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VISEUR 14 CM

14 CM VIEWFINDER

MANUEL TECHNIQUE

TECHNICAL MANUAL

B1700M22MA

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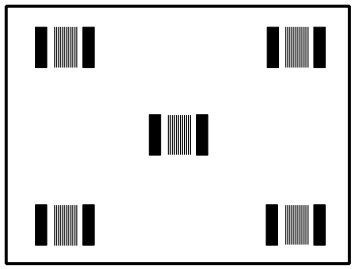
SECTION 1 - Réglages / Version Française

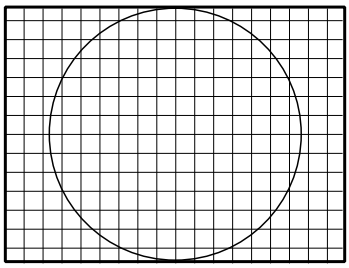
SOMMAIRE

1.1 - MATÉRIEL NÉCESSAIRE

- Oscilloscope 2 Voies.
- Multimètre Numérique.
- Sonde THT.
- Mire de définition au format 4/3 comportant des salves de fréquence (5MHz).
- Mire de géométrie au format 4/3 comportant un cercle et un quadrillage.
- Mire au format 16/9 comportant un cercle si le viseur est utilisé sur une caméra commutable.



Exemple de mire de définition



Exemple de mire de géométrie

Figure 1.1 : Mires utilisées

1.2 - ACCÈS AUX ÉLÉMENTS

1.2.1 - Démontage du capot

Dévisser les 2 vis de fixation et extraire avec précaution le capot en le tirant vers l'arrière en faisant attention à la limande reliant les afficheurs à la carte VIDEO. Déconnecter la limande de la carte LCD1.

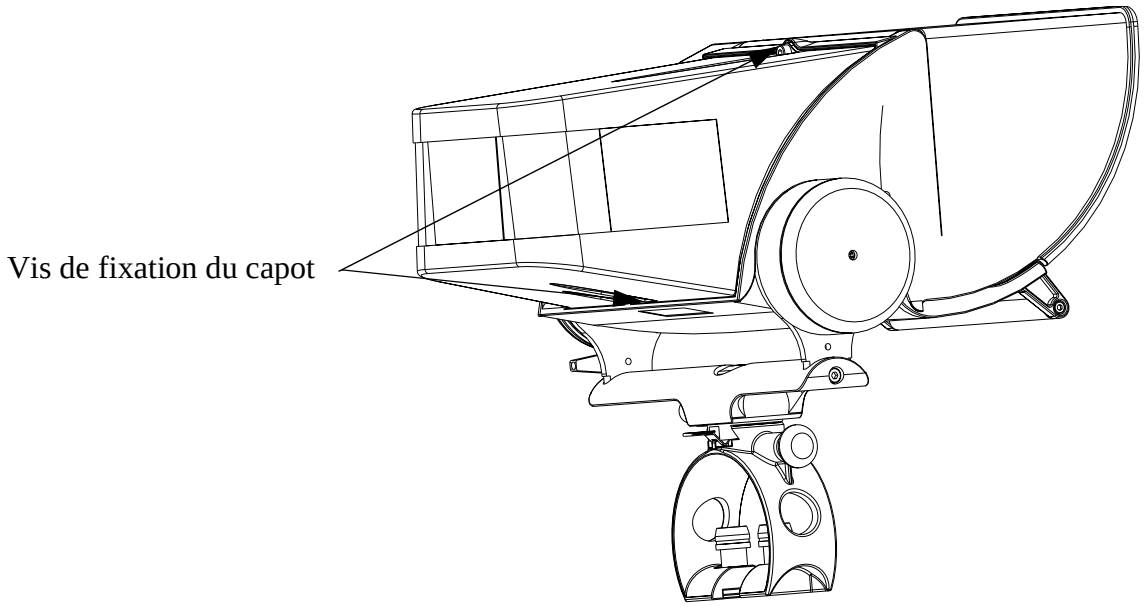


Figure 1.2 : Démontage du capot

1.2.2 - Localisation des éléments

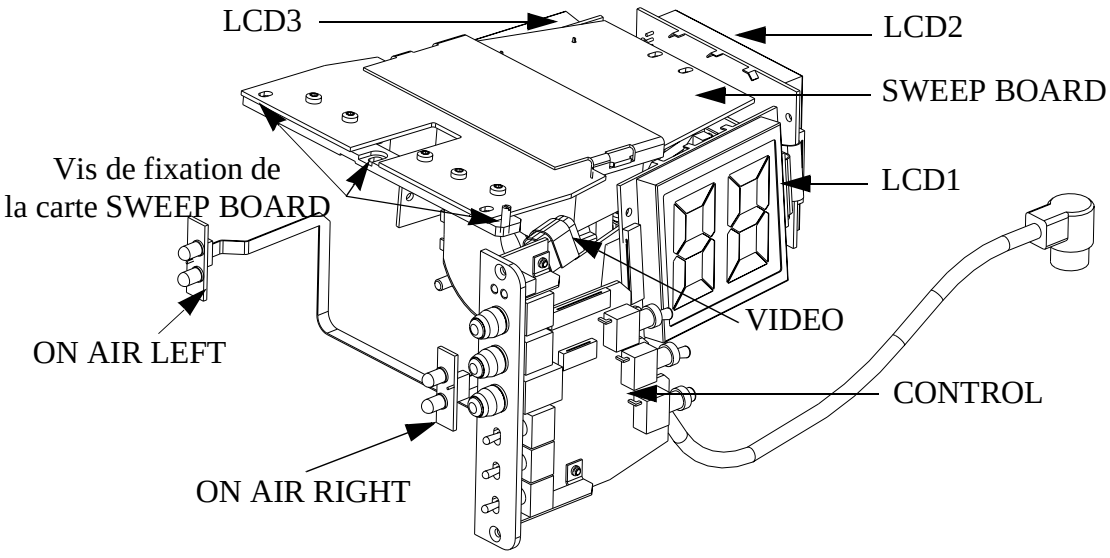


Figure 1.3 : Localisations des éléments

1.2.3 - Dépose de la carte CONTROL

- Dévisser les 3 vis de fixation de la carte SWEEP BOARD (figure 1.4) et faire pivoter la carte SWEEP BOARD vers l'arrière du viseur.
- Déconnecter de la carte VIDEO les 2 limandes en J3 et J13.
- Dévisser les 2 vis de fixation de la carte CONTROL en face avant du viseur (figure 1.5).
- Extraire la carte vers l'avant du viseur en maintenant les 2 limandes vers le bas.

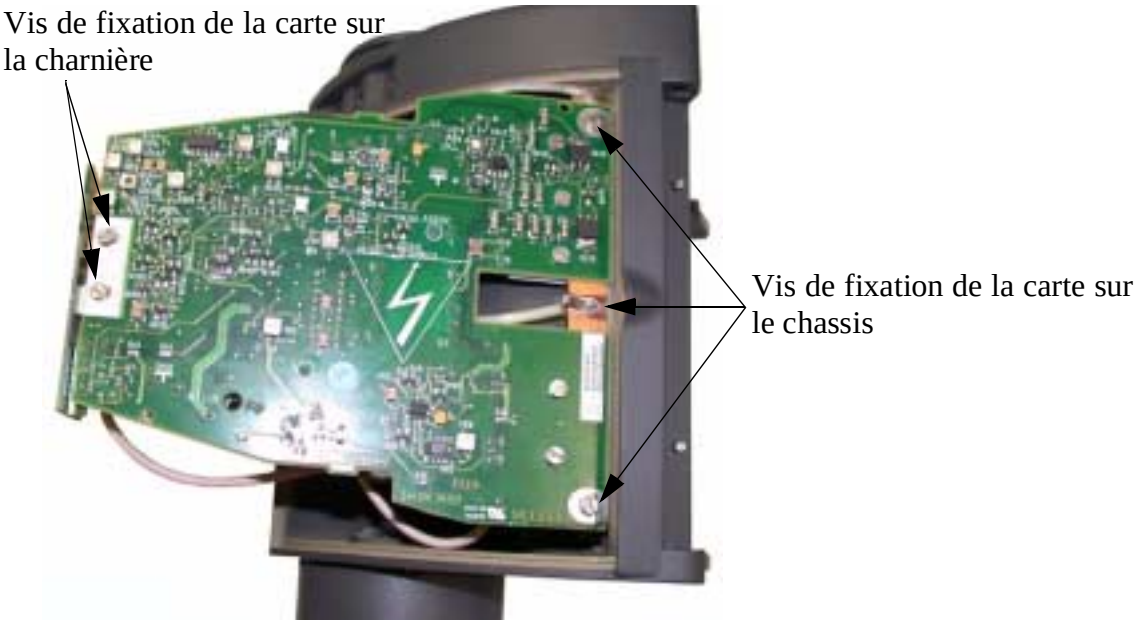


Figure 1.4 : Fixation de la carte SWEEP BOARD

Figure 1.5 : Fixation de la carte CONTROL

1.2.4 - Dépose de la carte VIDEO

- Dévisser les 3 vis de fixation de la carte SWEEP BOARD (figure 1.4) et faire pivoter la carte SWEEP BOARD vers l'arrière du viseur.
- Déconnecter de la carte VIDEO les 2 limandes en J3 et J13.
- Déconnecter la limande en J2
- Dévisser les 2 vis de fixation de la carte (figure 1.6).
- Tirer légèrement la carte vers l'arrière du viseur.
- Déconnecter les limandes en J7 et J8.
- Déconnecter le câble coaxial en J6.
- Déconnecter la prise d'alimentation du viseur en J1.
- Extraire la carte.

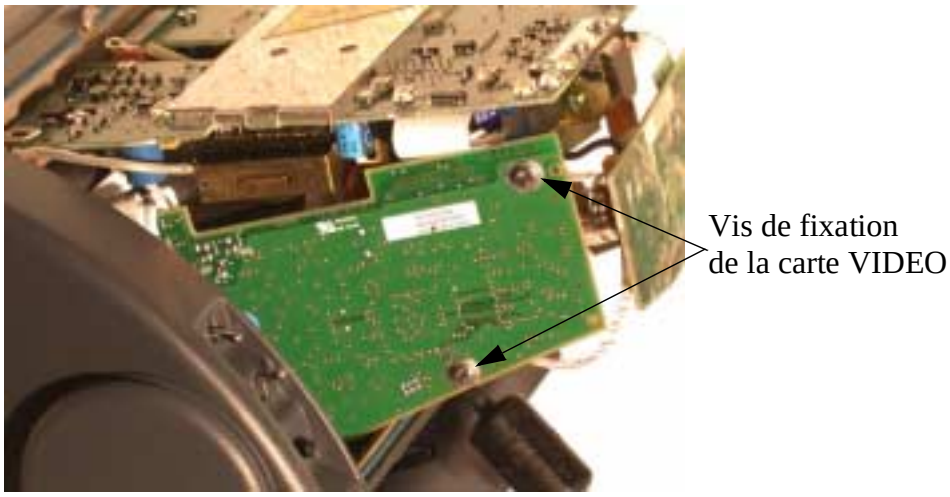


Figure 1.6 : Fixation de la carte VIDEO

1.2.5 - Dépose de la carte SOCKET

- Déconnecter la carte du tube.
- Déconnecter la limande en J4.
- Déconnecter le câble coaxial en J6.
- Dessouder le fil noir en GND TUBE.

1.2.6 - Dépose de la carte SWEEP BOARD

- Dévisser les 3 vis de fixation de la carte SWEEP BOARD (figure 1.4) et faire pivoter la carte SWEEP BOARD vers l'arrière du viseur.
- Déconnecter la limande en J2.
- Déconnecter le connecteur du déviateur en J5.
- Déconnecter la prise THT du tube cathodique (figure 1.7).
- Dévisser les 2 vis fixant la carte sur la charnière.

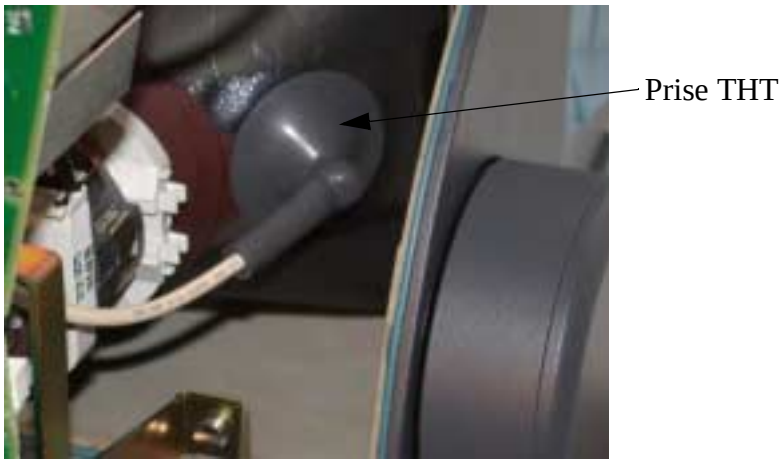


Figure 1.7 : Prise THT

1.2.7 - Dépose du tube cathodique et du bloc déviateur

- Déposer les cartes SWEEP BOARD, SOCKET et CONTROL (se référer aux paragraphes précédents).
- Déposer le support de la carte SWEEP BOARD en dévissant ses 2 vis de fixation (figure 1.8).
- Dévisser les 4 vis de fixation du tube (figure 1.8).
- Extraire le tube.
- Désserrer la vis de serrage du déviateur sur le tube et l'extraire (figure 1.9).

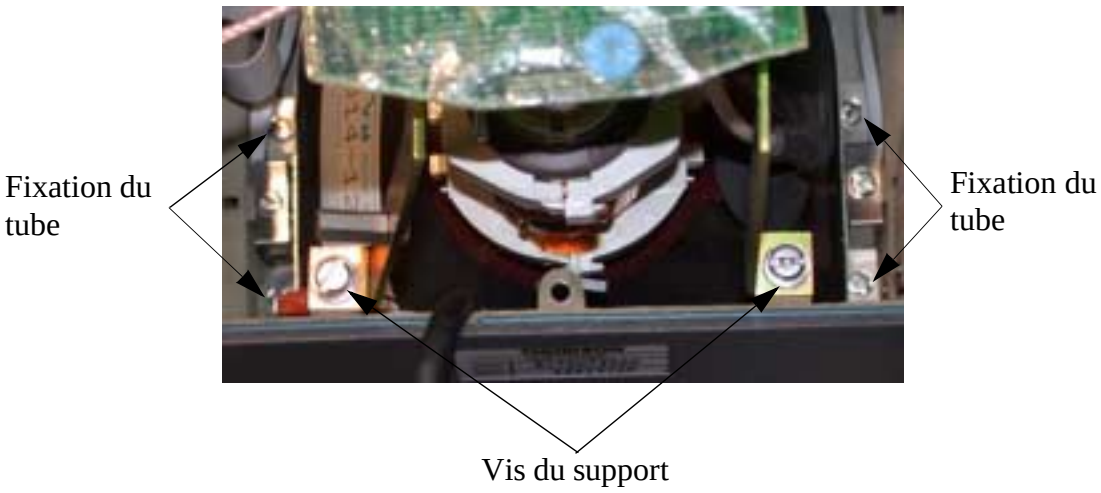


Figure 1.8 : Fixation du support de la carte SWEEP BOARD et du tube

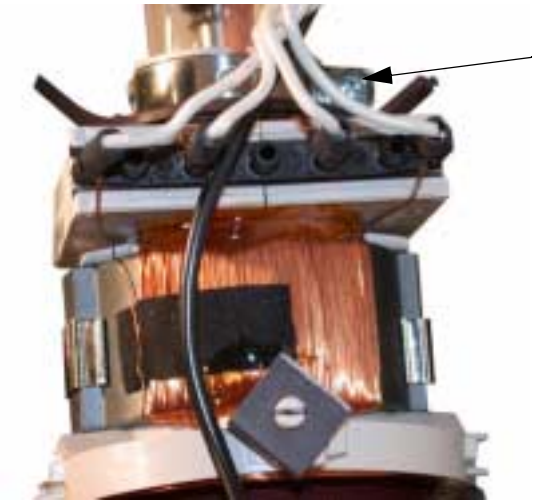


Figure 1.9 : Fixation du déviateur sur le tube

1.2.8 - Dépose des cartes ON AIR RIGHT et ON AIR LEFT

- Déposer le tube cathodique (se référer au paragraphe précédent).

1.2.8.1 - Carte ON AIR RIGHT

- Déposer la carte VIDEO (se référer au paragraphe 1.2.4 - Dépose de la carte VIDEO).
- Dévisser la vis située entre les 2 vis de fixation du tube.
- Extraire la carte.

1.2.8.2 - Carte ON AIR LEFT

- Dévisser la vis située entre les 2 vis de fixation du tube.
- Extraire la carte.

Figure 1.10 : Fixation des cartes ON AIR RIGHT et ON AIR LEFT

1.2.9 - Dépose des cartes LCD du capot

- A l'intérieur du capot, dévisser les 4 vis de fixation du support des LCD (figure 1.11).
- Extraire le support et les LCD.
- Déconnecter la ou les limande(s) du LCD à déposer.
- Déposer le LCD en dévissant ses 3 vis de fixation du LCD.

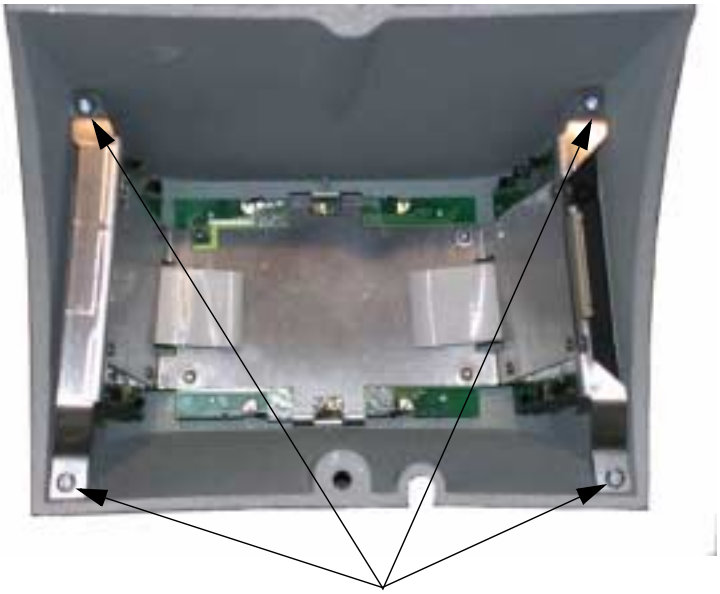


Figure 1.11 : Dépose du support LCD

1.2.10 - Accès au réglage de friction d'inclinaison du viseur

- Le réglage de dureté de la friction s'effectue au moyen de la vis centrale du support côté gauche (figure 1.12).

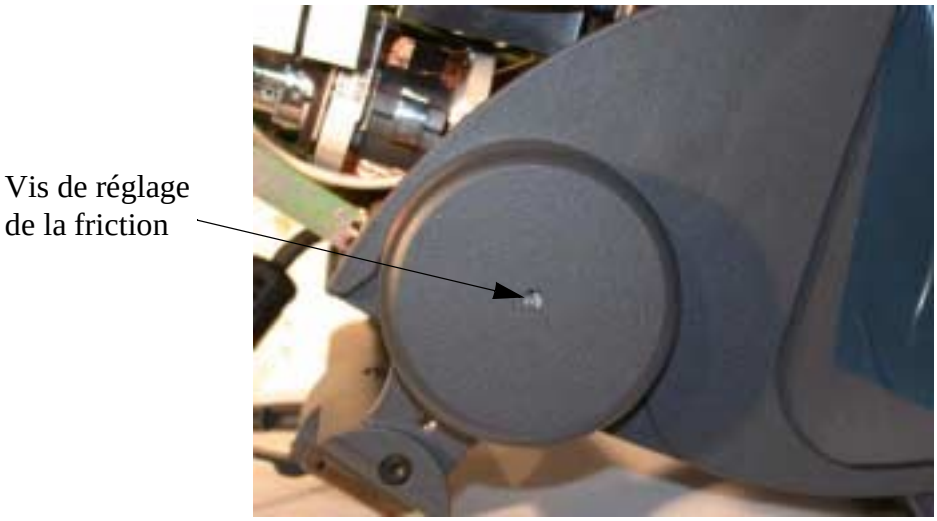


Figure 1.12 : Réglage de la friction du viseur

1.3 - RÉGLAGES

1.3.1 - Réglage de l'alimentation

Sur la carte SWEEP BOARD (figure 1.14)

- Régler R51 afin d'obtenir 10,5V + 0,05V en TP1. La tension en TP2 doit être alors égale à 11,35V + 0,1V.

1.3.2 - Réglage de la THT

Sur la carte SWEEP BOARD (figure 1.14)

- Régler R121 (THT) pour obtenir une haute tension de 9,6KV ± 100Vsur la prise THT en face arrière du tube cathodique. Cette valeur correspond à une tension d'environ 4,85V ± 0.05V en TP4 (mesurée avec un voltmètre à affichage numérique).

1.3.3 - Réglage de la synchronisation ligne

1.3.3.1 - Fréquence ligne

Sur la carte SWEEP BOARD (figure 1.14)

- Repérer les 2 positions de R89 (H. FREQ) pour lesquelles le viseur ne synchronise plus en horizontal. Placer R89 à mi-course entre ces 2 positions.
- Faire un arrêt marche du viseur et vérifier qu'il se synchronise correctement en horizontal. Sinon reprendre légèrement le réglage de R89 (H.FREQ).

1.3.3.2 - Phase horizontale du signal vidéo visible

Sur la carte SWEEP BOARD (figure 1.14)

Placer une sonde de l'oscilloscope en 11 de Z80 (ou en 6 de J2) et une sonde en TP3.

- Ajuster R92 (H.PHASE) pour avoir le début du signal de retour ligne en avance de 0,5 µs par rapport au front descendant du signal de synchronisation

.

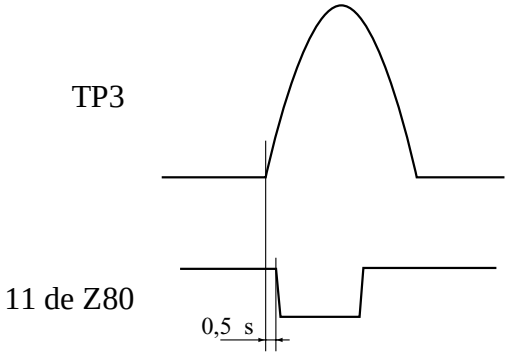


Figure 1.13 : Phase horizontale

1.3.4 - Réglage de la synchronisation trame

Sur la carte SWEEP BOARD (figure 1.14)

- Repérer les 2 positions de R263 (V. FREQ) pour lesquelles le viseur ne synchronise plus en vertical. Placer R263 à mi-course entre ces 2 positions.
- Faire un arrêt marche du viseur et vérifier qu'il se synchronise correctement en vertical. Sinon reprendre légèrement le réglage de R263 (V.FREQ).

1.3.5 - Réglage de la concentration

Sur la carte SOCKET (figure 1.15)

La caméra étant en position 4/3, cadrer la mire de salves et faire la mise au point optique.

- Ajuster R3 (FOCUS) pour obtenir une image nette sur toute la surface de l'écran.

1.3.6 - Centrage, horizontalité, format, linéarité de l'image

1.3.6.1 - Centrage, horizontalité et géométrie de l'image

Les aimants de géométrie situés sur le bloc de déviation, ont des valeurs ajustées en usine. Il est déconseillé d'intervenir sur ces aimants.
Les réglages décrits ci après ne doivent être repris qu'en cas de besoin (changement de tube par exemple).
Si le déviateur doit être remplacé, il est conseillé de faire effectuer l'intervention par le Service Après Vente de THOMSON.

Dévisser les 3 vis de fixation de la carte SWEEP BOARD (figure 1.3) et la faire pivoter afin d'avoir accès au bloc de déviation.

Sur le déviateur (figure 1.16)

- Régler l'horizontalité en tournant le bloc de déviation.
- Centrer l'image avec les aimants circulaires d'alignement placés sur l'arrière du bloc de déviation.
- Remettre la carte SWEEP BOARD dans sa position initiale et vérifier le centrage de l'image. Si besoin est, reprendre le réglage précédent.

1.3.6.2 - Format et linéarité de l'image

Sur la carte SWEEP BOARD (figure 1.14)

Cas d'une caméra commutable 4/3 16/9:

Mettre la caméra en position 4/3 et cadrer la mire de format 4/3.

- Ajuster L151 (self de linéarité) de façon à avoir l'équidistance, en horizontal, entre les carreaux du quadrillage de la mire dans le viseur.
- Ajuster R300 (V.AMP) en 625 lignes ou R311 (V.AMP) en 525 lignes de façon à avoir le cercle de la mire parfaitement rond dans le viseur.
- Ajuster R268 (V.LIN) de façon à avoir l'équidistance, en vertical, entre les carreaux du quadrillage de la mire dans le viseur.

Mettre la caméra en position 16/9 et cadrer la mire de format 16/9.

- Ajuster R320 (V.AMP) en 625 lignes ou R310 (V.AMP) en 525 lignes de façon à avoir le cercle de la mire parfaitement rond dans le viseur.

Cas d'une caméra 4/3 :

Cadrer la mire de format 4/3.

- Ajuster L151 (self de linéarité) de façon à avoir l'équidistance, en horizontal, entre les carreaux du quadrillage de la mire dans le viseur.
- Ajuster R300 (V.AMP) en 625 lignes ou R311 (V.AMP) en 525 lignes de façon à avoir le cercle de la mire parfaitement rond dans le viseur.
- Ajuster R268 (V.LIN) de façon à avoir l'équidistance, en vertical, entre les carreaux du quadrillage de la mire dans le viseur.

1.3.7 - Réglage de la limitation de luminosité

Sur la carte SWEEP BOARD (figure 1.14)

Mettre la caméra en position "BARS".

Positionner le potentiomètre BRIGHT en face avant du viseur au maximum (sens des aiguilles d'une montre).

Positionner le potentiomètre CONTRAST en face avant du viseur au minimum (sens inverse des aiguilles d'une montre).

- Ajuster R8 (BRIGHT LIMITER) pour rendre légèrement visible le niveau de la barre la plus sombre.

1.4 - LOCALISATION DES RÉGLAGES

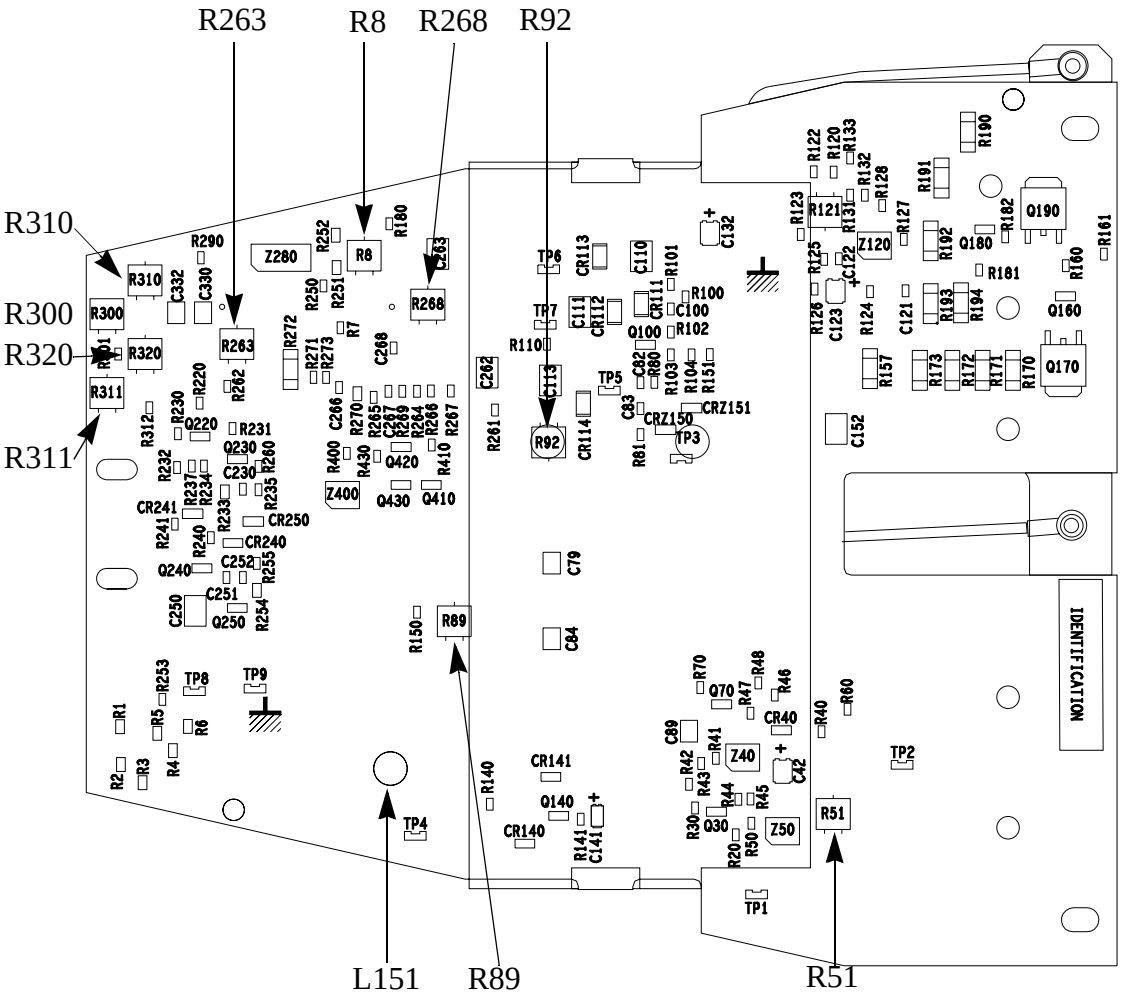


Figure 1.14 : Implantation des réglages de la carte SWEEP BOARD

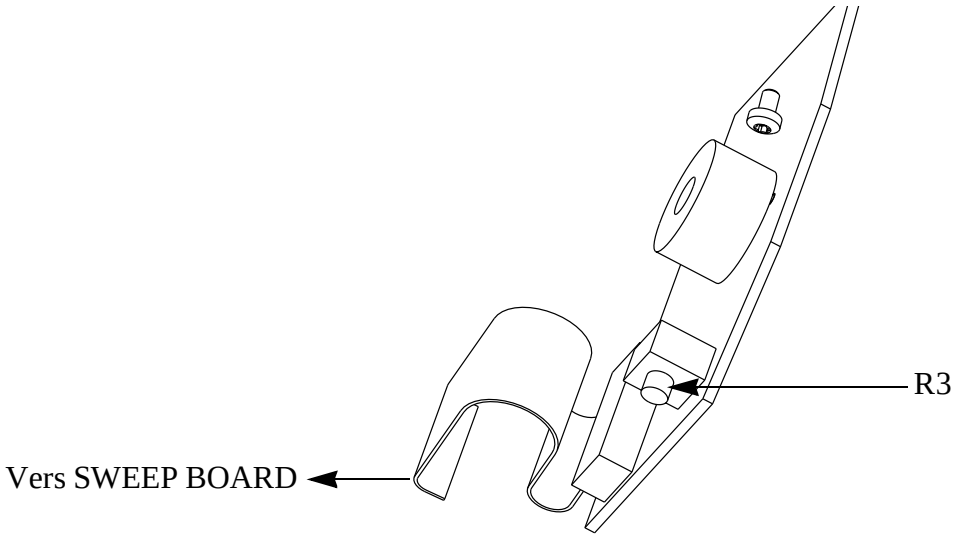


Figure 1.15 : Implantation du réglage de la carte SOCKET

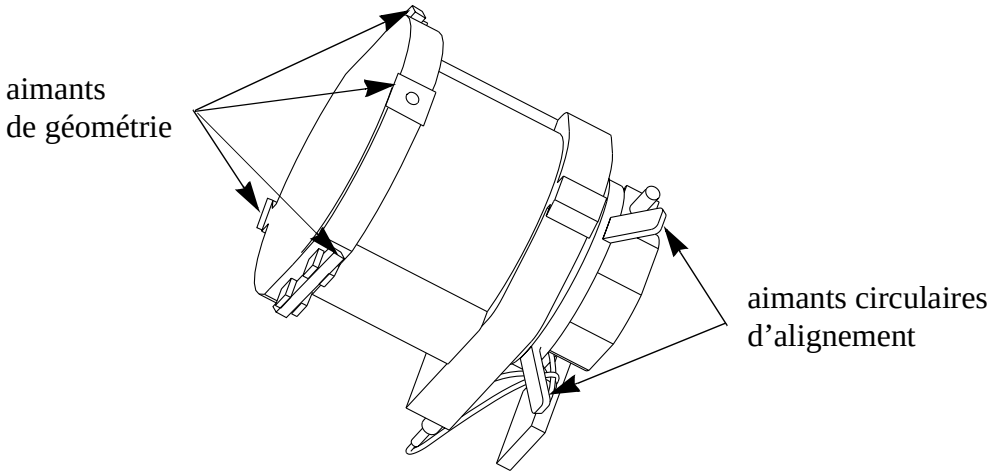


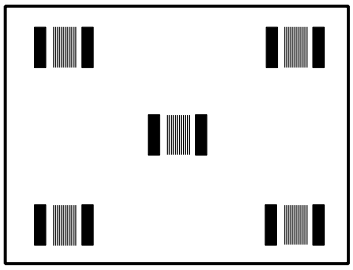
Figure 1.16 : Réglages sur le déviateur

SECTION 2 - Adjustments / English Version

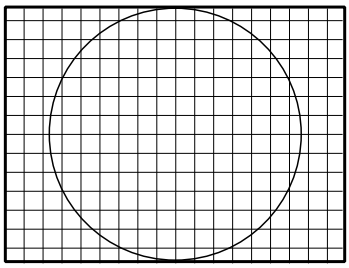
CONTENTS

1.1 - EQUIPMENT REQUIRED

- 2 channel oscilloscope.
- Digital multimeter.
- EHT probe.
- Definition pattern 4:3 with 5 MHz bars.
- Geometry pattern 4:3 with circle and grid.
- Geometry pattern 16:9 with a circle if the viewfinder is used on a dual standard camera



Typical definition pattern



Typical geométriy pattern

Figure 1.1 : Patterns required

1.2 - ACCESSING THE PARTS

1.2.1 - Removing the cover

Unscrew both fixing screws and slide the cover carefully backwards, ensuring that the ribbon cable connecting the displays to the VIDEO board is not disturbed. Disconnect the ribbon cable from the LCD1 board.

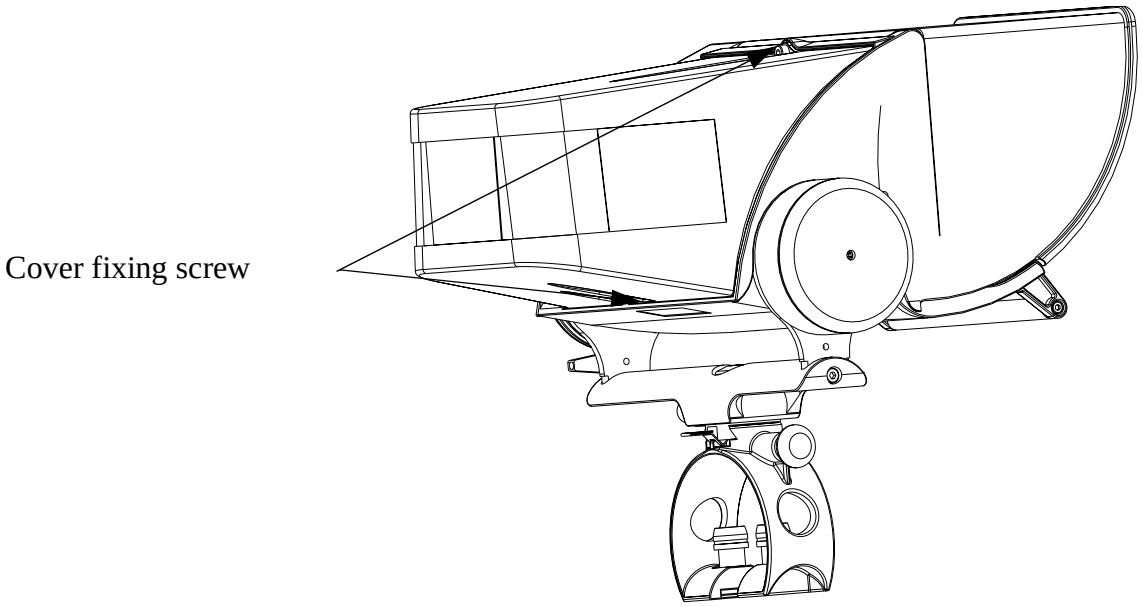


Figure 1.2 : Removing the cover

1.2.2 - Lay out

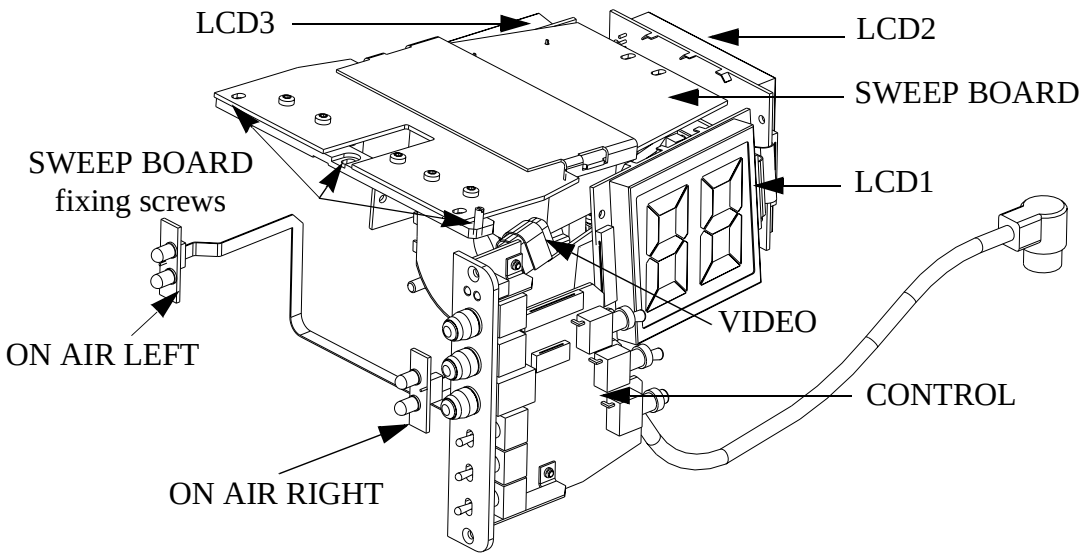


Figure 1.3 : Lay out

1.2.3 - Removing the CONTROL board

- Unscrew the three SWEEP BOARD fixing screws (figure 1.4) and tilt the SWEEP BOARD to the rear of the viewfinder.
- Disconnect the ribbon cables from J3 and J13 on the VIDEO board.
- Unscrew both CONTROL board fixing screws which are on the front panel of the viewfinder (figure 1.5).
- Pull the board forwards holding the ribbon cables downwards.

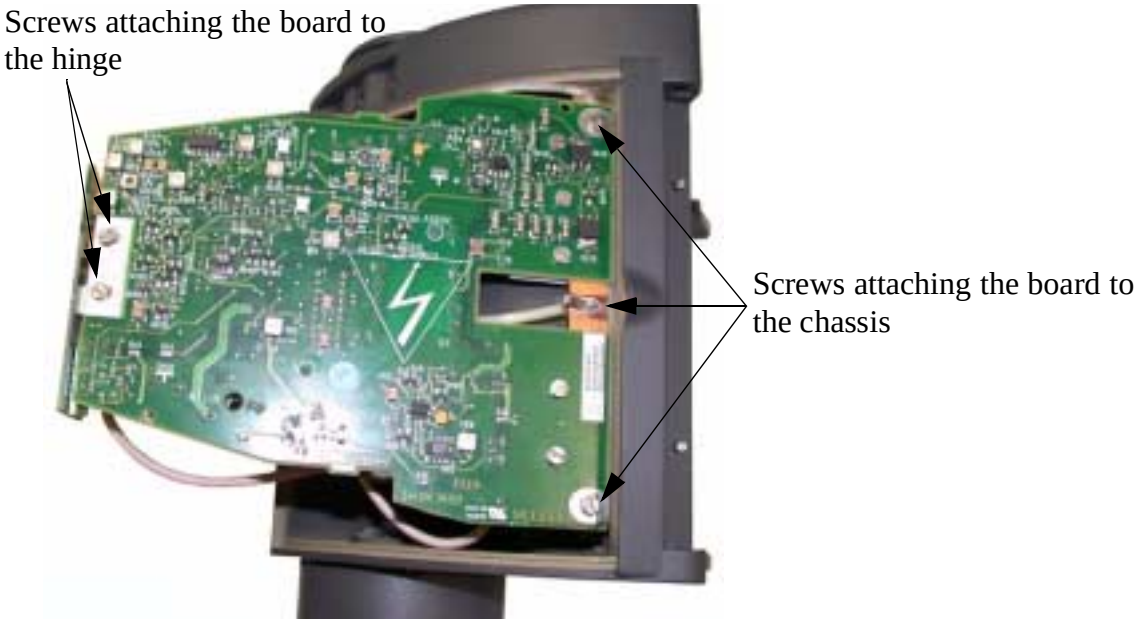


Figure 1.4 : SWEEP BOARD fixing

Figure 1.5 : CONTROL board fixing

1.2.4 - Removing the VIDEO board

- Unscrew the three SWEEP BOARD fixing screws (figure 1.4) and tilt the SWEEP BOARD to the rear of the viewfinder.
- Disconnect the ribbon cables from J3 and J13 on the VIDEO board.
- Disconnect the ribbon cable from J2
- Unscrew both board fixing screws (figure 1.6).
- Pull the board gently towards the rear of the viewfinder.
- Disconnect the ribbon cables from J7 and J8.
- Disconnect the coaxial cable from J6.
- Disconnect the viewfinder power line from J1.
- Remove the board.

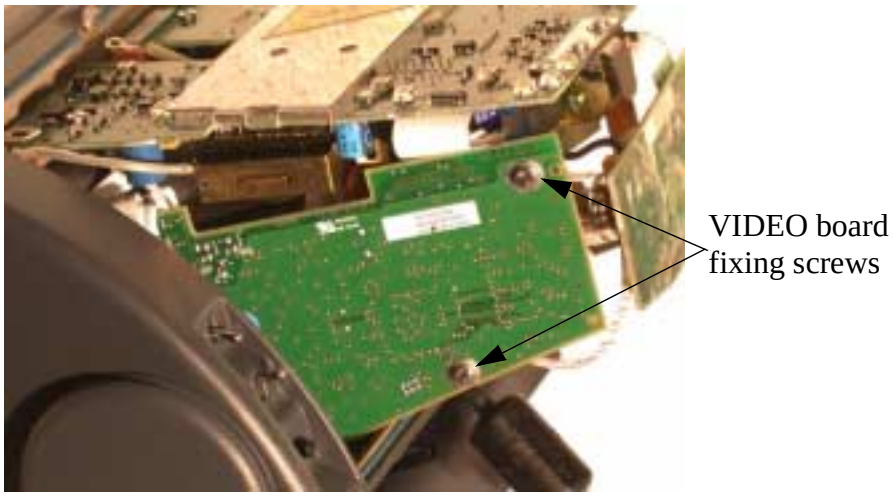


Figure 1.6 : VIDEO board fixing

1.2.5 - Removing the SOCKET board

- Disconnect la carte du tube.
- Disconnect the ribbon cable from J4.
- Disconnect the coaxial cable from J6.
- Unsolder the black wire from GND TUBE.

1.2.6 - Removing the SWEEP BOARD

- Unscrew the 3 fixing screws on the SWEEP BOARD (figure 1.4) and tilt the SWEEP BOARD to the rear of the viewfinder.
- Disconnect the ribbon cable from J2.
- Disconnect the scan coils connector from J5.
- Disconnect the EHT connector from the CRT (figure 1.7).
- Unscrew both screws fixing the board to the hinge.

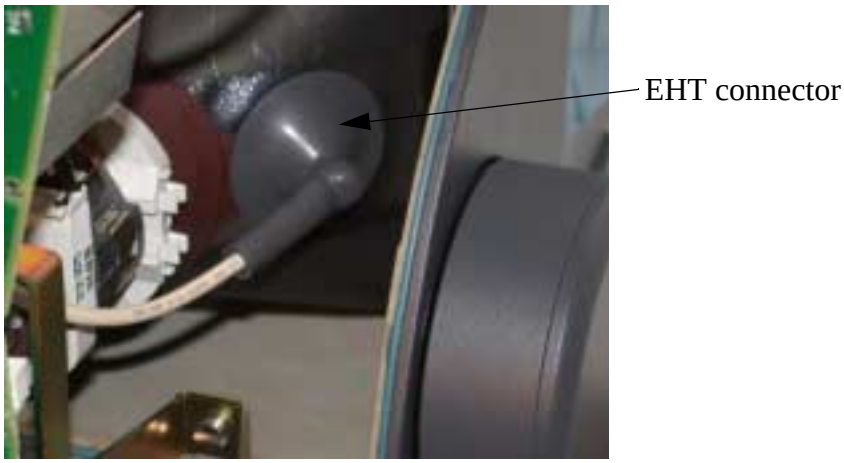


Figure 1.7 : EHT connector

1.2.7 - Removing the CRT and scan coils

- Remove the SWEEP BOARD, SOCKET board and CONTROL board (see above).
- Remove the SWEEP BOARD mounting by unscrewing both fixing screws (figure 1.8).
- Unscrew the 4 CRT fixing screws (figure 1.8).
- Remove the CRT.
- Slacken the screw clamping the coil to the CRT and remove the coils (figure 1.9).

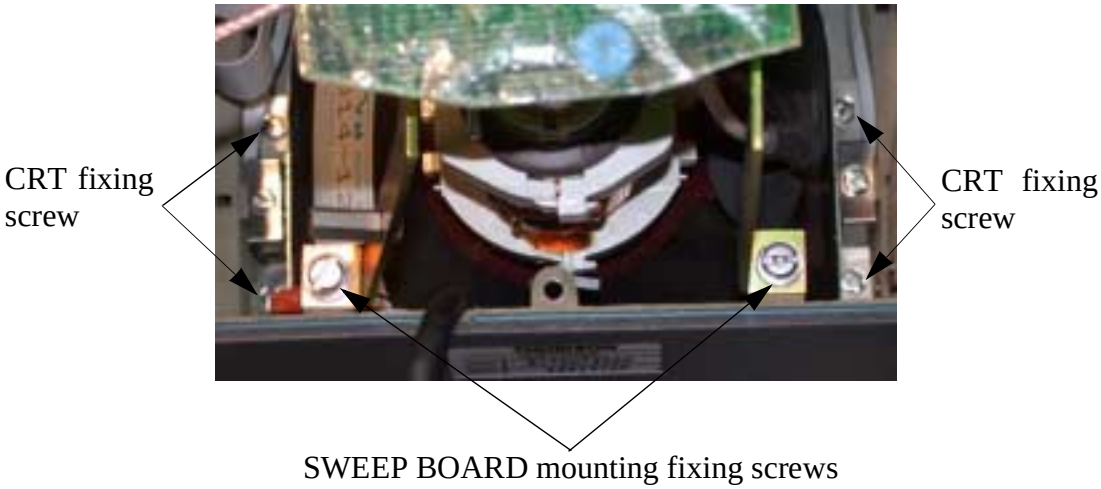


Figure 1.8 : SWEEP BOARD mounting and CRT fixing screws

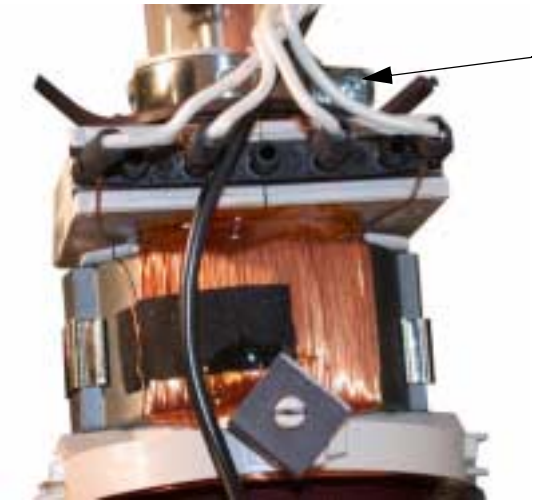


Figure 1.9 : Clamping the coils on the CRT

1.2.8 - Removing the ON AIR RIGHT and ON AIR LEFT boards

- Remove the CRT (see above).

1.2.8.1 - ON AIR RIGHT board

- Remove the VIDEO board (see paragraph 1.2.4 - Removing the VIDEO board).
- Unscrew the screw between the two CRT fixing screws.
- Remove the board

1.2.8.2 - ON AIR LEFT board

- Unscrew the screw between the two CRT fixing screws.
- Remove the board.

Figure 1.10 : ON AIR RIGHT and ON AIR LEFT board fixing

1.2.9 - Removing the LCD boards from the cover

- Unscrew the 4 LCD mounting fixing screws from the inside of the cover (figure 1.11).
- Remove the mounting and the LCDs.
- Disconnect the ribbon cable(s) from the LCD to be removed.
- Unscrew the 3 LCD fixing screws and remove the LCD.

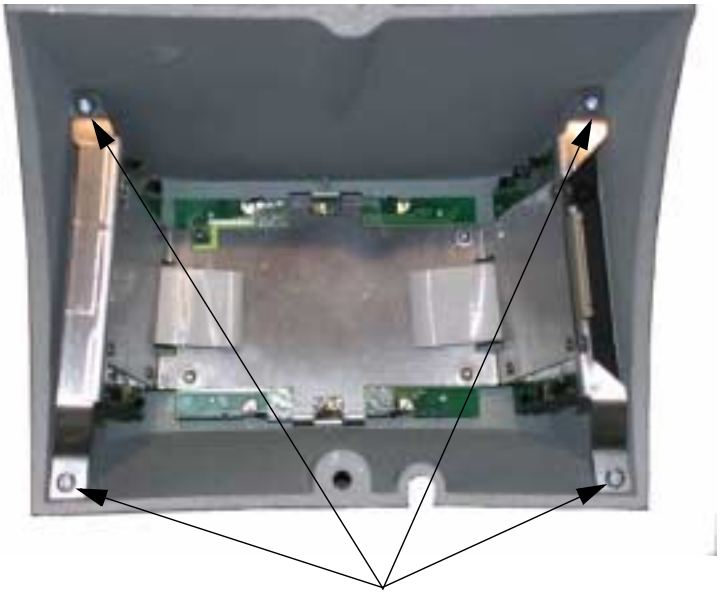


Figure 1.11 : Removing the LCD mounting

1.2.10 - Adjusting the viewfinder tilt friction

- The tilt friction is adjusted using the screw in the middle of the left side mounting (figure 1.12).

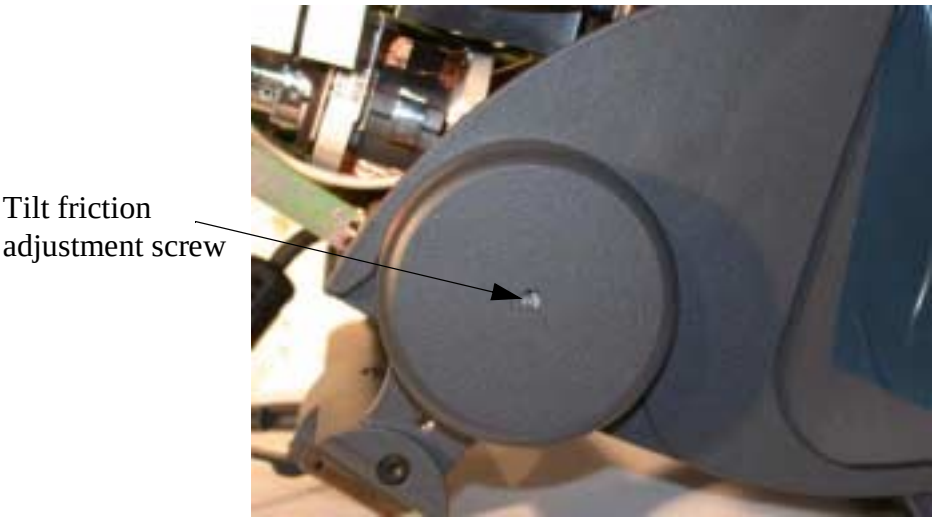


Figure 1.12 : Adjusting the viewfinder tilt friction

1.3 - ADJUSTMENTS

1.3.1 - Power supply

On the SWEEP BOARD (figure 1.14)

- Adjust R51 to provide 10.5V + 0.05V at TP1. The voltage at TP2 should then be 11.35V + 0.1V.

1.3.2 - EHT

On the SWEEP BOARD (figure 1.14)

- Adjust R121 (THT) to provide an EHT of 9.6 kV ± 100V on the EHT connector on the rear of the CRT. This should correspond to a voltage of around 4.85V ±0.05V at TP4 (measured with a digital multimeter).

1.3.3 - Horizontal synchronisation

1.3.3.1 - Horizontal frequency

On the SWEEP BOARD (figure 1.14)

- Find the 2 settings for R89 (H. FREQ) where the viewfinder loses horizontal synchronisation. Set R89 mid way between these two settings.
- Turn the viewfinder off and on and check that the horizontal synchronisation is correct. If it is not, adjust R89 (H. FREQ) slightly.

1.3.3.2 - Horizontal position of the visible line

On the SWEEP BOARD (figure 1.14)

Connect an oscilloscope probe to pin 11 of Z80 (or pin 6 of J2) and a probe to TP3.

- Adjust R92 (H. PHASE) to set the leading edge of the line fly back signal to 0.5 µs before the falling edge of the sync signal. See figure 1.13.

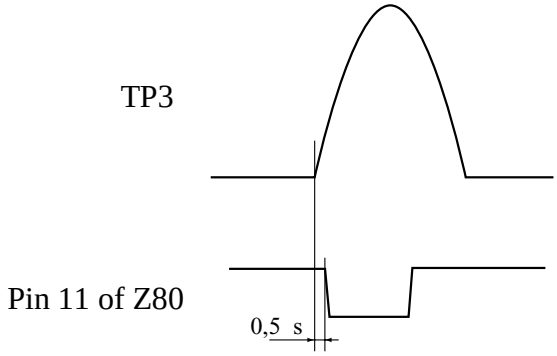


Figure 1.13 : Horizontal phase

1.3.4 - Vertical synchronisation

On the SWEEP BOARD (figure 1.14)

- Find the 2 settings for R263 (V. FREQ) where the viewfinder loses vertical synchronisation. Set R263 mid way between these two settings.
- Turn the viewfinder off and on and check that the vertical synchronisation is correct. If it is not, adjust R263 (V. FREQ) slightly.

1.3.5 - Focus

On the SOCKET board (figure 1.15)

Set the camera to 4:3, fill the screen with the definition pattern and adjust the camera focus.

- Adjust R3 (FOCUS) to obtain a sharp image over the whole screen area.

1.3.6 - Image centring, tilt, format, linearity

1.3.6.1 - Image centring, tilt, geometry

The geometry magnets on the scan coils are factory set.
These magnets are not user adjustable.
The adjustments described below should not be carried out unless strictly necessary (replacing the CRT, for example).
If the scan coils need to be replaced, they should be replaced by the THOMSON After Sales Service.

Unscrew the 3 fixing screws on the SWEEP BOARD (figure 1.3) and tilt it to access the scan coils.

On the scan coils (figure 1.16)

- Adjust the tilt by turning the scan coils.
- Centre the image using the circular alignment magnets at the rear of the scan coils.
- Return the SWEEP BOARD to its normal position and check the image centring. If necessary, readjust the scan coils.

1.3.6.2 - Image format and linearity

On the SWEEP BOARD (figure 1.14)

For a dual standard 4/3 16/9 camera:

Set the camera to 4:3 and fill the screen with the 4:3 pattern.

- Adjust L151 (linearity coil) to obtain an even horizontal spacing of the grid in the viewfinder.
- Adjust R300 (V. AMP) for 625 lines or R311 (V. AMP) for 525 lines to obtain a perfectly round circle in the viewfinder.
- Adjust R268 (V. LIN) to obtain an even vertical spacing of the grid in the viewfinder.

Set the camera to 16:9 and fill the screen with the 16:9 pattern..

- Adjust R320 (V. AMP) for 625 lines or R310 (V. AMP) for 525 lines to obtain a perfectly round circle in the viewfinder

For a 4/3 camera:

Fill the screen with the 4:3 pattern.

- Adjust L151 (linearity coil) to obtain an even horizontal spacing of the grid in the viewfinder.
- Adjust R300 (V. AMP) for 625 lines or R311 (V. AMP) for 525 lines to obtain a perfectly round circle in the viewfinder.
- Adjust R268 (V. LIN) to obtain an even vertical spacing of the grid in the viewfinder.

1.3.7 - Bright limit

On the SWEEP BOARD (figure 1.14)

Set the camera to "BARS".

Set the BRIGHT control on the viewfinder front panel to maximum (fully clockwise).

Set the CONTRAST control on the viewfinder front panel to minimum (fully anti-clockwise).

- Adjust R8 (BRIGHT LIMITER) to make the darkest bar just visible.

1.4 - LAYOUT OF THE ADJUSTMENTS

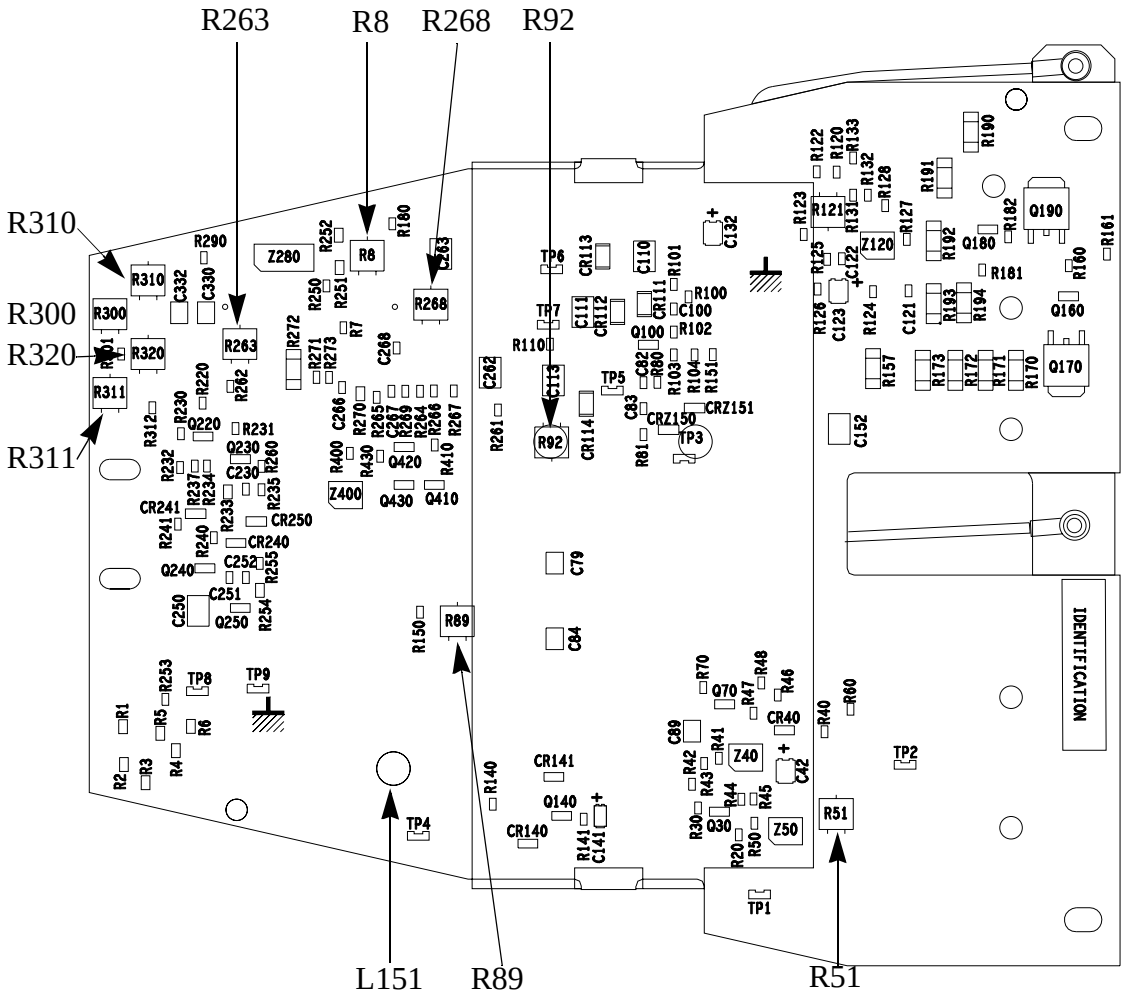


Figure 1.14 : Layout of the adjustments on the SWEEP BOARD

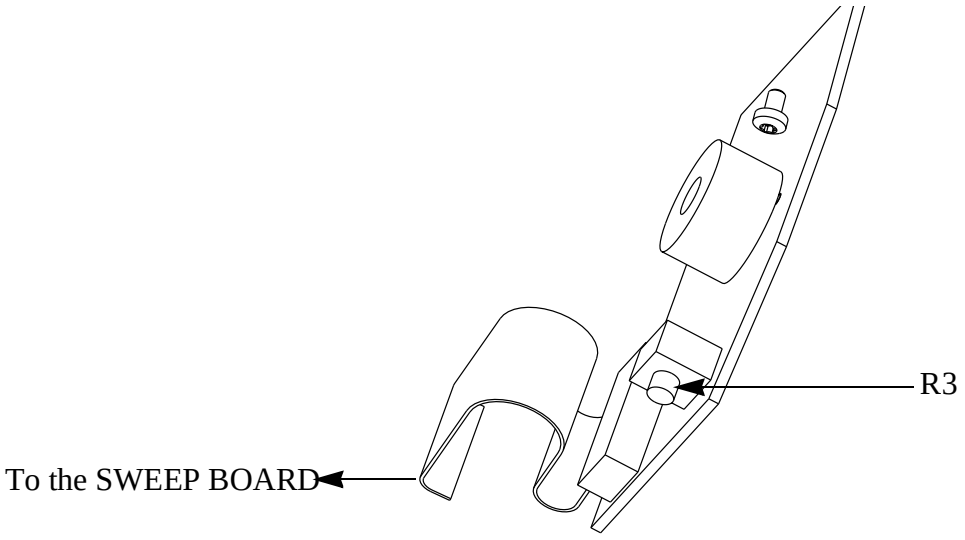


Figure 1.15 : Layout of the adjustments on the SOCKET board

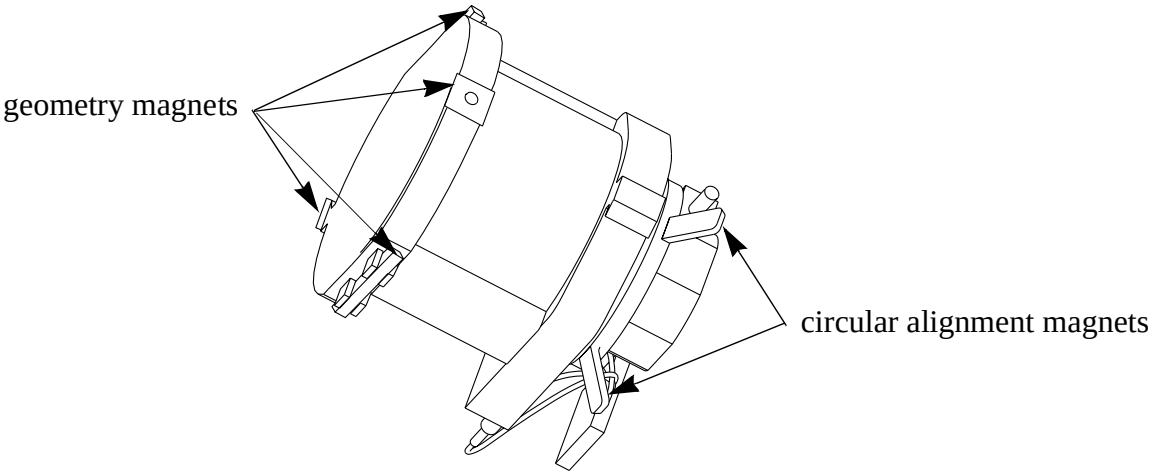


Figure 1.16 : Adjustments on the scan coils

SECTION 3 - SCHEMATIC / PART LIST

SOMMAIRE / SUMMARY

REAR CONTROLS

FRONT CONTROLS

VIEWFINDER ON OFF

ON AIR ON OFF

PIP L ROTATE R ROTATE

ZEBRA MARK

STANDBY

ON STBY

PIP ON/OFF REVERSE

CONTRAST

PEAKING

BRIGHT

OFF

S1 S2 S3 S4 S5 S6

+5V

GREEN LED YELLOW LED

R1 R2 R3

ON AIR1 ON/OFF

POWER IN

SW STBY

POWER IN A

GREEN LED YELLOW LED PIP LEFT PIP RIGHT PIP ON/OFF PIP REVERSE ZEBRA MARK PEAK NUM

«CONTROLS»

J3 J13

3,3V

NORMAL: ≅2,4Vcc

STANDBY: ≅0,6Vcc

«SOCKET»

Q20-Q30-Q40-Q50-Q60

AMPLIFIER

J6 J9

V HEAT G1 G2 G3

P400V

R3 FOCUS (Reserved)

10,5V P60V P400V

J4

K F F G1 G2 G3 A

«SWEEP BOARD»

	Q300	Q310	Q320	Q330
625-4/3	ON	OFF	ON	ON
625-16/9	ON	ON	OFF	ON
525-4/3	ON	ON	ON	OFF
525-16/9	OFF	ON	ON	OFF

J2 J6

G1 TP8

P60V R8 BRIGHT LIMITER

M60V

BEAM BLANKING 10,5V 0V 8,8µS

VERTICAL SWEEP

R268 V LIN

PRE SUP

Q250 Q240

CR250 C252 R255

BEAM V BLANKING DURATION

ALIGNMENT

CR240 C231 R240

VD2 HD VD2

Z280

BUFFER PREAMPLIFIER AMPLIFIER

VERTICAL OSCILLATOR RAMP GENERATOR

J5/P5

V DEFLEXION COIL

H DEFLEXION COIL

SAFETY

10,5V L151 LINEARITY

HORIZONTAL SWEEP

130V 0V 9µS TP3 T3

Q150 CR150

CRZ150-CRZ151

CR141

Q140 V SWEEP ON OFF

10,5V R121 THT ADJ

VCC Q130 Z120 TP4 4,85V 200MΩ X3 THT

HIGHT VOLTAGE SUPPLY

60V 0V 10µS T1 Q110

CR114 TP5 P400V

CR112 TP7 M60V

CR111 TP6 P60V

CR113

2V 0V ON AIR1:ON RED BL Q200-Q210

Q190 ON

2V 0V ON AIR1:OFF YELLOW BL Q170-Q180

Q160 ON

VCC=+5V

V HEAT=+12V

R263 V FREQ

R311 525-4/3 V HEIGHT

R310 525-16/9 V HEIGHT

R300 625-4/3 V HEIGHT

R320 625-16/9 V HEIGHT

Q330 625

Z280 LOGIC

Q300 Q310 Q320

625/525

4/3-16/9

CLAMP1 Q230 THRESHOLD

R230 R232 Q220

N. C. HD

N. C. Z80

VIDEO

H/V SYNC SEPARATOR

V SYNC

OUTPUT STAGE

OUTPUT STAGE

OUTPUT STAGE

HD SANDCASTLE

Q100

SYNC EXTRACTION Z400

H Q430 VD2

Q410 Q420

H SYNC

HORIZONTAL OSCILLATOR VCO

OUTPUT VOLTAGE

H PHASE FLYBACK

VCC NC

R89 H FREQUENCY

R92 H PHASE

DV

VCC (+5V)

10,5V

P14V

ON AIR1 ON/OFF

V HEAT

YELLOW BL

RED BL

R51 10.5V

START AFTER DELAY

CR40

Z50 VREF2,5V

Q20 Q30 Z40 2,5V

Q60 Q70 Z40

TP1 10,5V 10,5V

TP2 12V V HEAT (12V)

LOW VOLTAGE SUPPLY

ON AIR1 ON 4V 0V

ON AIR1 OFF 4V 0V

ON OFF

ON AIR1 ON/OFF

«VIDEO»

J3 J13

POWER IN A (TO SWEEP BOARD)

10,5V YELLOW LED

CONTRAST IN

CONTRAST OUT

PEAK IN

PEAK OUT

Q60

R141 Q140

R151

R150 Q150

Z130

10,5V

P3V3

R133 C130

PEAKING 10,5V

DELAY LINE

Q70 Q80 Q90 Q100-Q110 R110 Z120

Q250

SOCKET

8,8µS 10V 0V

PRE SUP

PEAKING OFF

Z120 NORMAL GAIN=3 STANDBY GAIN=0,75 VIDEO COMPRESS 1,5 < GAIN < 3

CLAMP

Q240 P3V3

BURST PRESENCE DETECT

10,5V

P3V3 CLAMP Q30

Burst

Q190 Q200 C200

Q210 C220 Q220

Q230

PEAK OFF

VCC (+5V)

Z160

YELLOW LED

4µS 10V 0V

625/525

4/3-16/9

CLAMP 1

VIDEO

Q170

Y300

Z290 RESET RESET

SW STBY

PIP LEFT

PIP RIGHT

PIP ON/OFF

PIP REVERSE

ZEBRA

PEAK NUM

MARK

MICRO CONTROLLER Z300

PEAK OFF

STBY

625/525

4/3-16/9

DV

BOARD VERSION INDICATION R316 TO R332

VIEWFINDER TYPE INDICATION R310 TO R315

LCD

≅2V 1Vcc 75Hz

Q40-Q50

VCC=+5V

V HEAT=+12V

BKGD MOSI SCK SS0-8

MISO

ON AIR2 TX-EN MISO-A

Z280

POWER IN A (FROM CONTROL BOARD)

ON OFF

R492 (NC)

Z500 Z510 Z520 Z530

X14

V HEAT

YELLOW BL

RED BL

Z490 75Hz OSCILLATOR

R492 N. C.

Z530 COMMUN

S1 to S14

R493

J10

R272

Q30

Z270 CR272

J20

ON OFF

(ON AIR1)

Q350

(ON AIR2)

J7 «ON AIR LEFT» RED YELLOW

J8 «ON AIR RIGHT» RED YELLOW

0V 1Vcc 75Ω

Z260 VCC (+5V)

Z300 PROGRAMMING (Factory Use)

Q390 Q400

10,5V 10,5V

J1 J8

LCD X3

ON AIR1 OFF: YELLOW

ON AIR1 ON: RED

(FRONT SIDE) (LEFT SIDE REAR SIDE RIGHT SIDE)

GND POWER GND VIDEO TALLY BKGD SS0-8 MISO

POWER IN (14V) INPUT VIDEO MOSI SCK

VIEWFINDER ⇔ CAMERA CABLE CONNECTOR

14 CM VIEWFINDER BLOCK-DIAGRAM

THOMSON BROADCAST SYSTEMS

BD0 1/1

KIT 245
THT
CAB 14
SOCKET 46150577XX
J6
RG 179B/U
CAB 10
J9
J4
CAB 03
CAB 05
CAB 01
CAB 02
LCD1
LCD2
LCD3
CAB 04
CAB 07
J10
J6
THT
VIDEO 46150578XX
J3
J3
SWEEP BOARD 46150576XX
J2
J2
COMMANDES 46150579XX
J13
J13
CAB 13
CAB 12
J7
J8
J1 P1
VIEWFINDER CABLE 46150773XX
CAB 11
CAB 06
P5 J5
DEFLEXION COIL
120 MM
LED ONAIR LEFT 46150731XX
J7
CAB 09
CAB 08
J8
LED ONAIR RIGHT 46150730XX

1	S1
2	S2
3	S3
4	S4
5	S5
6	S6
7	S7
8	S8
9	S9
10	S10
11	S11
12	S12
13	S13
14	S14
15	COMMUN
16	V_HEAT +12V
17	YELLOW_BL
18	RED_BL
19	— NC —
20	— NC —

1	GND
2	GND
3	+10.5V
4	V_HEAT
5	G1
6	— NC —
7	+60V
8	— NC —
9	— NC —
10	+400V
11	— NC —
12	— NC —

1	ONAIR1_ON/OFF
2	SW_STBY
3	POWER_IN_A
4	POWER_IN_A
5	POWER_IN_A
6	POWER_IN
7	POWER_IN
8	POWER_IN

VIDEO_IN	A1	B1	VIDEO_GND
TALLY	A2	B2	GND_POWER
POWER_IN	A3	B3	SSB_8
MISO	A4	B4	MOSI
SCK	A5	B5	BKGD
GND_SHIELD	A6	B6	—RESERVED—

1	A LEFT_YELLOW
2	K LEFT_YELLOW
3	A LEFT_RED
4	K LEFT_RED

1	A RIGHT_RED
2	K RIGHT_RED
3	A RIGHT_YELLOW
4	K RIGHT_YELLOW

1	POWER_IN_A
2	POWER_IN_A
3	POWER_IN_A
4	+10.5V
5	GND_POWER
6	VIDEO_OUT
7	GND_POWER
8	CLAMP_1
9	GND_POWER
10	LIGHT_IN
11	LIGHT_OUT
12	ONAIR1_ON/OFF
13	16/9_4/3
14	PRE_SUP
15	+5V
16	525/625L
17	DV
18	V_HEAT+12V
19	YELLOW_BL
20	RED_BL

1	— NC —
2	— NC —
3	PIP_RIGHT
4	PIP_LEFT
5	PIP_REVERSE
6	PIP_ON/OFF
7	MARK
8	ZEBRA
9	LIGHT_OUT
10	LIGHT_IN
11	PEAK_NUM
12	PEAK_IN
13	PEAK_OUT
14	CONTRAST_GND
15	CONTRAST_OUT
16	CONTRAST_IN
17	GND
18	+5V
19	YELLOW_LED
20	GREEN_LED

V COIL TOP
H COIL LEFT
H COIL RIGHT
V COIL BOTTOM
V COIL
H COIL
H COIL
V COIL
KEY
KEY

TITLE
INTERCONNECTION

14 CM VF

THOMSON BROADCAST SYSTEMS

DRAWING No	REV	CODE	SIZE	SHEET
46150724AA	C	050	3	01/01

THE RED LED MUST BE UP.

THOMSON

J7

J8

K245

CAB14

CAB12

CAB12A

CAB12B

CAB13

LENGTH 200 CAB 14 SOLDERED IN THE GND TUBE HOLE,
AND SELLOTAPE STICKING COPPER TO TUBE.

THE OVERALL TWISTED LENGTH OF THE WIRED IS 120 mm .

CAB14 SOLDERED TO COPPER SELLOTAPE K245 .

NEXT VIEW F1

2 AREAS TO ISOLATE WITH
ADHESIVE TAPE REP : K255
ON THE 3 LCD DISPLAYS

8

23

CAB07

CAB09

110

110A

110B

110C

CAB06

CAB05

1

CAB10

CAB08

1 B

CAB04

CAB01

K245

CAB03

CAB14

CAB02

CAB11

1 A

1 D

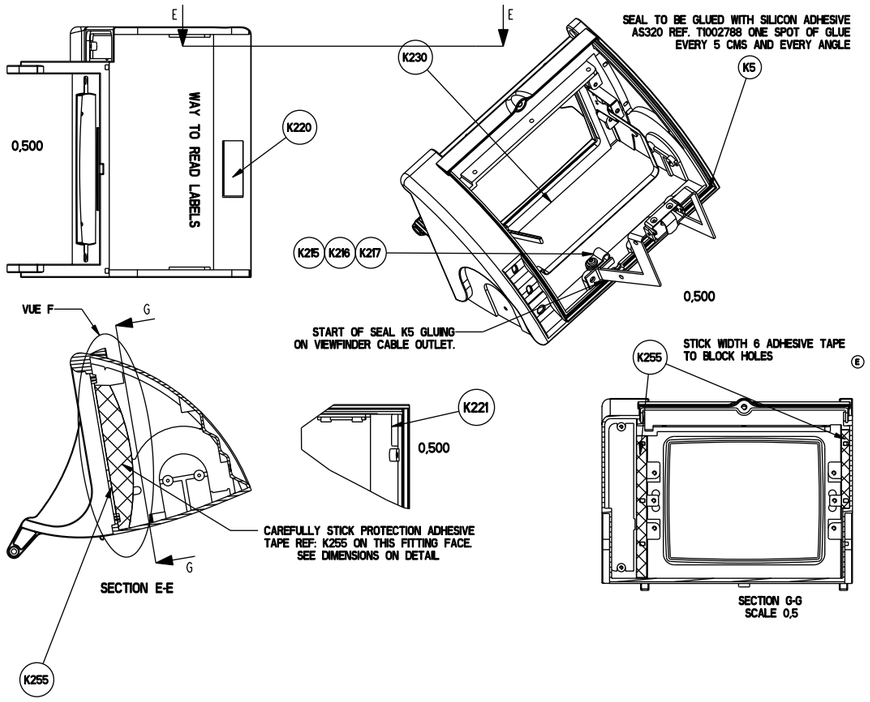
J7

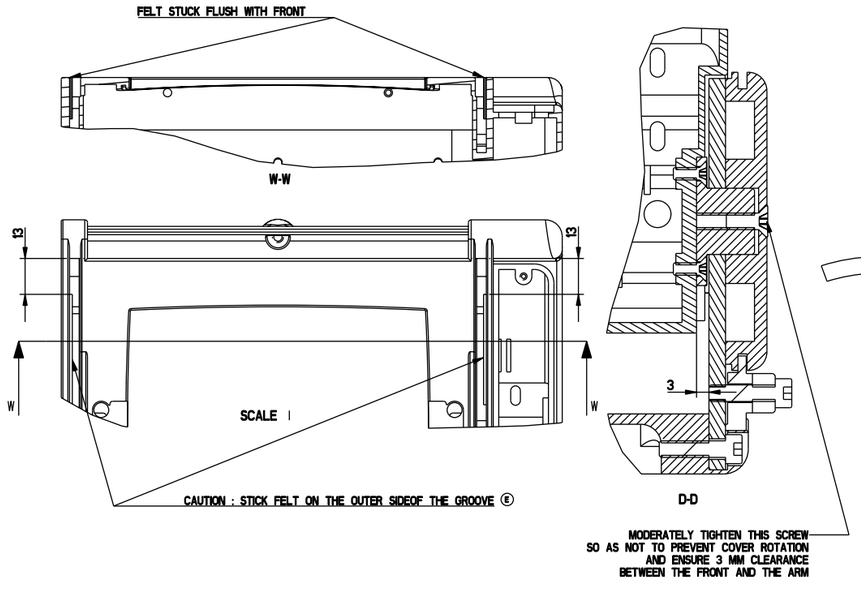
1 E

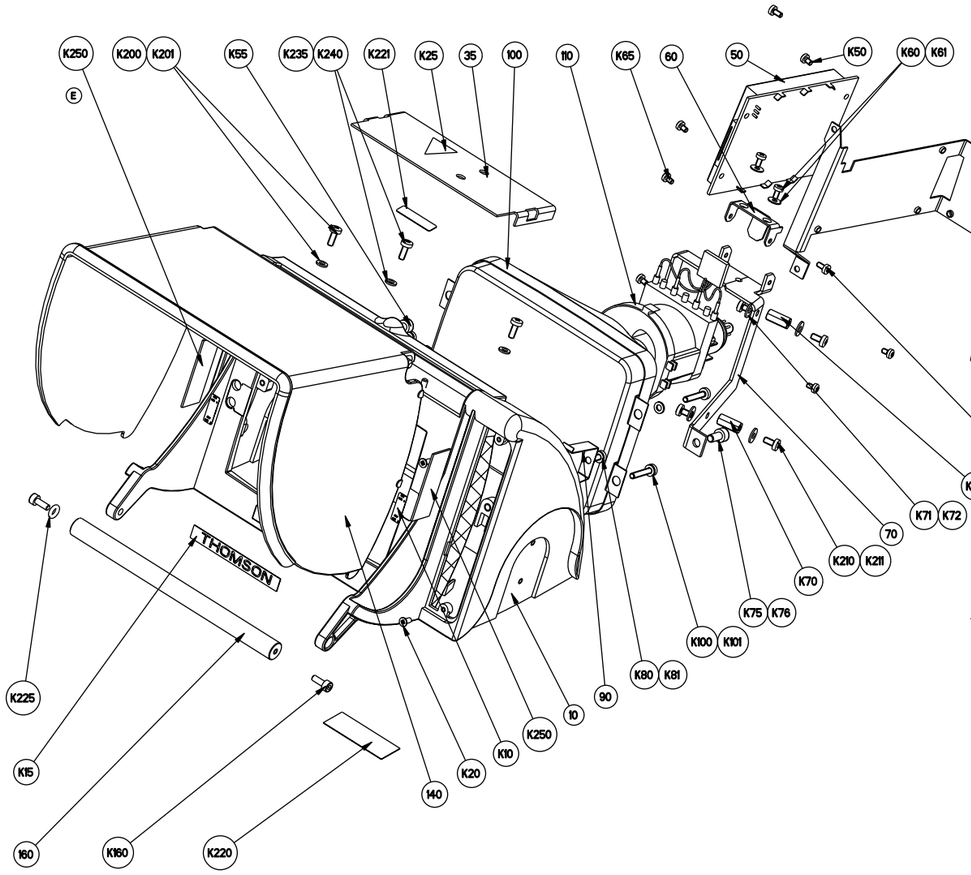
J8

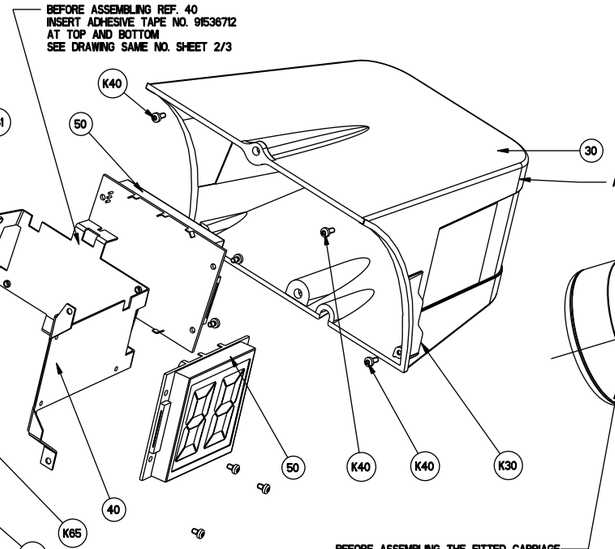
1 C

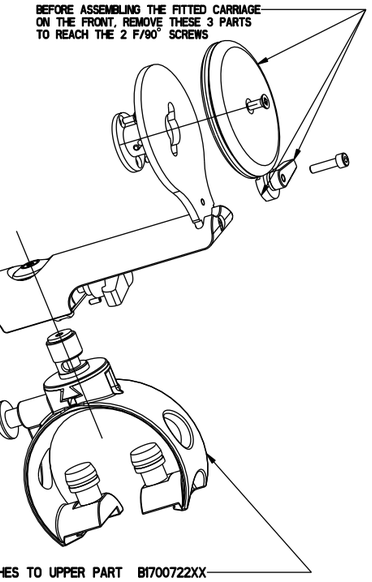
TITLE: ASSEMBLED VIEWFINDER					14 CM VF
THOMSON BROADCAST SYSTEMS	DRAWING No	REV	CODE	SIZE	SHEET
	46153410AA	E	040	1	01/02

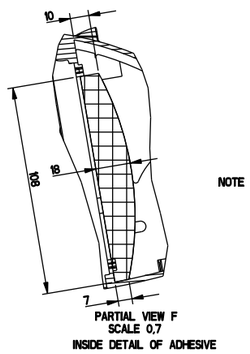












NOTE : FIRST ASSEMBLE

REFS. : J7-J8-CAB08-CAB09-90-K80-K81-K230

100-K100-K101-K255. E

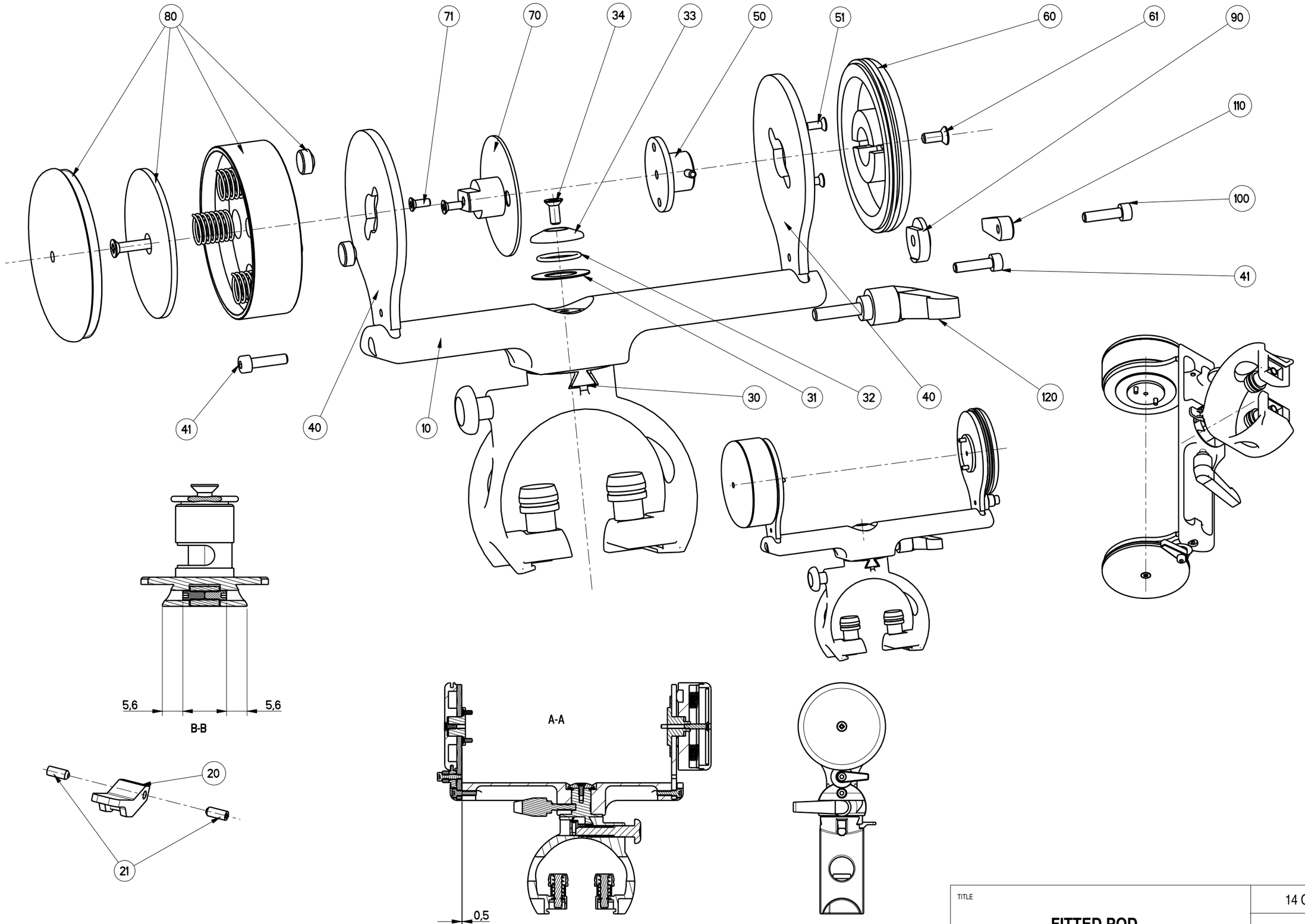
ALL SCREWS SHOULD BE ASSEMBLED WITH THREADLOCK

EXCEPT K50 SCREWS.

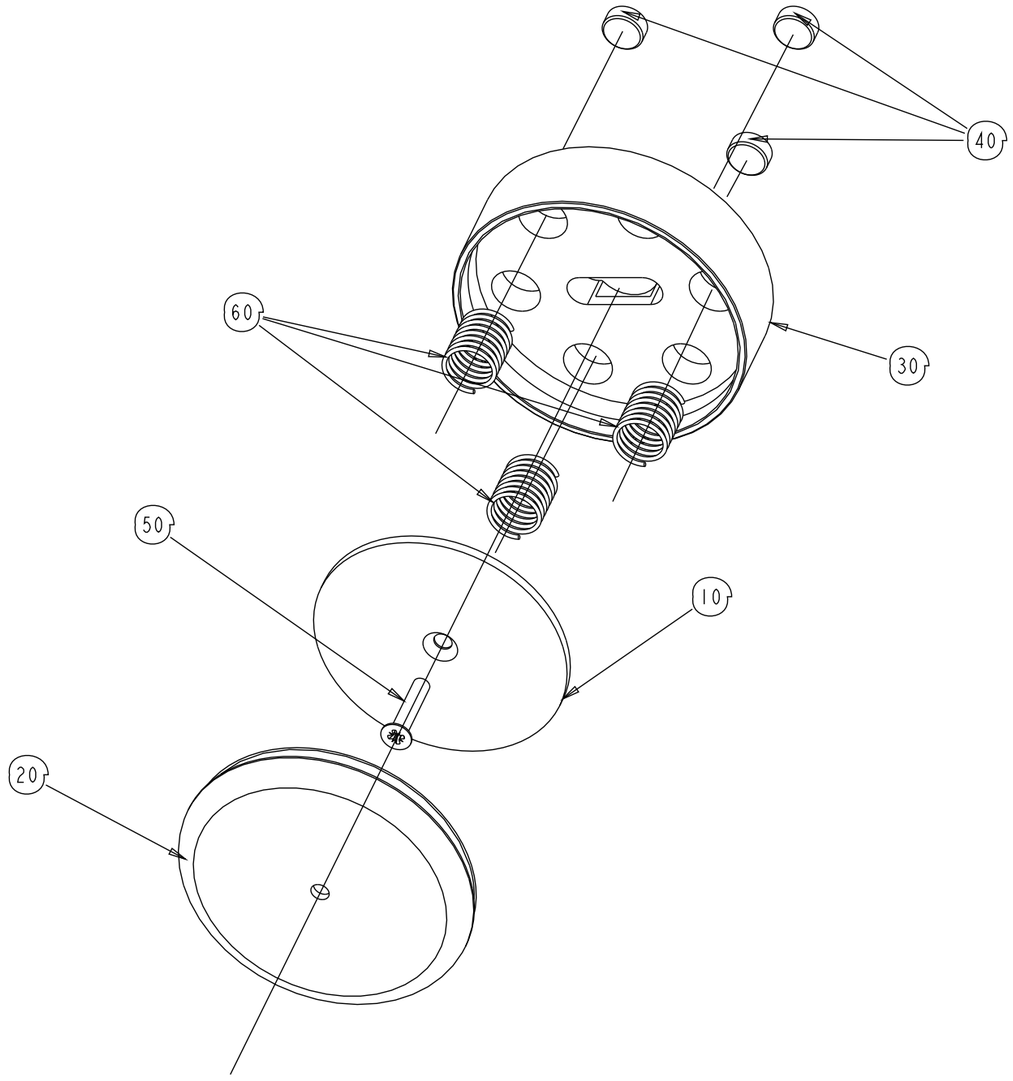
ASSEMBLED VIEWFINDER

14 CM VF

THOMSON BROADCAST SYSTEMS	DRAWING No	REV	CODE	SIZE	SHEET
	46153410AA	E	040	1	02/02



TITLE						14 CM VF
FITTED POD						
THOMSON BROADCAST SYSTEMS	DRAWING No	REV	CODE	SIZE	SHEET	
	46153833AA	D	040	2	01/01	



TITLE					14 CM VF
FRICTION SYSTEM					
THOMSON BROADCAST SYSTEMS	DRAWING No	REV	CODE	SIZE	SHEET
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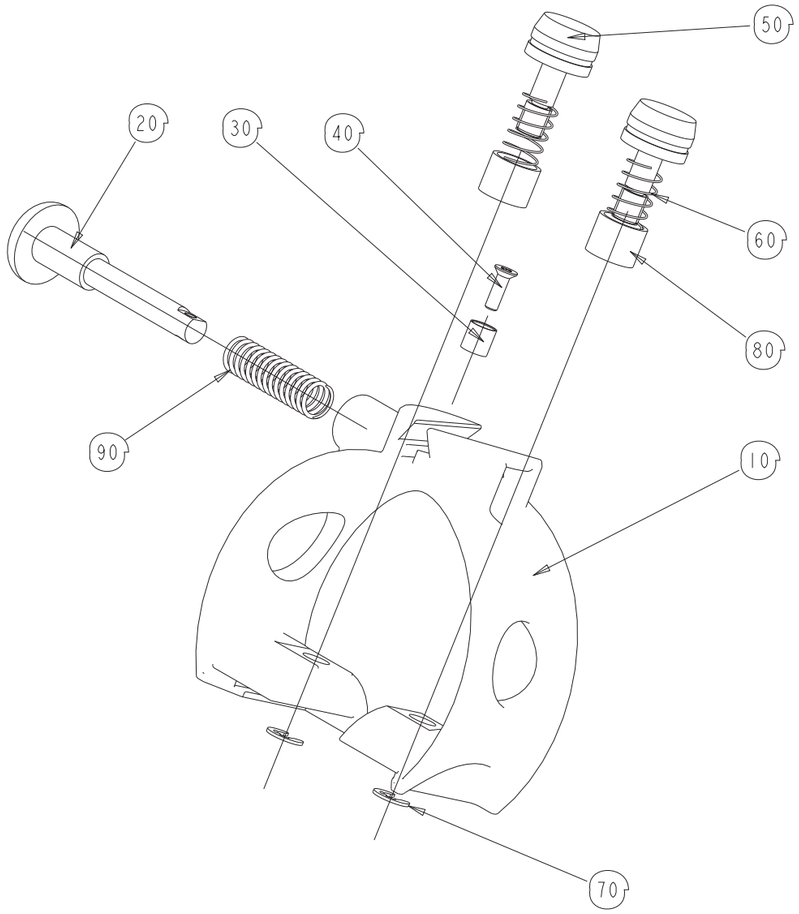
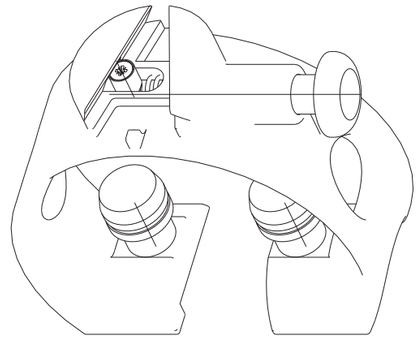
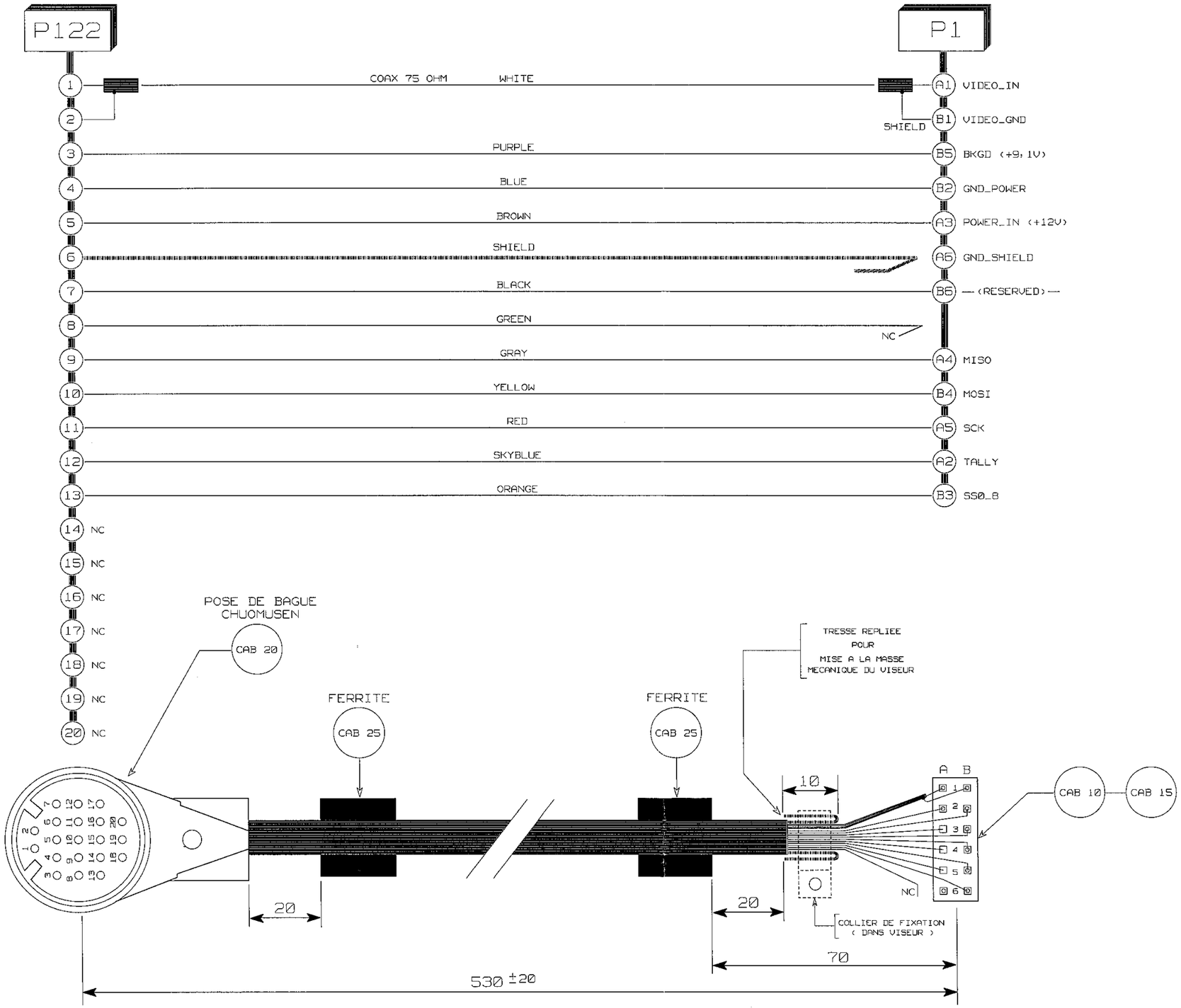




TITLE					14 CM VF
VIEWFINDER HOLDER					
THOMSON BROADCAST SYSTEMS	DRAWING No	REV	CODE	SIZE	SHEET
	46153605AA	B	040	3	01/01



TITLE: **VIEWFINDER CABLE**						14 CM VF
THOMSON BROADCAST SYSTEMS	DRAWING No	REV	CODE	SIZE	SHEET	
	46150773AA	C	050	3	01/01	

SWEEP CONTROL

J2-6 VIDEO
C80 100N
C81 100N
R91 43.2K
P10.5V
R92 50K H. PHASE
C92 100N
C93 100N
Z80 TDA 2595
R82 15K
C79 10N
C84 10N
R84 825
R86 681
C87 4.7U
R80 56.2K
C82 10P
C83 10N
R81 1K
R85 82.5K
R83 4.75K
C85 0.47U
C86 10N
C89 10N
C90 100N
C91 100N
NC S1
P10.5V
R90 47.5
C88 100U
H. FREQU
R95 0
R93 10K
R94 10K
DH TO R234 FOLIO 2/2
DV2 TO R235 FOLIO 2/2
DV J2-17
R87 121K
R89 50K H. FREQU
R88 11K
150V
9 µS
NC TP3
FLYBACK
CRZ150 BZX84C75V
CRZ151 BZX84C75V

HIGHT VOLTAGE SUPLLY

P10.5V
R103 1K
R104 1K
R100 1K
R102 10K
C100 100N
R101 1K
Q100 S03904
R110 10
Q110 BUZ31
+11,4V
VHEAT
R133 0
L130 100U
R125 47.5K
C122 47N
0503
R126 100K
C123 2.2U
C130 22U
P10.5V
R120 5.62K
C120 22U
THT ADJ
R121 1K
R123 2.21K
R122 4.32K
Z120
R124 100K
C121 100P
R132 681
Q130 BD436
R131 825
R128 100K
FREE
R127 100K
Z120
THT 9,6KV
T1 TRANSF733896
C131 47U
C132 4.7U
+400V
NC TP5
P400V
CR114 BYD37MS
C113 0.1U
3000V
T2 MSR3547
+60V
NC TP6
CR113 BYD37MS
P60V
C112 100U 100V
-60V
NC TP7
M60V
C110 0.1U
C111 0.1U
CR111 BYD37MS
CR112 BYD37MS
4,85V
TP4
P10.5V
C140 100U
Q140 SST177
C141 1U
R140 47.5K
R141 100K
CR140 BAV99
CR141 BAV99
SAFETY FROM Z260 FOLIO 2/2

HORIZONTAL SWEEP

+11,4V
VHEAT
R150 0
L150 100U
L151 12-120UH
C150 22U
C151 470U
R152 0
NC R153 0
J5-1 H_DEFLECT_R
J5-2 H_DEFLECT_IN
T3
R157 0.33
R151 10
Q150 BUZ31
CR150 BYW29-200
C152 47N
16734078
R156 0
NC
R155 0
NC
R154 0
NC

ON AIR

P10.5V
R160 22.1K
R170 3.3
R171 3.3
R172 2.21
R173 2.21
J2-19 YELLOW_BL
Q170 SUD25N06.45L
Q150 S03904
P10.5V
R182 10K
R161 100K
R190 3.3
R191 3.3
R192 3.3
R193 3.3
R194 3.3
J2-20 RED_BL
Q190 SUD25N06.45L
J2-12 ON_AIR1
R180 10K
Q180 S03904
R181 22.1K

						VFR 1400
06-12-2000					TITLE	SWEEP BOARD
THOMSON BROADCAST SYSTEMS	DRAWING No	REV	CODE	SHEET	BLOCK	
	46150576AC	D	030	1/2		

LOW VOLTAGE SUPPLY

P14V
L20 100U
C20 220U
Q20 RFP30P06
R20 2.21K
R40 5Ω2
C40 22U
CR40 BAV99
+10,5V
TP1
P10.5V
C41 220U
R42 221
R43 15K
R41 100K
Q30 S03904
Z40 TL082S
R30 2.21K
R44 4.75K
R50 3.92K
R45 2.21K
C42 4.7U
Z50 LT1009S8
VOLT REF
ADJ
R51 10K
10,5V
+11,4V
VHEAT
NC
TP2
C43 47U
Q60 RFP30P06
R60 2.21K
R47 100K
R46 18.2K
Q70 S03904
Z40 TL082S
R70 2.21K
R48 5.11K

BEAM CONTROL

P10.5V
C401 100N
C402 100N
Z400 GS4982
VIDEO
RSET
VCC
GND
SYNC_H
SYNC_V
OD/EV
BACK_PORCH
J2-6
R400 221K
C400 100N
R430 100K
Q430 2N7002
TO Z80 FOLIO 1/2
DH
R410 100K
Q410 2N7002
Q420 S03904
J2-8
CLAMP1
Q220 S03906
R230 1K
R232 4.75K
R237 NC
R220 4.75K
R231 3.32K
Q230 S04392
C230 100N
R233 4.7MEG
C231 22U
R240 2.21K
C234 180P
CR240 BAV99
Q240 S03904
CR241 BAV99S
R241 1K
CR250 BAV99S
Q250 S04392
C251 100N
R254 4.7MEG
C252 10N
R255 221K
J2-11
BRIGHT
PRE_SUP
J2-14
R250 1MEG
R251 4.7MEG
R252 4.7MEG
M60V
R253 475
C250 0.1U
TO R93/R95 FOLIO 1/2
DV2
R235 10K

SOCKET

EFC12P2
J4
1 GND
2 GND
3 P10.5V +10,5V
4 +11,4V VHEAT V_HEAT (+12V)
5 G1
6
7 P60V +60V
8
9
10 P400V +400V
11
12
G1
NC
TP8
P60V
R1 4.7MEG
R2 4.7MEG
R3 4.7MEG
R4 4.7MEG
R5 4.7MEG
R6 4.7MEG
P400V

VERTICAL SWEEP

P10.5V
C260 470U
CR260 BYD37M
C261 100U
Z260 TDA1175
TDA1175 DIP16-3
OSC
REGVOLT
SYNCIN
RAMPGEN
AMPIN
FLYBACK
HEIGHTADJ
VCC2
VCC1
GND4
GND5
GND13
GND12
COMP
POWOUT
RAMPOUT
C268 470P
C267 47P
R260 4.75K
R261 825K
C262 100N
C263 100N
R266 150K
R267 56.2K
R269 221K
R268 100K
R270 3.32
C266 100N
V.LIN
R312 357K
R262 200K
R264 15K
C264 22U
R263 100K
R265 15K
V-AMP
R311 500K
525 4/3
V.FREQU
SAFETY
TO CR141 FOLIO 1/2
625 4/3
R301 68.1K
525 16/9
625 16/9
C331 100N
R300 500K
R310 500K
R320 1M
R321 357K
C330 10N
C332 10N
Q300 2N7002
Q310 2N7002
Q320 2N7002
Q330 2N7002
J2-16
525/625
16/9_4/3
J2-13
Z280 74ACT02
Q290 2N7002
R290 22.1K
vcc
R271 22.1K
R273 47.5K
R272 2.21
C265 470U
R

EMD6X1P2-MDJ
J5
H_DEFLECT_R
H_DEFLECT_IN
NC
IN
KEY
R
H.DEFLECT
V.DEFLECT

vcc = +5V

VIDEO

TP9
EFC20C
J2
P14V
P10.5V
POWER IN A
VIDEO
CLAMP1
P60V
R7 182K
R8 500K
BRIGHT LIMITER
BRIGHT
ON_AIR1
16/9_4/3
PRE_SUP
vcc (+5V)
525/625
DV
+11,4V VHEAT
YELLOW_BL
RED_BL

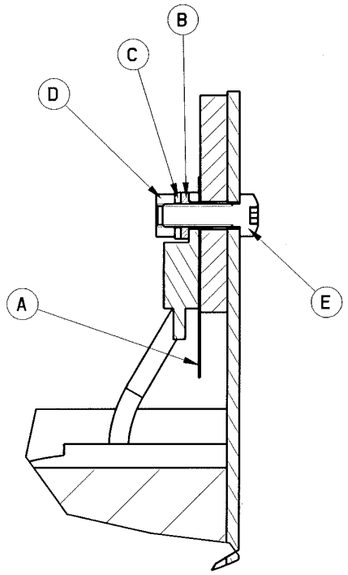
VFR 1400

06-12-2000

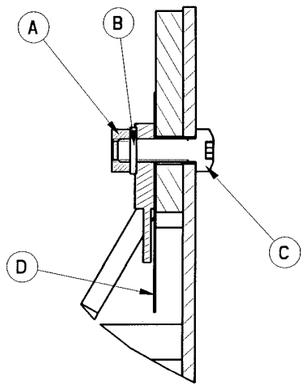
TITLE: SWEEP BOARD

THOMSON BROADCAST SYSTEMS

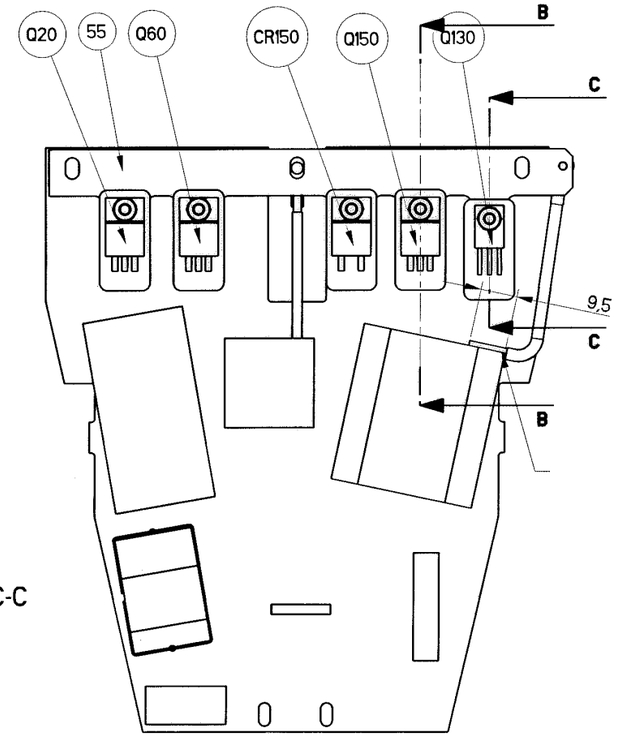
DRAWING No	REV	CODE	SHEET	BLOCK
46150576AC	C	030	2/2	

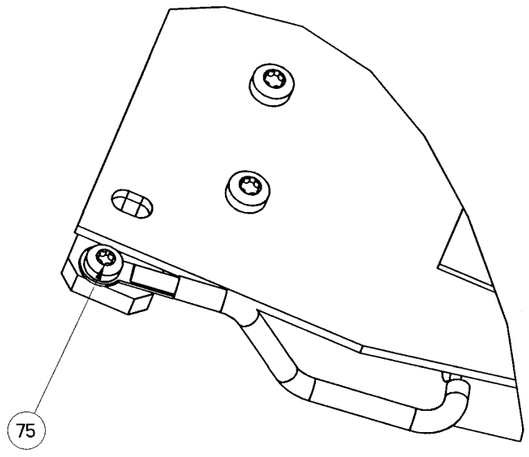


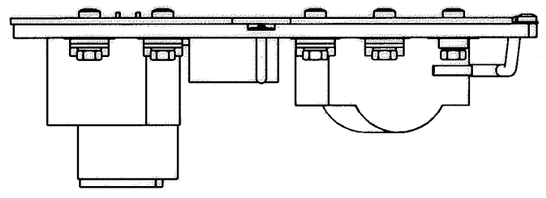
COUPE PARTIELLE B-B

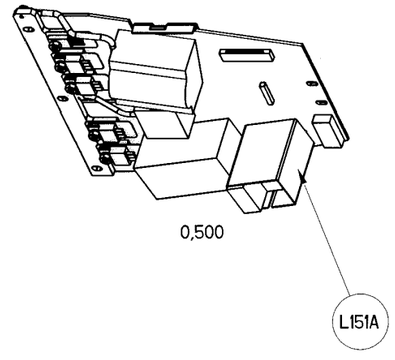


COUPE PARTIELLE C-C

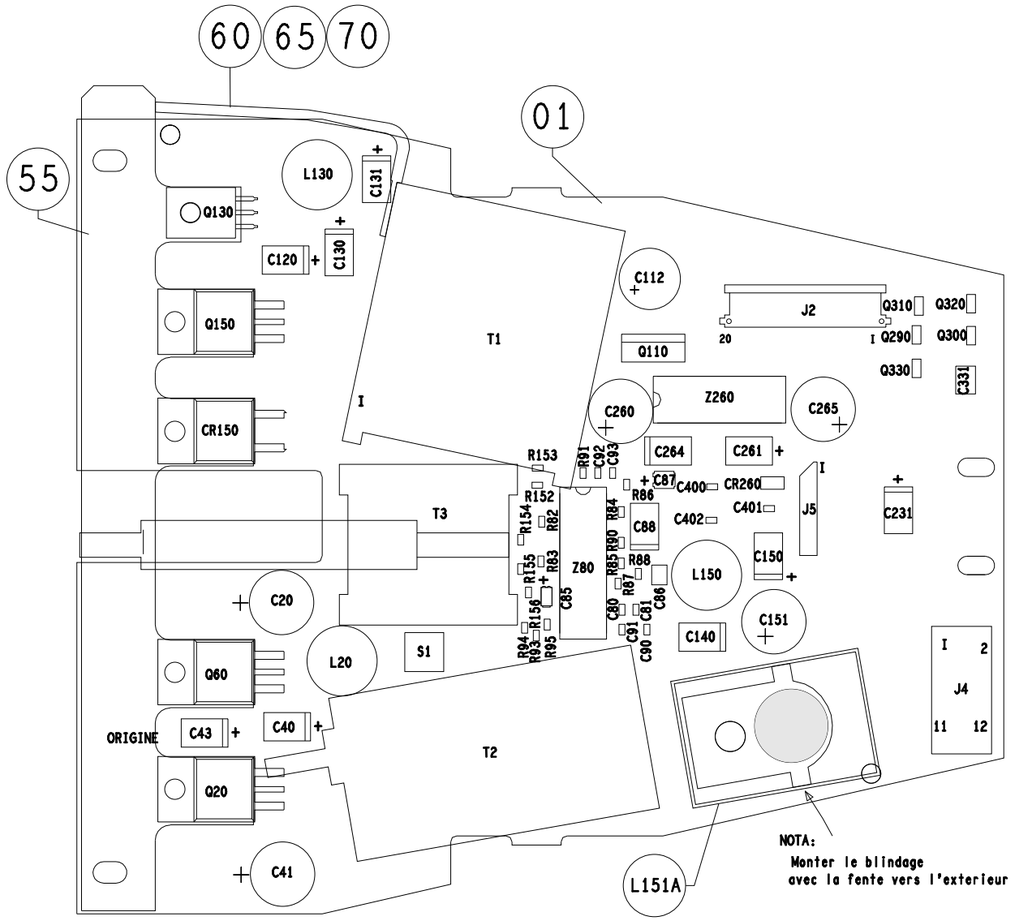


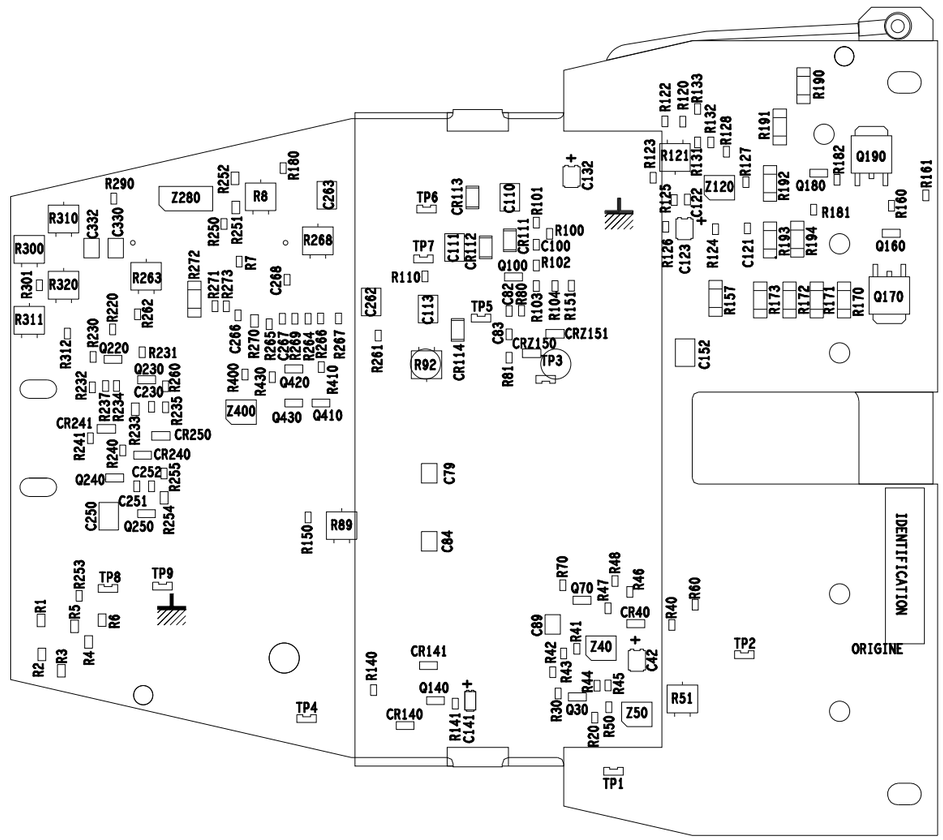




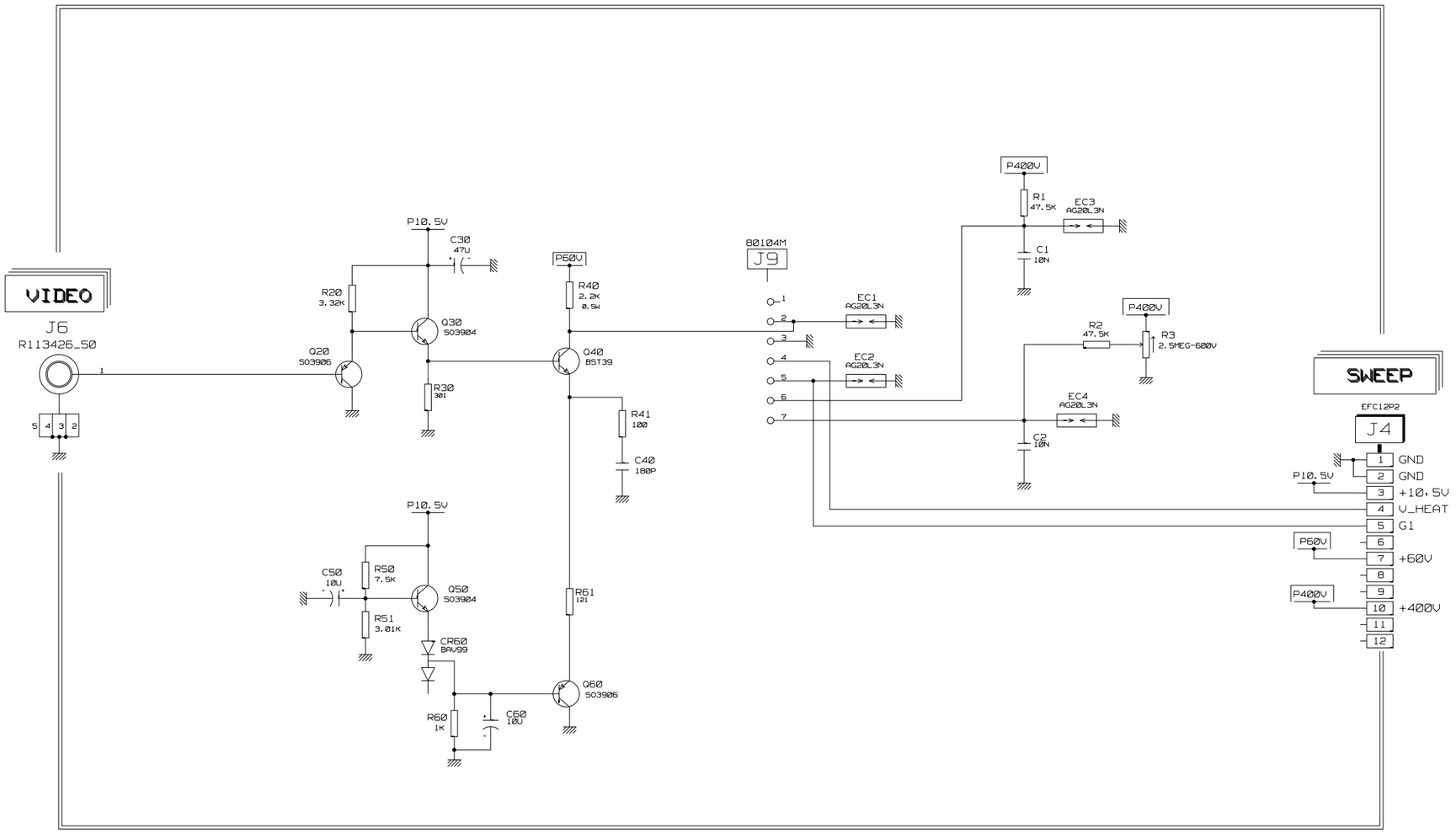


TITLE					14 CM VF
SWEEP BOARD					
THOMSON BROADCAST SYSTEMS	DRAWING No	REV	CODE	SIZE	SHEET
	46150576AC	A	040	3	01/01

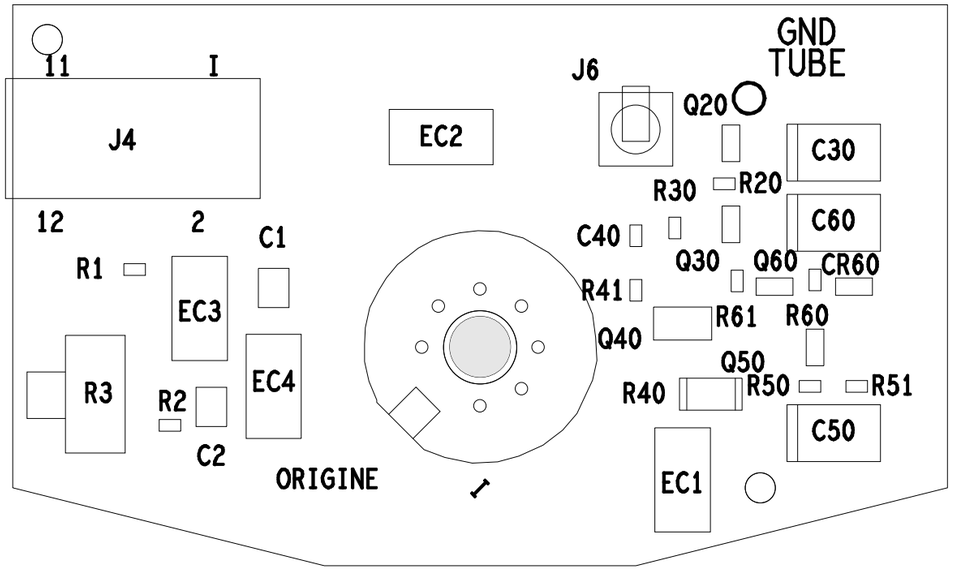




TITLE **SWEEP BOARD**					14 CM VF
THOMSON BROADCAST SYSTEMS	DRAWING No	REV	CODE	SIZE	SHEET
	46150576AC	A	046	4	01/01



	VISEUR 14CM					
04-01-01	TITLE SOCKET					
THOMSON BROADCAST	DRAWING No	REV	CODE	SHEET	BLOCK	
	46150577AB	A	030	1/1		



TITLE					14 CM VF
SOCKET					
THOMSON BROADCAST SYSTEMS	DRAWING No	REV	CODE	SIZE	SHEET
	46150577AB	A	046	3	01/01

+3,3V

+10.5V
C132 4.7U
R135 39.2K
R136 18.2K
Z130 TL082S
+3.3V
C133 4.7U

+5V

328
RELIER PIN 5 ET 8 AU +14V.

Z260
LT1763CS8-5
POWER_IN (+14V)
C262 1U
C261 10N
C260 4.7U
VCC = +5V

328
AJOUT DE C262

+10.5V
R152 1K
GREEN_LED
J13-20
YELLOW_LED
J13-19
Z160 TSC4420
STBY
18-Z500
Q150 BSD22
R150 1K
R151 3.32K
R132 56.2K
R130 22.1K
R131 3.32K
C130 4.7U
R133 1MEG
Z130 TL0825
R134 100K
C140 100N
Q140 BSD22
R141 3.01K
C120 100N
Z120 AD847
R110 1K
R111 1K
C121 100N
Q110 S03904
R100 3.32K
Q100 S03905
C90 1U
TP9
Q90 S03904
R90 3.32K
C80 100U
R81 332
R82 332
Q80 S03904
PEAK_OUT
J13-13
PEAK_IN
J13-12
R80 5.11K
DL100 DPES8 80NS 580W
R250 1MEG
C250 10N
Q250 BSD22
R251 475
J6 MCXR113426
PRE_SUP
J2-14

+10.5V
CR20 BAV99
R20 10K
C20 10U
R22 3.92K
Q20 S03906
R21 56.2K
R40 1K
R41 909
Q40 S03906
R42 1K
Q50 S03904
C50 47U
R50 562
CONTRAST_IN
CONTRAST_GND
J13-16
J13-14
J1-A1
VIDEO_IN
C30 47U
Q30 S03904
R30 75
R31 10K
R33 1K
VIDEO_GND
J1-B1
C31 10P
R32 100

CONTRAST_OUT
J13-15
R64 75
C60 47U
Q60 S03904
R60 4.75K
R61 475
C70 47P
Q70 BSD22
R62 2.67K
R63 562
CR60 BAV99
C81 47U

328
AJOUT DE R64.

DETECTION PRESENCE BURST

+3.3V
R180 4.7MEG
Q180 S04392
C180 10N
L180 18U
R181 221
C181 1U
Q190 BSD22
R190 2.21K
+10.5V
R200 1K
C200 10N
Q200 S03904
R201 1K
C201 560P
R210 100K
Q210 S03904
R211 10K
C220 1U
Q220 S03904
R220 100K
PEAK_OFF
19-Z500 (2/3)
+3.3V
R170 22.1K
C170 10U
Q170 S03904
R171 1.5K
VIDEO_OUT
J2-6

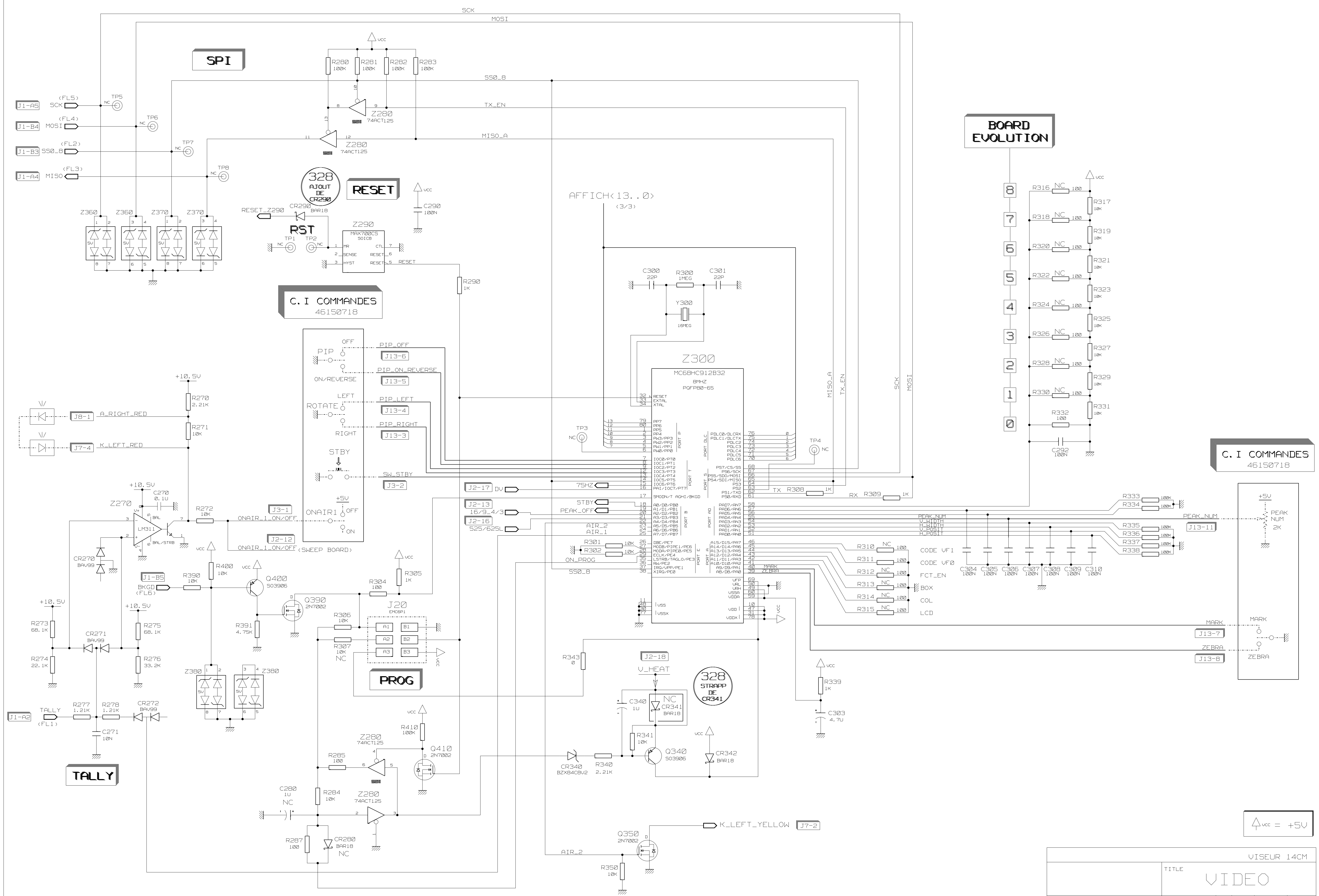
L100 18U
C230 68P
R230 22.1K
Q230 S03905
CLAMP_1
J2-8
C231 10N
R231 2.21K
Q240 S04392
R240 4.7MEG
C240 100N
R241 1K
C241 100U

VCC = +5V

VISEUR 14 CM

TITLE
VIDEO

THOMSON BROADCAST SYSTEMS	DRAWING No	REV	CODE	SHEET	BLOCK
	46150578AC	E	030	1/3	



VISEUR 14CM

TITLE

VIDEO

THOMSON BROADCAST SYSTEMS

DRAWING No	REV	CODE	SHEET	BLOCK
46150578AC	F	030	2/3	

CABLE

EMD12P1

J1

A1 — VIDEO_IN
B1 — VIDEO_GND
A2 — TALLY
B2 — GND_POWER
A3 — POWER_IN
B3 — S50_8
A4 — MISO
B4 — MOSI
A5 — SCK
B5 — BKGD (1_TB3)
A6 — GND_SHIELD
B6 — NC

FL1 NFM51R50MEG
FL2 NFM51R50MEG
FL3 NFM51R50MEG
FL4 NFM51R50MEG
FL5 NFM51R50MEG
FL6 NFM51R50MEG

COMMANDES

EFC8C

J3

COMMAND BOARD
1 — 8
2 — 7 — POWER_IN
3 — 6
4 — 5
5 — 4 — POWER_IN_A
6 — 3
7 — 2 — SW_STBY
8 — 1 — ONAIR_1_ON/OFF

SWEEP

EFC20C

J2

1, 2, 3 — POWER_IN_A
4 — +10.5V
5 — GND_POWER
6 — VIDEO_OUT
7 — GND_POWER
8 — CLAMP_1
9 — GND_POWER
10 — LIGHT_IN
11 — LIGHT_OUT
12 — ONAIR_1_ON/OFF
13 — 16/9_4/3
14 — PRE_SUP
15 — vcc (+5V)
16 — 525/625L
17 — DV
18 — V_HEAT (+12V)
19 — YELLOW_BL
20 — RED_BL

C10 22U

328 AJOUT DE C10.

COMMANDES

EFC20C

J13

COMMAND BOARD
1 — 20 — GREEN_LED
2 — 19 — YELLOW_LED
3 — 18 — vcc (+5V)
4 — 17
5 — 16 — CONTRAST_IN
6 — 15 — CONTRAST_OUT
7 — 14 — CONTRAST_GND
8 — 13 — PEAK_OUT
9 — 12 — PEAK_IN
10 — 11 — PEAK_NUM
11 — 10 — LIGHT_IN
12 — 9 — LIGHT_OUT
13 — 8 — ZEBRA
14 — 7 — MARK
15 — 6 — PIP_OFF
16 — 5 — PIP_ON_REVERSE
17 — 4 — PIP_LEFT
18 — 3 — PIP_RIGHT
19 — 2 — NC
20 — 1 — NC

L C D

EFC20C

J10

328 AJOUT DE R450, R451, Q450

vcc
R500 NC
+5VA
C500 10u
POWER_IN_A
R451 47.5K
RESET_Z290
Q450 2N7002
R450 100K

AFFICH<13..0> (2/3)

S1 — 1 — 0
S2 — 2 — 1
S3 — 3 — 2
S4 — 4 — 3
S5 — 5 — 4
S6 — 6 — 5
S7 — 7 — 6
S8 — 8 — 7
S9 — 9 — 8
S10 — 10 — 9
S11 — 11 — 10
S12 — 12 — 11
S13 — 13 — 12
S14 — 14 — 13
COMMUN — 15
ANODE_BL — 16 — V_HEAT (+12V)
17 — YELLOW_BL
18 — RED_BL
19 — NC
20 — NC

Z500 74ACT86 (VCC=+5VA)
Z510 74ACT86 (VCC=+5VA)
Z520 74ACT86 (VCC=+5VA)
Z530 74ACT86 (VCC=+5VA)
Z530 74ACT86

ON AIR LEFT

EFC4C

J7

1 — K_LEFT_YELLOW — D_Q350 (2/3) — 2 — YELLOW
3 — K_LEFT_RED — 7_Z270 (2/3) — 4 — RED
(F.AV)

ON AIR RIGHT

EFC4C

J8

+10.5V
R1 2.21K
A_RIGHT_RED — R270 (2/3)
1 — RED
2
3 — YELLOW
4
(F.AV)

OSCILLATOR 75 HZ

C490 100N
vcc
Z490 LM555
8 vcc
6 THR
5 CONT
4 RESET
1 GND
7 DIS
3 OUT
2 TRG
R490 51.1K
R491 22.1K
NC R492 0
R493 0
C491 100N
C493 100N
C492 10N
75HZ

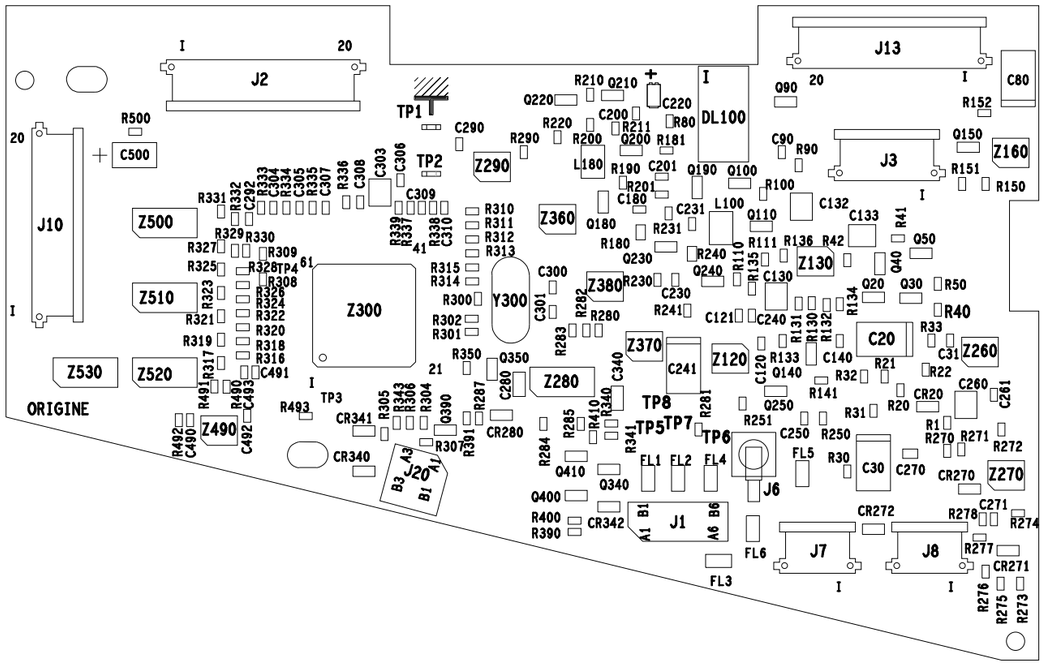
vcc = +5V

VISEUR 14CM

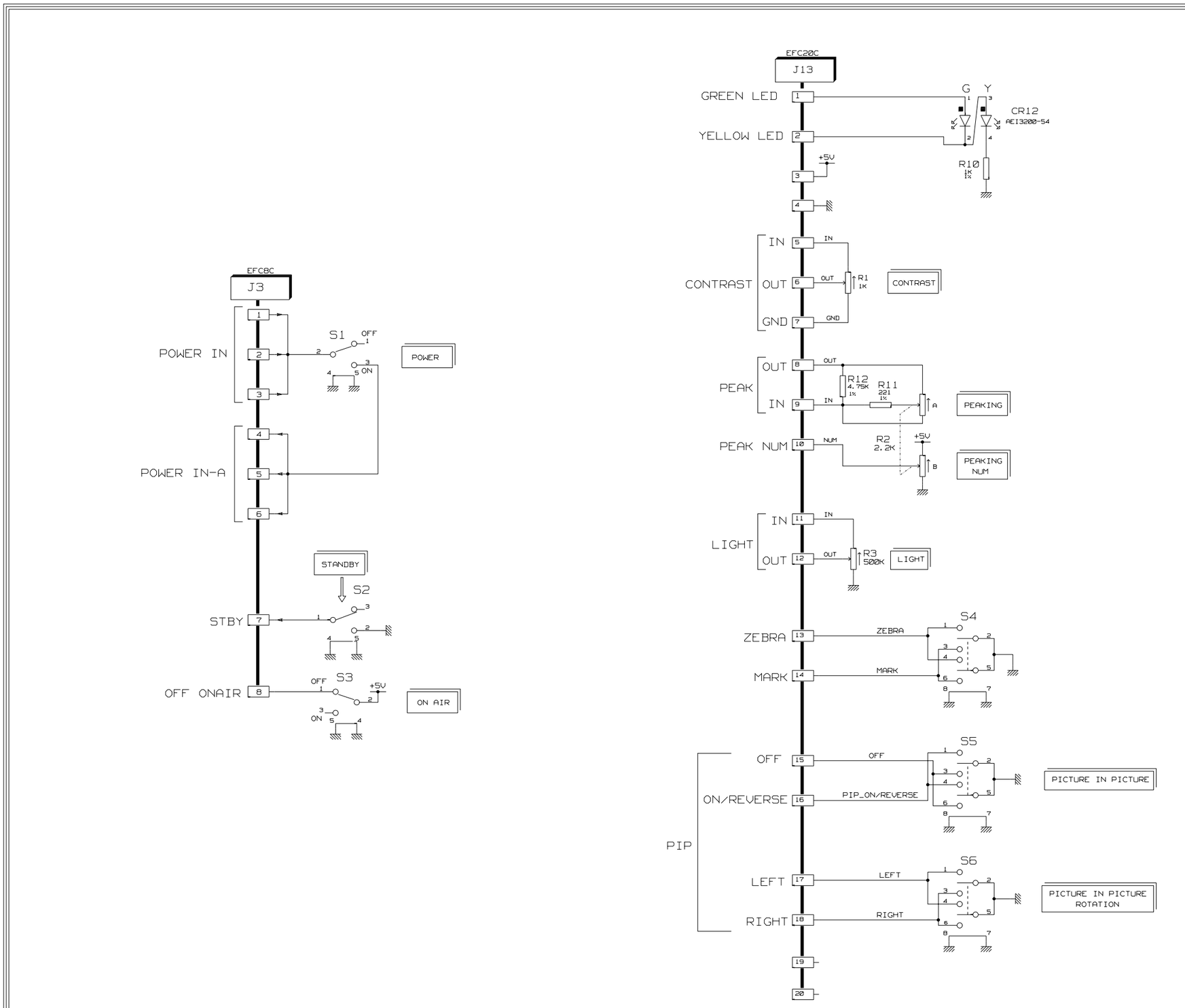
TITLE
VIDEO

THOMSON BROADCAST SYSTEMS

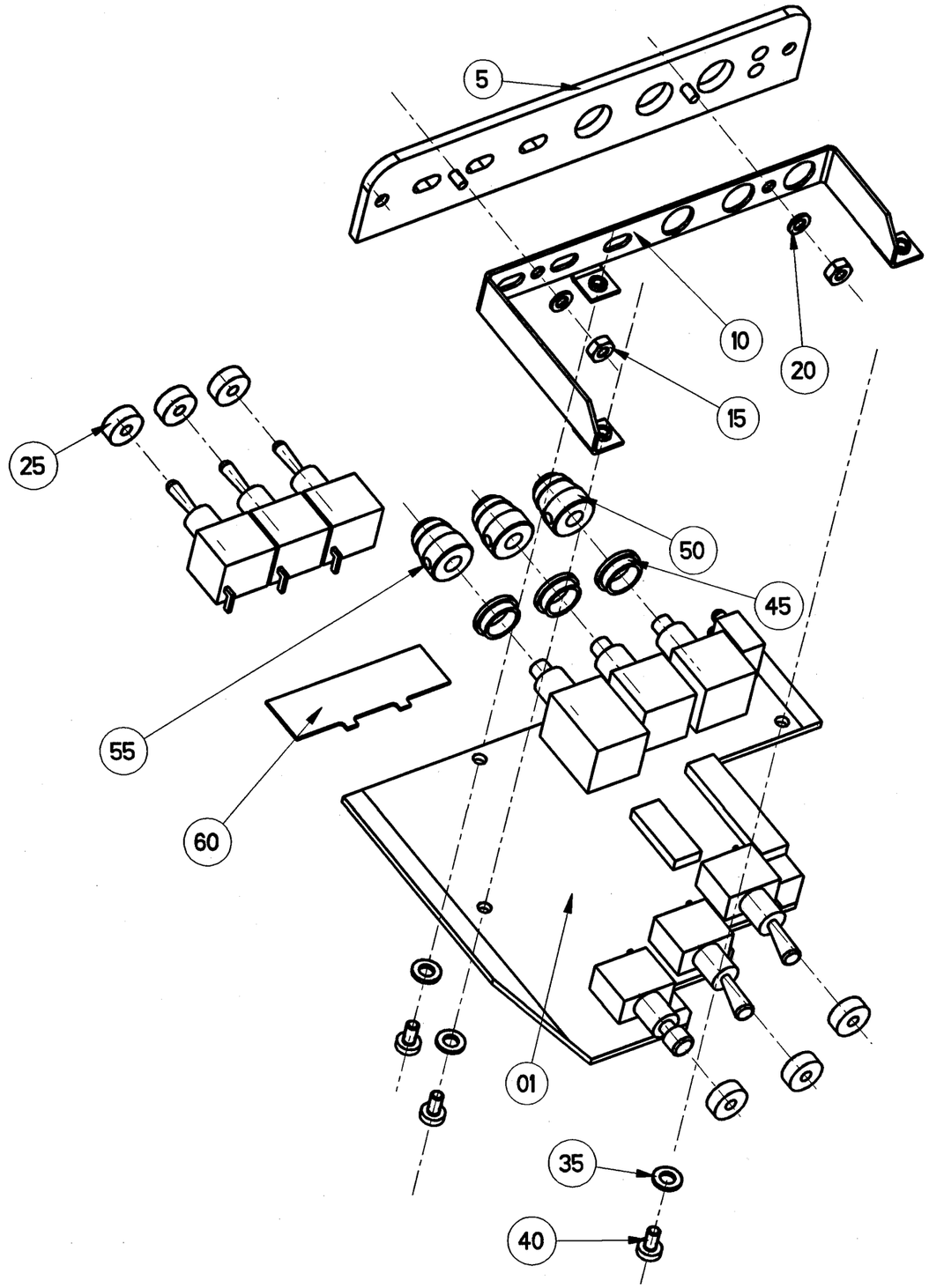
DRAWING No	REV	CODE	SHEET	BLOCK
46150578AC	F	030	3/3	

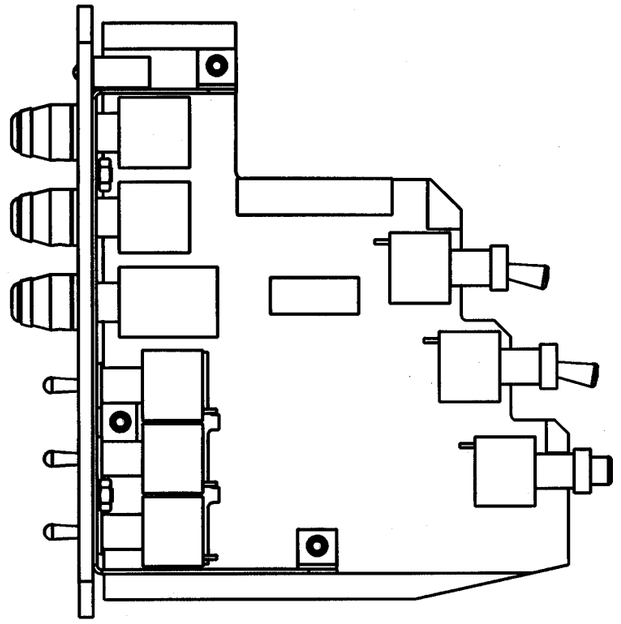


TITLE						14 CM VF
VIDEO						
THOMSON BROADCAST SYSTEMS	DRAWING No	REV	CODE	SIZE	SHEET	
	46150578AC	A	046	3	01/01	

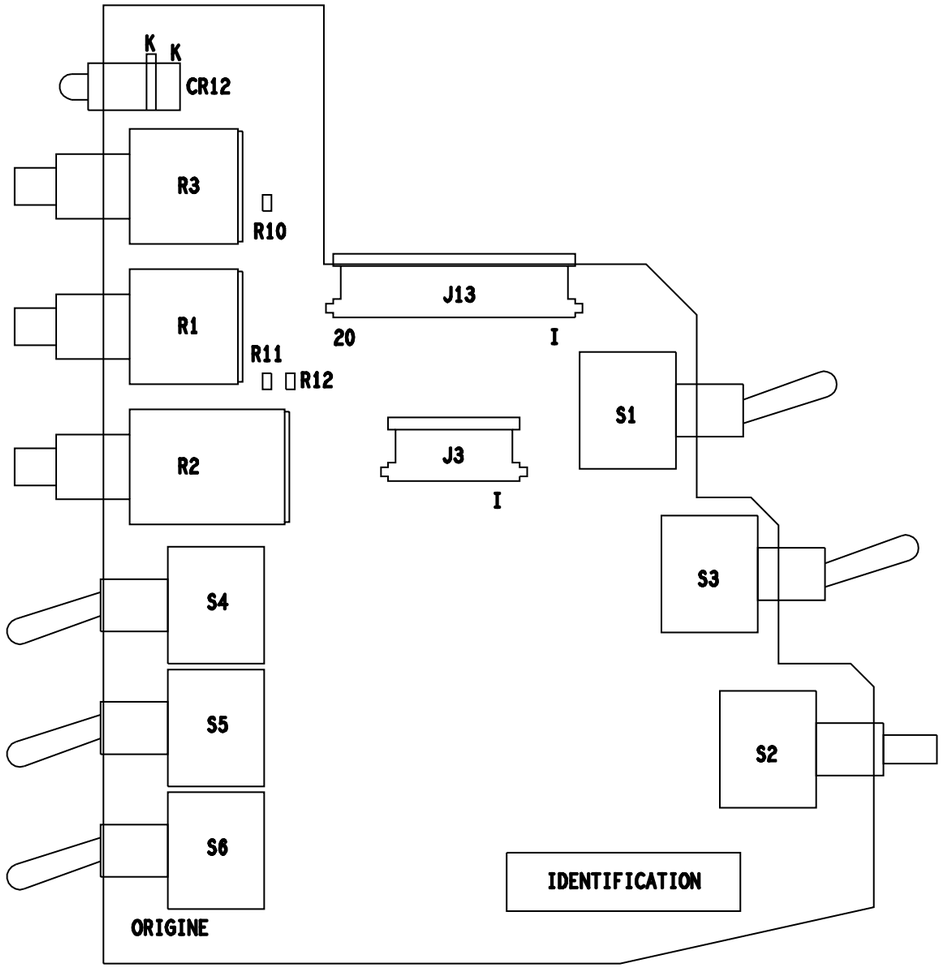


	VISEUR 14 CM					
	TITLE COMMANDES					
THOMSON BROADCAST SYSTEMS	DRAWING No	REV	CODE	SHEET	BLOCK	
	46150579AB	B	030	1/1		

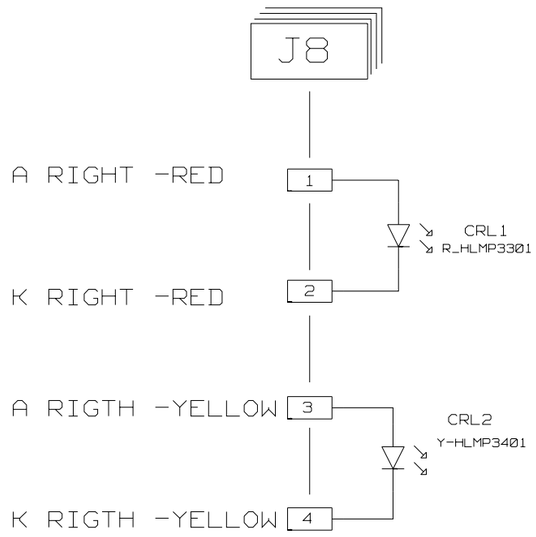




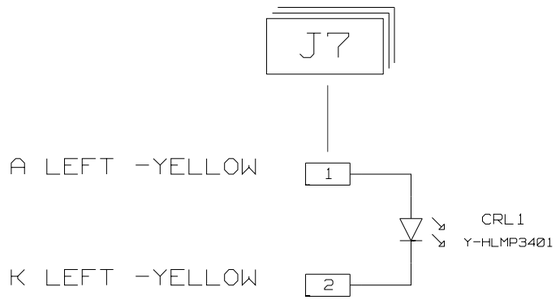
TITLE					14 CM VF
CONTROL					
THOMSON BROADCAST SYSTEMS	DRAWING No	REV	CODE	SIZE	SHEET
	46150579AA	A	040	3	01/01



TITLE					14 CM VF
CONTROL					
THOMSON BROADCAST SYSTEMS	DRAWING No	REV	CODE	SIZE	SHEET
	46150579AB	A	046	4	01/01

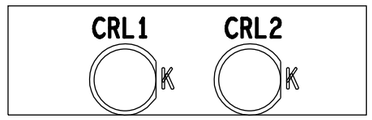


TITLE						VE14CM
LED ONAIR RIGHT						
THOMSON BROADCAST SYSTEMS	DRAWING No	REV	CODE	SIZE	SHEET	
	46150730AA	A	030	3	1 / 1	

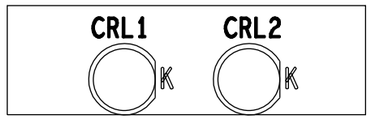


TITLE: LED ONAIR LEFT						VE14CM
THOMSON BROADCAST SYSTEMS	DRAWING No	REV	CODE	SIZE	SHEET	
	46150731AA	A	030	3	1 / 1	

ON AIR LEFT



ON AIR RIGHT



TITLE: **ON AIR RIGHT** **ON AIR LEFT**					14 CM VF
THOMSON BROADCAST SYSTEMS	46150730AB 46150731AC	A A	CODE 046	SIZE 4	SHEET 01/01

ARTICLE: 46153410aa VISR VISEUR 14 NG CABLE

REPERES TOPO						DESIGNATION 1	DESIGNATION 2	COMPOSANT
| 50 |						AFIC afic afficheur lcd	umsh-1021md-w	16831310AB
| CAB 20 |						---- BAGUE CHUOMUSEN		46153150aa
| 90 |						---- LAME DE RESSORT		46153548AA
| 70 |						---- ETRIER		46153549AA
| 160 |						---- POIGNEE		46153589AA
| 60 |						---- CHARNIERE CI BALAYA		46153608AA
| 40 |						---- SUPPORT AFFICHEUR		46153760AA
| 300 |						---- NACELLE VISEUR 14	EQUIPEE	46153833AA
| KIT 10 |						---- LOT ETIQUETTES	VISEUR 14 CM	47268339AA
| KIT 255 |						RUBN PPI1710 LARG.70 ADH	EXCLUSIF AU 29293042	91536712
| KIT 245 |						RUBN X1181 LARG.25MM ADH		91569931
| KIT 221 |						REMP ETIQUETTE	DAT-50-652-10	91623311
| KIT 25 |						REMP ETIQUETTE AUTOCOLL.	A1636015 DOC.25133067	96059220
Accessoires cablages								
| KIT 215 |						COLL BRIDE REPRISE MASSE	NYLON METALLISE D:5.3MM	T9005910
Bobines								
| 110 |						BDEF BOBINE DEFLEXION	POUR TUBE CATH.14CM	T9003209
| CAB 25 |						FRIT FERRIT P/CABLE D5.5	BOIT.PVC NOIR	T9006168
Cables-cordons								
| cab 10 |						CABL CABLE	MICROCOAX MCX TRIAX	46152933ab
| cab 07 |						CAPL CABLE PLAT EQUIPE	FFC100A08-125-L330707SB	t1002588
| cab 08 |	cab 09 |					CAPL CABLE PLAT EQUIPE	FFC100D04-270-L330707SB	t1003070
| cab 13 |						FIL UB-FIL UL1569 AWG24	300V BLANC	t9004734
| cab 14 |						FIL FIL UL1015 AWG18	600V NOIR	t9004985
| CAB 05 |						CORD CORD VISEUR	20 COND.	T9005659
| cab 04 |						CAPL CABLE PLAT EQUIPE	FFC 1.00 A20 150 L3-3-07	t9005736
| cab 01 |	cab 02 |	cab 06 |				CAPL CABLE PLAT EQUIPE	FFC 1.00 A20 65 L-3-3-07	t9005737
| cab 05 |						CAPL CABLE PLAT EQUIPE	FFC 1.00 D20 100 L3-3-07	t9005738
| cab 03 |						CAPL CABLE PLAT EQUIPE	FFC 1.25 D12 60 L-5-5-10	t9005739
Cartes équipées								
| CI 1 |						CARP PANEL VISEUR 14 CM		16831297AB
Circuits intégrés mémoires CMS								
| Z 300 |						MPMS CIRC PLD CMS PQF80	68HC912B32 16 BITS	T9005314
Connecteur								
| cab 12 |						CNSC FICHE F DRT FIL	RECT 1X6 NU PAS2.54	91343770
| cab 12 A |						CNCT 47565-001 (ACHAT PA	00)	t1000298
| CAB 10 |						CNSC FICHE F DRT FIL	RECT 2X6 PAS2MM SERIE LY	t9005682
| CAB 15 |						CNCT CONTACT F SERT	AU/SN J26-30 D:0.7-1.2	t9005716
Divers mécaniques								
| 35 |						---- PROTECTION CI	CI BALAYAGE	46153282AA
| 10 |						FAVT FONDERIE USINEE	PEINTE VIS14	46153496AA
| 140 |						---- VISIERE MOBILE		46153588AA
| KIT 230 |						---- MOUSSE	D'ETANCHEITEE	47268335aa
| KIT 250 |						**** FEUTRINE		47268518AA
| cab 12 B |						CLE CLE DE DETROMPAGE	65166-001>MINILATCH DROI	91508633
| KIT 225 |						JTOR JOINT THORIQUE	3,4X1,9 NITRILE 70	T1003033
| KIT 5 |						JOIN JOINT CHARGE AL/AG	D:1.6 SUPPORT SILICONE	T9005813
Etiquettes								
| Z 300 |						ETIQ ETIQUETTE	DAT-1-637-10	91592387
| |						ETIQ UL-ETIQUETTE POLYES	40X15MM (CF:39962994/E)	T1003312
Tubes								
| 100 |						TCAT TUBE CATHODIQUE	G14-126AW 14CM 47019917	T6000193AA
Visserie-Ecrous-Rondelles-Rivets								
| KIT 61 |	kit 235 |					RDEL RONDELLE	520251-80	91280718
| KIT 101 |						RDEL RONDELLE M3U	A4-50 PASSIVE	99012770
| KIT 76 |						RDEL RONDELLE 520401-80		99051636
| KIT 72 |	KIT 81 |	KIT 201 |	KIT 211 |			RDEL RONDELLE 520301-80		99051638
| KIT 217 |								
| KIT 200 |						VIS VIS INOX.A4 PASS. C	M3X10/10 U	99058372
| kit 240 |						VIS VIS INOX.A4 PASS. C	M2.5X6/6 U	99060919
| KIT 71 |	KIT 80 |	KIT 210 |	KIT 216 |			VIS VIS INOX.A4 PASS. C	M3X6/6 U	99060923
| KIT 100 |						VIS VIS INOX A4 PASS. C	M3X8/8 U	99060924
| KIT 75 |						VIS VIS INOX.A4 PASS. C	M4X8/8 U	99060928
| KIT 50 |	KIT 60 |	KIT 65 |				VIS VIS INOX.A4 PASS. C	2.5X4/4 U	99078673
| KIT 55 |						VIS VIS CHC M4X8 U	10.9 NOIR	99126138
| KIT 160 |						VIS VIS INOX A2.70 NOIR	CHC M3X8 SP39960411	T6000014
| KIT 20 |						VIS VIS INOX F/90+PHIL.	M2.5X6 NOIR SPE47018469	T6000096
| KIT 70 |						ENTT ENTRETOISE F/F	L12 TAR:M3 INOX	T6000512
| KIT 40 |						VIS VIS AUTO.T ACIER-Z	PLASTIQUE TCB+Z M2.5X6	T9004817

ARTICLE: 46153603aa KIT. CABLE

REPERES TOPO	DESIGNATION 1	DESIGNATION 2	COMPOSANT
CAB 20	---- BAGUE CHUOMUSEN		46153150aa
Bobines			
CAB 25	FRIT FERRIT P/CABLE D5.5	BOIT.PVC NOIR	T9006168
Cables-cordons			
cab 10	CABL CABLE	MICROCOAX MCX TRIAX	46152933ab
cab 07	CAPL CABLE PLAT EQUIPE	FFC100A08-125-L330707SB	t1002588
cab 08 / cab 09	CAPL CABLE PLAT EQUIPE	FFC100D04-270-L330707SB	t1003070
cab 13	FIL UB-FIL UL1569 AWG24	300V BLANC	t9004734
cab 14	FIL FIL UL1015 AWG18	600V NOIR	t9004985
CAB 05	CORD CORD VISEUR	20 COND.	T9005659
cab 04	CAPL CABLE PLAT EQUIPE	FFC 1.00 A20 150 L3-3-07	t9005736
cab 01 / cab 02 / cab 06	CAPL CABLE PLAT EQUIPE	FFC 1.00 A20 65 L-3-3-07	t9005737
cab 05	CAPL CABLE PLAT EQUIPE	FFC 1.00 D20 100 L3-3-07	t9005738
cab 03	CAPL CABLE PLAT EQUIPE	FFC 1.25 D12 60 L-5-5-10	t9005739
Connecteur			
cab 12	CNSC FICHE F DRT FIL	RECT 1X6 NU PAS2.54	91343770
cab 12 A	CNCT 47565-001 (ACHAT PA	00)	t1000298
CAB 10	CNSC FICHE F DRT FIL	RECT 2X6 PAS2MM SERIE LY	t9005682
CAB 15	CNCT CONTACT F SERT	AU/SN J26-30 D:0.7-1.2	t9005716
Divers mécaniques			
cab 12 B	CLE CLE DE DETROMPAGE	65166-001>MINILATCH DROI	91508633

ARTICLE: 46153601aa KIT. MECA NEW VIS.14

REPERES TOPO				DESIGNATION 1	DESIGNATION 2	COMPOSANT
KIT 10				---- LOT ETIQUETTES	VISEUR 14 CM	47268339AA
KIT 255				RUBN PPI1710 LARG.70 ADH	EXCLUSIF AU 29293042	91536712
KIT 245				RUBN X1181 LARG.25MM ADH		91569931
KIT 221				REMP ETIQUETTE	DAT-50-652-10	91623311
KIT 25				REMP ETIQUETTE AUTOCOLL.	A1636015 DOC.25133067	96059220
Accessoires cablages						
KIT 215				COLL BRIDE REPRISE MASSE	NYLON METALLISE D:5.3MM	T9005910
Divers mécaniques						
KIT 230				---- MOUSSE	D'ETANCHEITEE	47268335aa
KIT 250				**** FEUTRINE		47268518AA
KIT 225				JTOR JOINT THORIQUE	3,4X1,9 NITRILE 70	T1003033
KIT 5				JOIN JOINT CHARGE AL/AG	D:1.6 SUPPORT SILICONE	T9005813
Etiquettes						
				ETIQ UL-ETIQUETTE POLYES	40X15MM (CF:39962994/E)	T1003312
Visserie-Ecrous-Rondelles-Rivets						
KIT 61	kit 235			RDEL RONDELLE	520251-80	91280718
KIT 101				RDEL RONDELLE M3U	A4-50 PASSIVE	99012770
KIT 76				RDEL RONDELLE 520401-80		99051636
KIT 72	KIT 81	KIT 201	KIT 211	RDEL RONDELLE 520301-80		99051638
KIT 217						
KIT 200				VIS VIS INOX.A4 PASS. C	M3X10/10 U	99058372
kit 240				VIS VIS INOX.A4 PASS. C	M2.5X6/6 U	99060919
KIT 71	KIT 80	KIT 210	KIT 216	VIS VIS INOX.A4 PASS. C	M3X6/6 U	99060923
KIT 100				VIS VIS INOX A4 PASS. C	M3X8/8 U	99060924
KIT 75				VIS VIS INOX.A4 PASS. C	M4X8/8 U	99060928
KIT 50	KIT 60	KIT 65		VIS VIS INOX.A4 PASS. C	2.5X4/4 U	99078673
KIT 55				VIS VIS CHC M4X8 U	10.9 NOIR	99126138
KIT 160				VIS VIS INOX A2.70 NOIR	CHC M3X8 SP39960411	T6000014
KIT 20				VIS VIS INOX F/90+PHIL.	M2.5X6 NOIR SPE47018469	T6000096
KIT 70				ENTT ENTRETOISE F/F	L12 TAR:M3 INOX	T6000512
KIT 40				VIS VIS AUTO.T ACIER-Z	PLASTIQUE TCB+Z M2.5X6	T9004817

ARTICLE: 46153833aa ---- NACELLE VISEUR 14 EQUIPEE

REPERES TOPO			DESIGNATION 1	DESIGNATION 2	COMPOSANT
31			---- RONDELLE DE FRICTIO		46153412AA
30			---- QUEUE D'ARONDE		46153469AA
10			---- BERCEAU		46153592AA
40			---- BRAS		46153593AA
30			---- BOUTON DE COMMANDE	FRICTION	46153594AA
50			---- AXE PIVOT DROIT		46153596AA
70			---- AXE PIVOT GAUCHE		46153597AA
10			---- RONDELLE DE FRICTIO		46153598AA
40			---- PASTILLE DE FRICTIO		46153599AA
90			---- RONDELLE D'ARRET		46153600AA
20			---- COUVERCLE		46153701AA
110			---- MANETTE DE BLOCAGE		46153808AA
33			---- CHAPEAU		46153813AA
Divers mécaniques					
60			BTON BOUTON DROIT		46153595AA
20			---- LOQUET DE SECURITE		46153609AA
32			JTOR 17X1,5 NITRILE 70 D		T1002286
60			RSOR RESSORT ACIER	C.117.140.0250.A	T9005708
120			PGNE MANETTE INDEXABLE	TIGE M5X20	T9005743
Visserie-Ecrous-Rondelles-Rivets					
51	71		VIS VIS INOX.A4 PASS.	F/90 M3X8/8 U	99012676
50			VIS VIS INOX.A4PAS.F/90	M4X20/20U 60KG D20702002	99012686
21			VIS VIS S/T HC BT PLAT	M2.5X6 U CLASSE10-9 CD8B	99035393
41	100		VIS VIS INOX A2.70 NOIR	CHC M4X16 SP39960411	T6000016
34	61		VIS VIS INOX A2.70 NOIR	F/90HC M4X10 SP39960411	T6000041

ARTICLE: 46153834aa **** SYSTEME DE FRICTION

REPERES TOPO	DESIGNATION 1	DESIGNATION 2	COMPOSANT
30	---- BOUTON DE COMMANDE	FRICTION	46153594AA
10	---- RONDELLE DE FRICTIO		46153598AA
40	---- PASTILLE DE FRICTIO		46153599AA
20	---- COUVERCLE		46153701AA
Divers mécaniques			
60	RSOR RESSORT ACIER	C.117.140.0250.A	T9005708
Visserie-Ecrous-Rondelles-Rivets			
50	VIS VIS INOX.A4PAS.F/90	M4X20/20U 60KG D20702002	99012686

ARTICLE: 46153605aa SUTV SUPPORT VISEUR
EQUIPE

REPERES TOPO	DESIGNATION 1	DESIGNATION 2	COMPOSANT
60	---- RESSORT		29292540
50	---- BOUTON DE BLOCAGE		46153003AB
80	---- CACHE RESSORT		46153008AB
10	SUPP.VIS.QUEUE ARON		46153604AA
20	---- POUSSOIR		46153606AA
30	---- DOIGT		46153710AA
Divers mécaniques			
90	RSOR RESSORT ACIER	C.090.100.0400.A	T9005709
Visserie-Ecrous-Rondelles-Rivets			
70	CICL CIRCLIPS	864-050-09	91344688
40	VIS VIS INOX F/90+PHIL.	M3X12 NOIR 47018469-022	T6000206

ARTICLE: 46150773aa CORD CABLE VISEUR 14 CM

REPERES TOPO		DESIGNATION 1	DESIGNATION 2	COMPOSANT
CAB 20		---- BAGUE CHUOMUSEN		46153150aa
Bobines				
CAB 25		FRIT FERRIT P/CABLE D5.5	BOIT.PVC NOIR	T9006168
Cables-cordons				
CAB 05		CORD CORD VISEUR	20 COND.	T9005659
Connecteur				
CAB 10		CNSC FICHE F DRT FIL	RECT 2X6 PAS2MM SERIE LY	t9005682
CAB 15		CNCT CONTACT F SERT	AU/SN J26-30 D:0.7-1.2	t9005716

ARTICLE: 46150576ac CART SWEEP BOARD

REPERES TOPO				DESIGNATION 1	DESIGNATION 2	COMPOSANT
T 1				REMP TRANSFO SUR SPECIF.	SELON SPE:16733896	16733896
L 151 A				BLND BLINDAGE SELF		46153417AA
55				---- RADIATEUR		46153805AA
60				REMP GAINE THERMO 3/16	NOIR D:4,8	99002491
Q 110	Q 150			REMP BUZ31 TO220		99132442
ID				REMP 25,4X6,35MM	POLYIMIDE H TEMP.	T9004679
Accessoires cablages						
65				COSS 519C		91221430
J 5				BARR BARETTE SECABLE	1X36 MD	91395276
TP 1	TP 4	TP 9		PLMS PLOT CMS	RCT00000C	T1002596
CR 150 B	Q 20 B	Q 60 B	Q 150 B	CISO CANON ISOLANT/TO220	TETE D6 H3.5 CANO3.5/3.1	T9006378
Cables-cordons						
70				TRES TRESSE CREUSE CUIVR	ETAME G3	91319705
Circuit imprimé nu						
01				CIU SWEEP BOARD		29534722CA
Circuits intégrés						
Z 80				CINT TDA2595		91665613
Z 260				CINT CIRC ANA FIL DIP16	TDA1175P DEFLEC VERT	T9005026
Circuits intégrés CMS						
Z 400				CIMS CIRC CMS SO8P	GS4982-CKA 0 +70	T1005547
Z 280				CIMS CIRC NUM CMS S014P	74ACT02	T9000057
Z 40	Z 120			CIMS CIRC ANA CMS SO8P	TL082ID AMPLI OP	T9000867
Z 50				CIMS CIRC ANA CMS SO8P	LT1009S8	T9001265
Condensateurs						
C 20	C 41			CAPA COND	220UF UPL1E221MPH6	T1005863
C 151	C 260	C 265		CAPA COND FIXE CAR1015	470 UF 20% 16V	T9001342
C 112				CAPA COND RAD ALU 100MF	20% 100V	T9006428
Condensateurs CMS						
C 85				C.CH COND CMS CTC3A TANT	0.47 MF 20% 25V	96103224
C 123				C.CH COND CMS CTC3B TANT	2.2 UF 20% 20V	96103241
C 141				C.CH COND CMS CTC3A TANT	1 UF 20% 16V	99142711
C 43	C 131			C.CH COND CMS CTC3D TANT	47 UF 20% 16V	T1006086
C 82				C.CH COND CMS 0603 NPO	10 PF 5% 63V	T9000869
C 121				C.CH COND CMS 0603 NPO	100 PF 5% 63V	T9000870
C 267				C.CH COND CMS 0603 NPO	47 PF 5% 63V	T9000964
C 234				C.CH COND CMS 0603 NPO	180 PF 5% 63V	T9000970
C 83	C 252			C.CH COND CMS 0603 X7R	10 NF 10% 63V	T9001016
C 79	C 84	C 86	C 89	C.CH COND CMS 1210 NPO	10 NF 10% 63V	T9001368
C 330	C 332					
C 42	C 87	C 132		C.CH COND CMS CTC3B TANT	4,7MF 20% 16V	T9001370
C 40	C 120	C 130	C 150	C.CH COND CMS CTC3D TANT	22MF 20% 20V	T9003002
C 231	C 264					
C 268				C.CH COND CMS 0603 X7R	470 PF 10% 63V	T9003491
C 88	C 140	C 261		C.CH COND CMS TANTALE	100 UF 10% 16V	T9004239
C 110	C 111	C 113	C 250	C.CH COND CMS 1812 X7R	0.1UF10%630V	T9005046
C 152				C.CH COND CMS 1812 X7R	47NF10% 630V	T9005047
C 80	C 81	C 90	C 91	C.CH COND CMS 0603 Z5U	100 NF 20% 16V	T9005086
C 92	C 93	C 100	C 230			
C 251	C 266	C 400	C 401			
C 402						
C 122				C.CH COND CMS 0603 Y5V	47NF 10% 50V	T9005294
C 262	C 263	C 331		C.CH COND CMS 1812	100 NF 10% 100V	T9005790
Connecteur						
J 4				CNEC E#C2T12+#P2-FFC#-M1	-### P/CABLE NAPPE	T9004898
J 2				CNMS 52103-2017 EFC-20S		T9004990
Diodes						
CR 150				DIOD DIOD	BYW29/200	91512561
Diodes CMS						
CR 40	CR 140	CR 141	CR 240	DIMS DIOD CMS SOT23	BAV99	99116852
CR 241	CR 250					
CR 111	CR 112	CR 113	CR 114	DIMS DIOD CMS SOD87	BYD37M 1000V 1,5A	T1002529
CR 260						
CRZ 150	CRZ 151			DIMS DIOD CMS SOD23	BZX84C 75V 5% 300MW	T9004626
inductances						
L 151				SELF SELF SUR SPECIF.	SELON SPE: 43110541	T1002990
L 20	L 130	L 150		SELF SELF TSL1110	100 UH 10%	T9003230
Résistances CMS-Potentiomètres CMS						
R 1	R 2	R 3	R 4	RESC RESIST CMS 0805	4,7 MOHM 5% 1/8W K200	161475
R 5	R 6	R 233	R 251			
R 252	R 254					
R 89	R 92			POMS POTENT CMS	50 K 20%	91610763
R 51				POMS POTENT CMS	10 K 20%	91614807
R 8	R 300	R 310	R 311	POMS POTENT CMS	500 K 20%	91616775
R 263	R 268			POMS POTENT CMS	100 K 20%	91623210
R 133	R 150	R 152	R 156	RESC RESIST CMS 0603	0 OHM 1/16W K250	T9000877
R 121				POMS POTENT CMS	1 K 20%	T9001673
R 127	R 128			RESC RESIST CMS 0603	100 KOHMS 0.5% 1/16W K50	T9001826
R 270				RESC RESIST CMS 0805	3.32 OHMS 1% 1/10W K100	T9004329
R 81	R 100	R 101	R 103	RESC RESIST CMS 0603	1 KO 1% 1/10W K100	T9005114
R 104	R 230	R 241				
R 93	R 94	R 102	R 180	RESC RESIST CMS 0603	10 KO 1% 1/10W K100	T9005115
R 182	R 235					
R 41	R 47	R 124	R 126	RESC RESIST CMS 0603	100 KO 1% 1/10W K100	T9005116
R 141	R 161	R 410	R 430			
R 110	R 151			RESC RESIST CMS 0603	10 O 1% 1/10W K100	T9005117
R 90				RESC RESIST CMS 0603	47,5 O 1% 1/10W K100	T9005124
R 20	R 30	R 45	R 60	RESC RESIST CMS 0603	2,21KO 1% 1/10W K100	T9005137
R 70	R 123	R 240				
R 231				RESC RESIST CMS 0603	3,32KO 1% 1/10W K100	T9005141
R 50				RESC RESIST CMS 0603	3,92KO 1% 1/10W K100	T9005143
R 122				RESC RESIST CMS 0603	4,32KO 1% 1/10W K100	T9005144
R 44	R 83	R 220	R 232	RESC RESIST CMS 0603	4,75KO 1% 1/10W K100	T9005145
R 260						
R 48				RESC RESIST CMS 0603	5,11KO 1% 1/10W K100	T9005146
R 120				RESC RESIST CMS 0603	5,62KO 1% 1/10W K100	T9005147
R 42				RESC RESIST CMS 0603	221 O 1% 1/10W K100	T9005157
R 253				RESC RESIST CMS 0603	475 O 1% 1/10W K100	T9005165
R 40				RESC RESIST CMS 0603	562 O 1% 1/10W K100	T9005167
R 86	R 132			RESC RESIST CMS 0603	681 O 1% 1/10W K100	T9005169
R 84	R 131			RESC RESIST CMS 0603	825 O 1% 1/10W K100	T9005171
R 88				RESC RESIST CMS 0603	11 KO 1% 1/10W K100	T9005173
R 43	R 82	R 264	R 265	RESC RESIST CMS 0603	15 KO 1% 1/10W K100	T9005176
R 46				RESC RESIST CMS 0603	18,2KO 1% 1/10W K100	T9005178
R 160	R 181	R 271	R 290	RESC RESIST CMS 0603	22,1KO 1% 1/10W K100	T9005180
R 91				RESC RESIST CMS 0603	43,2KO 1% 1/10W K100	T9005187
R 125	R 140	R 273		RESC RESIST CMS 0603	47,5KO 1% 1/10W K100	T9005188
R 80	R 267			RESC RESIST CMS 0603	56,2KO 1% 1/10W K100	T9005190
R 301				RESC RESIST CMS 0603	68,1KO 1% 1/10W K100	T9005192

ARTICLE: 46150576ac CART SWEEP BOARD

REPERES TOPO									DESIGNATION 1	DESIGNATION 2	COMPOSANT
R	85								RESC RESIST CMS 0603	82,5KO 1% 1/10W K100	T9005194
R	87								RESC RESIST CMS 0603	121 KO 1% 1/10W K100	T9005197
R	266								RESC RESIST CMS 0603	150 KO 1% 1/10W K100	T9005198
R	7								RESC RESIST CMS 0603	182 KO 1% 1/10W K100	T9005199
R	262								RESC RESIST CMS 0603	200 KO 1% 1/10W K100	T9005200
R	255	R	269	R	400				RESC RESIST CMS 0603	221 KO 1% 1/10W K100	T9005201
R	312	R	321						RESC RESIST CMS 0603	357 KO 1% 1/10W K100	T9005206
R	261								RESC RESIST CMS 0603	825 KO 1% 1/10W K100	T9005211
R	250								RESC RESIST CMS 0603	1 MO 1% 1/10W K100	T9005212
R	157								RESC RESIST CMS MELF 1W	0,33 OHM 5%	T9005713
R	172	R	173	R	272				RESC RESIST CMS MELF1W	2,21 OHMS 1%	T9005714
R	170	R	171	R	190	R	191		RESC RESIST CMS MELF 1W	3,3 OHMS 1%	T9005715
R	192	R	193	R	194						
R	320								POMS POTENT CMS	1MO 20%	T9006408
Transformateurs											
T	3								TRFO TRANSFO SUR SPECIF.	SELON SPE:16734078AA	16734078AA
T	2								TRFO TRANSFO	MSR3547	91566237
Transistors											
Q	130								TRAN TRANS TO126	BD436 PNP	91357110
Q	20	Q	60						TRAN TRANS TO220AB	MOSFET-P 30A 60V	T9004907
Transistors CMS											
Q	140								TRMS TRANS CMS SOT23	SST177 FET [S77]	91590607
Q	290	Q	300	Q	310	Q	320		TRMS TRANS CMS SOT23	2N7002 [702] [72AB]	91685632
Q	330	Q	410	Q	430						
Q	230	Q	250						TRMS TRANS CMS SOT23	SO4392 NFET	99110320
Q	30	Q	70	Q	100	Q	160		TRMS TRANS CMS SOT23	SO3904 NPN	99110321
Q	180	Q	240	Q	420						
Q	220								TRMS TRANS CMS SOT23	SO3906 PNP	99110322
Q	170	Q	190						TRMS TRANS CMS TO252	MOSFET-N 25A 60V 50	T9004909
Visserie-Ecrous-Rondelles-Rivets											
CR	150 C	Q	20 C	Q	60 C	Q	130 B		RDEL RONDELLE 520301-80		99051638
Q	150 C										
CR	150 D	Q	20 D	Q	60 D	Q	130 A		ECRU ECROU H M3 U INOX	A4 PASSIVE	99059912
Q	150 D										
CR	150 E	Q	20 E	Q	60 E	Q	130 E		VIS VIS INOX.A4 PASS. C	M3X12/12 U	99060925
Q	150 E										
	75								VIS VIS INOX.A4 PASS. C	2.5X4/4 U	99078673
CR	150 A	Q	20 A	Q	60 A	Q	130 D		RDEL RONDELLE 60 11	8302 1674	99112427
Q	150 A										

ARTICLE: 46150577ab CART SOCKET

REPERES TOPO				DESIGNATION 1	DESIGNATION 2	COMPOSANT
EC 1	EC 2	EC 3	EC 4	ECLA AG20PC-152F-L3N		91520842
				RUBN PPI1710 LARG.70 ADH	EXCLUSIF AU 29293042	91536712
ID				REMP 25,4X6,35MM	POLYIMIDE H TEMP.	T9004679
Circuit imprimé nu						
01				CIU SOCKET		29534721BA
Condensateurs CMS						
C 1	C 2			C.CH COND CMS 1210 X7R	10 NF 10% 500V	264001
C 50	C 60			C.CH COND CMS CTC3D TANT	10 UF 20% 35V	291001
C 30				C.CH COND CMS CTC3D TANT	47 UF 20% 16V	T1006086
C 40				C.CH COND CMS 0603 NPO	180 PF 5% 63V	T9000970
Connecteur						
J 6				CNCX EMBASE COAXIALE DRO	MCX	T9003326
J 4				CNEC E#C2T12+#P2-FFC#-M1	-### P/CABLE NAPPE	T9004898
Diodes CMS						
CR 60				DIMS DIOD CMS SOT23	BAV99	99116852
Résistances CMS-Potentiomètres CMS						
R 40				RESC RESIST CMS 2010	2,2KO 5% 1/2W K100	T9005037
R 60				RESC RESIST CMS 0603	1 KO 1% 1/10W K100	T9005114
R 51				RESC RESIST CMS 0603	3,01KO 1% 1/10W K100	T9005140
R 20				RESC RESIST CMS 0603	3,32KO 1% 1/10W K100	T9005141
R 50				RESC RESIST CMS 0603	7,5 KO 1% 1/10W K100	T9005150
R 41				RESC RESIST CMS 0603	100 O 1% 1/10W K100	T9005153
R 61				RESC RESIST CMS 0603	121 O 1% 1/10W K100	T9005154
R 30				RESC RESIST CMS 0603	301 O 1% 1/10W K100	T9005160
R 1	R 2			RESC RESIST CMS 0603	47,5KO 1% 1/10W K100	T9005188
Résistances-potentiomètres						
R 3				POT. POTENT	2.5 M 20%	T9004550
Support						
J 9				SUP. SOCKET TUBE CATHOD.		91360995
Transistors CMS						
Q 30	Q 50			TRMS TRANS CMS SOT23	SO3904 NPN	99110321
Q 20	Q 60			TRMS TRANS CMS SOT23	SO3906 PNP	99110322
Q 40				TRMS TRANS CMS SOT89	BST39 NPN	T9001683

ARTICLE: 46150578ac CART VIDEO

REPERES TOPO					DESIGNATION 1	DESIGNATION 2	COMPOSANT
ID					REMP 25,4X6,35MM	POLYIMIDE H TEMP.	T9004679
Bobines							
FL 1	FL 2	FL 3	FL 4		FLMS FILTRE CMS	NFM51R 50 MHZ	T9004952
FL 5	FL 6						
Circuit imprimé nu							
01					CIU VIDEO		29534724CA
Circuits intégrés CMS							
Z 270					CIMS CIRC ANA CMS SO8P	LM311 COMPARATEUR	99129838
Z 490					CIMS CIRC CMS SO8P	555 -40+85	99167547
Z 120					CIMS CIRC CMS SO8P	AD847JR 0+70	T1000607
Z 500	Z 510	Z 520	Z 530		CIMS CIRC NUM CMS SO14	74ACT86	T9000094
Z 130					CIMS CIRC ANA CMS SO8P	TL082ID AMPLI OP	T9000867
Z 160					CIMS CIRC ANA CMS SO8P	MAX4420 TSC4420	T9001527
Z 280					CIMS CIRC NUM CMS SO14P	74ACT125 BUFFERX4	T9004947
Z 260					CIMS CIRC ANA CMS SO8	LT1763 REGUL.5V 500MA	T9005711
Circuits intégrés mémoires CMS							
Z 290					CIMS CIRC PROC CMS SO8P	MAX700CSA DETEC TENSION	T1002869
Z 300					MPMS CIRC PLD CMS PQF80	68HC912B32 16 BITS	T9005314
Condensateurs CMS							
C 20	C 170				C.CH COND CMS CTC3D TANT	10 UF 20% 35V	291001
C 181	C 220	C 340			C.CH COND CMS CTC3A TANT	1 UF 20% 16V	99142711
C 262					C.CH COND CMS 2012	1UF 20%	T1005761
C 30	C 50	C 60	C 81		C.CH COND CMS CTC3D TANT	47 UF 20% 16V	T1006086
C 31					C.CH COND CMS 0603 NPO	10 PF 5% 63V	T9000869
C 300	C 301				C.CH COND CMS 0603 NPO	22 PF 5% 63V	T9000961
C 70					C.CH COND CMS 0603 NPO	47 PF 5% 63V	T9000964
C 230					C.CH COND CMS 0603 NPO	68 PF 5% 63V	T9000966
C 180	C 200	C 231	C 250		C.CH COND CMS 0603 X7R	10 NF 10% 63V	T9001016
C 261	C 271	C 492					
C 130	C 132	C 133	C 260		C.CH COND CMS CTC3B TANT	4,7MF 20% 16V	T9001370
C 303							
C 10					C.CH COND CMS CTC3D TANT	22MF 20% 20V	T9003002
C 500					C.CH COND CMS CTC3C TANT	10 UF 20% 16V	T9003419
C 80	C 241				C.CH COND CMS TANTALE	100 UF 10% 16V	T9004239
C 270					C.CH COND CMS 0805 X7R	100 NF 10% 63V	T9004666
C 120	C 121	C 140	C 240		C.CH COND CMS 0603 Z5U	100 NF 20% 16V	T9005086
C 290	C 292	C 304	C 305				
C 306	C 307	C 308	C 309				
C 310	C 490	C 491	C 493				
C 201					C.CH COND CMS 0603 X7R	560PF 10% 100V	T9005295
C 90					C.CH COND CMS 0805 X7R	1 UF +-10% 16V -55+125	T9005785
Connecteur							
J 7	J 8				CNMS EMBASE F COUD CMS	FFC 1X4 NAP	T1002087
J 3					CNMS EMBASE F COUD CMS	FFC 8 NAP	T1002088
J 6					CNCX EMBASE COAXIALE DRO	MCX	T9003326
J 2	J 10	J 13			CNMS 52103-2017 EFC-20S		T9004990
J 1					CNEC EMBASE M DRT	RECT 2X6 PAS 2MM CI1.6	T9005693
J 20					CNEC EMBASE M COUD	RECT 2X3 PAS2MM CI1.6	T9005699
Diodes CMS							
CR 340					DIMS DIOD CMS SOT23	BZX84C 8V2 [Z7]	99111198
CR 20	CR 60	CR 270	CR 271		DIMS DIOD CMS SOT23	BAV99	99116852
CR 272							
CR 290	CR 342				DIMS DIOD CMS SOT23	BAR18 [D76]	99123948
Z 360	Z 370	Z 380			DIMS CIRC ANA CMS SO8P	RESEAU TRANSIL X4 5V	T9005365
Filtres							
DL 100					LRMS LAR CMS S8-GW	330 OHMS 80NS DPE	T9005906
INDUCTANCES CMS							
L 100	L 180				SFMS SELF CMS 1812	18 UH 10%	T9001011
Oscilateurs							
Y 300					QRTZ QUARTZ HC49US	16MHZ 50PPM 16PF	T9001471
Résistances CMS-Potentiomètres CMS							
R 180	R 240				RESC RESIST CMS 0805	4,7 MOHM 5% 1/8W K200	161475
R 343	R 493				RESC RESIST CMS 0603	0 OHM 1/16W K250	T9000877
R 270					RESC RESIST CMS 0603	2.21 KOHM 0.5% 1/16W K50	T9001798
R 33	R 40	R 42	R 110		RESC RESIST CMS 0603	1 KO 1% 1/10W K100	T9005114
R 111	R 150	R 152	R 200				
R 201	R 241	R 290	R 305				
R 308	R 309	R 339					
R 331	R 341	R 350	R 390		RESC RESIST CMS 0603	10 KO 1% 1/10W K100	T9005115
R 400							
R 20	R 31	R 211	R 271				
R 272	R 284	R 301	R 302				
R 306	R 317	R 319	R 321				
R 323	R 325	R 327	R 329				
R 134	R 210	R 220	R 280		RESC RESIST CMS 0603	100 KO 1% 1/10W K100	T9005116
R 281	R 282	R 283	R 333				
R 334	R 335	R 336	R 337				
R 338	R 410	R 450					
R 30	R 64				RESC RESIST CMS 0603	75 O 1% 1/10W K100	T9005128
R 277	R 278				RESC RESIST CMS 0603	1,21KO 1% 1/10W K100	T9005131
R 171					RESC RESIST CMS 0603	1,5 KO 1% 1/10W K100	T9005133
R 1	R 190	R 231	R 340		RESC RESIST CMS 0603	2,21KO 1% 1/10W K100	T9005137
R 62					RESC RESIST CMS 0603	2,67KO 1% 1/10W K100	T9005139
R 141					RESC RESIST CMS 0603	3,01KO 1% 1/10W K100	T9005140
R 90	R 100	R 131	R 151		RESC RESIST CMS 0603	3,32KO 1% 1/10W K100	T9005141
R 22					RESC RESIST CMS 0603	3,92KO 1% 1/10W K100	T9005143
R 60	R 391				RESC RESIST CMS 0603	4,75KO 1% 1/10W K100	T9005145
R 80					RESC RESIST CMS 0603	5,11KO 1% 1/10W K100	T9005146
R 32	R 285	R 287	R 304		RESC RESIST CMS 0603	100 O 1% 1/10W K100	T9005153
R 311	R 332						
R 181					RESC RESIST CMS 0603	221 O 1% 1/10W K100	T9005157
R 81	R 82				RESC RESIST CMS 0603	332 O 1% 1/10W K100	T9005161
R 61	R 251				RESC RESIST CMS 0603	475 O 1% 1/10W K100	T9005165
R 50	R 63				RESC RESIST CMS 0603	562 O 1% 1/10W K100	T9005167
R 41					RESC RESIST CMS 0603	909 O 1% 1/10W K100	T9005172
R 136					RESC RESIST CMS 0603	18,2KO 1% 1/10W K100	T9005178
R 130	R 170	R 230	R 274		RESC RESIST CMS 0603	22,1KO 1% 1/10W K100	T9005180
R 491							
R 276					RESC RESIST CMS 0603	33,2KO 1% 1/10W K100	T9005184
R 135					RESC RESIST CMS 0603	39,2KO 1% 1/10W K100	T9005186
R 451					RESC RESIST CMS 0603	47,5KO 1% 1/10W K100	T9005188
R 490					RESC RESIST CMS 0603	51,1KO 1% 1/10W K100	T9005189
R 21	R 132				RESC RESIST CMS 0603	56,2KO 1% 1/10W K100	T9005190
R 273	R 275				RESC RESIST CMS 0603	68,1KO 1% 1/10W K100	T9005192
R 133	R 250	R 300			RESC RESIST CMS 0603	1 MO 1% 1/10W K100	T9005212
Transistors CMS							
Q 350	Q 390	Q 410	Q 450		TRMS TRANS CMS SOT23	2N7002 [702] [72AB]	91685632
Q 180	Q 240				TRMS TRANS CMS SOT23	SO4392 NFET	99110320

ARTICLE: 46150578ac CART VIDEO

REPERES TOPO				DESIGNATION 1	DESIGNATION 2	COMPOSANT
Q 30	Q 50	Q 60	Q 80	TRMS TRANS CMS SOT23	SO3904 NPN	99110321
Q 90	Q 110	Q 170	Q 200			
Q 210	Q 220					
Q 20	Q 40	Q 100	Q 230	TRMS TRANS CMS SOT23	SO3906 PNP	99110322
Q 340	Q 400					
Q 70	Q 140	Q 150	Q 190	TRMS TRANS CMS SOT143	BSD22 FET [M32]	T1000318
Q 250						

ARTICLE: 46150579ab CART COMMANDES

REPERES TOPO				DESIGNATION 1	DESIGNATION 2	COMPOSANT
	5			---- FACE AVANT CADREUR		46153591AA
	10			---- SUPPORT CI CADREUR		46153677AA
	45			---- CANON		46153686AA
	60			---- CALE COMMUTATEUR		46153690AA
	25			---- JOINT D'ETANCHEITE		46153709AA
ID				REMP 25,4X6,35MM	POLYIMIDE H TEMP.	T9004679
CR	12			LED DIOD LED 3MM	3200-54 JAUNE/VERT	T9005712
Circuit imprimé nu						
	01			CIU COMMANDES		29534723BA
Commutateurs						
S	2 A			CAPU CAPUCHON NOIR	P/N7089-2	91581801
S	2			COMP COMMUT POUS COUD	8121SD9AGE2	T9005349
S	1	S	3	COML COMMUT LEV COUD 1P	2POS CI1,6	T9005351
S	4	S	5 S 6	COML COMMUT LEV COUD 2P	3POS CI1,6	T9005352
Connecteur						
J	3			CNMS EMBASE F COUD CMS	FFC 8 NAP	T1002088
J	13			CNMS 52103-2017 EFC-20S		T9004990
Divers mécaniques						
	50			BTON BOUTON POTENTIOM.		46153629AA
Résistances CMS-Potentiomètres CMS						
R	10			RESC RESIST CMS 0603	1 KO 1% 1/10W K100	T9005114
R	12			RESC RESIST CMS 0603	4,75KO 1% 1/10W K100	T9005145
R	11			RESC RESIST CMS 0603	221 O 1% 1/10W K100	T9005157
Résistances-potentiomètres						
R	2			POT. POTENT DOUBLE PA11	2KO+2,2KO 20%	T9005307
R	3			POT. POTENT P11	500KO 20%	T9005308
R	1			POT. POTENT PA11	1 KO 20%	T9005309
Visserie-Ecrous-Rondelles-Rivets						
	20		35	RDEL RONDELLE	520251-80	91280718
	15			ECRU ECROU H M2,5 U INOX	A4 PASSIVE	99059911
	40			VIS VIS INOX.A4 PASS. C	2.5X4/4 U	99078673
	55			VIS S/T HC BT CUVETTE M	U A4 50 PASSIVE	99087553

ARTICLE: 46150730ab CART ON AIR RIGHT

REPERES TOPO	DESIGNATION 1	DESIGNATION 2	COMPOSANT
CRL 2	LED DIOD LED 5MM	HLMP-3401 JAUNE	91361407
CRL 1	LED DIOD LED 5MM	HLMP-3301 ROUGE	91433130
ID	REMP 25,4X6,35MM	POLYIMIDE H TEMP.	T9004679
Circuit imprimé nu			
01	CIU LED ON AIR		29534726BA
Connecteur			
J 8	CNEC EMB M DRT NAP	RECT 2X2 PAS1 CI2,4	T9005354

ARTICLE: 46150731ac CART LED ONAIR LEFT

REPERES TOPO	DESIGNATION 1	DESIGNATION 2	COMPOSANT
CRL 1	LED DIOD LED 5MM	HLMP-3401 JAUNE	91361407
CRL 2	LED DIOD LED 5MM	HLMP-3301 ROUGE	91433130
ID	REMP 25,4X6,35MM	POLYIMIDE H TEMP.	T9004679
Circuit imprimé nu			
01	CIU LED ONAIR LEFT		29534758AA
Connecteur			
J 7	CNEC EMB M DRT NAP	RECT 2X2 PAS1 CI2,4	T9005354