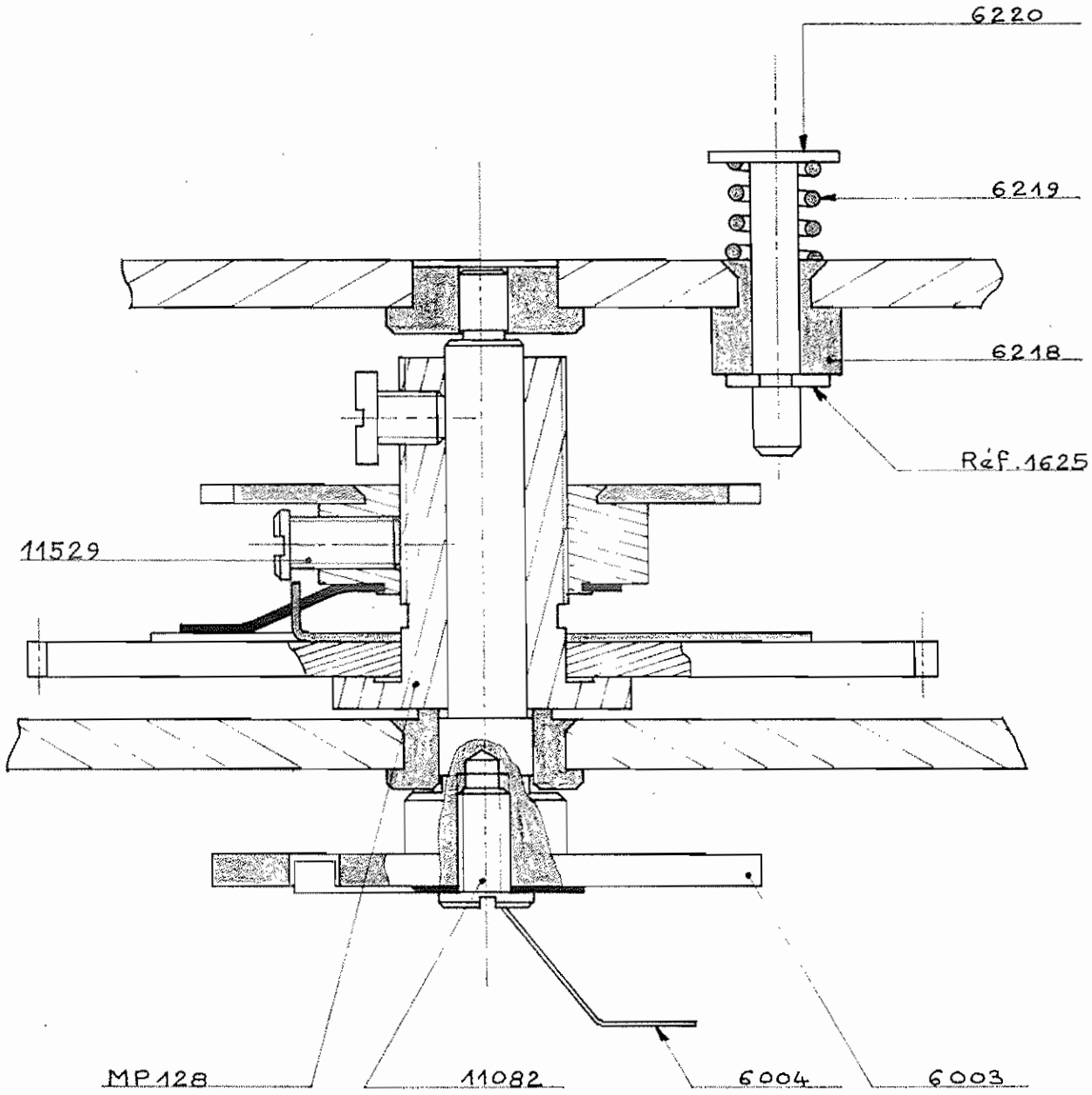


Rep	Nature de la modification	Date . Visa
C		
B		
A		

Matière	Traitement	Protection	Poids	Echelle	
—	—	—	—	5	Dés. par : Fourneau Date : 23 11 73 Vérif. par :

Quant. par appareil —

Tolér. gén.° —

N° de modif.

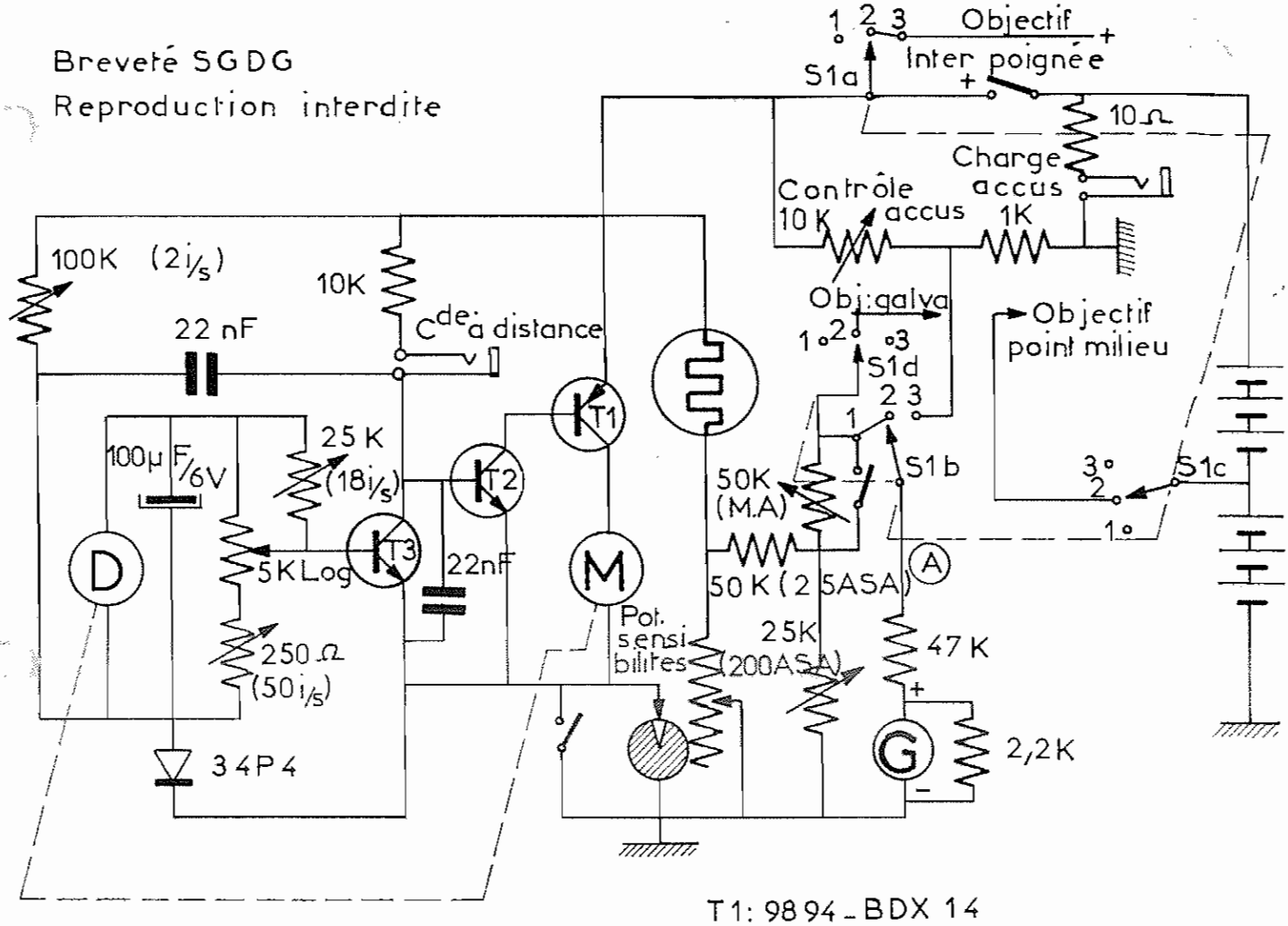
Détail mécanique

Blocage friction

4008 ZM II

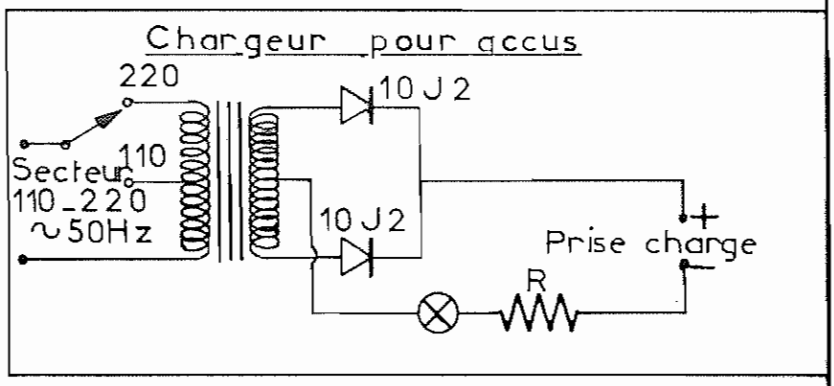
BEAULIEU

N°6235.SAV



T1: 9894 - BDX 14
T2, T3: PBC 183

	semi 1	auto 2	conti 3
S1a		X	X
S1b	X	X	X
S1c		X	
S1d		X	



Rep	Nature de la modification	Date - Visa
C		
B		
A	Mise à jour 25k (2 5ASA) ⇒ 50k	4.12.72. dcf

Matière	Traitement	Protection	Poids	Echelle	
—	—	—	—	—	Dés. par : Fourneau Date : 4.12.72 Vérif. par :

Quant. par appareil —
Tolér. gén.* —
N° de modif.

Schéma de principe

Caméra S8 et chargeur

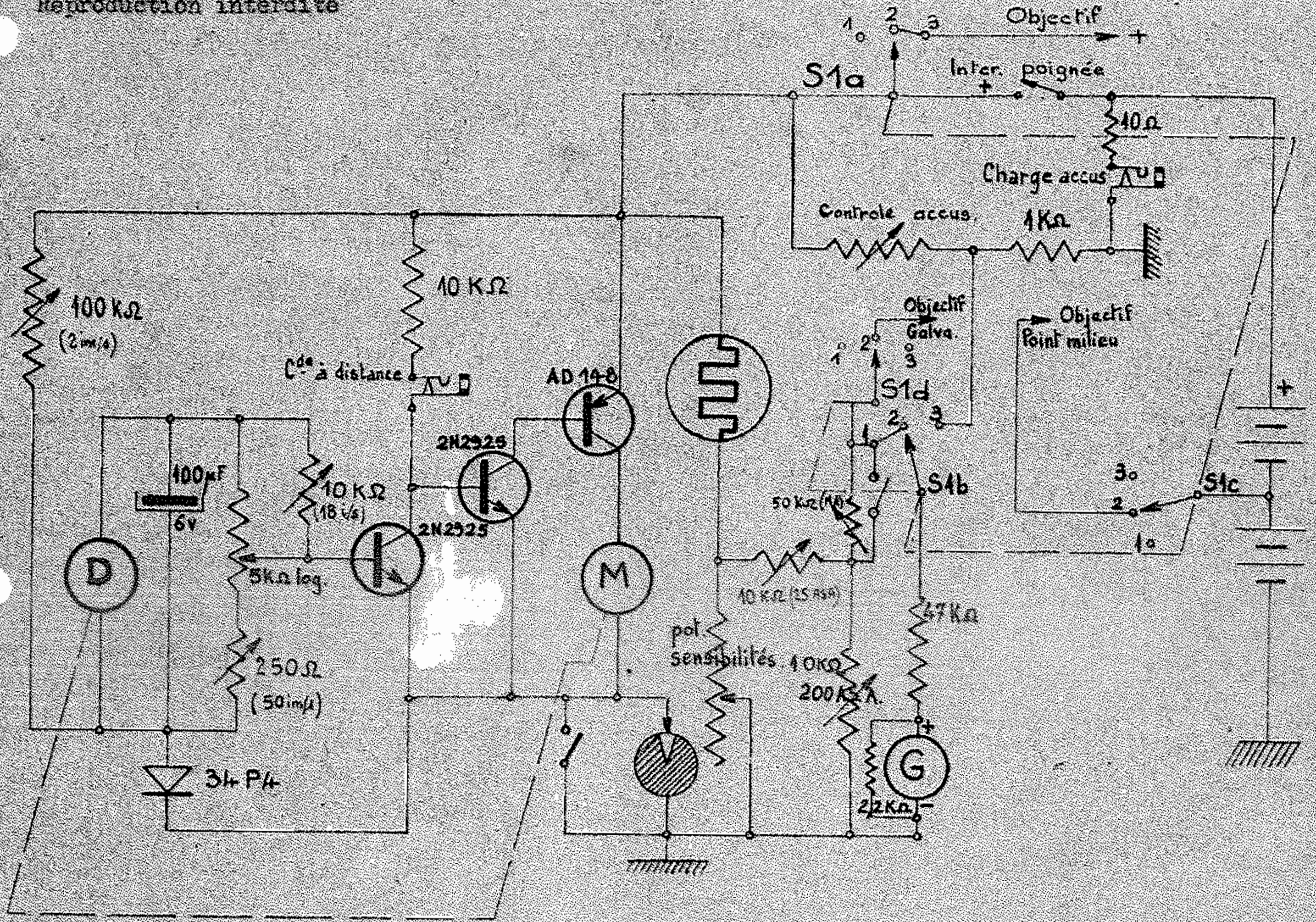
Super 8 électrique

BEAULIEU

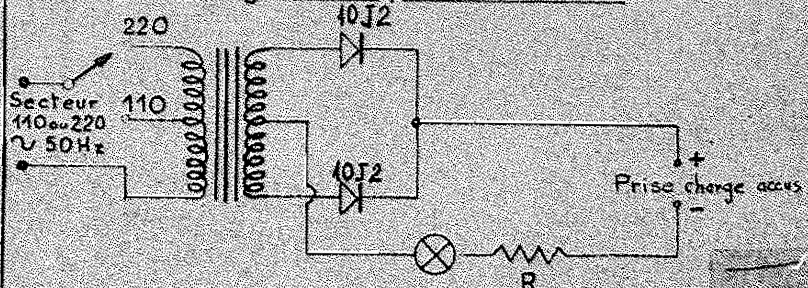
S.A.V 10/12 (A)

N° 6068

SADIA-PARIS-HORBOURG



Chargeur pour accus



	Semi. 1	Auto 2	Contr. 3
S1a		X	X
S1b	X	X	X
S1c		X	
S1d		X	

Rep	Nature de la modification	Date	Visa
C			
B			
A			

Matière	Traitement	Protection	Poids	Echelle	
					Dés. par J.C. Drezet
					Date 6.6.1966
					Vérif. par [signature]

Quant. par appareil

Circuit électrique.

Caméra et chargeur.

Tolér. gén.

Super 8 élect.

N° de modif.

BEAULIEU

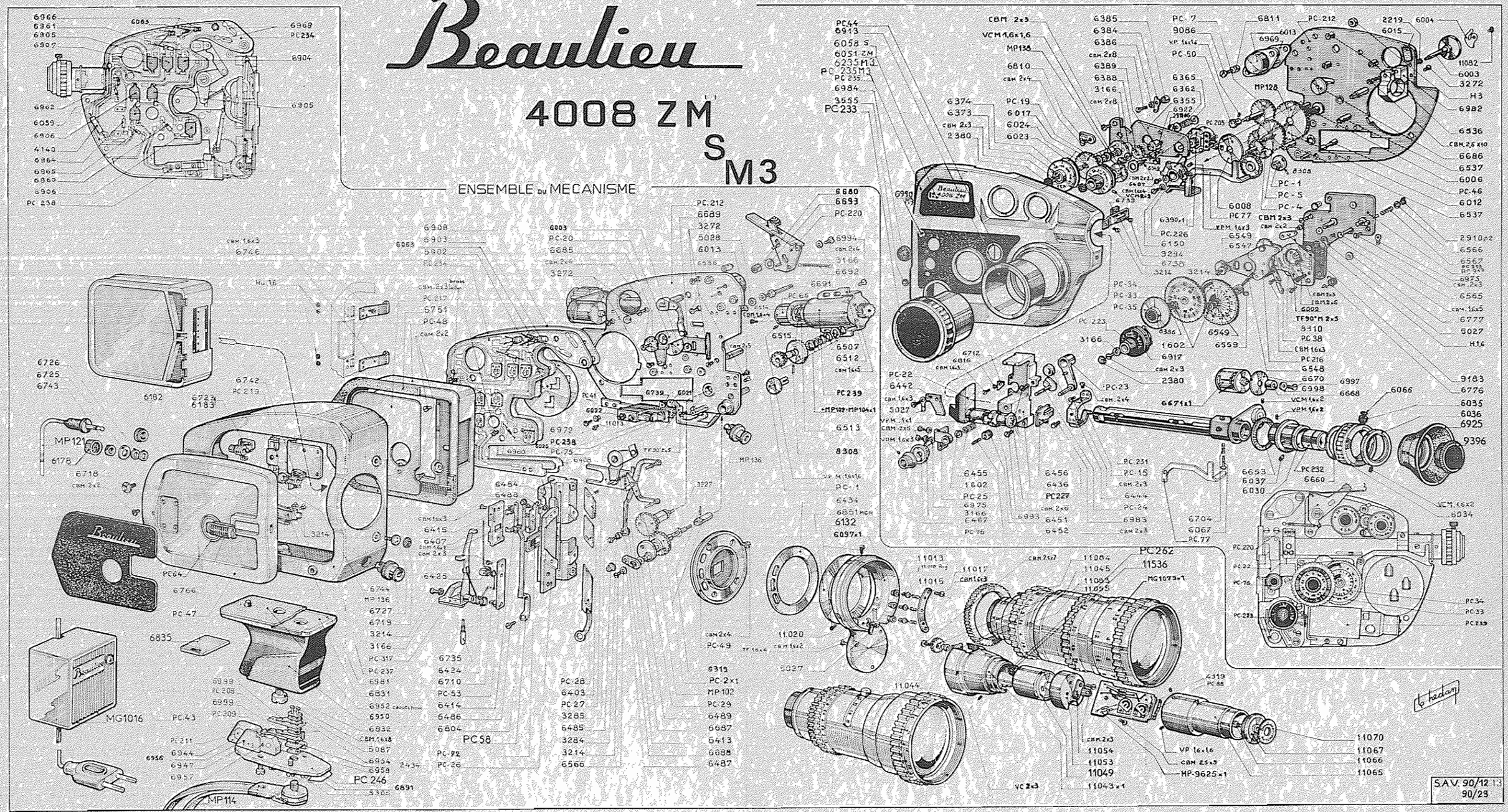
S.A.V 10/12

N° 6018

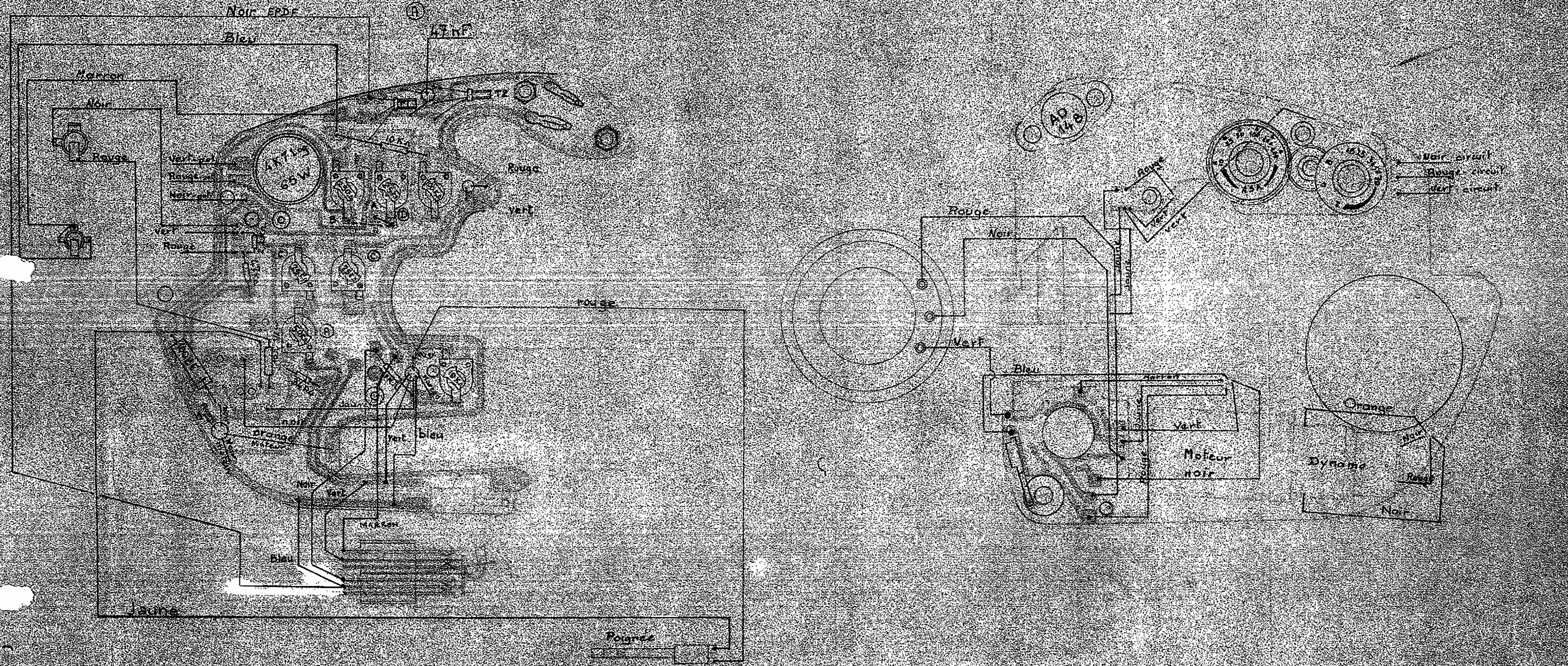
Beaulieu

4008 ZM S M3

ENSEMBLE du MECANISME



S.A.V. 90/12 13
90/23

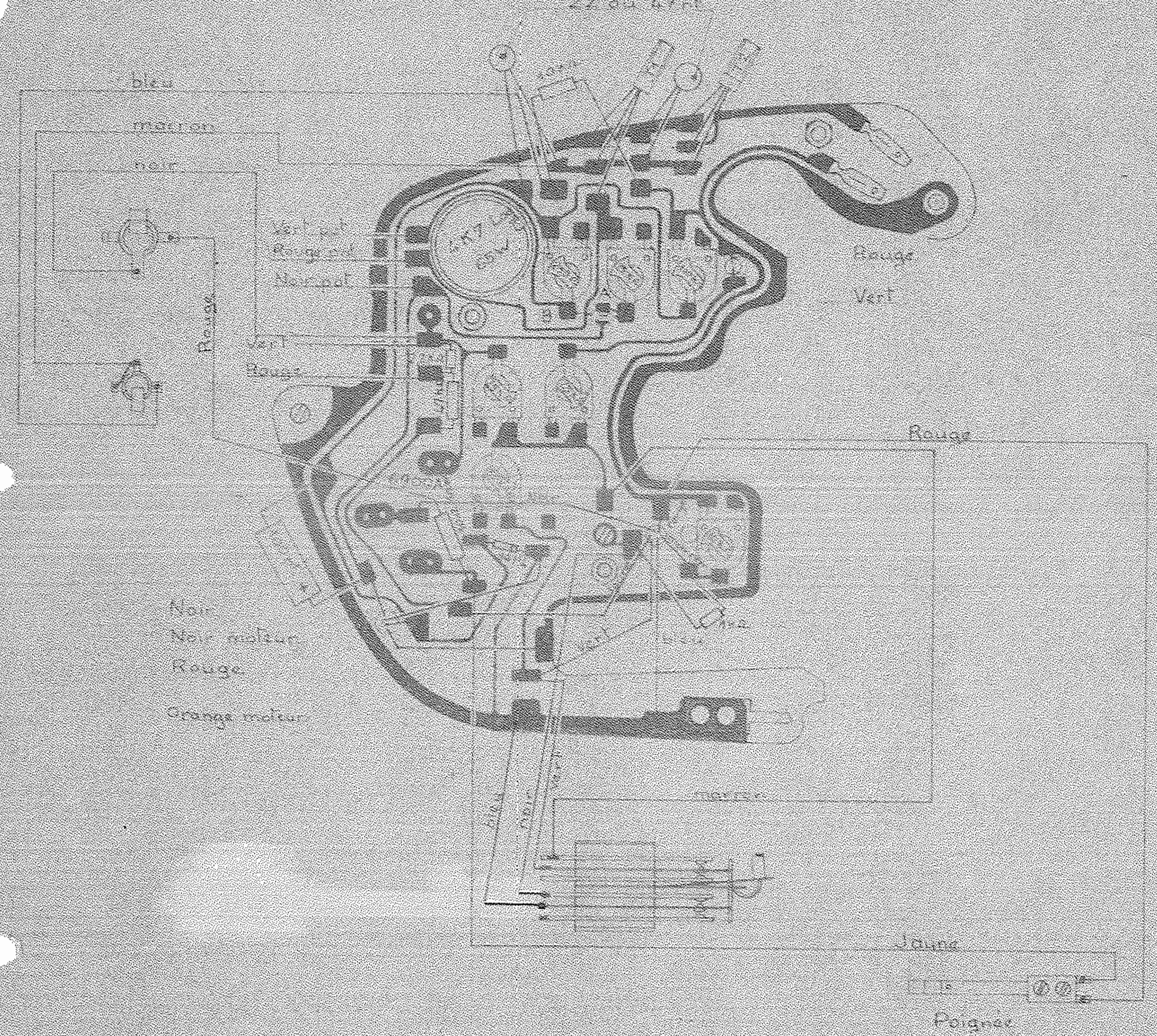


Rep	Nature de la modification	Date
D	La résistance 10 KΩ (18 %) passant à 25 KΩ	6.11.6
C	Les résistances 28 et 26 ASA de 10 KΩ passent à 25 KΩ	18.9.
B	La résistance 200 ASA de 50 KΩ devient 10 KΩ	13.11.
A	Adjonct. d'1 condensateur de 47 nF. Caractéristique M.A. de 100 Ω devient 50 Ω	26.11.

Matière	Traitement	Protection	Poids	Echelle	
—	—	—	—	—	Des. par Brossi… Date 3.6.66 Vérif. par

Quantité		
—	**Schéma de cablage**	BEAULIE…
Toler. gén. —	Super 8 Elect	S.A.V 20/12
		Nº 6070

Nº de modif.



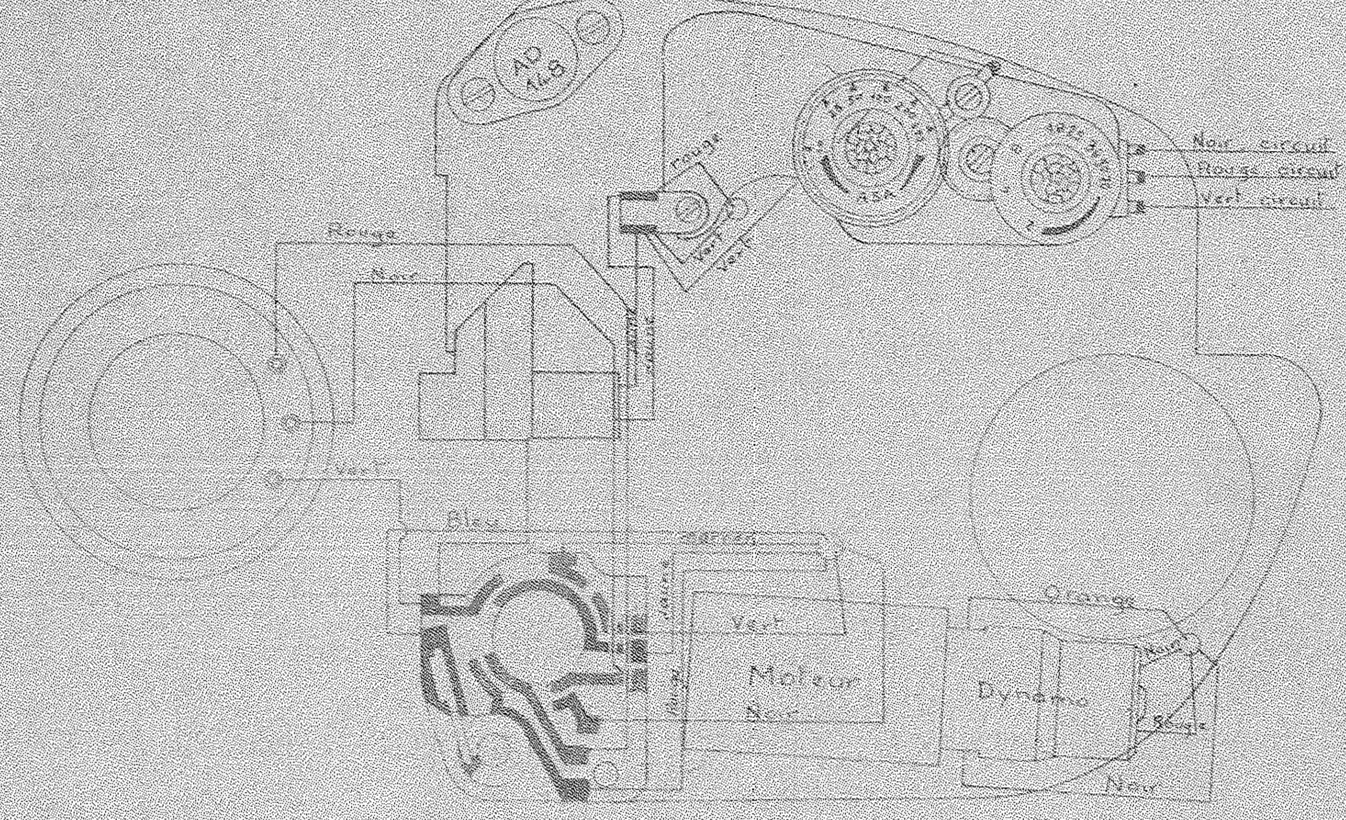
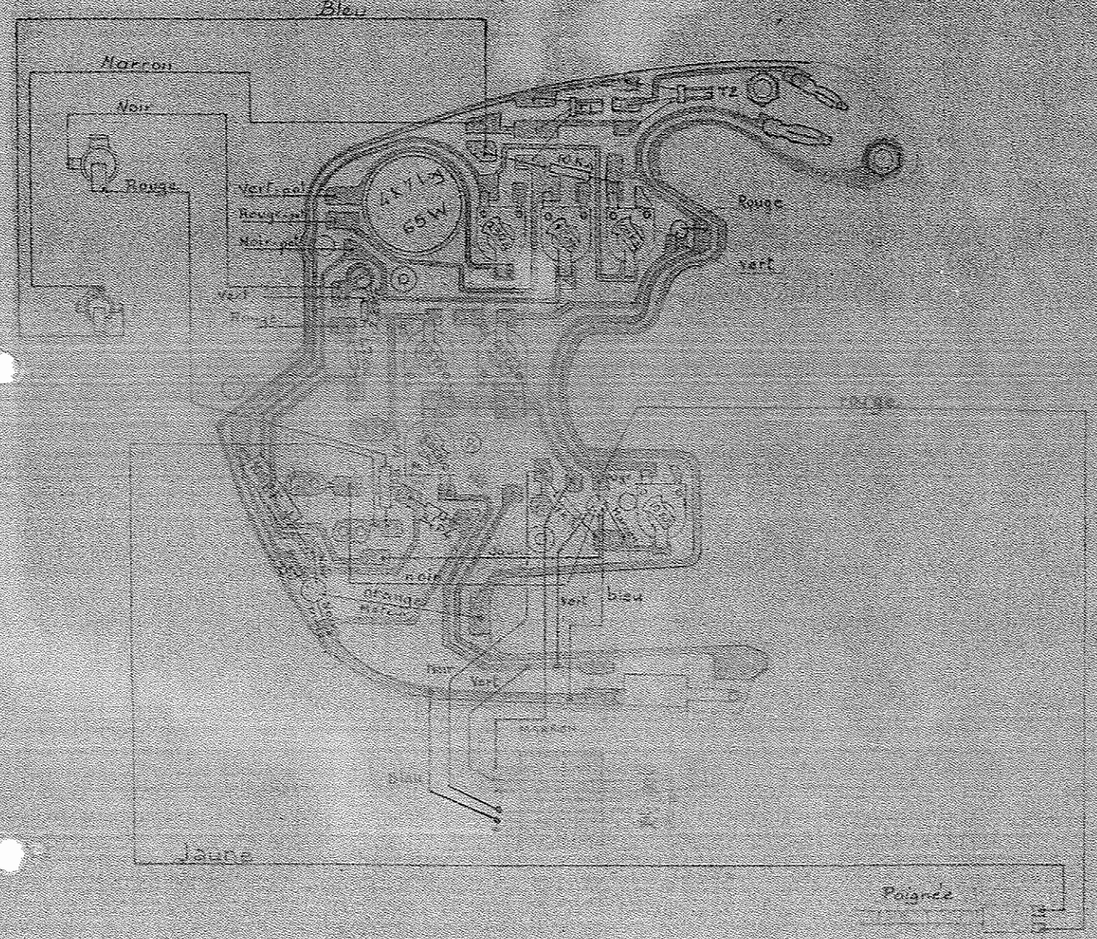


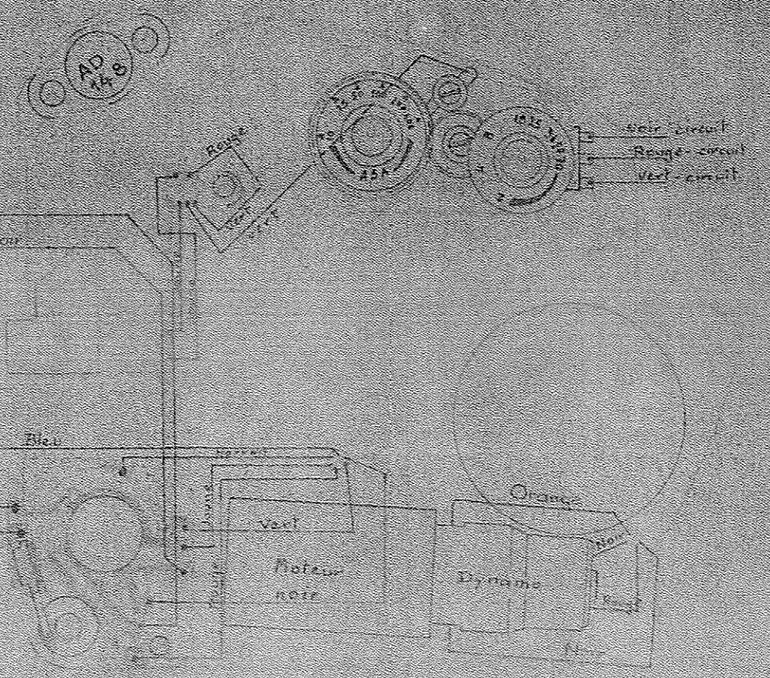
Schéma de cablage pour circuit 6900 A

Rep	Nature de la modification	Date
C		
B		
A		

Matière	Traitement	Protection	Poids	Echelle	
—	—	—	—	—	Des. par Fourneau Date 23.4.70 Vérif. par

Quantité		
—	**Schéma de cablage** Super 8 élect	**BEAULIEU** SAV 20x12 N°6070 x2

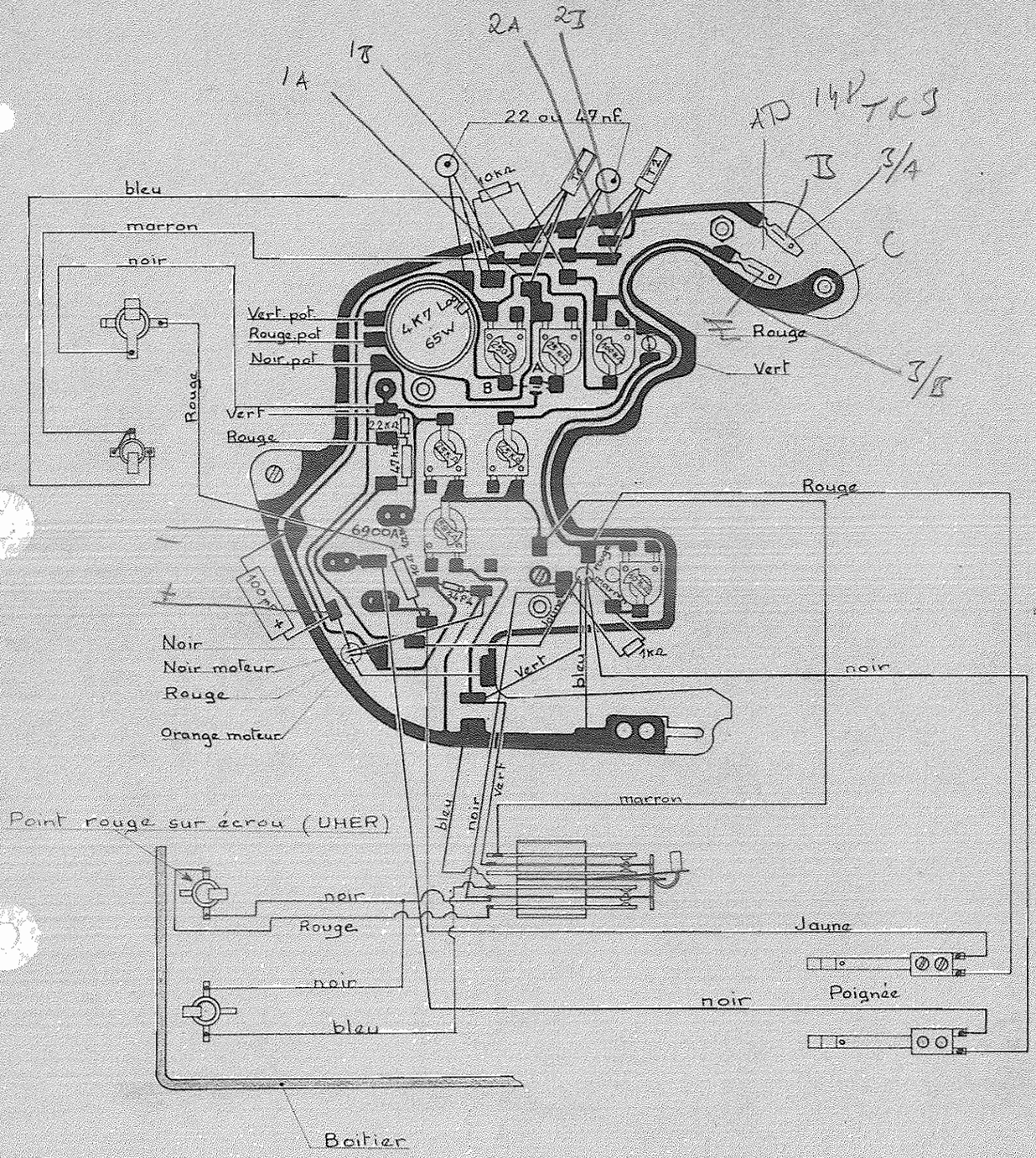




Rep	Nature de la modification	Date	Visa
C			
B			
A			

Matière	Traitement	Protection	Poids	Echelle	Dess par Brossier
–	–	–	–	–	Date 3.6.66
					Vérif par

Quantité	Schema de cablage	BEAULIEU
–		S.A.V 20/12
Total gén. –	Super 8 Elect	N° 6019
N° de plan		



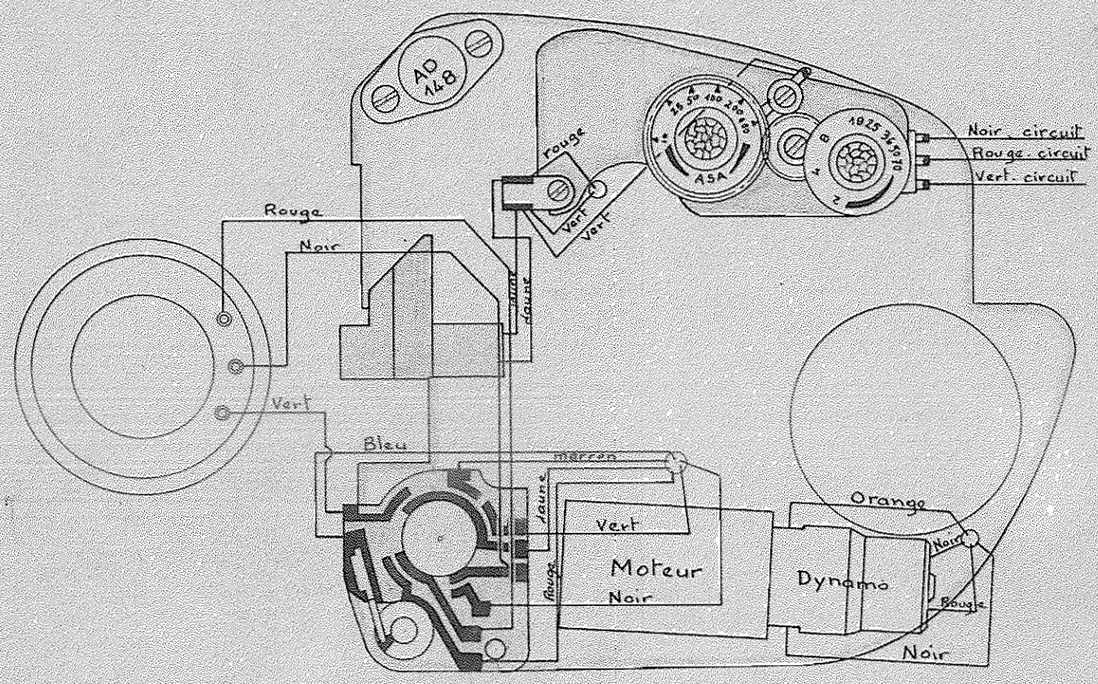


Schéma de cablage pour circuit 6900 A

Rep	Nature de la modification	Date	Visa
C			
B			
A			

Matière	Traitement	Protection	Poids	Echelle	
–	–	–	–	–	Dés. par : Fourneau Date : 23.4.70 Vérif. par :

Quantité	Schéma de cablage	BEAULIEU
–		S.A.V 20x12
Tolér. gén. –	Super 8 élect.	N°6070 x 4
N. de modif.		

SADIA - PARIS - HORBOURG

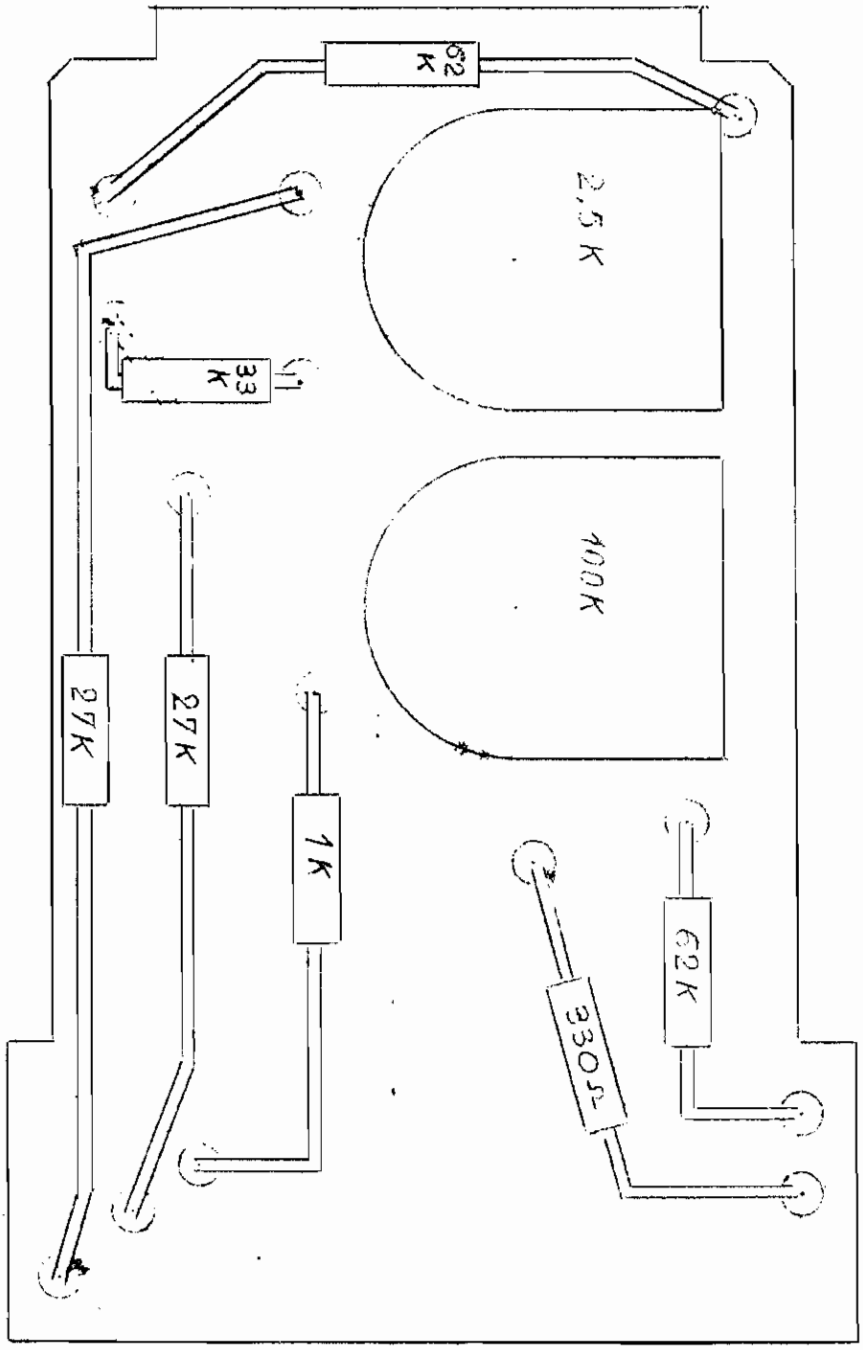


Schéma de cablage

objectif auto S 8

BEAULI

S.A.V. 20/

N° 11095

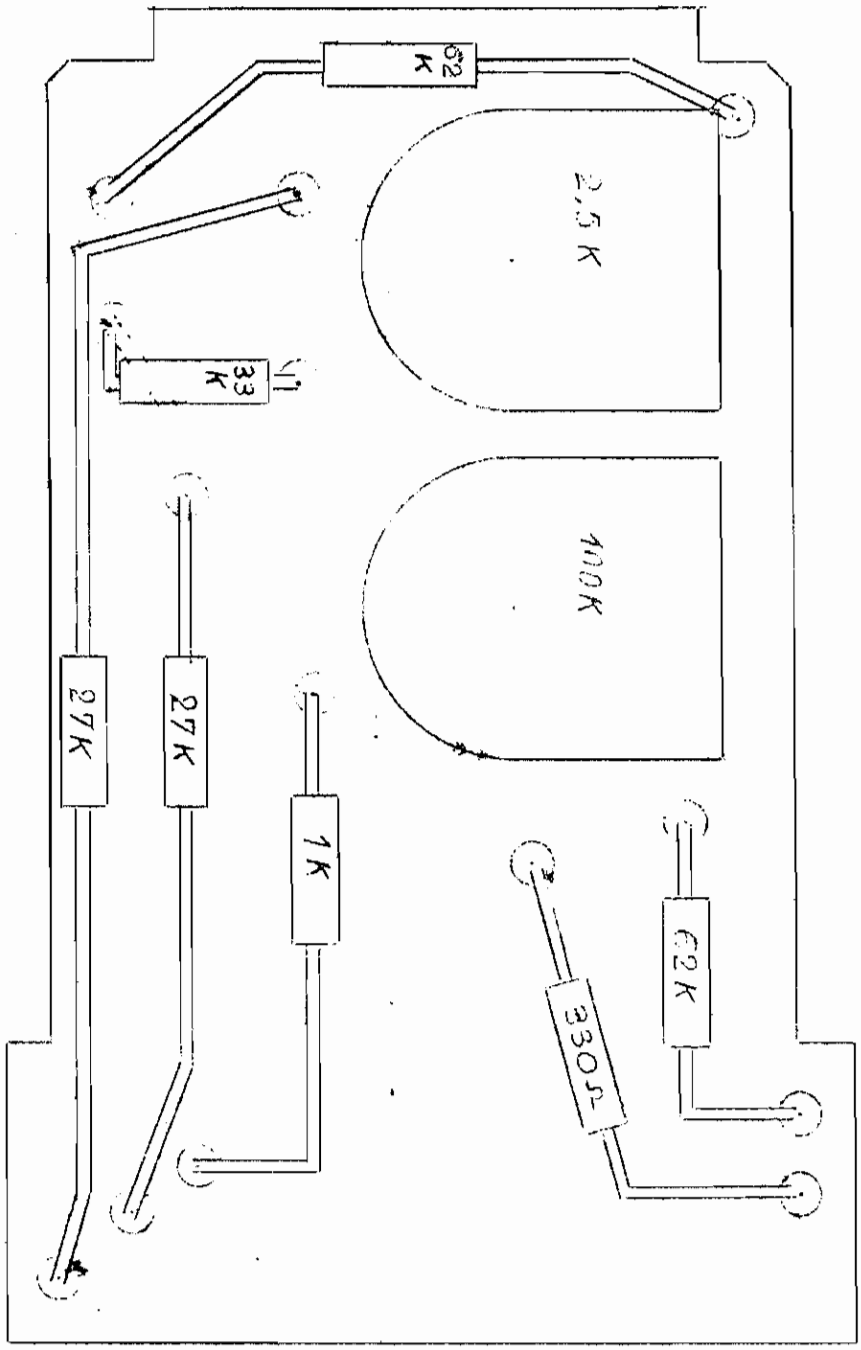


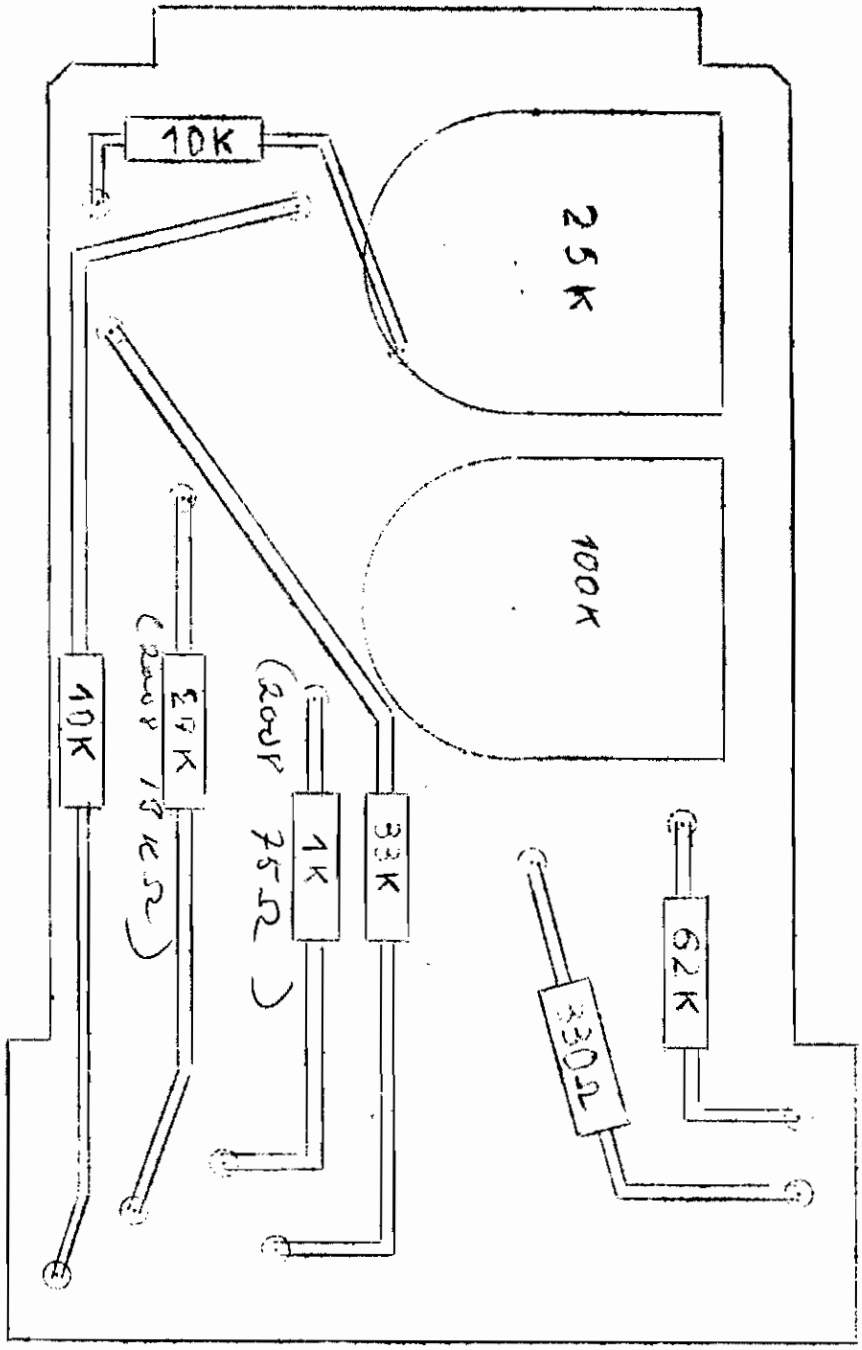
Schéma de cablage

objectif auto S 8

BEAULIE

S. A V. 20/1

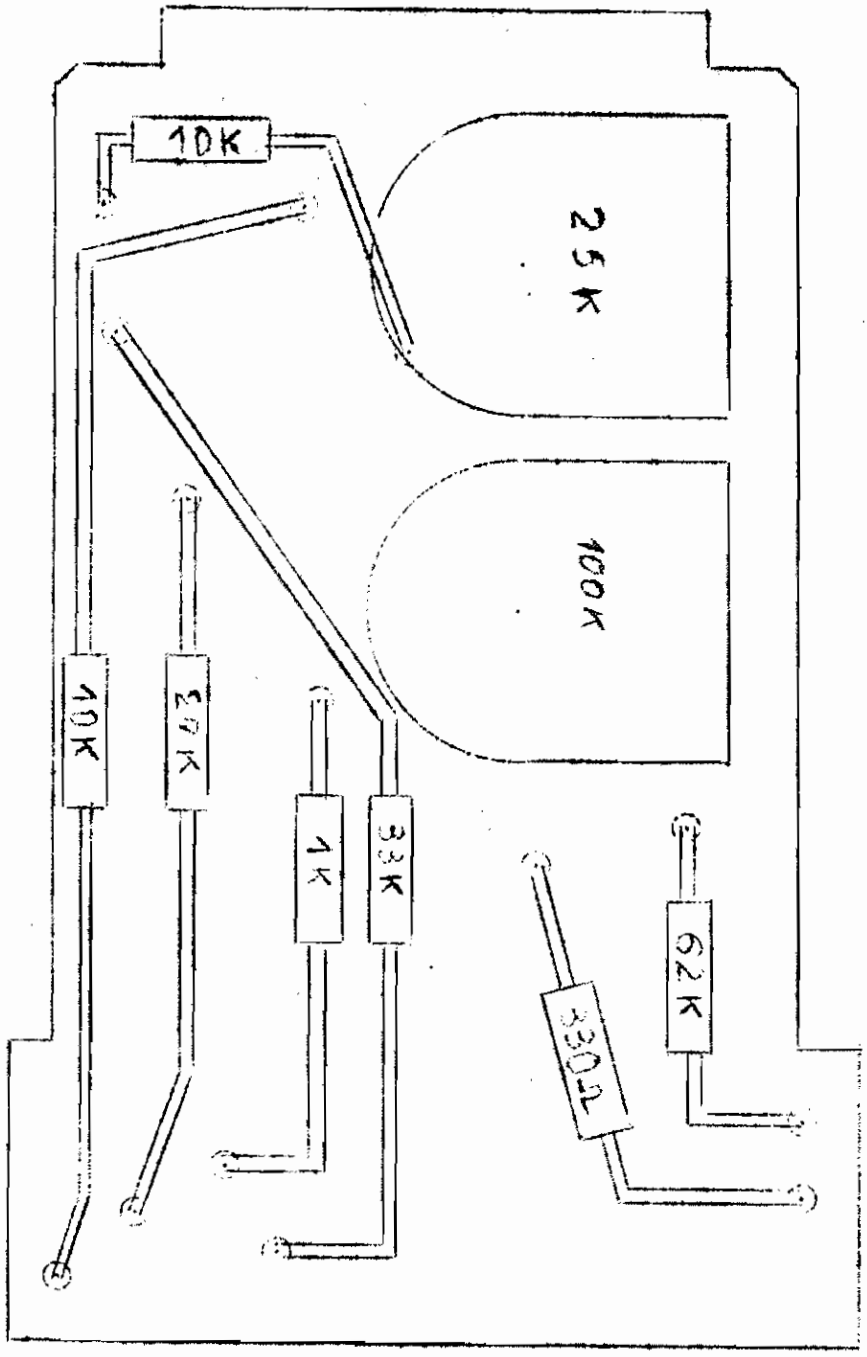
N° 11095



BEAULIEU

S.A.V. 20/20

N° 11095x1



BEAULIEU

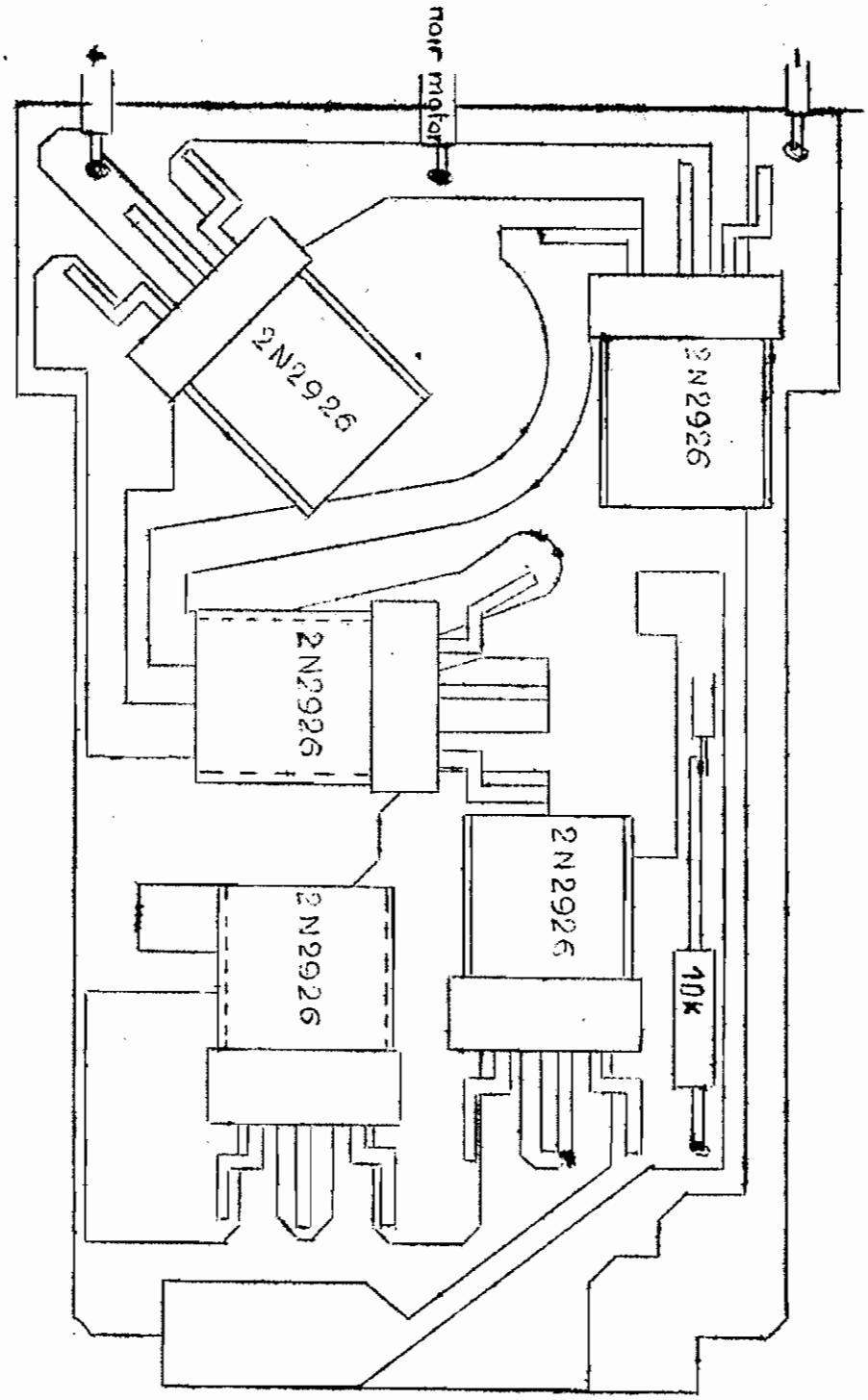
S.A.V. 20/20

N° 11095x1

BEAULIEU

S.A.V. 20/20

N° 11096



BEAULIEU

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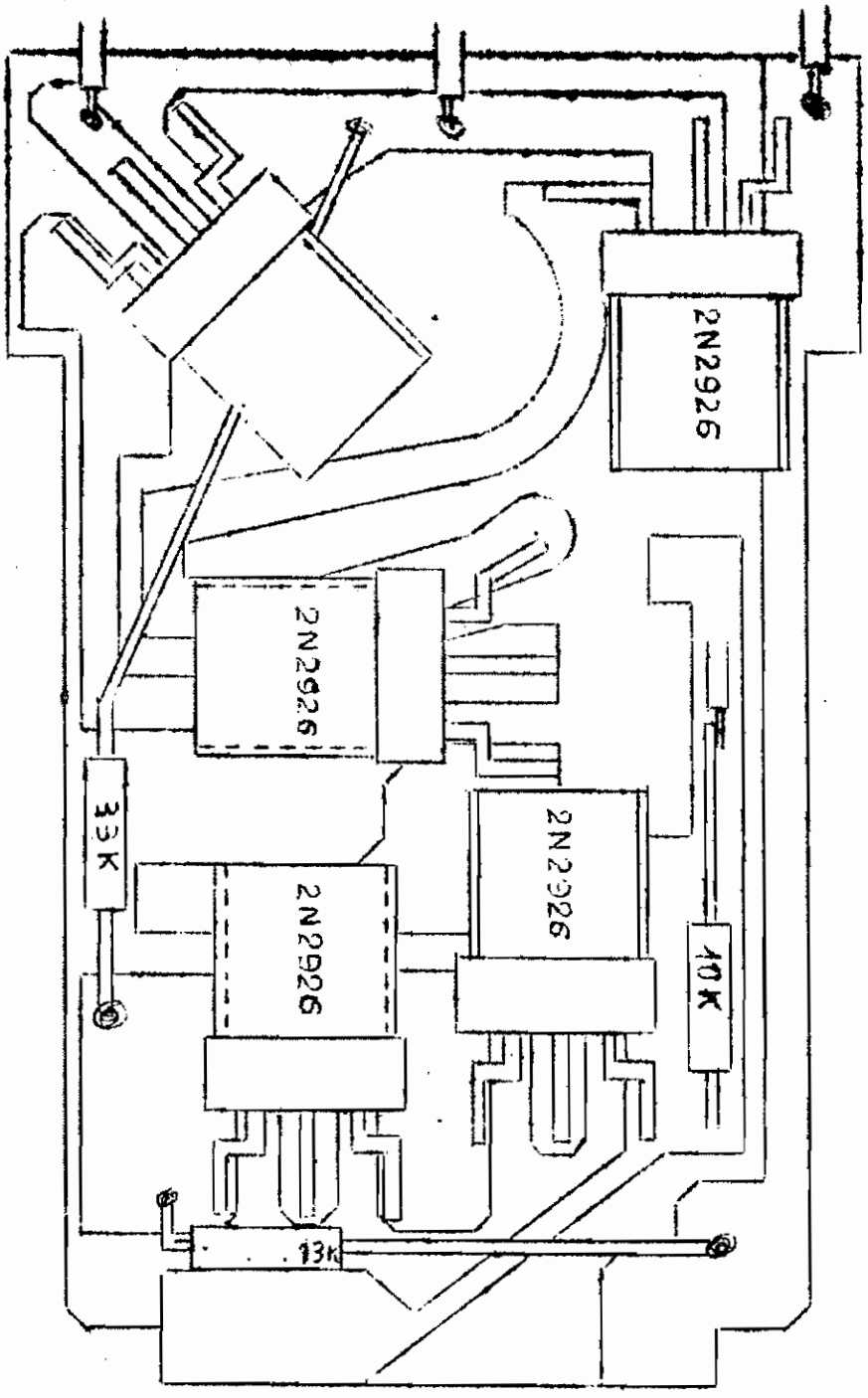
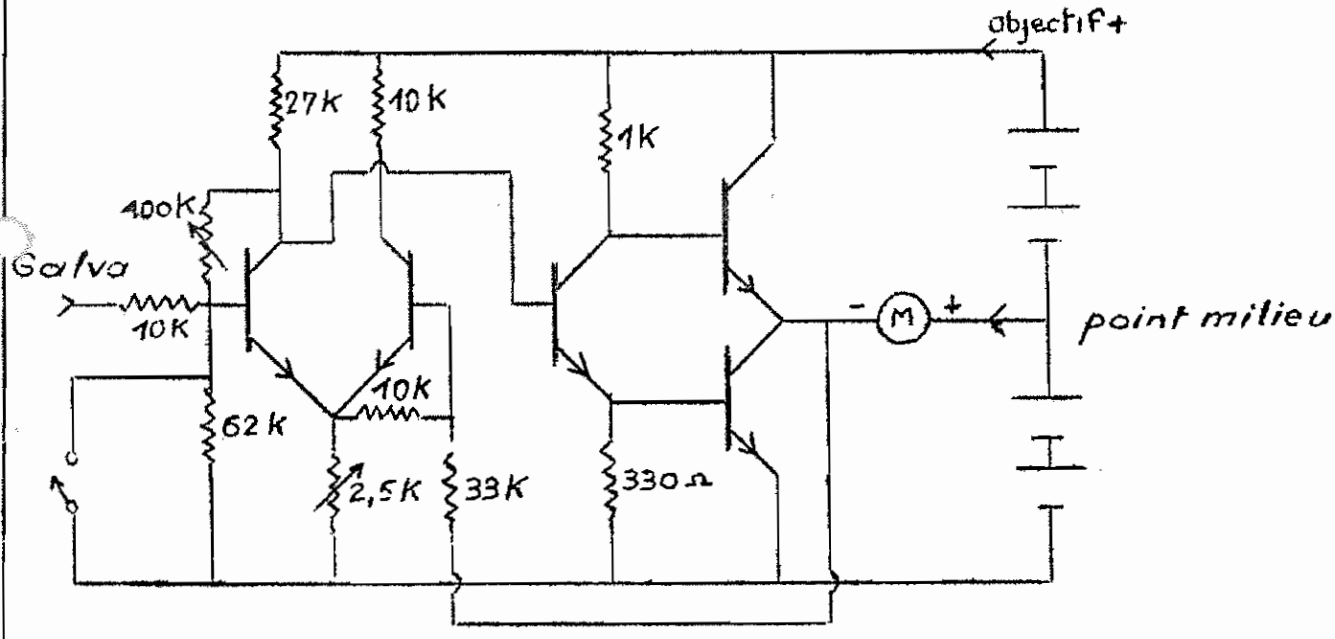
N° 11096x1



BEAULIEU

A.V. 20/20

N° 1196x2



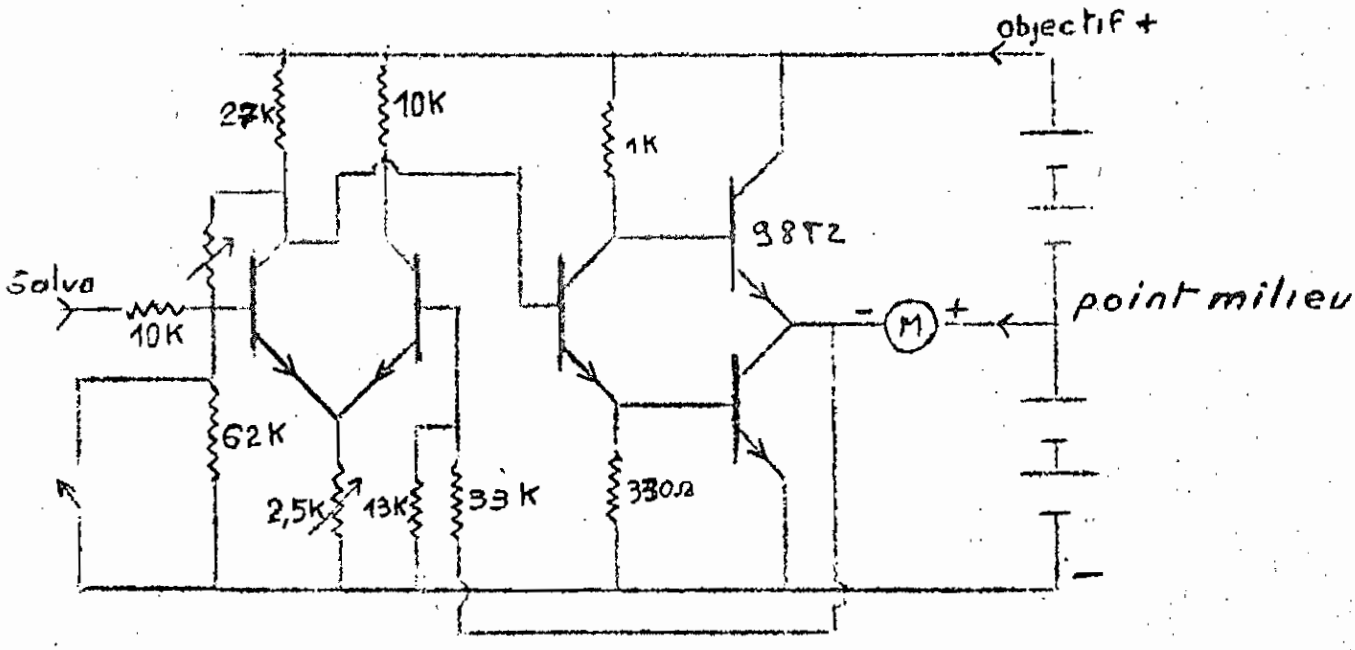
Transistors 2N2926

Objectif automatique S-8

BEAULIEU

S.A.V. 10/20

N° 1097x1



Transistors 2N2926

Objectif Automatique S-8

BEAULIEU

S.A.V. 10/20

N° 1097x2

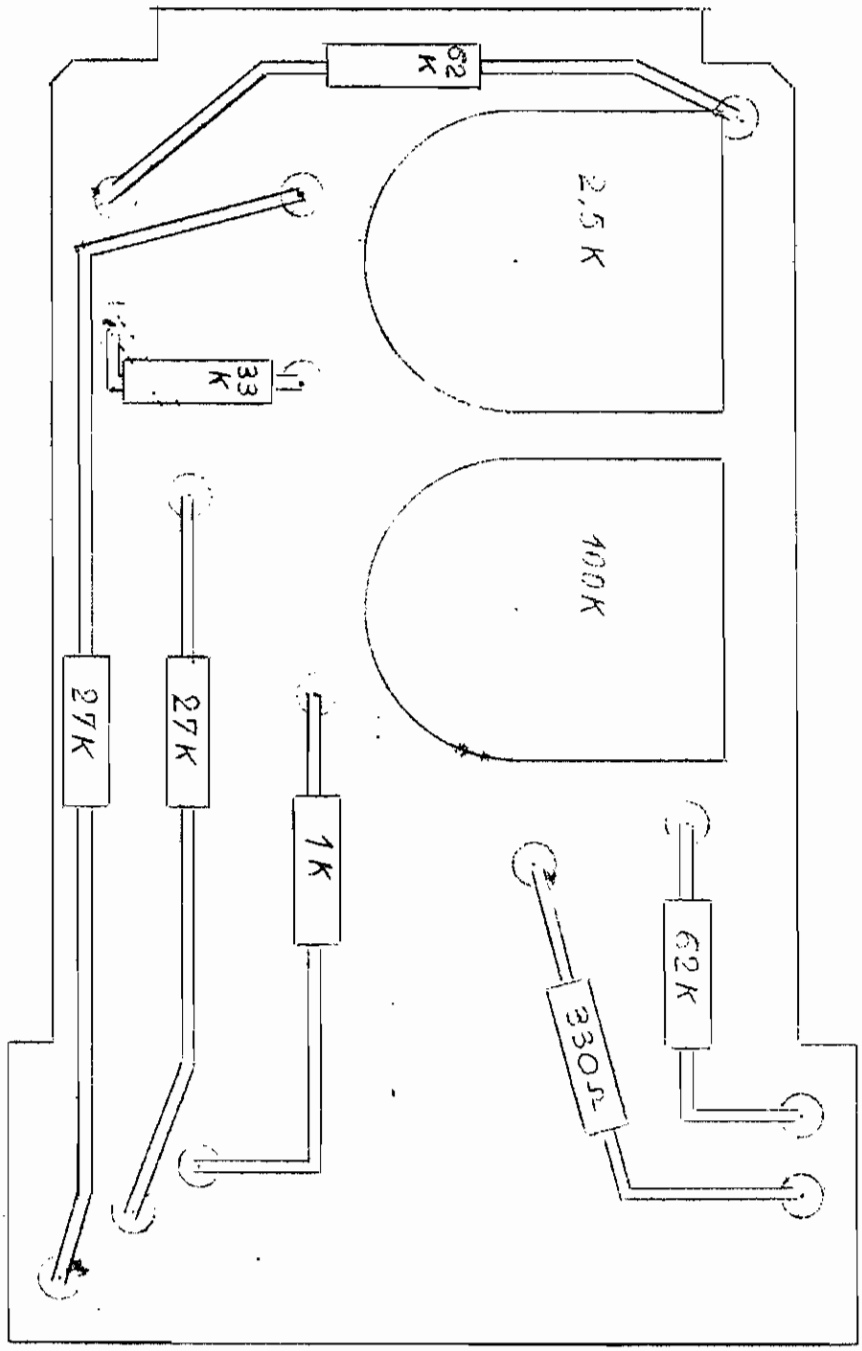


Schéma de cablage objectif auto S 8	BEAULI S.A.V. 20/ N° 11095

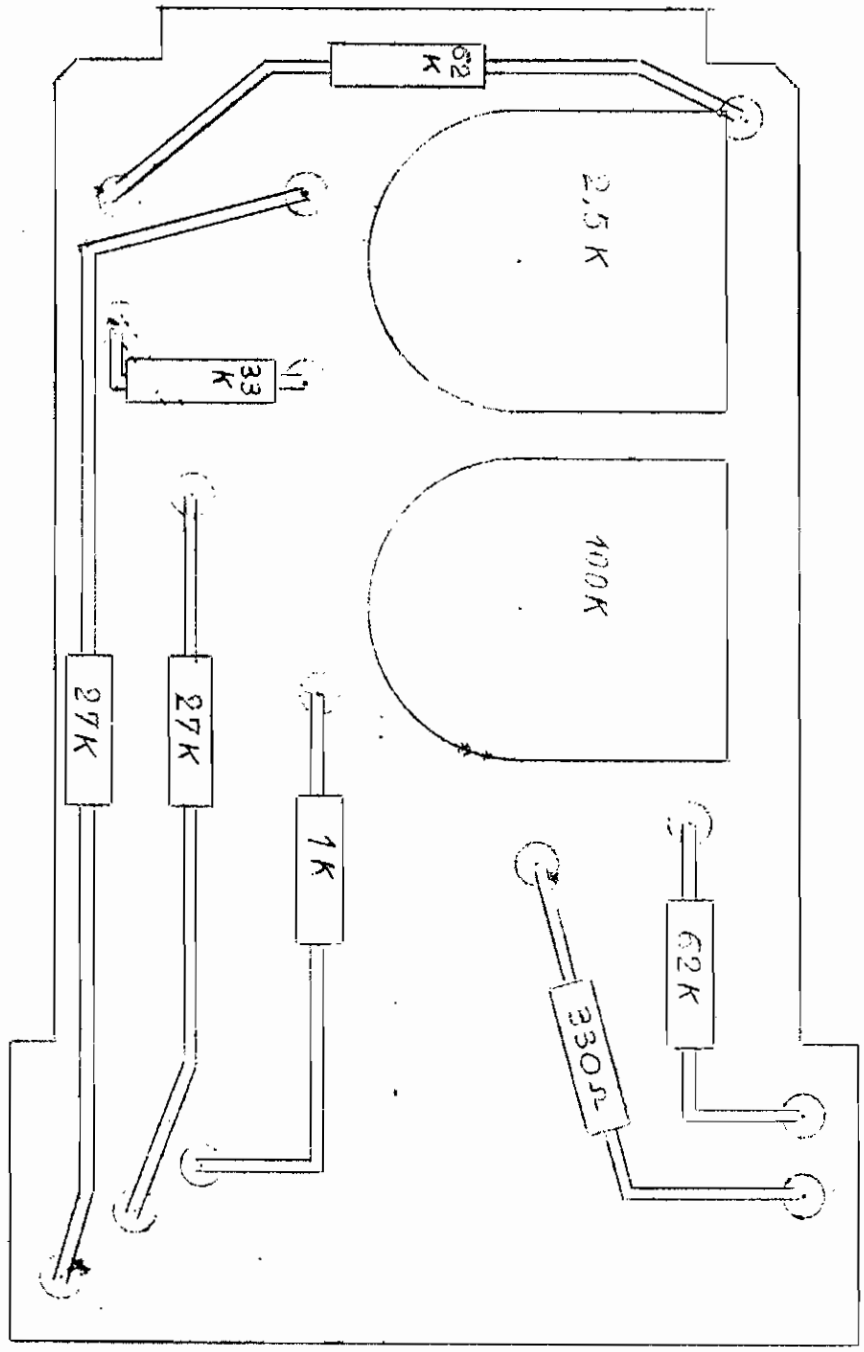


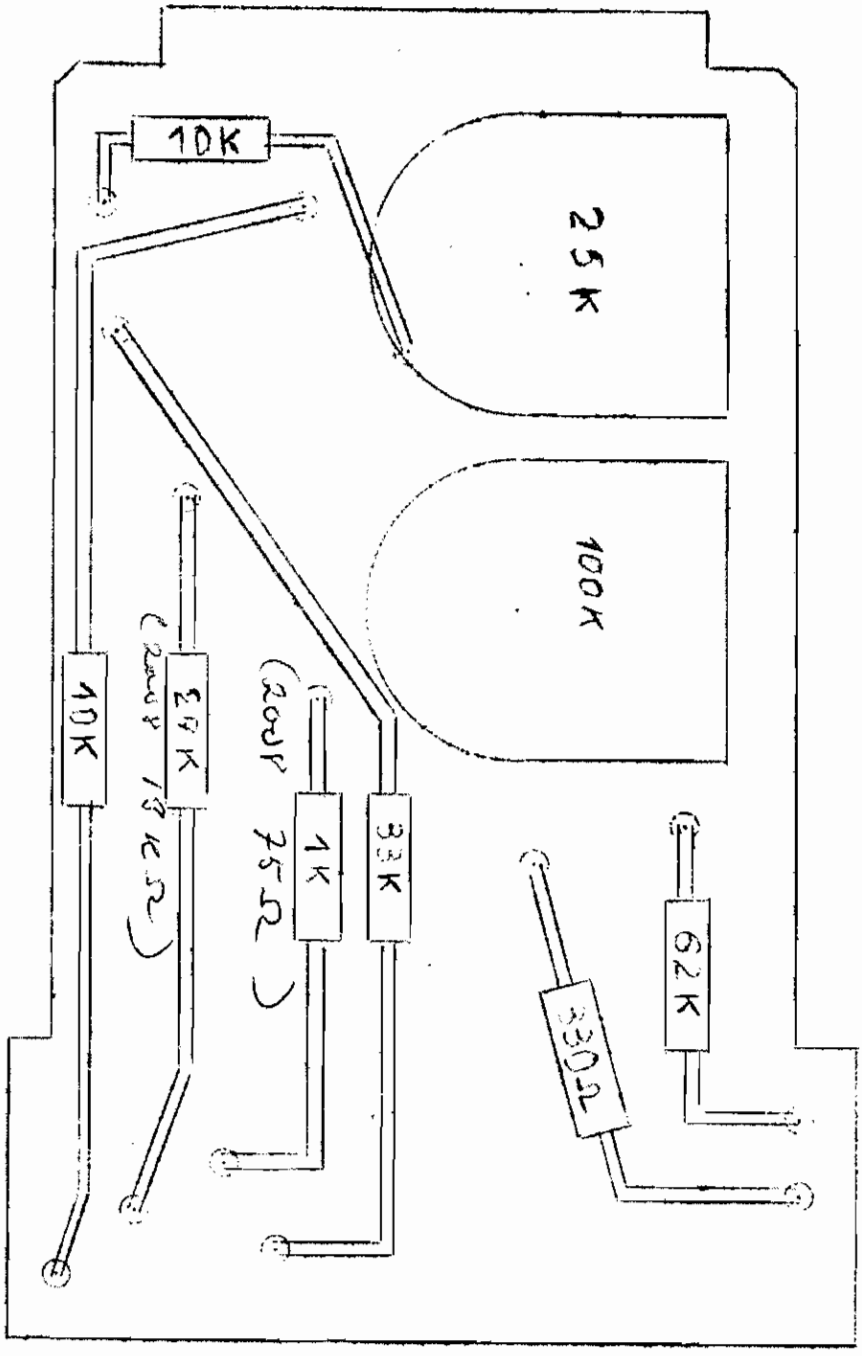
Schéma de cablage

objectif auto S 8

BEAULIE

S.A.V. 20/

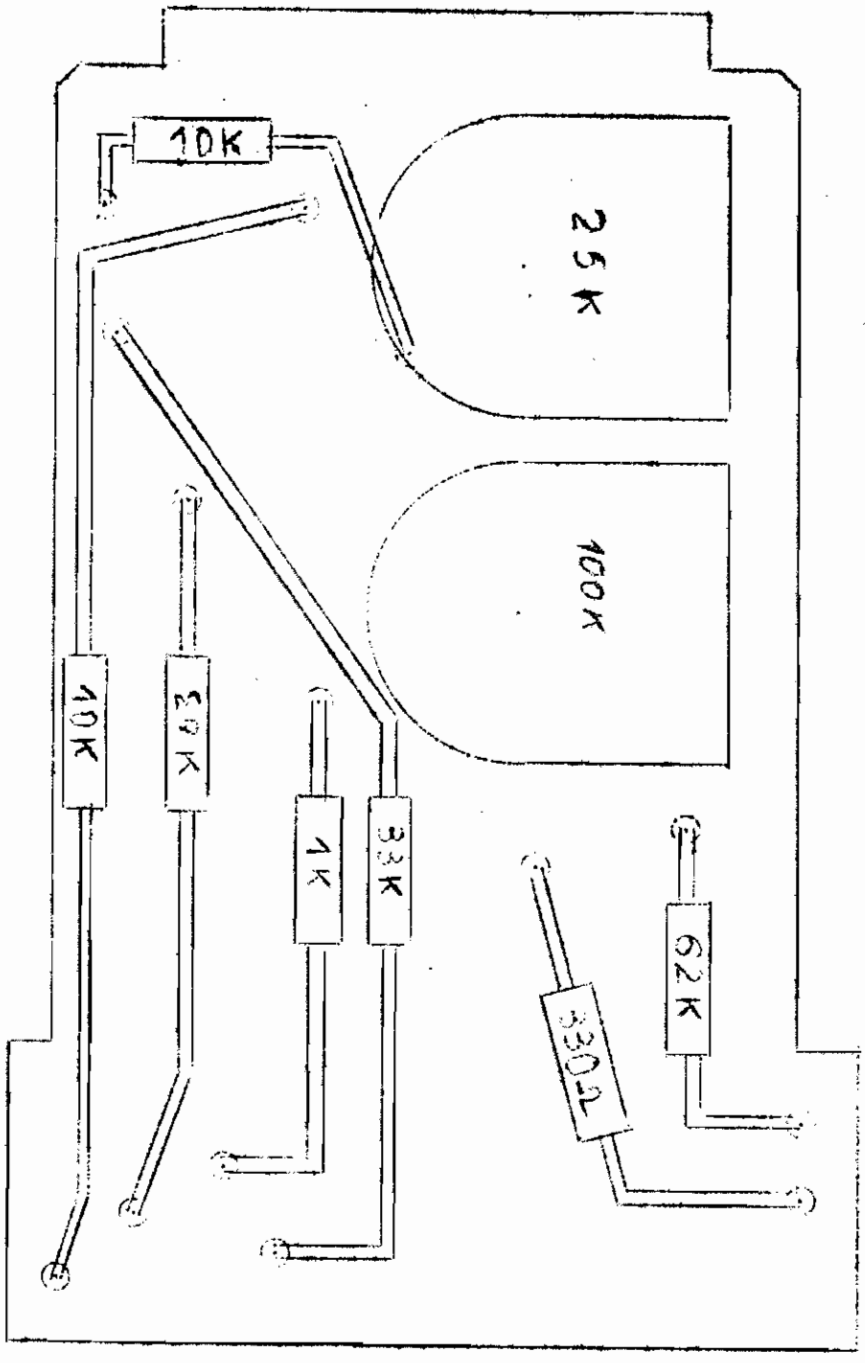
N° 11095



BEAULIEU

S.A.V. 20/20

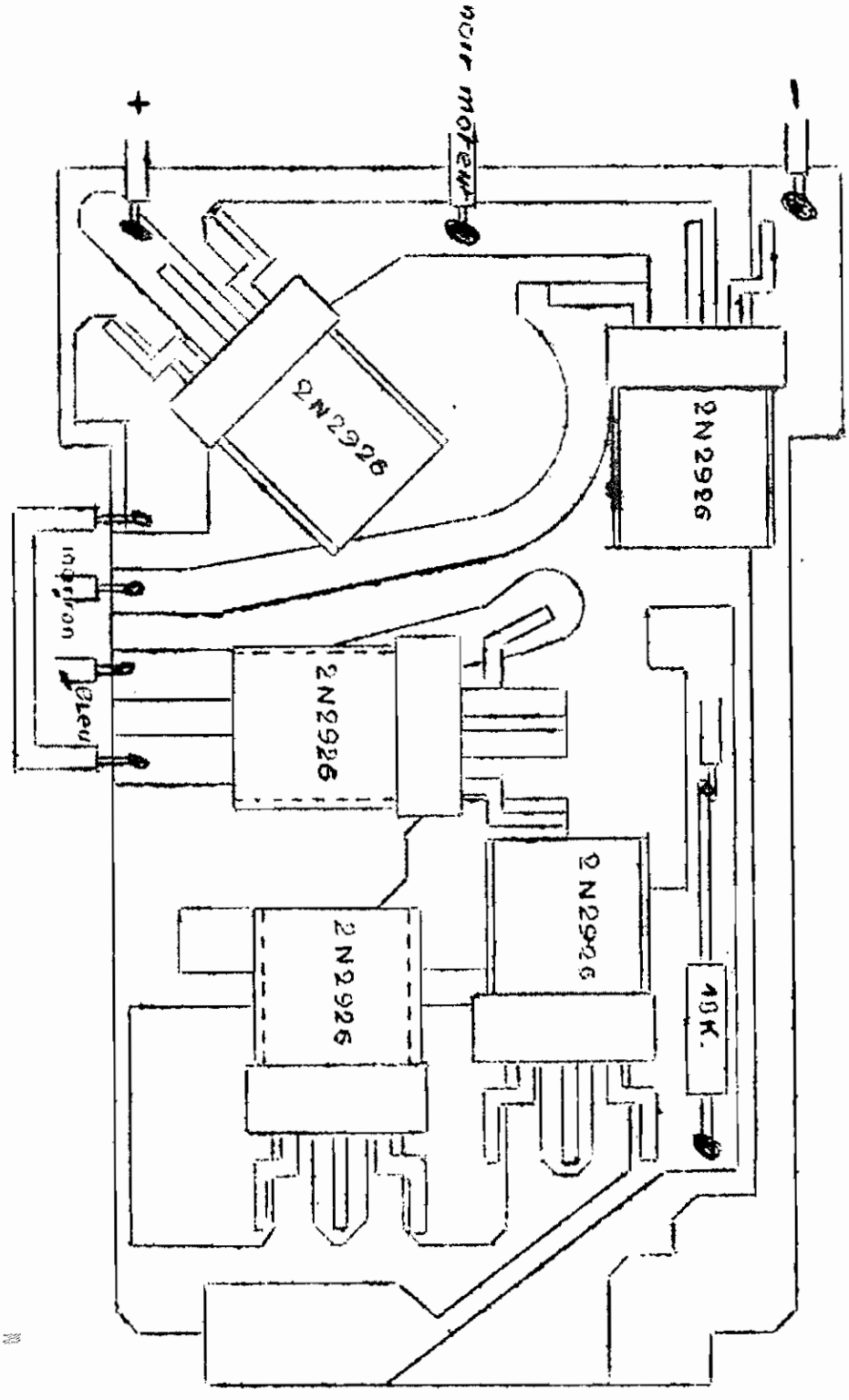
N° 11095x1



BEAULIEU

S.A.V. 20/20

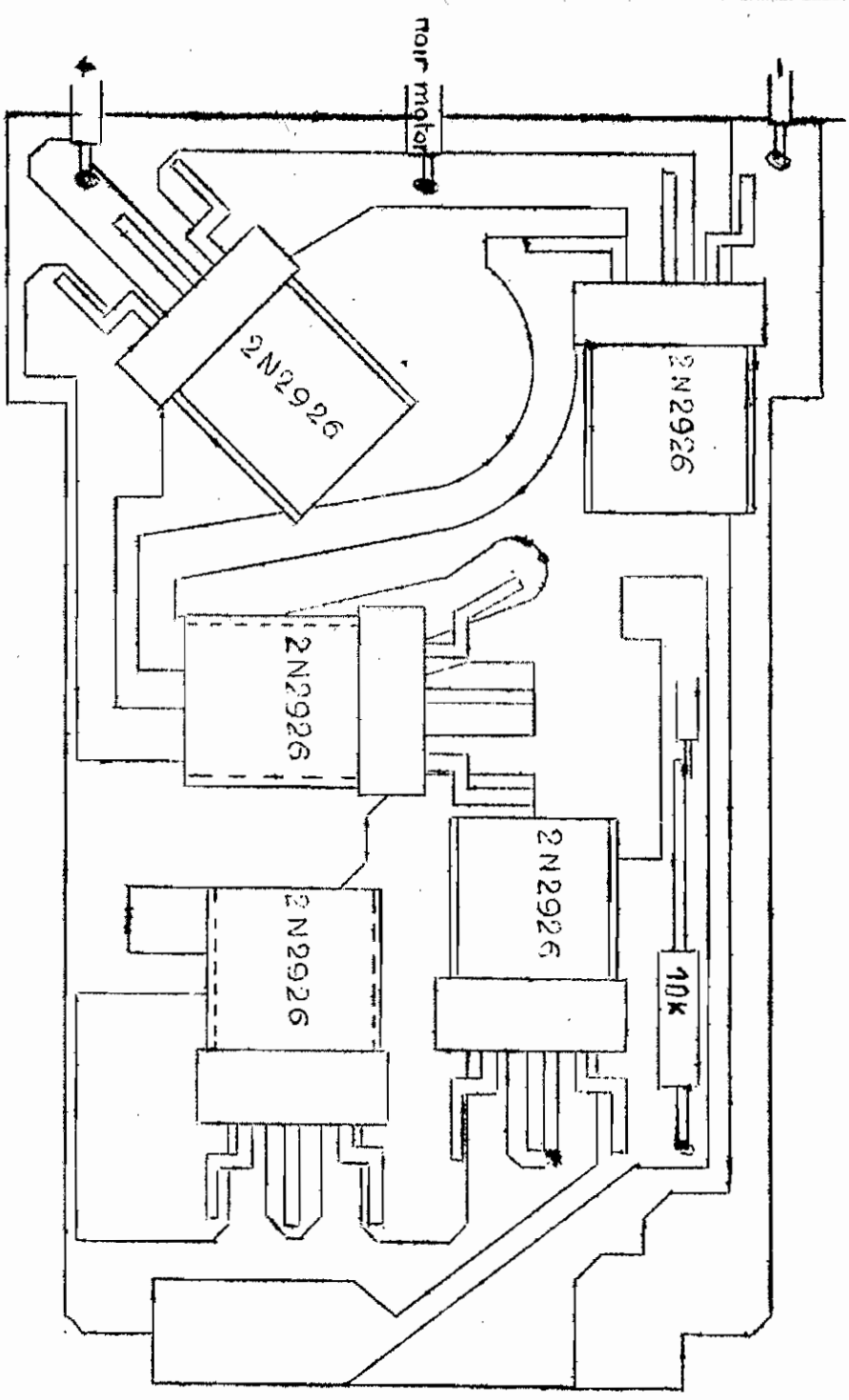
N° 11095x1



BEAULIEU

S.A.V. 20/20

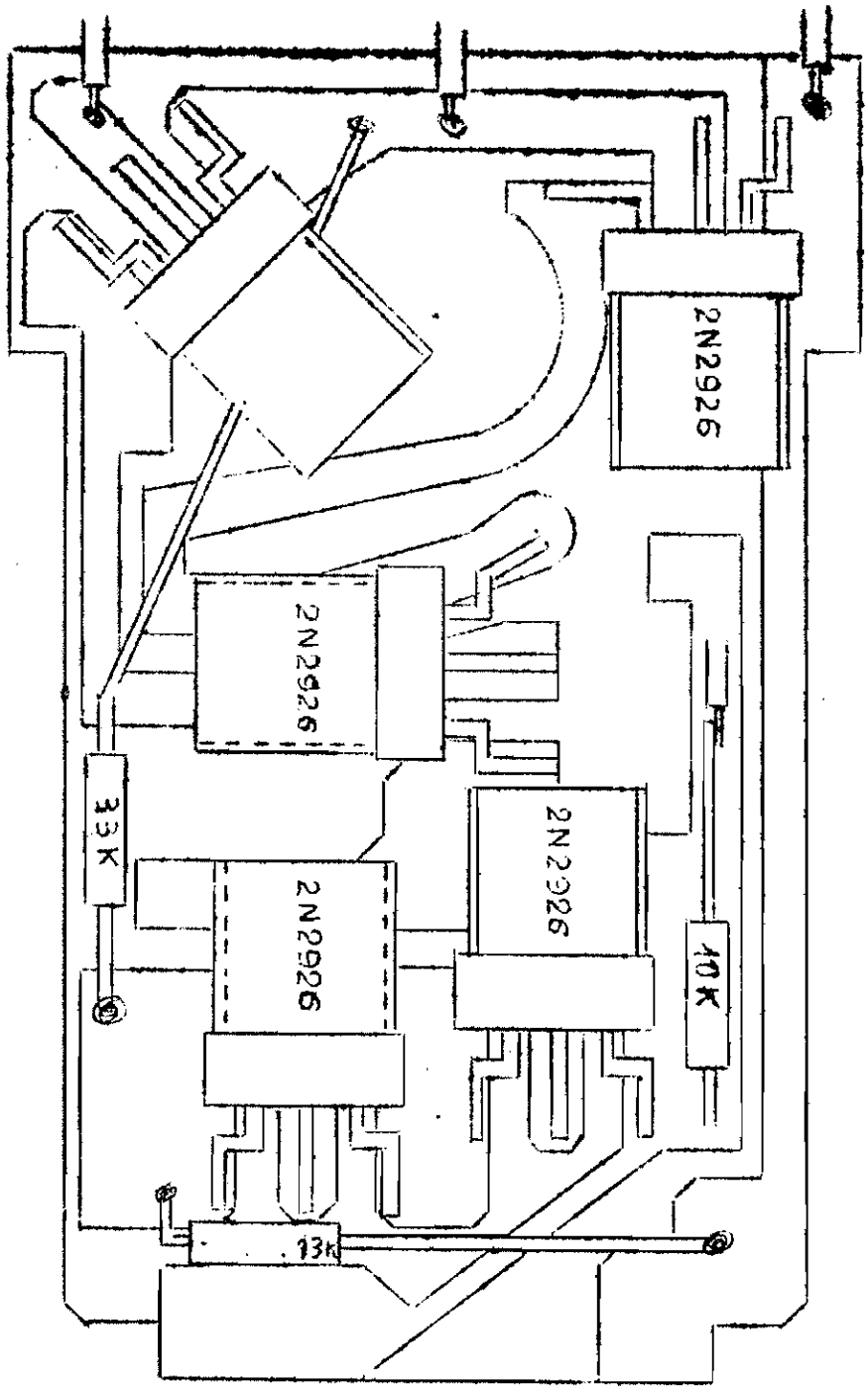
N° 11096



BEAULIEU

S.A.V. 20/20

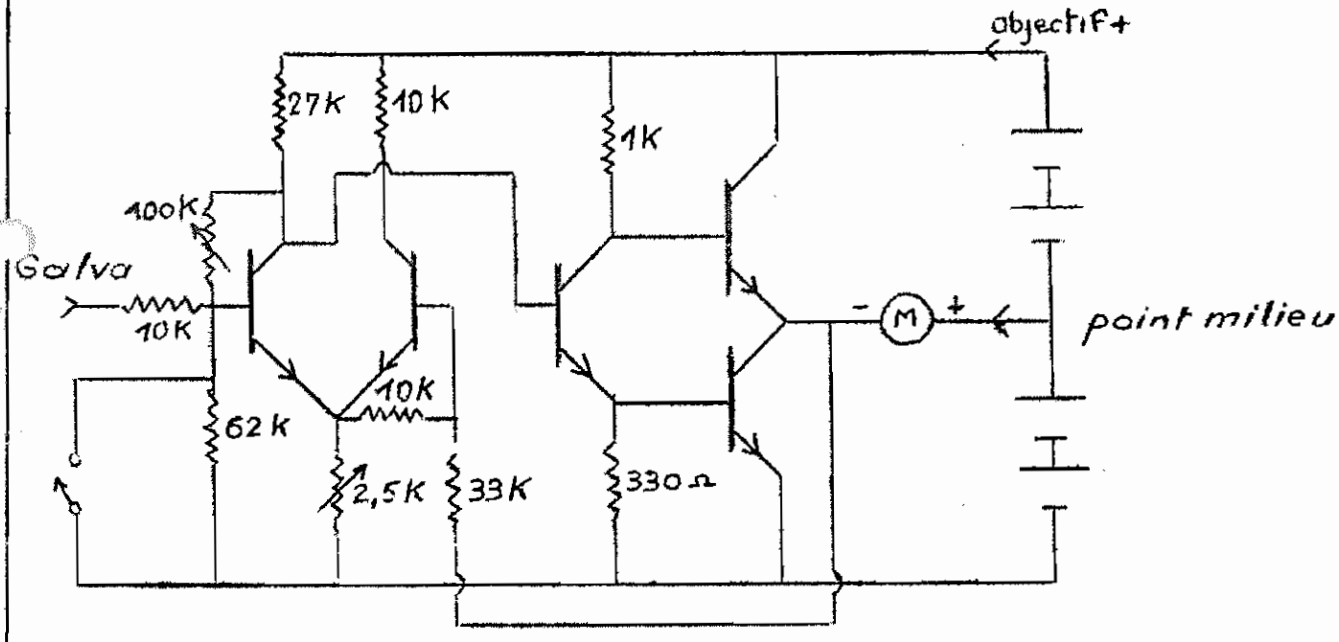
N° 11096x1



BEAULIEU

A.V. 20/20

N [illegible]×2



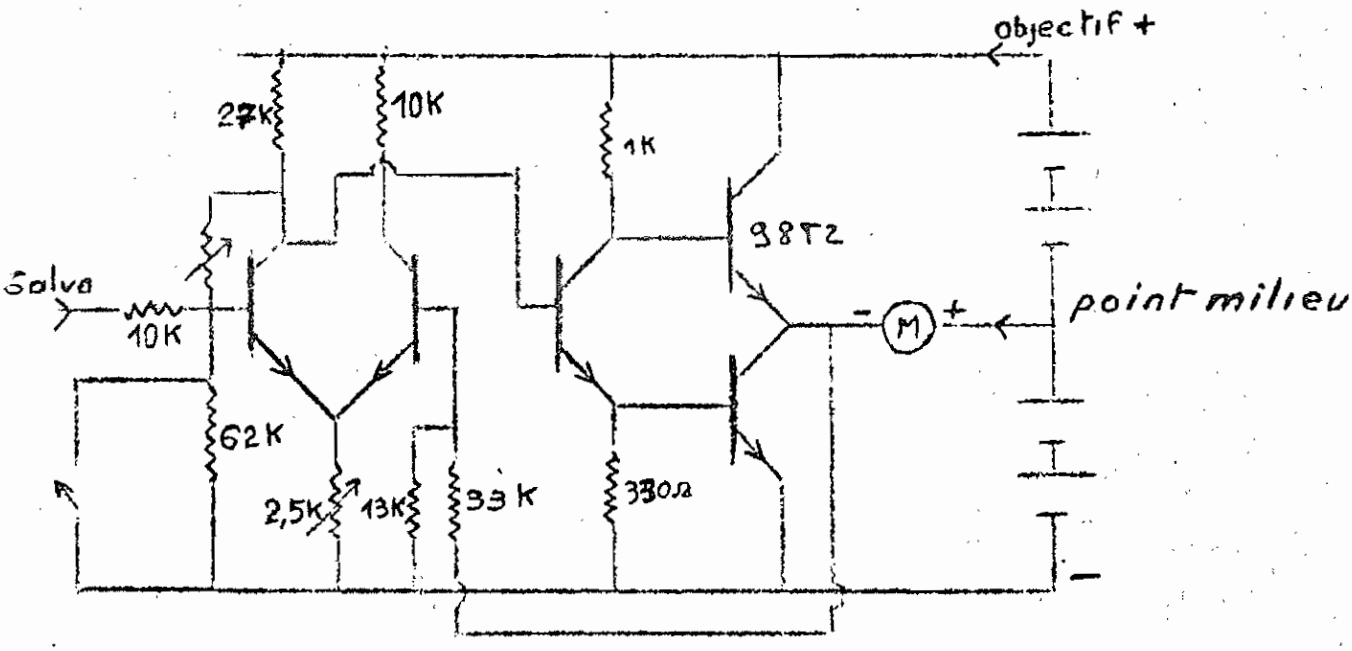
Transistors 2N2926

Objectif automatique S-8

BEAULIEU

S.A.V. 10/20

N° 11097x1



Transistors 2N2926

Objectif Automatique S-8

BEAULIEU

S.A.V. 10/20

N° 11097x2

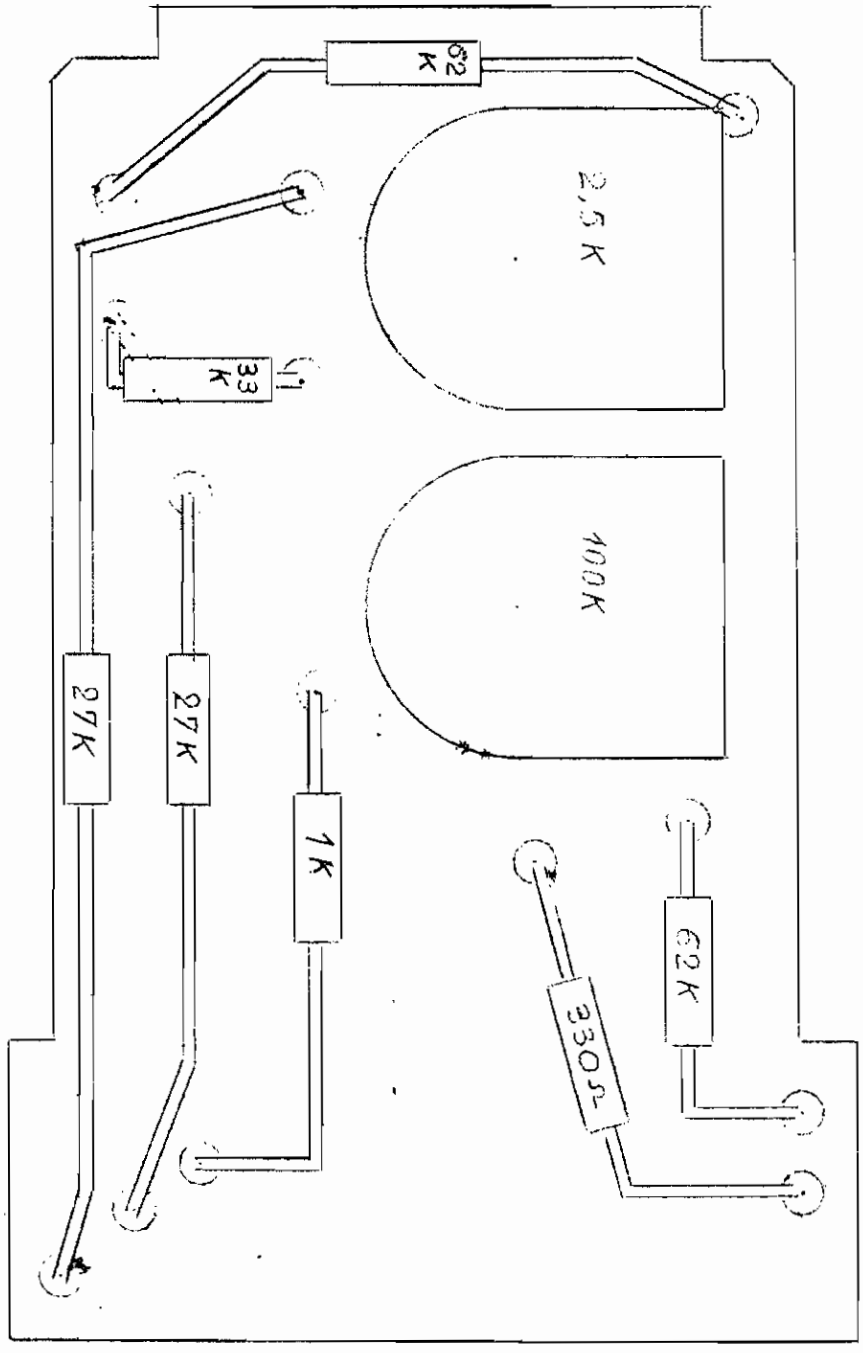


Schéma de cablage

objectif auto S 8

BEAULI

S.A.V. 20/

N° 11095

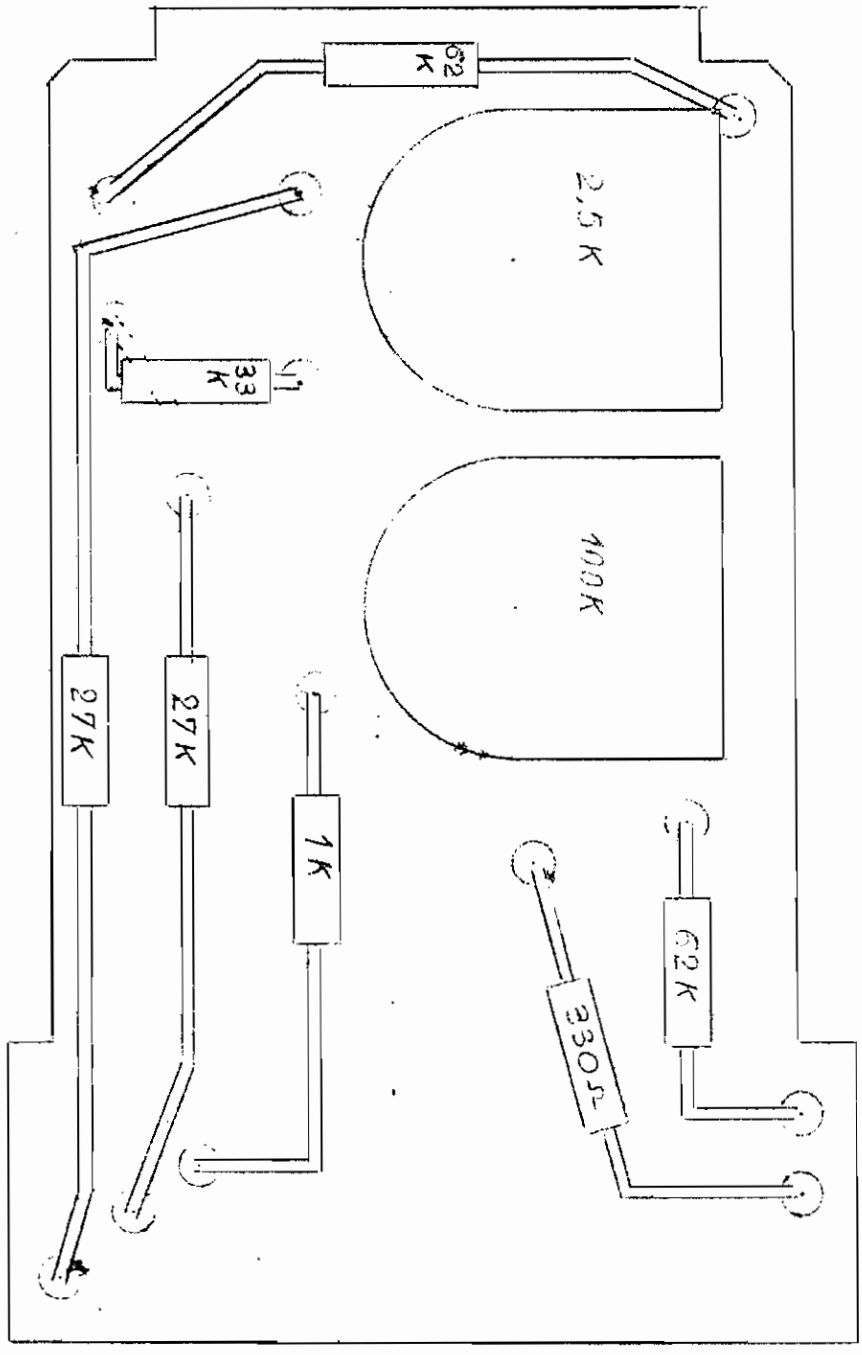


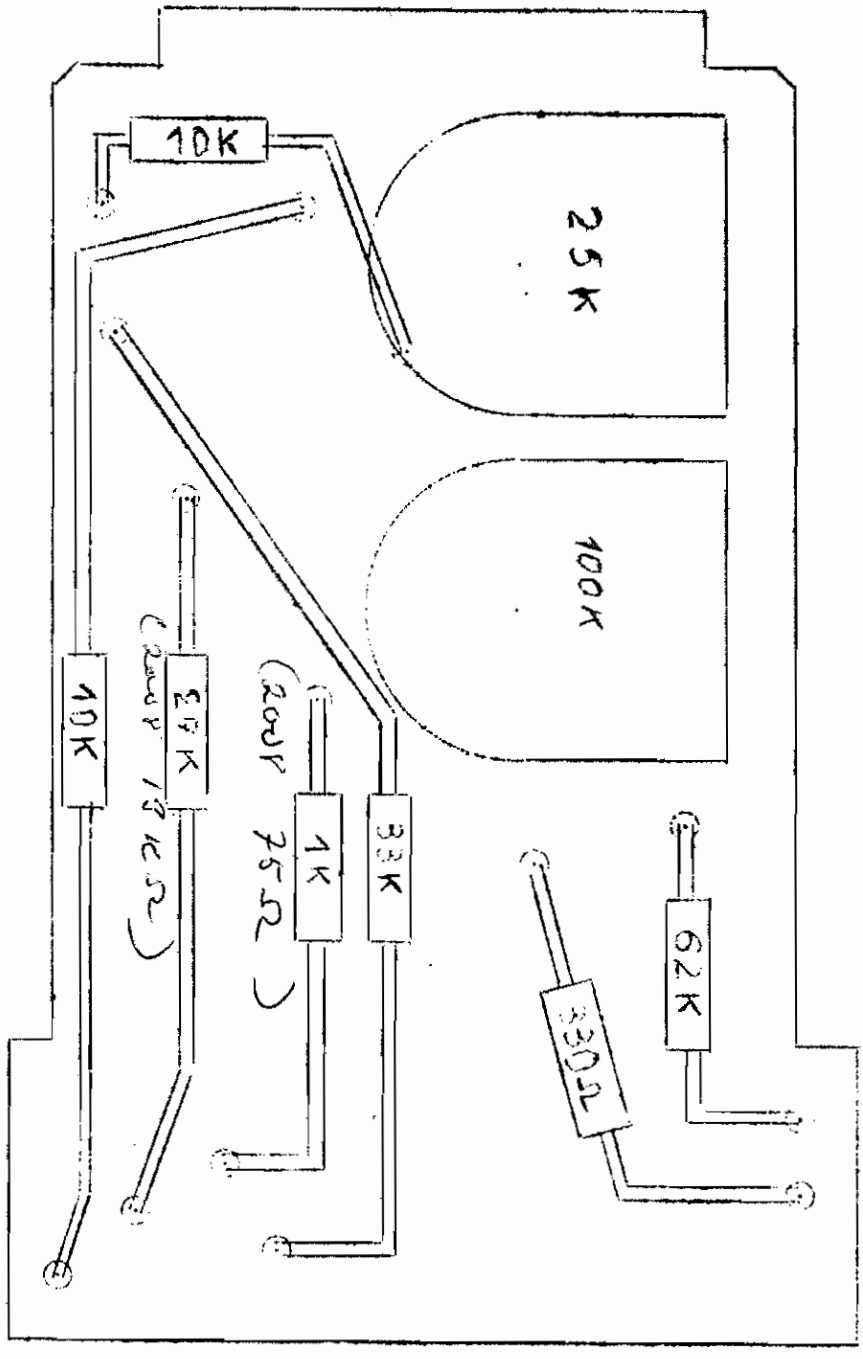
Schéma de cablage

objectif auto S 8

BEAULIE

S.A.V. 20/

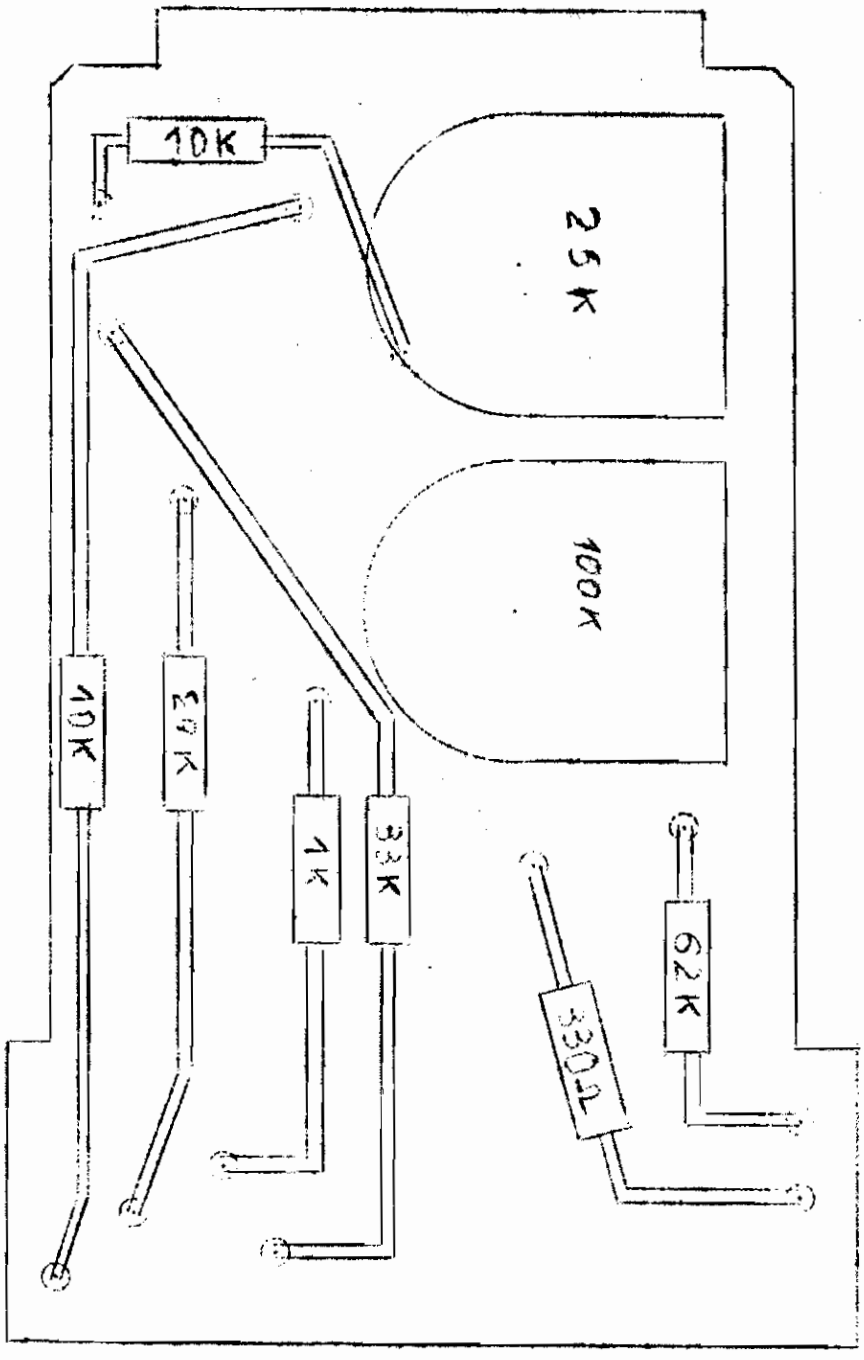
N° 11095



BEAULIEU

S.A.V. 20/20

N° 11095x1



BEAULIEU

S.A.V. 20/20

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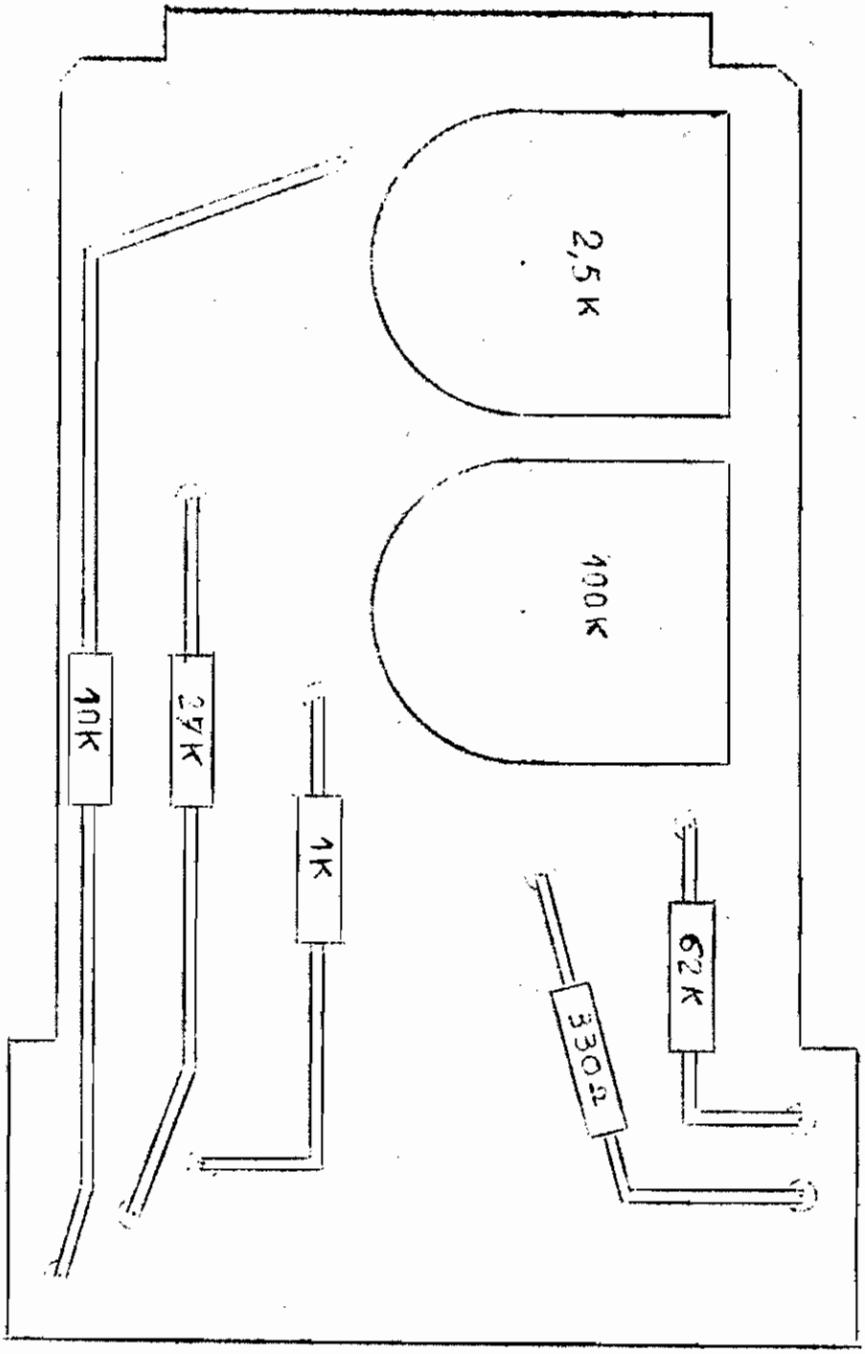

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S.A.V. 20/20

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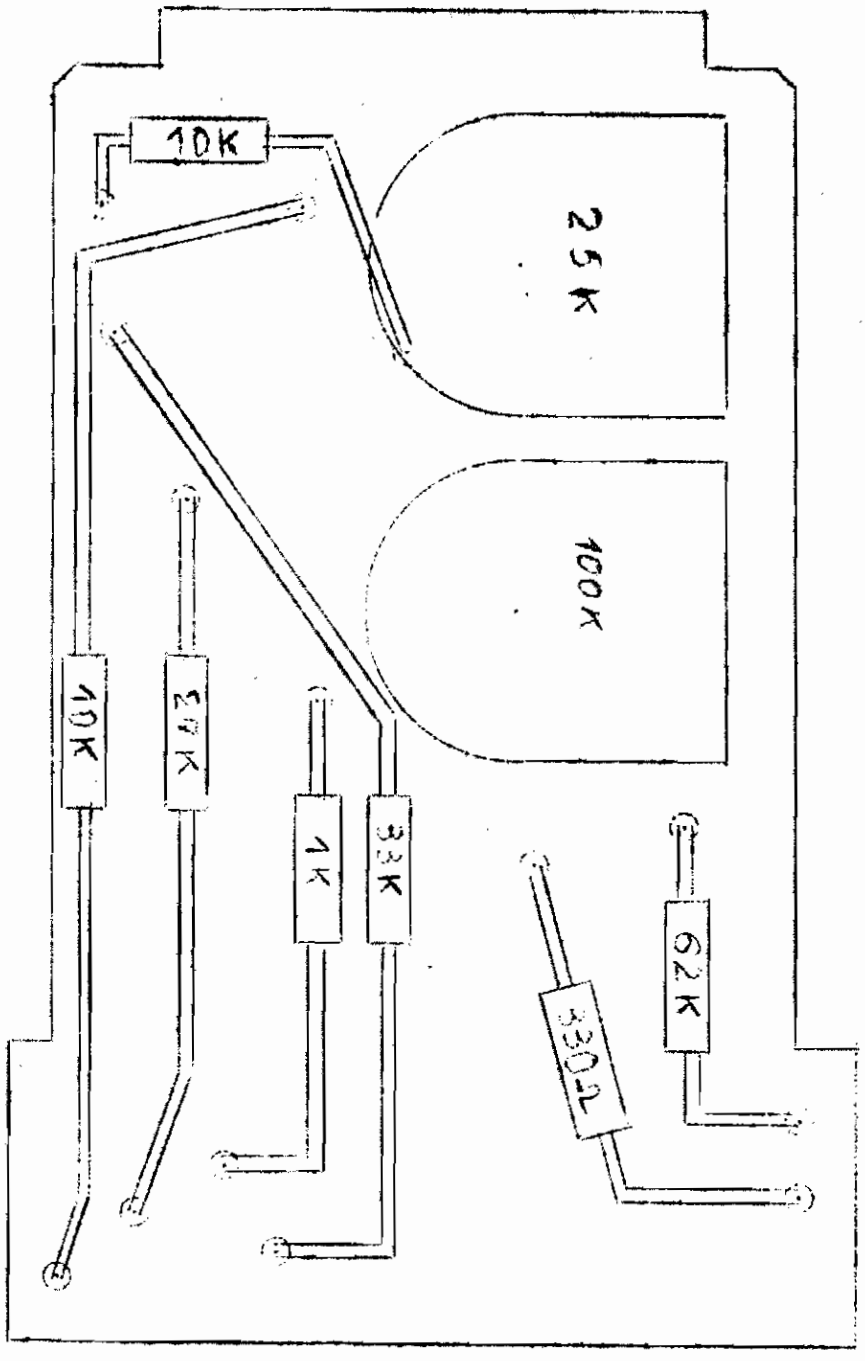
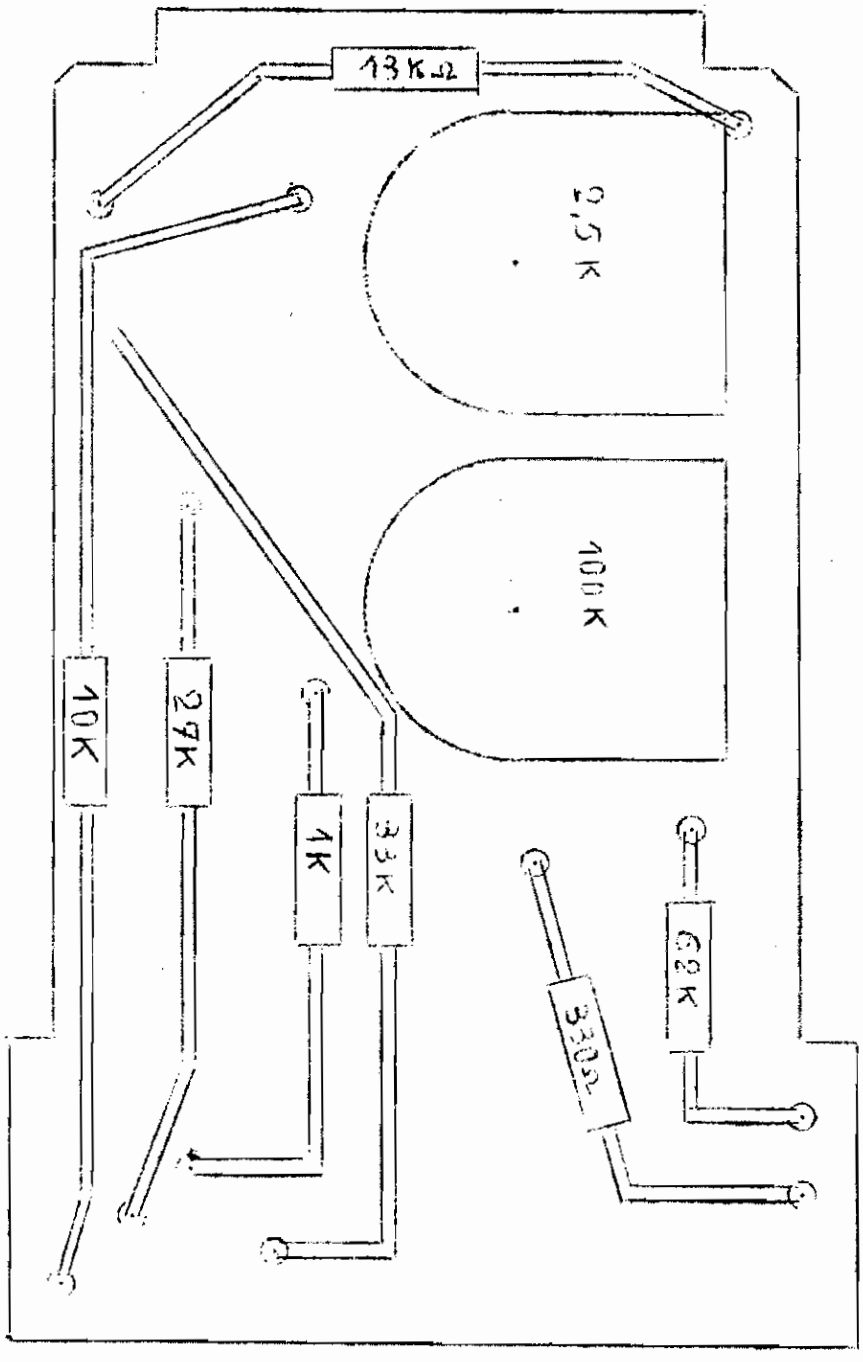


BEAULIEU

S.A.V. 20/20

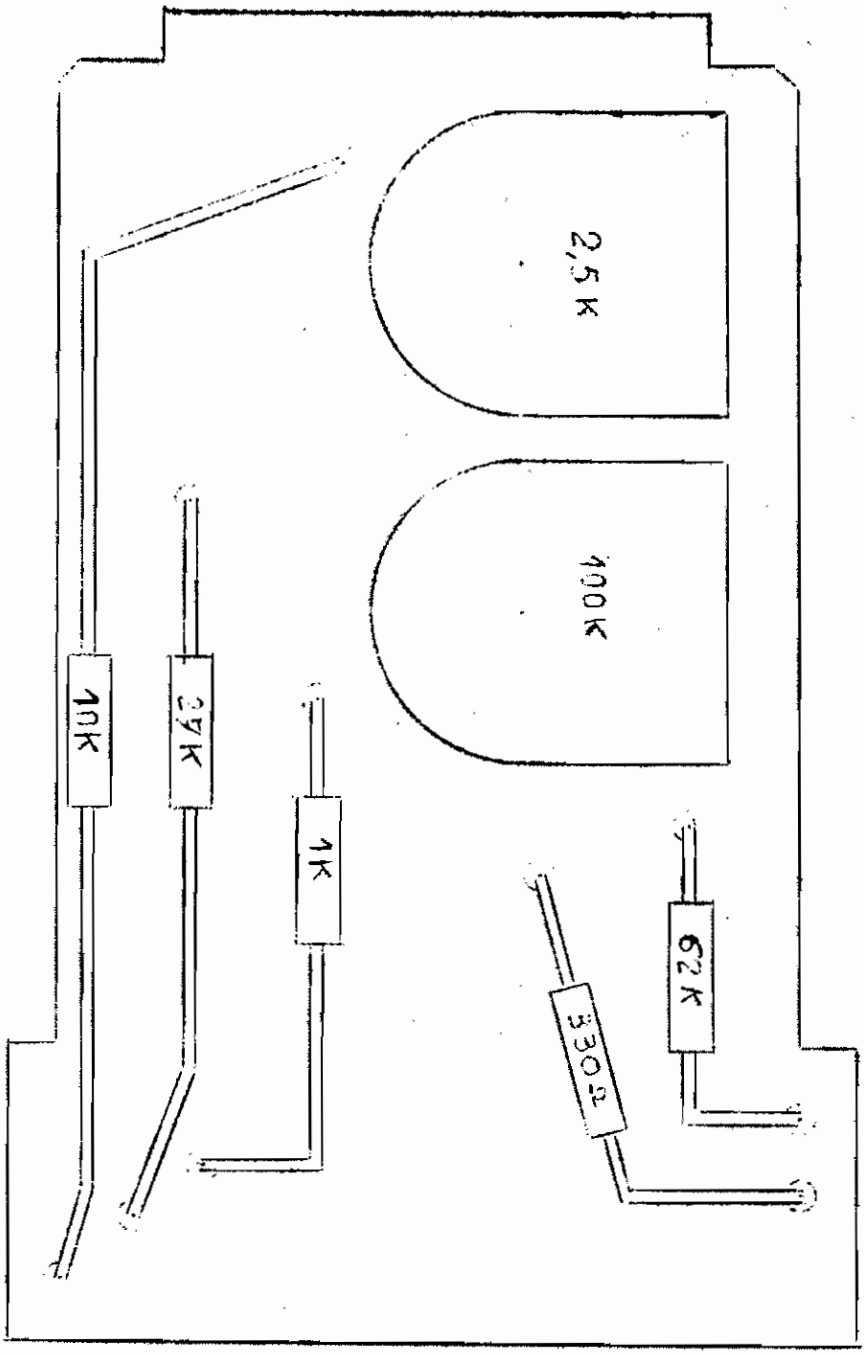
N° 11095x1



BEAULIEU

S.A.V. 90/11

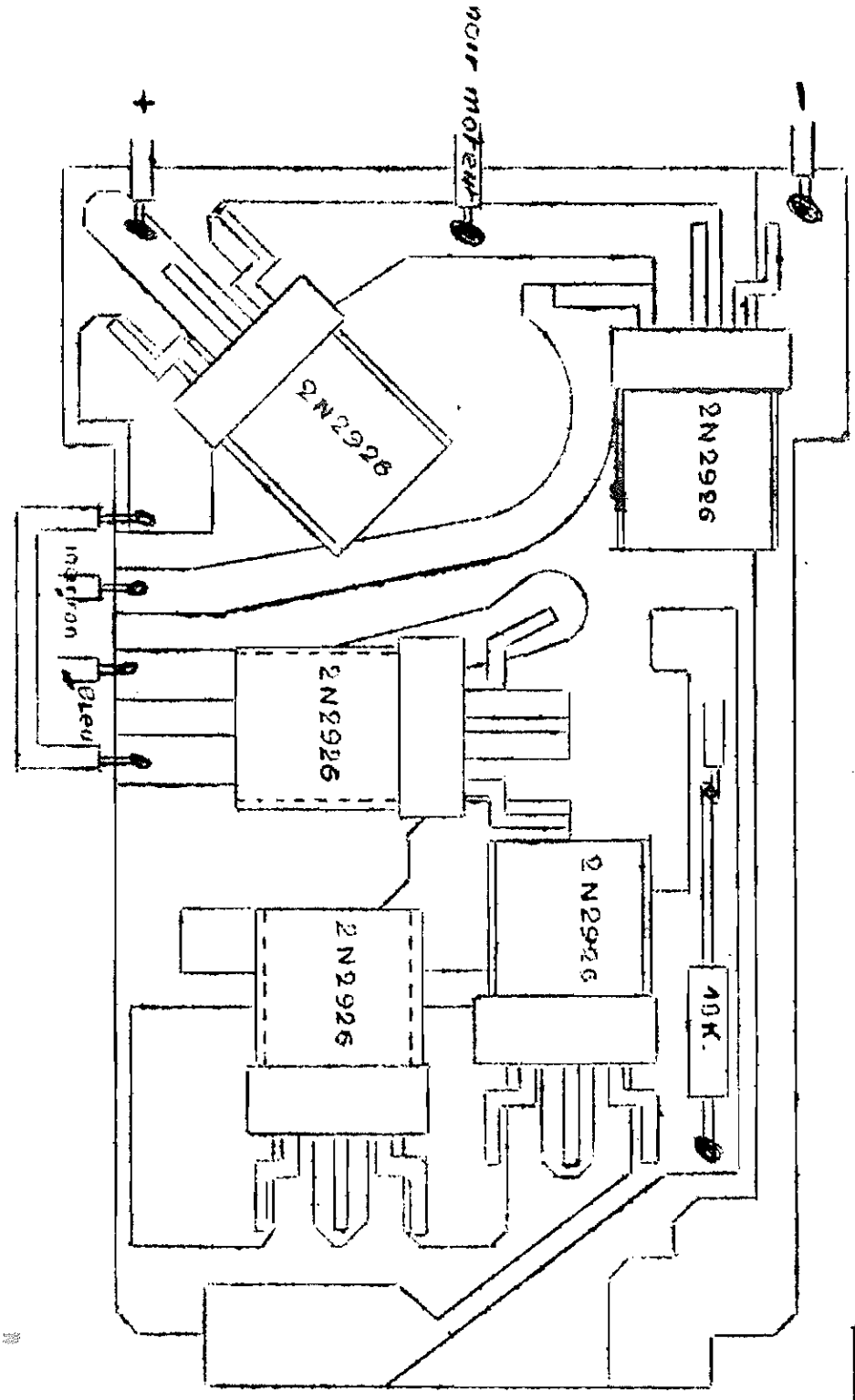
N° 11095 x 2



BEAULIEU

S.A.V. 20/20

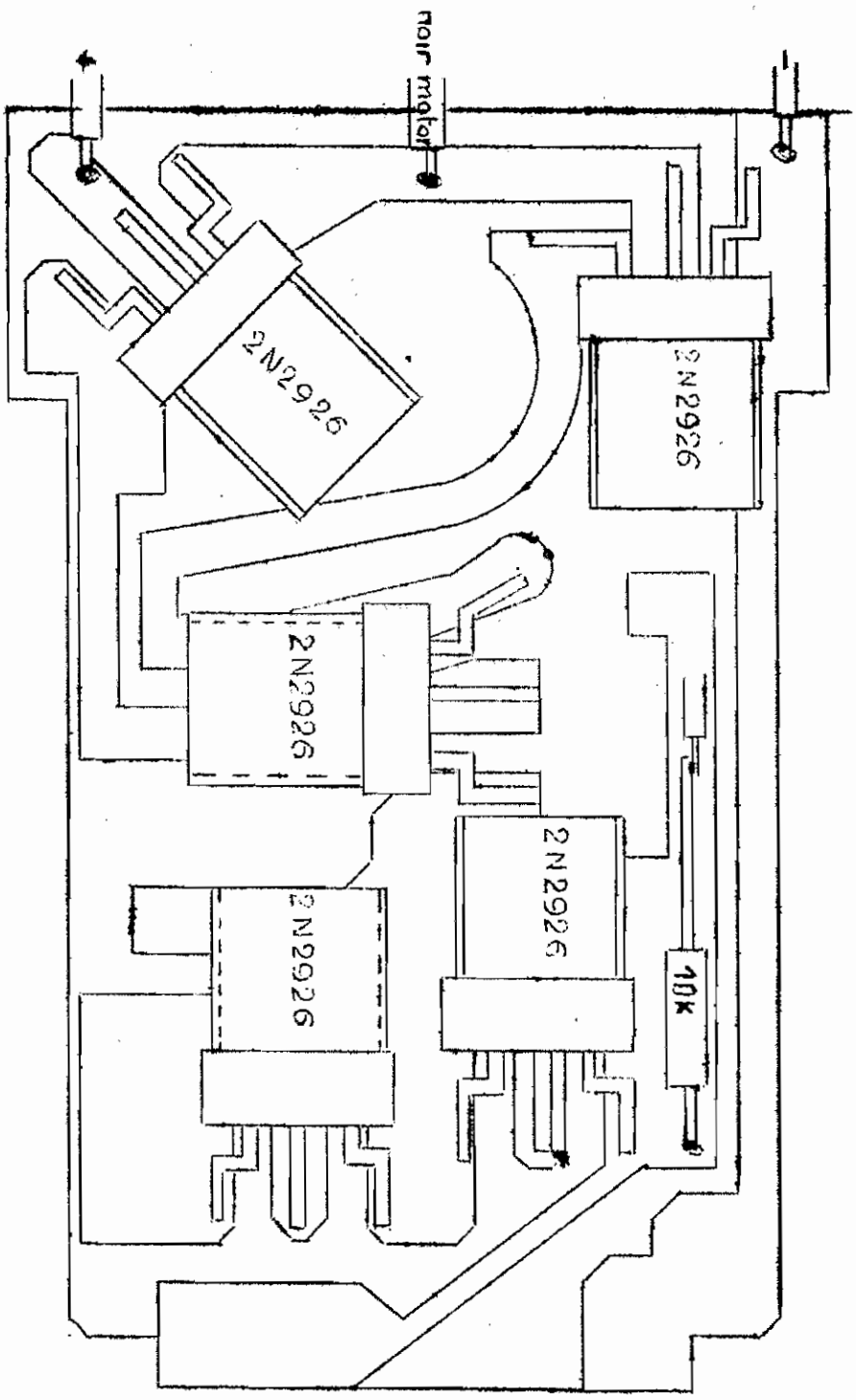
N° 11095x3



BEAULIEU

S.A.V. 20/20

N° 11096



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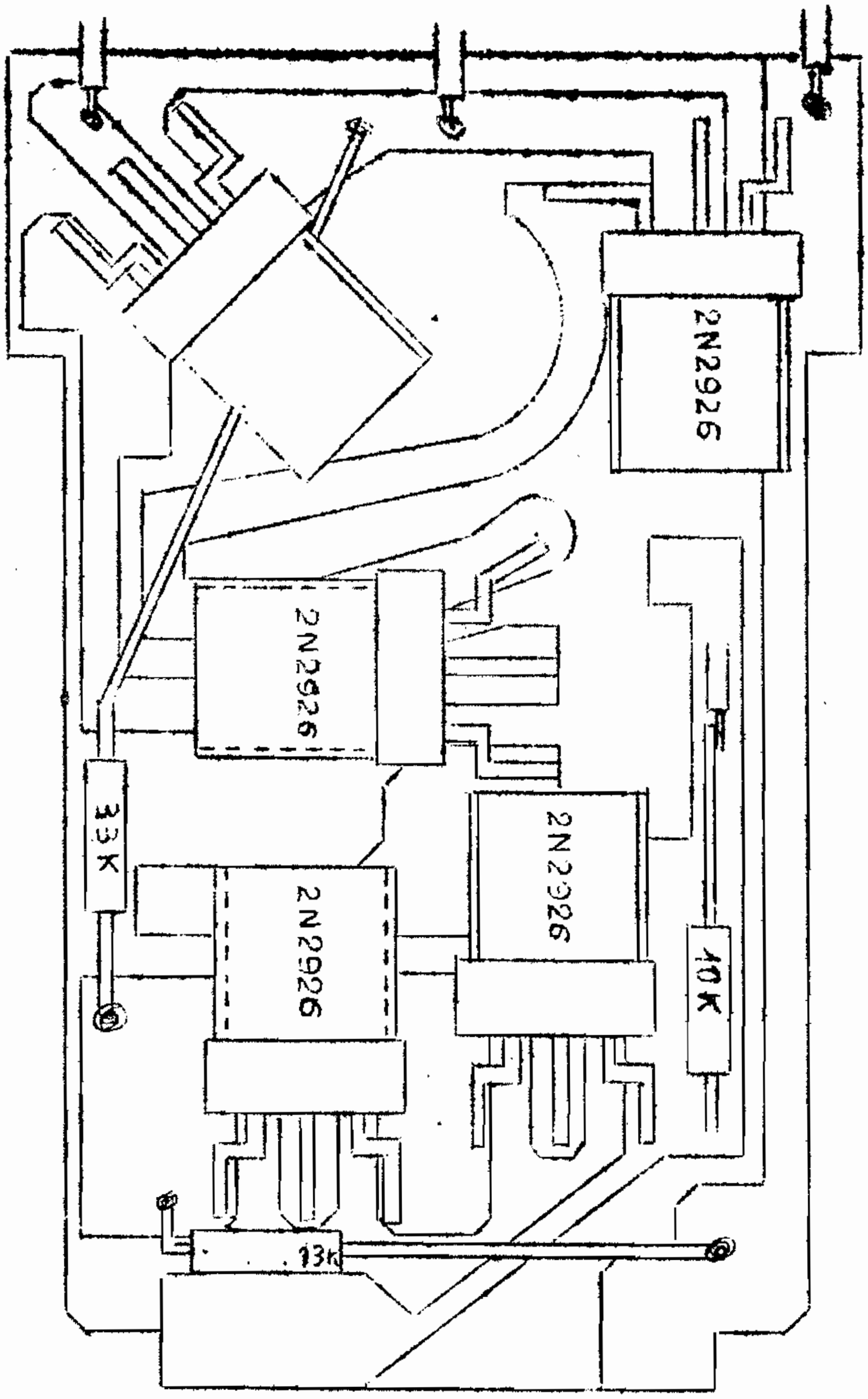
S.A.V. 20/20

N° 11096x1



BEAULIEU

A V. 20/20

N° 1[illegible]06 x2

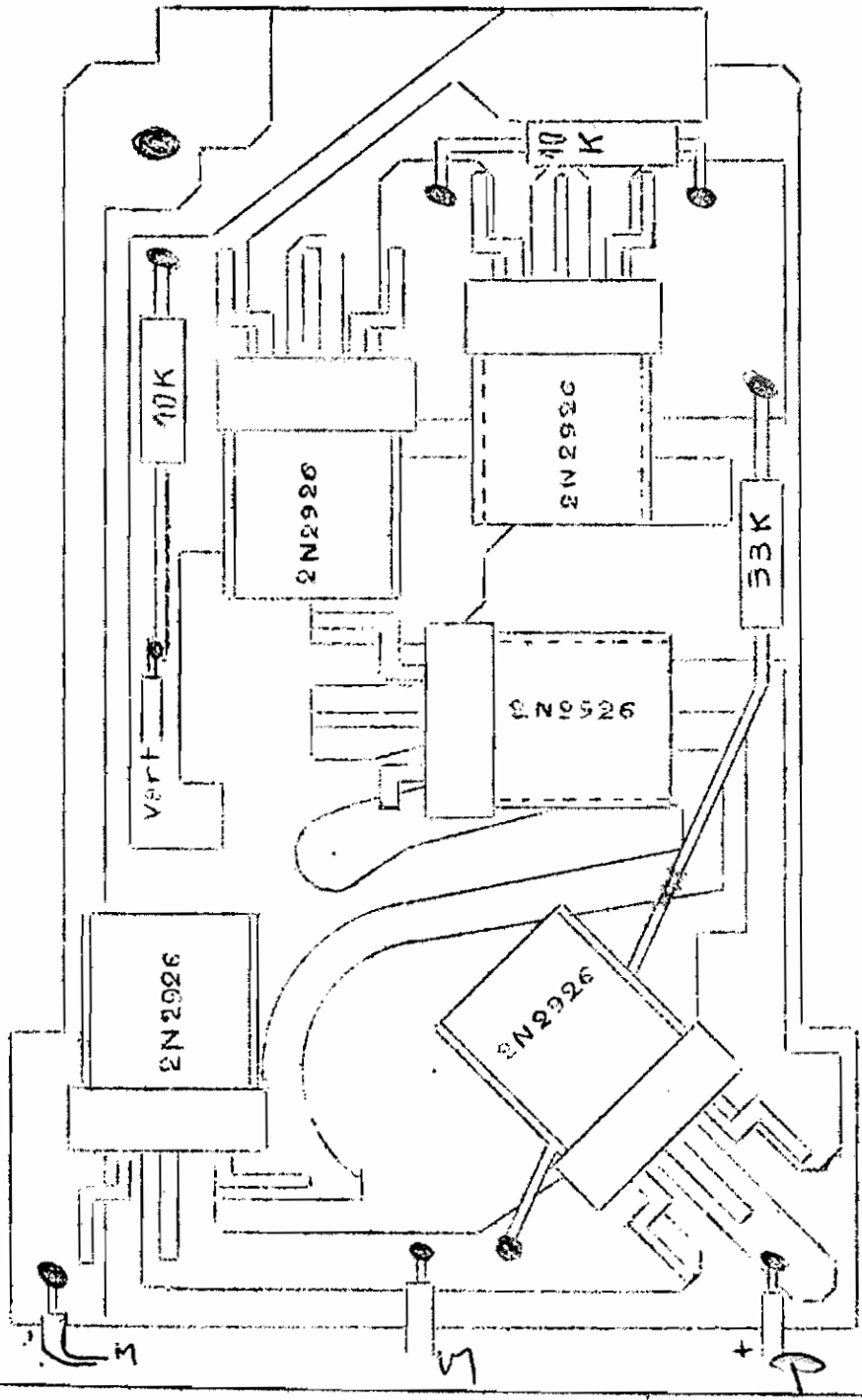


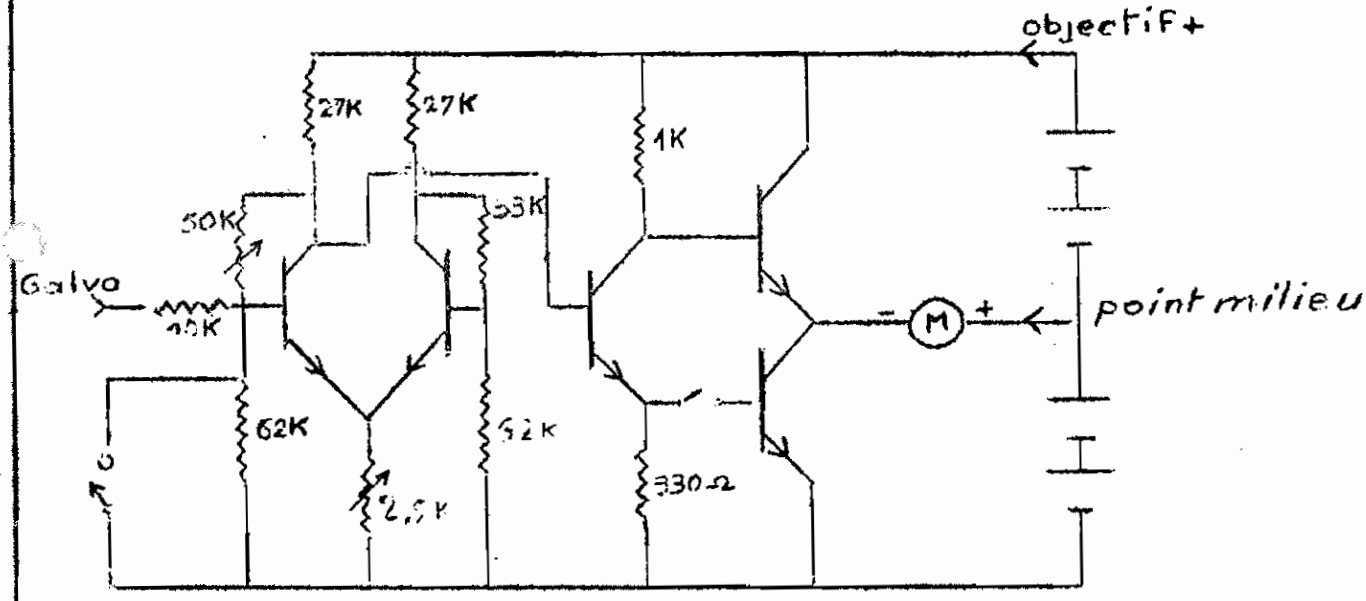
Schéma de cablage

objectif auto S8

BEAULIEU

S.A.V 20/20

N° 11096x3



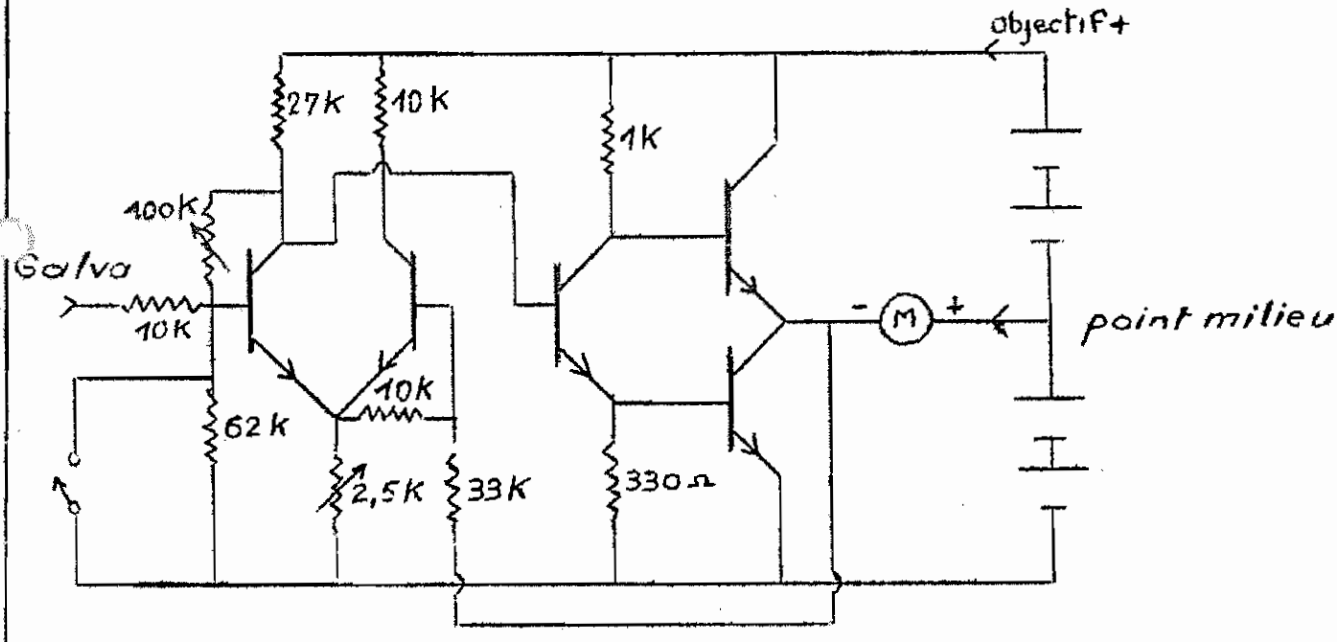
Transistors 2N2926

Objectif Automatique S-6

BEAULIEU

S.A.V. 10/20

N° 11097



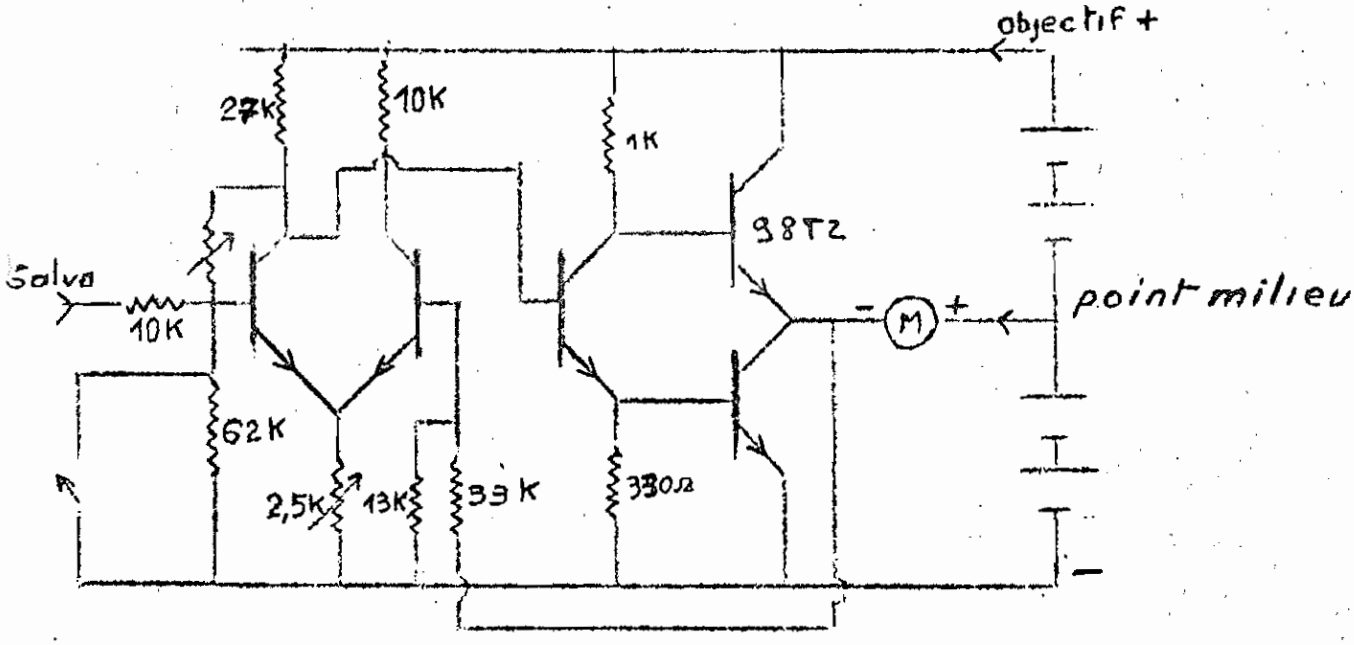
Transistors 2N2926

Objectif automatique S-8

BEAULIEU

S.A.V. 10/20

N° 1097x1



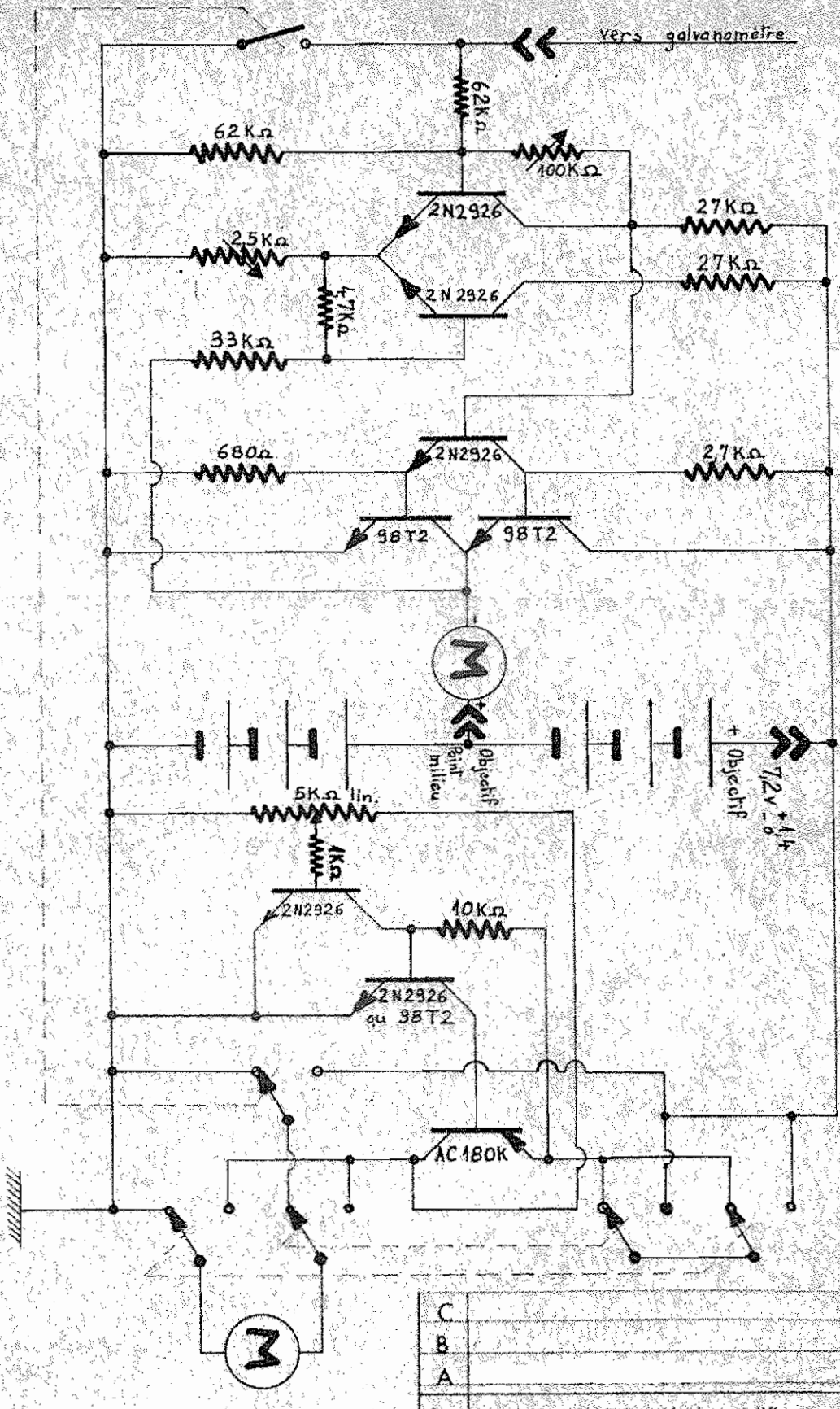
Transistors 2N2926

Objectif Automatique S-8

BEAULIEU

S.A.V. 10/20

N° 11097x2



Rep	Nature de la modification	Date	Visa
C			
B			
A			

Matière	Traitement	Protection	Poids	Echelle	Dés. par : J.C. Drezet.
-	-	-	-	-	Date : 20.11.68
					Vérif. par :

Quant. par appareil : -

Tolér. gén.ᵉˢ : -

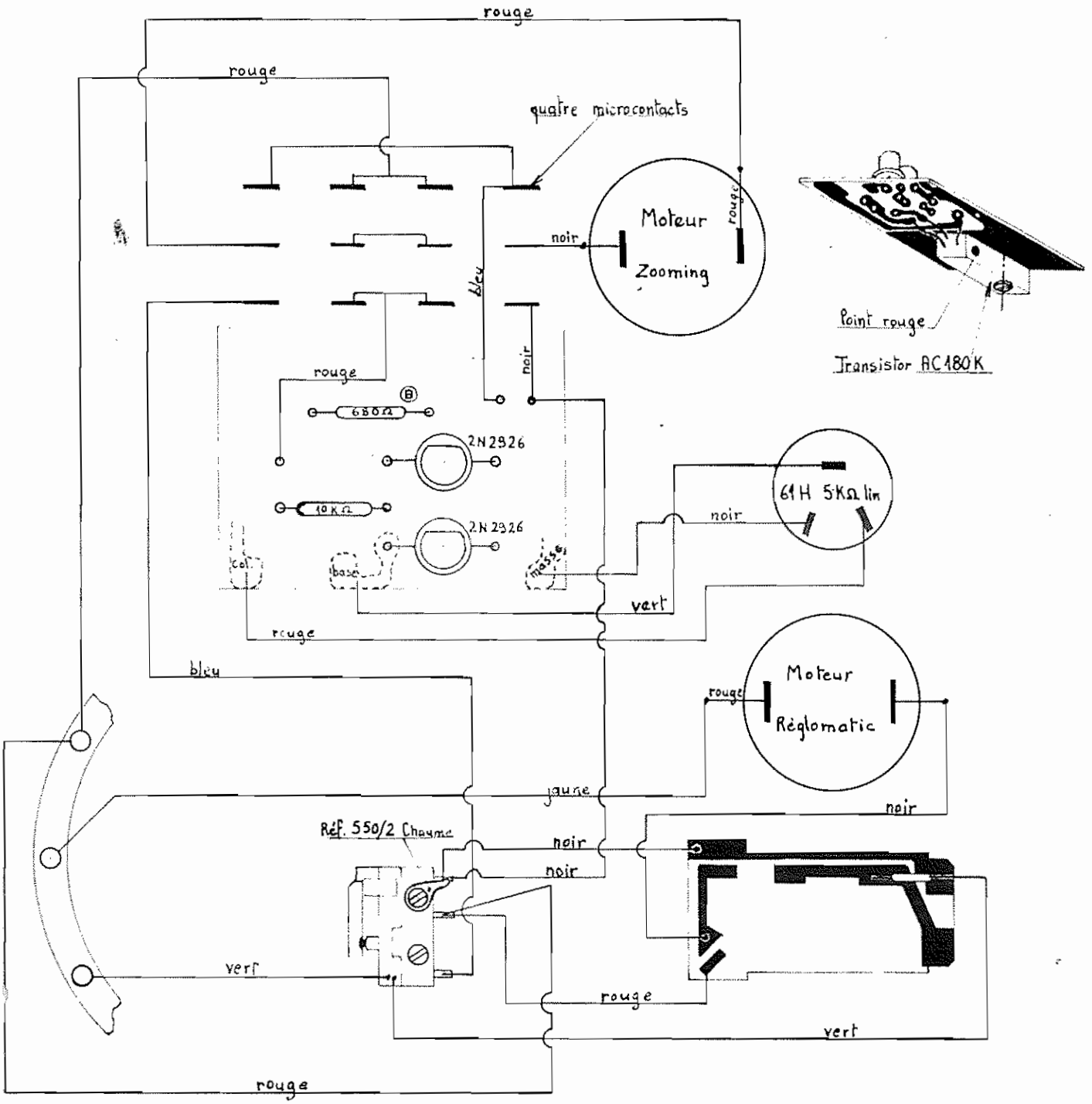
N° de modif.

Schéma de principe.

Ensemble objectif 4008 ZM.

BEAULIEU

N° 6123



Rep	Nature de la modification	Date . Visa
C		
B	la résistance 62Ω est remplacée par la résistance 680Ω	17-7-69 L.P.
A	Adjonction d'une resistance 62 KΩ	

Matière	Traitement	Protection	Poids	Echelle	Dés. par : J.L. Drezet.
—	—	—	—	—	Date : 19.11.68
					Vérif. par :

Quant. par appareil —

Tolér. gén.° —

N° de modif.

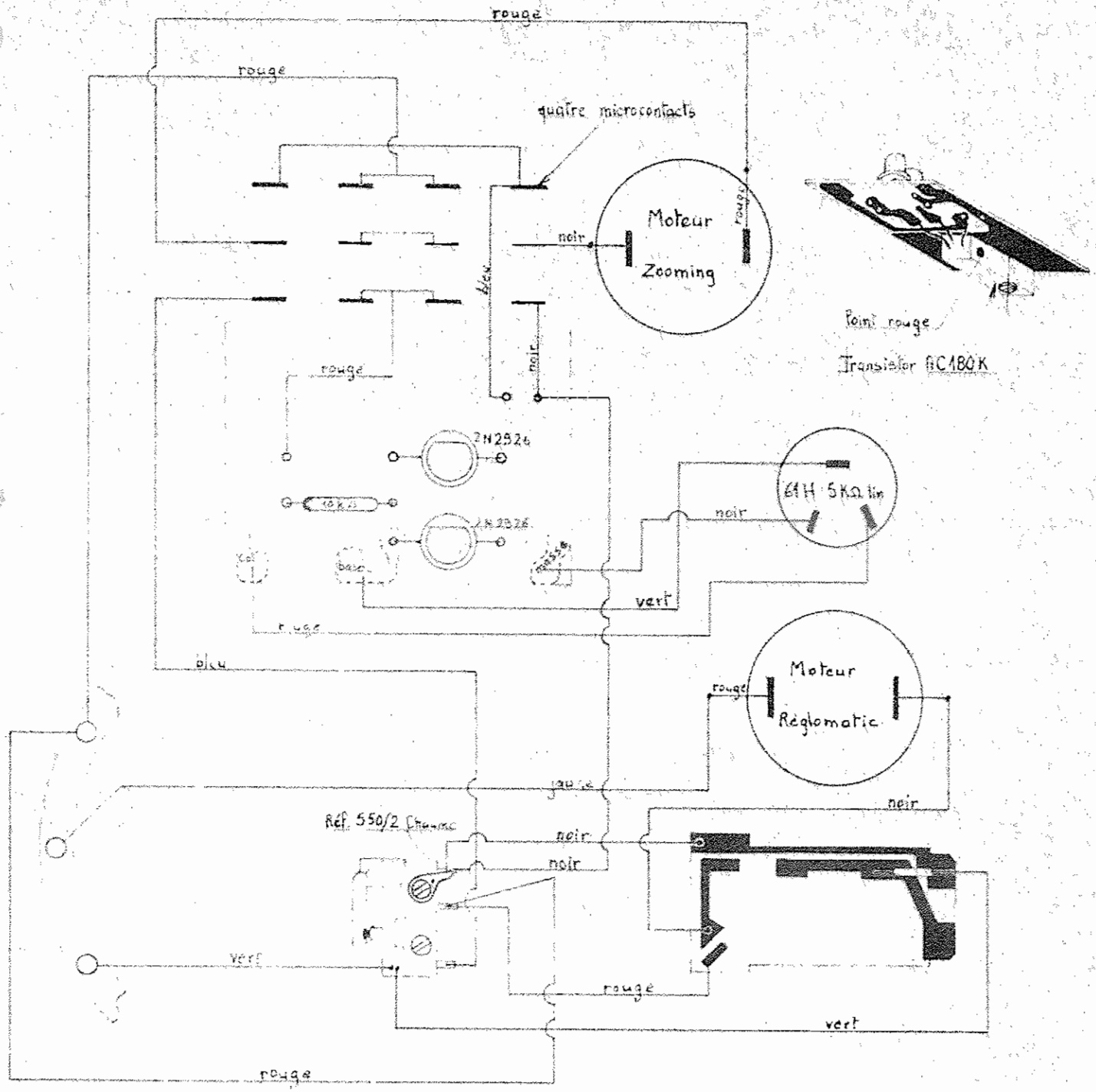
Schéma de cablage.

Ensemble objectif 4008 ZM.

BEAULIEU

N° 6122.B

SADIA-PARIS-HORBOURG



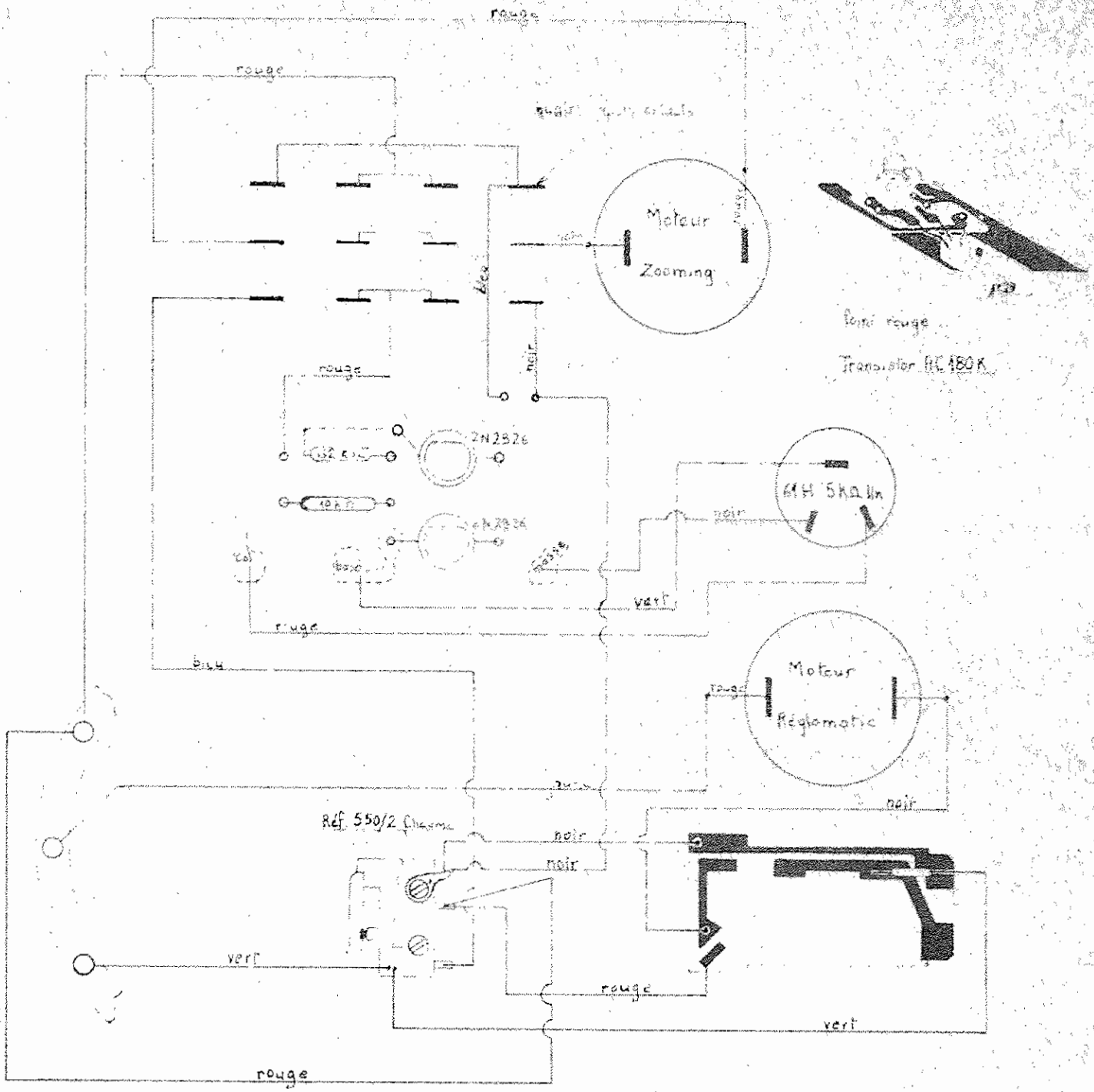
Point rouge

Transistor BC180K

C					
B					
A					
Rep	Nature de la modification				Date Visa

Matière	Traitement	Protection	Poids	Echelle	Dés par J.C. Drezet
—	—	—	—	—	Date 19-11-68
					Vérif par

Quant par appareil —	**Schéma de cablage.**	BEAULIEU
Toler gen —	Ensemble objectif 4008 ZM.	N° 6122
N° de modif		



Rep	Nature de la modification	Date	Visa
C			
B			
A	Adjonction d'une résistance 62 KΩ		

Matière	Traitement	Fabrication	Poids	Echelle	Dessiné par J.C. Drezet.
—	—	—	—	—	Date 19-11-68
					Vérifié par

Quant. par appareil —

Toler. gén. —

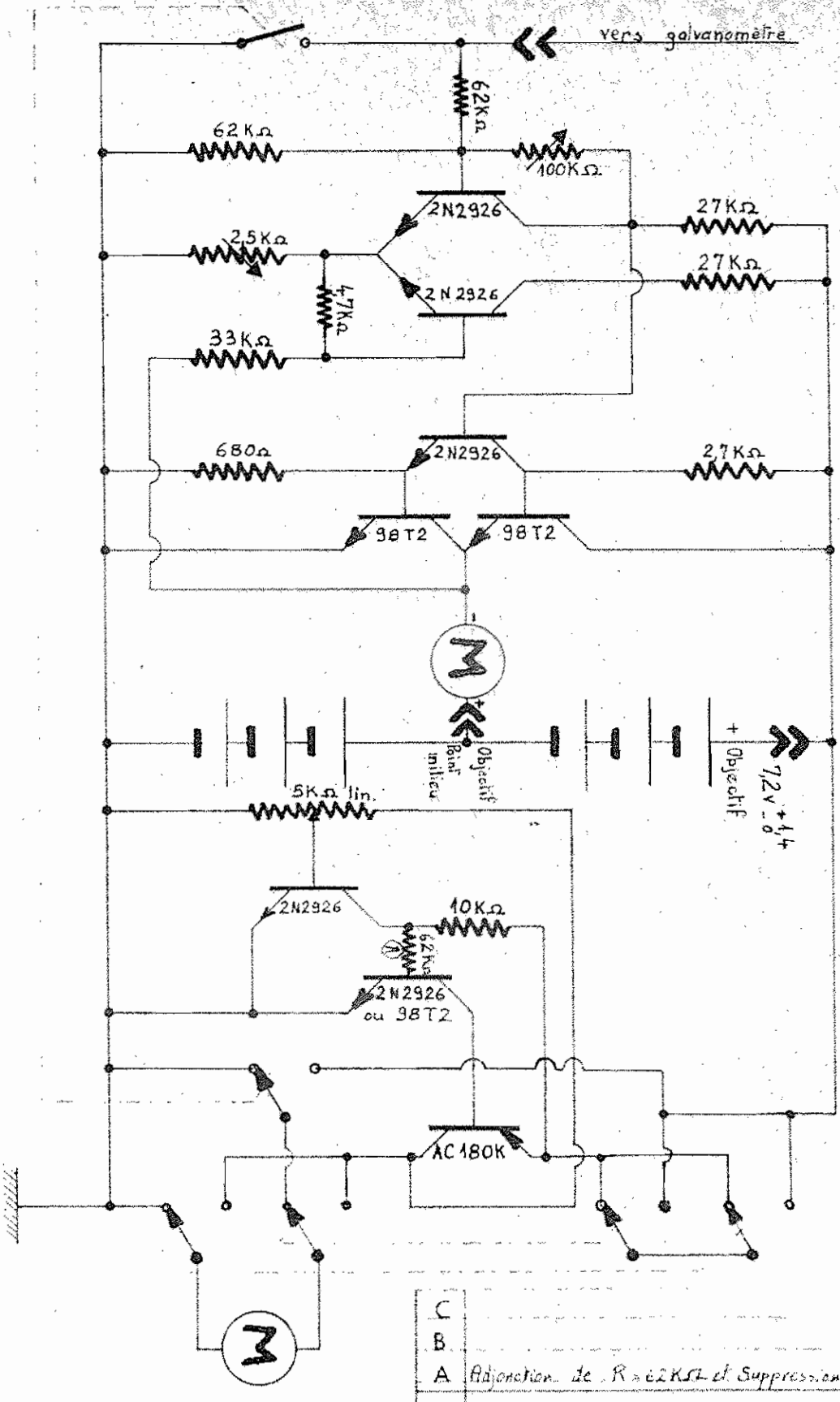
N° de modèle

Schéma de cablage.

Ensemble objectif 4008 ZM

BEAULIEU

N° 6122.A



Rep	Nature de la modification	Date Visa
C		
B		
A	Adjonction de R = 62KΩ et Suppression de R = 1KΩ	27.2.63.

Matière	Traitement	Protection	Poids	Echelle	Dess par J.C. Drezet.
-	-	-	-	-	Date 20.11.68.
					Vérif par

Quant. par appareil -

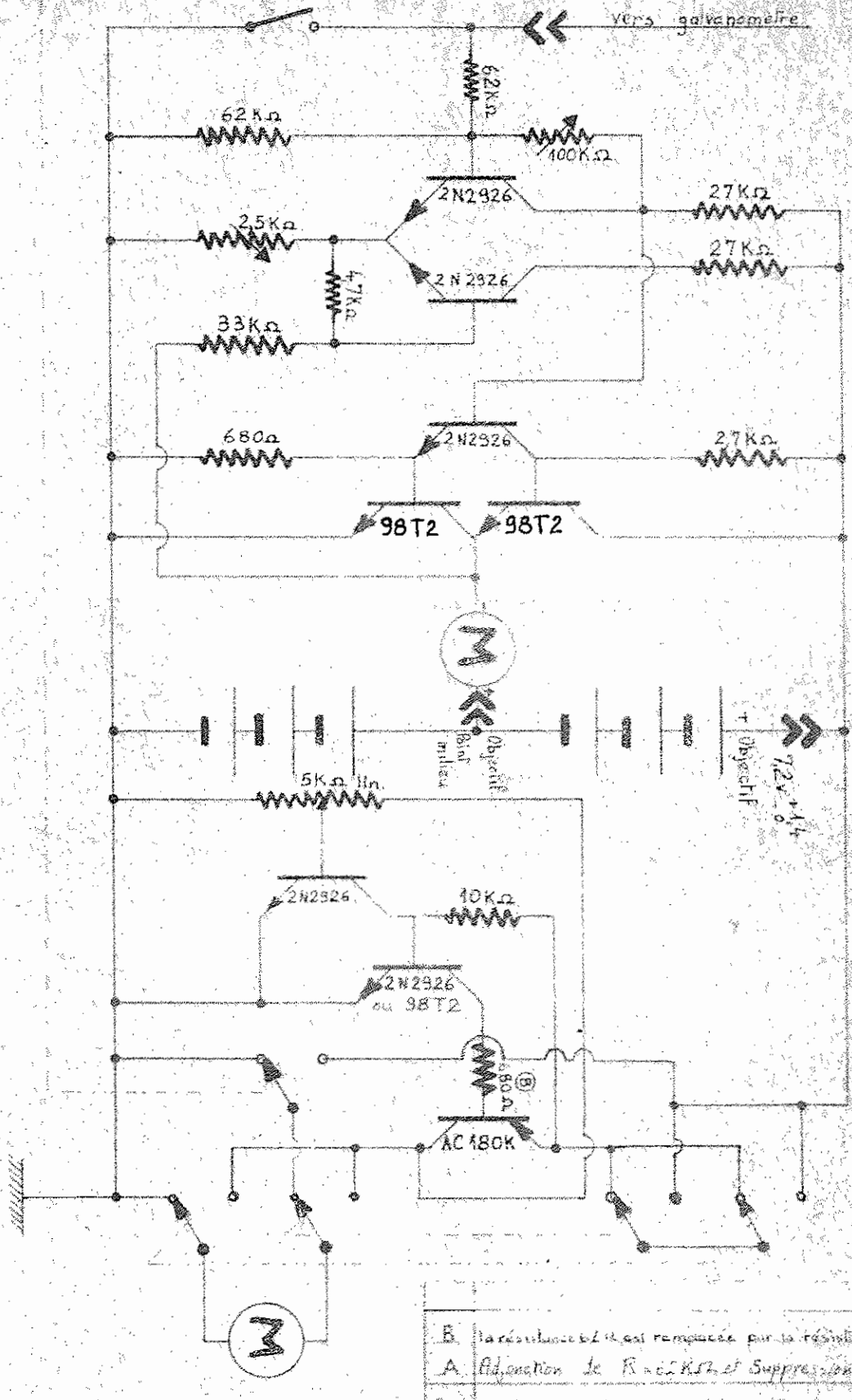
Tolér. gén. -

Schéma de principe.

Ensemble objectif 4008 ZM.

BEAULIEU

N° 6123 A



Rep	Nature de la modification	Date Visa
B	la résistance 62 K est remplacée par la résistance 680 Ω	19.7-69 L.P.
A	Adjonction de R = 62 KΩ et Suppression de 6,4 KΩ	27.2.69.

Matière	Traitement	Protection	Poids	Echelle	Dess. par J.C. Dreant
-	-	-	-	-	Date 20.11.68
					Vérif. par

Quant. par appareil -

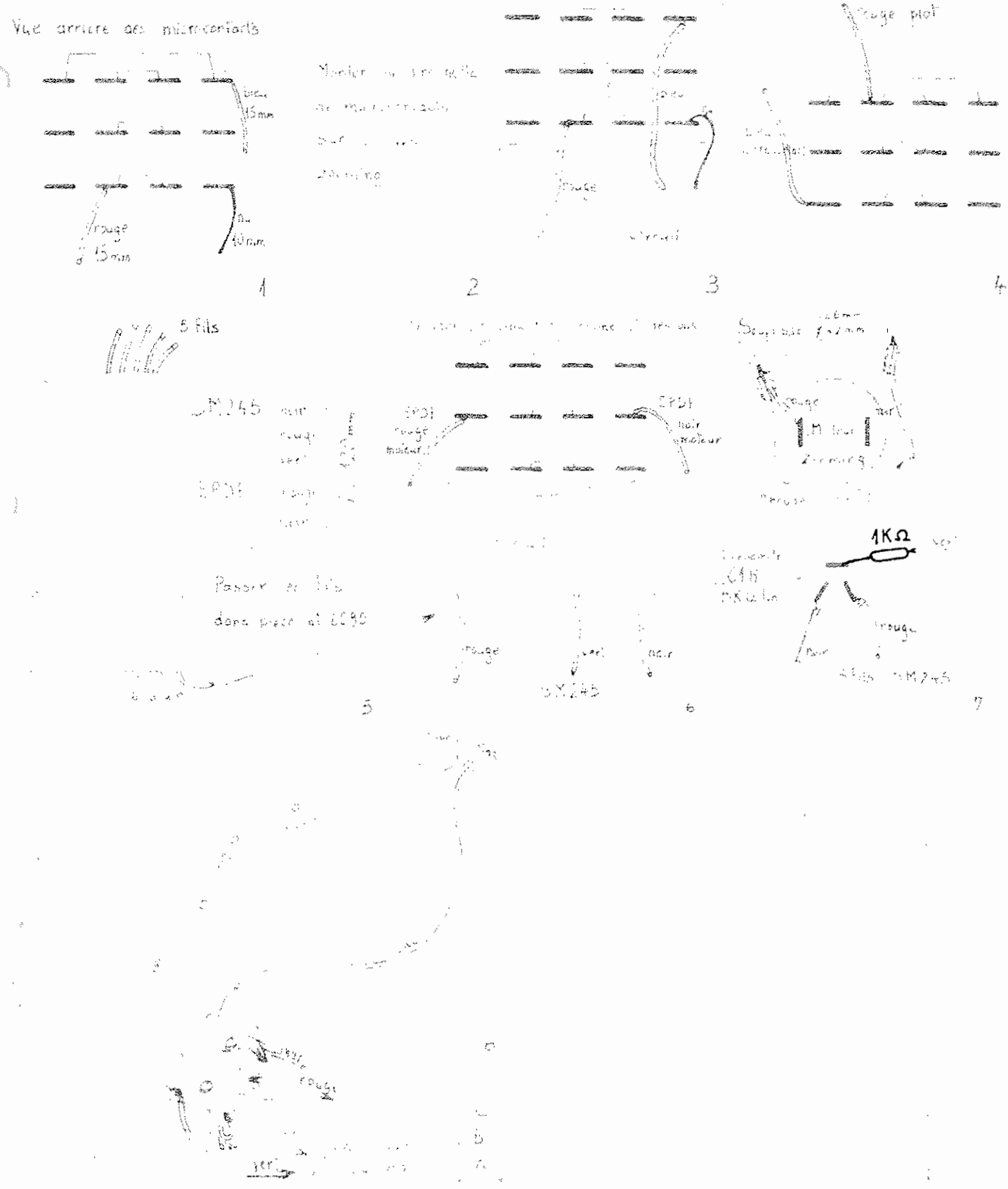
Toléran. -

Schéma de principe.

Ensemble objectif 4008 ZM

BEAULIEU

N° 6123.B



Ordre de cablage

Objectif 4028 ZM

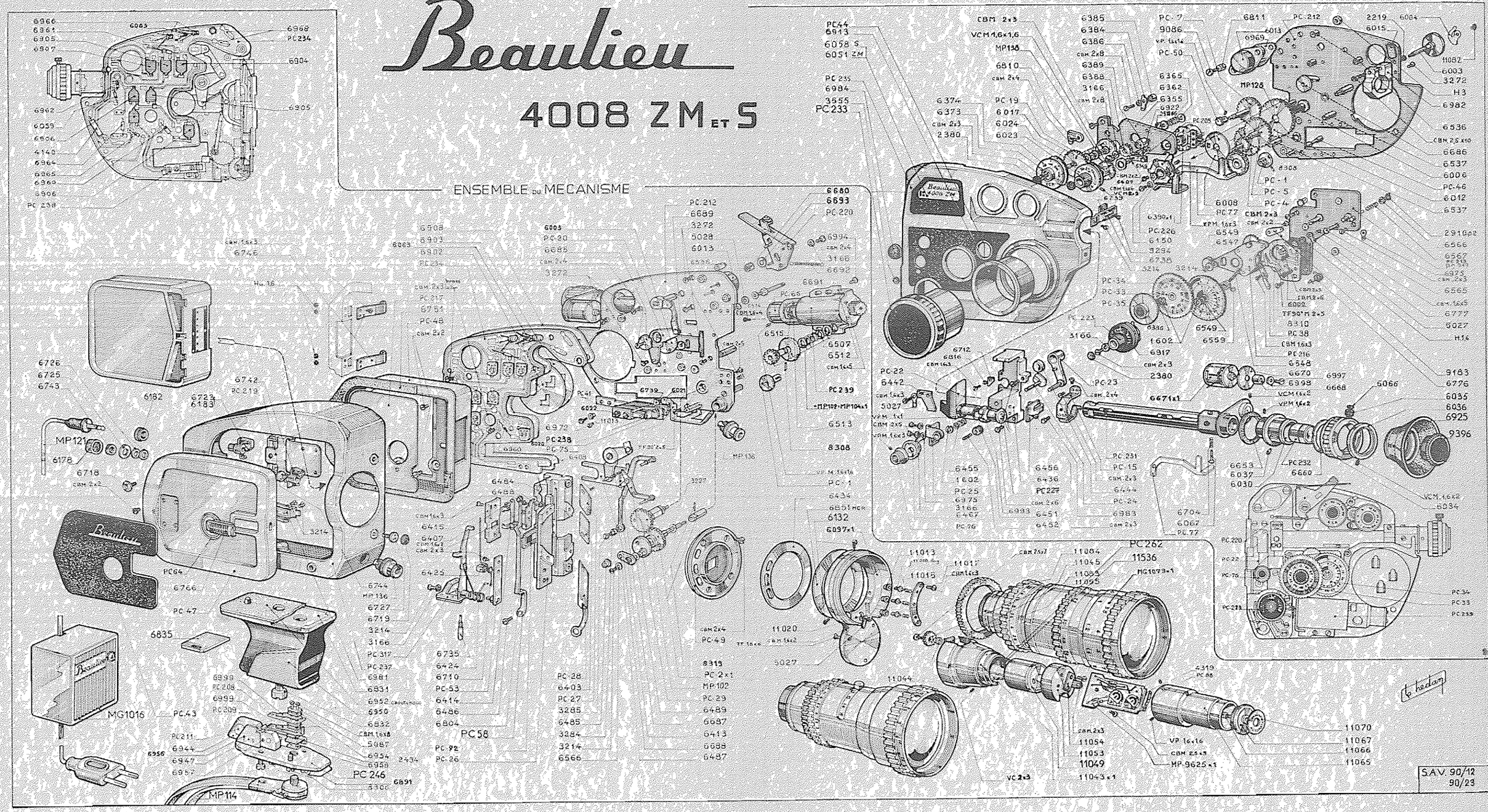
BEAULIEU

N° 6124

Beaulieu

4008 ZM ET S

ENSEMBLE ou MECANISME

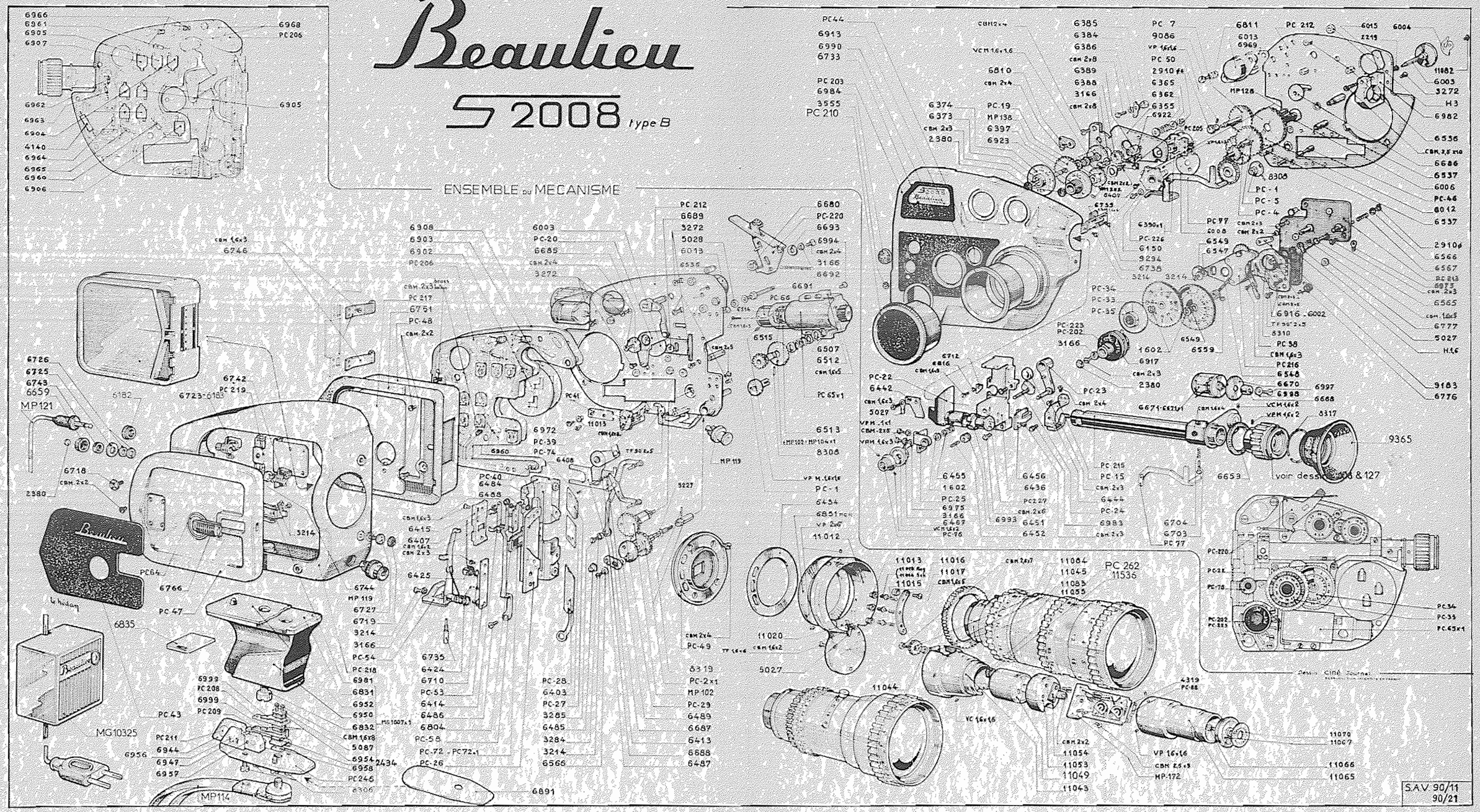


S.A.V. 90/12
90/23

Beaulieu

S 2008 type B

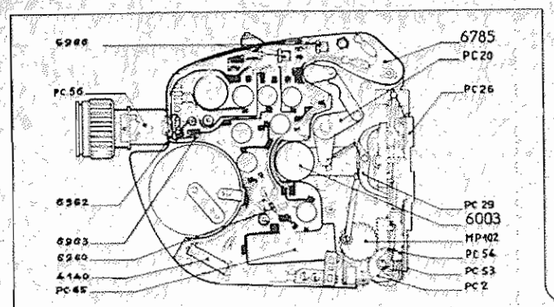
ENSEMBLE ou MECANISME

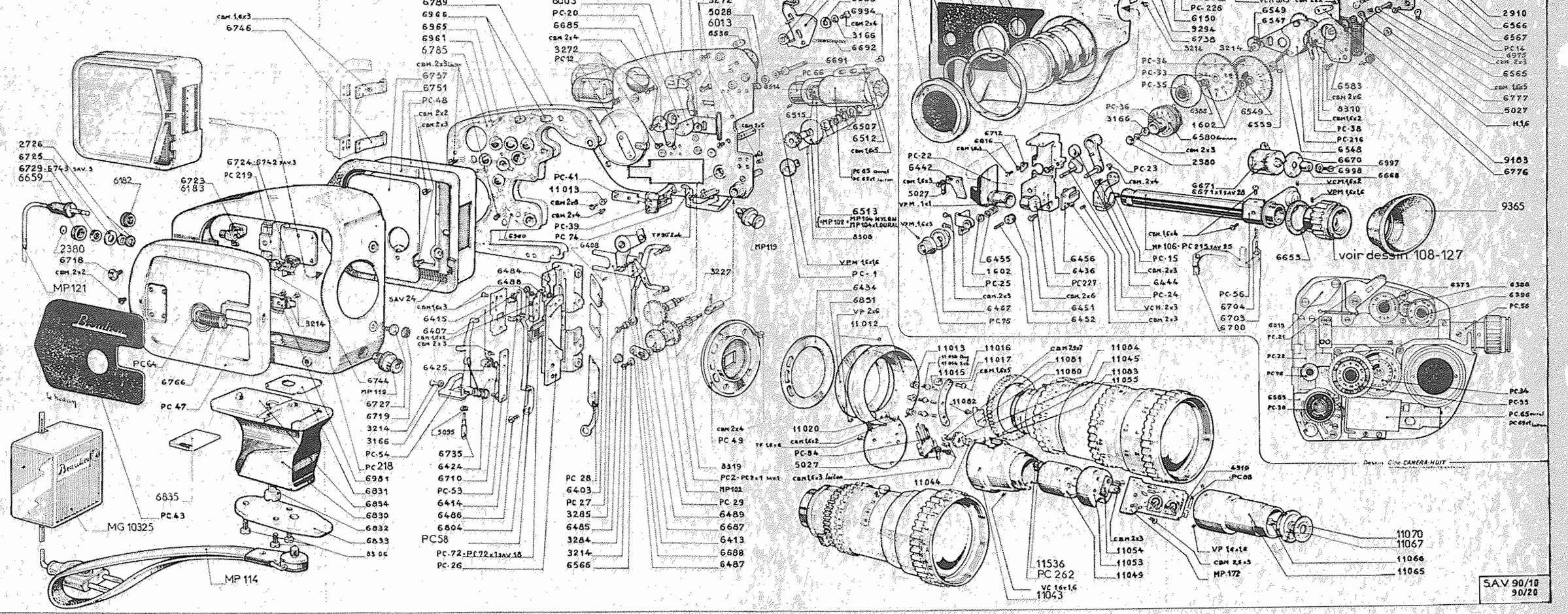


Beaulieu

S 2008 *type A*

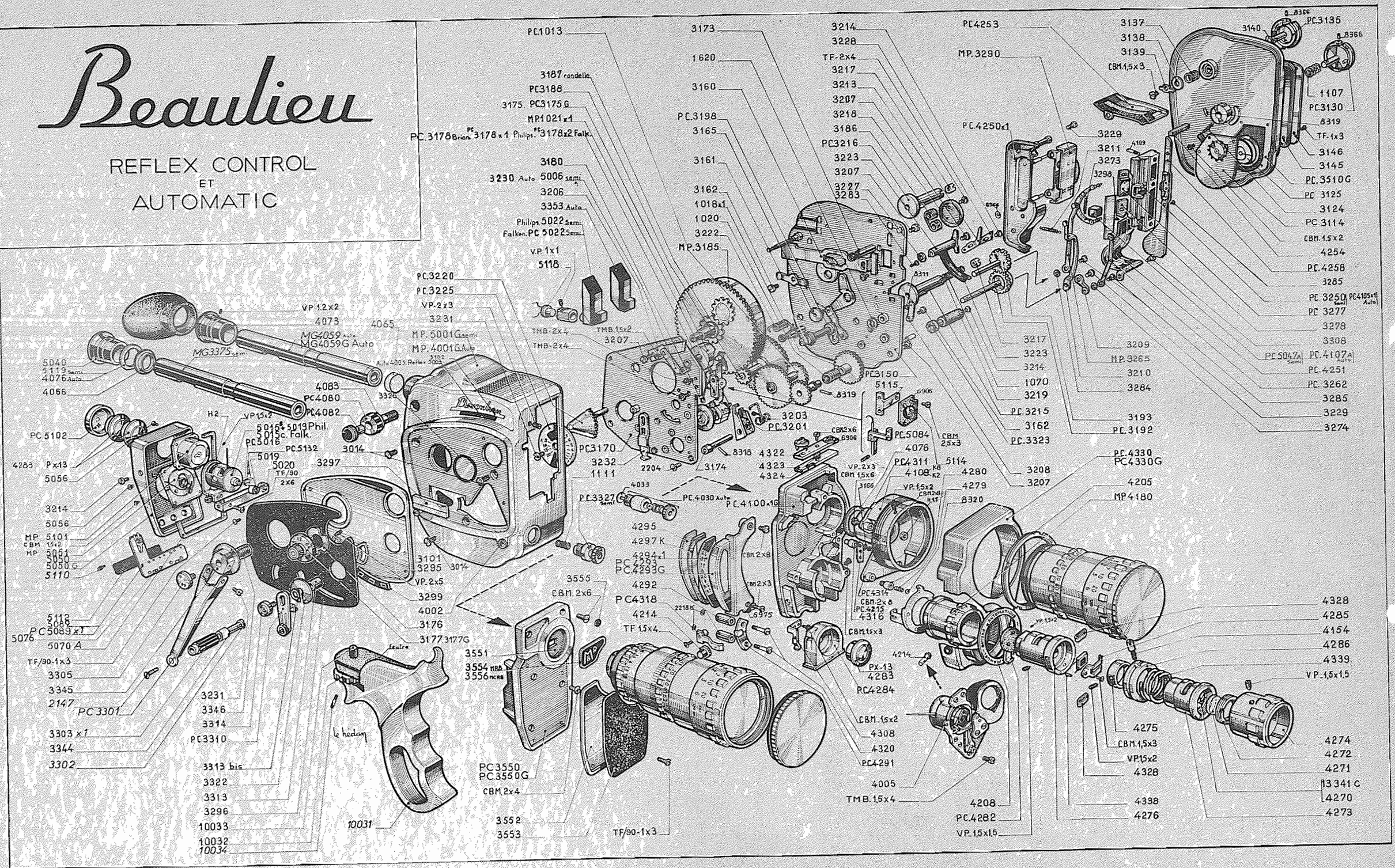
ENSEMBLE DU MECANISME



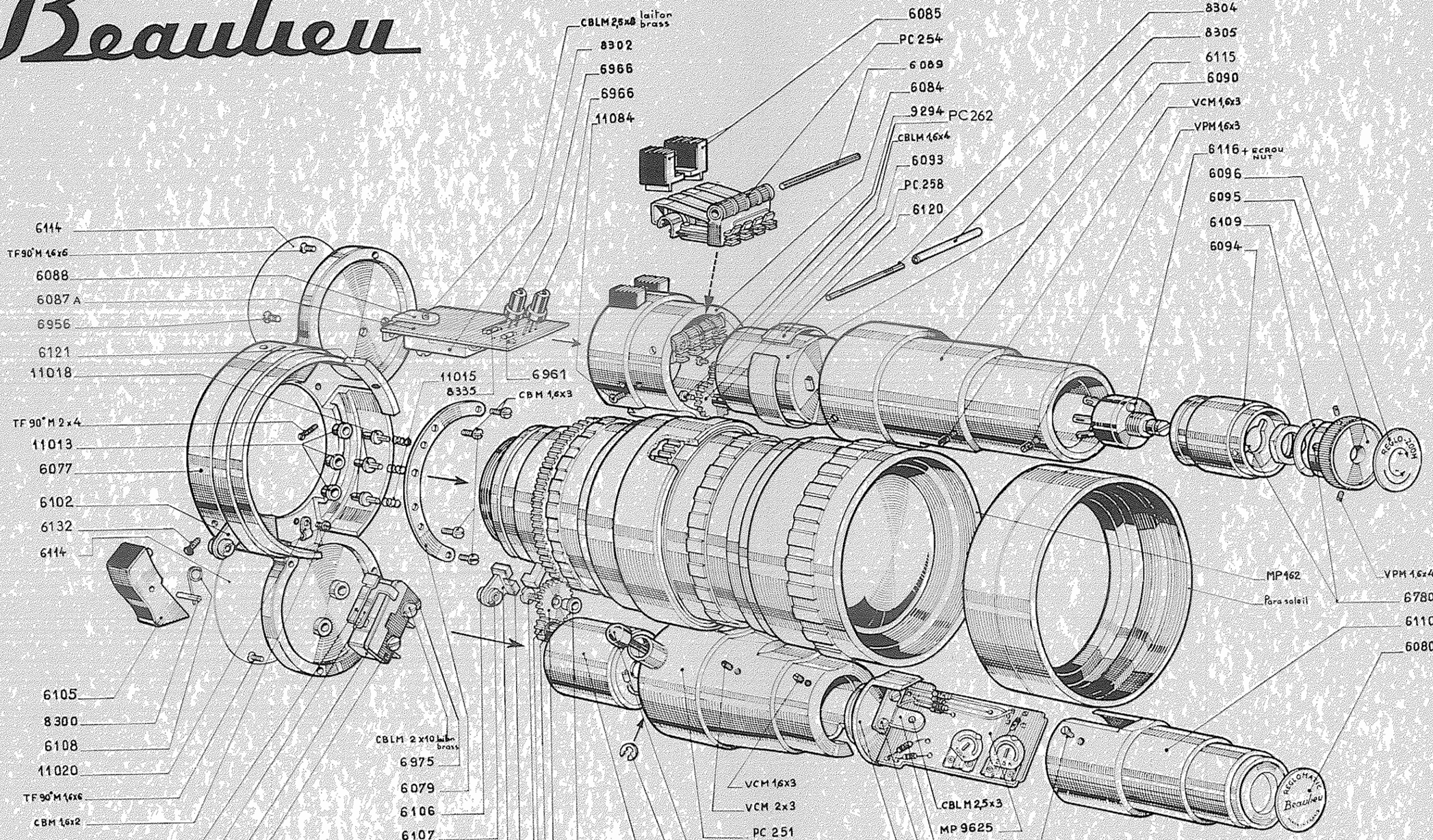


Beaulieu

REFLEX CONTROL
ET
AUTOMATIC

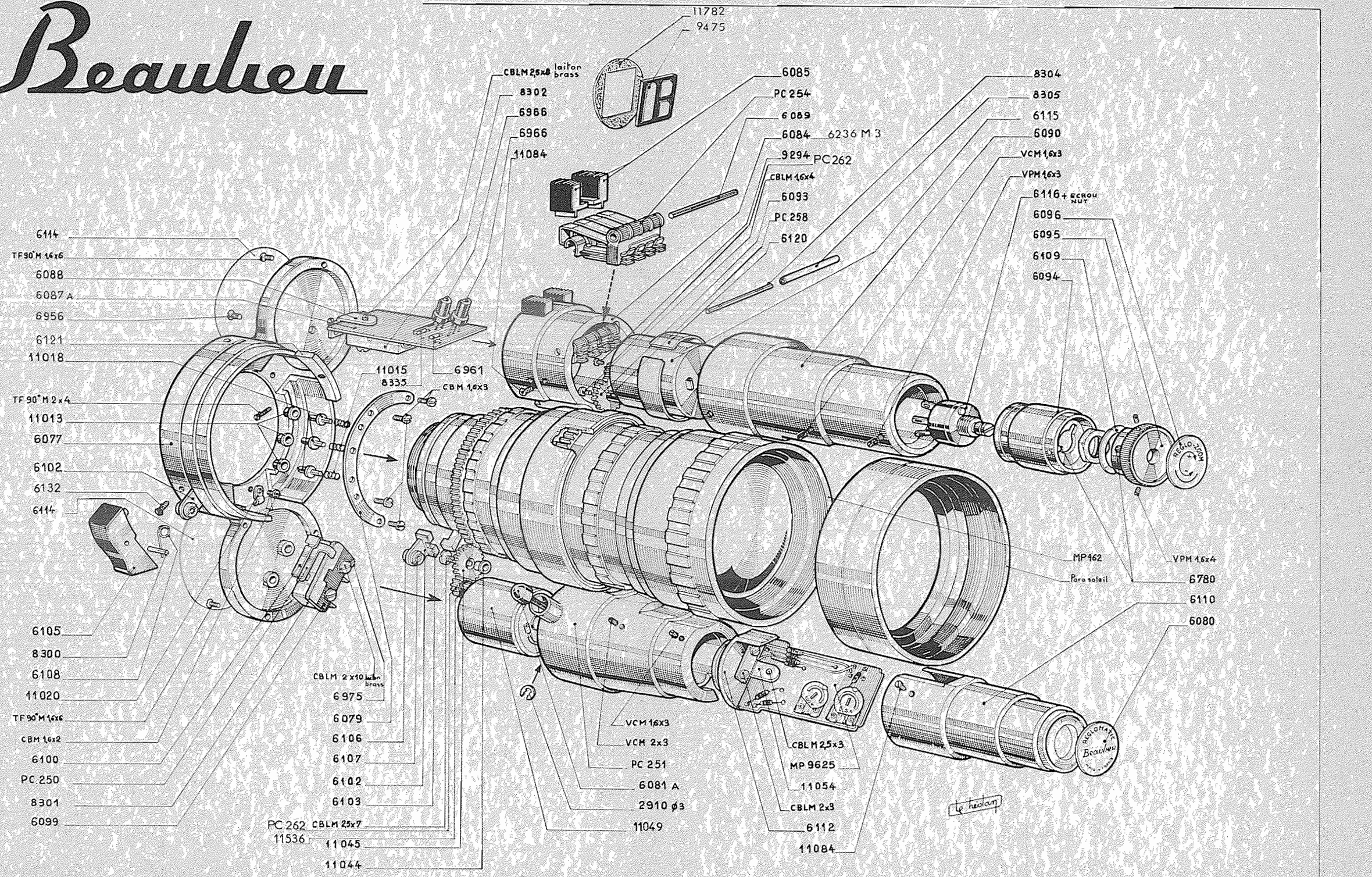


Beaulieu

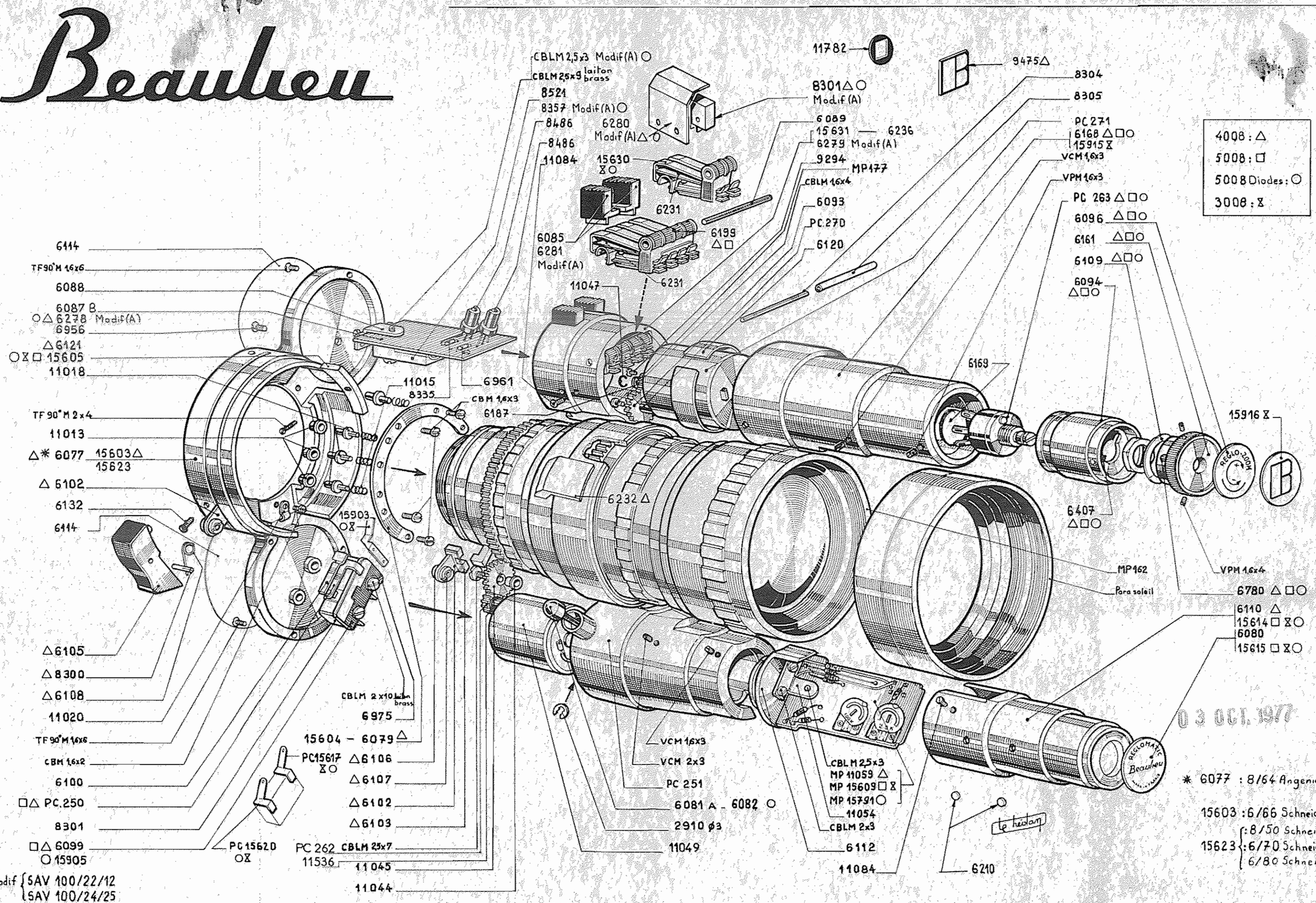


SAV 90/22

Beaulieu


11782
9475
CBLM 2,5x8 laiton brass
8302
6966
6966
11084
6085
PC 254
6089
6084
6236 M 3
9294
PC262
CBLM 1,6x4
6093
PC 258
6120
8304
8305
6115
6090
VCM 1,6x3
VPM 1,6x3
6116 + ECROU NUT
6096
6095
6109
6094
6114
TF 90° M 1,6x6
6088
6087 A
6956
6121
11018
11015
8335
6961
CBM 1,6x3
TF 90° M 2x4
11013
6077
6102
6132
6114
6105
8300
6108
11020
TF 90° M 1,6x6
CBM 1,6x2
6100
PC 250
8301
6099
CBLM 2x10 laiton brass
6975
6079
6106
6107
6102
6103
PC 262 CBLM 2,5x7
11536
11045
11044
VCM 1,6x3
VCM 2x3
PC 251
6081 A
2910 ø3
11049
CBLM 2,5x3
MP 9625
11054
CBLM 2x3
6112
11084
MP162
Pare soleil
VPM 1,6x4
6780
6110
6080
REGLOMATIC
Beaulieu
le haslam

Beaulieu



Mise A Jour 05.77 SAV 90/22.24

4008S and ZM

INSTRUCTIONS FOR DISASSEMBLY

CAMERAS BEAULIEU - MAISON BRANDT FRERES
8 Quai du Marché Neuf
PARIS IV° - Tel : 326.08.71

SAV/30/12

JANUARY 1969

INSTRUCTIONS FOR THE DISASSEMBLY OF THE COVER, GRIP HANDLE, CASE AND CARTRIDGE CHAMBER.

I - DISASSEMBLY OF COVER

II - DISASSEMBLY OF GRIP HANDLE

III - DISASSEMBLY OF CASE

IV - DISASSEMBLY OF CARTRIDGE CHAMBER

I DISASSEMBLY OF COVER PC 235

Unscrew setscrew VCM 1.6 x 3 of ground glass control knob PC 76.

Remove PC 76.

Unscrew screw 3214 securing rear cover.

Unscrew locking ring 6467 securing cover (spanner 0 109).

Remove cover.

Slide photocell holder mask 6993.

Insert a photocell mask into the photocell holder slot.

II DISASSEMBLY OF GRIP HANDLE

Detach felt gasket 6891 from base plate (dampen felt with gasolene to detach.

Unscrew the 4 screws S I M SP N°. 4 securing the base plate.

Unsolder the red and yellow leads.

Unscrew screw 6832 securing the grip handle to the case.

Remove the grip handle.

III DISASSEMBLY OF CASE

Unscrew filter retracting stud 6735.

Unscrew release button MP 136.

Detach lens mounting plate 6434. The plate must be replaced. To detach, damp with gasolene and use a screwdriver and the jigging plate. Insert the screwdriver through the round hole, just far enough to pierce the plate which can then be prised out.

Detach the 2 discs 6719, on each side of the lens mounting plate (0 140) after damping with gasolene.

Unscrew the 4 screws CBM 2 x 4 securing the lens plate PC 49.

Remove PC 49.

Unsolder the red, black and green leads.

Remove PC 49.

Unscrew screw 6718 securing the case to the drive mechanism (to 0154).

Unscrew the 2 screws 6727 securing the front part of the case (to 0154).

Remove case.

Unsolder the black, red, blue and brown leads.

IV DISASSEMBLY OF CARTRIDGE CHAMBER PC 48

Detach the bottom section of cartridge chamber PC 217 after damping it with gasolene.

Unscrew the 4 screws C B M 2 X 2

Remove cartridge chamber.

MECHANICAL FAULTS

CAMERA TYPES 4008 S AND ZM

CAMERAS BEAULIEU - MAISON BRANDT FRERES
8 Quai du Marché Neuf
PARIS IV° - Tel : 326.08.71

SAV/50/12

JANUARY 1969

MECHANICAL FAULTS

I Footage (metres/feet) counter

II Film-drive indicator inoperative

III Filter does not retract or stick

IV Film packup

V Erratic film drive

VI Single-frame mechanism gates more than one frame at a time

VII Drive mechanism does not stop on release of trigger button

VIII Variable shutters do not close

I FOOTAGE COUNTER

1 Disassemble cover (SAV 30/12, ch. I)

2 Operational check:

2.1 Rotate manually the footage disc PC 34. When released, the disc should automatically return to the 50 feet-15 metres position.

If the footage disc can be rotated manually but does not return to initial position, see ch. 3.

If footage disc cannot be rotated manually see ch. 5.

2.2 Push in clutch shaft 6565 located inside the cartridge chamber - Gear train PC 216 should engage the footage disc and disengage when shaft 6565 is released.

If the gear train does not engage the footage disc see ch. 4.

3 Footage disc can be rotated manually but does not return to initial position.

Remove frame disc mobile index PC 35 and split washer 6386.

Remove circlip 1602 from footage disc.

Remove footage disc PC 34, retrieving washer 6549 located under the circlip and footage counter - return spring 6559

Remove spring 6559

Eliminate the friction which prevents the return of the footage disc.

Reassemble footage counters by repeating above operations in reverse sequence.

Proceed with checks of ch. 2.

Reassemble cover as per SAV 60/12, ch. IV.

4 Gear train does not engage footage disc

Remove footage and frame discs as indicated in ch. 3.

Detach return spring 6548 from gear train.

Remove screw 3214 and spacer 6547.

Remove gear train.

Clean the side bearing against the mounting plate. Clean mounting plate.

Reassemble counters by repeating above operations in reverse sequence.

Proceed with checks of ch. 2.

Reassemble cover as per SAV 60/12 - ch. IV.

5 Footage disc cannot be rotated manually: gear train does not disengage from footage disc.

5.1 Clutch shaft 6565 slides freely - proceed as indicated in ch. 4.

5.2 The clutch shaft does not protrude out of bottom plate of cartridge chamber.

Remove frame and footage discs as per ch. 3.

Lift the two tags securing the wire harness terminating on the master switch. Release harness.

Unscrew the 3 screws 6994 securing the motor-cradle.

Remove motor assembly.

Clean clutch shaft, check spring action and, if required, re-tension.

Place motor assembly back in position.

Screw the 3 screws 6994 without locking.

Adjust motor position for minimum current consumption (less than 380 mA) and minimum noise.

Lock the 3 screws 6994, checking current consumption.

Place wire harness back in position and close the two tags.

Reassemble counters by repeating above operations in reverse sequence.

Proceed with checks as per ch. 2.

Reassemble cover as per SAV 60/12 - ch. IV.

II. FILM DRIVE INDICATOR INOPERATIVE

Disassemble cover as per SAV 30/12 ch. I

Lift drive indicator lever PC 77 so as to free drive indicator stud 6703 being careful that it does not spring free under the pressure of its loading spring 6704.

Remove stud 6703 and loading spring 6704.

Pull clear the coil of the spring bearing against the window holder.

Smear lightly the stud with oil.

Reassemble stud and loading spring.

Check cleanliness of stud by observing it through the ocular piece.

Adjust the height of stud travel so that, in the higher position, the stud comes flush with the lower edge of the window - adjust by twisting the actuating-tip of lever PC 77.

Reassemble cover as per SAV 60/12, ch. IV.

III. FILTER RETRACTION FAULTY

1 Disassemble cover (SAV 30/12, ch. 1)

Align, with precision, the viewfinder window against the filming window (SAV 60/12, ch.4)

Subsequently, this will enable the precise alignement of the guide-way.

Disassemble grip handle, case and cartridge chamber as per SAV 30/12, ch.II, III and IV.

2 Checking of filter holder retraction system

Check that retraction lever PC 317 does move down against the shutter holder - if it does not, re-tension lever return spring 6424.

Check that filter holder control spring 6710 does not bear against the shutter holder - if it does, apply slight camber to the end of the spring.

Lift the retraction lever and check that filter holder control spring 6710 does bring filter holder PC 72 against stop 6804 - if it does not, re-tension spring.

If the filter holder sticks in the guide-way, see following chapter.

3 Filter holder sticks in the guide-way

Disengage filter holder control spring 6710 from the retraction lever and next from the filter holder.

If required, re-tension spring.

Unscrew the 2 screws CBM 1.6 x 3 securing stop 6804.

Remove stop.

Remove, with a pair of tweezers, filter holder assembly. Do not attempt to clean filters: if scratched or dirty, replace filters.

Unscrew the 2 screws CMB 1.6 x 3 securing guide-way 6415.

Remove guide-way.

Clean the recess housing the filter holder.

Reassemble guide-way, filter holder and stop.

Re-connect filter holder control spring 6710 to the filter holder and, next, to the retraction lever.

Proceed with the checks of ch. 2.

Secure the lens mount to the shutter holder by means of 2 screws CBM 2 x 4.

Screw framing indicator 0 207 to the lens mount.

Loosen the 2 screws CMB 1.6 x 3 securing the guideway.

Apply voltage supply and run camera.

Sight on a white sheet illuminated through the framing indicator and the viewfinder and adjust guideway position for framing as obtained in ch. I.

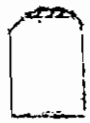
Lock the two screws CBM 1.6 x 3 securing the guideway.

Adjust filter travel as indicated in the following chapter.

4 Adjustment of filter travel

Retract the orange filter by lifting the retraction lever.

Adjust stop 6804 by deforming it so that the base of the grey filter comes flush with the base of the window and so that the function of the grey and orange filters be effective in the domed portion of the window.

Correct   Faulty

Bring the orange filter down: the filter should completely cover the window.

5 Reassembly:

Reassemble cartridge chamber, case, grip handle and cover as per SAV/60/12 ch. I - II - III and IV.

IV. FILM PACKUP

1 Checking of takeup mechanism friction

Check that cartridge drive spring 6004 shows slight camber.

Place the takeup friction indicator 0 204 in the cartridge chamber.

Run the camera and note friction reading which should exceed 27 grams.

2 Friction is less than 27 grams:

2.1 Disassemble cover (SAV 30/12, ch. I)

2.2 Adjustment of friction of cartridge drive wheel MP 128 located under the footage and frame counters.

Unscrew, by 1 turn, the 3 screws VPM A.6 x 3 securing hub PC 226 (these screws are sealed with a spot of varnish).

Lock hub PC 226 with a screw driver.

Rotate manually cartridge spindle 6003 (located inside the cartridge chamber), one full turn clockwise.

Lock the 3 screws VPM 1.6 x 3 securing the hub.

Carry out check I of this chapter and, if required, readjust.

Seal the 3 screws VPM 1.6 x 3 with varnish.

3 Reassemble cover as per SAV 60/12 -ch. IV.

V. ERRATIC FILM DRIVE

1 Checking of claw action

Run the camera.

Place a finger over the opening of guideway 6415 (located in the cartridge) which provides passage for the claw: the scratching action of the claw should be clearly felt if not claw spring 6484 is no longer tensioning correctly the pressure stud of the claw.

2 Disassemble cover, grip handle, case and cartridge chamber as per SAV 30/12 - ch. I - II - III and IV.

3 Reassembly of spring.

If required, re-tension spring 6484.

Grease lightly the claw spring stud and the portion of the shutter holder located under the stud.

Carry out check I by rotating manually the mechanism.

Check that the claw does not bear against the shutter holder.

4 Reassembly

Reassemble cartridge chamber, case, grip handle and cover as per SAV 60/12 - ch. I - II - III and IV.

5 Checking of film drive.

Check claw action using a test cartridge on which the portion level with the claw has been filed off.

The claw should engage precisely into the film perforations, move the film by one frame and retract clear out of the perforation. If not, deform the claw slightly in order to achieve correct penetration.

4008S and ZM

INSTRUCTIONS FOR DISASSEMBLY

CAMERAS BEAULIEU - MAISON BRANDT FRERES
8 Quai du Marché Neuf
PARIS IV° - Tel : 326.08.71

SAV/30/12
1/4
JANUARY 1969

INSTRUCTIONS FOR THE DISASSEMBLY OF THE COVER, GRIP HANDLE, CASE AND CARTRIDGE CHAMBER.

I - DISASSEMBLY OF COVER

II - DISASSEMBLY OF GRIP HANDLE

III - DISASSEMBLY OF CASE

IV - DISASSEMBLY OF CARTRIDGE CHAMBER

I DISASSEMBLY OF COVER PC 235

Unscrew setscrew VCM 1.6 x 3 of ground glass control knob PC 76.

Remove PC 76.

Unscrew screw 3214 securing rear cover.

Unscrew locking ring 6467 securing cover (spanner 0 109).

Remove cover.

Slide photocell holder mask 6993.

Insert a photocell mask into the photocell holder slot.

II DISASSEMBLY OF GRIP HANDLE

Detach felt gasket 6891 from base plate (dampen felt with gasolene to detach.

Unscrew the 4 screws S I M SP N°. 4 securing the base plate.

Unsolder the red and yellow leads.

Unscrew screw 6832 securing the grip handle to the case.

Remove the grip handle.

III DISASSEMBLY OF CASE

Unscrew filter retracting stud 6735.

Unscrew release button MP 136.

Detach lens mounting plate 6434. The plate must be replaced. To detach, damp with gasolene and use a screwdriver and the jigging plate. Insert the screwdriver through the round hole, just far enough to pierce the plate which can then be prised out.

Detach the 2 discs 6719, on each side of the lens mounting plate (0 140) after damping with gasolene.

Unscrew the 4 screws CBM 2 x 4 securing the lens plate PC 49.

Remove PC 49.

Unsolder the red, black and green leads.

Remove PC 49.

Unscrew screw 6718 securing the case to the drive mechanism (to 0154).

Unscrew the 2 screws 6727 securing the front part of the case (to 0154).

Remove case.

Unsolder the black, red, blue and brown leads.

IV DISASSEMBLY OF CARTRIDGE CHAMBER PC 48

Detach the bottom section of cartridge chamber PC 217 after damping it with gasolene.

Unscrew the 4 screws C B M 2 X 2

Remove cartridge chamber.

MECHANICAL FAULTS

CAMERA TYPES 4008 S AND ZM

CAMERAS BEAULIEU - MAISON BRANDT FRERES
8 Quai du Marché Neuf
PARIS IV° - Tel : 326.08.71

SAV/50/12

JANUARY 1969

MECHANICAL FAULTS

I Footage (metres/feet) counter

II Film-drive indicator inoperative

III Filter does not retract or stick

IV Film packup

V Erratic film drive

VI Single-frame mechanism gates more than one frame at a time

VII Drive mechanism does not stop on release of trigger button

VIII Variable shutters do not close

I FOOTAGE COUNTER

1 Disassemble cover (SAV 30/12, ch. I)

2 Operational check:

2.1 Rotate manually the footage disc PC 34. When released, the disc should automatically return to the 50 feet-15 metres position.

If the footage disc can be rotated manually but does not return to initial position, see ch. 3.

If footage disc cannot be rotated manually see ch. 5.

2.2 Push in clutch shaft 6565 located inside the cartridge chamber - Gear train PC 216 should engage the footage disc and disengage when shaft 6565 is released.

If the gear train does not engage the footage disc see ch. 4.

3 Footage disc can be rotated manually but does not return to initial position.

Remove frame disc mobile index PC 35 and split washer 6386.

Remove circlip 1602 from footage disc.

Remove footage disc PC 34, retrieving washer 6549 located under the circlip and footage counter - return spring 6559

Remove spring 6559

Eliminate the friction which prevents the return of the footage disc.

Reassemble footage counters by repeating above operations in reverse sequence.

Proceed with checks of ch. 2.

Reassemble cover as per SAV 60/12, ch. IV.

4 Gear train does not engage footage disc

Remove footage and frame discs as indicated in ch. 3.

Detach return spring 6548 from gear train.

Remove screw 3214 and spacer 6547.

Remove gear train.

Clean the side bearing against the mounting plate. Clean mounting plate.

Reassemble counters by repeating above operations in reverse sequence.

Proceed with checks of ch. 2.

Reassemble cover as per SAV 60/12 - ch. IV.

5 Footage disc cannot be rotated manually: gear train does not disengage from footage disc.

5.1 Clutch shaft 6565 slides freely - proceed as indicated in ch. 4.

5.2 The clutch shaft does not protrude out of bottom plate of cartridge chamber.

Remove frame and footage discs as per ch. 3.

Lift the two tags securing the wire harness terminating on the master switch. Release harness.

Unscrew the 3 screws 6994 securing the motor-cradle.

Remove motor assembly.

Clean clutch shaft, check spring action and, if required, re-tension.

Place motor assembly back in position.

Screw the 3 screws 6994 without locking.

Adjust motor position for minimum current consumption (less than 380 mA) and minimum noise.

Lock the 3 screws 6994, checking current consumption.

Place wire harness back in position and close the two tags.

Reassemble counters by repeating above operations in reverse sequence.

Proceed with checks as per ch. 2.

Reassemble cover as per SAV 60/12 - ch. IV.

II. FILM DRIVE INDICATOR INOPERATIVE

Disassemble cover as per SAV 30/12 ch. I

Lift drive indicator lever PC 77 so as to free drive indicator stud 6703 being careful that it does not spring free under the pressure of its loading spring 6704.

Remove stud 6703 and loading spring 6704.

Pull clear the coil of the spring bearing against the window holder.

Smear lightly the stud with oil.

Reassemble stud and loading spring.

Check cleanliness of stud by observing it through the ocular piece.

Adjust the height of stud travel so that, in the higher position, the stud comes flush with the lower edge of the window - adjust by twisting the actuating-tip of lever PC 77.

Reassemble cover as per SAV 60/12, ch. IV.

III. FILTER RETRACTION FAULTY

1 Disassemble cover (SAV 30/12, ch. 1)

Align, with precision, the viewfinder window against the filming window (SAV 60/12, ch.4)

Subsequently, this will enable the precise alignement of the guide-way.

Disassemble grip handle, case and cartridge chamber as per SAV 30/12, ch.II, III and IV.

2 Checking of filter holder retraction system

Check that retraction lever PC 317 does move down against the shutter holder - if it does not, re-tension lever return spring 6424.

Check that filter holder control spring 6710 does not bear against the shutter holder - if it does, apply slight camber to the end of the spring.

Lift the retraction lever and check that filter holder control spring 6710 does bring filter holder PC 72 against stop 6804 - if it does not, re-tension spring.

If the filter holder sticks in the guide-way, see following chapter.

3 Filter holder sticks in the guide-way

Disengage filter holder control spring 6710 from the retraction lever and next from the filter holder.

If required, re-tension spring.

Unscrew the 2 screws CBM 1.6 x 3 securing stop 6804.

Remove stop.

Remove, with a pair of tweezers, filter holder assembly. Do not attempt to clean filters: if scratched or dirty, replace filters.

Unscrew the 2 screws CMB 1.6 x 3 securing guide-way 6415.

Remove guide-way.

Clean the recess housing the filter holder.

Reassemble guide-way, filter holder and stop.

Re-connect filter holder control spring 6710 to the filter holder and, next, to the retraction lever.

Proceed with the checks of ch. 2.

Secure the lens mount to the shutter holder by means of 2 screws CBM 2 x 4.

Screw framing indicator 0 207 to the lens mount.

Loosen the 2 screws CMB 1.6 x 3 securing the guideway.

Apply voltage supply and run camera.

Sight on a white sheet illuminated through the framing indicator and the viewfinder and adjust guideway position for framing as obtained in ch. I.

Lock the two screws CBM 1.6 x 3 securing the guideway.

Adjust filter travel as indicated in the following chapter.

4 Adjustment of filter travel

Retract the orange filter by lifting the retraction lever.

Adjust stop 6804 by deforming it so that the base of the grey filter comes flush with the base of the window and so that the function of the grey and orange filters be effective in the domed portion of the window.

Correct   Faulty

Bring the orange filter down: the filter should completely cover the window.

5 Reassembly:

Reassemble cartridge chamber, case, grip handle and cover as per SAV/60/12 ch. I - II - III and IV.

IV. FILM PACKUP

1 Checking of takeup mechanism friction

Check that cartridge drive spring 6004 shows slight camber.

Place the takeup friction indicator 0 204 in the cartridge chamber.

Run the camera and note friction reading which should exceed 27 grams.

2 Friction is less than 27 grams:

2.1 Disassemble cover (SAV 30/12, ch. I)

2.2 Adjustment of friction of cartridge drive wheel MP 128 located under the footage and frame counters.

Unscrew, by 1 turn, the 3 screws VPM A.6 x 3 securing hub PC 226 (these screws are sealed with a spot of varnish).

Lock hub PC 226 with a screw driver.

Rotate manually cartridge spindle 6003 (located inside the cartridge chamber), one full turn clockwise.

Lock the 3 screws VPM 1.6 x 3 securing the hub.

Carry out check I of this chapter and, if required, readjust.

Seal the 3 screws VPM 1.6 x 3 with varnish.

3 Reassemble cover as per SAV 60/12 -ch. IV.

V. ERRATIC FILM DRIVE

1 Checking of claw action

Run the camera.

Place a finger over the opening of guideway 6415 (located in the cartridge) which provides passage for the claw: the scratching action of the claw should be clearly felt if not claw spring 6484 is no longer tensioning correctly the pressure stud of the claw.

2 Disassemble cover, grip handle, case and cartridge chamber as per SAV 30/12 - ch. I - II - III and IV.

3 Reassembly of spring.

If required, re-tension spring 6484.

Grease lightly the claw spring stud and the portion of the shutter holder located under the stud.

Carry out check I by rotating manually the mechanism.

Check that the claw does not bear against the shutter holder.

4 Reassembly

Reassemble cartridge chamber, case, grip handle and cover as per SAV 60/12 - ch. I - II - III and IV.

5 Checking of film drive.

Check claw action using a test cartridge on which the portion level with the claw has been filed off.

The claw should engage precisely into the film perforations, move the film by one frame and retract clear out of the perforation. If not, deform the claw slightly in order to achieve correct penetration.

Check cleanliness of stud by observing it through the ocular piece.

Adjust the height of stud travel so that, in the higher position, the stud comes flush with the lower edge of the window - adjust by twisting the actuating-tip of lever PC 77.

Reassemble cover as per SAV 60/12, ch. IV.

III. FILTER RETRACTION FAULTY

1 Disassemble cover (SAV 30/12, ch. 1)

Align, with precision, the viewfinder window against the filming window (SAV 60/12, ch.4)

Subsequently, this will enable the precise alignement of the guide-way.

Disassemble grip handle, case and cartridge chamber as per SAV 30/12, ch.II, III and IV.

2 Checking of filter holder retraction system

Check that retraction lever PC 317 does move down against the shutter holder - if it does not, re-tension lever return spring 6424.

Check that filter holder control spring 6710 does not bear against the shutter holder - if it does, apply slight camber to the end of the spring.

Lift the retraction lever and check that filter holder control spring 6710 does bring filter holder PC 72 against stop 6804 - if it does not, re-tension spring.

If the filter holder sticks in the guide-way, see following chapter.

3 Filter holder sticks in the guide-way

Disengage filter holder control spring 6710 from the retraction lever and next from the filter holder.

If required, re-tension spring.

Unscrew the 2 screws CBM 1.6 x 3 securing stop 6804.

Remove stop.

Remove, with a pair of tweezers, filter holder assembly. Do not attempt to clean filters: if scratched or dirty, replace filters.

Unscrew the 2 screws CMB 1.6 x 3 securing guide-way 6415.

Remove guide-way.

Clean the recess housing the filter holder.

Reassemble guide-way, filter holder and stop.

Re-connect filter holder control spring 6710 to the filter holder and, next, to the retraction lever.

Proceed with the checks of ch. 2.

Secure the lens mount to the shutter holder by means of 2 screws CBM 2 x 4.

Screw framing indicator 0 207 to the lens mount.

Loosen the 2 screws CMB 1.6 x 3 securing the guideway.

Apply voltage supply and run camera.

Sight on a white sheet illuminated through the framing indicator and the viewfinder and adjust guideway position for framing as obtained in ch. I.

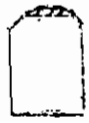
Lock the two screws CBM 1.6 x 3 securing the guideway.

Adjust filter travel as indicated in the following chapter.

4 Adjustment of filter travel

Retract the orange filter by lifting the retraction lever.

Adjust stop 6804 by deforming it so that the base of the grey filter comes flush with the base of the window and so that the function of the grey and orange filters be effective in the domed portion of the window.

Correct   Faulty

Bring the orange filter down: the filter should completely cover the window.

5 Reassembly:

Reassemble cartridge chamber, case, grip handle and cover as per SAV/60/12 ch. I - II - III and IV.

IV. FILM PACKUP

1 Checking of takeup mechanism friction

Check that cartridge drive spring 6004 shows slight camber.

Place the takeup friction indicator 0 204 in the cartridge chamber.

Run the camera and note friction reading which should exceed 27 grams.

2 Friction is less than 27 grams:

2.1 Disassemble cover (SAV 30/12, ch. I)

2.2 Adjustment of friction of cartridge drive wheel MP 128 located under the footage and frame counters.

Unscrew, by 1 turn, the 3 screws VPM A.6 x 3 securing hub PC 226 (these screws are sealed with a spot of varnish).

Lock hub PC 226 with a screw driver.

Rotate manually cartridge spindle 6003 (located inside the cartridge chamber), one full turn clockwise.

Lock the 3 screws VPM 1.6 x 3 securing the hub.

Carry out check I of this chapter and, if required, readjust.

Seal the 3 screws VPM 1.6 x 3 with varnish.

3 Reassemble cover as per SAV 60/12 -ch. IV.

V. ERRATIC FILM DRIVE

1 Checking of claw action

Run the camera.

Place a finger over the opening of guideway 6415 (located in the cartridge) which provides passage for the claw: the scratching action of the claw should be clearly felt if not claw spring 6484 is no longer tensioning correctly the pressure stud of the claw.

2 Disassemble cover, grip handle, case and cartridge chamber as per SAV 30/12 - ch. I - II - III and IV.

3 Reassembly of spring.

If required, re-tension spring 6484.

Grease lightly the claw spring stud and the portion of the shutter holder located under the stud.

Carry out check I by rotating manually the mechanism.

Check that the claw does not bear against the shutter holder.

4 Reassembly

Reassemble cartridge chamber, case, grip handle and cover as per SAV 60/12 - ch. I - II - III and IV.

5 Checking of film drive.

Check claw action using a test cartridge on which the portion level with the claw has been filed off.

The claw should engage precisely into the film perforations, move the film by one frame and retract clear out of the perforation. If not, deform the claw slightly in order to achieve correct penetration.

VI SINGLE- FRAME MECHANISM GATES MORE THAN ONE FRAME AT A TIME

1 Disassemble cover, grip handle, case and cartridge as per SAV 30/12 - ch. I - II - III and IV.

2 Readjustment of single frame mechanism

Disassemble single-frame rod PC 46

Disconnect return spring 6424 from the retraction lever and remove the screw and its washer.

Remove lever

Loosen the two screws TF 90° 2 x 5 securing the lever of stop lever PC 74

Depress the stop lever in the single frame direction and push the pin of the stop lever pillar (the pin must not be twisted in that direction - otherwise, replace pin (tool 0150) against the stop lever and lock screw TF 90° 2 x 5 of the pillar on the side of the main printed circuit.

Lock screw TF 90° 2 x 5 of the column located on the side of the switch printed circuit.

Check that the stop lever operates correctly in the normal release direction (move the lever forward).

The lever should come flush with the pillar pin - if it does not, twist the pin.

Check that the single-frame electrical contact (when the lever bears against the contact blade) does not make before the stop lever releases the stop pin of the claw pin.

3 Reassembly

Reassemble filter retraction lever and spring

Reassemble cartridge chamber, case, grip handle and cover as per SAV/60/12 ch. I - II - III and IV

VII DRIVE MECHANISM DOES NOT STOP WHEN THE TRIGGER BUTTON IS RELEASED

1 Check that, when released, trigger button MP 119 does not bear against the stop lever - if it does, place a rubber disc under MP 119.

If the trigger button does not bear against the stop lever, or if it is already fitted with a rubber disc, then the stop pin is faulty and must be replaced.

2 Disassemble cover, grip handle and case as per SAV/30/12, ch.I-II-III.

3 Replacement of stop pin

Use tool 0 150

Remove pin

Fit another pin

Check by pressing on the single frame rod PC 46 that the pin is freed from the stop lever when the lever comes into contact with the single frame contact blade PC 41.

Bring the stop lever to bear against the pin

Bring the stop lever forward and check that the clicking noise heard when the trigger lever is released does occur when the lever comes to bear against the stop pin.

4 Reassembly

Reassemble cartridge chamber, case, grip handle and cover as per SAV 60/12 ch. I - II - III and IV.

VIII VARIABLE SHUTTERS DO NOT CLOSE

1 Disassemble cover, grip handle, case and cartridge chamber as per SAV 30/12 - ch. I - II - III and IV.

2 Check action of linkage return spring 6413 - replace, if required.

3 Adjust travel of shutter lever slide, as follows:

Loosen screw CBM 2 x 4 securing slide lever pin.

Run camera and, through the window, observe shutter closure, holding the fade lever in the shutter-closed position.

Shift slider lever pin in order to open shutters and then proceed in the reverse direction until full shutter closure is obtained - set lever pin in that position by tightening screw CBM 2 x 4.

Check the adjustment by operating the fade lever several times in succession.

4 Reassemble cartridge chamber, case, grip handle and cover as per SAV 60/12 - ch. I - II - III and IV.

ELECTRICAL FAULTS

CAMERA TYPE 4008 S and ZM

CAMERAS BEAULIEU - MAISON BRANDT FRERES
8 Quai du Marché Neuf
PARIS IV° - Tel : 326.08.71

SAV/51/12
1/15
JANUARY 1969

ELECTRICAL FAULTS

I CAMERA DOES NOT RUN

1 - Batteries discharged
2 - Remote control socket open-circuited
3 - Diode "dis"
4 - Motor "dis"
5 - Release contact faulty
6 - Transistor T 2 "dis"
7 - Trigger switch faulty

II CAMERA RUNS AT HIGH SPEED ONLY

1 - Short circuit in the circuit of transistors T 2, T3
2 - Faulty 2 fps resistor, potentiometer, capacitor or dynamo

III CAMERA RUNS AT LOW SPEED ONLY

IV CAMERA RUNS ONLY AT ONE SPEED OF LESS THAN 18 FPS

V CAMERA DOES NOT RUN AT MORE THAN 10 FPS

VI CAMERA DOES NOT RUN AT LESS THAN 18 FPS

VII SPEED UNSTEADY

VIII BATTERIES DISCHARGE TOO RAPIDLY

I CAMERA DOES NOT RUN

1 Batteries discharged

Check battery voltage.

If the battery voltage reads less than 7.2 v: replace battery.

If battery voltage exceeds 7.2 v: insert ammeter into the circuit.

If current reading is zero, see ch. 7.

If 1.5 mA current consumption reading remains unchanged on the release, see 5.

If 1.5 mA current consumption reading rises to 4 mA on release see ch. 3 or 6.

If 1.5 mA current consumption reading rises to 3 mA on release see ch. 2.

If 1.5 mA current consumption reading rises to 200 mA on release see ch. 4.

2 Remote control socket

Insert onto the remote control socket the jack plug termination of the remote control lead, set the release button to "continuous drive", with the trigger "in", and release by means of the switch terminating the remote control lead.

If the camera does not run, see ch. 5.

If the camera runs, disassemble as per SAV 30/12, ch. I - II and III. Tension slightly the jack socket blade carrying the contact stud and check that the remote control lead controls the camera correctly - reassemble as per SAV 60/12, II - III and IV.

3 Diode "dis"

3-1 Detach the bottom plate of the cartridge chamber.

3-2 Set the release button for continuous drive, with the trigger "in".

3-3 Measure the voltage across the diode.

If the voltage reading is approximately 0.6 v, see ch. 6.

If the reading is far in excess of that value, replace the diode and repeat the speed adjustments.

3-4 Speed adjustment.

Disassemble cover as per SAV 30/12, ch. 1.

Set the speed button to 2 fps.

Adjust the 2 fps resistor (top right-hand side) for a rotation speed of 120 rpm of the claw pin as measured with revolution counter 0 121.

IMPORTANT

Do not set the 2 fps resistor fully clockwise, as this might damage the diode.

Reassemble cover as per SAV 60/12 - IV.

Set the speed knob to 18 fps.

Adjust the 18 fps resistor (top centre) so as to obtain 18 fps as measured by means of the electronic tachometer 0 239.

Set the speed knob to 70 fps.

Adjust the 70 fps resistor (top left-hand side) for 70 fps as measured by means of the electronic tachometer 0 239.

Repeat and optimise the last two adjustments

4 Motor "dis"

Disassemble cover as per SAV 30/12 ch. 1.

Set the release button for continuous drive, with the trigger "in".

Measure the voltage across the terminals of the motor - if the voltage reading is approximately 7.2 v, replace the motor.

4-1 Motor replacement.

Remove the mobile index of the frame disc PC 35.

Remove the circlip from the frame disc.

Remove the frame disc PC 33.

Remove circlip 1602 from the footage disc.

Remove footage disc DC 34. Retrieve the footage counter return spring 6559 and the washer placed under the circlip.

Remove the footage counter return spring.

Lift the two tags securing the wire harness terminating on the master switch.

Unscrew the 3 screws 6994 securing the motor cradle.

Remove the motor assembly.

Unscrew the 3 screws VPM 1.6 x 1.6 securing the dynamo.

Uncouple the dynamo from the motor.

Unsolder the motor leads quickly so as to avoid melting the plastic material which forms the motor body.

Unscrew the 2 screws CBM 1.6 x 4 securing the dynamo bracket 6513 on the motor.

Remove the dynamo bracket.

Unscrew the 4 screws CBM 1.6 x 5, securing the motor to its cradle 6512.

Replace the motor.

Solder the leads to the motor (orange lead to +, black lead to -), proceed quickly to prevent melting of the plastic material.

Reassemble, repeating the above operations in reverse sequence, the dynamo bracket and the dynamo (without locking the 3 screws VPM 1.6 x 1.6).

Insert an ammeter into the voltage supply circuit and run the camera at 18 fps.

Adjust the position of the dynamo with respect to that of the motor, for minimum current consumption (less than 100 mA).

Tighten the 3 screws VPM 1.6 x 1.6 while checking current consumption and seal screws with a spot of varnish.

Place the motor back in position.

Screw in the 3 screws 6994 without tightening.

Adjust the position of the motor assembly for minimum current consumption (less than 350 mA) and minimum noise.

Tighten the 3 screws 6994, while checking current consumption.

Reassemble the footage and frame counters, in reverse sequence.

Adjust as per SAV 50/12 - ch. I - 3.

Reassemble the cover as per SAV 60/12 - ch. IV.

5 Release contact

Depress the release button and listen for tell-tale microcontact trip noise.

5 -1 On hearing the trip noise:

Detach the bottom of the cartridge chamber.

Check tightening of the brass screw securing the printed circuit.

Measure the resistance across the screw and the diode terminal marked with a black line. When the microcontact opens, the resistance should be zero - other-wise, disassemble cover, grip handle and case as per SAV 30/12 - ch. I - II - III.

Check the connection of the leads on the microcontact and clean contacts (use carborendum paper) so as to obtain zero resistance.

Reassemble case, grip handle and cover as per SAV 60/12, ch. II - III and IV.

5-2 No trip noise is heard.

Check that the release button is correctly screwed on.

Disassemble cover, grip handle and case as per SAV 30/12, ch. I - II and III.

Check that the insulating stud 6021 is in correct position.

Set the stop lever to bear against the stop pin.

Depress the stop lever forward. On hearing the trip noise, release the lever: a second trip noise should be heard precisely at the time when the lever comes to bear against the pin.

Adjustment procedure: unscrew, by one turn, the 2 screws CBM 2 x 17.5 securing the microcontact against its holder. Open the microcontact by rotating it until a trip noise is heard, with the stop lever still bearing against the claw. Lock the 2 screws CBM 2 x 17.5 and check release as previously explained.

Reassemble case, grip handle and cover as per SAV 60/12, ch. II - III and IV.

6 Transistor T 2 "dis" or 47000 UF capacitor short-circuited.

Disassemble cover, grip handle and case as per SAV 30/12, ch. I - II and III.

Replace transistor T2 - when soldering the transistor, hold the terminal lug which is being soldered, with a pair of pliers in order to absorb the heat away from the transistor.

Replace the 47000 UF capacitor.

Reassemble case and grip handle as per SAV 60/12 ch. II and III.

Proceed with speed adjustment as per SAV 51/12 - I, 3-4.

Reassemble cover as per SAV 60/12, ch. IV.

7 Trigger switch

Detach the felt from the base plate.

Unscrew the 4 screws SIM SP No. 4.

Remove the base plate.

Measure the resistance across the soldered connections of the yellow and red leads, with the trigger pulled in. If the resistance is not equal to zero: clean the contacts and, if required, retension the blades. If the resistance is equal to zero: measure the resistance across the yellow lead and the contact blade of the + side of battery. If the resistance is equal to zero, detach the bottom plate of the cartridge chamber and resolder the red lead to the + S point. If the resistance is infinite, disassemble the grip handle, cover and case and the cartridge chamber as per SAV 30/12, ch. I - II - III and IV. Resolder the yellow lead to the soldered connection of the battery charge resistance;

Check for correct operation and reassemble as per SAV 60/12, ch. I - II - III and IV.

II CAMERA RUNS AT HIGH SPEED ONLY

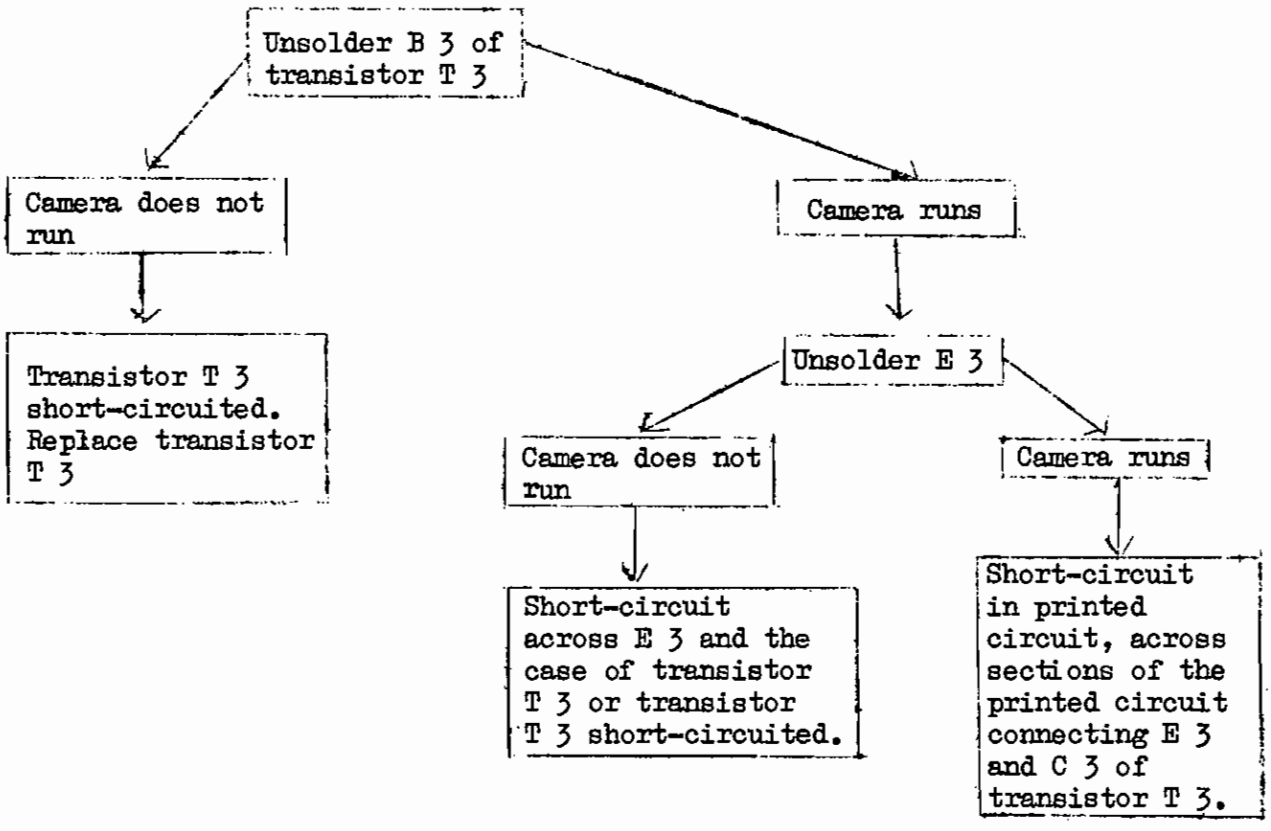
Insert into the remote control socket a non-terminated jack socket (i.e. not connected to a remote control lead) and release by means of the release button, with the trigger pulled in.

If the camera continues to run: see ch. I.

If the camera stops running: see ch. 2.

1 Short-circuit in the circuit of transistors T2, T3.

Disassemble cover, grip handle, case and cartridge chamber as per ch. I - II - III and IV of SAV 30/12.



Reassemble cartridge chamber, case and grip handle as per SAV 60, ch. I II and III. Proceed with speed adjustment as per SAV 51/12, ch. I, 3-4.

Reassemble cover as per SAV 60/12, ch. IV.

2 Faulty 2 fps resistor, potentiometer, capacitor or dynamo.

Disassemble cover, grip handle, case and cartridge chamber as per ch. I - II - III and Iv of SAV 30/12.

Re-insert the unmounted jack socket into the remote control socket. Apply voltage supply to camera. Release switch, with the trigger pulled in. Measure the voltage across the terminals of the diode - the voltage reading should be approximately 0.5 v - if the reading is 0 see ch. 2-1.

Release the camera and measure the voltage across the base BI of transistor TI and the slider of the 2 fps resistor.

If the voltage exceeds I v: replace TI.

If the voltage is zero or of very low value: see ch. 2-3 and then 2-4.

2-1 Check the 2 fps resistor.

Check that the circuit connected to the black lead of the motor is not shorted to the circuit connected to the red lead of the dynamo.

Proceed with speed adjustment as per SAV 51/12, ch. 1-3-4.

2-2 Unsolder one of the capacitor terminals and measure capacitor resistance - if the resistance reading is zero, replace capacitor.

Check that the camera runs at all speed settings.

Reassemble cartridge chamber, case, grip handle as per SAV 60/12, ch. I - II and III.

Proceed with speed adjustments as per SAV 51/12, ch. 1-3.

2-3 Unsolder the red lead of the dynamo at point RD.

Connect the -ve side of the voltmeter to the red lead, the +ve side to the black lead.

Run the camera. If the resultant voltage reading does not exceed 1v, replace the dynamo.

2-3-1 Replacement of dynamo.

Unsolder the black lead and bring out the 2 leads on the dynamo side.

Disassemble the motor assembly as per SAV 51/12, ch. 1-4, 1.

Unscrew the 3 screws VPM 1.6 x 1.6

Uncouple the dynamo from the motor.

Instal another dynamo PC 66, do not forget to fit the coupling disc 6515.

Insert an ammeter into the supply circuit and run the camera.

Adjust the position of the dynamo with respect to the motor for minimum current consumption (less than 100 mA).

Tighten the 3 screws VPM 1.6 x 1.6, while checking current consumption - seal the screws with a spot of varnish.

Mount the motor assembly back in position.

Screw in the 3 screws 6994 without tightening.

Adjust the position of the motor assembly for minimum current consumption (less than 350 mA) and minimum noise.

Tighten the 3 screws 6994 while checking current consumption.

R eassemble the footage and frame counters, proceeding in reverse sequence and adjust as per SAV 50/12, ch. 1-2.

Reassemble cartridge, case and grip handle as per SAV 60/12, ch. I - II and III.

Proceed with the speed adjustment as per SAV 51/12 ch. 1-3-4.

Reassemble cover as per SAV 60/12, ch. IV.

III CAMERA RUNS AT LOW SPEED ONLY

Detach the bottom plate of the cartridge chamber.

Set the speed knob to 18 fps.

Short-circuit, with a pair of tweezers, the slider and the rivet on the speed potentiometers side of the 70 fps resistor (top left-hand side).

1 Speed increases: replace the 70 fps resistor.

Check that the camera runs at all speed settings.

Disassemble cover as per SAV 30/12, ch. I

Proceed with speed adjustment as per SAV 51/12, ch. I -3-4.

Reassemble cover as per SAV 60/12, ch. IV.

2 Camera runs at low speed only.

Disassemble cover as per SAV 30/12, ch. I.

Short-circuit the terminals of the speed potentiometer connected to the red and green leads, with a pair of tweezers.

2-1 Speed increases:

Replace speed potentiometer as per SAV 51/12, ch. VI,2-2-1.

Proceed with speed knob adjustment as per SAV 51/12, ch. VI, 2-2-2.

Proceed with sensitivity track adjustment as per SAV 51/12, ch. VI 2-2-3

Adjust speed settings (SAV 51/12, ch. I - 3-4).

Adjust exposure meter (SAV 52/12, ch. I -3).

2-2 Speed does not vary.

Disassemble grip handle and case as per SAV 30/12, ch. II and III.

Replace green lead connecting the potentiometer to the printed circuit.

Check that the camera runs at all speed settings.

Reassemble case and grip handle as per SAV 60/12,ch. II and III.

Check speed adjustment (SAV/51/12, ch. I - 3-4).

Reassemble cover as per SAV 60/12, ch. IV.

IV CAMERA RUNS AT STEADY SPEED OF LESS THAN 18 FPS

Disassemble cover as per SAV 30/12, ch. I.

Short-circuit speed potentiometer terminals connected to the red and black leads, with a pair of tweezers.

1 Speed increases

Replace speed potentiometer as per SAV 51/12, ch. VI, 2-2-1.

Proceed with adjustment of speed knob as per SAV/51/12, ch. VI,2-2-3.

Proceed with adjustment of sensitivity track as per SAV 51/12, ch. 2-2-3.

Proceed with speed adjustment as per SAV 51/12, ch. I-3-4.

Proceed with exposure meter adjustment as per SAV 52/12 ch. I-3.

2 Speed does not vary

Disassemble grip handle and case as per SAV/30/12 ch. II and III.

Replace red lead connecting printed circuit potentiometer.

Check that the camera runs at all speed settings.

Reassemble case and grip handle as per SAV 60/12, ch. II and III.

Check speed adjustment (SAV 51/12 ch. I - 3-4).

Reassemble cover as per SAV/60/12, ch. IV.

V CAMERA DOES NOT RUN AT MORE THAN 10 FPS

Disassemble cover, grip handle and case as per SAV 30/12, ch. I - II and III.

Unsolder one of the terminals of the 4700 UF capacitor.

Measure capacitor resistance.

1 Capacitor resistance less than 500 kohms.

Replace capacitor.

Check that camera runs at all speed settings.

Reassemble case and grip handle as per SAV/60/12, ch. II and III.

Proceed with speed adjustment (SAV 51/12 - ch. I - 3-4).

2 Capacitor resistance exceeds 500 kohms.

Replace transistor T2.

Check that camera runs at all speed settings.

Reassemble case and grip handle as per SAV 60/12, ch. II and III.

Proceed with speed adjustment (SAV 51/12 - ch. I - 3-4).

VI CAMERA DOES NOT RUN AT LESS THAN 18 FPS

Detach the bottom section of the cartridge chamber.

Set speed knob to 2 fps.

Measure the voltage across the terminals of the diode with the camera running.

1 Zero voltage across diode terminals.

Unsolder diode and start camera running.

1-1 If the camera fails to run: replace diode; disassemble cover (SAV 30/12, ch. I) and repeat speed adjustments (SAV 51/12, ch. I - 3-4).

1-2 If the camera continues to run: disassemble cover, grip handle, case and cartridge chamber (SAV 30/12, ch. I - II - III and IV).

Check that the circuit connected to the dynamo red lead is not short circuited to the circuit connected to the motor black lead (zero resistance).

Reassemble cartridge chamber, case and grip handle as per SAV 60/12, ch. I - II and III and repeat speed adjustments (SAV 51/12 - ch; I.3-4).

2 Voltage reading of approximately 0.5 v across diode terminals

Disassemble cover, grip handle, case and cartridge chamber as per SAV 30/12 - ch. I - II - III and IV.

2-1 Check that the circuit connected to the slider of the 70 fps resistor is not short-ciruited to the case of the speed potentiometer (zero resistance across slider and ground.).

2-2 By means of an ohmmeter, check the continuity of the black lead connecting the speed potentiometer to the printed circuit.

If the resistance is not equal to zero: replace black lead, check that the camera runs at all speed settings, reassemble cartridge chamber, case and grip handle (SAV 60/12 - ch. I - II and III).

Check speed adjustment (SAV 51/12, ch. I - 3-4).

If the resistance is equal to zero: check potentiometer as follows:

Unsolder black lead from the potentiometer and measure resistance across the mid-tap terminal (red lead) and the terminal normally connected to the black lead. This should result in a low resistance reading which increases as the knob is rotated towards the 70 fps setting. In the negative, replace potentiometer.

2-2-1 Replacement of potentiometer 6390 X I

Remove spring 6692 from the fade control lever.

Unscrew screw CBM 2 x 4 securing the fade lever and remove the screw and washer.

Remove fade control lever PC 220, washer 6693 and bush 6680.

Unsolder the three leads from the potentiometer and the red lead from the sensitivity track.

Unscrew the 2 screws CBM 2 x 2 securing the speed indexing blade and the top plate.

Unscrew indexing pillar 6922.

Unscrew indexing pillar 6922.

Unscrew screw CBM 2 x 4 securing the photocell connection circuit 6810.

Remove mounting plate (retrieve the two washers and track shaft spring).

Unscrew screw VPM 2 x 2 and screw VCM 2 x 2 securing the speed knob.

Remove knob.

Unscrew the 3 screws VCM 1.6 x 1.6 securing the speed wheel. Remove speed wheel.

Unscrew the potentiometer nut and remove potentiometer.

Replace potentiometer.

Reassemble potentiometer by repeating above operations in reverse order without re-soldering the sensitivity track green lead. When soldering the 3 potentiometers leads, bear in mind that the red lead is connected to the mid-tap terminal and that the green lead is connected to the terminal on the viewfinder side.

Stick the insulating plate 6015 back in position.

Reassemble cartridge chamber, case and grip handle as per SAV 60/12 - ch. I - II and III.

2-2-2 Adjustment of speed knob

Unscrew knob setscrew VCM 2 x 2.

Unscrew and remove setscrew VPM 2 x 2 from knob.

Rotate potentiometer shaft fully clockwise.

Connect an ohmmeter across the terminals of the potentiometer connected to the red and black leads and rotate slightly the potentiometer shaft in order to overshoot the "jump" point of the potentiometer (as indicated by the ohmmeter).

Hold the potentiometer shaft in that position and position the knob for minimum setting (2 fps) on the indexing blade.

Tighten screw VCM 2 x 2, tack the potentiometer shaft and screw in screw VPM 2 x 2.

Check that the knob markings are correctly positioned with respect to the cover marking (2 - 18 - 70 fps) - otherwise detach and re-position the etched disc.

2-2-3 Adjustment of sensitivity track

Unlock the 3 screws VCM 1.6 x 1.6 securing the speed wheel.

Unsolder the green lead connected to the track.

Set the speed knob to 18 fps.

Rotate the sensitivity knob fully clockwise.

Check that the reference dot on the cover is opposite the 10 ASA mark.

Mark with a pencil line the 10 ASA point on the mounting plate.

Connect an ohmmeter across the track contact blade and ground.

Bring the 200 ASA mark opposite the reference line and rotate the sensitivity track slider wheel so as to read 8460 to 10300 ohms on the ohmmeter.

Tighten the 3 screws VCM 1.6 x 1.6 of the speed wheel.

Bring the 25 ASA mark opposite the reference line - the ohmmeter should give a resistance reading of 1890 to 2310 ohms.

Resolder the green lead to the track contact blade.

Reassemble cover as per SAV 60/12 - ch. IV.

2-2-4 Speed adjustment, (see SAV 51/12 - ch. I - 3-4.)

2-2-5 Exposure meter adjustment, (SAV 52/12, ch. I - 3).

VII SPEED UNSTEADY

Disassemble cover, grip handle, case and cartridge chamber as per SAV 30/12 - ch. I - II - III and IV.

1 No 47000 UF capacitor and black lead in the circuit.

Solder a 47000 UF capacitor across point B2 and E2 of transistor T2.

Solder a black lead (E 0 D F black) across point EI (emitter of transistor TI) and the terminal of the microcontact which is soldered to the blue lead.

Check speed settings and reassemble cartridge chamber, case, grip handle and cover as per SAV 60/12 - ch. I - II - III and IV.

2 Replace the 100 UF capacitor, checking for correct polarity connection (the + terminal of the capacitor connected to point N D + C).

2-1 Speed steady.

Reassemble cartridge chamber, case and grip handle as per SAV 60/12, ch. I - II and III.

Proceed with speed adjustments (SAV 51/12, ch. I - 3).

2-2 Speed unsteady.

Replace the motor/dynamo coupling disc as detailed in SAV 51/12, ch. II - 2, 3, I (dynamo replacement procedure).

VIII BATTERIES DISCHARGE TOO RAPIDLY

Insert an ammeter into the camera circuit.

1 Trigger set to the "safe" position:

The ammeter shows that the camera is drawing current.

Detach the felt from the base plate.

Unscrew the 4 screws S I M SP No. 4 .

Remove the base plate and trigger switch.

Re-tension switch spring blades.

Reassemble base plate and secure with the 4 screws.

Glue a felt gasket 6891 in position.

2 Trigger in "pulled in" position, ammeter shows current consumption markedly in excess of 2 mA.

Disassemble cover (SAV 30/12 - ch. I).

Check that ground contact blade PC 38 is not in contact with the hub of the stop cam.

Check that the ground contact blade is within the insulating sector (i.e. infinite resistance across blade and ground) of the stop cam when the claw pin is against the stop lever. Otherwise, unscrew the screw and reposition the blade.

3 Run the camera at 18fps - the current consumption should then be approximately 350 mA. If that value is exceeded, check shutter mechanism.

EXPOSURE METER

TROUBLE SHOOTING PROCEDURE

4008 S and ZM

CAMERAS BEAULIEU - MAISON BRANDT FRERES

8 Quai du Marché Neuf

PARIS IV° - Tel : 326.08.71

SAV/52/12

JANUARY 1969

EXPOSURE METER MALFUNCTIONS

I - No pointer deflection

II - No deflection on AUTO - deflection on MANUAL, when the reglomatic is not mounted on the camera.

III - No deflection on AUTO and MANUAL - deflection on TEST.

IV - Pointer sticks to top of window on AUTO and MANUAL.

V - Pointer moves down when release button is depressed.

I NO DEFLECTION ON ANY POSITION

Check battery charge (should exceed 7.2 v).

Set master switch to TEST.

Disassemble cover as per SAV 30/12 - ch. I.

Set grip handle switch to "IN" position.

Measure on the switching circuit, the voltage across respectively the yellow lead and ground and the brown lead and ground.

1 Yellow lead: 0 volt - brown lead: 1 volt

Detach the skinplate disc (to 0 140) from the switch knob.

Unscrew setscrew and remove knob.

Clean and re-tension switch contacts.

Reassemble in reverse order.

Check exposure meter operation.

Reassemble cover as per SAV 60/12 - ch. IV.

Adjust exposure meter (SAV 52/12 - ch. I - 3)

2 Yellow lead: 1 volt.

Disassemble grip handle, case and cartridge chamber as per SAV 30/12 - ch. II - III and IV.

Check that yellow lead is connected to + G point and that neither of the two galvanometer terminals is damaged.

Replace galvanometer.

2-1 Replacement of galvanometer 6671 x I

Unsolder the green and black leads.

Unscrew screw 6997 (to 0 145).

Remove screw and washer 6998.

Unscrew the 2 screws VCM 1.6 x 2.

Rotate galvanometer by one quarter turn in order to move pointer clear of a viewfinder.

Extract insulated bush 6668 (block bush with a screwdriver while first pulling and then pushing the galvanometer: the bush should then come free).

Remove galvanometer and washer 6670.

Check that the openings of the new galvanometer are sealed with scotch tape and that (gentle) blowing onto the face of the meter causes the pointer to deflect.

Reassemble the new galvanometer, by repeating the above steps in reverse order and check that the pointer is straight and clean and does not come in contact with the viewfinder. Adjust the galvanometer.

2-2 Galvanometer adjustment.

Check that the switch is set to TEST.

Connect the Iv supply across the terminals of the 1,000 ohm resistor (6960), with the + on the brown lead side and the - on the black lead side.

Unlock the two screws VCM 1.6 x 2.

Position the galvanometer so that, observed through the eyepiece, the pointer is at the centre of the window slot. On that position, the pointer must be horizontal.

Lock the 2 screws VCM 1.6 x 2 and check the adjustment.

Reassemble cartridge chamber, grip handle and cover as per SAV 60/12 - ch. I - II - III and IV.

Adjust exposure meter.

3 Exposure meter adjustment

For the purpose of this adjustment, the camera equipped with a 5.6 F fixed focus lens is placed in front of the light box.

The supply voltage should read 7.6 v.

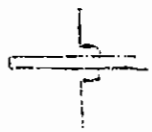
1 200 A S A Resistor

Switch: : Auto

Sensitivity: : 200 ASA

Speed: : 18 fps

Light intensity: 300 LUX



Camera running

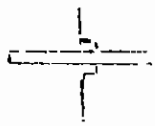
2 25 A S A Resistor

Switch : Auto

Sensitivity : 25 ASA

Speed : 18 fps

Light intensity : 2400 LUX



Camera running

3 Optimise 25 and 200 ASA adjustments

4 Start-stop resistor

Switch	: Auto	
Sensitivity	: 25 ASA	Camera stopped
Speed	: 18 fps	
Light intensity	: 2400 LUX	

5 Battery test resistor

Switch	: test	Camera stopped
Supply voltage	: 7.2 v	

II NO DEFLECTION ON AUTO - DEFLECTION ON MANUAL

(Reglomatic not mounted on camera)

Detach gasket 6434 from lens mount. The gasket must be replaced. To detach, damp with gasolene and prise out with screwdriver, using special jigging plate: insert screwdriver into round hole just enough to pierce the plate which can then be detached.

Unscrew the 4 screws CBM 2 x 4 and remove the lens mount.

Measure the resistance across the green lead terminal stud and the lens mount ground.

1 Resistance reading: 0

Look for the presence of metal particles shorting the terminal to ground - otherwise replace terminal stud.

Reassemble lens mount, gasket 6434 and apply sealant in the space between the case and the lens mount.

2 Resistance reading: infinite

Fault is traceable exclusively to green lead.

Check that green lead is not wedged between the shutter holder and the lens mount. If the lead is long enough, cut off the damaged section - otherwise disassemble cover, grip handle and case (SAV 30/12 - ch. I - II and III) and replace green lead (lift the 3 tags which hold the wire harness, solder a new green lead to the termination of the old one and replace - fold the tags over the harness and reassemble case, grip handle and cover (SAV 60/12 - ch. II - III and IV).

III NO DEFLECTION ON AUTO AND MANUAL - DEFLECTION ON TEST

Detach the bottom plate of the cartridge chamber.

Set the switch to manual, sensitivity to 200 ASA and speed knob to 18 fps.

Check that the 200 ASA resistor is not set fully clockwise.

Check the condition of the soldered connections of the green and red leads, on the right-hand side of the speed adjustment resistors. (If the red lead is unsoldered, there is no need to disassemble the cartridge chamber: re-solder the lead cleanly to the circuit connected to the + S point.

Remove the cover (SAV 30/12 - ch. I).

Check that the photocell mask has been duly removed.

Short-circuit the photocell and observe the deflection of the galvanometer pointer.

1 No deflection:

Check, on the switch circuit, that the green lead is correctly soldered and that the soldered connection is not in contact with the circuit mounting screw.

Check the 25 ASA and start stop resistors.

Check that the brown lead is correctly soldered to the POS point and that the terminal of the 1,000 hom resistor connected to ground through the brass screw is not in contact with the POS point.

2 The pointer registers a deflection.

Replace the photocell

2-1 Photocell replacement.

Unsolder the two photocell leads from the connection circuit 6810.

Unscrew the two screws CBM 1.6 x 3 securing spring blade 6442.

Remove the 2 screws, tag 5027 and the spring blade.

Open the two tags securing the wire harness.

Rotate photocell mask 6993 so that its opening is brought into coincidence with the flat of the photocell holder.

Remove the prism-photocell assembly.

Unscrew the 2 screws VPM 1 x 1 securing the photocell.

Remove photocell PC 227.

Check for presence of a photocell mask in the slot of the photocell holder.

Mount a new photocell, taking care not to expose it to light - secure with the 2 screws VPM 1 x 1.

Check that the prism and field lens are clean.

Reassemble by repeating the above steps in reverse order, checking that the prism is correctly applied against the shutter mount and that stop 6712 positions in the forward and downward direction.

Reassemble cover as per SAV/60/12 - ch. IV.

2-2 Exposure meter adjustment:

(see SAV 52/12 - ch. I - 3)

IV POINTERS FIXED TO TOP OF WINDOW ON AUTO AND MANUAL

1 Detach the bottom section of the cartridge chamber.

Check that the red and green leads, on the right hand side of the speed adjustment resistors, are not short-circuited.

2 Remove cover (SAV 30/12 - ch. I)

Check that the green and red leads soldered to the connection circuit 6810 are not short-circuited.

Check that contact blade 6384, on the sensitivity track, bears correctly against the track.

3 Unsolder one of the photocell leads and measure photocell resistance which, with the photocell mask in position, should exceed 10 Kohms, otherwise, replace photocell as per SAV 52/12 - ch. III - 2

Reassemble cover (SAV 60/12 - ch. IV)

Adjust exposure meter (SAV 52/12 - ch. I - 3).

EXPOSURE METER

TROUBLE SHOOTING PROCEDURE

4008 S and ZM

CAMERAS BEAULIEU - MAISON BRANDT FRERES

8 Quai du Marché Neuf

PARIS IV° - Tel : 326.08.71

SAV/52/12

JANUARY 1969

EXPOSURE METER MALFUNCTIONS

I - No pointer deflection

II - No deflection on AUTO - deflection on MANUAL, when the reglomatic is not mounted on the camera.

III - No deflection on AUTO and MANUAL - deflection on TEST.

IV - Pointer sticks to top of window on AUTO and MANUAL.

V - Pointer moves down when release button is depressed.

I NO DEFLECTION ON ANY POSITION

Check battery charge (should exceed 7.2 v).

Set master switch to TEST.

Disassemble cover as per SAV 30/12 - ch. I.

Set grip handle switch to "IN" position.

Measure on the switching circuit, the voltage across respectively the yellow lead and ground and the brown lead and ground.

1 Yellow lead: 0 volt - brown lead: 1 volt

Detach the skinplate disc (to 0 140) from the switch knob.

Unscrew setscrew and remove knob.

Clean and re-tension switch contacts.

Reassemble in reverse order.

Check exposure meter operation.

Reassemble cover as per SAV 60/12 - ch. IV.

Adjust exposure meter (SAV 52/12 - ch. I - 3)

2 Yellow lead: 1 volt.

Disassemble grip handle, case and cartridge chamber as per SAV 30/12 - ch. II - III and IV.

Check that yellow lead is connected to + G point and that neither of the two galvanometer terminals is damaged.

Replace galvanometer.

2-1 Replacement of galvanometer 6671 x I

Unsolder the green and black leads.

Unscrew screw 6997 (to 0 145).

Remove screw and washer 6998.

Unscrew the 2 screws VCM 1.6 x 2.

Rotate galvanometer by one quarter turn in order to move pointer clear of a viewfinder.

Extract insulated bush 6668 (block bush with a screwdriver while first pulling and then pushing the galvanometer: the bush should then come free).

Remove galvanometer and washer 6670.

Check that the openings of the new galvanometer are sealed with scotch tape and that (gentle) blowing onto the face of the meter causes the pointer to deflect.

Reassemble the new galvanometer, by repeating the above steps in reverse order and check that the pointer is straight and clean and does not come in contact with the viewfinder. Adjust the galvanometer.

2-2 Galvanometer adjustment.

Check that the switch is set to TEST.

Connect the Iv supply across the terminals of the 1,000 ohm resistor (6960), with the + on the brown lead side and the - on the black lead side.

Unlock the two screws VCM 1.6 x 2.

Position the galvanometer so that, observed through the eyepiece, the pointer is at the centre of the window slot. On that position, the pointer must be horizontal.

Lock the 2 screws VCM 1.6 x 2 and check the adjustment.

Reassemble cartridge chamber, grip handle and cover as per SAV 60/12 - ch. I - II - III and IV.

Adjust exposure meter.

3 Exposure meter adjustment

For the purpose of this adjustment, the camera equipped with a 5.6 F fixed focus lens is placed in front of the light box.

The supply voltage should read 7.6 v.

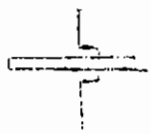
1 200 A S A Resistor

Switch: : Auto

Sensitivity: : 200 ASA

Speed: : 18 fps

Light intensity: 300 LUX



Camera running

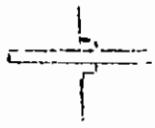
2 25 A S A Resistor

Switch : Auto

Sensitivity : 25 ASA

Speed : 18 fps

Light intensity : 2400 LUX



Camera running

3 Optimise 25 and 200 ASA adjustments

4 Start-stop resistor

Switch	: Auto	
Sensitivity	: 25 ASA	Camera stopped
Speed	: 18 fps	
Light intensity	: 2400 LUX	

5 Battery test resistor

Switch	: test	Camera stopped
Supply voltage	: 7.2 v	

II NO DEFLECTION ON AUTO - DEFLECTION ON MANUAL

(Reglomatic not mounted on camera)

Detach gasket 6434 from lens mount. The gasket must be replaced. To detach, damp with gasolene and prise out with screwdriver, using special jigging plate: insert screwdriver into round hole just enough to pierce the plate which can then be detached.

Unscrew the 4 screws CBM 2 x 4 and remove the lens mount.

Measure the resistance across the green lead terminal stud and the lens mount ground.

1 Resistance reading: 0

Look for the presence of metal particles shorting the terminal to ground - otherwise replace terminal stud.

Reassemble lens mount, gasket 6434 and apply sealant in the space between the case and the lens mount.

2 Resistance reading: infinite

Fault is traceable exclusively to green lead.

Check that green lead is not wedged between the shutter holder and the lens mount. If the lead is long enough, cut off the damaged section - otherwise disassemble cover, grip handle and case (SAV 30/12 - ch. I - II and III) and replace green lead (lift the 3 tags which hold the wire harness, solder a new green lead to the termination of the old one and replace - fold the tags over the harness and reassemble case, grip handle and cover (SAV 60/12 - ch. II - III and IV).

III NO DEFLECTION ON AUTO AND MANUAL - DEFLECTION ON TEST

Detach the bottom plate of the cartridge chamber.

Set the switch to manual, sensitivity to 200 ASA and speed knob to 18 fps.

Check that the 200 ASA resistor is not set fully clockwise.

Check the condition of the soldered connections of the green and red leads, on the right-hand side of the speed adjustment resistors. (If the red lead is unsoldered, there is no need to disassemble the cartridge chamber: re-solder the lead cleanly to the circuit connected to the + S point.

Remove the cover (SAV 30/12 - ch. I).

Check that the photocell mask has been duly removed.

Short-circuit the photocell and observe the deflection of the galvanometer pointer.

1 No deflection:

Check, on the switch circuit, that the green lead is correctly soldered and that the soldered connection is not in contact with the circuit mounting screw.

Check the 25 ASA and start stop resistors.

Check that the brown lead is correctly soldered to the POS point and that the terminal of the 1,000 hom resistor connected to ground through the brass screw is not in contact with the POS point.

2 The pointer registers a deflection.

Replace the photocell

2-1 Photocell replacement.

Unsolder the two photocell leads from the connection circuit 6810.

Unscrew the two screws CBM 1.6 x 3 securing spring blade 6442.

Remove the 2 screws, tag 5027 and the spring blade.

Open the two tags securing the wire harness.

Rotate photocell mask 6993 so that its opening is brought into coincidence with the flat of the photocell holder.

Remove the prism-photocell assembly.

Unscrew the 2 screws VPM 1 x 1 securing the photocell.

Remove photocell PC 227.

Check for presence of a photocell mask in the slot of the photocell holder.

Mount a new photocell, taking care not to expose it to light - secure with the 2 screws VPM 1 x 1.

Check that the prism and field lens are clean.

Reassemble by repeating the above steps in reverse order, checking that the prism is correctly applied against the shutter mount and that stop 6712 positions in the forward and downward direction.

Reassemble cover as per SAV/60/12 - ch. IV.

2-2 Exposure meter adjustment:

(see SAV 52/12 - ch. I - 3)

IV POINTERS FIXED TO TOP OF WINDOW ON AUTO AND MANUAL

1 Detach the bottom section of the cartridge chamber.

Check that the red and green leads, on the right hand side of the speed adjustment resistors, are not short-circuited.

2 Remove cover (SAV 30/12 - ch. I)

Check that the green and red leads soldered to the connection circuit 6810 are not short-circuited.

Check that contact blade 6384, on the sensitivity track, bears correctly against the track.

3 Unsolder one of the photocell leads and measure photocell resistance which, with the photocell mask in position, should exceed 10 Kohms, otherwise, replace photocell as per SAV 52/12 - ch. III - 2

Reassemble cover (SAV 60/12 - ch. IV)

Adjust exposure meter (SAV 52/12 - ch. I - 3).

4008S and ZM

INSTRUCTIONS FOR REASSEMBLY

CAMERAS BEAULIEU - MAISON BRANDT FRERES
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SAV/60/12
1/5
JANUARY 1969

INSTRUCTIONS FOR THE REASSEMBLY OF THE CARTRIDGE CHAMBER, CASE, GRIP HANDLE AND COVER.

I - REASSEMBLY OF CARTRIDGE CHAMBER

II - REASSEMBLY OF CASE

III - REASSEMBLY OF GRIP HANDLE

IV - REASSEMBLY OF COVER

I REASSEMBLY OF CARTRIDGE CHAMBER

Check condition of filter: replace if dirty.

Assemble cartridge chamber.

Check that the green and black galvanometer leads and the brown and blue remote control leads are not wedged under the cartridge chamber.

Check that the hinge of the cartridge chamber does not bear against the galvanometer leads.

Secure the cartridge chamber with the (4) screws CBM 2 x 2.

Check that the insulating stud 6021 of the stop lever does not bear against the cartridge chamber.

Check filter retraction.

Apply sealant in the space between the cartridge chamber and the guide-way.

II REASSEMBLY OF CASE

Before mounting the case, check that:

The galvanometer is aligned to Iv against the Iv supply,

See SAV/52/12 - ch. I - 7.

The exposure meter system operates normally (check by slightly retracting the photocell mask)

The drive mechanism operates correctly (current consumption less than 380 mA at 18 fps)

Claw spring 6484 is placed on the pressure stud of the claw.

The single-frame rod PC 46 is in its recess.

Assemble case, with the red, black and green leads (to lens mount) and red and yellow leads (to grip handle switch) terminating outside the case.

Place in position screw 6718, and the 2 screws 6727.

Tighten the 2 screws 6727 (tool 0 154) and screw 6718 (tool 0155).

Solder the red, black and green leads to the lens mount (mid-terminal: black lead - terminal on release button side: green lead).

Check, on the ohmmeter, that none of the 3 soldered connections are shorting to the lens mount ground (infinite resistance between the 3 points and the lens mount ground)

Check for clean condition of field lens 6444, ground glass and mirror.

Place lens mount in position (being careful not to wedge the leads between the mount and the case) and secure with the 4 screws CBM 2 x 4.

Screw filter retraction stud 6735.

IMPORTANT

Do not mount a Reglomatic on a lens mount which is not equipped with the diso 6434.

Secure with adhesive the lens mount plate 6434 and the 2 discs 6719 on screws 6727.

Apply sealant in the space between the lens mount and the case.

III REASSEMBLY OF GRIP HANDLE

Check that the filter retraction stud is in the correct position.

Thread the red and yellow leads into the grip handle and secure handle with screw 6832.

Check filter retraction by means of the retraction plate 6835.

Solder the yellow and red leads to the grip handle switch and check switch operation.

Secure the base plate with the 4 screws SIM SP No. 4.

Stick felt 6891 over the base plate.

IV REASSEMBLY OF COVER

1 Check alignment of viewfinder window with filming window.

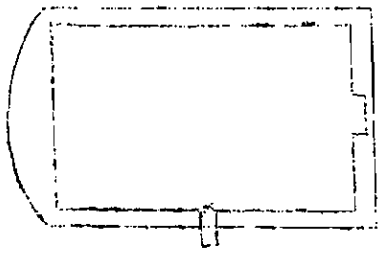
Screw, on the lens mount, the viewfinder window alignment tester 0 - 207.

Open the cover of the cartridge chamber and place on the springs a sheet of red paper.

Place, on the test bench, an illuminated sheet of white paper.

Observe the sheet through the lens and the viewfinder while running the camera at 18 fps: the viewfinder window must be correctly alined with the filming window.

To adjust alignment, alter setting of screws 6983 and CBM 2 x 4 of the front flange PC 15.



2 Remove the photocell mask, slide the photocell holder mask along the slot of the photocell holder and place cover in position.

During this operation, the camera must not be exposed to excessive light.

Secure the cover with nut 6467 (tool 0 109) and screw 3214.

Re-check alignement and readjust if necessary.

Mount the ground glass control knob and secure with screw VCM 1.6 x 3.

REGLOMATIC UNIT 4008 ZM

INSTRUCTIONS FOR RE-ASSEMBLY

CAMERAS BEAULIEU - MAISON BRANDT FRERES
8 Quai du Marché Neuf
PARIS IV° - Tel : 326.08.71

SAV/60/22
1/3
JANUARY 1969

I RE-ASSEMBLY OF REGLOMATIC UNIT

1.1 Motor.

Place motor on motor cradle.

Mount coupling 11045 and associated hub - secure with screw CBM 2.5 x 7.

Position motor so that motor pinion faces coupling pinion.

Tighten the two screws VCM 2 x 3 securing the motor.

Solder green lead connecting micro-switch 6099 to the input resistors of the printed circuit.

Solder the two motor leads. (See diagram 6122).

1.2 Re-assembly of motor cradle.

Instal motor cradle on supporting plate, positioning button 6081A so that it bears against ground blade 6100.

Screw the 3 screws 11084 securing the cradle to the supporting plate.

Stick on skinplate disc 6114.

1.3 Re-assembly of printed circuit and holder.

Place printed circuit holder on motor cradle.

Tighten the 2 screws VCM 1.6 x 3.

Re-solder the leads to the circuit as per diagrams 6122 and 6124.

Mount casing 6110 and secure by means of the 2 screws 11084.

II RE-ASSEMBLY OF REGLO-ZOOM TUBE

2.1 Re-assembly of printed circuit and micro-switches.

Fit the two buttons 6085 into their recesses.

Insert printed circuit into the micro-switch holder.

Insert micro-switch shaft 6089.

Screw the 2 screws 6956 securing the printed circuit to the supporting plate.

2.2 Re-assembly of motor cradle.

Place motor cradle in position, threading the 5 leads between the cradle and the supporting plate.

Solder the 2 motor leads (See diagram 6124, fig. 7).

Solder the 3 potentiometer leads (See diagram 6124, fig. 7).

Mount the potentiometer holder and tighten the 2 screws 1.6 x 4.

III RE-ASSEMBLY OF LENS

Mount lens on supporting plate, positioning knob 6105 so that the macro actuating lug engages into "fork" 6102.

Screw the 4 screws VPM 2 x 6 and apply sealant to the 4 holes.

LENS ASSEMBLY 4008 ZM

TROUBLE SHOOTING PROCEDURE

CINEMA BEAULIEU - MAISON BRANDT FRERES
8 Quai du Marché Neuf
PARIS IV° - Tel : 326.08.71

I	Reglo zoom and reglomatic inoperative
2	Reglomatic diaphragm ring remains on 22 setting
3	Reglo zoom operates normally
3.I	Reglomatic inoperative
3.2	Diaphragm ring remains on 1.9 setting
3.3	Diaphragm ring remains on 22 setting
3.4	Diaphragm ring rotates in one direction only
3.5	Diaphragm ring does not rotate but motor noise audible
4	Reglomatic operates normally
4.1	Focussing ring does not rotate
4.2	Focussing ring rotates in one direction only
4.3	Focussing ring keeps rotating at the same speed.

I Reglo zoom and Reglomatic inoperative.

Unscrew trip button and disconnect lens assembly from camera.

Apply voltage to camera and set master switch to"Auto".

Measure voltage across lens mount top stud and ground.

Zero voltage reading: see ch. I.1
Voltage reading of 7.2v.: see ch.I.2

I.1 Zero voltage on 7.2v.stud.

Remove cover (SAV 30/12 ch. I).

Measure, on the switch circuit, the voltage across the "+ S" point and ground, and next across the "+ BA" point and ground.

Voltage reading of 7.2v. on point "+S" and zero on "+B" point: see ch. I.1.1.

Voltage reading of 7.2v. on "+S" and "+BA" points: see ch.I.1.1.

Zero voltage on points "+S" and "+BA": see ch. I.1.3.

I.1.1.Faulty switch.

Disassemble switch knob.

Clean contacts and printed circuits and re-tension blades.

Reassemble knob and check for presence of 7.2v. on the top stud of the lens mount.

Reassemble cover (SAV 60/12 - ch. IV).

I.1.2.Disconnection between "+BA" point and lens mount.

Check condition of soldered connection of the red lead at point "BA".

Disassemble lens mount (SAV 30/12 ch.III).

Check condition of soldered connection of red lead on lens mount.

Check for infinite resistance between the top stud and ground of the lead lens mount (which should not be in contact with the camera ground.).

Check for zero resistance between the top stud of the lens mount and point "BA" - if resistance reading is other than zero, disassemble grip handle and casing (SAV 30/12 ch. II and III). replace red lead and reassemble as per (SAV 60/12 - ch. II-III-IV).

I.1.3. Disconnection between point "+S" on the switch and point "+S" on the main circuit.

Check condition of soldered connection of red lead at point "+S" on the switch circuit.

Detach bottom section of cartridge compartment and check condition of the soldered connection of the red lead at point "+S" on the main circuit.

Check the red lead for continuity (zero resistance across the 2 "+S" points).

Reassemble cover (SAV 60/12 - ch. IV).

I.2 Faulty connection of the +7.2v. supply to the lens assembly.

Check that studs 11018 do project clear of plate 6077 as a result of their spring loading.

Check condition (cleanliness) of the studs 11018 and of the lens mount studs.

Unscrew the 2 screws 11084 and remove reglomatic casing 6110.

Measure the resistance across contact stud 11018, on the reglo zoom tube side, and the collector of the aperture control transistor (connected to the red lead).

If the resistance reading is other than zero: see ch. I.2.1.

Measure the resistance across the contact stud and ground.

If the resistance reading is zero: see ch. I.2.2.

I.2.1. Red leads unsoldered from stud 11018.

Disassemble lens (SAV 30/21 ch. 3).

Check condition of the soldered connection of the 2 red leads on stud 11018.

Reassemble lens (SAV 60/21 ch. 3).

I.2.2. +7.2v. shorted to ground.

Check that the soldered connection of red lead on the transistor is not in contact with the circuit holder 6112.

Disassemble lens (SAV 30/21 ch.3).

Check for possible shorting to ground either at stud 11018 level or at the level of the 2 straps 11020.

Identify the point of shorting to ground of one of the 2 leads of the 2 straps 11020 or at stud 11018 level - either at the level of one of the 2 straps 11020 or at the level of micro switch PC 254 (in the latter case disassemble the reglo zoom tube (SAV 30/21 - ch. 2.I).

Reassemble, first the zoom tube and next the lens (SAV 60/21 ch. 2.2 and 3)

2. Reglo zoom inoperative and reglomatic diaphragm ring remains on 22 setting.

Check that the 4 screws VPM 2 x 6 securing the lens to the mounting plate 6077 and properly screwed in (any loseness in the attachment resulting in faulty grounding of the two reglo controls).

3.1 Reglomatic inoperative.

3.1.1. Diaphragm ring fails to rotate but motor audible: replace motor (SAV 30/21 - ch. I.I, I.2, and I.3 and SAV 60/21 ch. I.I, I.2 and I.3).

3.I.2. Motor fails to rotate.

Unscrew the 2 screws 11084 and remove case 6110.

a) Measure the voltage across the collector of the aperture transistor (connected to the red lead) and ground.

Zero reading: see ch. 3.I.3.

Reading of 7.2v.: see ch. 3.I.2. b.

b) Measure voltage across the solder connection connecting the yellow lead to the red motor lead and to ground.

Zero reading: see ch. 3.I.2. d.

Reading of 3.6v.: see ch. 3.I.2. c.

c) Unscrew the 2 screws VCM 1.6 x 3, - remove circuit and circuit holder and measure voltage across motor terminals. If a voltage reading is registered: replace motor (SAV 30/21 - ch. I.I, I.2, and I.3 and SAV 60/21 ch. I.I, I.2 and I.3).

d) Unscrew the trip button and detach the lens from the camera.

Measure the voltage across the lens mount centre stud and ground.

Zero reading: see ch. 3.I.4.

Reading of 3.6v.: see ch. 3.I.5.

3.I.3 Faulty 7.2v. connection

Check condition of soldered connection of red lead to connector of aperture transistor.

Disassemble lens (SAV 30/21 ch. 3) and check condition of soldered connection of red reglomatic lead to stud 11018.

Reassemble lens (SAV 60/21 ch.3).

3.I.4. Zero volts reading on 3.6v. stud of lens mount.

Check that mid-point contact blade in battery compartment is correctly tensioned.

Set master switch to test and measure the resistance across lens mount centre stud and ground.

Zero reading: see ch. 3.I.5.

Infinite resistance: see ch. 3.I.6.

3.I.5. 3.6v. stud shorted to ground.

Disassemble lens mount (SAV 30/12 ch. III).

Measure resistance across centre stud and ground of lens mount.

Zero resistance: check for presence of metal particle shorting stud to ground - if check fails, replace stud.

Infinite resistance: disassemble cover, grip handle and case, (SAV 30/12 - ch. I - II and III) replace black lead and reassemble case, grip handle and cover (SAV 30/ 2 ch. II - III and IV).

3.I.6. Zero volts reading on 3.6v. stud.

Disassemble cover (SAV 30/12 - ch. I).

Measure,on switch circuit, the voltage across point "PM" connected to the main circuit via a black lead, and ground.

Zero volts reading on point "PM" (lens mount) and 3.6v. reading on point "PM" (main circuit): see ch. 3.I.6.I.

3.6v. reading on points "PM", see ch. 3.I.6.2.

Zero volts on both "PM" points: see ch. 3.I.6.3.

3.I.6.I. Faulty switch.

Disassemble switch knob.

Clean contacts and printed circuit re-tension blades.

Reassemble knob and check for presence of 3.6v. on centre stud of lens mount.

Reassemble cover (SAV 60/12 ch.IV).

3.I.6.2. Faulty connection between point "PM" and the lens mount.

Check soldered connection of black lead (lens mount) at point "PM".

Disassemble lens mount (SAV 30/12 ch.III) .

Check condition of soldered connection of black lead on centre stud of lens mount.(This test should give zero resistance across the stud and point "PM" and infinite resistance across the stud and the ground of the lens mount.)

Reassemble lens mount and cover (SAV 60/12 ch. II and IV).

3.I.6.3. Faulty connection between point "PM" (main circuit) and point "PM" of the switch circuit.

Check condition of the soldered connection of the black lead at point "PM" if condition found correct, disassemble handle, case and cartridge chamber (SAV 30/12 ch. II-III and IV.) and check soldered connection of black lead at point "PM" on the main circuit.

Check for continuity (zero resistance) between point "PM" of the main circuit and point "PM" of the switch circuit.

Reassemble cartridge chamber, case, handle and cover (SAV 60/12 , ch. I-II-III and IV).

3.2 Diaphragm ring remains on 1.9 setting.

Set maste switch to manual - point camera towards light area so that galvanometer pointer deflects above index mark (with diaphragm ring set to 1.9) and re-set switch to "Auto".

Pointer drops to bottom of window: see ch. 3.2.I

Pointer remains on same position: see ch. 3.2.2.

3.2.I. Pointer drops to bottom of window when master switch is set to "Auto".

Unscrew trip button MP 119 and detach lens from camera.

Check whether pointer deflects when switch is set to "Auto".

Pointer does not deflect: see SAV 52/12 ch.II.

Pointer registers deflection: see ch. 3.2.I.I.

3.2.I.I. Reglomatic input circuit shorted to ground.

Check that contact stud 11018, on the reglomatic side, is not shorted to ground by a metal particle.

Disassemble reglomatic tube as per SAV 30/21 ch. I.I and I.2.

Check that ground blade 6100 is not in contact with contact blade PC 250.

If ground blade correct, unsolder on micro switch 8301, the green lead connected to the printed circuit.

Identify cause of shorting to ground which can be traced to damaged sleeving of one of the two green wires, or to stud 11018. If required, disassemble lens (SAV 30/12 ch. 3).

Reassemble as per SAV 60/12, ch. I.2, I.3 and 3.

3.2.2. Faulty reglomatic circuit.

Unscrew the two screws 11084 and remove case 6110.

Check their neatness of soldered connections: (absence of solder runs).

(Check condition of the 2 soldered connections of the input resistor connected to the green lead).

Check that the slider of the 2.5 kohms variable resistor bears correctly against the track.

Short circuit the 680 ohms resistor (blue-grey-brown) with a pair of tweezers and rotate by hand the diaphragm ring that, if the ring returns to the 1.9 setting, replace the aperture (opening) transistor (connect to the fine black lead). If the ring does not return to 1.9, replace circuit.

3.3 Diaphragm ring remains on 22.

Check circuit, condition (soldered connections).

Connect a voltmeter across the 680 ohms resistor (blue-grey-brown).

Depress button 6081 A (diaphragm opening): if the voltage exceeds 0.5v., replace the closing transistor (connected to the red wire or lead) otherwise replace the circuit.

3.4 Diaphragm ring rotates in one direction only.

3.4.I. Diaphragm ring does not rotate in the 1.9 to 22 direction.

Replace closing transistor (connected to the red lead).

3.4.2. Diaphragm ring does not rotate in the 22 to 1.9 direction.

Replace the opening transistor (connected to the red lead)

3.5 Diaphragm ring does not rotate but motor audible.

Replace motor as per SAV 30/12 ch. I, and SAV 60/12ch. I.

4.I Focussing ring does not rotate.

Depress button 6081 A (diaphragm opening).

Focussing ring returns to 64 setting, see ch. 4.I.I.

Focussing ring does not return to 64 setting, see ch. 4.I.2.

4.I.I. Focussing ring returns to 64.

Disassemble motor cradle (SAV 30/21 ch. 2.I.)

Apply voltage to camera (master switch set to Auto) and measure, on micro switch PC 254, the voltage across the soldered connection of the red lead from stud 11018 (see diagram 6122) and ground.

Zero volts reading, see ch. 4.I.I.I.

7.2v. reading see ch. 4.I.I.2.

4.I.I.I. Red lead of +7.2v. supply disconnected.

Locate point of disconnection of red lead - if required disassemble lens (SAV 30/21 ch. 3).

Reassemble motor cradle (SAV 60/21 ch. 2.2) and lens (SAV 60/21 ch.3).

4.I.I.2. Check, on the ohmeter, the 4 micro switches for correct closure. (Zero resistance across the 2 top studs, by depressing the corresponding button).

If the resistance reading is other than zero, disassemble circuit (SAV 30/21 ch. 2.2.) and clean contacts, otherwise replace printed circuit (see wiring diagram 6122).

Test for correct operation, proceeding as follows.

Solder the two major leads to the motor, solder together the red and green leads normally connected to the potentiometer and secure the lens assembly to the camera (the micro switches must be closed 2 by 2).

Reassemble as per SAV 60/21 ch. 2.I.. and 2.2.

4.I.2. Focussing ring does not return to 64

With no voltage applied to the camera, rotate by hand the focussing ring by depressing one of the two buttons 6085 and, next, release the button. The focussing ring must be felt to slow down - (self-braking) otherwise rotate the focussing ring by depressing one of the two buttons - depress both buttons simultaneously and the ring movements should then slow down.

Ring braking positive current: see ch.4.I.2.I.

Ring braking negative: see ch. 4.I.2.2.

4.I.2.I.Motor-dis' , open winding.

Disassemble the reglo zoom tube SAV 30/21 ch. 2.I.

Check that motor is dis (infinite resistance).

Unscrew the 2 screws VCM 1.6 x 3 securing the motor and remove motor.

Unscrew the 2 screws 9294 securing supporting plate PC 258 on the motor and remove plate.

Replace motor and reassemble by repeating above steps in reverse sequence.

Reassemble motor cradle (SAV 60/21 ch. 2.2.).

4.I.2.2.Faulty ground.

Disassemble the reglo zoom tube (SAV 60/21 ch. 2.2.)

Check that the 10 mm section of bare wire (fig. 1 of diagram 6124) is soldered correctly.

Check for zero resistance across the soldered connection of the black lead normally connected to the potentiometer, and the ground of plate 6077 - if the resistance reading is other than zero,disassemble the circuit (SAV 30/21 ch. 2.2.) check that screws CBM 2.5 x 8 securing the transistor is screwed in correctly (if required, clean both the circuit and the side of the transistor heat sink bearing against the circuit).

Reassemble as per SAV 60/21 ch. 2.I and 2.2 checking that the two screws 6956 securing the circuit to the plate are properly screwed in.

4.2 Focussing ring does not rotate in one direction.

Disassemble the reglo zoom tube (SAV 30/21 ch.2).

Check the condition of the bare wire connections of the micro switches (see diagram 6124 fig.1).

Clean contacts.

Test for correct operation, proceeding as follows, solder the two motor leads to the motor, solder together the red and green leads normally connected to the potentiometer and mount the lens assembly to the camera.

(The micro switches must be closed 2 by 2).

Reassemble as per SAV 60/21 ch.2.

4.3 Focussing ring keeps rotating at the same speed.

Disassemble motor cradle (SAV 30/21 ch. 2.I.) checking that the green red and black leads (figs 6 and 7, diagram 6124) are correctly soldered.

Check potentiometer continuity - if all conditions are found correct, replace printed circuit (see wiring diagrams 6122 and 6124).

Reassemble as per SAV 60/21 ch. 2.

REGLOMATIC UNIT 4008 ZM

INSTRUCTIONS FOR DISASSEMBLY

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SAV/30/22
1/2
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I DISASSEMBLY OF REGLOMATIC TUBE

1.1 Disassembly of printed circuit and holder.

Unscrew the 2 screws 11084 and remove casing 6110.

Unscrew the 2 screws VCM 1.6 x 3 and remove printed circuit and holder.

1.2 Disassembly of motor cradle.

Detach skinplate disc 6114.

Unscrew the three screws TF 900 1.6 x 6 securing the cradle to the supporting plate.

Tilt printed-circuit and holder so as to provide wider clearance for the leads.

Remove motor cradle.

1.3 Removal of motor.

Unsolder the 2 motor leads from the printed circuit.

Unsolder the green lead connecting printed circuit 6099 to the input resistor of the circuit.

Unscrew the screw CBM 2.5 x 7, remove coupler 11045 and hub 11044.

Unscrew the 2 screws VCM 2 x 3 and remove motor.

II DISASSEMBLY OF REGLO-ZOOM TUBE

2.1 Disassembly of motor cradle.

Unscrew the 2 screws VPM 1.6 x 3 and remove potentiometer holder 6094.

Cut off the 2 motor leads in order to enable re-assembly as per fig. 7 of diagram 6124 - remove motor and cradle.

2.2 Disassembly of printed circuit and micro-switches.

Unscrew the 2 screws 6956 securing the printed circuit to the supporting plate.

Extract shaft of micro switch 6089 - remove printed circuit.

III REMOVAL OF LENS

Unscrew the 4 screws VPM 2 x 6 securing the lens to the supporting plate.

Remove lens.