.6	112-28145	2	Screw
	PHK1.7X3.5-3.0X0.6	117-35114	2	Screw
	THK2.0X4.0-3.0X0.6	122-40114	4	Screw
	THK1.7X2.5-5.5X0.7	127-00114	1	Screw
	THK1.7X2.5-3.0X0.5	127-25114	2	Screw
	THK1.7X3.5-3.5X0.6	127-35114	2	Screw
	THK1.7X3.5-3.0X0.6	127-35121	2	Screw
	PSK1.7X2.0-2.5X0.5	317-20045	3	Screw
	TSK2.0X4.0-3.0X0.6	322-40114	4	Screw
	TSK1.7X2.5-2.5X0.5	327-25014	4	Screw
	TSK1.7X3.0-2.5X0.5	327-30014	3	Screw

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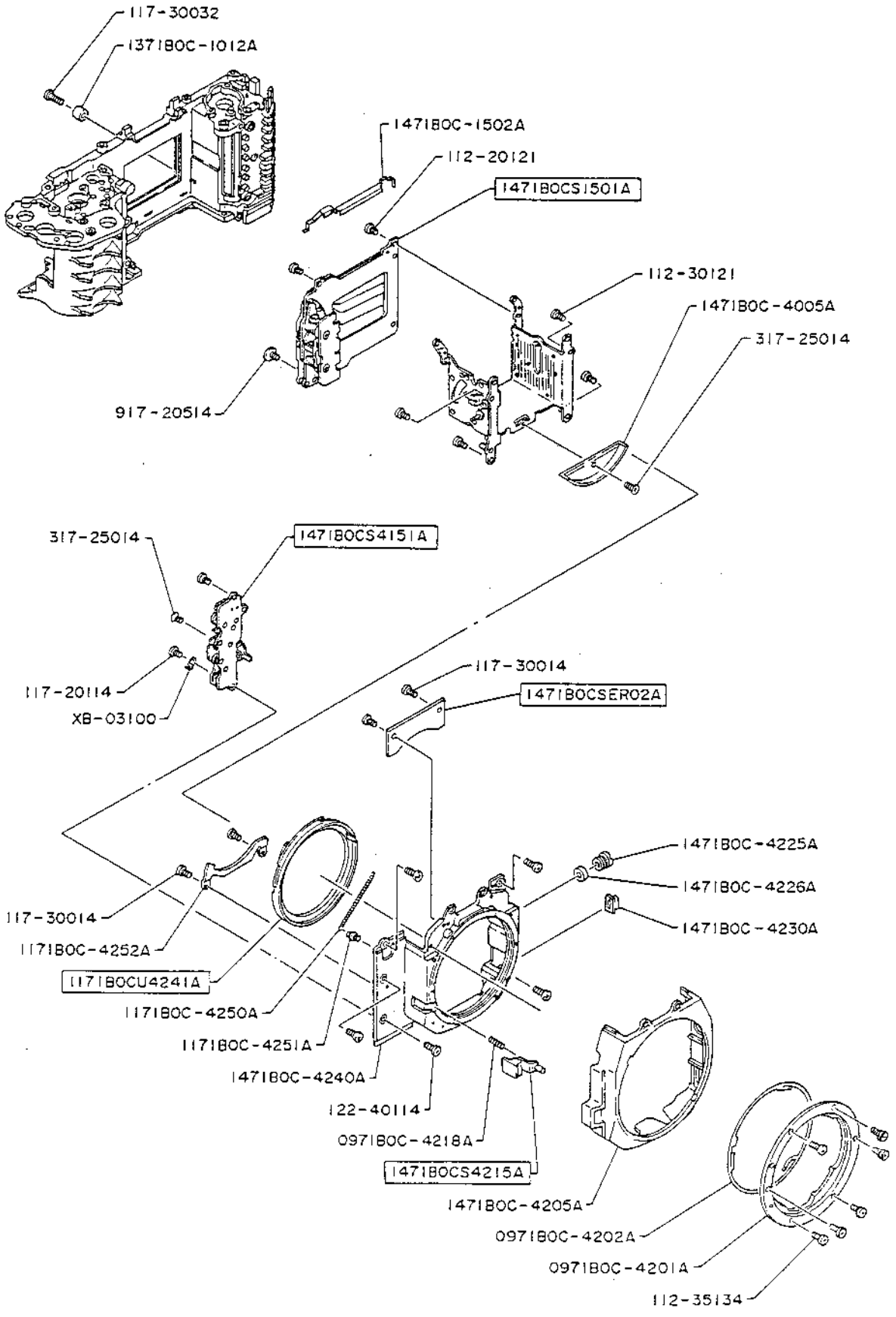
EXPLODED VIEW
OF
CHINON CP-7M MULTI PROGRAM



MIRROR HOUSING DISASSEMBLY (1)

ORDER Q'TY	部 品 名 称	PARTS CODE	QTY	PARTS NAME
	ｼｬｯﾀｰ ｾｯﾄ	1471B0CS1501A	1	Shutter
	ﾐﾗｰﾎﾞｯｸｽｰｼｬｯﾀｰ ｾｯﾄ	1471B0CS4000A	1	Mirror housing
	ｼﾎﾞﾘﾓﾄﾊﾞﾝA ｾｯﾄ	1471B0CS4151A	1	Stop-down baseplate A
	ﾏｳﾝﾄﾛｯｸﾎﾞﾀﾝ ｾｯﾄ	1471B0CS4215A	1	Mount lock button
	Fﾁﾚﾝﾄﾞｳﾘﾝｸﾞ ｾｯﾄ	1171B0CU4241A	1	F/No. information ring
	FIﾚﾒﾝﾄ ｾｯﾄ	1471B0CSER02A	1	F element
	ﾐﾗｰﾎﾞｯｸｽD	1471B0C-4005A	1	Mirror box D
	ﾊﾞﾖﾈｯﾄﾏｳﾝﾄ	0971B0C-4201A	1	Bayonet mount
	ﾏｳﾝﾄﾊﾞﾈ	0971B0C-4202A	1	Nount spring
	ﾏｴｶﾊﾞｰ	1471B0C-4205A	1	Front cover
	ﾛｯｸﾋﾟﾝSP	0971B0C-4218A	1	Spring
	ｹｰﾌﾞﾙﾈｼﾞｳｹ	1471B0C-4225A	1	"X" contact plug
	ｹｰﾌﾞﾙﾈｼﾞｳｹﾊﾟｯｷﾝ	1471B0C-4226A	1	Sponge
	AELﾎﾞﾀﾝ	1471B0C-4230A	1	AE lock button
	ﾏｳﾝﾄﾍﾞｰｽ	1471B0C-4240A	1	Mount baseplate
	Fﾁ SP	1171B0C-4250A	1	Spring
	Fﾁ SPｶｹ	1171B0C-4251A	1	Spring anchor
	Fﾁﾚﾝﾄﾞｳﾘﾝｸﾞｵｻｴ	1171B0C-4252A	1	Ring holder
	ﾘｰﾄﾞｾﾝﾎﾙﾀﾞｰ	XB-03100	1	Lead-wire holder
	THK2.0X2.0-3.0X0.6	112-20121	2	Screw
	PHK2.0X3.0-3.0X0.6	112-30121	4	Screw
	PHK2.0X3.5-3.0X0.6	112-35134	6	Screw
	PHK1.7X2.0-3.0X0.6	117-20114	1	Screw
	PHK1.7X3.0-2.5X0.5	117-30014	4	Screw
	THK2.0X4.0-3.0X0.6	122-40114	5	Screw
	PSK1.7X2.5-2.5X0.5	317-25014	3	Screw
	PDK1.7X1.6-2.5X0.45	917-20514	1	Screw

Mirror Housing(1471B0CS4000A) is composed of parts shown on page 4, 5, and 6 without followings.

	ﾌｨﾙﾑｶﾞｲﾄﾞｶﾗｰ	1371B0C-1012A	1	Film guide collar
	Sｼｬｺｳﾊﾞﾝｳｴ	1471B0C-1502A	1	Shielding plate
	PHK1.7X3.0-2.5X0.5	117-30032	1	Screw

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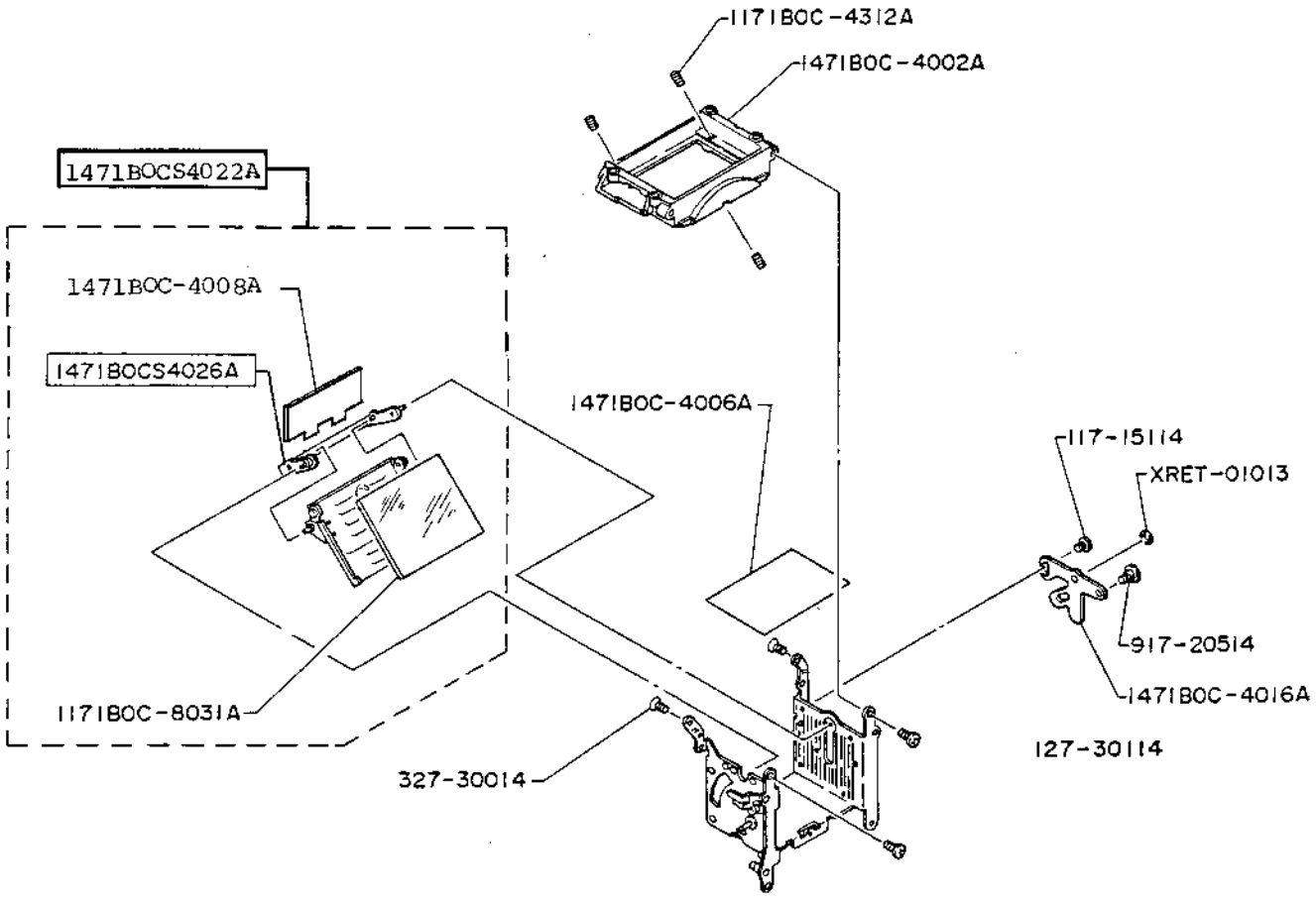
EXPLODED VIEW
OF
CHINON CP-7M MULTI PROGRAM

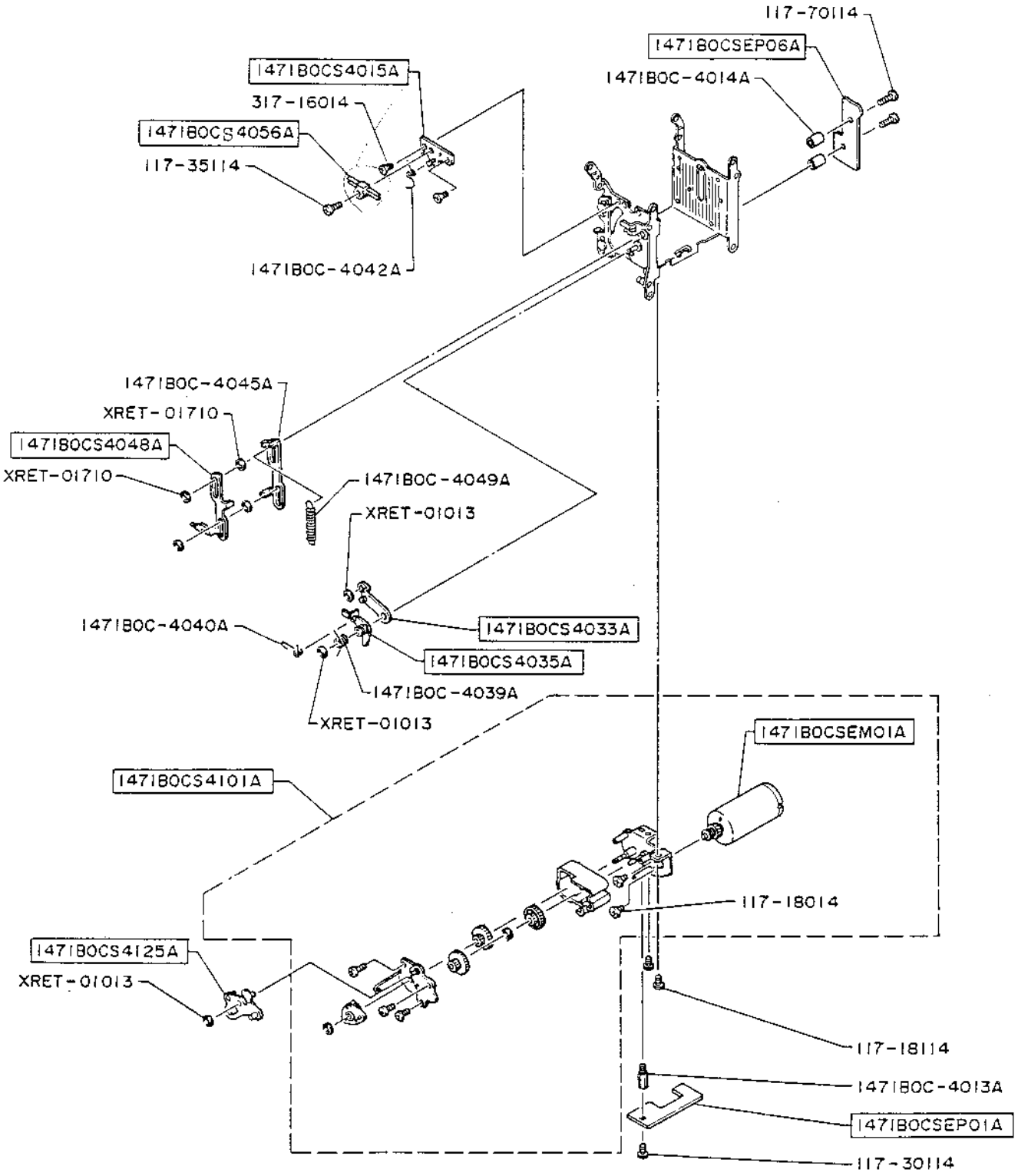


MIRROR HOUSING DISASSEMBLY (2)

ORDER Q'TY	部 品 名 称	PARTS CODE	QTY	PARTS NAME
	ミラーワク セット	1471B0CS4022A	1	Main mirror frame
	ミラージジワク セット	1471B0CS4026A	1	Main mirror holder
	ミラーボックスB	1471B0C-4002A	1	Mirror box B
	ミラーボックスシート	1471B0C-4006A	1	Box sheet
	ミラーシャコウバン	1471B0C-4008A	1	Mirror shielding plate
	ジジワクウケミギ	1471B0C-4016A	1	Mirror box holder (R)
	ピントチョウセイビス	1171B0C-4312A	3	Adjustment screw
	メインミラー	1171B0C-8031A	1	Main mirror
	Eリング 10	XRET-01013	1	E ring
	PHK1.7X1.5-3.0X0.6	117-15114	1	Screw
	THK1.7X3.0-3.0X0.6	127-30114	2	Screw
	TSK1.7X3.0-2.5X0.5	327-30014	2	Screw
	PDK1.7X1.6-2.5X0.45	917-20514	1	Screw

6

EXPLODED VIEW
OF
CHINON CP-7 M MULTI PROGRAM

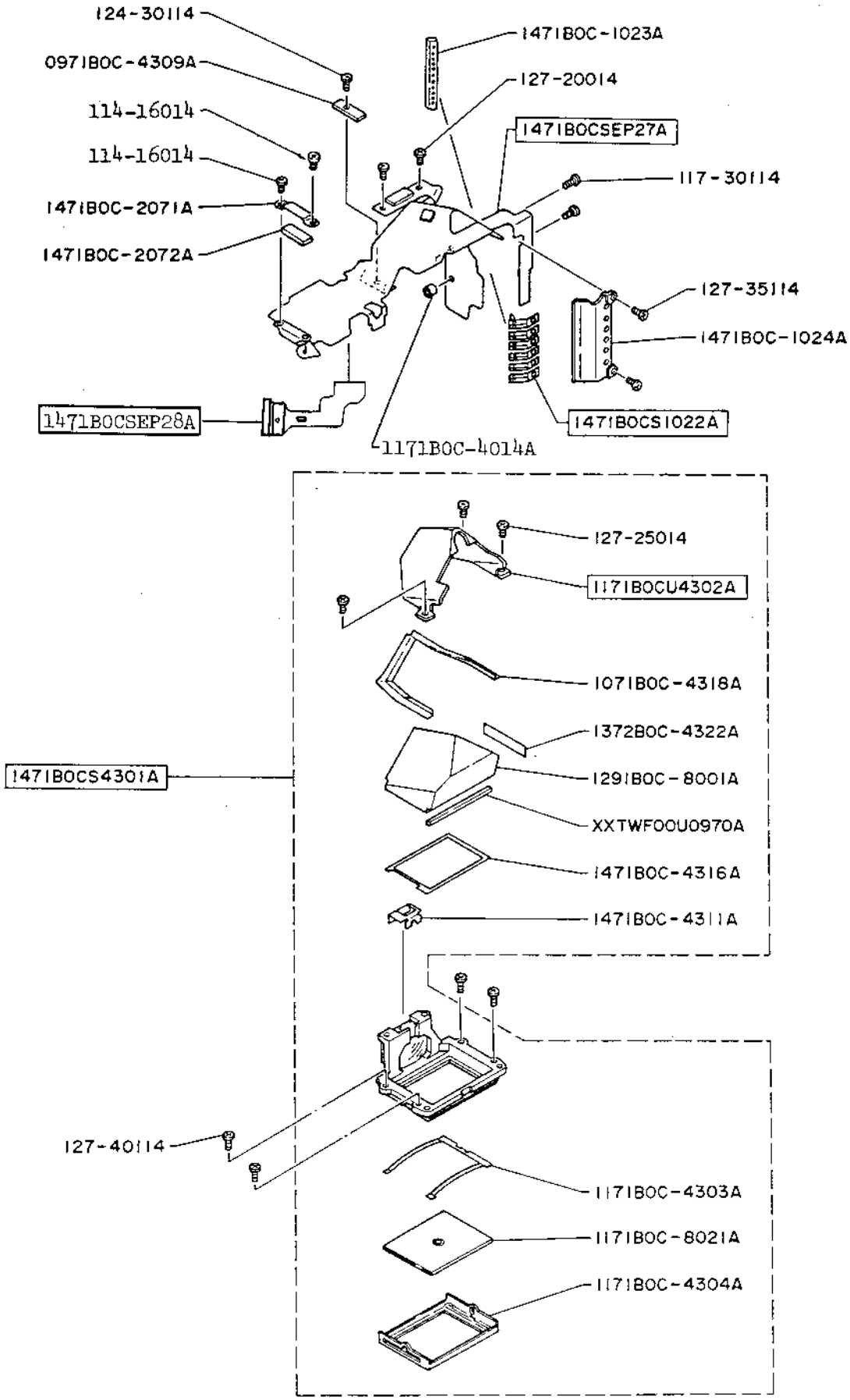


MIRROR HOUSING DISASSEMBLY (3)

ORDER Q'TY	部 品 名 称	PARTS CODE	QTY	PARTS NAME
	ｼｼﾞﾜｸｳｹﾋﾀﾘ ｾｯﾄ	1471B0CS4015A	1	Mirror box frame holder (L)
	ﾐﾗｰﾚﾊﾞｰ ｾｯﾄ	1471B0CS4033A	1	Mirror lever
	ﾐﾗｰｸﾄﾞｳﾚﾊﾞｰ ｾｯﾄ	1471B0CS4035A	1	Mirror operation lever
	ｼﾞﾎﾘﾚﾊﾞｰ ｾｯﾄ	1471B0CS4048A	1	Diaphragm lever
	ﾓｰﾀｰｽﾄｯﾌﾟSW ｾｯﾄ	1471B0CS4056A	1	Motor stop switch
	ﾓｰﾀｰﾌﾟﾚｰﾄ ｾｯﾄ	1471B0CS4101A	1	Mirror box motor plate
	ﾐﾗｰﾁｬｰｼﾞﾚﾊﾞｰ ｾｯﾄ	1471B0CS4125A	1	Mirror charge lever
	ﾎﾞｯｸｽﾓｰﾀｰ ｾｯﾄ	1471B0CSEM01A	1	Box motor
	ﾌﾟﾘﾝﾄｷﾊﾞﾝA ｾｯﾄ	1471B0CSEP01A	1	P.C.Board A
	ﾌﾟﾘﾝﾄｷﾊﾞﾝF ｾｯﾄ	1471B0CSEP06A	1	P.C.Board F
	ﾐﾗｰﾎﾞｯｸｽﾊﾟﾀｰﾝｳｹA	1471B0C-4013A	1	Mirror box pattern holder A
	ﾐﾗｰﾎﾞｯｸｽﾊﾟﾀｰﾝｳｹB	1471B0C-4014A	2	Mirror box pattern holder B
	ﾐﾗｰｱｯﾌﾟSP	1471B0C-4039A	1	Mirror-up spring
	ﾐﾗｰﾀﾞｳﾝSP	1471B0C-4040A	1	Mirror-down spring
	ﾐﾗｰﾌｯｸSP	1471B0C-4042A	1	Mirror hook spring
	ｶｲﾎｳﾚﾊﾞｰ	1471B0C-4045A	1	Opening lever
	ｶﾄﾎｳﾚﾊﾞｰSP	1471B0C-4049A	1	Opening lever spring
	Eﾘﾝｸﾞ 10	XRET-01013	3	E ring
	Eﾘﾝｸﾞ 1.7	XRET-01710	4	E ring
	PHK1.7X1.8-2.5X0.5	117-18014	2	Screw
	PHK1.7X1.8-3.0X0.6	117-18114	2	Screw
	PHK1.7X3.0-3.0X0.6	117-30114	1	Screw
	PHK1.7X3.5-3.0X0.6	117-35114	1	Screw
	THK1.7X7.0-3.6X0.6	117-70114	2	Screw
	PSK1.7X1.6-2.5X0.5	317-16014	2	Screw

7

EXPLODED VIEW
OF
CHINON CP-7M MULTI PROGRAM



FRESNEL LENS BOX & FLEXIBLE PATTERN A

7

ORDER Q'TY	部 品 名 称	PARTS CODE	QTY	PARTS NAME
	ﾆﾒﾝﾃｰﾌﾟﾖﾘ 097	XXTWF00U0970A	1	Tape
	DXｾｯﾍﾟﾝ ｾｯﾄ	1471B0CS1022A	1	DX contact
	ﾍﾝﾀﾜｸ ｾｯﾄ	1471B0CS4301A	1	Fresnel lens box
	ﾍﾝﾀｶﾊﾞｰﾃｰﾌﾟ ｾｯﾄ	1171B0CU4302A	1	Prism cover
	ﾌﾚｷｼﾌﾞﾙﾊﾟﾀｰﾝA ｾｯﾄ	1471B0CSEP27A	1	Flexible pattern A
	ﾌﾚｷｼﾌﾞﾙﾊﾟﾀｰﾝB ｾｯﾄ	1471B0CSEP28A	1	Flexible pattern B
	DXｾｯﾃﾝｳｹ	1471B0C-1023A	1	DX contact holder
	DXｾｯﾍﾟﾝｵｻI	1471B0C-1024A	1	DX contact plate
	ｺﾞﾑｵｻI	1471B0C-2071A	1	Gum pressure plate
	ﾌﾚｷｵｻIｺﾞﾑ	1471B0C-2072A	1	Gum
	ﾐﾗｰﾎﾞｯｸｽﾊﾟﾀｰﾝｳｹ	1171B0C-4014A	1	Collar
	ﾌﾚﾈﾙｵｻIﾊﾞﾈ	1171B0C-4303A	1	Spring
	ﾌﾚﾈﾙﾎﾞｯｸｽ	1171B0C-4304A	1	Box
	LEDｵｻI	0971B0C-4309A	1	LED holder
	ｼｭｺｳﾚﾝｽﾞｶﾊﾞｰ	1471B0C-4311A	1	Lens cover
	ﾌﾚﾈﾙﾏｽｸ	1471B0C-4316A	1	Fresnel lens mask
	ﾍﾝﾀﾜｸﾋﾒﾛﾝｼ	1071B0C-4318A	1	Shielding tape
	ﾍﾝﾀｽﾍﾟｰｻﾞｰ	1372B0C-4322A	1	Prism sheet
	ﾍﾝﾀﾌﾟﾘｽﾞﾑ	1291B0C-8001A	1	Prism
	ﾌﾚﾈﾙﾚﾝｽﾞ	1171B0C-8021A	1	Fresnel lens
	PHK1.4X1.6-2.5X0.5	114-16014	2	Screw
	PHK1.7X3.0-3.0X0.6	117-30114	2	Screw
	THK1.4X3.0-3.0X0.6	124-30114	1	Screw
	THK1.7X2.0-2.5X0.5	127-20014	2	Screw
	THK1.7X2.5-2.5X0.5	127-25014	3	Screw
	THK1.7X3.5-3.5X0.6	127-35114	2	Screw
	THK1.7X4.0-3.0X0.6	127-40114	4	Screw

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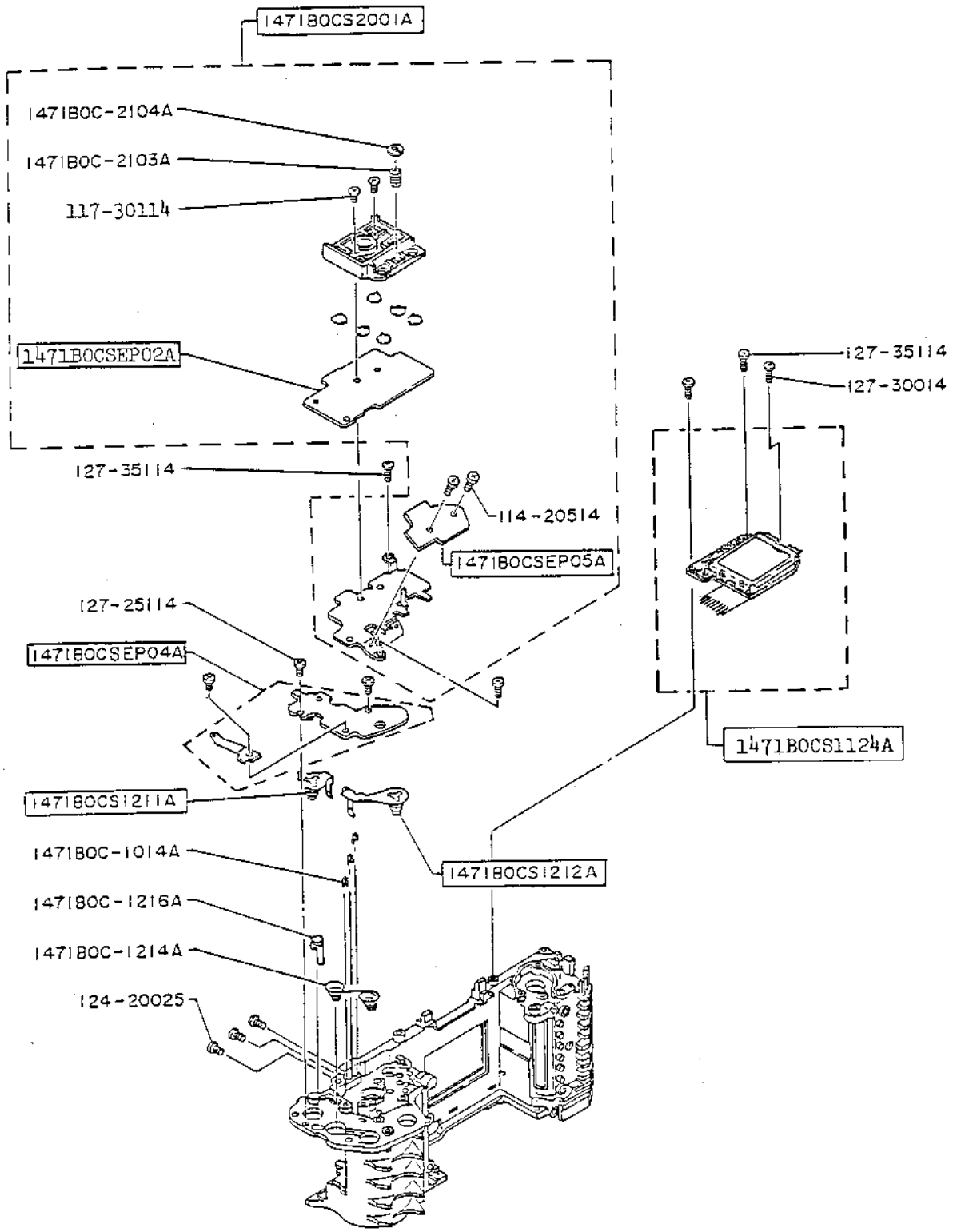
EXPLODED VIEW
OF
CHINON CP-7M MULTI PROGRAM



LIQUID CRYSTAL DIODE

ORDER Q'TY	部 品 名 称	PARTS CODE	QTY	PARTS NAME
	LCDキバン セット	1471B0CS1124A	1	LCD baseplate
	デンチセッペンA セット	1471B0CS1211A	1	Battery contact A
	デンチセッペンB セット	1471B0CS1212A	1	Battery contact B
	ANキバン セット	1471B0CS2001A	1	AN baseplate
	プリントキバンB セット	1471B0CSEP02A	1	P.C.Board B
	プリントキバンD セット	1471B0CSEP04A	1	P.C.Board D
	プリントキバンE セット	1471B0CSEP05A	1	P.C.Board E
	オートデートセッペン	1471B0C-1014A	1	Auto date contact
	デンチSPB	1471B0C-1214A	1	Battery spring B
	デンチリセットボタン	1471B0C-1216A	1	Battery reset button
	UP DOWN SP	1471B0C-2103A	1	Up-down spring
	S08314	1471B0C-2104A	1	Spring pressure ring
	PHK1.4X2.0-2.5X0.8	114-20514	2	Screw
	~~PHK1.4X2.5~~	~~114-25414~~	~~5~~	~~Screw~~
	PHK1.7X3.0-3.0X0.6	117-30114	2	Screw
	THK1.4X2.0-2.5X0.5	124-20025	3	Screw
	THK1.7X2.5-3.0X0.5	127-25114	3	Screw
	THK1.7X3.0-2.5X0.5	127-30014	1	Screw
	THK1.7X3.5-3.5X0.6	127-35114	4	Screw

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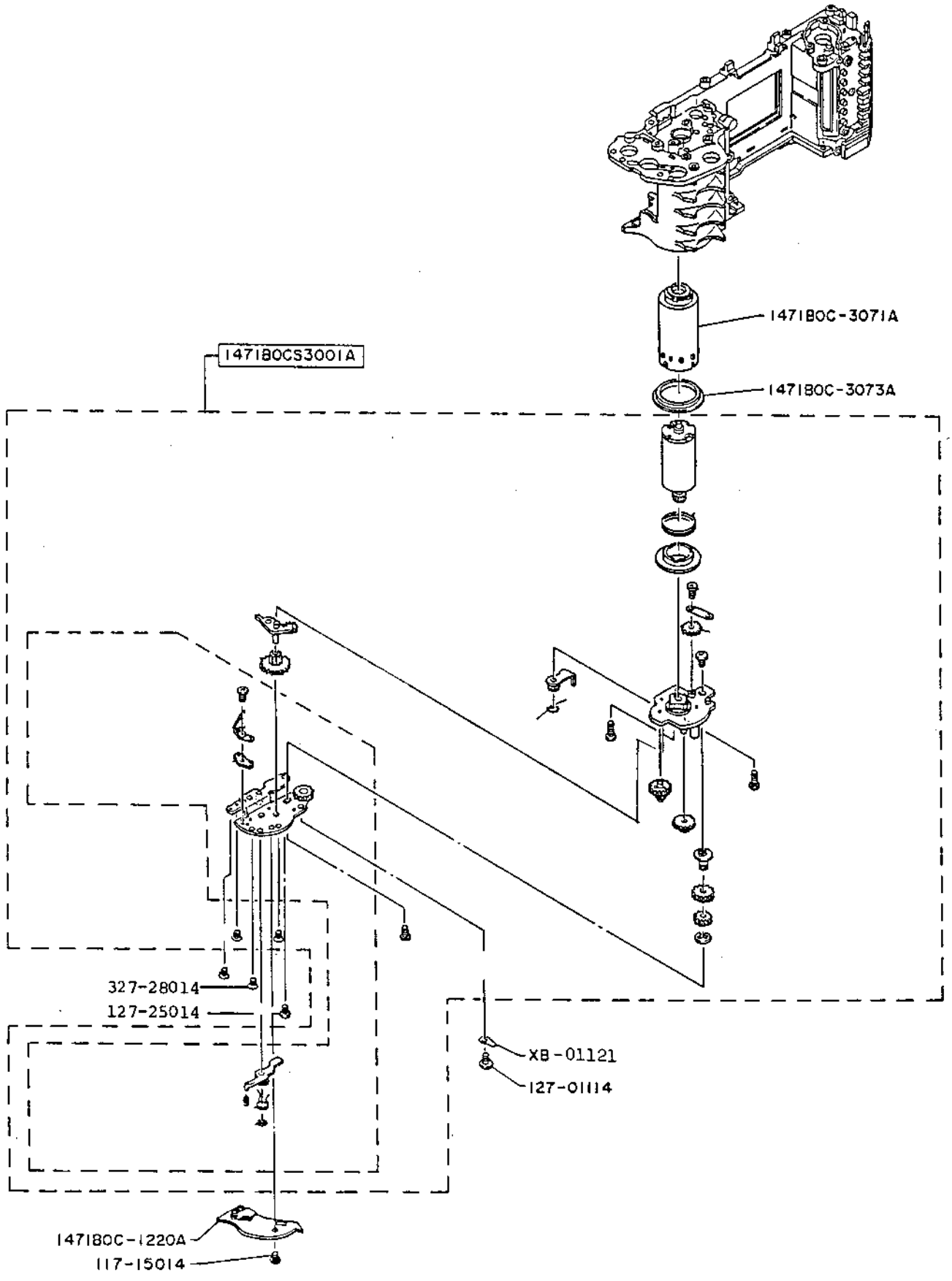
EXPLODED VIEW
OF
CHINON CP-7M MULTI PROGRAM



WINDING MECHANISM

ORDER Q'TY	部 品 名 称	PARTS CODE	QTY	PARTS NAME
	ﾏｷｱｹﾓﾊﾞﾝ ｾｯﾄ	1471B0CS3001A	1	Winding baseplate
	ﾃﾝﾁｷｬｯﾌﾟｼﾞｸｵｻｴ	1471B0C-1220A	1	Battery cap shaft retainer
	ﾘｰﾙﾄｳ	1471B0C-3071A	1	Take-up spool
	ﾘｰﾙｽﾘｰﾌﾞ	1471B0C-3073A	1	Reel sleeve
	ﾗｸﾞﾊﾞﾝ(ﾀﾏｺﾞ)	XB-01121	1	Lug plate
	PHK1.7X1.5-2.5X0.5	117-15014	1	Screw
	THK1.7X3.0-5.0X0.8	127-01114	1	Screw
	THK1.7X2.5-2.5X0.5	127-25014	1	Screw
	TSK1.7X2.8-2.5X0.5	327-28014	2	Screw

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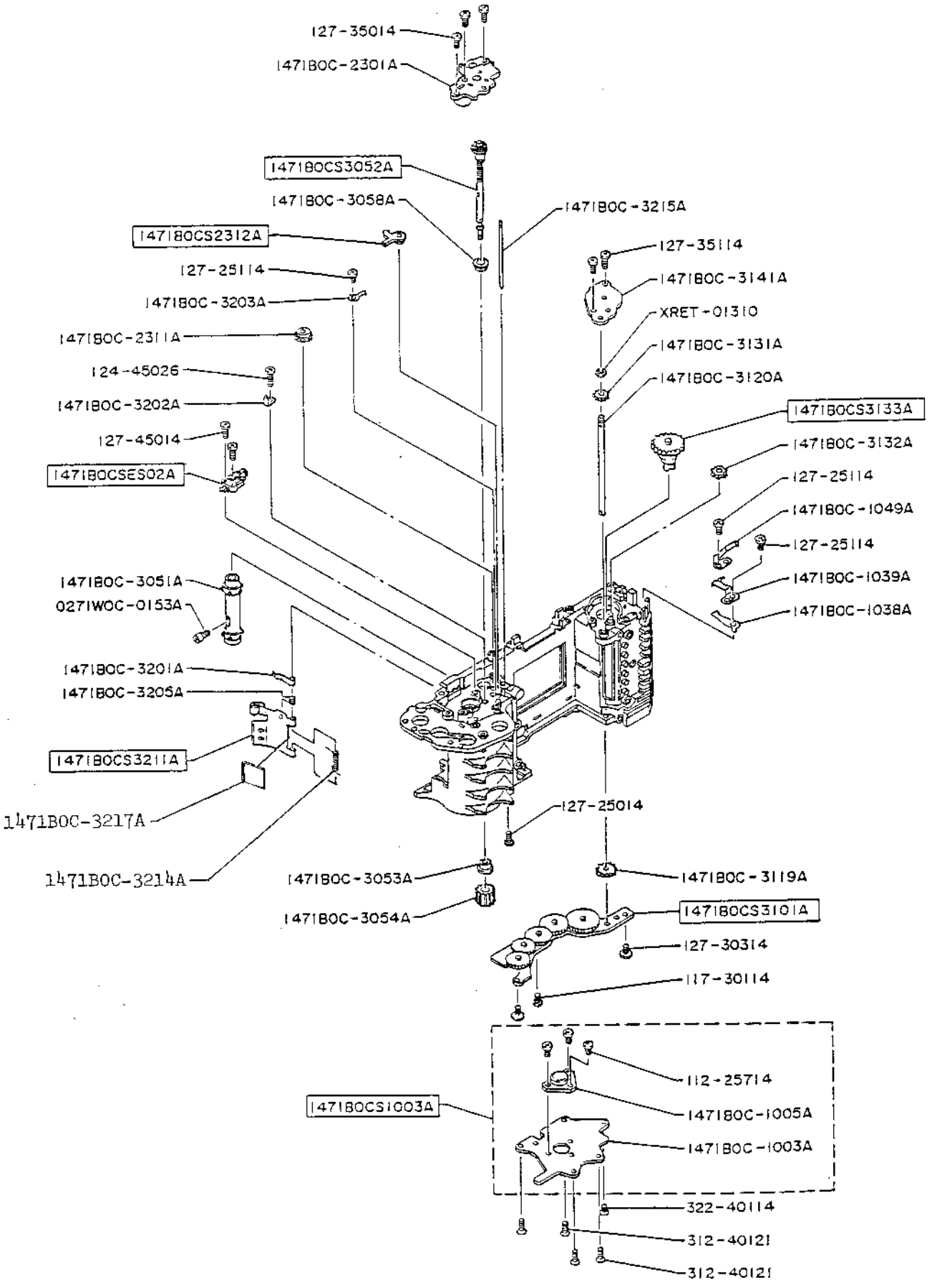
EXPLODED VIEW
OF
CHINON CP-7M MULTI PROGRAM



WINDING & REWINDING MECHANISM

ORDER Q'TY	部 品 名 称	PARTS CODE	QTY	PARTS NAME
	ｻﾝｷｬｸｷﾊﾞﾝ ｾｯﾄ	1471B0CS1003A	1	Tripod baseplate
	ｶｳﾝﾀｰﾚﾊﾞｰ ｾｯﾄ	1471B0CS2312A	1	Counter lever
	ｽﾌﾟﾛｹｯﾄｼﾞｸ ｾｯﾄ	1471B0CS3052A	1	Sprocket shaft
	Rｷﾊﾞﾝ ｾｯﾄ	1471B0CS3101A	1	Winding baseplate
	ﾏｷﾓﾄﾞｼｷﾔ ｾｯﾄ	1471B0CS3133A	1	Rewinding gear
	ﾌｲﾙﾑｵｻｴA ｾｯﾄ	1471B0CS3211A	1	Film pressure A
	ﾘｰﾌｽｲｯﾁ ｾｯﾄ	1471B0CSES02A	1	Winding switch
	ｽﾌﾟﾛｹｯﾄﾚﾝﾄﾞｳﾈｼﾞ	0271W0C-0153A	1	Screw
	ｻﾝｷｬｸｷﾊﾞﾝ	1471B0C-1003A	1	Tripod baseplate
	ｻﾝｷｬｸｿﾞｹ	1471B0C-1005A	1	Tripod socket
	ｳﾗﾌﾀｶｲﾍｲSWA	1471B0C-1038A	1	Door latch switch A
	ｳﾗﾌﾀｶｲﾍｲSWB	1471B0C-1039A	1	Door latch switch B
	ｳﾗﾌﾀﾛｯｸﾊﾞﾈ	1471B0C-1049A	1	Door lock spring
	ｶｳﾝﾀｰｷﾊﾞﾝ	1471B0C-2301A	1	Counter baseplate
	ｶｳﾝﾀｰｷﾔ	1471B0C-2311A	1	Counter gear
	ｽﾌﾟﾛｹｯﾄ	1471B0C-3051A	1	Sprocket
	ｽﾌﾟﾛｹｯﾄｼﾞｸｳｹ	1471B0C-3053A	1	Sprocket shaft holder
	ｽﾌﾟﾛAｷﾔ	1471B0C-3054A	1	Sprocket A gear
	ｽﾌﾟﾛCｷｬｳｹ	1471B0C-3058A	1	Sprocket C gear holder
	R7Aｷﾔ	1471B0C-3119A	1	R7 A-gear
	ﾚﾝｹﾂｼﾞｸ	1471B0C-3120A	1	Coupling shaft
	R7Bｷﾔ	1471B0C-3131A	1	R7 B-gear
	R8ｷﾔ	1471B0C-3132A	1	R8 gear
	ﾏｷﾓﾄﾞｼｷﾊﾞﾝ	1471B0C-3141A	1	Rewinding baseplate
	ｷｭｳｿｳSWA	1471B0C-3201A	1	Film transport SW. A
	ｷｭｳｿｳSWｾｯﾍﾟﾝB	1471B0C-3202A	1	Film transport SW. contact B
	ｷｭｳｿｳSWｾｯﾍﾟﾝA	1471B0C-3203A	1	Film transport SW. contact A
	ｷｭｳｿｳSWSP	1471B0C-3205A	1	Film transport SW. spring
	ﾌｲﾙﾑｵｻｴASP	1471B0C-3214A	1	Film pressure-A spring
	ﾌｲﾙﾑｵｻｴAｼﾞｸ	1471B0C-3215A	1	Film pressure-A shaft
	ﾌｲﾙﾑｶﾞｲﾄﾞAﾃｰﾌﾟ	1471B0C-3217A	1	Film guide A tape
	Eﾘﾝｸﾞ 1.3	XRET-01310	1	E ring
	PHK2.0X2.5-3.5X1.0	112-25714	3	Screw
	PHK1.7X3.0-3.0X0.6	117-30114	2	Screw
	THK1.4X4.5-2.5X0.5	124-45026	1	Screw
	THK1.7X2.5-2.5X0.5	127-25014	1	Screw
	THK1.7X2.5-3.0X0.5	127-25114	3	Screw
	THK1.7X3.0-4.0X0.8	127-30314	1	Screw
	THK1.7X3.5-2.5X0.5	127-35014	3	Screw
	THK1.7X3.5-3.5X0.6	127-35114	2	Screw
	THK1.7X4.5-2.5X0.5	127-45014	2	Screw
	PSK1.7X4.0-3.0X0.6	312-40121	4	Screw
	TSK2.0X4.0-3.0X0.6	322-40114	1	Screw

TECHNICAL MODIFICATION NOTICE

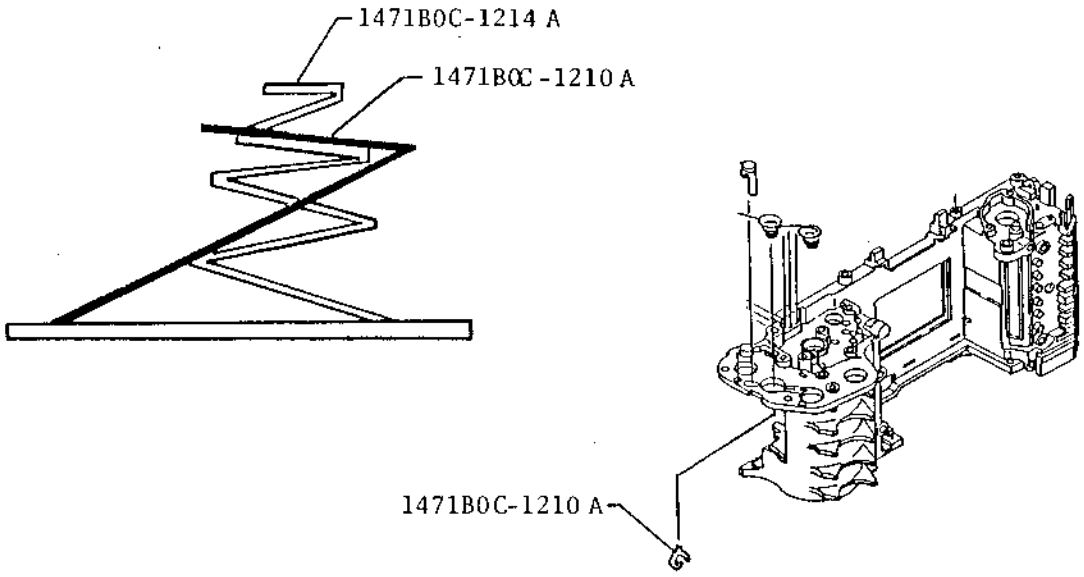
DATE: June 17, 1986 NO: CP7m-001

MODEL: Chinon CP-7m.

PARTS NAME	PARTS INF. PAGE NO.	OLD PARTS NO.	PRICE	NEW PARTS NO.	PRICE
Battery Reset Spring	8	————	——	1471B0C-1210 A	¥ 10.-

ILLUSTRATIONS(DRAWINGS OR PHOTOGRAPHS)

NEW STYLE



REASON FOR CHANGE:

The battery spring B(1471B0C-1214A) supplement the battery reset spring for come in contact with the duracell battery.

EFFECTIVE DATE OF CHANGE: From Production of May. 1986.

INTERCHANGEABILITY:

New parts usable in old products: (Yes). No.

~~Can old parts be used in old and new products: Yes. No.~~

REMARKS: SA-2497(M.T)

ORIGINATOR: Service Dept.

TECHNICAL MODIFICATION NOTICE

DATE: June 17, 1986 NO: CP7m-002

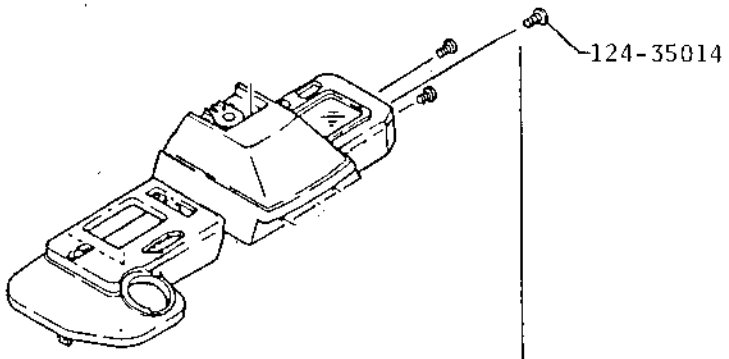
MODEL: Chinon CP-7m.

PARTS NAME	PARTS INF. PAGE NO.	OLD PARTS NO.	PRICE	NEW PARTS NO.	PRICE
Screw	1	124-40014	¥ 3.-	124-35014	¥ 3.-

ILLUSTRATIONS(DRAWINGS OR PHOTOGRAPHS)

OLD STYLE

NEW STYLE



REASON FOR CHANGE:

The top cover(1471B0CS1061A) fited a correct by drived the screw.

EFFECTIVE DATE OF CHANGE: Running change

INTERCHANGEABILITY:

New parts usable in old products: (Yes). No.

Can old parts be used in old and new products: (Yes). No.

REMARKS: SA-2491(M.T)

ORIGINATOR: Service Dept.

TECHNICAL MODIFICATION NOTICE

DATE: June 17, 1986 NO: CP7m-003

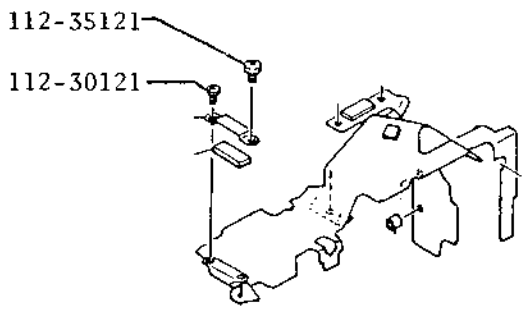
MODEL: Chinon CP-7m.

PARTS NAME	PARTS INF. PAGE NO.	OLD PARTS NO.	PRICE	NEW PARTS NO.	PRICE
Screw	7	114-16014	¥ 3.-	112-35121	¥ 3.-
Screw	7	114-16014	¥ 3.-	112-30121	¥ 3.-

ILLUSTRATIONS (DRAWINGS OR PHOTOGRAPHS)

OLD STYLE

NEW STYLE



REASON FOR CHANGE:

There are sure that prevent come loose of the screw.

EFFECTIVE DATE OF CHANGE: From production of May. 1986.

INTERCHANGEABILITY:

New parts usable in old products: (Yes). No.

~~Can old parts be used in old and new products~~:

REMARKS: SA-2489(M.T)

ORIGINATOR: Service Dept.

TECHNICAL MODIFICATION NOTICE

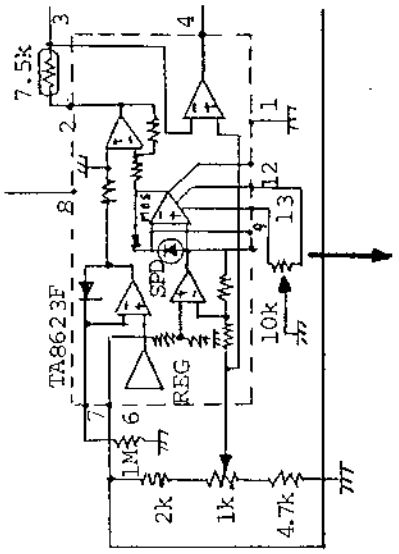
DATE: June, 20, 1986 NO: CP7m-004

MODEL: Chinon CP-7m.

PARTS NAME	PARTS INF. PAGE NO.	OLD PARTS NO.	PRICE	NEW PARTS NO.	PRICE
Potentiometer VR1	———	10 kΩ	——	———————	——

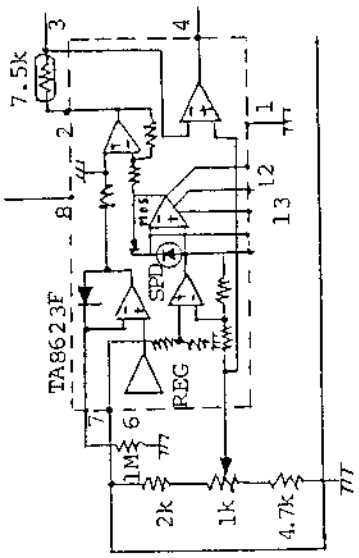
ILLUSTRATIONS (DRAWINGS OR PHOTOGRAPHS)

OLD STYLE



Abolition

NEW STYLE



REASON FOR CHANGE:

Off-Set adjustment abolition, there is no problem to take out the potentiometer VR1(10 kΩ) and it is not necessary to adjut the potentiometer VR1.

EFFECTIVE DATE OF CHANGE: From production of July. 1986.

INTERCHANGEABILITY:

New parts usable in old products: (Yes). No.

Can old parts be used in old and new products: (Yes). No.

REMARKS: SA-2492(M.T)

ORIGINATOR: Service Dept.