

OLYMPUS OM-10 REPAIR MANUAL



OLYMPUS OPTICAL CO., LTD. TOKYO, JAPAN

<http://olympus.dementia.org/Hardware>

**PARTS LIST
AND
EXPLODED PARTS DIAGRAM**

EXPLANATION OF MARKS

- ① Indicates parts that are supplied both as a single piece and as an assembled unit. In the latter case, the single part is incorporated in the assembled unit indicated with the mark ①.
Exception: Parts in the mark () are not supplied in single pieces.
(Parts that are supplied only in single pieces are not indicated with any mark. While parts that are supplied as an assembled unit are prefixed with "Z" or "U".)
-] Several types of parts for the same position are available, from which most suitable one is to be selected.
- * 3 Parts differ according to different models and types. This mark is used to indicate various combinations in a picture.
- ⌚ Left-handed screw. The mate screw hole is not marked particularly.
- ✖ Indicates parts that should not be touched directly by bare hand because special surface treatment is applied. Wear fingerstalls or use tweezers.
- ★ Not supplied as a repair part.
- Used exclusively for black finish models.
- Indicates original parts. New, modified ones are not indicated with this mark. Both original and modified parts are supplied.
- == No more available parts due to design change or out of stock.
- ✕ A correction mark. Parts with this mark are not available.
- < 2 > Modified parts that are unable to show in the technical manual. The figure indicates reference page number.
- 2-A3 This notation is entered in the "Remarks" column of parts list and indicates parts position in the technical manual.
- 2-A3 → Parts position. The technical manual is divided into 16 equal sections. Each section can be identified by using A, B, C and D from left to right and 1, 2, 3 and 4 from top to bottom.
- Indicates page number in which the technical manual appears. However, 1/1 (page 1 of 1) is not indicated particularly.

PARTS NO.	NAME OF PARTS	NOTE	(Q'ty used/ per unit
CA738100	STOPPER SCREW	4 - B4	(1)
CA796300	E RING	4 - C1	(2)
CA807600	TUBE	3 - A3	(2)
CA841800	STOPPER SCREW	8 - C2	(1)
CA841900	HOOING LEVER	8 - B2	(1)
CA842100	HOOING LEVER SPRING	8 - B2	(1)
CA842200	TUBE 2	8 - D2	(1)
CA842300	RETURNING	8 - C2	(1)
CA843100	TUBE 1		(1)
CA843400	HOOK SPRING	8 - C2	(1)
CA843700	MS SPRING	8 - C2	(1)
CA844600	M RING	8 - D2	(1)
CA844700	M SPRING	8 - D2	(1)
CA844800	CONNECTING LEVER SPRING	8 - D2	(1)
CA846300	E RING 0.8	5 - C1, 8 - B3	(2)
CA849900	B MASK	4 - D3	(1)
CA852300	PLATE L	4 - C1	(1)
CA852900	ROLLER B	4 - B1, 4 - C2	(2)
CA853100	TENSION NUT	4 - B4	(2)
CA853200	TENSION NUT STOPPER	4 - B4	(1)
CA858900	1st C, SPRING	5 - A2	(1)
CA859400	1st C, SPRING	5 - A2	(1)
CA859800	WASHER	3 - A1	(1)
CA871600	R COLLAR SPRING	7 - C1	(1)
CA872200	KEY SPRING	1 - D2	(1)
CA874600	LIGHT PROOF R	1 - A3	(1)
CA877000	SPOOL SPRING	2 - B2	(1)
CA881500	S TUBE SHAFT HOLDER	3 - D2	(1)
CA881600	GEAR NO.1	3 - D2	(1)
CA881700	GEAR NO.1 SCREW	3 - D2	(1)
CA881800	GEAR NO.1 SPRING	3 - D2	(1)
CA881900	K CLAW	3 - D2	(1)
CA882100	CHECKING LEVER	3 - D1	(1)
CA882400	LOCK LEVER	3 - D1 short	(1/2)
CA882600	LOCK SPRING	3 - D1, 3 - D2	(2)
CA882700	SHAFT NO.2	3 - C1	(1)
CA884000	S WINDING PLATE	3 - B2	(1)
CA884100	GEAR NO.4 BASE	3 - C2	(1)
CA884300	SHAFT NO.4	3 - B2	(1)
CA884800	KS SHAFT	3 - B2	(1)
CA884900	KS SPRING	3 - B2	(1)
CA885100	GEAR NO.3 SPRING	3 - B2	(1)
CA885200	SHAFT NO.4 SCREW	3 - C1	(1)
CA885400	S RING	3 - C2	(1)
CA885700	BASE PLATE SHAFT	3 - C2	(1)
CA885900	BULB PALTE SCREW	3 - C1	(1)
CA886100	RETURNING SPRING	3 - C1	(1)
CA886400	KL SHAFT	3 - B1	(1)
CA888800	MOUNT SPRING	6 - C4	(3)
CA889700	FP SYNCHRO CONTACT POINT	1-B2, 4-A3, 6-A1, 8-C3	(4)
CA890000	INSULATING PLATE	6 - B1	(1)
CA907000	C SCREW	3 - D3	(1)
CA908400	BUTTON SHAFT	3 - D4	(1)
CA910600	SHIM 1	t 0.01 6 - B2	(0 ~ 4/3)

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PARTS NO.	NAME OF PARTS	NOTE	(Q'ty used/ per unit)
CA910700	SHIM 2	t 0.03 6 - B2	(0 ~ 4/3)
CA915400	LIGHT PROOF PADDING (UPPER)	6 - B2	(2)
CA915500	FORNT SCREW	6 - B2	(4)
CA915600	LIGHT PROOF PADDING	8 - B3	(2)
CA917000	SHIM 3	t 0.08 6 - B2	(0 ~ 4/3)
CA917400	L HOLDER	3 - D1	(1)
CA917500	M HOLDER	3 - D2	(1)
CA917600	L HOLDER WASHER	3 - D1	(1)
CA919200	ADJUSTING PLATE	3 - C2	(0~1)
CA937400	M LEVER SHAFT	3 - B1	(1)
CA937700	GUIDE	1 - B3	(1)
CA937900	3G SPRING HOLDER	3 - C2	(1)
CA938000	RUBBER BAND	8 - B2	(1)
CA938900	LOWER STOPPER	3 - C2	(1)
CA946400	BULB PLATE	Without punch 3 - C1	(1/2)
CA947200	SW WASHER	3 - A3	(0~1)
CA948800	RUBBER BAND 3	8 - C2	(2)
CA949100	LOCK LEVER 2	w/oval hole 3 - D1	(1/2)
CA949400	FELT C	4 - B4	(1)
CA961100	TAPE		(0~2)
CA965500	STOPPER PLATE	t 0.4 2 - C3	(0 ~ 1/2)
CA968800	BULB PLATE 2	With punch 3 - C1	(1/2)
CA989700	X CONTACT POINT	5 - C3	(1)
CE051400	TRIPOD SOCKET	1 - C4	(1)
CE057800	SR TUBE	8 - C1	(1)
CE057900	F CONTACT (UPPER)	6 - B1	(1)
CE058200	F SCREW	6 - B1	(2)
CE066500	INSULATOR	6 - B1	(1)
CE067300	B LIGHT PROOF	4 - D3	(2)
CE070600	COLLAR SPRING HOLDER	7 - C1	(1)
CE070700	R SPRING	7 - C1	(1)
CE071600	R COLLAR	1 - C2	(1)
CE073000	TUBE		(3)
CE081100	UPPER PLATE	5 - C1	(1)
CE082300	REAR SHAFT	5 - C2	(1)
CE086100	GEAR SCREW	5 - B1	(1)
CE086700	GEAR SHAFT	5 - B2	(1)
CE088300	M _R SHAFT	5 - C3	(1)
CE088400	PLATE	3 - A1	(1)
CE089900	GEAR SHAFT	5 - B3	(1)
CE094000	TOOTH STOPPER 18	2 - C3	(3)
CE100100	T FASTENER	2 - C3	(1)
CE100200	T CONTACT A	2 - C3	(1)
CE100300	T CONTACT B	2 - D3	(1)
CE100400	T CONTACT C	2 - D3	(1)
CE112200	CELL PLATE	4 - A4	(1)
CE126600	LOWER BASE PLATE	2 - B3	(1)
CE126900	WINDING PIN	2 - B2	(1)
CE127000	WINDING GEAR 1	2 - C1	(1/2)
CE127200	RING	2 - C1	(4)
CE127400	SPRING	2 - C2	(1)

PARTS NO.	NAME OF PARTS	NOTE	(Q'ty used/ per unit)
CE127500	SPRING	2 - C2	(1)
CE127600	SPRING	2 - C2	(1)
CE128200	IDLER 2	2 - B3	(1/3)
CE128300	FILM COUNTER GEAR	2 - B3	(1)
CE128600	FILM COUNTER SPRING 1	2 - C1	(1)
CE128700	FILM COUNTER LC	2 - A1	(1)
CE128800	FILM COUNTER SPRING 2	2 - A1	(1)
CE128900	FILM COUNTER STOPPER	2 - A1	(1)
CE129300	SPROCKET	3 - A2	(1)
CE129400	TAPE	2 - C3	(0 ~ 1/2)
CE129600	WASHER	2 - B1	(1)
CE129700	WINDING GEAR 12	2 - C1	(1/2)
CE129900	IDLER 22	2 - B3	(1/3)
CE130000	IDLER 23	2 - B3	(1/3)
CE200100	DIECAST BODY	Not on sale 1 - D3	(1)
CE200700	B RUBBER	1 - B2	(1)
CE200900	FW LEVER HOLDER	1 - A1	(1)
CE201000	FILM COUNTER COVER	1 - B2	(1)
CE201400	R KNOB	1 - D1	(1)
CE201600	R PLATE	1 - D1	(1/2)
CE201700	R SPRING	1 - C1	(1)
CE201800	R SCREW	1 - C1	(1)
CE202200	HOT SHOE	1 - B1	(1)
CE202400	M WASHER	1 - D2	(1)
CE202500	A BOARD WASHER	7 - B3	(1)
CE202800	H, SCREW	1 - B1, 7 - A2	(2)
CE203100	SW FASTENER	1 - B1	(1)
CE203200	A NAME PALTE	1 - B1	(1)
CE203300	KNOB FASTENER	1 - B1	(1)
CE203400	A BOARD STOPPER	7 - B3	(1)
CE203600	SW KNOB	1 - B1	(1)
CE203700	M PIN	6 - D1	(1)
CE203800	R.P. MARK	1 - C2	(1)
CE204100	DISK	1 - A1	(1)
CE204200	FW LEVER WASHER	1 - A2	(1)
CE204300	R PLATE 2	1 - D1	(1/2)
CE204400	SPRING	1 - B1	(1)
CE204700	SW CLICK	1 - B2	(1)
CE205000	U INSULATOR 1	1 - C2	(1)
CE205100	U INSULATOR 2	1 - C2	(1)
CE205400	U INSULATOR 3	1 - C2	(1)
CE210300	REAR LEATHER	1 - B2	(1)
CE210800	SHAFT	1 - A4	(1)
CE211000	KEY TAPE	1 - B3	(1)
CE211100	SIDE TAPE	1 - A4	(1)
CE211200	RUBBER TAPE	1 - B4	(1)
CE211300	UPPER TAPE L	1 - A3	(1)
CE211400	LOWER TAPE	1 - A4	(1)
CE211500	FRONT LEATHER L	6 - D2	(1)
CE211600	FRONT LEATHER R	6 - A2	(1)
CE211700	SPOOL B	2 - B3	(1)
CE211800	R SHAFT HOLDER	7 - C1	(1)
CE211900	R SHAFT	1 - B3	(1)

PARTS NO.	NAME OF PARTS	NOTE	(Q'ty used/ per unit)
CE212100	KEY COVER	1 - D3	(1)
CE212700	SPRING	4 - A4	(1)
CE212800	COVER	1 - B4	(1)
CE213100	BLACK TAPE	2 - B3	(2)
CE213300	STRAP EYELET	1 - D3	(1)
CE213400	SP 18	1 - C3	(1)
CE213500	LIGHT PROOF TAPE	2 - C3	(1)
CE214000	P LIGHT PROOF	1 - B3	(2)
CE214100	CELL BASE	4 - A4	(1)
CE220100	CC LEAD	3 - C4	(1)
CE220200	SPRING	3 - C3	(1)
CE220300	SPRING	3 - C4	(1)
CE220500	CC CAM HOLDER	3 - C2	(1)
CE221600	M RELEASE	5 - C3	(1)
CE222700	ME GUIDE	3 - C1	(1)
CE223100	TUBE	3 - A2	(1)
CE230300	T INSULATOR	2 - D2	(1)
CE230400	T TAPE	2 - C2	(1)
CE231400	L FRAME	7 - A1	(1)
CE232100	FPC HOLDER	2 - D2	(1)
CE232200	CONNECTOR 182	2 - C2	(2)
CE232400	JM FASTENER	2 - C3	(1)
CE236400	FILM COUNTER	2 - A1	(1)
CE236500	SPRING 2	2 - B2	(2)
CE240100	S UPPER PLATE	5 - C1	(1)
CE240200	GEAR BM	5 - B2	(1)
CE240300	GEAR AM	5 - B2	(1)
CE240800	SPRING	5 - C2	(1)
CE240900	SPRING	5 - C1	(1)
CE241300	MG BASE	5 - D3	(1)
CE241400	M HOOK	5 - A2	(1)
CE241600	M HOOK SPRING	5 - A2	(1)
CE241700	CLAW	5 - A2	(1/2)
CE241800	SHAFT	5 - A2	(1)
CE241900	KS WASHER	3 - C2	(1)
CE242000	CURTAIN SHAFT	4 - B2	(1)
CE242200	GUIDE	4 - B2	(2)
CE242300	CURTAIN SHAFT BM	4 - B2	(1)
CE244200	REAR RING	5 - C2	(1)
CE244400	PLATE	5 - C2	(1)
CE244600	U. STOPPER	4 - B1	(1)
CE244900	SPRING	5 - C2	(1)
CE245100	FELT D	4 - C4	(1)
CE245300	WASHER	5 - D3	(1)
CE245500	FELT A	4 - C4	(1)
CE245600	FELT B	4 - D3	(1)
CE246100	A LEVER SPRING	5 - C2	(1)
CE246200	B LEVER SPRING	5 - A2	(1)
CE246300	CLAW 2	5 - A2	(1/2)
CE246400	T TUBE	5 - C2	(1)
CE250200	IM TAPE	8 - A2	(2)
CE250300	F COVER 1	6 - C1	(1)
CE250400	F COVER 2	6 - A2	(1)
CE250500	S FRAME	7 - B2	(1)
CE250700	INDICATOR BASE	7 - A1	(1)

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<u>PARTS NO.</u>	<u>NAME OF PARTS</u>	<u>NOTE</u>	<u>(Q'ty used/ per unit</u>
CE250800	L INSULATOR	7 - A1	(1)
CE250900	U. MOLT	6 - D2	(1)
CE251100	MS TUBE	8 - C2	(1)
CE251400	MF INSULATOR	6 - B1	(1)
CE251500	LIGHTPROOF	8 - A2	(1)
CE251600	F INSULATOR	6 - B1	(1)
CE251700	F CONTACT	6 - B1	(1)
CE251800	M LEVER SHAFT	8 - C1	(1)
CE251900	SW TUBE	6 - B1	(2)
CE252600	L. COVER	6 - D2	(1)
CE252700	PC INSULATOR	6 - A1	(1)
CE253000	RIGHT SIDE COVER	8 - B3	(1)
CE253100	C COVER 2	7 - C2	(1)
CE253200	L COVER	6 - A2	(1)
CE253300	P FASTENER	7 - C2	(1)
CE253400	P FRAME	7 - C2	(1)
CE253500	F FASTENER	6 - D2	(1)
CE253600	F FASTENER 2	6 - C1	(1)
CE253700	F WASHER	t 0.2 7 - C3	(1/3)
CE253900	PC COVER	6 - A2	(1)
CE254500	FRONT COVER	6 - C3	(1)
CE254600	B MOUNT	6 - D3	(1)
CE254700	P COVER	7 - C2	(1)
CE254800	F WASHER 10	t 0.1 7 - C3	(1/3)
CE254900	F WASHER 35	t 0.35 7 - C3	(1/3)
CE255000	L MASK	7 - A2	(1)
CE255100	F COVER WASHER	6 - C2	(4)
CE260200	M STOPPER	8 - A3	(1)
CE260300	SPRING	8 - A3	(1)
CE260400	STOPPER SHAFT	8 - A3	(1)
CE261500	CUSHION	8 - A2	(1)
CE261600	45 RUBBER	8 - A2	(1)
CE261800	45 PLATE	8 - A3	(1)
CE261900	45 SCREW	8 - A3	(1)
CE262200	ML SPRING	8 - A3	(1)
CE262300	K STOPPER PLATE	8 - B3	(1)
LC408600	PENTAPRISM	7 - C2	(1)
LC409000	MIRROR (IM)	8 - B2	(1)
LC409100	M SPLIT	7 - C3	(1)
SC0155	B THREAD	Length 10m 6 - A3	(1)
SC0156	CLIP 15	8 - B3	(1)
SC0157	CLIP 20	2 - B3	(1)
SC0158	MR 90	1 - D1	(1)
ES1008	DIODE	D101 1SS53	(1)
ES5010	CdS CELL	P201	(1)
ES7001	PCV	SP101 7PB-206A	(1)

PARTS NO.	NAME OF PARTS	NOTE	(Q'ty used/ per unit
DS8003	V. RESISTOR	RV103	(1)
DS8004	V. RESISTOR	RV203, 204, 205	(3)
KS0033	CONDENSER	C101	(1/4)
KS0034	CONDENSER	C101	(1/4)
KS0035	CONDENSER	C101 0.1 μ F 35V TANTALUM	(1/4)
KS0036	CONDENSER	C102, C204 3.3 μ F 6.3V TANTALUM	(2)
KS0037	CONDENSER	C103 6800pF 50V CERRAMIC	(1)
KS0038	CONDENSER	C104 1.5 μ F 6.3V TANTALUM	(1)
KS0039	CONDENSER	C105, C201 0.022 μ F TANTALUM	(2)
KS0040	CONDENSER	C202 10 μ F TANTALUM	(1)
KS0041	CONDENSER	C203 1000pF CERRAMIC TIP	(1)
KS0056	CONDENSER	C101	(1/4)
RS0120	RESISTOR	R201 C.1M Ω 1/8W	(1)
RS0121	RESISTOR	R202, R203 C.10M Ω 1/16W	(2)
RS0122	RESISTOR	R204 C.330K Ω 1/8W	(1)
RS0123	RESISTOR	R205 C.180K Ω 1/8W	(1)
RS0124	RESISTOR	R105 C.160 Ω 1/8W	(1)
RBJ-A	LEAD WIRE (BLUE)	length: 10m	
RBJ-B	LEAD WIRE (BLACK)	length: 10m	
RBJ-C	LEAD WIRE (BROWN)	length: 10m	
RBJ-D	LEAD WIRE (ORANGE)	length: 10m	
RBJ-G	LEAD WIRE (GREEN)	length: 10m	
RBJ-M	LEAD WIRE (VIOLET)	length: 10m	
RBJ-R	LEAD WIRE (RED)	length: 10m	
RBJ-W	LEAD WIRE (WHITE)	length: 10m	
RBJ-Y	LEAD WIRE (YELLOW)	length: 10m	
THJ-Y	TUBE (YELLOW)	Inside diameter: 0.7 ϕ length: 5m	
TKJ-Y	TUBE (YELLOW)	Inside diameter: 1.0 ϕ length: 5m	
TE-N	TUBE	Inside diameter: 3.0 ϕ length: 5m	
ZC102700	4 GEAR ASS'Y	3 - B2	(1)
ZC102900	KS LEVER ASS'Y	3 - B2	(1)
ZC103000	3 GEAR ASS'Y	3 - C2	(1)
ZC104100	KM LEVER ASS'Y	3 - A1	(1)
ZC106700	M CHARGE LEVER ASS'Y	8 - C2	(1)
ZC107800	EYE PIECE ASS'Y	7 - C2	(1)
ZC133200	B PINCH ASS'Y	5 - A2	(1)
ZC135500	SIDE PLATE L ASS'Y	8 - C3	(1)
ZC137300	KL PLATE 3 ASS'Y	Pin 1.4 ϕ 3 - A1	(1/2)
ZC137400	KL PLATE 3 ASS'Y	Pin 1.8 ϕ 3 - A1	(1/2)
ZC138400	M LEVER ASS'Y	8 - C1	(1)
ZC161000	FX BASE ASS'Y	5 - C3	(1)
ZC162600	DIAPHRAGM LEVER ASS'Y	8 - B2	(1)
ZC164100	PRESSURE PLATE ASS'Y	1 - A2	(1/5)
ZC168900	LEVER ASS'Y	5 - C1	(1)
ZC182700	PRESSURE PLATE 4 ASS'Y	1 - A3	(1/5)
ZC182800	PRESSURE PLATE 5 ASS'Y	1 - A3	(1/5)
ZC182900	PRESSURE PLATE 6 ASS'Y	1 - A3	(1/5)
ZC183000	PRESSURE PLATE 7 ASS'Y	1 - A3	(1/5)
ZC200200	TOP COVER ASS'Y	1 - A2	(1)

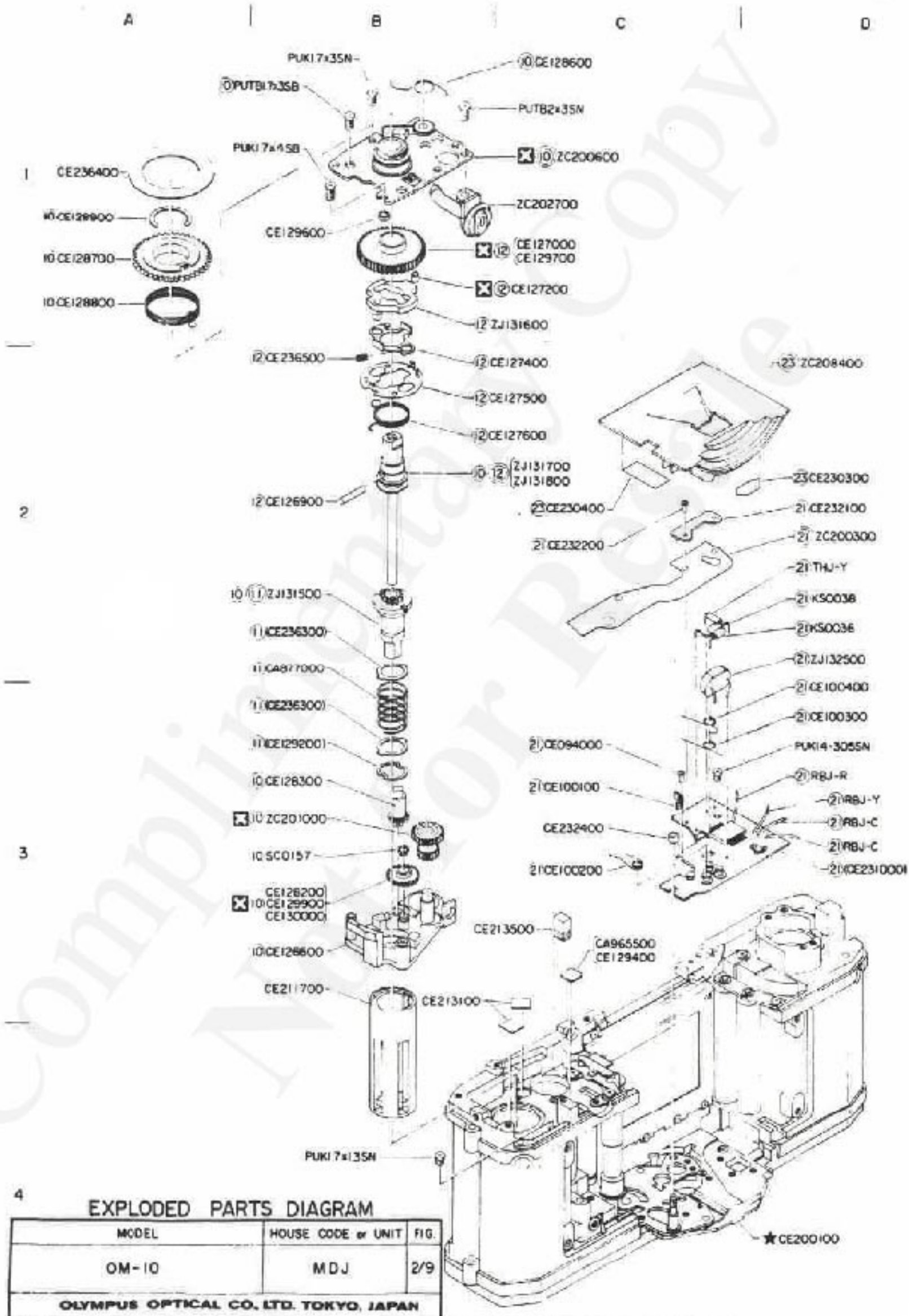
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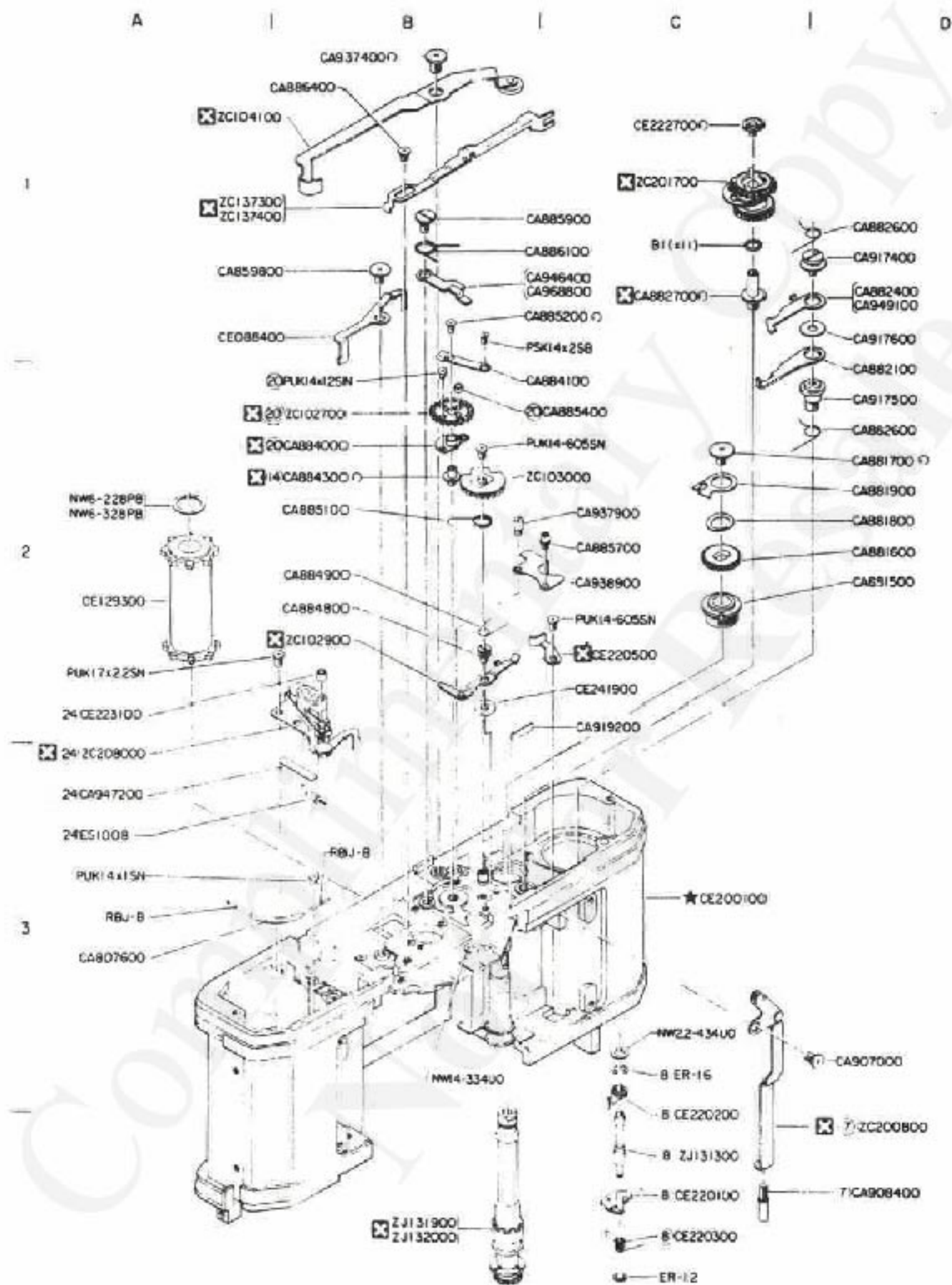
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PARTS NO.	NAME OF PARTS	NOTE	(Q'ty used/ per unit)
ZC200300	FPC-1 ASS'Y	2 - D2, 7 - A1	(1)
ZC200500	REAR COVER ASS'Y	1 - A3	(1)
ZC200600	FW BASE ASS'Y	2 - C1	(1)
ZC200800	RELEASE PLATE ASS'Y	3 - D4	(1)
ZC201000	IDLER ASS'Y	2 - B3	(1)
ZC201200	KEY PLATE ASS'Y	1 - D3	(1)
ZC201400	U GUIDE ASS'Y	4 - B2	(1)
ZC201500	L GUIDE ASS'Y	4 - B2	(1)
ZC201600	SW 2 ASS'Y	5 - C3	(1)
ZC201700	2 GEAR SHAFT ASS'Y	3 - C1	(1)
ZC201800	A PINCH ASS'Y	5 - B2	(1)
ZC202100	FRAME ASS'Y	4 - D3	(1)
ZC202200	R CLAW A1 ASS'Y	No.1 L 7.8 5 - C1	(1/5)
ZC202300	R CLAW A2 ASS'Y	No.2 L 8.1 5 - C1	(1/5)
ZC202400	R CLAW A3 ASS'Y	No.3 L 8.4 5 - C1	(1/5)
ZC202500	R CLAW A4 ASS'Y	No.4 L 7.95 5 - C1	(1/5)
ZC202600	R CLAW A5 ASS'Y	No.5 L 8.25 5 - C1	(1/5)
ZC202700	K KNOB ASS'Y	2 - C1	(1)
ZC205100	SIDE PLATE R ASS'Y	8 - B3	(1)
ZC207200	WINDING LEVER ASS'Y	1 - A2	(1)
ZC207300	BUTTON ASS'Y	1 - B2	(1)
ZC207500	R LEVER ASS'Y	1 - D1	(1)
ZC207900	A HOLDER ASS'Y	7 - B2	(1)
ZC208000	SW BASE PLATE ASS'Y	3 - A3	(1)
ZC208100	F MASK ASS'Y	7 - C3	(1)
ZC208200	S FRAME ASS'Y	7 - B2	(1)
ZC208300	R KNOB ASS'Y	1 - D1	(1)
ZC208400	COVER PLATE ASS'Y	2 - D2	(1)
ZC208500	R CHANGE ASS'Y	1 - D1	(1)
ZJ128400	M BASE PLATE ASS'Y	8 - C1	(1)
ZJ130400	SIDE PLATE L ASS'Y	8 - C3	(1)
ZJ130600	CONNECTING RING ASS'Y	6 - B3	(1)
ZJ130700	SPRING HOLDER ASS'Y	6 - A2	(1)
ZJ130800	R SPRING ASS'Y	6 - B1	(1)
ZJ130900	M FRAME ASS'Y	8 - B2	(1)
ZJ131000	FRONT CASTING ASS'Y	6 - C2, 8 - B3	(1)
ZJ131100	MS BASE PLATE ASS'Y	6 - C1	(1)
ZJ131200	LED ASS'Y	6 - A1	(1)
ZJ131300	CC SHAFT ASS'Y	3 - C4	(1)
ZJ131400	CELL CASE ASS'Y	4 - A3	(1)
ZJ131500	SPOOL GEAR ASS'Y	2 - B2	(1)
ZJ131600	WINDING CLAW ASS'Y	2 - C1	(1)
ZJ131700	WINDING GEAR 1 ASS'Y	Diameter: < ZJ1318 2-C2	(1/2)
ZJ131800	WINDING GEAR 12 ASS'Y	Diameter: > ZJ1317 2-C2	(1/2)
ZJ131900	SP SHAFT ASS'Y	Diameter: < ZJ1320 3-B4	(1/2)
ZJ132000	SP SHAFT ASS'Y	Diameter: > ZJ1319 3-B4	(1/2)
ZJ132100	MG BASE ASS'Y	5 - D3	(1)
ZJ132200	TR PLATE ASS'Y	5 - C2	(1)
ZJ132300	S BASE PLATE ASS'Y	5 - B3	(1)
ZJ132400	CURTAIN J ASS'Y	4 - B1	(1)
ZJ132500	L BASE ASS'Y	2 - D2	(1)

PARTS NO.	NAME OF PARTS	NOTE	(Q'ty used/ per unit
ZJ132600	MINI JACK ASS'Y	1 - D2	(1)
ZJ132700	BOTTOM PLATE	Not on sale 1 - D4	(1)
ZJ132800	INSULATION WASHER ASS'Y	1 - B1	(1)
ZJ132900	FPC-3 ASS'Y	1 - B2	(1)
ZJ133000	BUTTON WASHER ASS'Y	1 - B1	(1)
ZJ133100	A KNOB ASS'Y	1 - B1	(1)
ZJ136100	F BOARD ASS'Y	Lead wire orange 6 - D3	(1/5)
ZJ136200	F BOARD ASS'Y	Lead wire blue 6 - D3	(1/5)
ZJ136300	F BOARD ASS'Y	Lead wire red 6 - D3	(1/5)
ZJ136400	F BOARD ASS'Y	Lead wire green 6 - D3	(1/5)
ZJ136500	F BOARD ASS'Y	Lead wire black 6 - D3	(1/5)
ZJ136600	A BOARD ASS'Y	Lead wire orange 7 - A2	(1/5)
ZJ136700	A BOARD ASS'Y	Lead wire blue 7 - A2	(1/5)
ZJ136800	A BOARD ASS'Y	Lead wire red 7 - A2	(1/5)
ZJ136900	A BOARD ASS'Y	Lead wire green 7 - A2	(1/5)
ZJ137000	A BOARD ASS'Y	Lead wire black 7 - A2	(1/5)
PUK1.4 x 1SN	SCREW	PSK1.4 x 2SN	SCREW
PUK1.4 x 1.2SN	SCREW	PSK1.4 x 2SB	SCREW
PUK1.4 x 1.4SN	SCREW		
PUK1.4 x 1.6SN	SCREW	PSK2 x 2.2SN	SCREW
PUK1.4 x 1.8SN	SCREW	PSK2 x 2.8SN	SCREW
PUK1.4 x 3SN	SCREW	PSK2 x 3SN	SCREW
PUK1.4 - 305SN	SCREW	PSK2 x 4SE	SCREW
PUK1.4 - 605SN	SCREW		
PUK1.7 x 1.3SN	SCREW	PUTB1.4 x 3SN	SCREW
PUK1.7 x 1.5SN	SCREW	PUTB1.7 x 3SN	SCREW
PUK1.7 x 2.2SN	SCREW	PUTB2 x 3SN	SCREW
PUK1.7 x 3SN	SCREW		
PUK1.7 x 3.5SN	SCREW	NW1.4 - 334UO	WASHER
PUK1.7 x 4SN	SCREW	NW1.4 - 340UO	WASHER
PUK1.7 x 4SB	SCREW	NW1.5 - 425UO	WASHER
PUK1.7 - 308SN	SCREW	NW2.1 - 240UO	WASHER
PUK1.7 - 410SB	SCREW	NW2.2 - 434UO	WASHER
PUK1.7 - 410SG	SCREW	NW6 - 280PB	WASHER
PUK1.7 - 416SG	SCREW	NW6 - 380PB	WASHER
PUK1.7 - 512SN	SCREW		
PUK1.7 - 516SN	SCREW	ER1.2	
		ER1.6	
PUK2 x 1.8SN	SCREW		
PUK2 x 2SN	SCREW	NN1.4BN	
PUK2 x 2.2SN	SCREW		
PUK2 x 2.5SN	SCREW	B 1	BALL
PUK2 x 3SN	SCREW		
PUK2 x 4.5BO	SCREW		
3PUK1.4 x 1.8SN	SCREW		
3PUK1.4 x 2.5SN	SCREW		
3PUK1.4 x 4.5SN	SCREW		
3PUK1.7 x 1.8SN	SCREW		
3PUK1.7 x 2.8SN	SCREW		
3PUK1.7 x 3.5SN	SCREW		



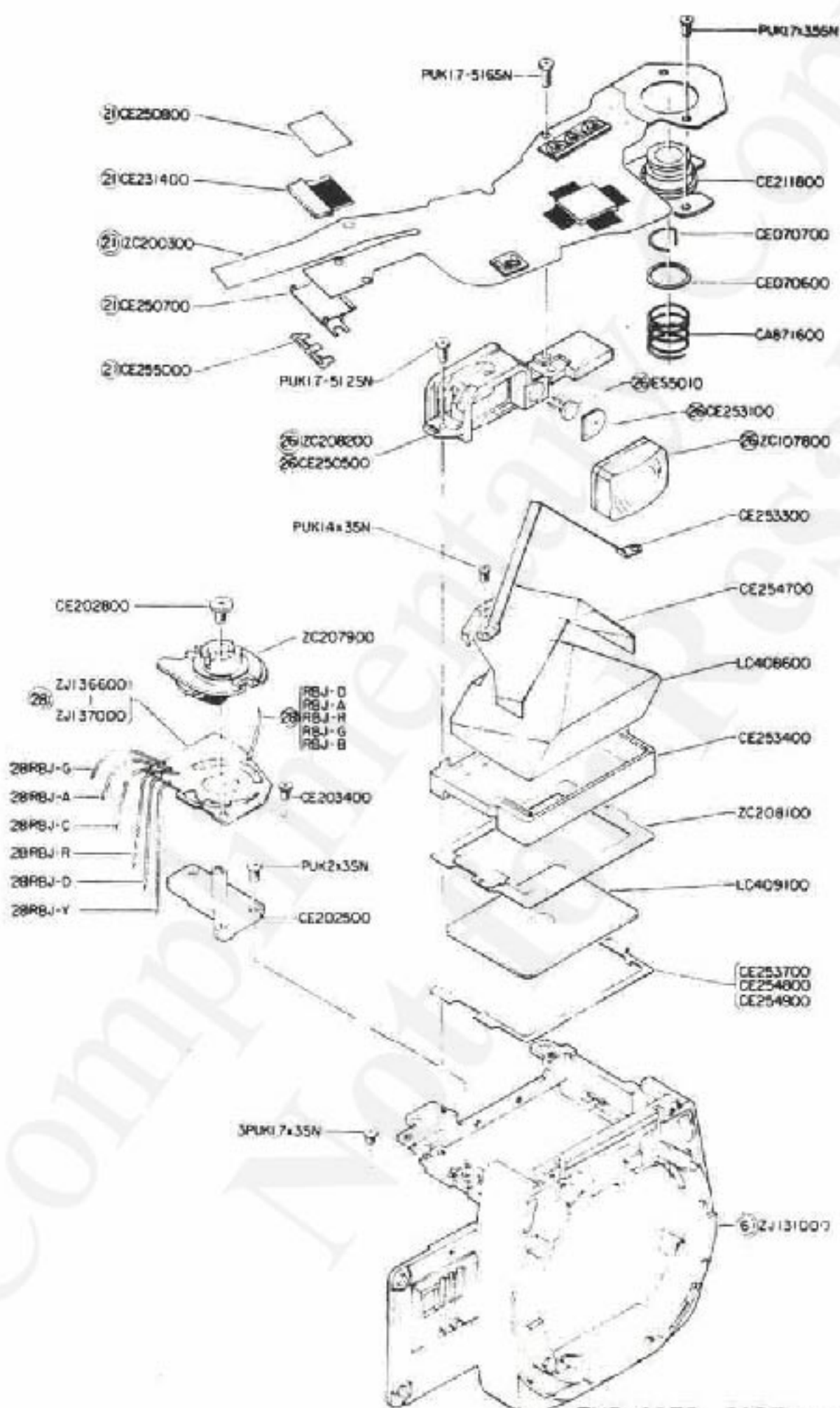


EXPLODED PARTS DIAGRAM

MODEL	HOUSE CODE or UNIT	FIG.
OM-10	MDJ	3/9
OLYMPUS OPTICAL CO., LTD. TOKYO, JAPAN		

NOTE WHEN ORDERING FOR SPARE PARTS, PLEASE CLARIFY A MODEL or HOUSE CODE, PARTS NUMBER AND QUANTITY.

A | B | C | D



EXPLODED PARTS DIAGRAM

MODEL	HOUSE CODE or UNIT	FIG.
OM-10	MDJ	7/9
OLYMPUS OPTICAL CO., LTD. TOKYO, JAPAN		

NOTE: WHEN ORDERING FOR SPARE PARTS, PLEASE CLARIFY A MODEL or HOUSE CODE, PARTS NUMBER AND QUANTITY.



MODEL	HOUSE CODE or UNIT	FIG.
OM-10	MDJ	B/9
OLYMPUS OPTICAL CO. LTD. TOKYO, JAPAN		

<http://olympus.dementia.org/Hardware>

**GENERAL OUTLINE
AND
MECHANICAL FEATURES**

A. GENERAL OUTLINE AND MECHANICAL FEATURES

1. MAIN SPECIFICATIONS

Camera type:

35 mm SLR single lens reflex camera with electronic control automatic exposure and focal plane shutter.

Image format:

24 x 36 mm.

Lens mount:

Olympus OM Mount, bayonet type.

Shutter:

Electronically controlled focal plane shutter.

Flash synchronization:

X contact. Direct contact only.

Automatic exposure control:

Aperture-priority electronically controlled shutter. TTL direct light measuring system. Light measuring range: EV— 0.5 to 17 from 2 sec. to 1/1000 sec. at normal temperatures and humidity with ASA 100 and F1.2 standard lens.

Exposure compensation: ± 2 EV.

Film speed range:

ASA 25 to 1600

Battery checker:

Battery voltage can be checked by both LED and PCV. Mirror lock to limit drainage.

Power source:

Two 1.5V silver oxide batteries.
Eveready (or UCAR) EPX-76 or equivalents.

Viewfinder:

Pentaprism type.

Focusing screen:

Microprism/split image-matte type.

Finder View-field:

93% of actual picture field.

Viewfinder magnification:

0.92X with standard 50 mm lens at infinity.

Viewfinder information:

12-step shutter speed scale and flash charge indicated by LEDs.

Mirror:

Oversize, quick return mirror.

Film advance:

Lever type with 130° angle. It can be wound with one long or several short strokes. 30° pre-advance angle. Power winding is possible with the Olympus OM System Winder 1.

Self-timer:

Electronic self-timer with about 12 second delay.

Accessory shoe:

Built-in type, with direct contact.

Dimensions and weights:

Body only:

135 (W) x 84 (H) x 50 (D) mm	450 gr.
(5.3" x 3.3" x 2")	(15.9 oz)

With F1.8 lens:

135 (W) x 84 (H) x 81 (D) mm	620 gr.
(5.3" x 3.3" x 3.2")	(21.9 oz)

With F1.4 lens:

135 (W) x 84 (H) x 86 (D) mm	680 gr.
(5.3" x 3.3" x 3.4")	(24 oz)

* Specifications subject to change without notice.

2. MECHANICAL FEATURES

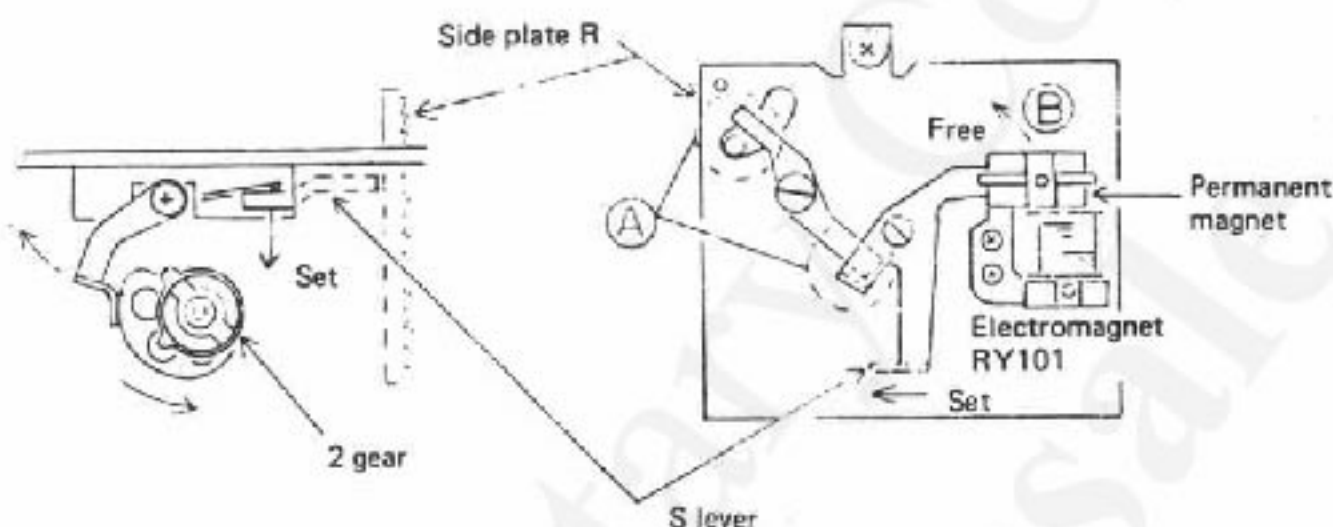
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(1) SHUTTER LOCK MECHANISM (MIRROR LOCK MECHANISM)

This mechanism is so arranged that, when the shutter fails to operate in the normal manner because of such as battery trouble, the mirror becomes locked and, consequently, the shutter

becomes locked.

It is due to this relationship that an electromagnet (RY101) is provided on the side plate R as a means of unlocking the mirror.



Sequential actions

- 1) By the cam of 2 gear, the mechanism gets set, that is, shifts to the condition shown on the above, in which the mirror is set in locked state.
- 2) As electromagnet RY101 gets energized, S lever disengages by moving in the direction (B) thereby releasing the mirror from locked state. (The polarity of RY101 is the same as that of its permanent magnet: when energized, it develops repulsive force.)

2-1. Light remaining on

This means that "strobo charging is completed."

2-2. Light flickers

This means that "flashing was satisfactory."

(2) FINDER INDICATION

1. Shutter speed indication

The speed is indicated not as an analog quantity (as when a pointer is provided so that the user has to "read" speed from pointer position) but as a digital quantity. As illustrated on the right, one of the LEDs lights up to tell the speed.

2. Strobo indication

With an exclusive-use strobo (such as T20) connected to the shoe, the light (shown in the illustration on the right) signifies either of the two consequences:

Strobo indication	→ ●
Overspeed	→ ●
1/1000 second	→ ●
1/500 second	→ ●
1/250 second	→ ●
1/125 second	→ ●
1/60 second	→ ●
1/30 second	→ ●
1/15 second	→ ●
1/8 second	→ ●
1/4 second	→ ●
1/2 second	→ ●
1 second or longer	→ ●

⚡ 60

1000

500

250

125

60

30

15

8

4

2

1

(3) RELATION BETWEEN STROBO T20 AND INDICATION INSIDE THE FINDER

1. Three on-off actions of LED

1-1. On-off cycles equal in number to that of strobo on-off cycles

This manner of lighting signifies that the main capacitor is taking more time than usual in getting recharged after a strobo flashing.

1-2. Flickering for about 1.5 seconds

This short flickering signifies that the strobo bulb did not produce enough light flux in flashing. (After each strobo flashing, the charge lamp will light up first, followed by the finder's LED: the charge lamp has priority over this LED.)

1-3. Flickering for less than 1.5 seconds

This manner of flicker could occur when two flashes have been made in succession.

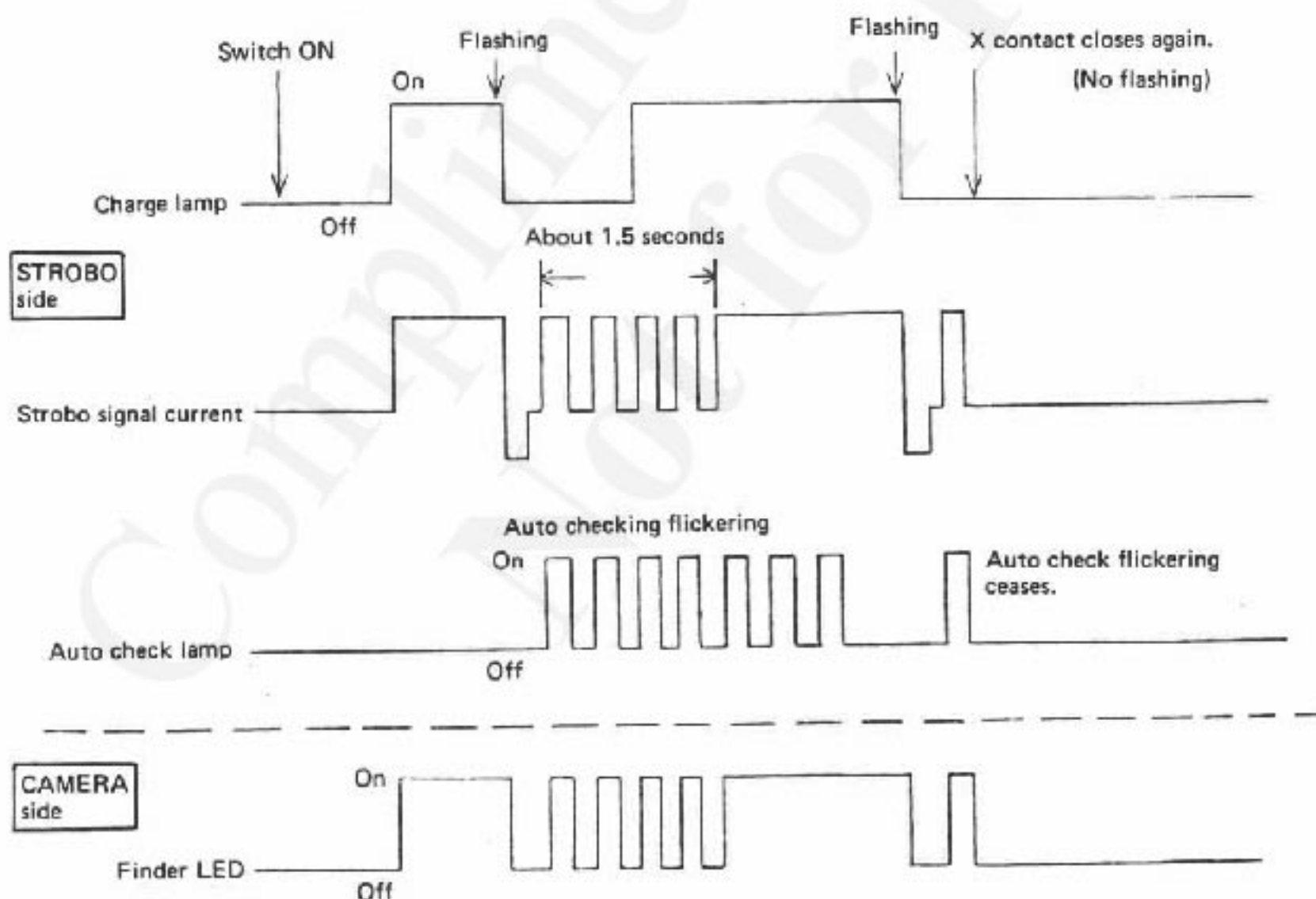
It means that the main capacitor is not charged adequately. If the shutter button is pressed under this condition, no flashing might occur. Whenever the LED ceases to flicker upon pressing down of the shutter button, it means inadequate recharging.

NOTE:

Under the condition of inadequate charge, the auto lamp on the strobo, too, stops flickering.

If X contact happens to be unsteady and should chatter, the flickering will cease even when the strobo has flashed satisfactorily. This is because such chatter produces the same effect as two contact closures in rapid succession.

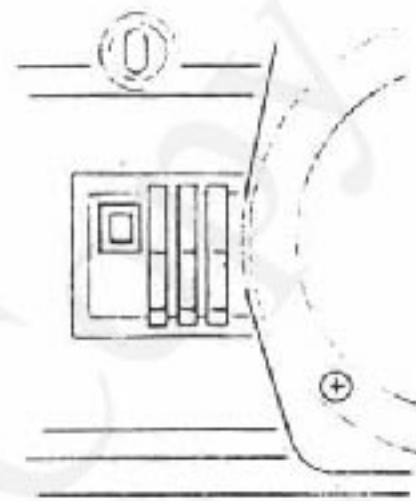
2. Signal patterns



(4) SELF-TIMER

Timing action of the self-timer is electrically induced. With the power on-off switch set in SELF-TIMER position, pressing the release button does not result in energization of the electromagnet RY101 for releasing the mirror from locked condition, so that the mirror remains locked.

As the self-timer times out, the electromagnet becomes energized to unlock the mirror and then the shutter operates to make an exposure. While the self-timer is clocking, the LED (shown in the illustration on the right) flickers and concurrently a buzzer sound issues forth.



Indicating window of self-timer.

(5) Power saving circuit for shutter speed indicating LED unit in viewfinder

In order to minimize power consumption by the shutter speed indicating LED unit in the viewfinder, the circuit is designed to automatically turn off the LED unit in about 1.5 minutes even if the LED unit switch is kept turned on.



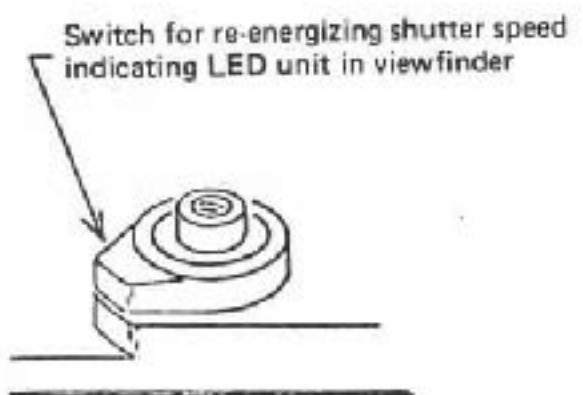
Switch for shutter speed indicating LED unit in viewfinder

(6) Switch for re-energizing shutter speed indicating LED unit in viewfinder

The shutter releasing button seat serves as the switch.

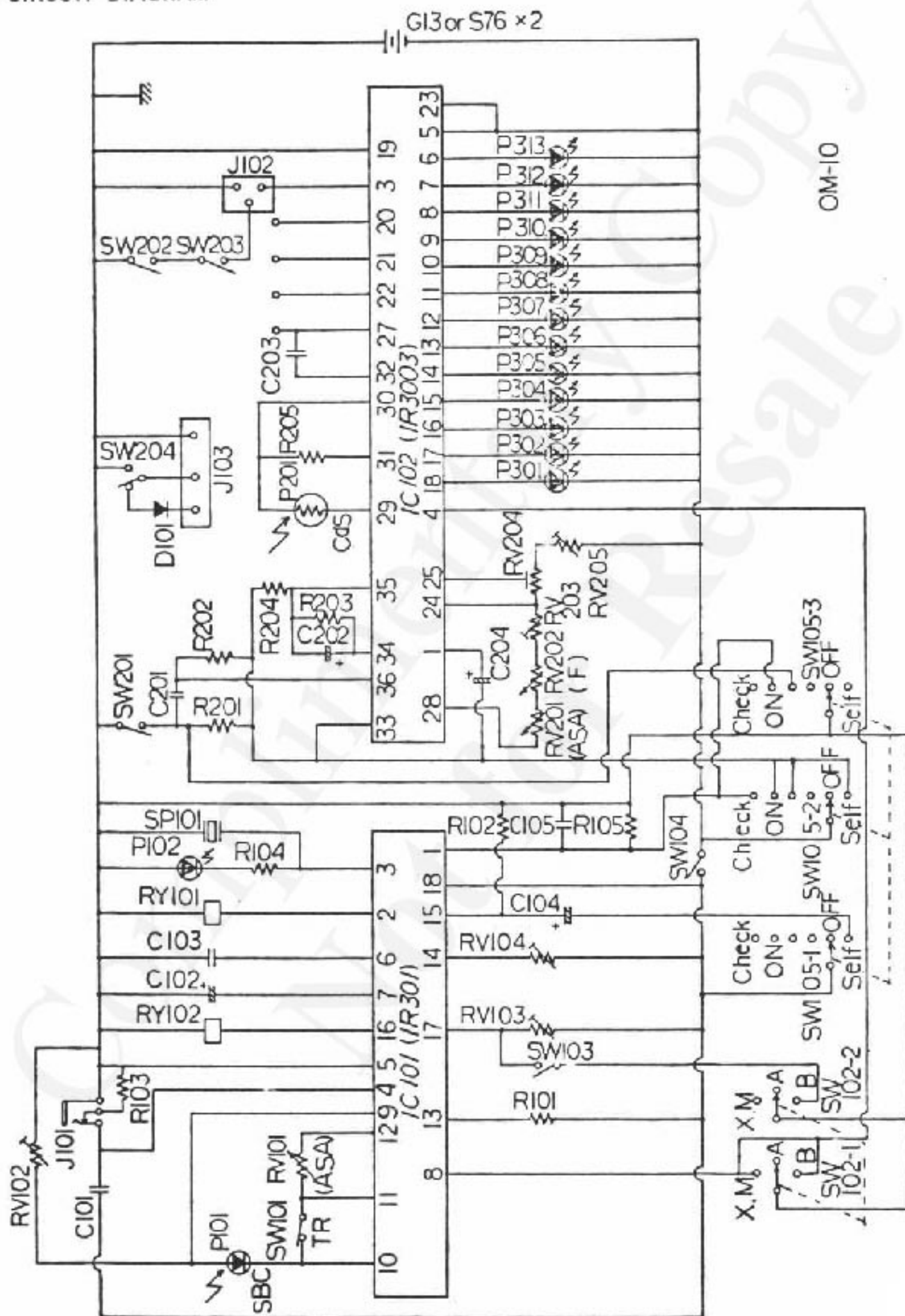
When the LED unit is turned off by the power saving circuit described in (5) above, the LED unit can be turned on again by slightly touching the shutter releasing button seat.

- The power saving circuit is automatically cut off in about 1.5 minutes after the LED unit is turned on.
- The circuit will be cut off in about 1.5 minutes, even if the shutter releasing button seat is kept pressed.



Switch for re-energizing shutter speed indicating LED unit in viewfinder

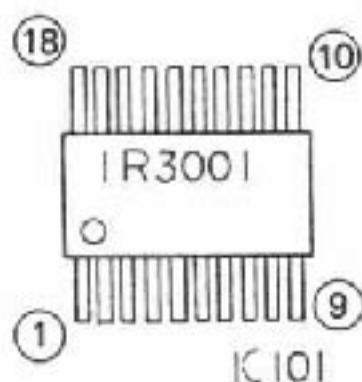
(7) CIRCUIT DIAGRAM



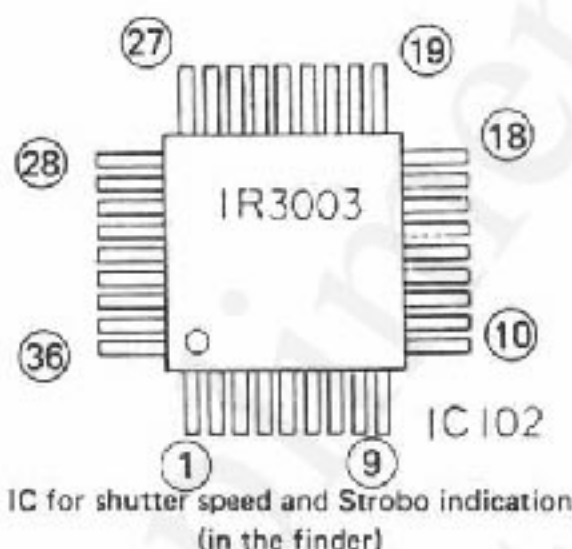
(8) CIRCUIT DESCRIPTION

1. Circuitry

The circuitry may be viewed as being composed of a shutter circuit and a finder indication circuit. In terms of hardware, these circuits are implemented by ICs soldered to a printed-circuit board. The IC for shutter circuit is IC101 (IR3001), and that of finder indication circuit is IC102 (IR3003). It is inside these ICs that the two circuits are formed respectively.



IC for shutter circuit



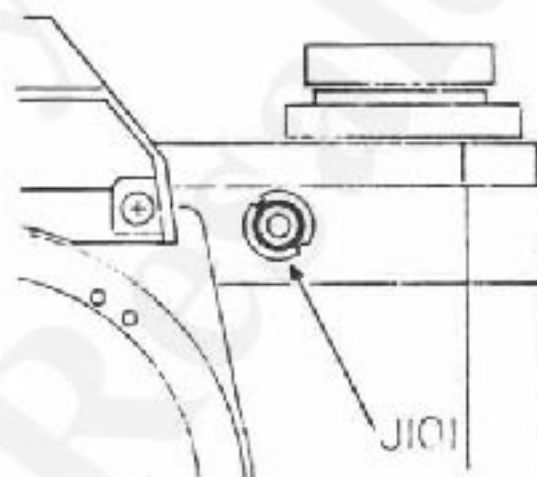
2. Circuit elements and parts

2-1. Terminals

1) J101 (manual adaptor jack)

When the manual adaptor is not inserted, R103 is in service and, by this resistor, the effective timing action is that of X (X timing). Inserting the adaptor into this jack, however, cuts R103 out of the circuit but places a resistor corresponding to a speed of 1 second up to and including 1/1000 second. The ohmic values of the resistors, one of which goes into the circuit, are as follows:

Shutter speed	Resistor
1 sec.	8.3 MΩ
1/2 sec.	4.15 MΩ
1/4 sec.	2.1 MΩ
1/8 sec.	1.0 MΩ
1/15 sec.	0.52 MΩ
1/30 sec.	0.26 MΩ
1/60 sec.	0.13 MΩ
1/125 sec.	65 KΩ
1/250 sec.	32 KΩ
1/500 sec.	16 KΩ
1/1000 sec.	8 KΩ



2) J102 (shoe)

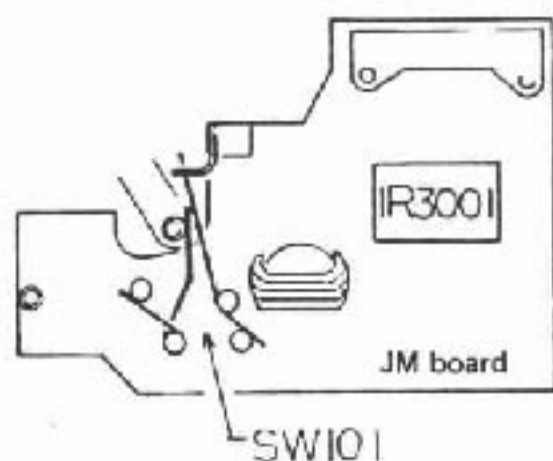
The shoe has a terminal for the flasher and another for the indication inside the finder. The only synchro contact is X.

3) J103 (winder contacts)

Diode D101 is included in J103 to keep motor drive out of service. (Do not cut motor drive into service even with the diode removed.)

2-2. Switches

1) SW101 (trigger switch)



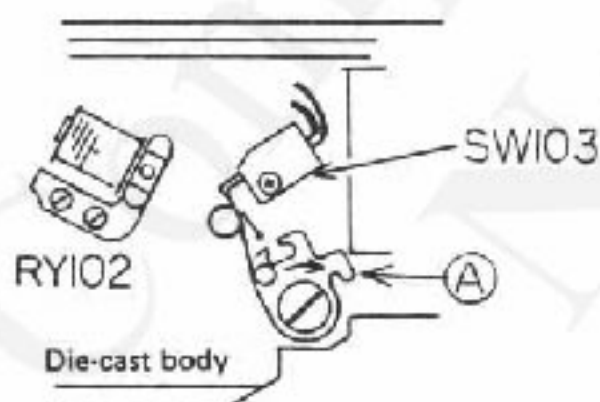
This switch is on JM board. It closes on shutter charging and opens on shutter releasing. The moment the shutter is released for exposure, light measuring action commences.

2) SW102 (mode selector switch)



This switch is located near ASA dial on the upper plate. It has three positions: B (for bulb), AUTO and MANUAL. With this switch set in MANUAL, the timed duration for X is about 1/45 second.

3) SW103 (bulb switch)



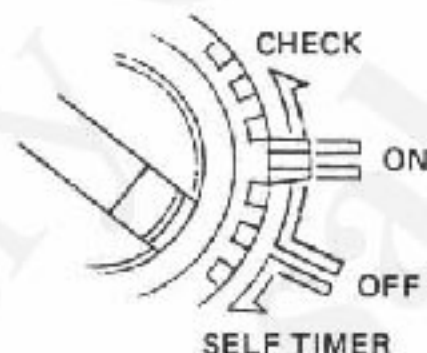
This switch is secured to the die-cast body of the camera by means of a screw, and is accessible when JM board is removed. Pressing the release button causes the actuator (A) to turn in the arrow direction, thereby closing the switch; releasing the button opens the switch.

As long as this switch (SW103) is on, the shutter stays in released condition because M.G. (RY102) remains on.

4) SW104 (main switch)

Interconnected to the lever for automatic aperture control, this switch closes when the aperture begins to be narrowed. By its closure, the shutter circuit is energized to operate the shutter.

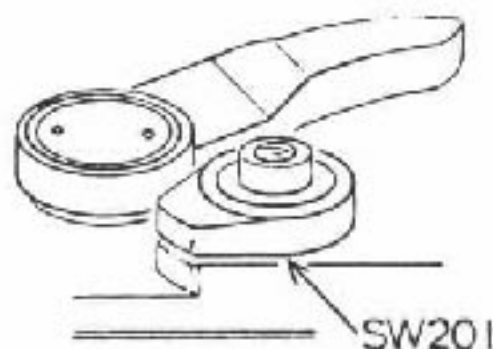
5) SW105 (power on-off switch)



Located below R knob, this switch has four positions:

- OFF Finder indication is off.
- ON Finder indication is on.
- CHECK Battery is checked, resulting in LED lighting and buzzer sounding if the battery is satisfactory.
- SELF-TIMER ... The timer starts clocking for the self-timed duration of about 12 seconds.

6) SW201 (indication starting switch)



The seat of the shutter release button has this switch built in it. Actually, the switch is a pressure-sensitive element, which presents an ohmic resistance of several megohms when it is in relaxed (not pressed) state. Even a small thumb pressure causes its resistance to decrease drastically, making the element conductive.

7) SW202 (X contact)

Interconnected to the leading curtain brake, this switch turns on (closes) instantly when the shutter has opened fully (not over 1/60 second) following the running of the leading curtain. (The same as in OM-1 and OM-2.)

8) SW203 (OFF switch for X contact)

This switch is interconnected to the movable mirror. It closes when the mirror goes UP, and opens when the mirror goes DOWN. (This action is the same as that of FP contact in OM-2.)

Switch 203 is in series with switch 202, mentioned above: it is provided because SW202 remains on after the shutter is released.

9) SW204 (winder switch)

This switch operates in conjunction with the movable mirror. It has two positions: wind-up side (D101 side) and brake side (body ground side). On mirror DOWN, it moves to wind-up side; on mirror UP, it moves to brake side. (This feature is the same as in OM-1 and OM-2.)

NOTE:

Closure on wind-up side does not set motor drive in operation because a diode (D101) is provided on that side. (This feature, too, is the same as in OM-1 and OM-2.)

2-3. Capacitors

1) C101 (manual-timing capacitor)

This capacitor is secured to the flexible board above the penta prism by soldering. The timed duration for X timing and manual timing is determined by this capacitor.

2) C102 (2-Hz oscillation capacitor)

Installed on and secured by soldering to JM board, this capacitor times the flickering action of the LED during the clocking action of the self-timer.

3) C103 (3-KHz oscillation capacitor)

This capacitor, too, is soldered to JM board; it takes part in generation of buzzer sound during the clocking action of the self-timer (and also for B CHECK).

4) C104 (self-timer capacitor)

Pressing the shutter release button on self-timing initiates recharging of this capacitor and, when its charging voltage rises to about 1.8 volts, the shutter gets released to make an exposure. The timed duration terminates with the capacitor voltage reaching the level of 1.8 volts. This capacitor is soldered to and installed on JM board.

5) C105 (anti-misoperation capacitor)

Soldered to the flexible board above the penta prism, this capacitor serves to prevent the battery checker circuit from misoperation upon turning on of main switch.

6) C201 (indication-start capacitor)

Soldered to the flexible board above the penta prism, this capacitor permits current to flow upon turning on of SW105 or SW201, in order to bring up indication inside the finder. This current persists until C201 becomes fully charged, even when SW105 or SW201 remains on. For this reason, it is located in the subsequent stage. The indication disappears in about one minute and a half as a result of the action of time-constant circuit.

7) C202 (indication time-constant capacitor)

This capacitor is located close to the gang of three variable resistors on the flexible board, and secured to the board by soldering. It takes part in timing the 1 and 1/2 minutes duration for indication in the finder.

Its recharging commences with the turning on of SW105 (power on-off switch) and, before C201 becomes charged, it becomes fully charged. Its discharging action takes place after C201 gets fully charged: the 1 and 1/2 minute duration corresponds to the time this capacitor takes to discharge.

8) C203 (anti-resonance capacitor)

This capacitor, too, is soldered to the flexible board above the penta prism, and prevents IC102 from developing resonance.

9) C204

This capacitor for preventing misoperation in strobo flashing. It is secured to the flexible board above the penta prism by soldering.

2-4. Resistors

1) R101 (bias resistor)

This is a printed resistor on JM board. It reduces the input current of the comparator inside IC101.

2) R102 (self-timer resistor)

This, too, is a printed resistor on JM board. It is associated with C104 for the time constant for the timing action of the self-timer.

3) R103 (X timing resistor)

Printed on JM board, this resistor works with C101 to time the X duration.

4) R104 (LED resistor)

This resistor is soldered to JM board. It is used to adjust the brightness of LED turned on for and at the time of self-timing or battery checking.

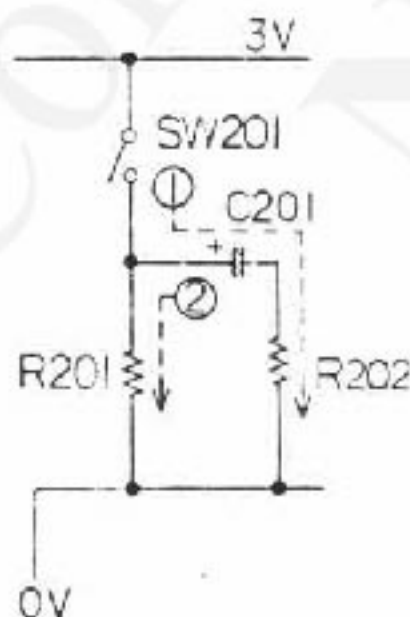
5) R105 (alternative resistor for combination M.G.)

This resistor is soldered to the flexible board above the penta prism. It serves as a substitute for the combination M.G. during B checking since no current flows in the M.G. during this duration.

The ohmic value of this resistor is just about equal to that of the M.G. As the M.G. becomes energized, the supporting plate separates to defeat mirror locking, thereby taking the self-timer out of service: this is the reason why the M.G. is not energized during B checking.

6) R201 (discharging circuit resistor)

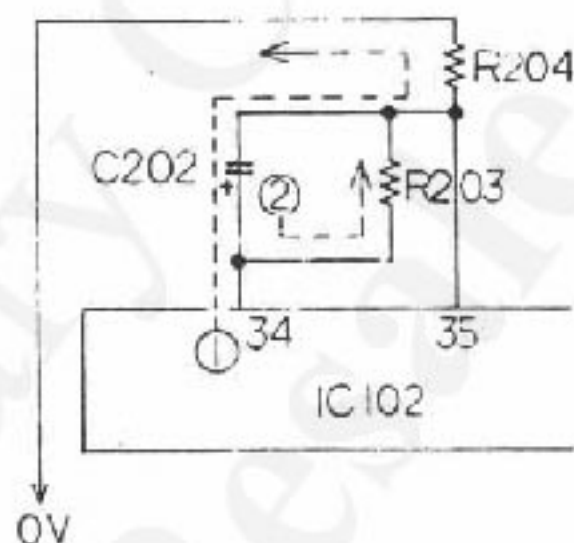
R202 (charging circuit resistor)



Both R201 and R202 are soldered to the flexible board above the penta prism. With the turning on of SW201, charging current flows through R202 into C201. With the turning off of SW201, discharging current flows through R201.

7) R203 (discharging circuit resistor)

R204 (charging circuit resistor)



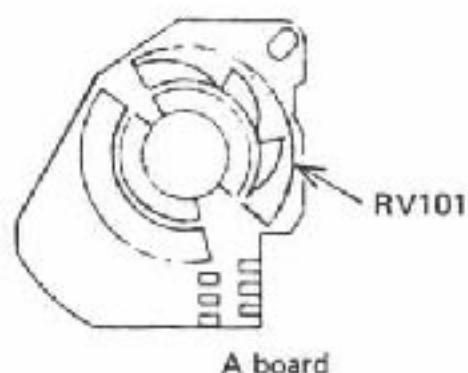
Charging current is indicated as (1), and discharging current as (2), in the diagram on the right. Charging of C202 is initiated by the turning on of SW105, discharging by the switching action of a transistor inside IC102. These resistors are soldered to the same flexible board.

8) R205 (temperature-compensation resistor)

Soldered to the flexible board above the penta prism, this resistor works in conjunction with IC102 to maintain a constant amount of exposure light under varying temperature condition. Its ohmic value is approximately equal to that of CdS at the battery voltage of 9.5 volts (BV 9.5).

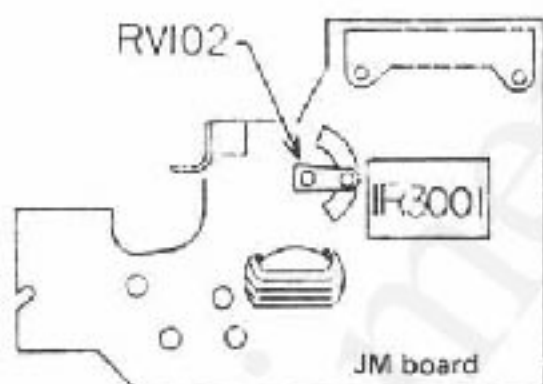
2-5. Variable resistors

1) RV101 (Auto ASA resistor)



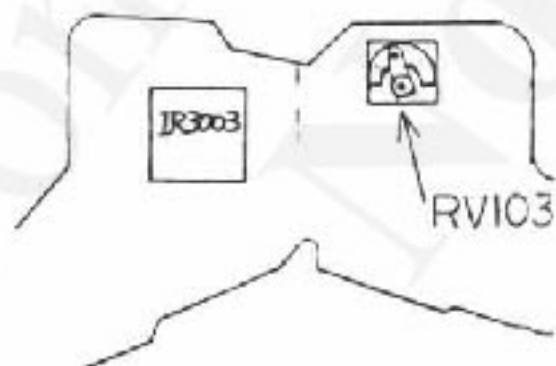
This resistor is printed on the board (A board) under the ASA dial. The ASA sensitivity depends on the setting of this variable resistor in AUTO.

2) RV102 (mirror locking voltage adjusting resistor)



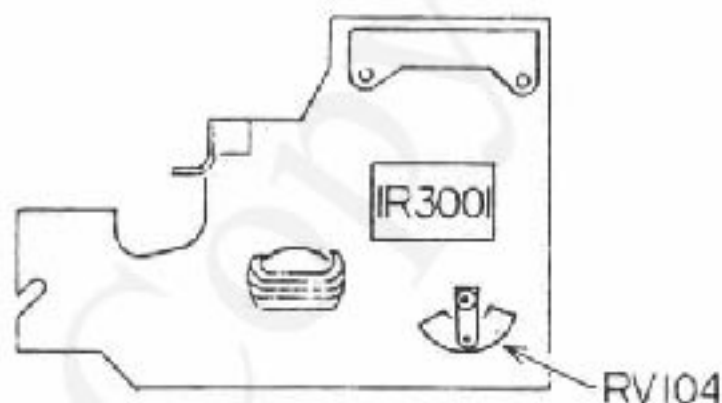
This variable resistor, too, is printed on JM board. The locking voltage can be adjusted by means of this resistor.

3) RV103 (EE level adjusting resistor)



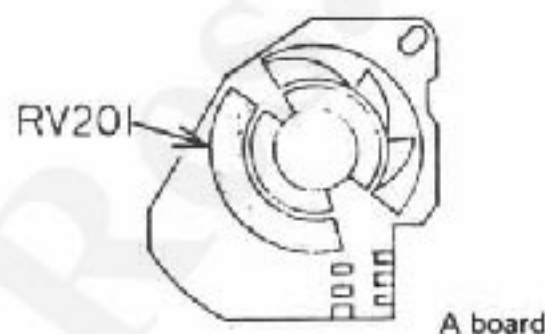
Soldered to the flexible board above the penta prism, this variable resistor serves as the means of adjusting the EE level.

4) RV104 (offset variable resistor)



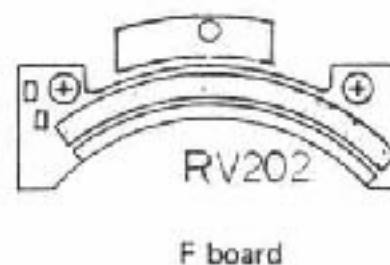
RV104 is a printed variable resistor on JM board. The offset in the AUTO comparator is adjusted by means of this resistor.

5) RV201 (ASA resistor for indication)



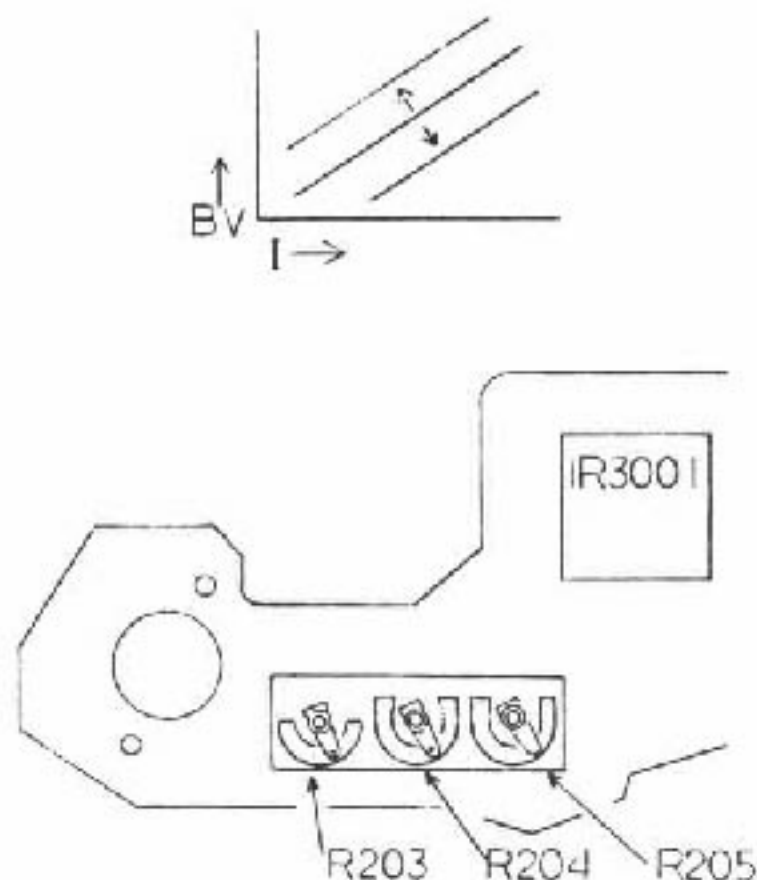
RV201 is a printed variable resistor on A board under the ASA dial. ASA sensitivity for indication inside the finder is adjusted by means of this resistor.

6) RV202 (F resistor)



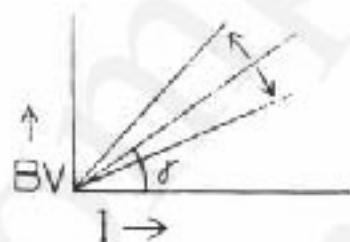
This variable resistor is printed on F board under the ZJ130600 (CONNECTING RING). It is a means of translating the lens aperture setting into an ohmic value to related the aperture ring to the LED inside the finder.

7) RV203 (level adjusting resistor)



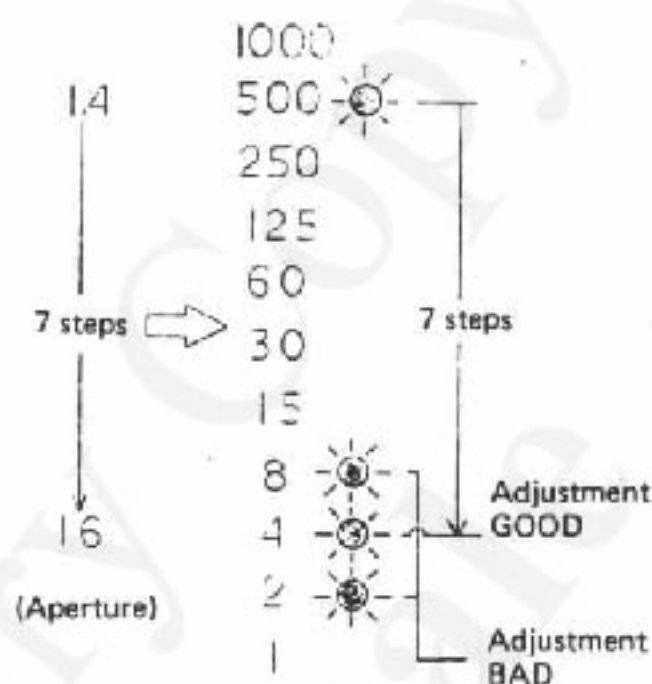
This is one of the three variable resistors forming a gang on the flexible board. The setting of this resistor is to be changed to adjust the brightness of the LEDs inside the finder. Changing its ohmic value shifts the lighting level for all of the LEDs at a uniform rate, as will be noted in this graph:

8) RV204 (gamma adjusting resistor)



This variable resistor is located right next to R203, as shown above. It is used to compensate the current for changes in the intensity of light falling on CdS. In other words, it is a variable resistor for gamma compensation.

9) RV205 (aperture resistance matching resistor)

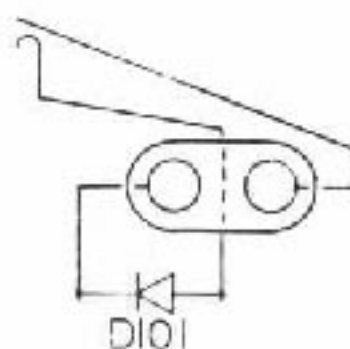


Match the number of aperture stops to the LED steps.

Located right next to R204, shown above, this variable resistor is used to match the successive aperture positions to the corresponding successive steps of indication inside the finder. (This matching adjustment is necessary because of some variations that are unavoidable in resistance values (on F board) and also in IC102.)

2-6. Diodes

1) D101 (motor drive diode)

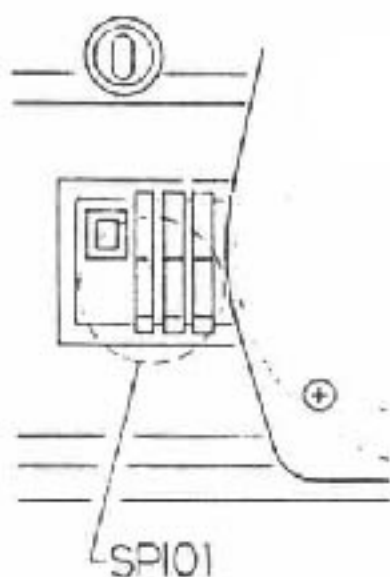


Winder contact circuit

This diode is provided on the winder contact. During winding action, current flows in the normal direction (through this diode). Motor drive needs current in reverse direction, but diode D101 blocks this current so that the motor does not run.

The camera itself does not withstand such a fast drive as 5 frames per second. In this regard, D101 is a safety device.

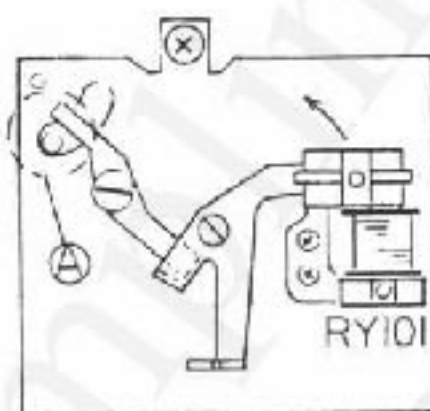
2-7. SP101 (piezoelectric element)



This element is built on the front casting, at the location indicated on the right. When voltage is impressed in a rapid on-off manner upon this element, it physically expands and contracts in rapid succession to make a buzzing sound. The frequency of this sound is set at a level of about 3 KHz by means of capacitor C103.

2-8. Relays (M.G.)

1) RY101 (combination magnet)

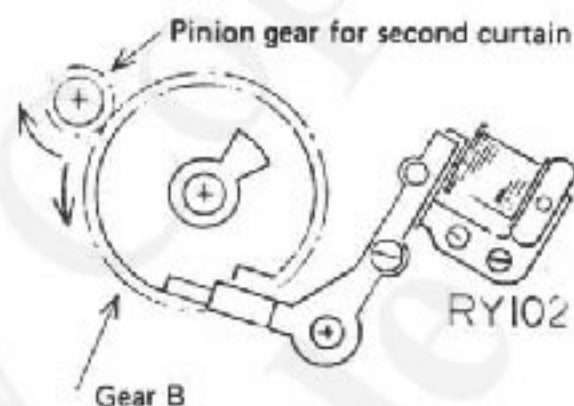


Mirror locking action is made at (A). Energizing RY101 causes the support plate move in the arrow direction to separate itself from the hook, thereby unlocking the mirror.

Composed of a permanent magnet and an electromagnet, this relay (RY101) is mounted on the side plate R. With this relay in de-energized state, pressing the shutter release button results in mirror locking: the shutter refuses to be released. As the electromagnet becomes energized, the mirror then gets unlocked, allowing the shutter to be released for making an exposure.

(The polarity of the electromagnet is such that, when it is energized, it kicks up the permanent magnet on the lever arm, thereby separating the supporting plate.)

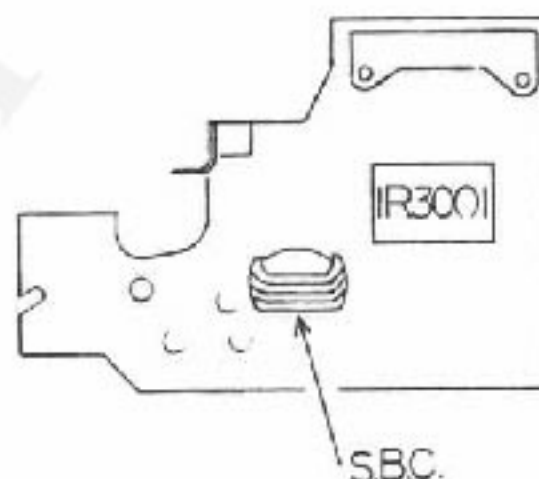
2) RY102 (Second curtain magnet)



This electromagnet is secured to "S" plate by mounting screws. It is this magnet by which the second curtain in charged condition is held up. De-energizing RY102 frees the second curtain, allowing it to run for making an exposure.

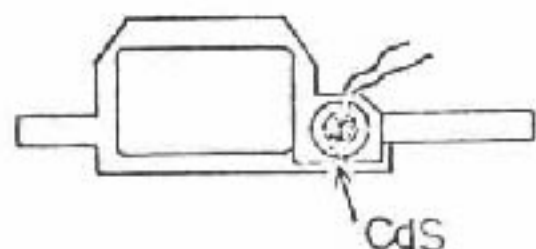
2-9. Light receivers

1) P101 (S.B.C.)



This photoelectric element is located at the middle of JM board. It is a part of the automatic circuit.

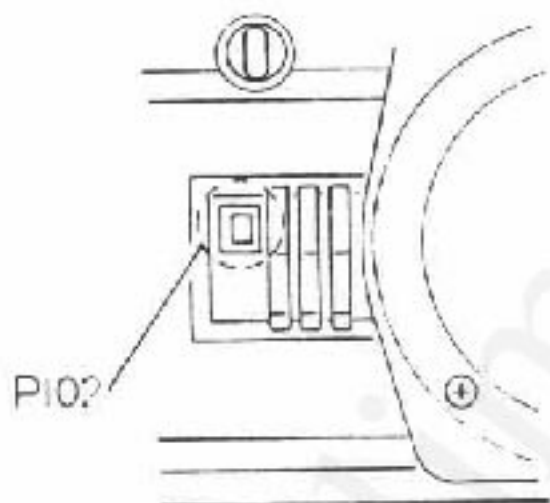
2) P201 (CdS)



This photocell is on the left-side part of the frame. It has two lead wires. It is the light receiver for indication inside the finder. Matching for high and low intensities of light (brightness) is effected by means of R203 and R204.

2-10. LEDs (light-emitting diodes)

1) P102 (self-timer LED)



The location of this LED is as shown on the right, that is, on the front plate. It flickers with a frequency of 2 Hz when the self-timer is running. It remains lit during B (battery) checking.

2) P302 ~ P312 (shutter speed indicating LEDs)

These LEDs are installed on and soldered to the flexible board. The numerical value next to a speed indicating LED is a denominator, whose numerator is unity. When LED P302 is on, for example, it means that the shutter speed is 1/1000 second.

P313●	≤ 60
P301	.....●	(OVER)
P302	.....●	1000
P303	.....●	500
P304	.....●	250
P305	.....●	125
P306	.....●	60
P307	.....●	30
P308	.....●	15
P309	.....●	8
P310	.....●	4
P311	.....●	2
P312	.....●	1
		(LED)

3) P301 (overspeed LED)

This LED is included in the array of speed indicating LEDs and, by lighting up, signifies overspeeding, that is, a shutter speed faster than 1/1000 second. It lights up whenever this maximum speed is exceeded.

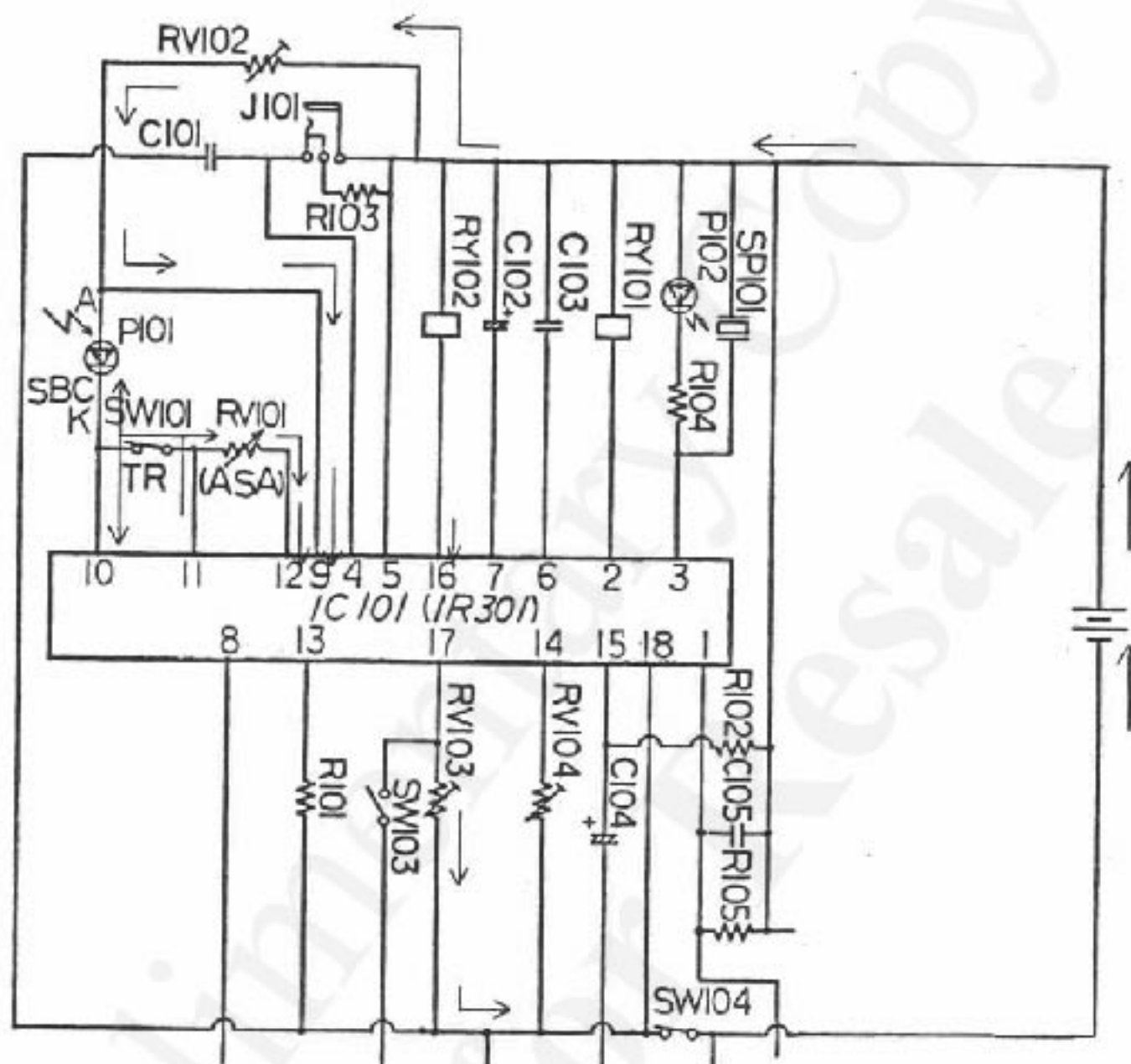
4) P313 (flash indicating LED)

As one of the array of speed indicating LEDs, this one is effective when an exclusive-use strobo (such as T20) is connected to the camera. It remains on or flickers to signify the action related to strobo flashing:

- P313 remains on to mean that the strobo has been charged.
- P313 flickers to mean that the flashed exposure was satisfactory.

3. Operational description of circuits

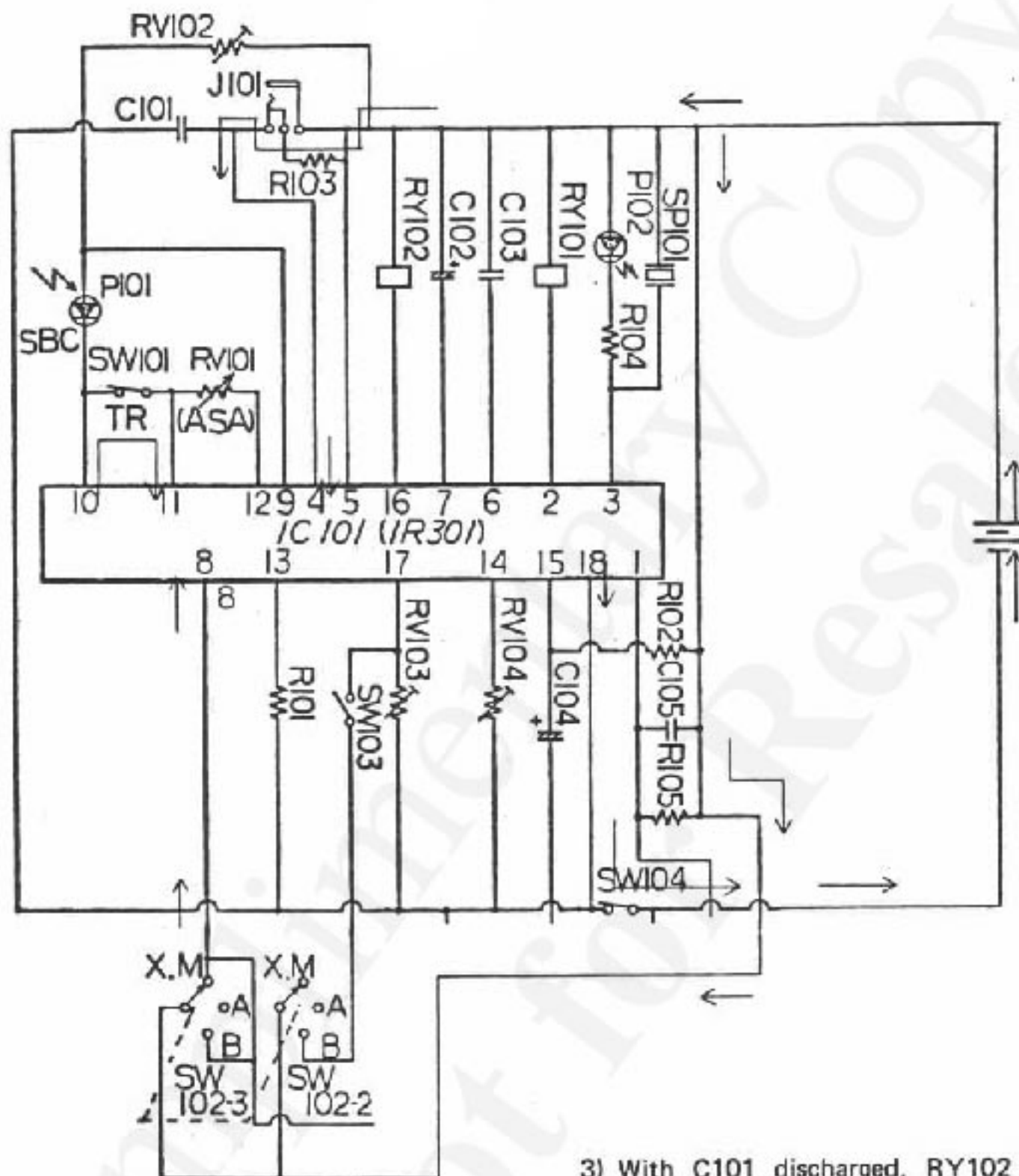
3-1. AUTO Circuit



- 1) Main switch (SW104) closes as the shutter is released. From the moment of this closure to the moment of turning-off of trigger switch (SW101), S.B.C. becomes charged from terminal 11 through switch (SW104). Note that the cathode side of S.B.C. is indicated as K and the anode side as A. (After each picture-taking, the potential of K side is low.)
- 2) As the leading curtain runs to turn off switch (SW101), current begins to flow through S.B.C.: this is equivalent to discharging. As a result, the potential of K side gradually falls. This means that the potential of terminal 10 falls. The speed of this potential fall is proportional to the light intensity.

- 3) On the other hand, terminal 12 (which is connected to terminal 11 through RV101) has been lower in potential than terminal 10. When the potential of terminal 12 is low, RY102 is in closed condition (ON) and holds fast the trailing curtain.
- 4) As discharging action proceeds in S.B.C., terminals 12 and 10 become equal in potential level. When this occurs, the potential of terminal 16 reaches 3 volts to turn off RY102, thereby closing the shutter.

3-2. X Timing Circuit



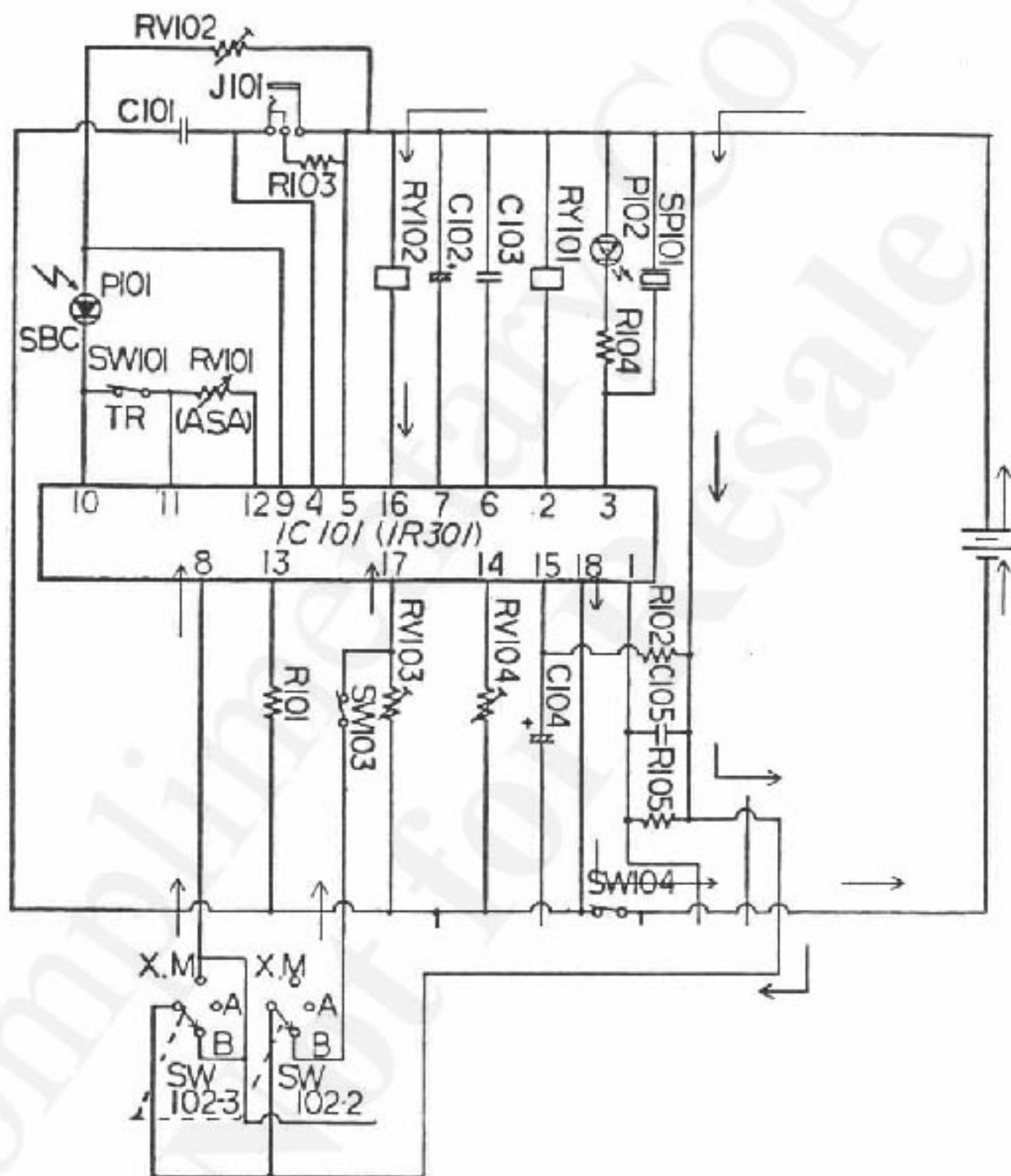
- 1) Turning the switches (SW102) to X.M. position isolates S.B.C. and RV101 from the rest of the circuit and, at the same time, connects C101 to R103. (In other words, MANUAL is selected by applying voltage (+) to terminal 8.
 - 2) From the moment of turning-on of SW104 (following the shutter releasing) to the moment of turning-off of SW101, terminal 4 remains connected to terminal 18: during this period, C101 is in discharged state.
 - 3) With C101 discharged, RY102 is on and holds fast the trailing curtain.
 - 4) As the leading curtain runs to turn off SW101, terminal 4 becomes disconnected from terminal 18, and C101 gets charged through R103.
 - 5) While the charging of C101 is in progress, terminals 10 and 4 become equal in potential level. When this equality occurs, the potential of terminal 16 reaches 3 volts to turn off RY102, thereby closing the shutter. The time that C101 takes to get charged is about 1/60 second.

3-3. MANUAL Timing Circuit

This circuit is essentially the same as the X timing circuit, the difference being that a manual adaptor is inserted into J101. Each

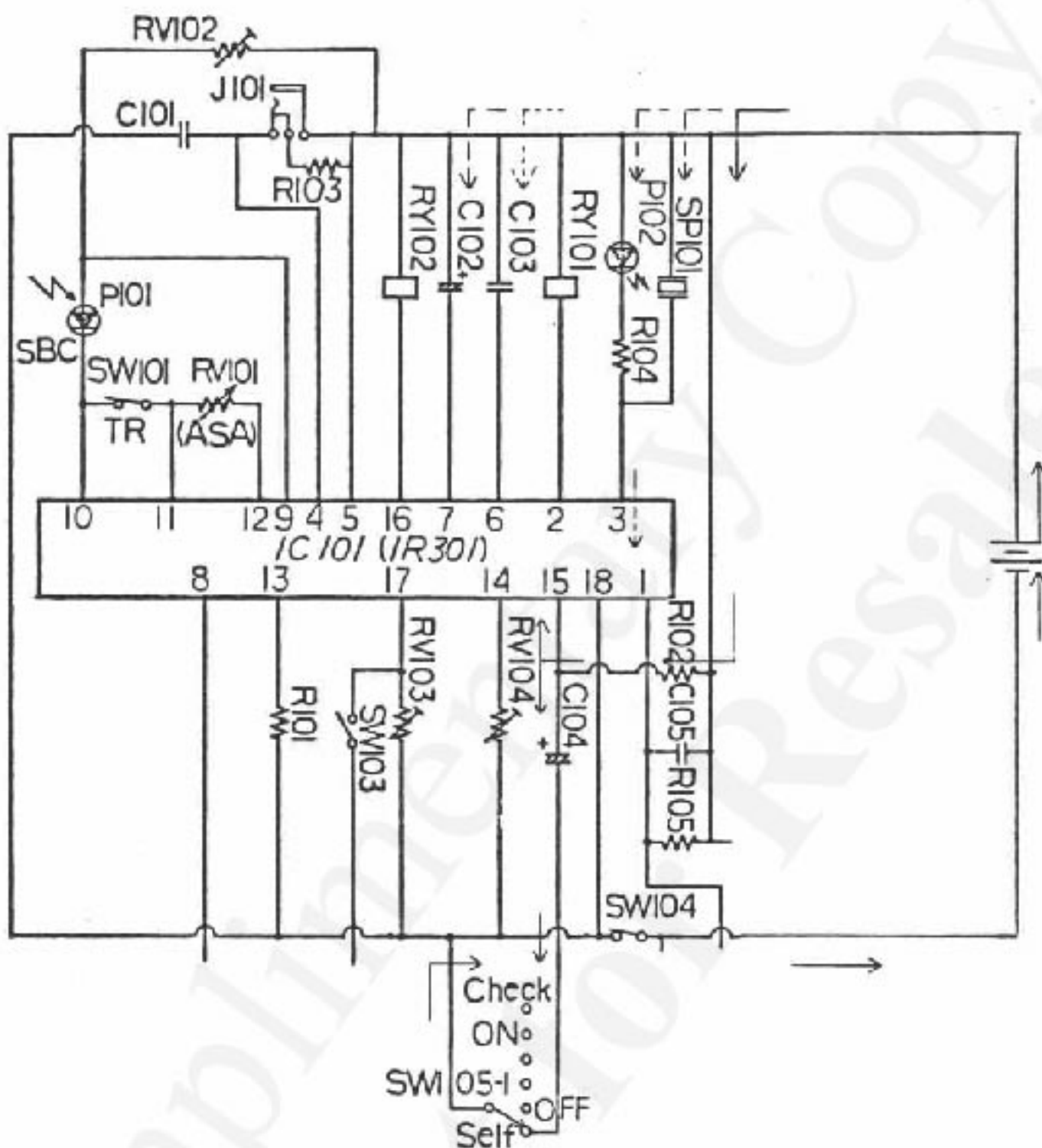
exposure time is obtained by varying the resistance corresponding to that of R103.

3-4. Bulb



- 1) Turning the switches (SW102) to B position applies 3 volts to terminal 8, and this alters the internal circuit of IC101, thereby introducing a manual circuit in this IC. (If the manual adaptor is off, manual control is completed in about 1/45 second of X timing and, thereafter, RY102 comes under control of SW103.)
- 2) With IC101 set for MANUAL, application of 3 volts to terminal 7 turns on RY102, so that the trailing curtain becomes held up rigidly to leave the shutter in released state.
- 3) Removing the finger from the release button opens SW103, causing the shutter to close.

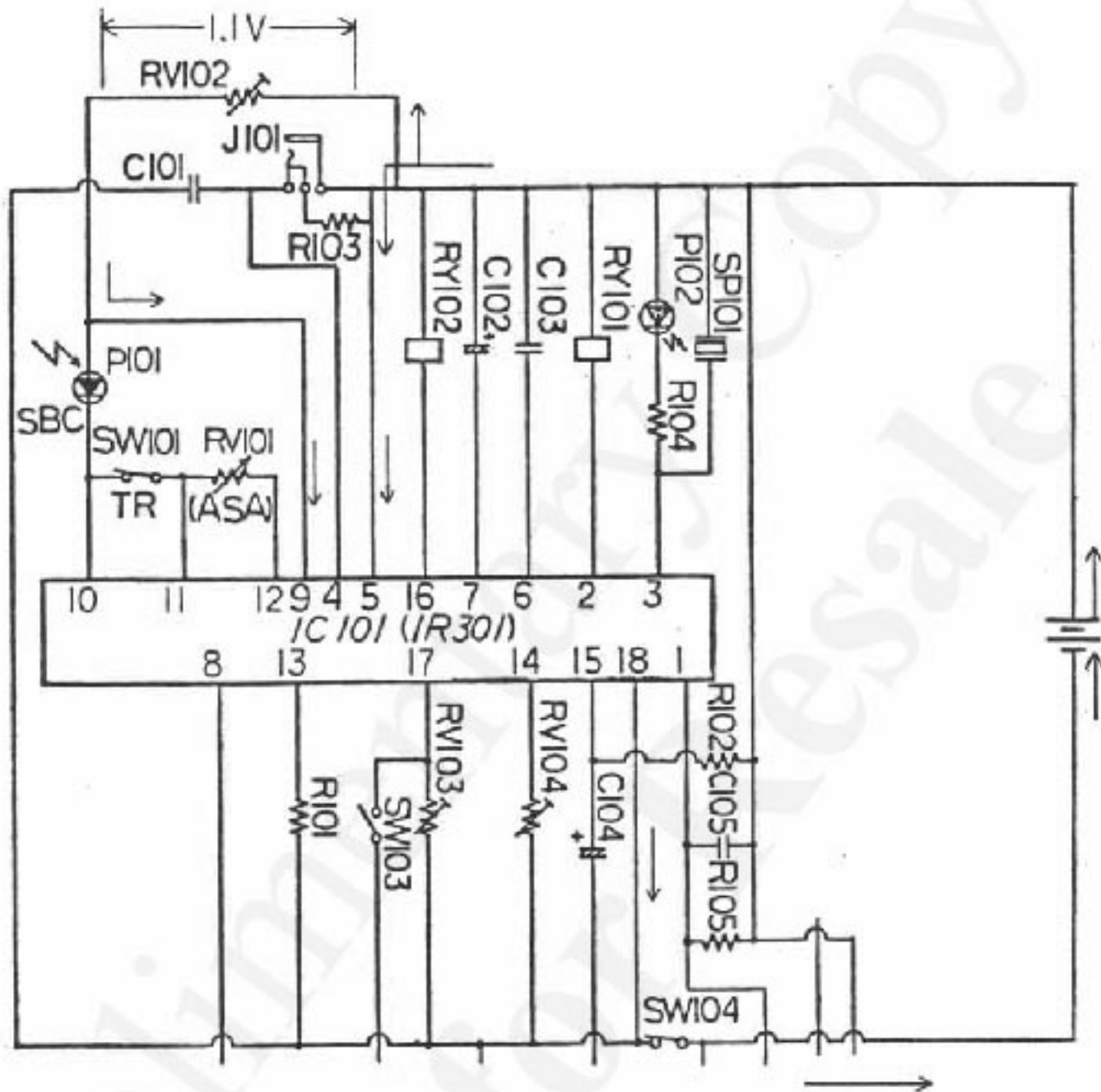
3-5. Self Timer



- 1) C104 is in discharged condition, so that terminal 15 is at a lower potential. Turning the switch (SW105) to Self position under this condition allows terminal 2 to reach a potential level of 3 volts to turn off RY101, thus introducing a mirror-lock condition. At the same time, current begins to flow through terminal 3, causing the Self LED to flicker and the beep sound to issue forth.
- 2) As the voltage of C104 getting charged rises to about 1.8 volts, terminal 2 goes down to 0 volt to turn on RY101, thus unlocking the mirror and releasing the shutter. When this occurs, both the flicker of LED and the beep sound cease.

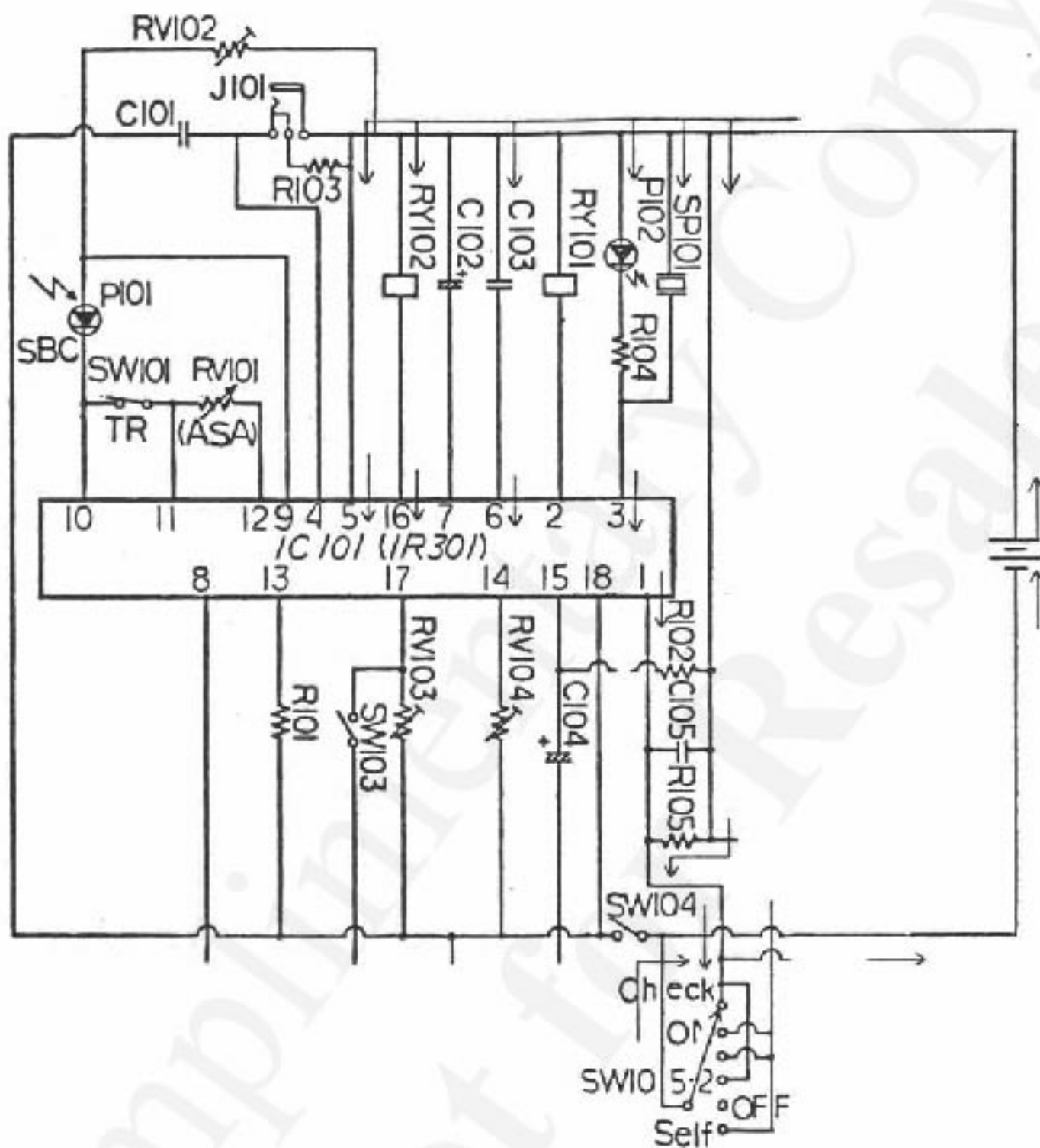
- 3) Inside the circuit of IC101, 2-Hz oscillation is induced by C102 connected to terminal 7 and 3-kHz oscillation by C103 connected to terminal 6. These oscillations are combined in IC101 to make the LED flicker and produce the beep sound by means of piezo-electric element.

3-6. Shutter-Lock (Mirror-Lock) Circuit



- 1) The potential level of terminal 9 is maintained at a steady level lower by 1.1 volts than the plus side of the voltage source even when the battery voltage changes. It is the voltage regulator circuit inside IC101 and the resistance of RV102 that holds terminal 9 at the steady level.
- 2) The voltages of terminals 5 and 9 are compared inside IC101.
- 3) If the source voltage is 2 volts or higher, terminal 2 goes to 0 volt, turning RY101 on to defeat mirror locking.
- 4) If the source voltage is lower than 2 volts, terminal 2 comes up to the level of the source voltage. Under this condition, RY101 does not turn on.
- 5) If RY101 does not go on, as in the case 4) above, then the mirror refuses to get unlocked. Releasing results in mirror locking.

3-7. Battery Checker

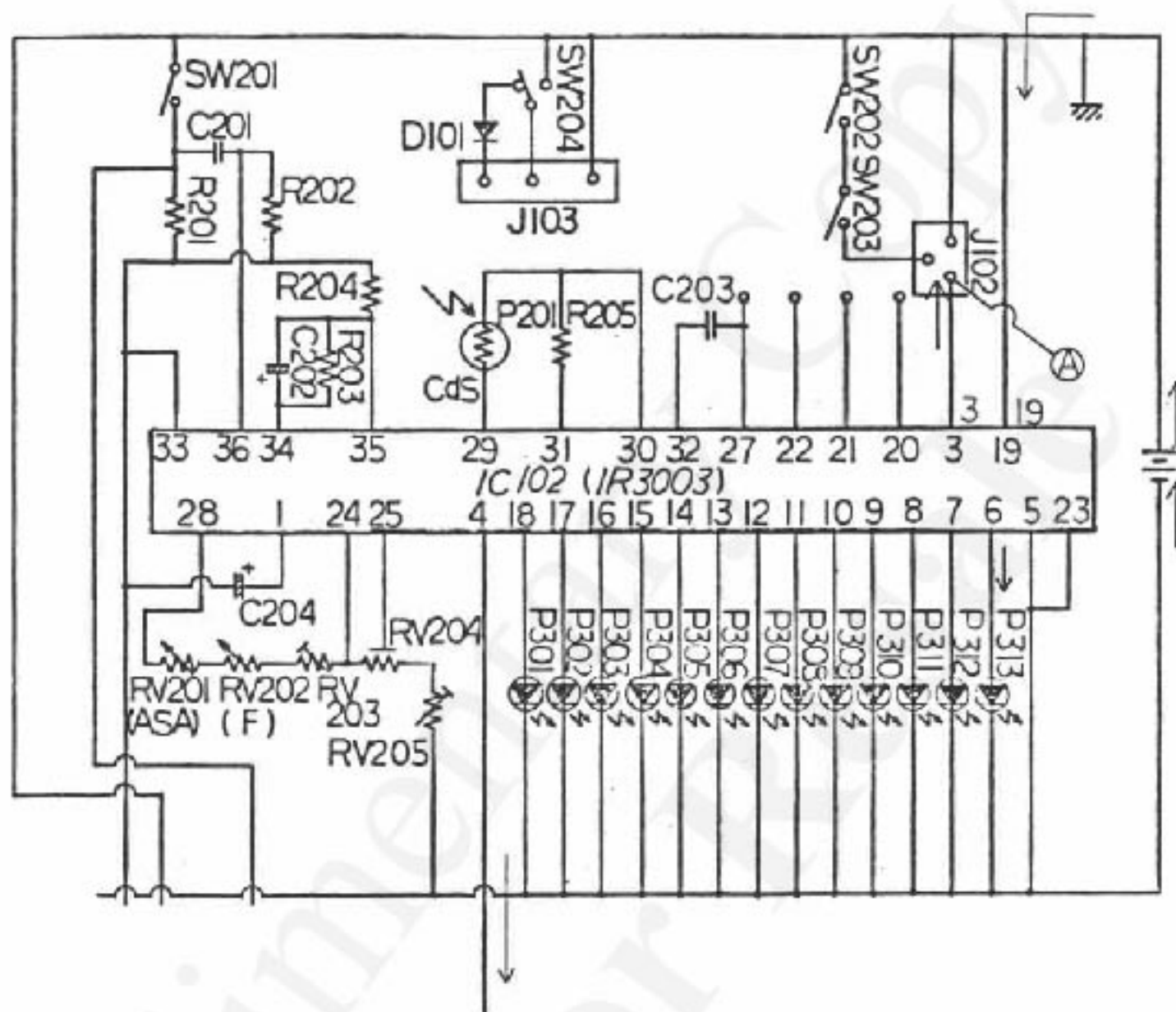


- 1) Turning the switch (SW105) to Check position, the internal circuit of IC101 goes into a condition close to full operating condition.
- 2) The resistance of R105 is approximately equal to the ohmic resistance of RY101. The moment SW105 goes into Check position, current starts flowing through R105.

- 3) In battery checking, RY101 becomes de-energized and current is permitted to flow through R105 instead of RY101. The reason of this scheme is as follows:

Once RY101 is energized, mirror lock becomes released. Thus, if SW105 is moved to Check position with RY101 kept energized, shutter lock as well as self-timer remains defeated after checking. In order to hold both shutter lock and self-timer effective, R105 is used in place of RY101.

3-8. Circuits Related to Strobo



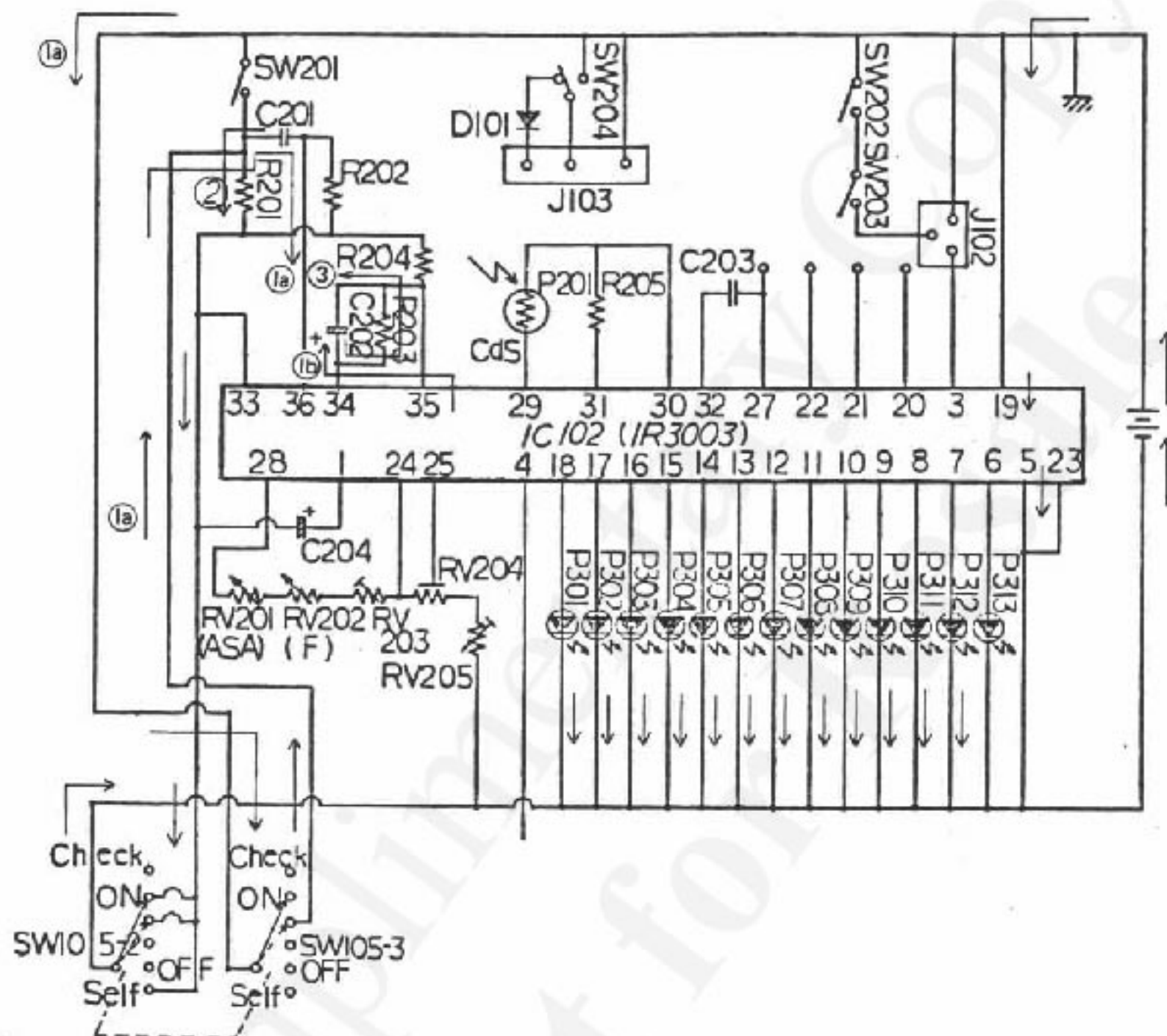
3-8-1. Automatic switch-over to X timing

- 1) Assume that a proper strobo (such as a T20 strobo) is attached to the camera. Turning on the strobo power on-off switch introduces current through the terminals of J102 (which the shoe of the camera), as shown by arrow lines.
- 2) As current flows from terminal 3 to terminal (A), the transistor connected to terminal 4 switches on, thereby establishing continuity from terminal 19 to terminal 4.
- 3) The voltage (3 volts) of terminal 4 applies to terminal 8 of IC101, and this automatically induces X timing.

3-8-2. Strobo-charge indication and light check indication

- 1) The current that flows from terminal 3 of IC102 to terminal (A) is small before strobo charging starts: since this current is small then, another transistor inside IC102, which is connected to terminal 6, does not switch on.
- 2) As the strobo becomes increasingly charged, the current, too, increases to switch on the transistor, thereby causing P313 to light up.
- 3) As the strobo checks the incident light, current flows intermittently to it and P313 flickers.

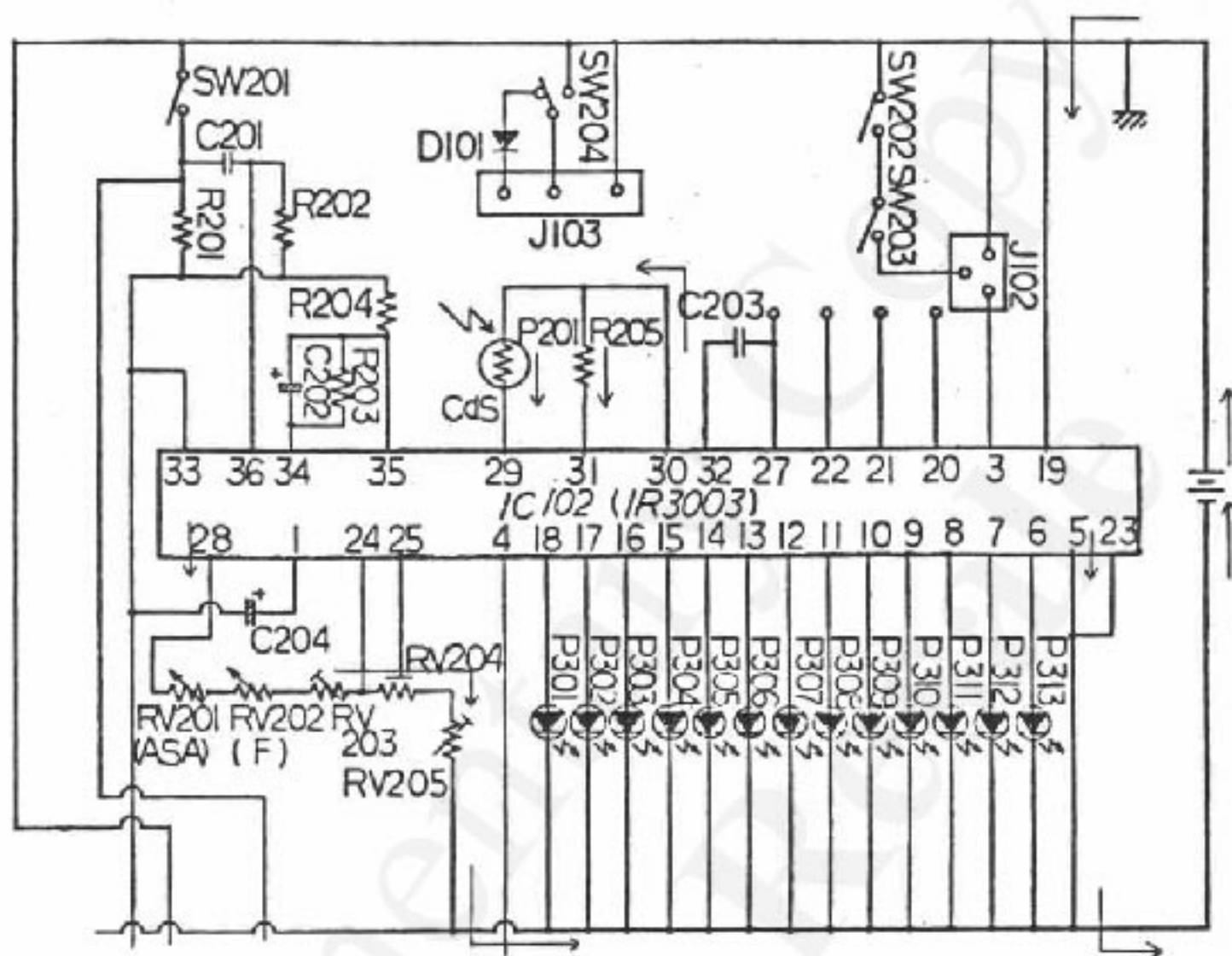
3-9. Indication Timing Circuit (for shutter speed indication)



- 1) Moving the switches (SW105) to ON position switches on the hold circuit inside IC102 by the current (Ia), which flows through C201 and SW105-3. The pulse generating circuit remains off. C202, too, gets charged at the same time by the current (Ib).
- 2) As the hold circuit gets switched on, the indicator circuit becomes energized to commence indication.

- 3) Also, with this switching-on of the hold circuit, C202 begins to discharge. The discharging current is indicated as 3). (The time constant circuit starts its action.)
- 4) As C202 becomes increasingly discharged, the potential of its positive (+) side goes down. When this falling potential reaches the reference level, the hold circuit becomes released. About a minute and a half will be required to release the hold circuit.
- 5) The releasing of the hold circuit puts out the indication.
- 6) The second indication is initiated by SW201 (the switch at the seat of release button).

3-10. CdS Light Sensing Circuit



- 1) The path of current is from terminal 30 through CdS, terminals 29 and 28 and then through PV201, RV202 and RV203.
- 2) IC102 operates in such a way that, when the intensity of incident light is high, the voltage (through CdS) at terminal 29 is high, and vice versa.
- 3) This voltage at terminal 29 is checked and compared with the reference voltage at terminal 31 next to R205. It is according to the checked voltage that LEDs (P301 ~ P312) are lit.
- 4) P312 is the 1-second LED; P311 being the 1/2-second LED; . . . P302 is the 1/1000-second LED. P301 is for OVER indication. (P313 is for strobo indication.)