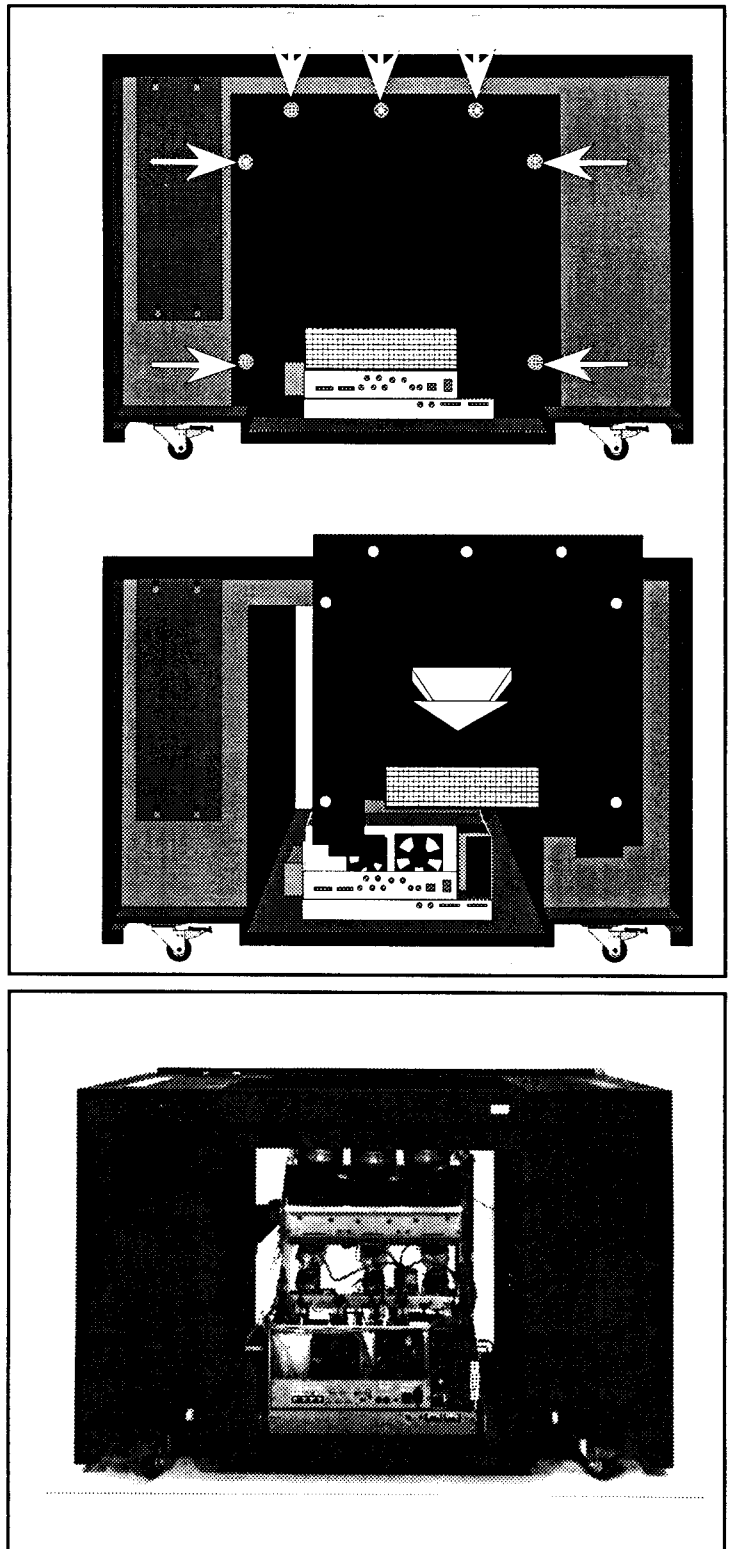


ACCESS TO CHASSIS FOR SERVICING

1. Access to chassis from the rear side

- Turn out the seven screws holding the rear cover to projector cabinet.
- Remove rear cover.



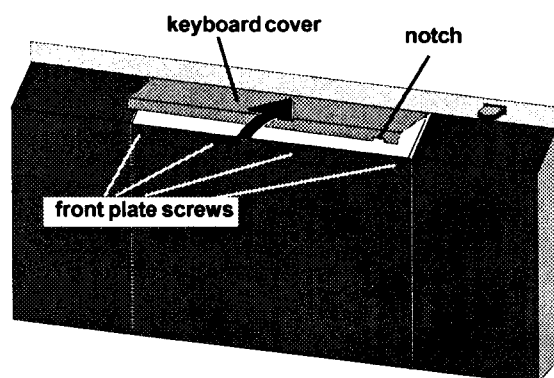
2. Access to chassis from the front side

I. Front cover removal

Raise the keyboard cover by pulling it by the notch and push it toward the cabinet. (The keyboard cover enters the cabinet)

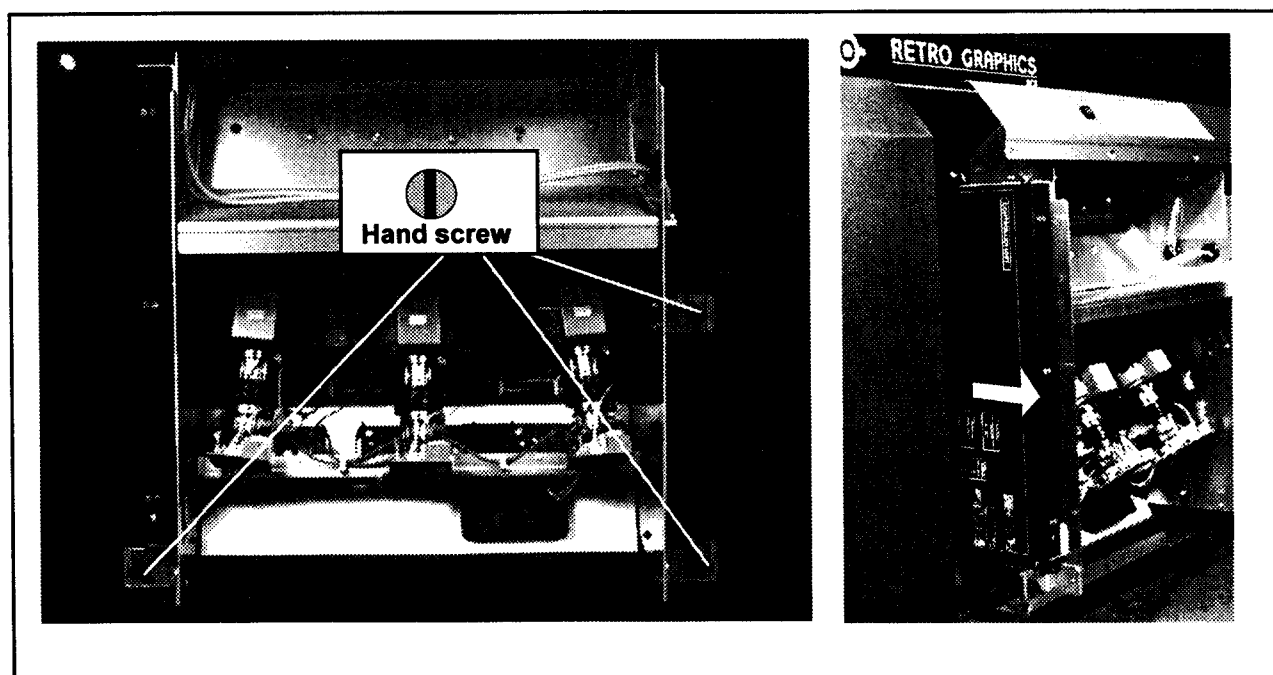
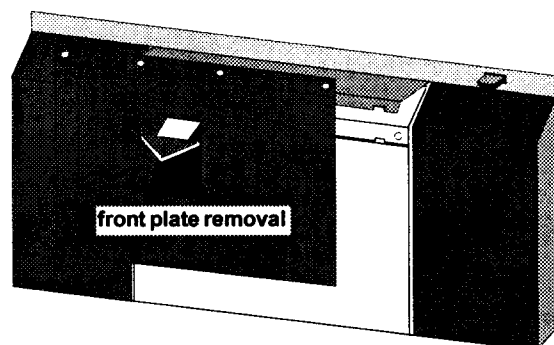
Remove the four screws holding the front cover to the cabinet.

Slide the front cover upwards and pull it toward you to remove



II. Access to chassis.

- Loosen the retaining hand screws (turning CCW) holding mechanical main frame to cabinet.
- Pull the projector unit toward you to slide out.



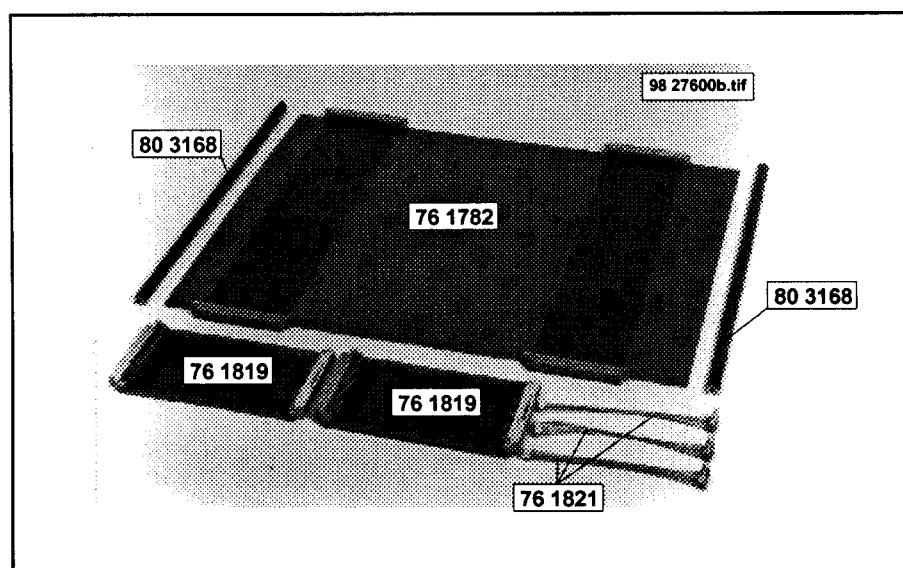
Introduction

Repairing the Barco 800 series projectors on component level is made possible by using the extension boards and the extensions cable units, delivered as **service kit**.

Contents of the kit:

Order No. kit: 98 27600

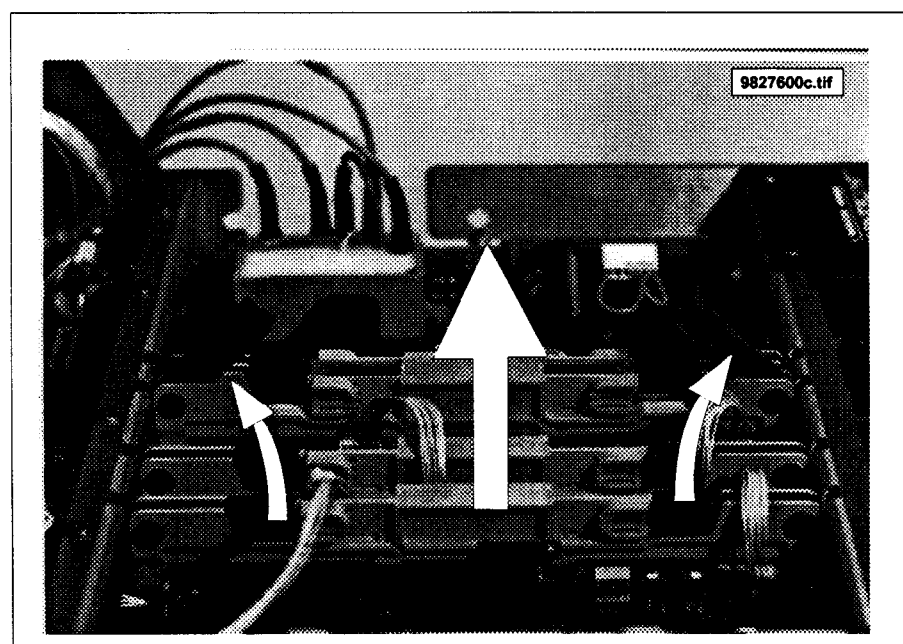
2 Extension boards for Euro cards:	Art. No. 76 1819
1 Extension board for Convergence module:	Art. No. 76 1782
2 Extensions metallic supports	Art. No. 80 3168
3 Extension cable units:	Art. No. 76 1821



Using the extension boards for Euro cards

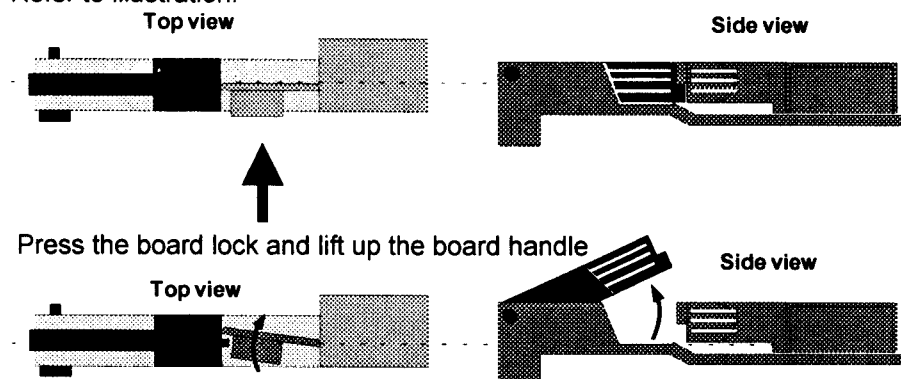
How to extract a module

Each board is locked in the main chassis on both sides.



To unlock the board, proceed as follows:

Refer to illustration:



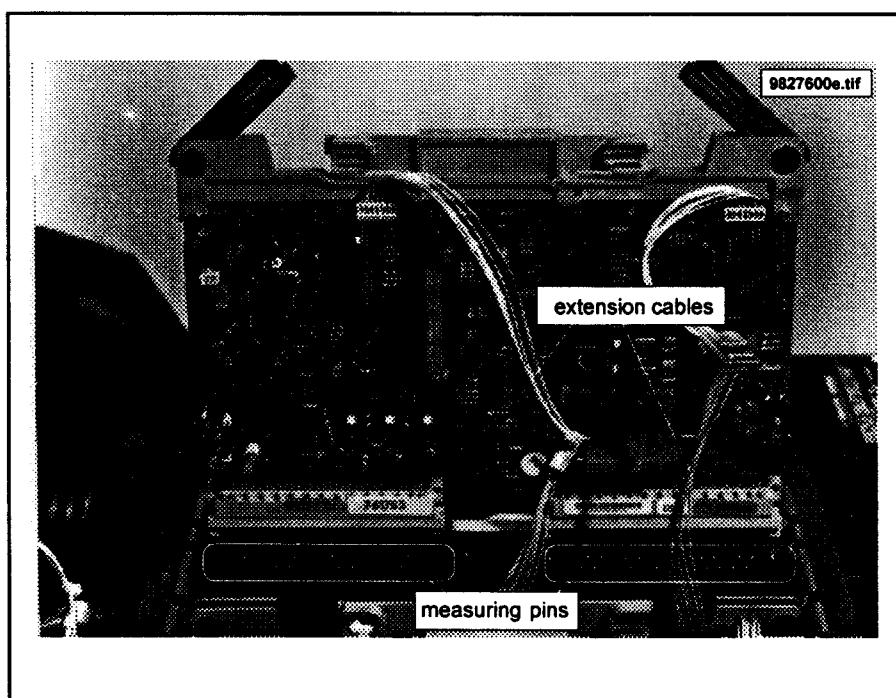
Press the board lock and lift up the board handle

Repeat this action on both sides of the module and extract the module out of the main frame.

Example: repairing the decoder module

- Unplug the two connection cables to and from the Decoder module.
- Remove the Decoder module out of the main frame as already described.
- Plug the extension boards on the two decoder board connectors on the main frame.
- Put the Decoder module on the extensions boards.
- Re-install the cable connection by inserting the extension cables.

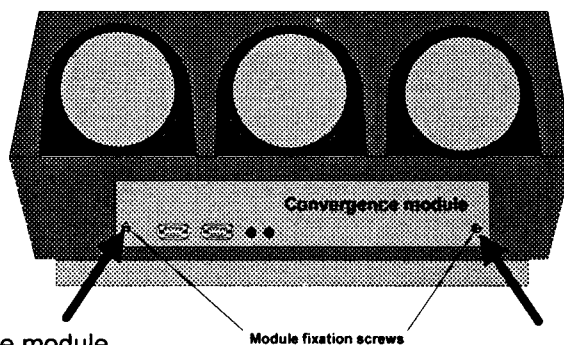
Important: the extension board for Eurocard is provided on each printed circuit foil with measuring pins.



Using the extension
board for the
Convergence
module

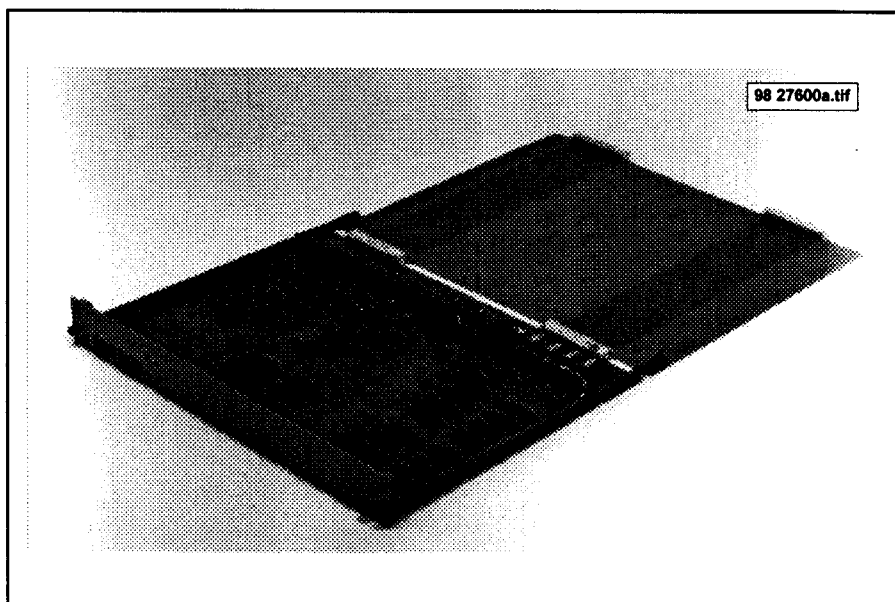
Removing the convergence module:

- Loosen the board fixation screws on both sides of the Convergence module.

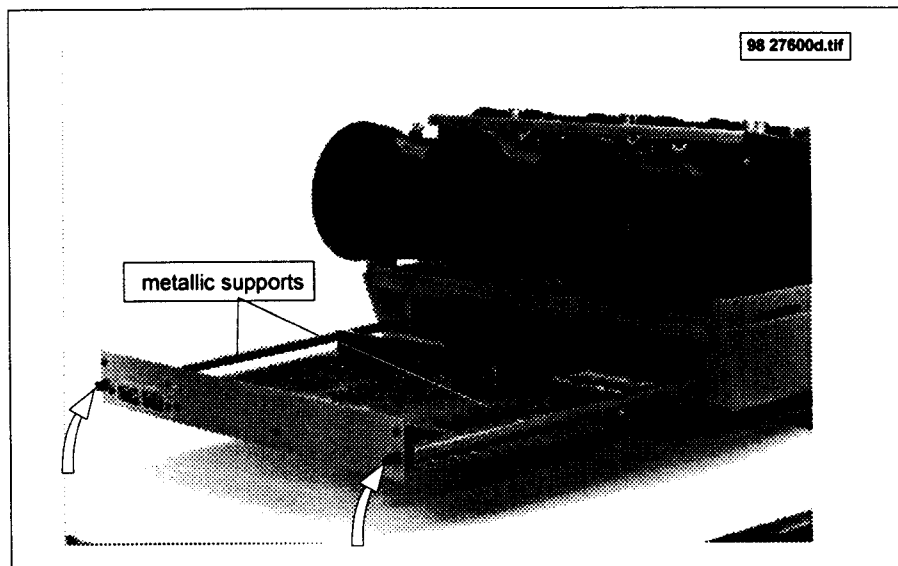
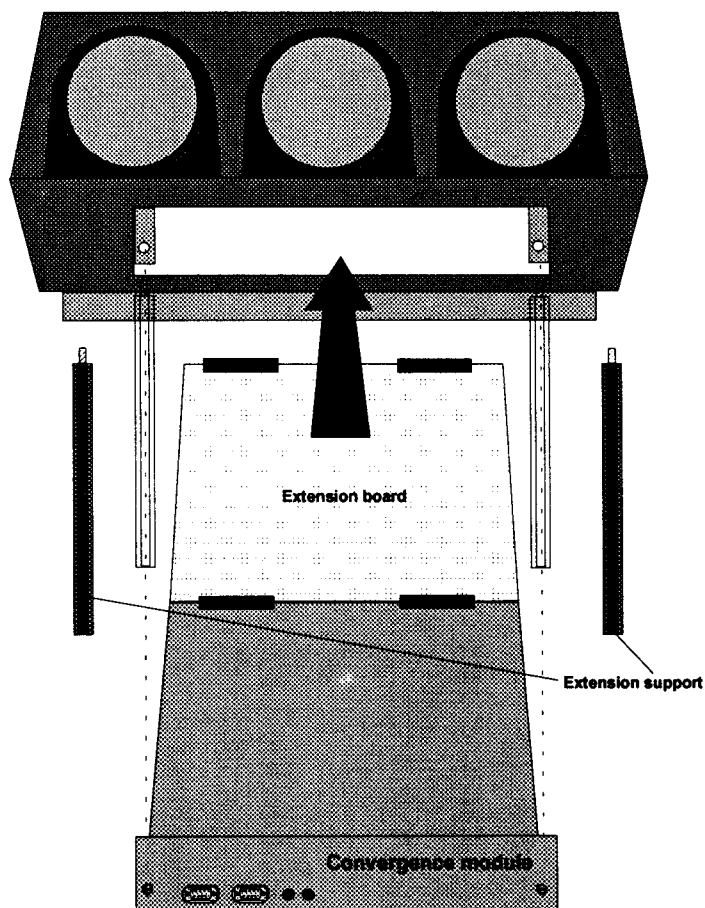


- Pull out the Convergence module.

- Put the Convergence module onto the convergence extension board.



- Screw in on both side on the main frame the metallic extension supports.
- Slide the extension board with the plugged in Convergence module into the projector.
- Secure the Convergence module onto the supports by screwing in the two remaining board screws.



CRT REPLACEMENT

WARNING : CRT handling

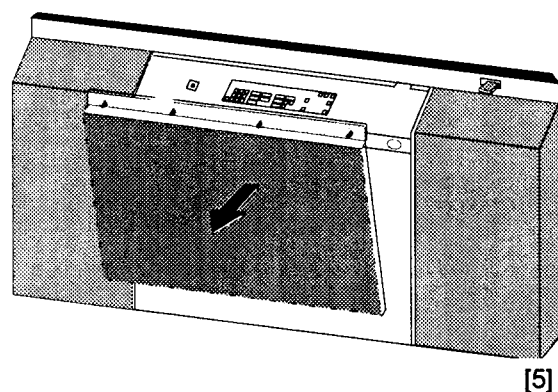
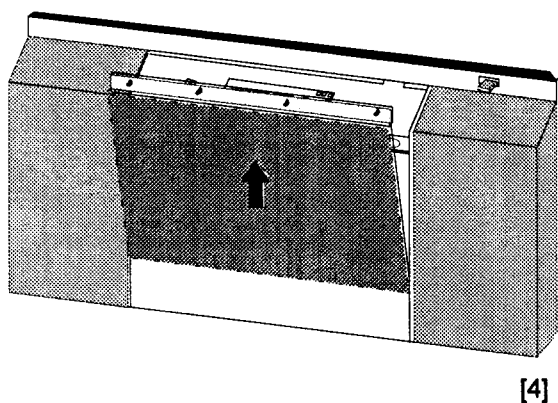
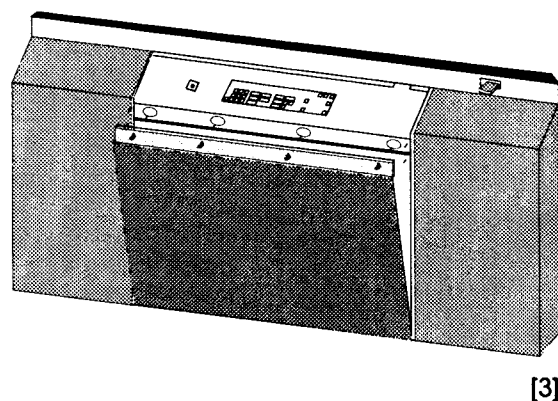
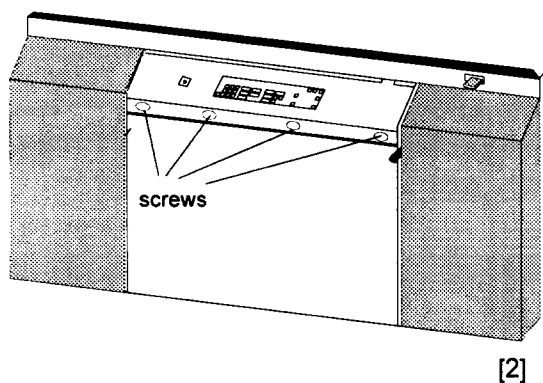
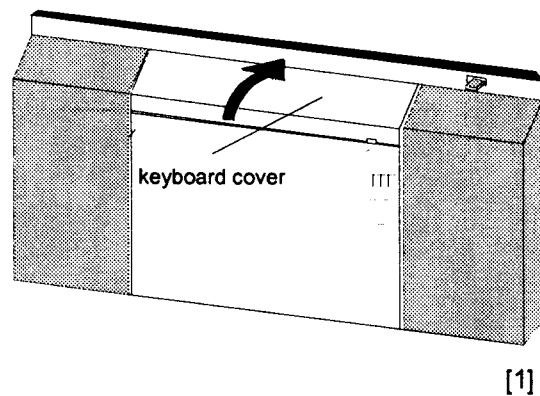
The picture tube encloses a high vacuum and care must be taken not to bump or to scratch the picture tube as this may cause the tube to implode resulting in personal injury and property damage. Shatterproof goggles must always be worn by individuals while handling the CRT or installing it in the projector. Do not handle the CRT by the neck.



Order N° CRT: Red R7625422K
 Green R7625425K
 Blue R7625426K

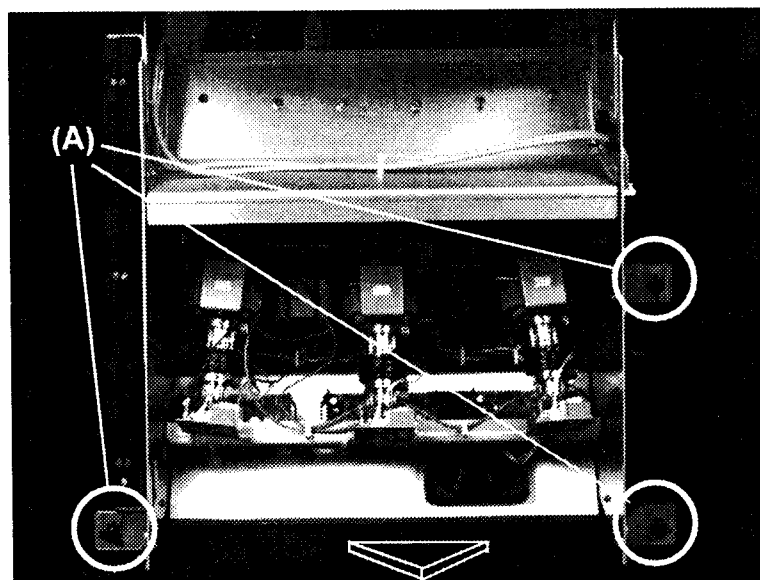
Access to the picture tubes**I. Front cover removal**

Move the keyboard cover upwards by pulling it by the notch [1].
The retaining screws of the front panel are now exposed.
Turn the four screws a quarter of a turn to the left [2].
Move the front panel towards you [3] and pull it upwards to remove [4,5].



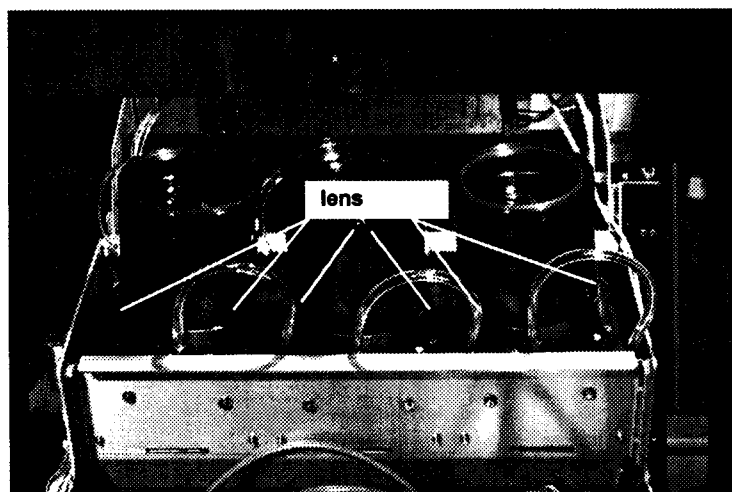
II. Sliding out of the projector chassis.

- Loosen the retaining hand screws (a) holding mechanical chassis in cabinet (turning CCW to open, turning CW to lock).
- Slide out the chassis to the front.



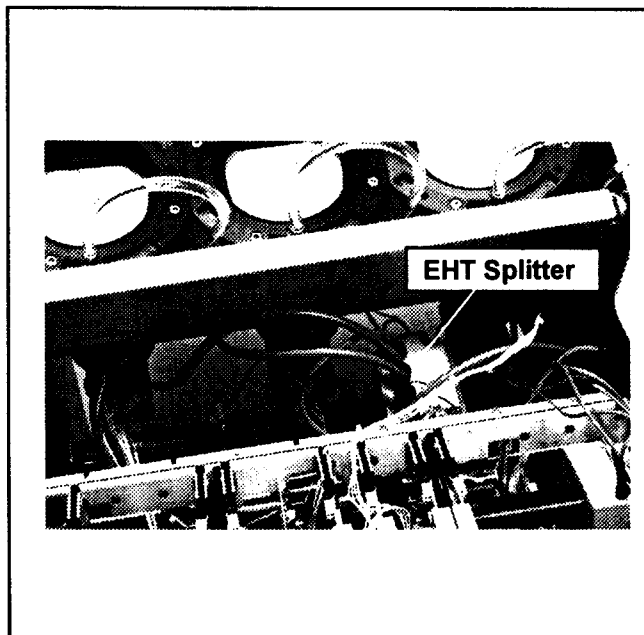
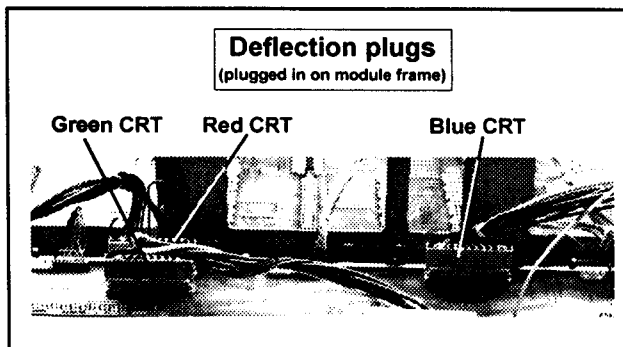
III. Removing the lens of the defective tube.

- Turn out the **four** lens screws and remove the lens.



IV. Electrical disconnection.

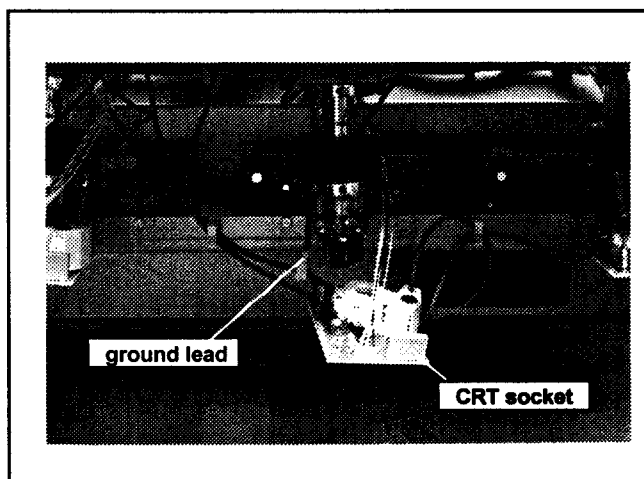
- * Unlock the EHT plug cap of the defective picture tube on the EHT splitter by turning it counter clockwise. Pull out the EHT plug.
- * Pull out the deflection plug of the defective picture tube from the main frame.



CRT socket removal

Disconnect CRT ground lead from CRT socket (Black wire)

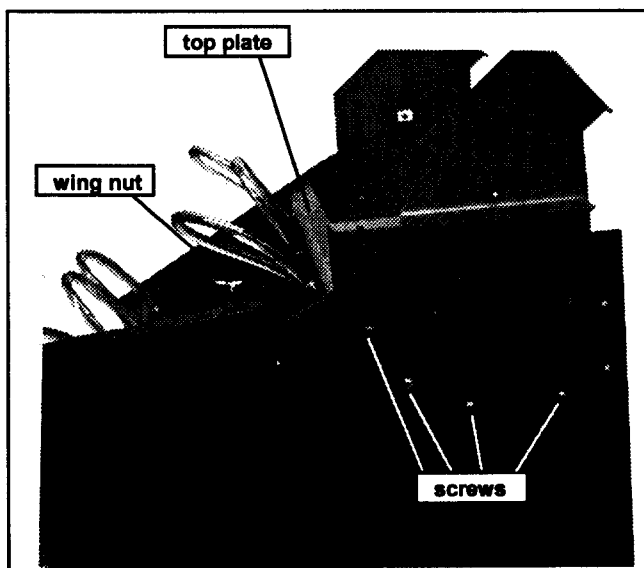
Carefully pull the PCB back to slide the CRT socket off the end of the CRT.



V. Removing the upper CRT support plate

Preparation: **remove the controller module**, by loosening the four wing nuts, to access the top plate retaining screws on that side.

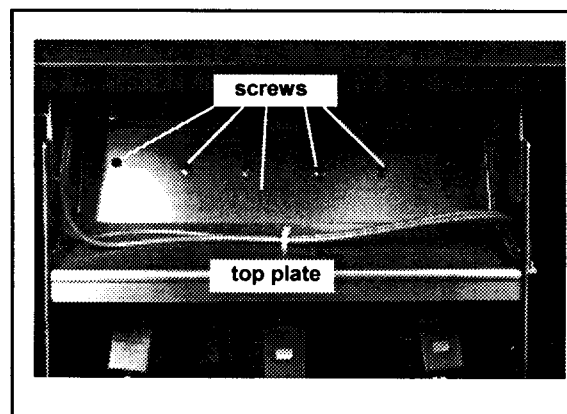
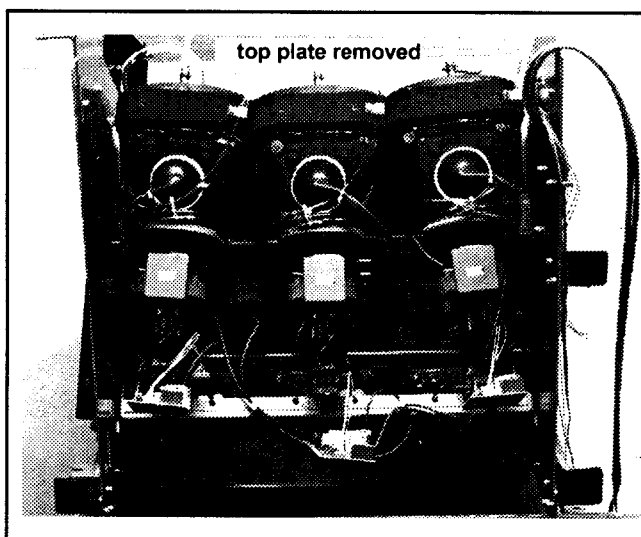
Turn out the four screws holding the top plate to both sides of the mechanical main frame.





Turn out the six retaining screws holding the cooling block of the picture tubes to the top plate.

Remove the top plate.

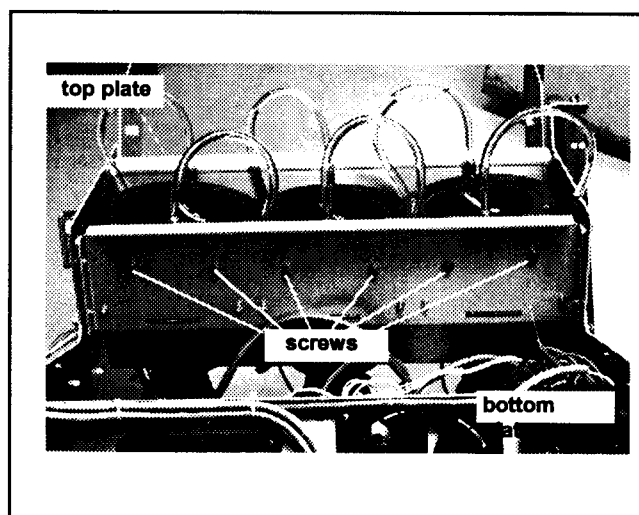


VI. Tube - lens unit removal

Turn out the two retaining screws holding the **defective tube** to the bottom support plate.

Attention : support the unit by hand.

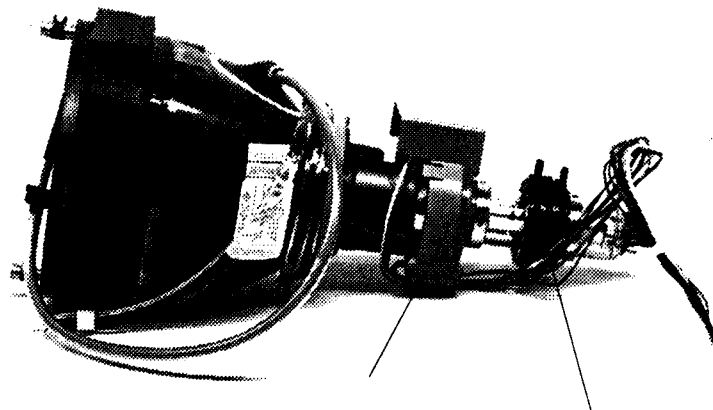
Remove the unit.



VII. Disassembly of the defective tube.

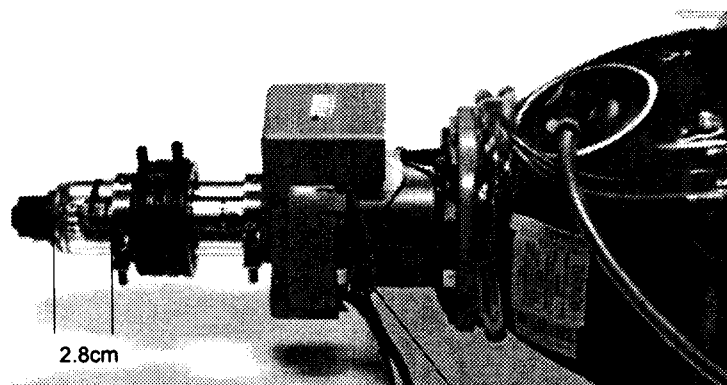
Deflection yoke removal.

- loosen the retaining screw of the 2/4 pole magnetic ring and the deflection yoke.
- slide off carefully the 2/4 pole ring and the deflection yoke of the neck of the tube.



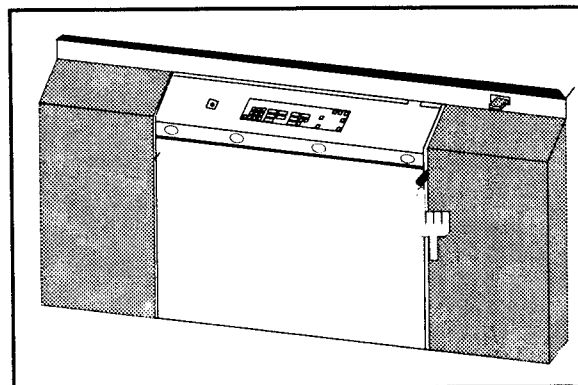
VIII. Assembling of the new picture tube.

- * Take the new picture tube.
- * Slide carefully the deflection yoke and 2 pole/4 pole magnetic ring over the neck of the CRT. Secure this position by tightening both retaining screws.
- * Mount the lens with the four bolts.
- * Position the 'tube-lens' unit on the 'support plate CRT's down' and secure this position with the two bolts.* Mount the support plate CRT's up with the six bolts to the cooling blocks of the tubes.
- * Secure this plate to the metallic frame with four bolts on each side.
- * Hook on the controller module and secure with the four wing bolts.
- * Slide the projector frame back into the cabinet.
- * Re-install the front cover.
- * Close the keyboard cover by turning the handle upwards.



2/4 pole magnetic ring

Deflection yoke fully against the CRT neck



IX. Picture tube alignment.

Introduction :

Before starting the alignment of the new tube, the projector must warm up for at least 15 minutes at a medium brightness and contrast.

- Lens focusing (see installation manual)
- Electrical focusing (see installation manual)
- * Adjustment of the 2-pole/4-pole magnet ring (the adjustments have to be done separately for each CRT).
 - Select a source that will generate a field of small dots.
 - Lower brightness and increase the contrast until the dots begin to bloom.
 - Overdrive the electronic focus by turning the control clockwise for the respective CRT.
 - Adjust the four pole rings (the ring with knob closest to the yoke) until the defocused dots are circular.
 - Underdrive the electronic focus by turning the control counter clockwise for the respective CRT.
 - Adjust the two pole rings (the rings closest to the CRT socket) until the brightest portion of the defocused dots are in the center of the dots.

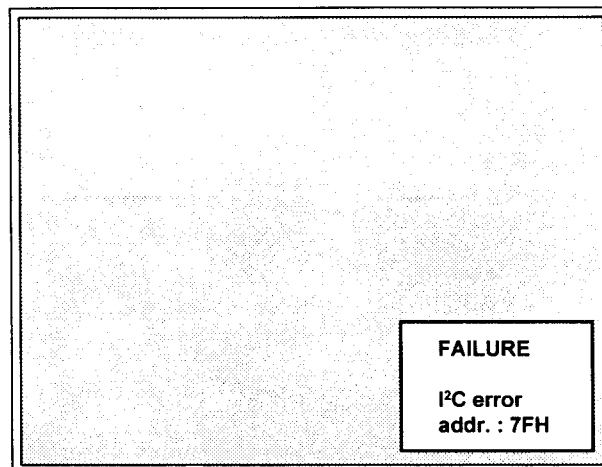
Note : while adjusting the pole magnets you may rotate the entire pole assembly (carefully) using the knob as a handle. You may also rotate the pole elements by turning the knob itself.

Failure (RD801S)

I²C error

I²C error is displayed on the screen together with the respective address, as illustrated on screen picture:

The table below indicates which IC corresponds to the displayed address. Replacement of the indicated IC solves the I²C error.



Convergence module (Driver) 76 2512 - Green convergence sub module 76 25128

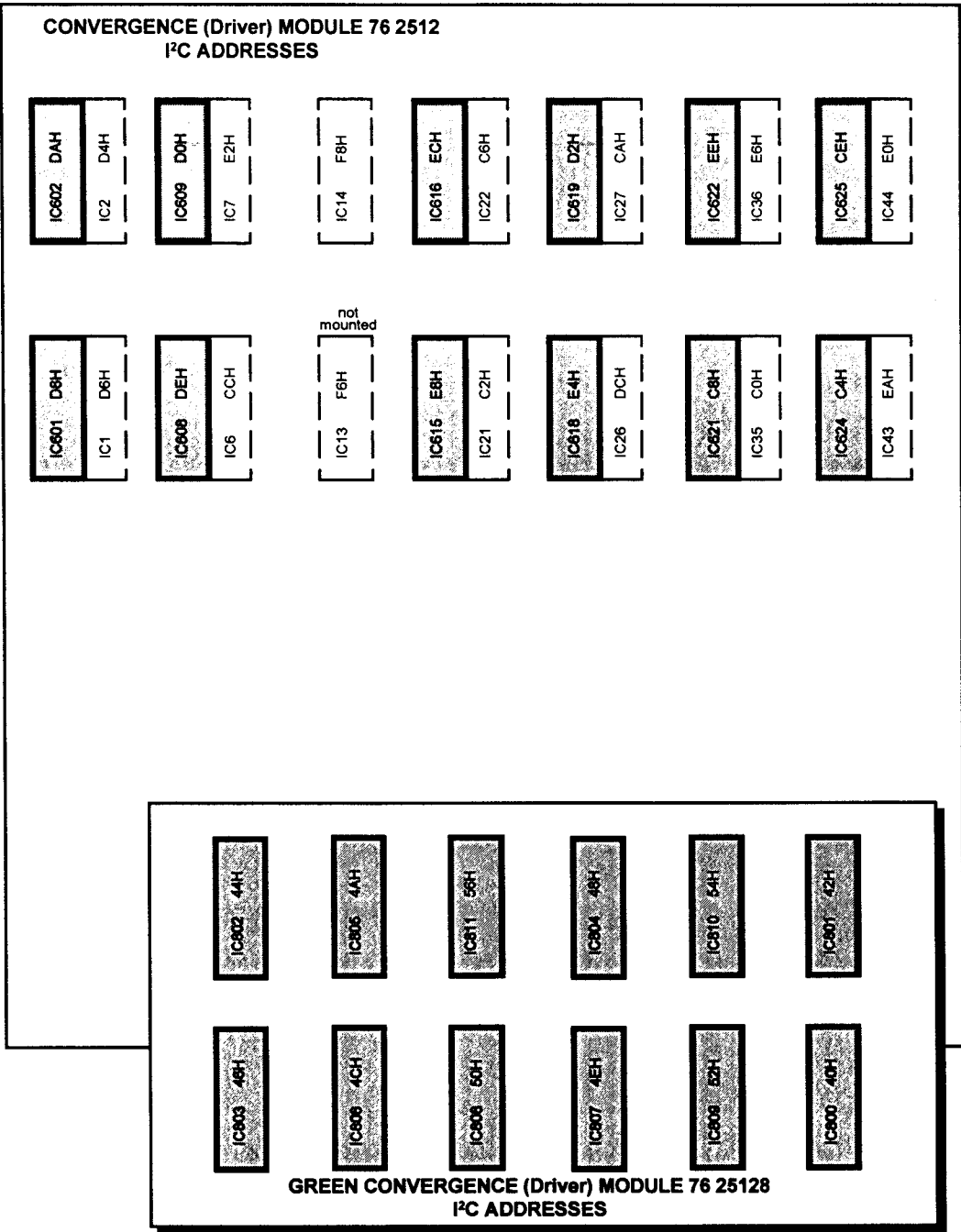
Convergence zones

1	2	3	4	5
6	7	8	9	10
11	12		13	14
15	16	17	18	19
20	21	22	23	24

E2H	IC7	18
E4H	IC618	19
E6H	IC36	20
E8H	IC615	21
EAH	IC43	22
ECH	IC616	23
EEH	IC622	24

HEX address	IC	CORRECTION Green vert./hor.	ZONE
40H	IC800		22
			3
42H	IC801		8
			17
44H	IC802		13
			12
46H	IC803		14
			11
48H	IC804		6
			15
4AH	IC805		7
			16
4CH	IC806		9
			18
4EH	IC807		19
			10
50H	IC808		4
			23
52H	IC809		5
			24
54H	IC810		20
			1
56H	IC811		2
			21

HEX address	IC	CORRECTION Red/Blue vert./hor.	ZONE
C0H	IC35		1
C2H	IC21		2
C4H	IC624		3
C6H	IC22		4
C8H	IC621		5
CAH	IC27		6
CCH	IC6		7
CEH	IC625		8
D0H	IC609		9
D2H	IC619		10
D4H	IC2		11
D6H	IC1		12
D8H	IC601		13
DAH	IC602		14
DCH	IC26		15
DEH	IC608		16
E0H	IC44		17



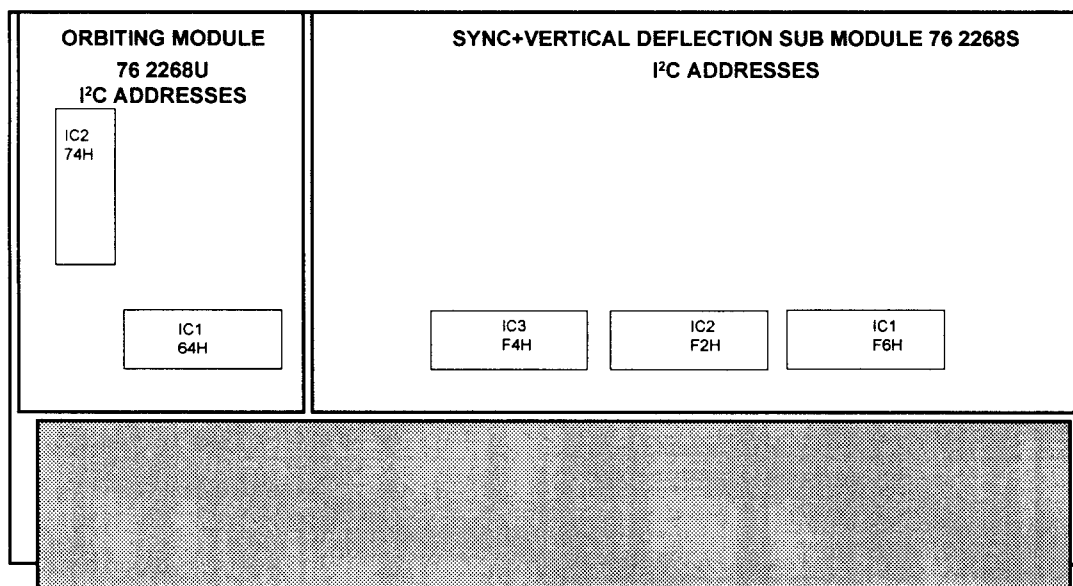
HEX address	IC	CORRECTION N/S Correction	ZONE	HEX address	IC	CORRECTION N/S Correction	ZONE
F8H	IC14	top keystone bottom keystone top bow bottom bow		FAH	IC42	horizontal midline bow horizontal midline skew vertical midline bow vertical midline skew	

Failure (RD801S)

I²C error

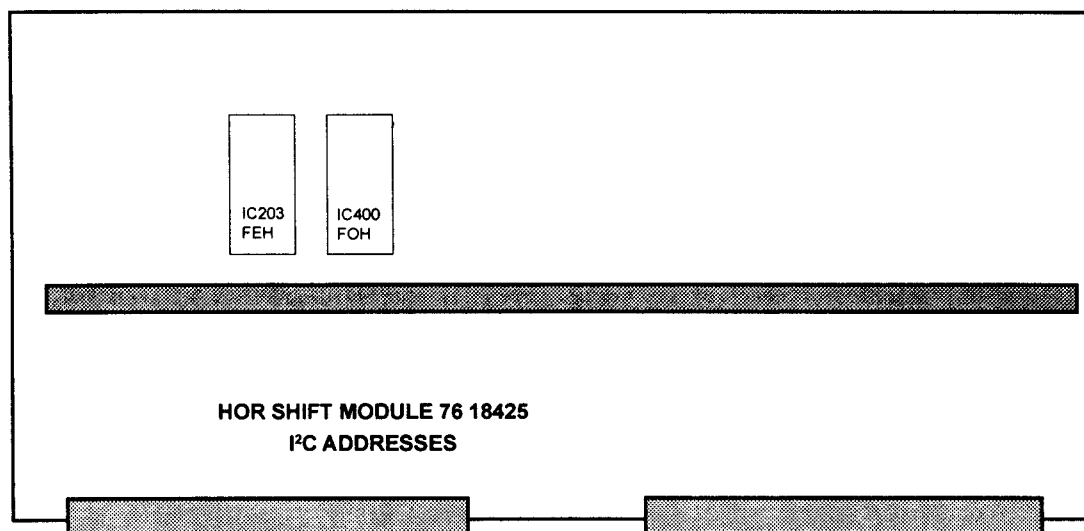
SYNC+VERTICAL DEFLECTION MODULE 76 22695

HEX address	IC	CORRECTION	HEX address	IC	CORRECTION
F2H	IC3	bottom blanking vertical shift red vertical shift green vertical shift blue	F6H	IC1	side keystone side bow left blanking right blanking
F4H	IC2	vertical amplitude vertical linearity horizontal phase top blanking	<i>ORBITING</i> 74H	IC2	max deviation zero deviation slow orbiting fast orbiting
			64H	IC1	shift orbit phase orbit



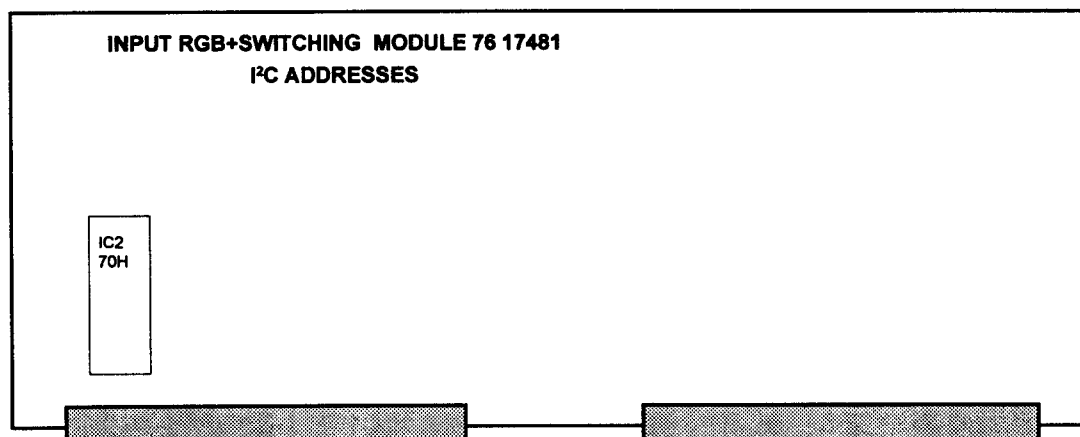
HOR SHIFT 76 18425

HEX address	IC	CORRECTION	HEX address	IC	CORRECTION
F0H	IC400	horizontall shift red horizontal shift green horizontal shift blue x (not used)	FEH	IC203	horizontal amplitude x (not used) x (not used) x (not used)



INPUT RGB+SWITCHING 76 17481

HEX address	IC	CORRECTION
70H	IC2	red on/off green on/off blue on/off sync fast/slow input video input S-video input RGB TTL input RGsB analog input RGBS analog internal pattern enhanced blue on/off

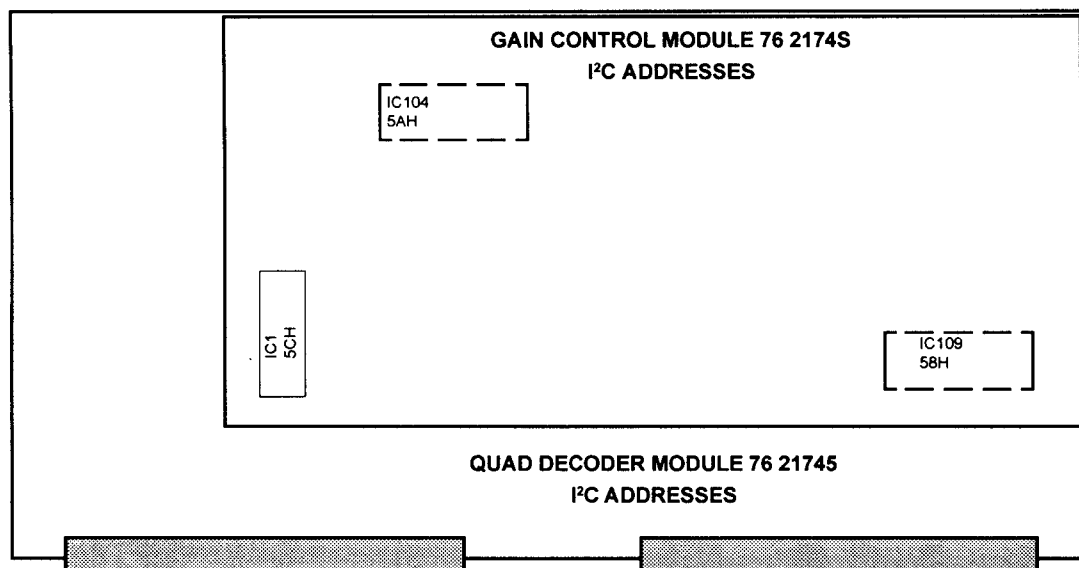


Failure (RD801S)

I²C error

QUAD DECODER+GAIN CONTROL 76 21745

HEX address	IC	CORRECTION	HEX address	IC	CORRECTION
58H	IC109	saturation R-Y saturation B-Y tint sharpness	<i>Gain control</i> 5CH	IC1	red gain blue gain red cut off blue cut off
5AH	IC104	contrast brightness blanking left blanking right			



Failure (RD801S)

I²C error

I²C error messages in ascending order of address number

HEXaddress	IC	MODULE	HEXaddress	IC	MODULE
40H	IC800	Convergence G 76 25128	D0H	IC609	Convergence 76 2512
42H	IC801	Convergence G 76 25128	D2H	IC619	Convergence 76 2512
44H	IC802	Convergence G 76 25128	D4H	IC2	Convergence 76 2512
46H	IC803	Convergence G 76 25128	D6H	IC1	Convergence 76 2512
48H	IC804	Convergence G 76 25128	D8H	IC601	Convergence 76 2512
4AH	IC805	Convergence G 76 25128	DAH	IC602	Convergence 76 2512
4CH	IC806	Convergence G 76 25128	DCH	IC26	Convergence 76 2512
4EH	IC807	Convergence G 76 25128	DEH	IC608	Convergence 76 2512
50H	IC808	Convergence G 76 25128	E0H	IC44	Convergence 76 2512
52H	IC809	Convergence G 76 25128	E2H	IC7	Convergence 76 2512
54H	IC810	Convergence G 76 25128	E4H	IC618	Convergence 76 2512
56H	IC811	Convergence G 76 25128	E6H	IC36	Convergence 76 2512
58H	IC109	Q Decoder+Gain 76 21745	E8H	IC615	Convergence 76 2512
5AH	IC104	Q Decoder+Gain 76 21745	EAH	IC43	Convergence 76 2512
5CH	IC1	Q Decoder+Gain 76 21745	ECH	IC616	Convergence 76 2512
70H	IC2	In RGB+Switching 76 17481	EEH	IC622	Convergence 76 2512
74H	IC2	Orbiting 76 2268U	F0H	IC400	Hor Shift 76 18425
C0H	IC35	Convergence 76 2512	F2H	IC3	Sync+Vert defl 76 22695
C2H	IC21	Convergence 76 2512	F4H	IC2	Sync+Vert defl 76 22695
C4H	IC624	Convergence 76 2512	F6H	IC1	Sync+Vert defl 76 22695
C6H	IC22	Convergence 76 2512	F8H	IC805	Convergence 76 2512
C8H	IC621	Convergence 76 2512	FAH	IC803	Convergence 76 2512
CAH	IC27	Convergence 76 2512	FEH	IC203	Hor Shift 76 18425
CCH	IC6	Convergence 76 2512			
CEH	IC625	Convergence 76 2518			

Refer to preceding pages for IC location on module and fault identification.