



AE-II FINDER E

Repair Manual 1—20

Parts List 21—26

BRONICA CO., LTD.

Use of the VOM (Volt-Ohm-Milliammeter) Tester

- (1) In general, the tester is used for four types of measurements of (a) DC current, (b) AC voltage, (c) DC voltage and (d) resistances.
- (2) Measurements of (c) DC voltage and (d) resistance are undertaken in the repair manual.
- (3) When measuring (c) DC voltage and (d) resistances, as indicated in (2), the reading must always be made between two points.
- (4) One of the points (base) must always be P-0 (GND) when measuring DC voltage or, in other words, measurements are based on the ground (earth) point. Furthermore, the black-colored minus (-) test lead must always be used on the grounding terminal, in this case.
- (5) In the illustration of the tester range, measurements of DC voltage must always be made within the DCV range and measurements of resistance within the ohm (Ω) range.
- (6) The numerals 200, 50, 10, etc., in the DCV range, show the maximum reading that is possible at that setting. When checking the AE circuit of the ETR camera, however, only the three settings 10, 2.5 and 0.5 are used.
- (7) The resistance settings shown as x100, x1K, etc., indicate the multiplications that must be made on the indicated reading and should be read as "times one hundred", etc. In other words, the reading must be multiplied by 100 which means that a reading of 10, when set to the x100 range, will be 1,000 ohms which is equivalent to 1 kilohm. Or, in other words, the reading will be 1, in the same case, if the tester were to be set to the x1K range.
- (8) Before making the resistance test, always be sure to calibrate the tester's circuit or, in other words, touch the two test prods together and adjust the knob (with the Ω indication) to get a zero reading.

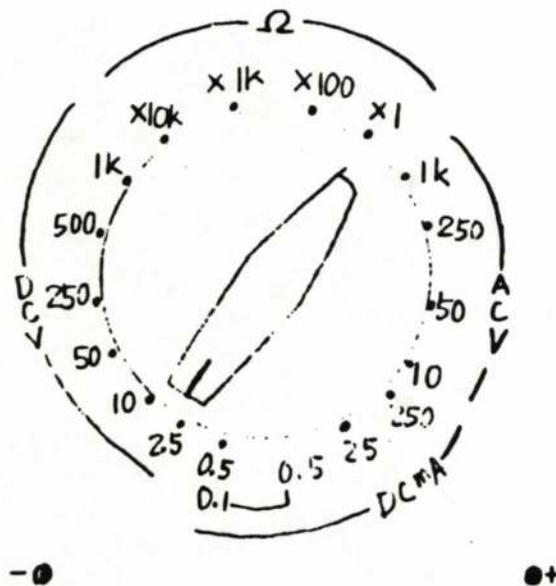


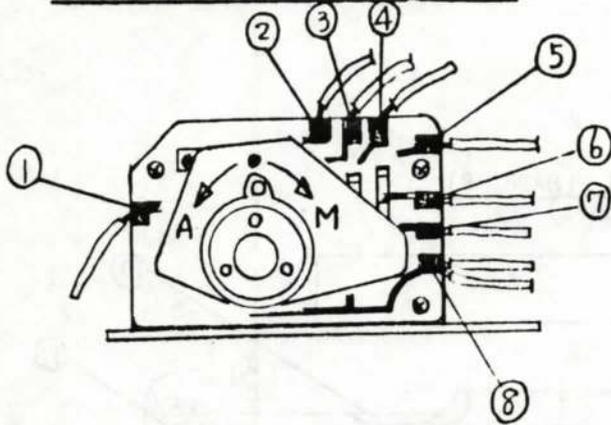
Fig-1

CAUTION

Extra care is required on handling of Main Circuit
(1-726330)

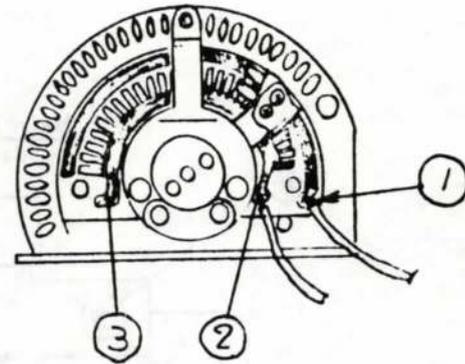
such as solder iron and working bench should be properly grounded.

AE selector unit-II (MARK: S)

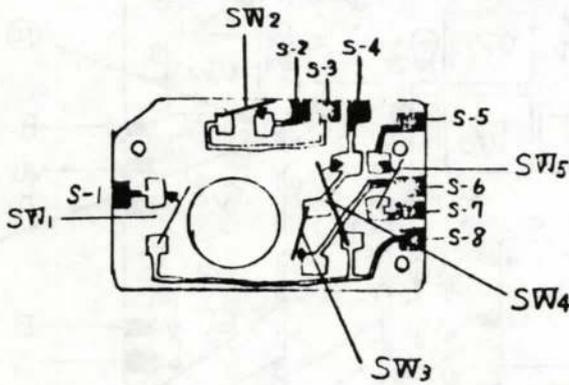


(The above figure shows OFF mode)

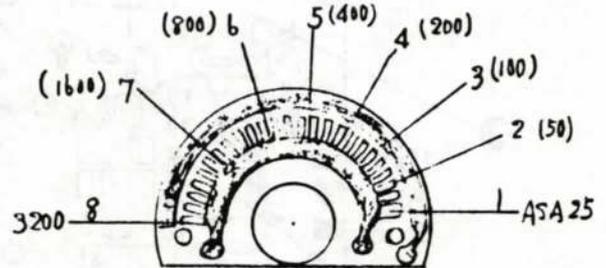
ASA base plate unit (MARK: A)



(The above figure shows ASA 100 setting)



(AE selector plate-II)



(ASA base plate)

MODE	SW ₁	SW ₂	SW ₃	SW ₄	SW ₅
A	OFF	ON	OFF	ON	ON
•	ON	OFF	OFF	OFF	OFF
M	ON	ON	ON	OFF	OFF

MARK	1	2	3	4	5	6	7	8
ASA	25	50	100	200	400	800	1600	3200
R值	0	200	400	600	800	1000	1200	1400

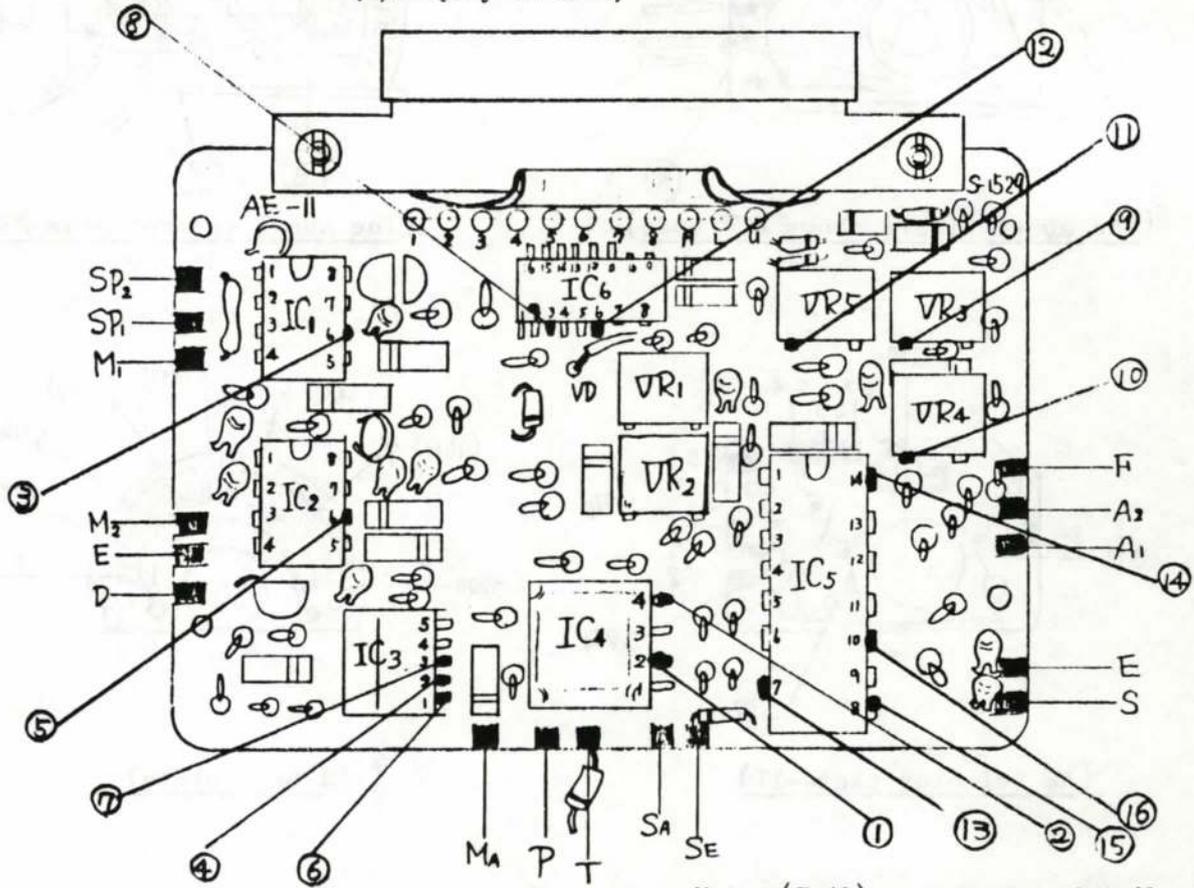
R值单位: Ω

AE selector unit-II mode

ASA base plate unit mode

Fig-2

Main circuit-II (MARK: P)
(w/display circuit)



Note: (P-A1) represents point A1 of main circuit-II (P), and in the same manner (C-5) represents point 5 of AE contact pin base plate-II.

AE contact pin base plate-II (MARK: C)

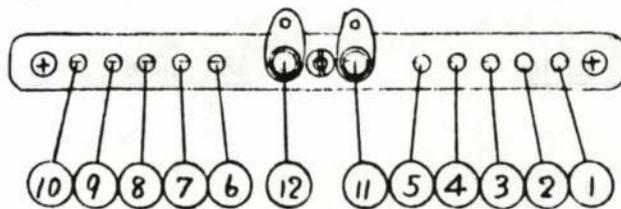


Fig-3

Wiring diagram of AE-II contact pin base plate-II. Silicon photo cell.

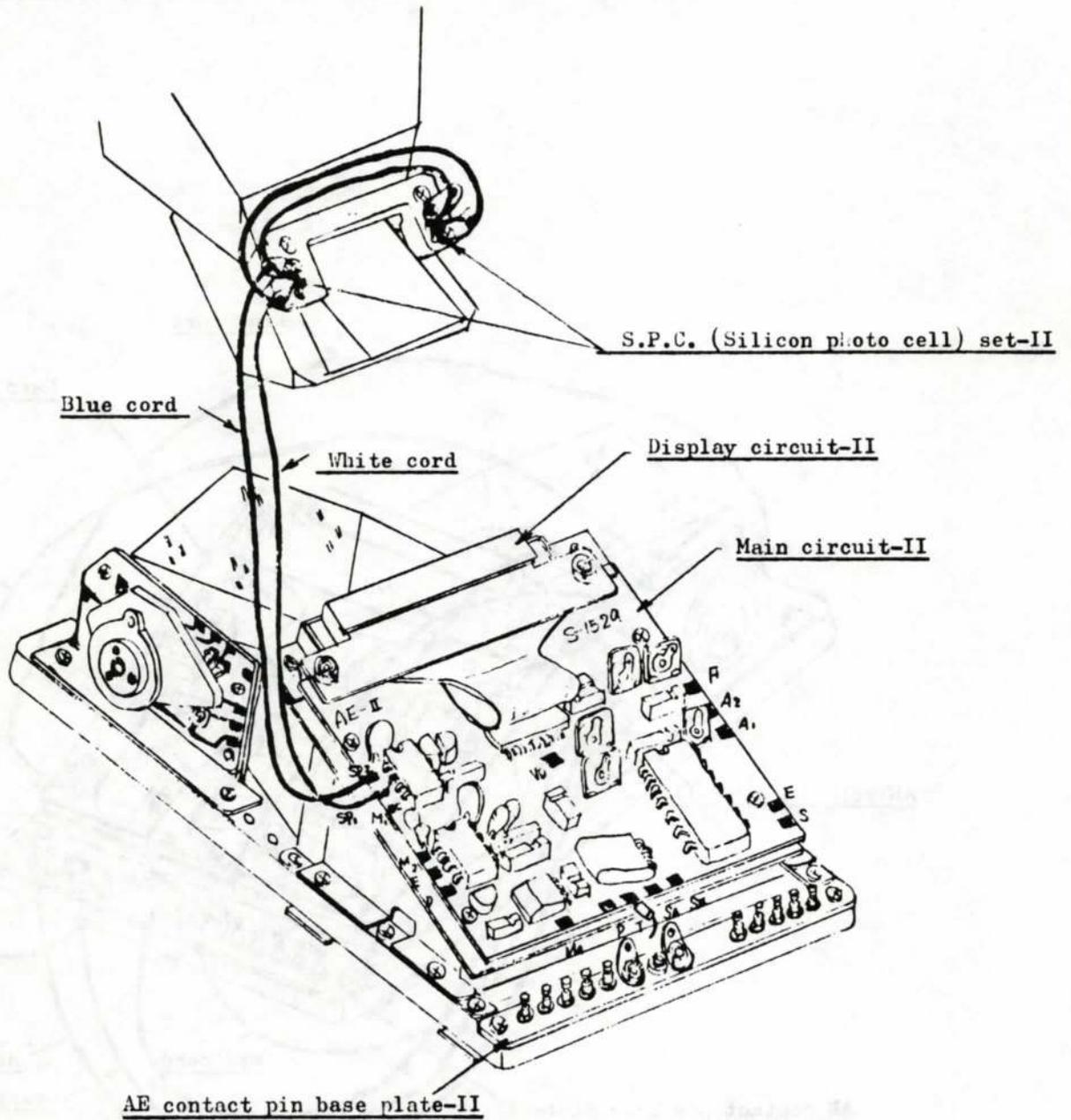


Fig-5

Wiring diagram of AE selector unit-II & AE contact pin base plate

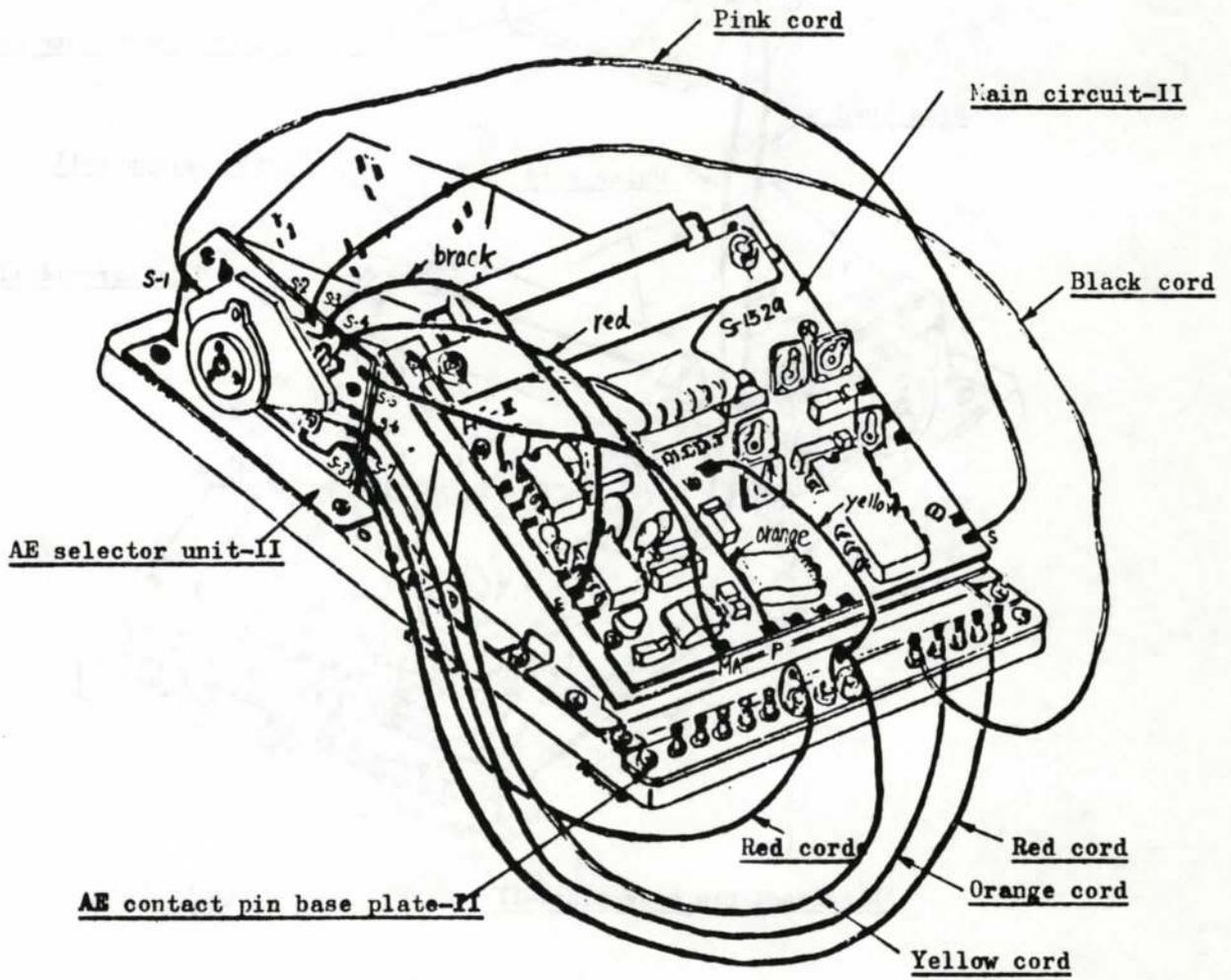


Fig-6

Wiring diagram of AE contact pin base plate-II & ASA base plate unit &

Display button unit-II

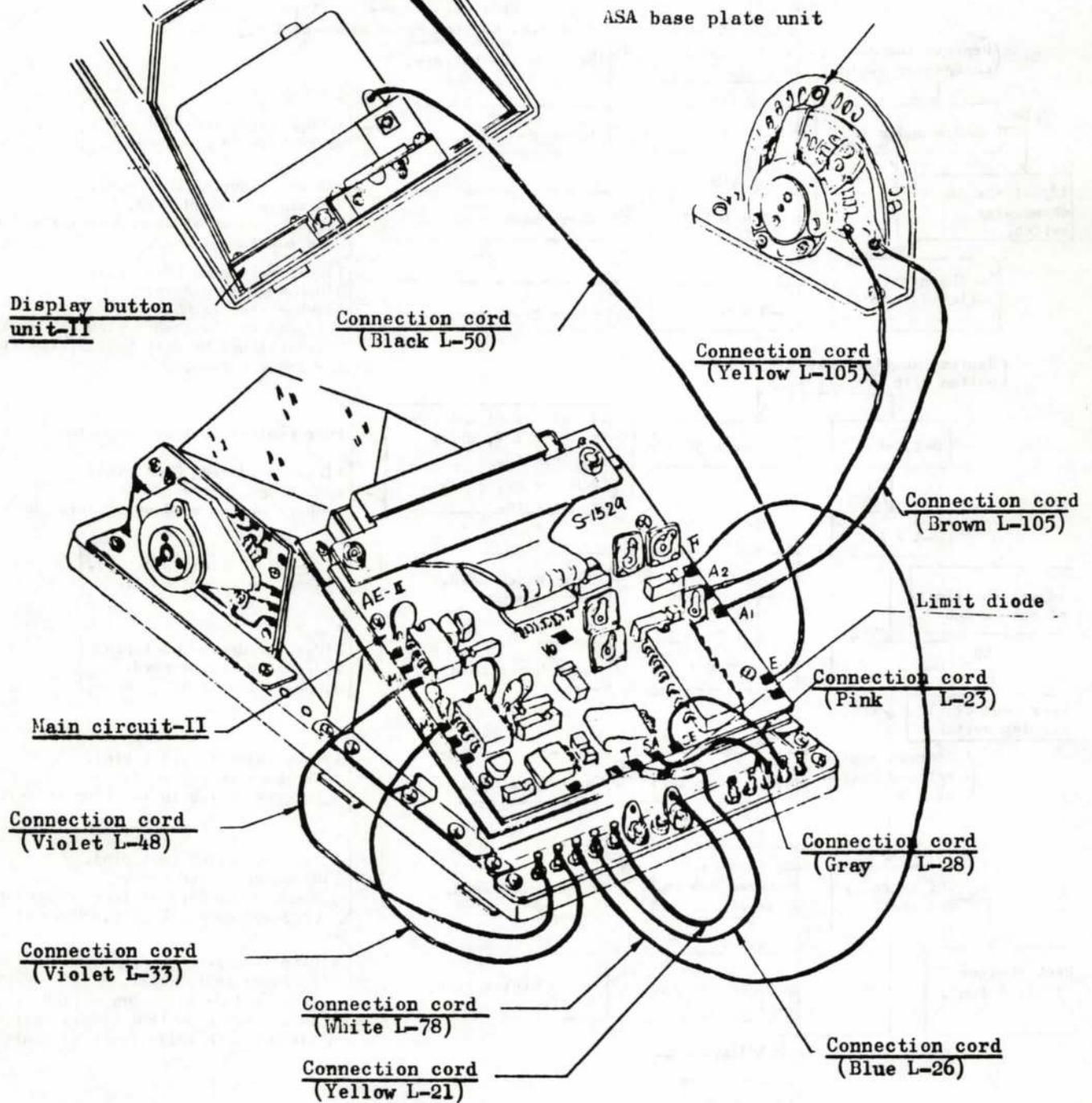
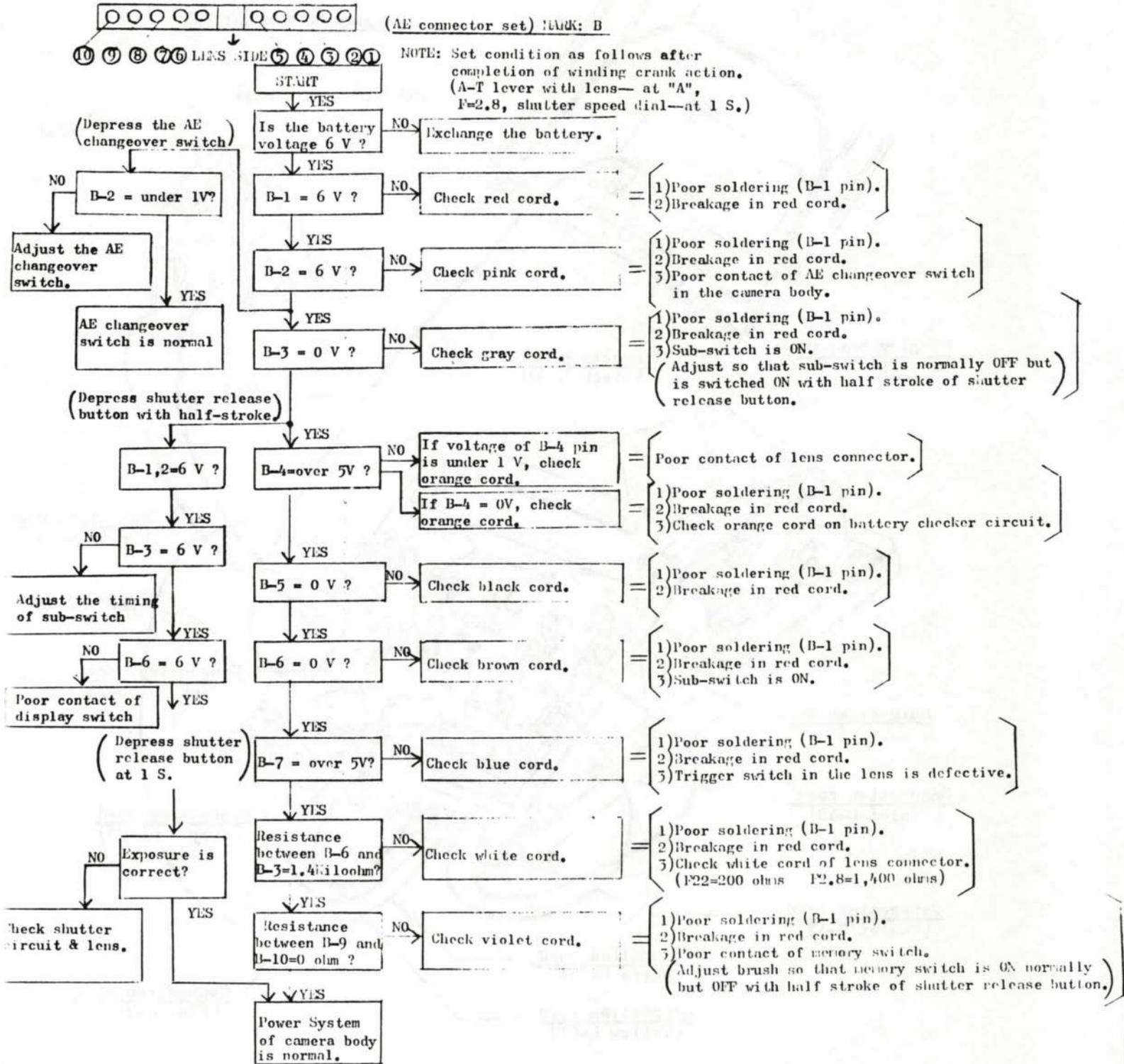


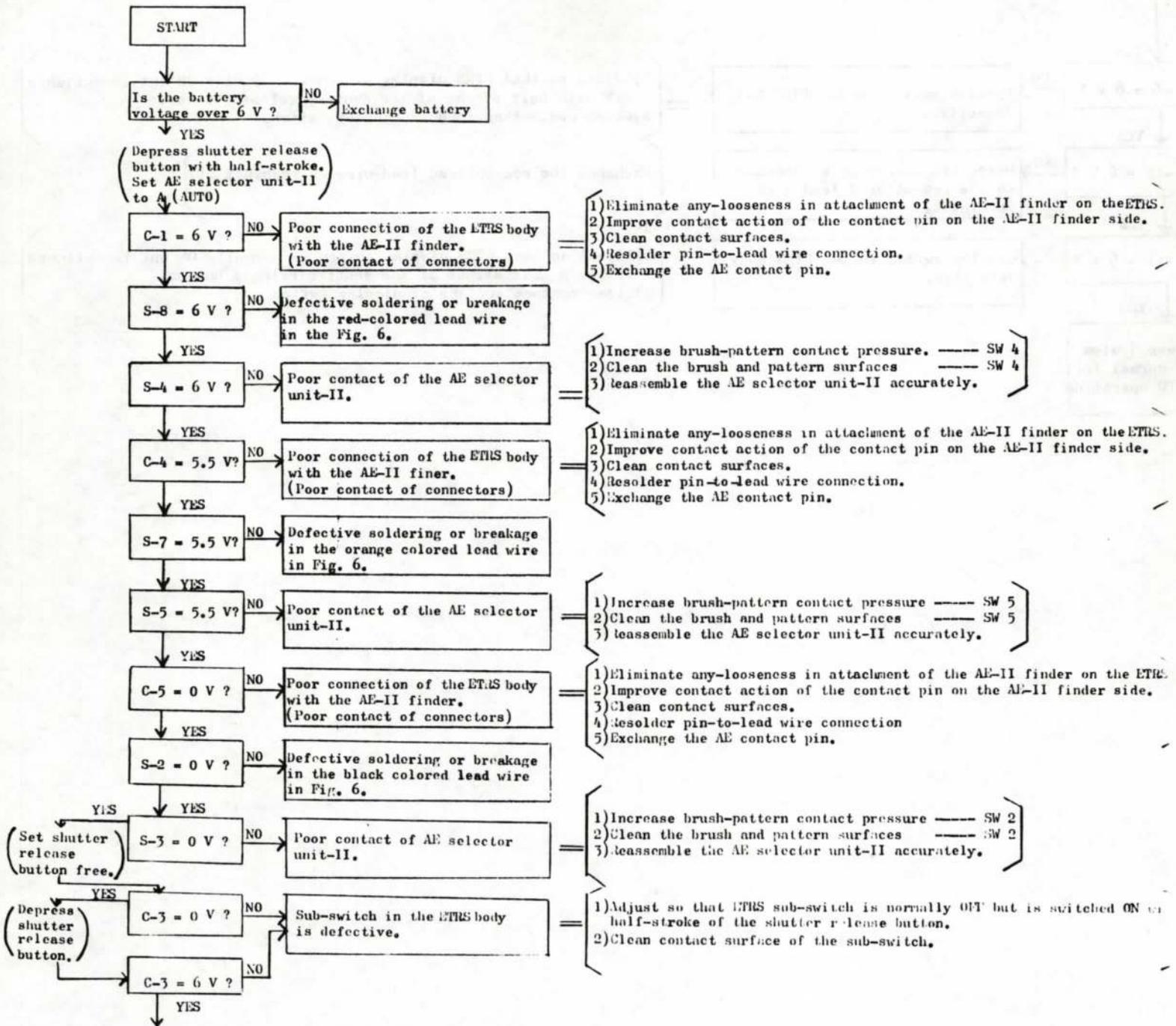
Fig-7

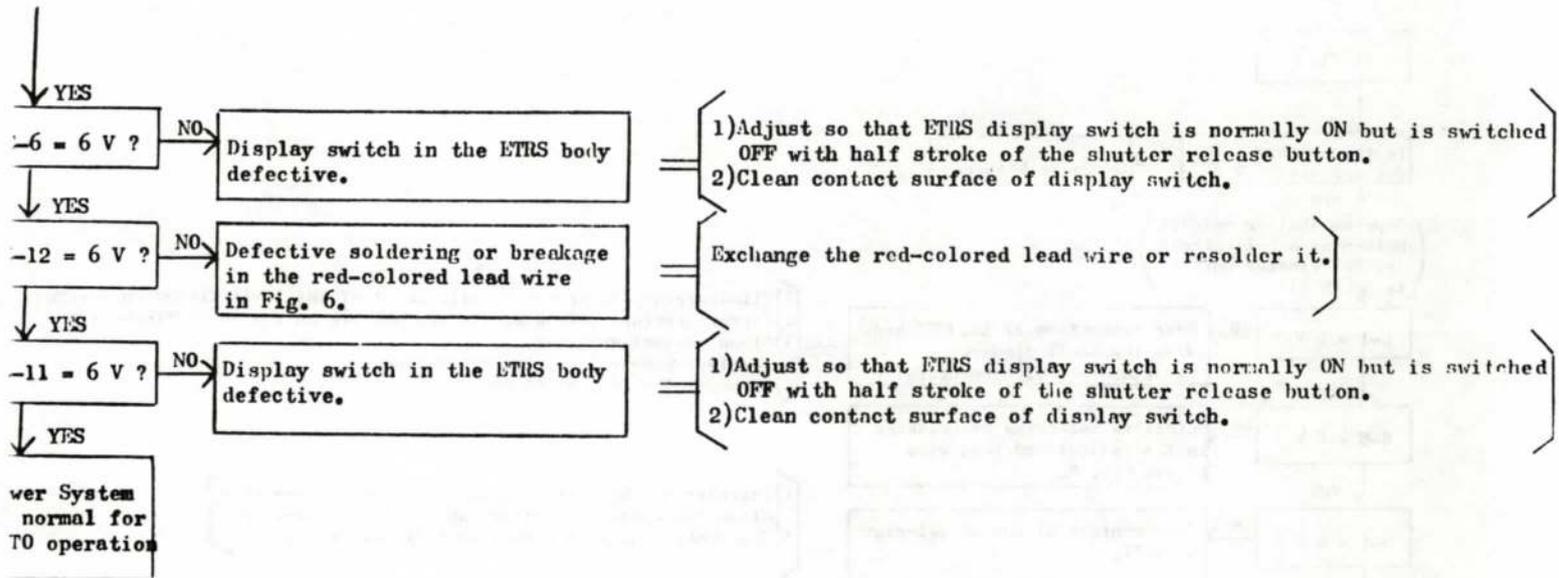
Note: The numbers next to "L" in the parentheses indicates length of each cord in mm.

(1) Checking the Power System (Body side only)

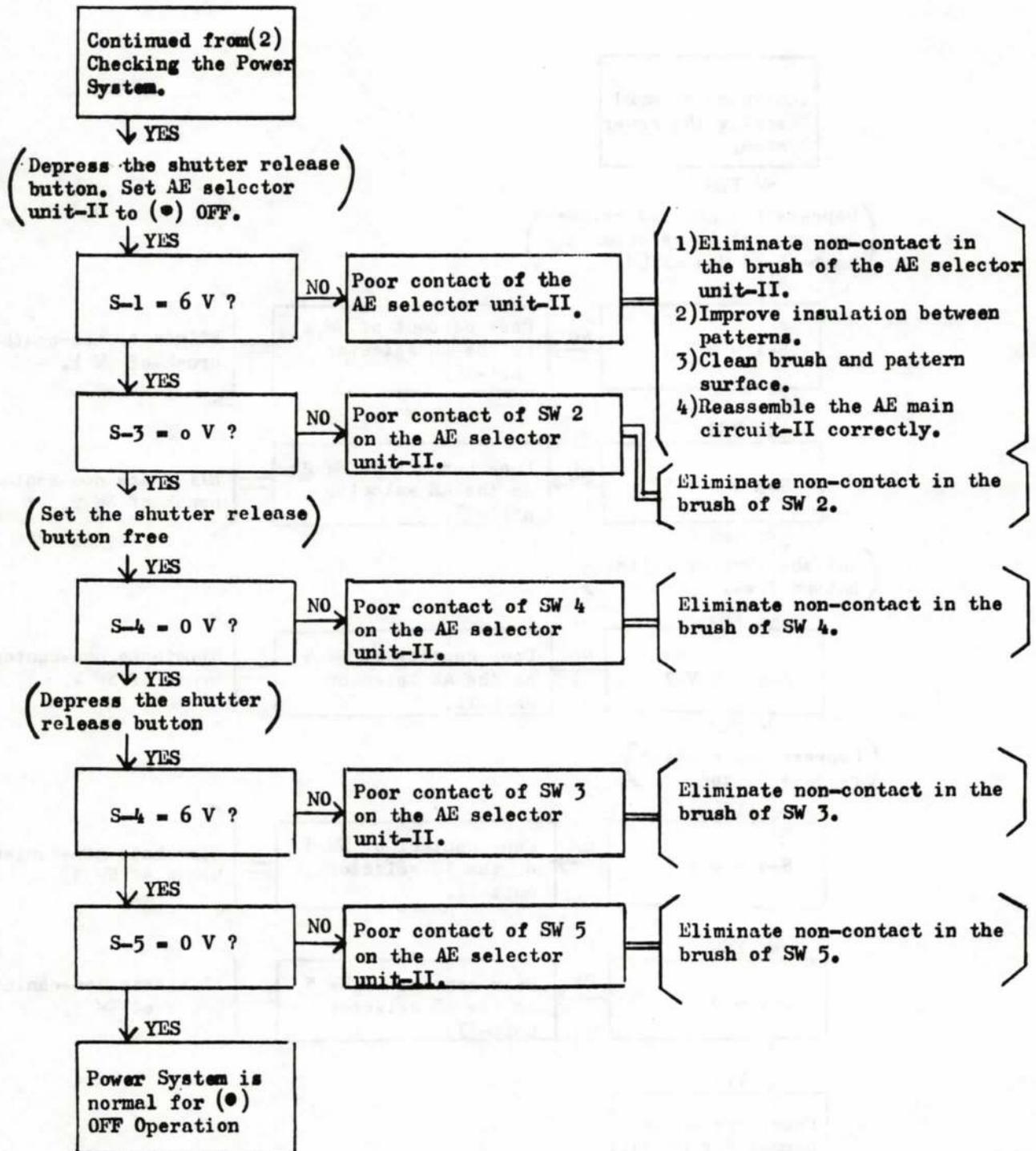


(2) Checking of Power System (AUTO)

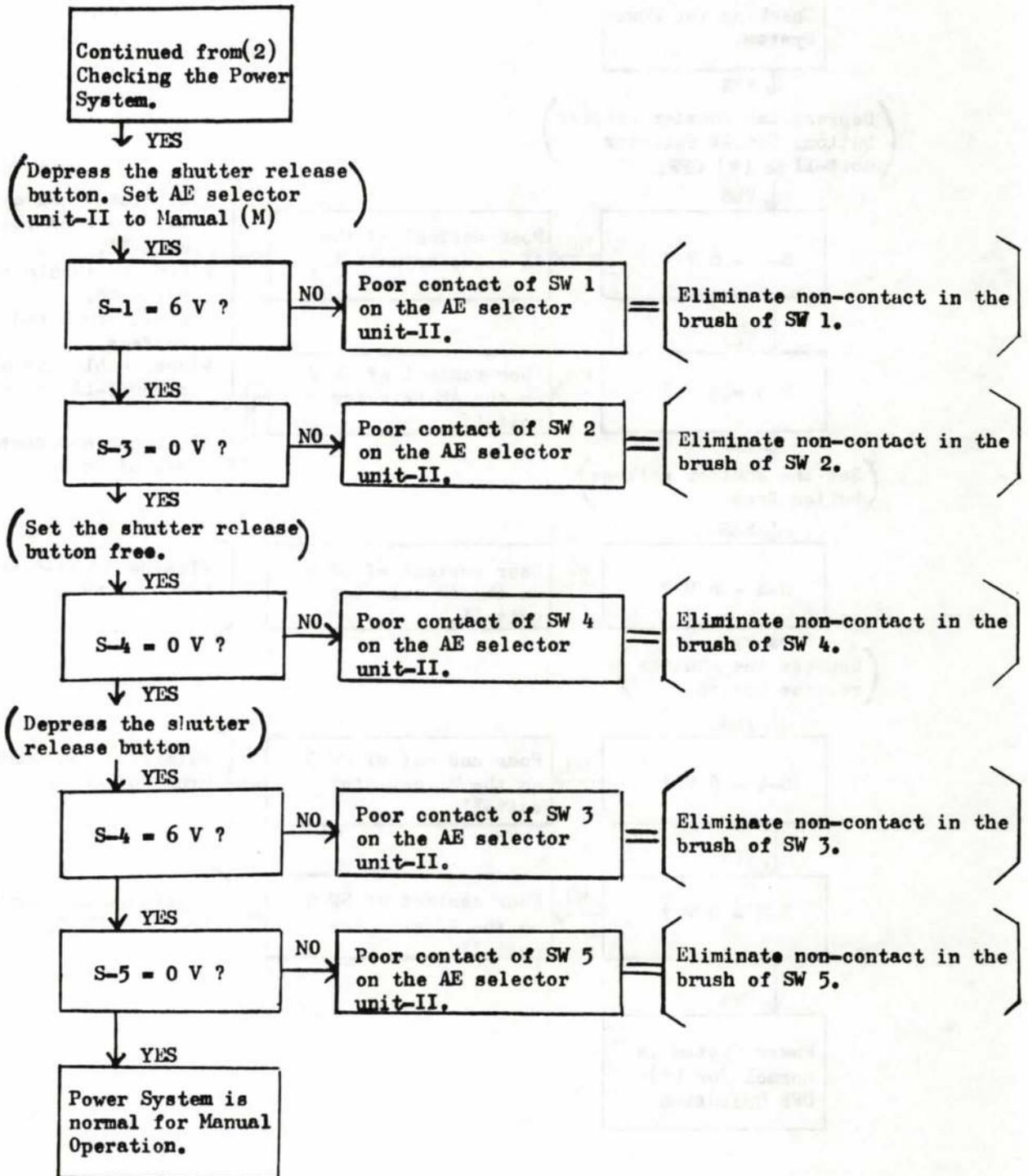




(3) Checking the Power System (●) OFF

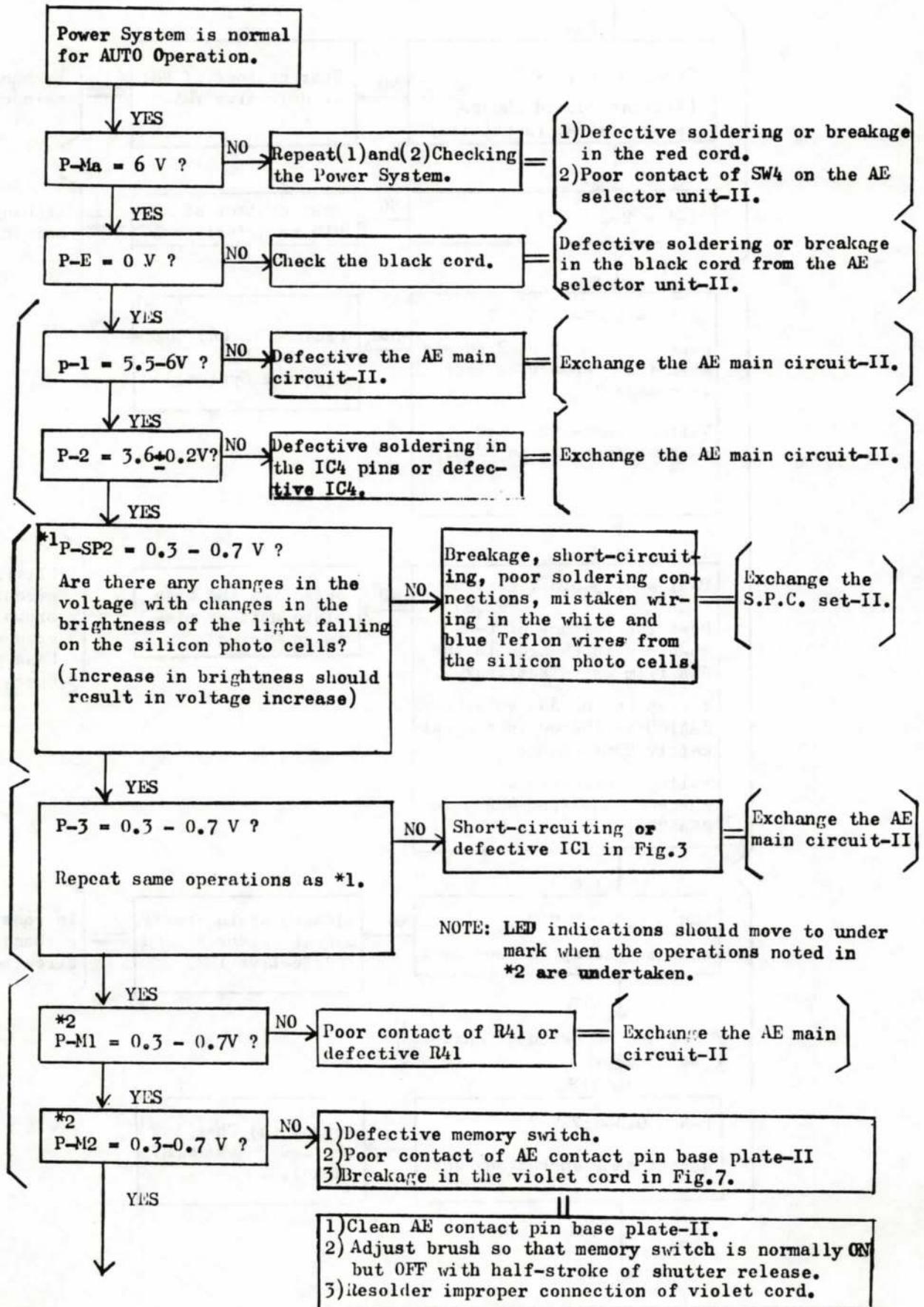


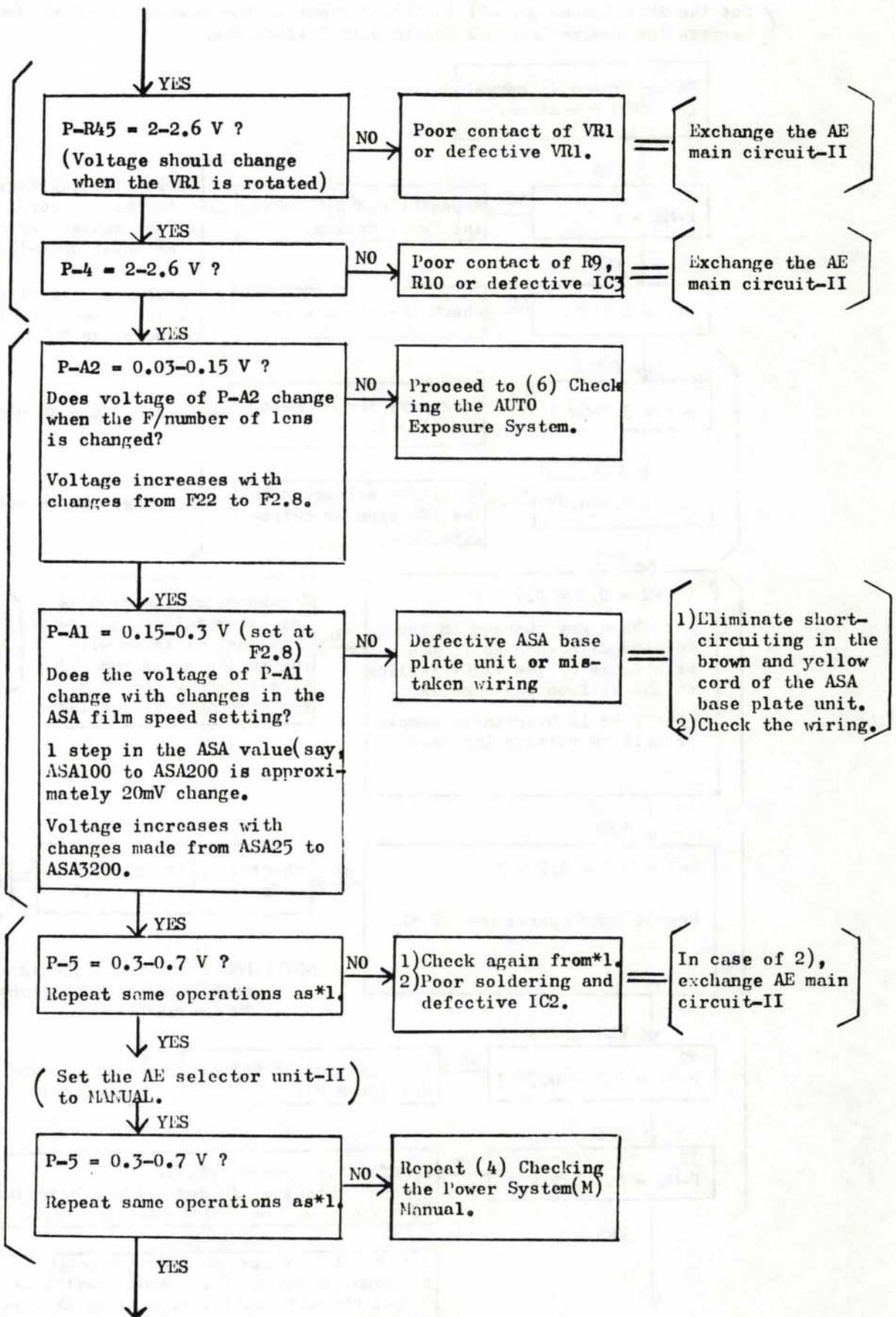
(4) Checking the Power System (M) Manual

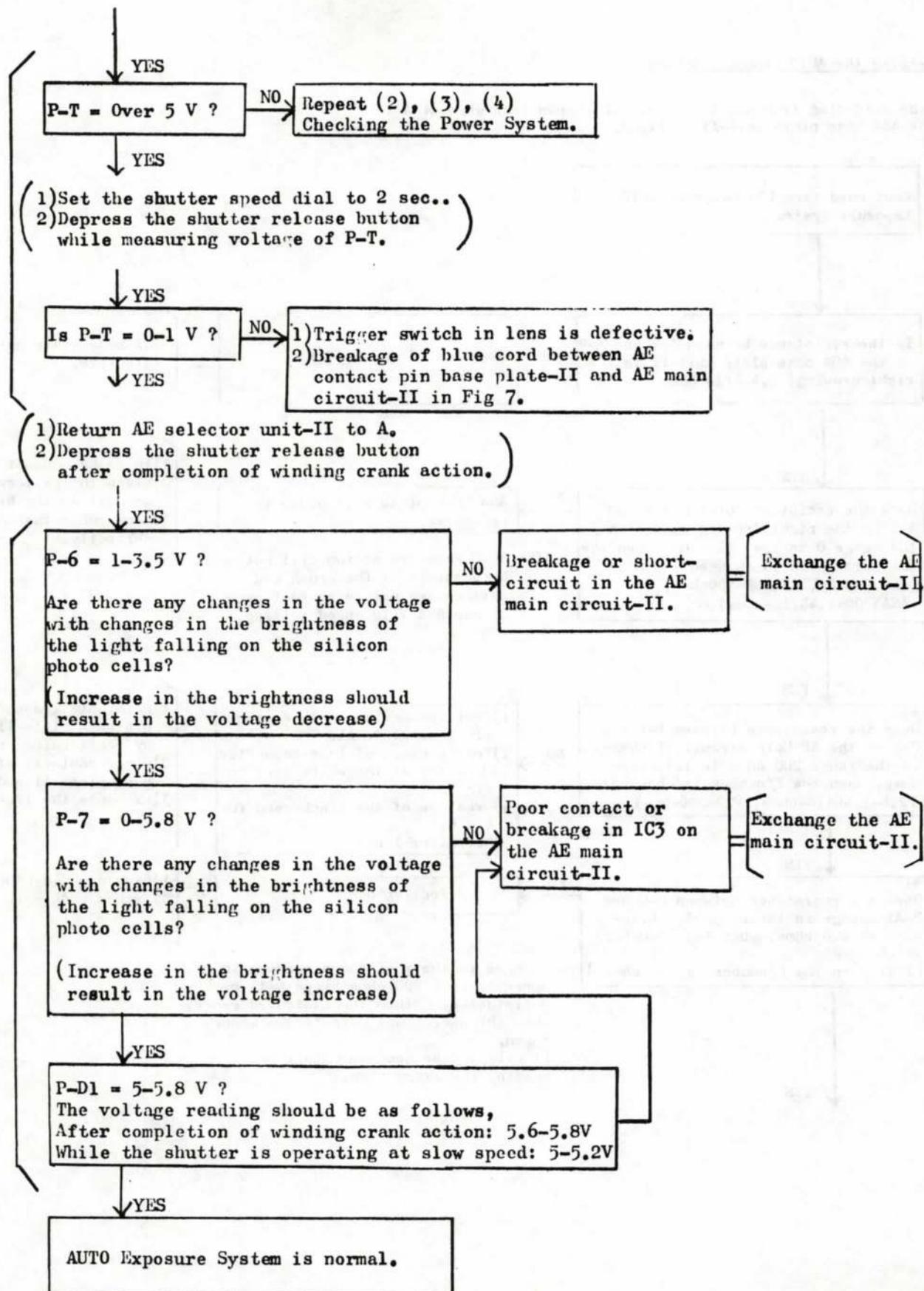


(5) Checking the AUTO Exposure System

(Set the AE selector unit-II to "A". Manipulate the winding crank on the body)
(Depress the shutter release button with half-stroke.)

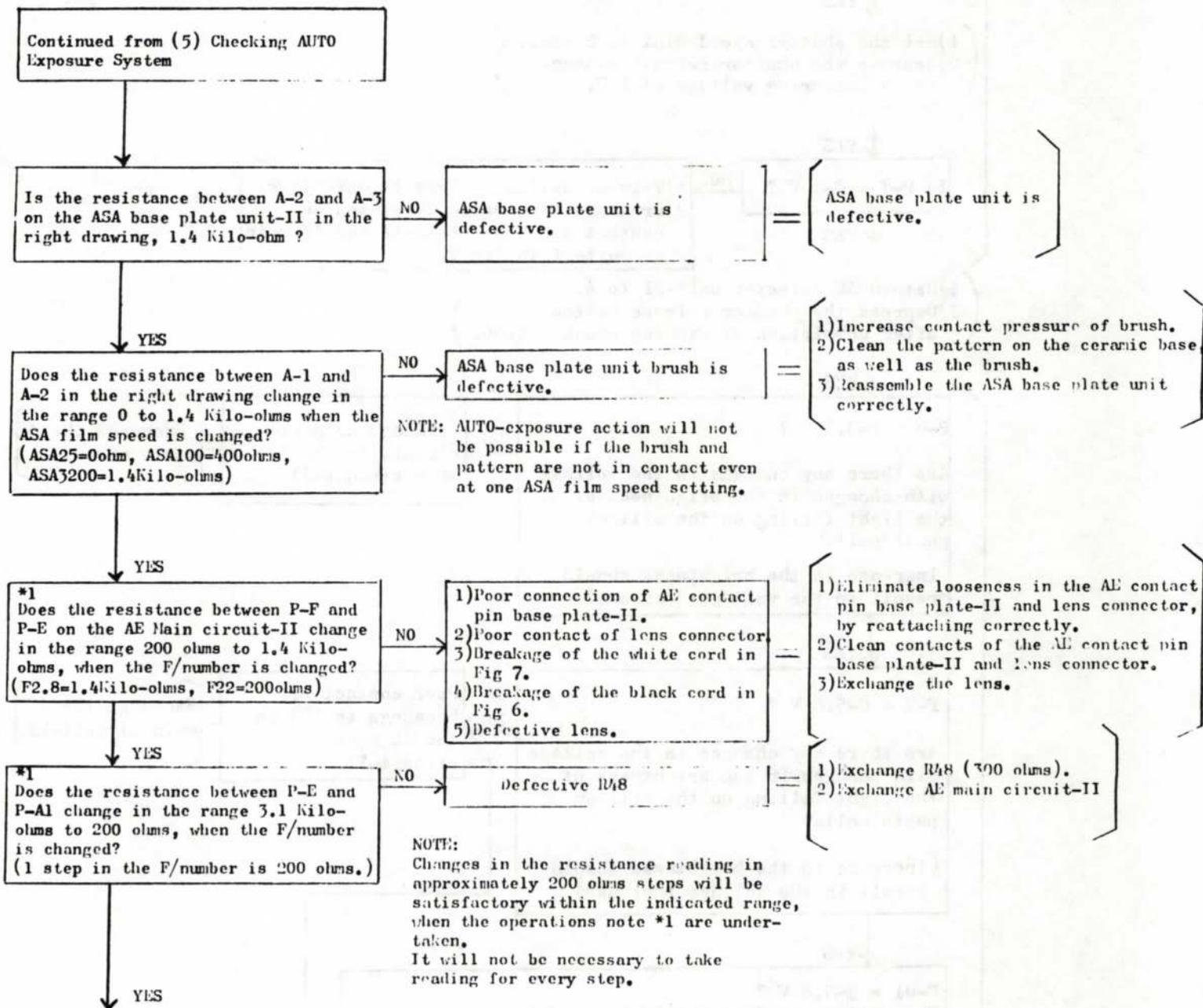


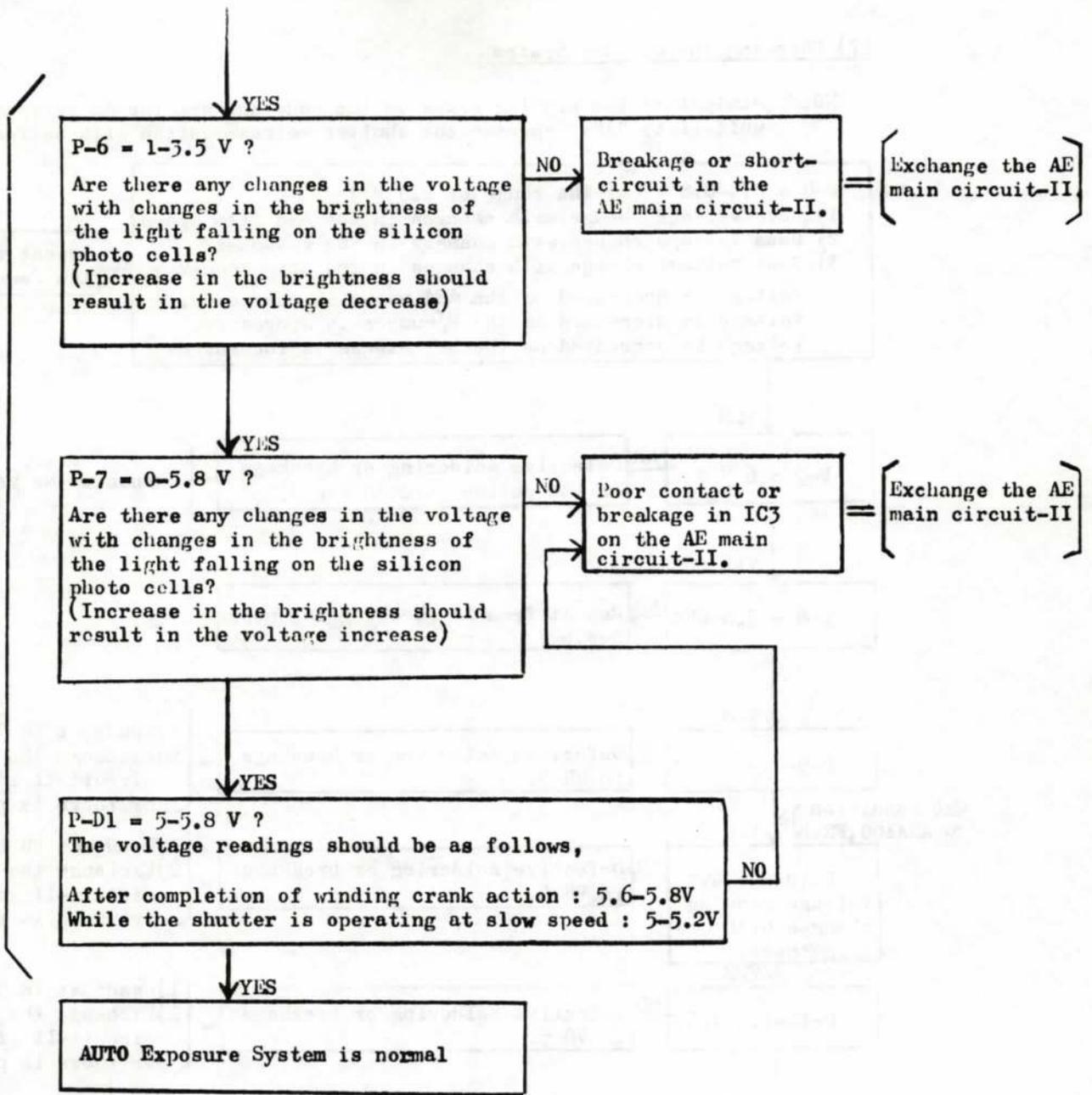




Checking the AUTO Exposure System

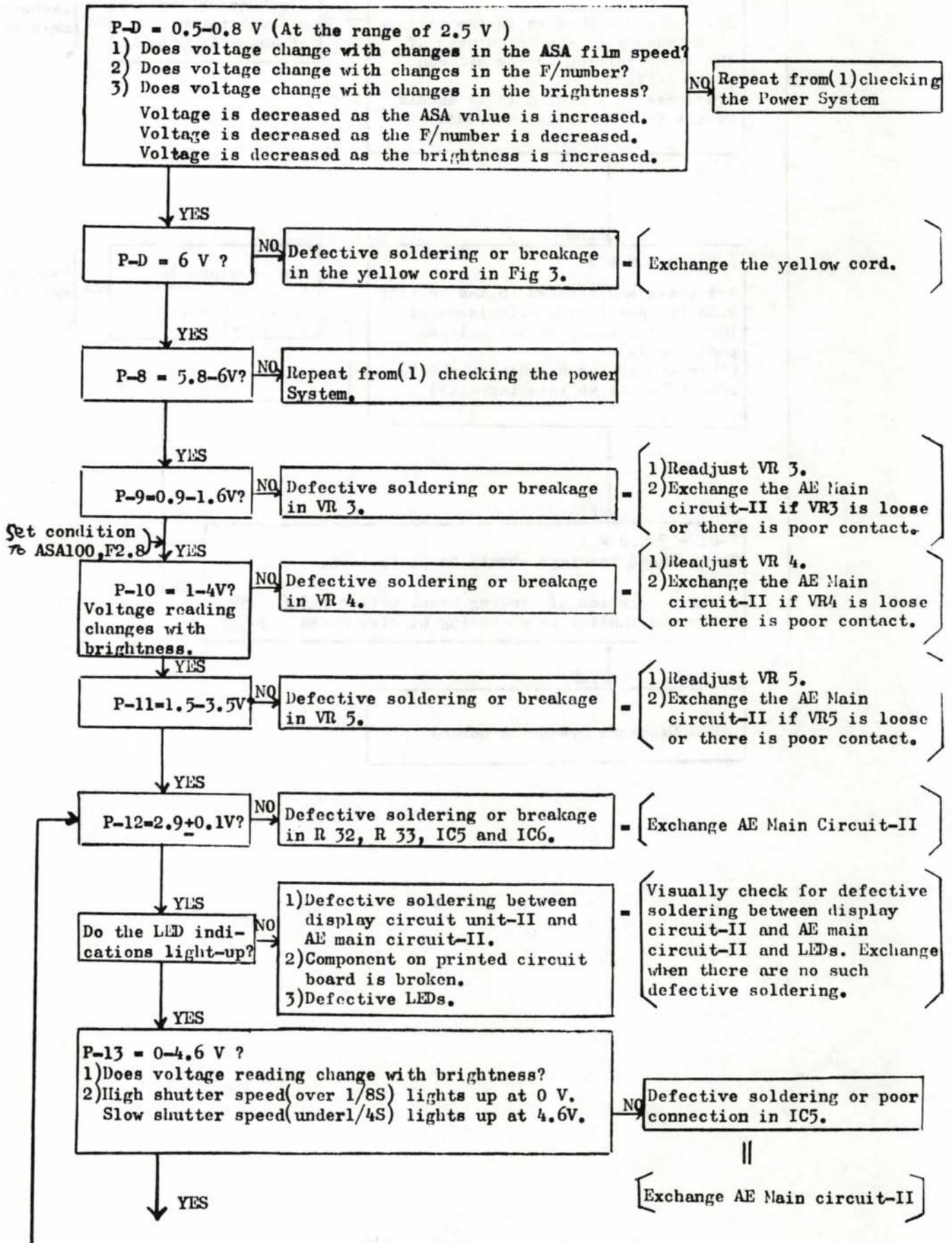
the soldering iron and disconnect the brown lead wire at A-1 the ASA base plate unit-II in Fig 2.

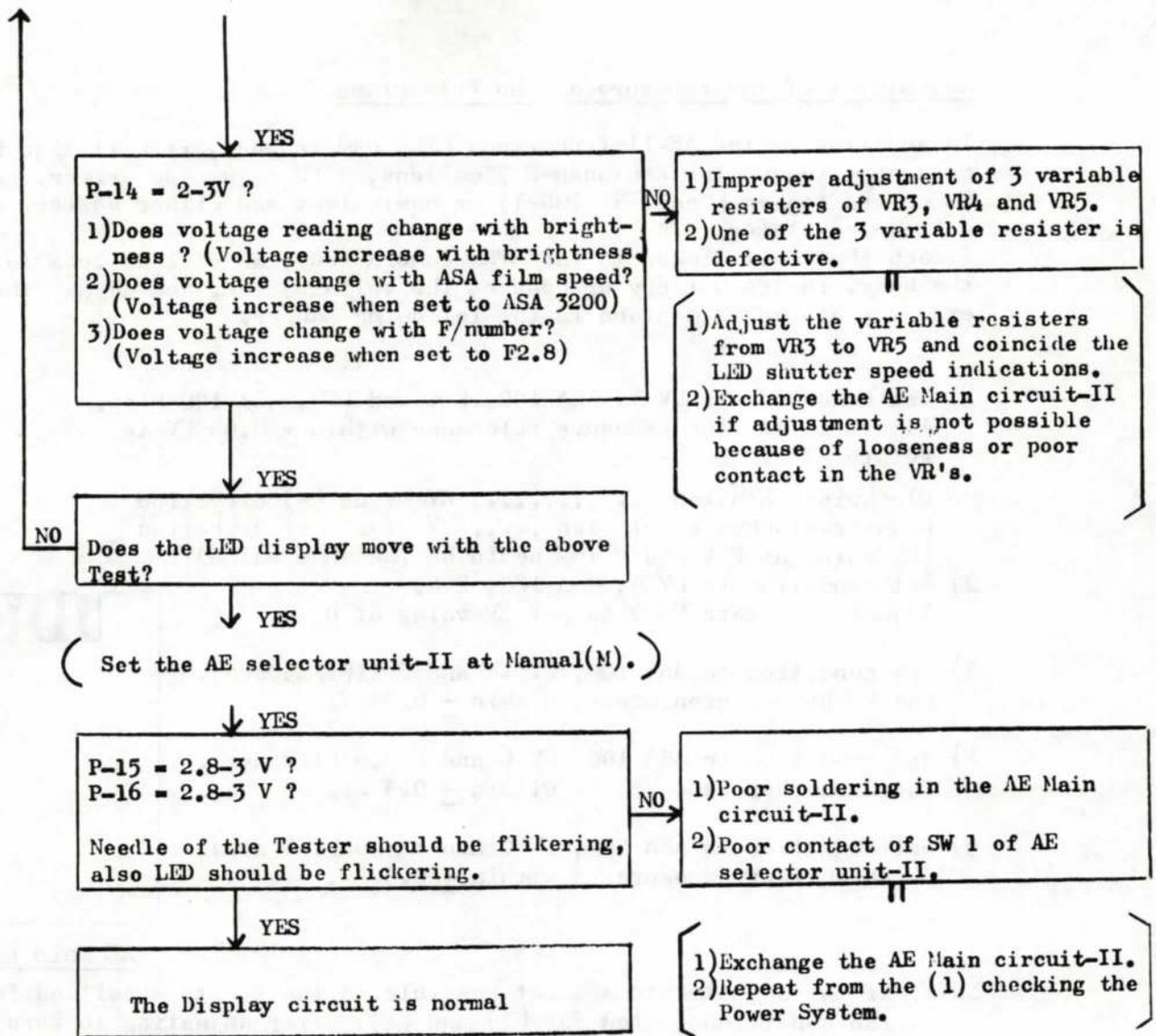




(7) Checking the Display System

NOTE: Manipulate the winding crank on the body and set the AE selector unit-II to "A". Depresse the shutter release button with half-stroke.





Adjustment of the Exposure at the Film Plane

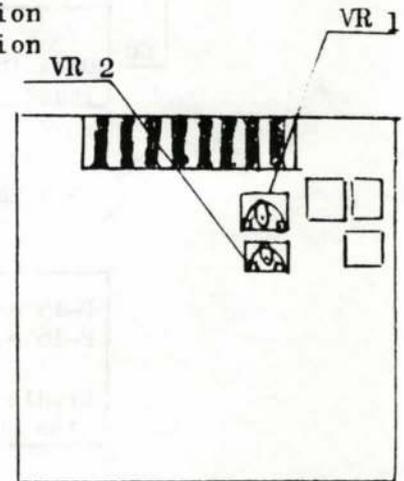
In addition to the AE-II finder and ETRS camera body, it will also be necessary to use the Zenzanon-E 75mm lens, a VR adjusting driver, an EE camera tester (Model ST 70B-1) or equivalent and either battery or voltage regulator.

Attach the AE-II finder to the ETRS camera body, as well as lens to the body, insert battery or connect the voltage, etc. and adjust the exposure at the film plane in the following manner.

- 1) Set condition to LV 9, ASA 100, F 4 and LV9, ASA 100 F 16.
Adjust to get the exposure tolerance within ± 0.05 EV to rotate VR 1.

Clockwise rotation EV minus (-) direction
Counter-clockwise rotation EV plus (+) direction
(EV value at F 4 and F 16 should be the same value)

- 2) Set condition to LV 9, ASA 100, F 4.
Adjust to rotate VR 2 to get EV value of 0 EV.
- 3) Set condition to ASA 100, LV 15 and F 11(1/250sec).
Check whether exposure is within ± 0.3 EV.
- 4) Set condition to ASA 100, LV 6 and F 5.6 (1/2 sec).
Check whether exposure is within ± 0.3 EV.
- 5) Set condition to ASA 400, LV 6 and F 5.6 (1/8 sec).
Check whether exposure is within ± 0.3 EV.



AE Main circuit-II

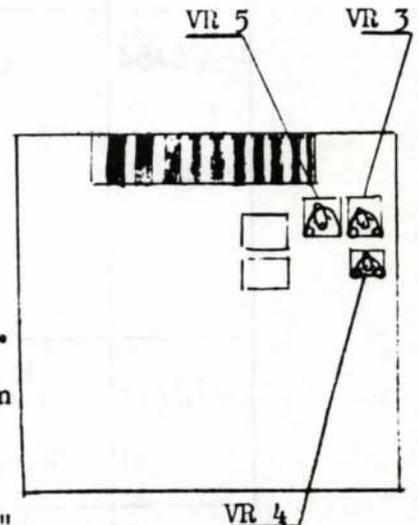
NOTE: If the adjustments are not possible to the limits specified for the conditions noted for (3) and (4), after adjusting to Zero EV (0 EV) under condition specified for (1), then check again the AUTO Exposure System or replace the AE main circuit-II.

Adjustment the LED Display Indications

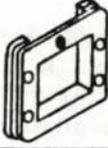
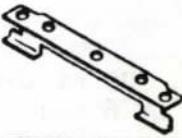
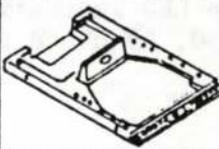
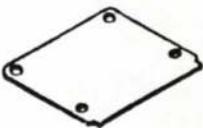
The following adjustments must be made after completing adjustments of the exposure at the film plane, as otherwise the display indications may not be correct.

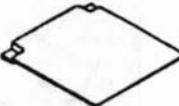
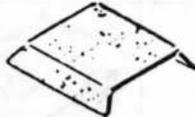
In addition to the AE-II finder on the ETRS body, adjustments will also require the 75mm Zeissanon-E lens, a VR adjusting driver, an EE camera tester (Model ST 70B-1) and either battery or voltage regulator, in the same manner as for the previous adjustment.

- 1) Set the brush of VR3, VR4, VR5 at the center. Set condition to ASA 100, LV 6 and F 11 (2sec.). Revolve VR 3 and coincide the LED shutter speed indication to "2S" when the display button is depressed.
- 2) Set condition to ASA 100, LV 6 and F 5.6(1/2sec.). Revolve VR 4 and coincide the LED indication to "2".
- 3) Repeat para 1), and 2). Make sure the LED indication turn on at "2S" and "2".
- 4) Set condition to ASA 100, LV 9 and F 5.6(1/15sec.). Revolve VR 5 and coincide the LED indication to "15".
- 5) Set condition to ASA 100, LV 15 and F 8(1/500sec.). Confirm that the LED indication is "500", when the display button is depressed.
- 6) Set condition to ASA 400, LV 6 and F 8(1/4sec.). Confirm that the LED indication is "4", when the display button is depressed.
- 7) Finally, confirm that the LED indication is "2" when conditions are ASA 50, LV 6 and F8(2sec.).



AE Main circuit-II

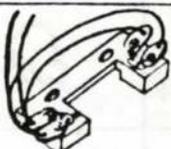
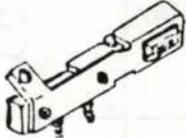
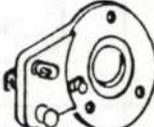
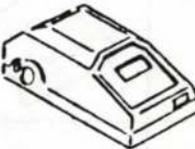
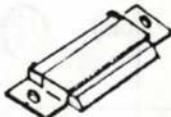
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1-220133	Eye piece frame 接眼マスフ					25	
1-220154	Attaching metal 接続板		2			30	
1-220192	Eye piece unit attaching screw 接眼止ネジ					20	
1-210240	Selector dial mark バヨネット環指線					5	
1-226000	AE finder base plate-II AEファインダベース		1			85	
1-222301	AE selector dial AE切換ダイヤル					240	
1-222311	AE selector lock button AE切換ロックボタン					60	
1-222373	AE button cover AEベース底板					35	
1-222390	AE contact piece AEフック板					10	

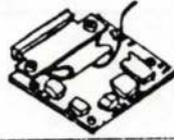
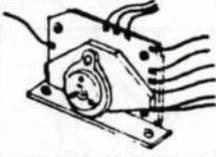
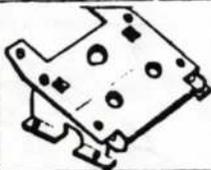
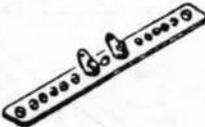
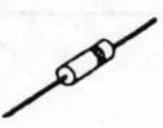
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1-222412	AE contact pin AE 接点ピン		9			30	
1-222490	Display button outer frame 表示ボタン外枠					40	
1-222540	Lock button spring AE 切替ボタンのバネ					5	
1-222641	Prism holder プリズム押え板					25	
1-222651	Insulating sheet AE 回路絶縁シート					10	
1-222660	Main circuit pillar AE 回路スペーサー		4			5	
1-226140	Leatherette (Front) AE カバー前部革					15	
1-226180	Leatherette (Upper) AE カバー上部革					20	
1-226150	Leatherette (Rear) AE カバー後部革					10	
1-226160	Leatherette (Selector lock button) AE 切替ボタ革					5	
1-222811	ASA dial unit attaching screw ASA ダイヤルネジ					60	

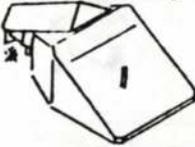
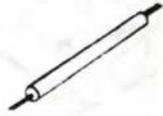
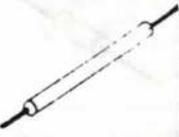
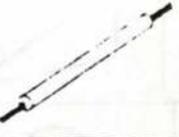
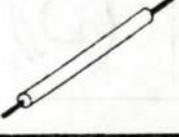
ZENZA BRONICA

ETRS

AE-II FINDER

Parts No. 部品番号	Name 名称	Shape 形状	Posper Unit 個数	Page 頁	Ass'y No. 組立番号	Price (¥) 単価	Remarks 備考
1-226170	Leatherette (ASA dial unit attaching screw) ASA ボタンネ					5	
1-252004	Contact pin spring コネクターバネ		9			5	
1-726150	SPC set -II (w/wire) ピンセット (新)		1			920	
1-722070	Cover 調整カバー					35	
1-722050	ASA dial unit ASA ダイアルユニット					400	
1-726390	Display button unit-II 表示ボタンユニット		1			150	
1-722210	ASA lock button unit ASA ロックボタンユニット					110	
1-222201	AE top cover AE ファインダーカバー					950	
1-726280	Display prism unit -II 表示プリズムユニット		1			800	
1-722250	ASA base plate unit ASA ベース板ユニット					450	

Parts No. 部品番号	Name 名称	Shape 形状	Pcs per Unit 個数	Page 頁	Ass'y No. 組立番号	Price 単価	Remarks 備考
1-726330	Main circuit -II (w/display circuit) AE-II回路基板ユニット		1			15,000	
1-726511	AE selector lock plate unit AE切換ロック板(B)		1			40	
1-726500	AE selector unit-II (w/connection cord) AE切換ユニット		1			490	
1-726180	AE prism holder unit -II AEプリズム押入ユニット					80	
1-226110	Circuit hold nut 表示基板台					10	
1-726110	AE contact pin base plate-II AE接点台ピット					800	
1-226470	Limit diode ダイオード					20	
1-226460	AE-II display print AE-II表示プリント					75	
1-223221	Prism hold spacer プリズム押入スペーサー		2			5	
1-222760	ASA display plate ASA文字板					25	

Parts No. 部品番号	Name 名称	Shape 形状	Pcs per Unit 個数	Page 頁	Ass'y No. 組立番号	Price (¥) 単価	Remarks 備考
1-222561	AE prism set (new) AEプリズムセット(新)					7,800	
1-223240	ASA lock button plate 指標板取付ボタ					10	
1-226060	Display hold nut AE表示持定台(Ⅱ)		1			10	
1-226190	Connection cord (Yellow L-105) コード(黄色-105)					10	
1-226200	Connection cord (Brown L-105) コード(茶色-105)					10	
1-226310	Connection cord (Violet L-33) コード(紫色-33)					10	
1-226320	Connection cord (Violet L-48) コード(紫色-48)					10	
1-226330	Connection cord (White L-78) コード(白色-78)					10	
1-226340	Connection cord (Blue L-26) コード(青色-26)					10	
1-226350	Connection cord (Yellow L-21) コード(黄色-21)					10	

