

12" Black & White Observation System VM6

VSS2360/00T

Service
Service
Service

VSS2260/00R

VSS4460/00T

22MS605R

VS23605T

VS23655T

VS22605R

VS44605T

NORTH-AMERICAN MODELS:

Service Manual: 8109

Service Manual

Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified be used.

Contents

Page

1.	Specifications	2	
2.	Controls and connections	2	
3.	Safety & maintenance instructions, warnings and notes	4	
4.	Mechanical instructions	6	
5.	Block diagram	7	
6.	Fault finding trees	8	
7.	<i>Electrical diagrams & P.W.B. layout</i>	diagrams	PWB
	Circuit diagrams :		
	A1 μ P and Power supply	11	15
	A2 Deflection & Line output	12	15
	A3 Twisted Pair interface & Alarm output	13	15
	A4 Slave & Audio/Video interfaces	14	15
	Wave forms	16	
8.	Electrical & mechanical adjustments	16	
9.	Circuit description	17	
10.	Direction for use	18	
11.	Abbreviations	22	
12.	Spare parts list	22	

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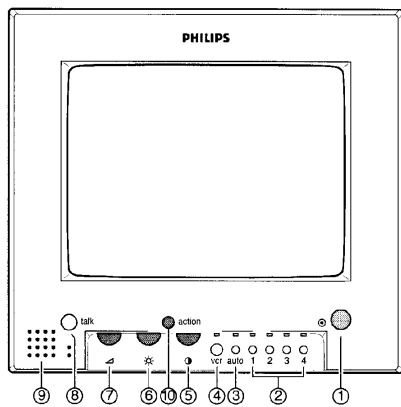
1. Specifications

General

Mains voltage	100 - 240 VAC \pm 10%	Outputs	
Mains frequency	50 - 60 Hz	Camera-telephone plug	2-wire transmission
Power consumption	24,4 W (max.) 4 camera's	CVBS- cinch plug	1 V _{pp} into 75 Ω (VCR & Slave)
		Audio- cinch plug	500 mV _{pp} into 10k Ω (not affected by the volume control)
Camera supply	24 V dc		
Weight	5,7 kg	Audio	
Dimensions (WxHxD)	320 x 310 x 310 mm	Power output	200 mW
High voltage (zero beam)	12 kV	Speaker	built in 25 Ω
Ambient temperature		Microphone	built in, electret
- Operating	+10 - +45 °C	Frequency response	baseband 30 - 16000 Hz
- Storage	-25 - +70 °C		
TV system		VCR signals	
Number of lines	625 / 525 (PAL/NTSC)	video input (CVBS)	1 V _{pp} on 75 Ω
Field frequency	50 Hz/ 60 Hz	audio input	500 mV _{pp} on 10k Ω
Resolution-bandwidth	4 MHz	video output (CVBS)	1 V _{pp} on 75 Ω
		audio output	500 mV _{pp} on 10 k Ω (not affected by the volume control)
Inputs			
Camera-telephone plug	2-wire twisted pair	Alarm facilities	
CVBS- BNC plug	1 V _{pp} into 75 Ω (VCR)	Contacts	Normally open or normally closed contact.
Audio- cinch plug	500 mV _{pp} into 10k Ω (VCR)	Ratings	max. switching voltage 24Vdc/24Vac max. switching current 2A

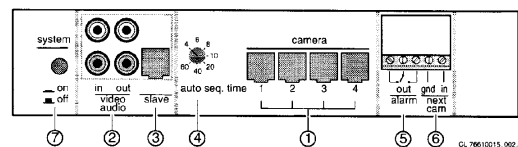
2. Controls and Connections

Controls and connections of VSS2360/00T & VS23605T & VS23655T (POS)



A-1

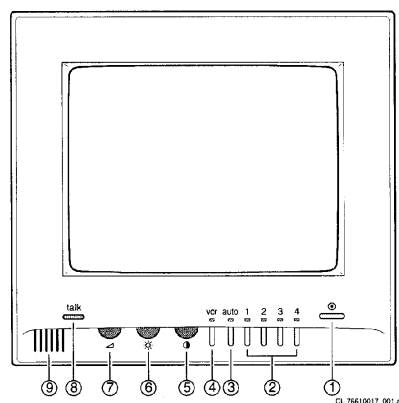
1. Stand by
2. Camera selection 1-4
3. Auto
4. VCR
5. Contrast
6. Brightness
7. Volume
8. Talk
9. Speaker
10. Action



A-2

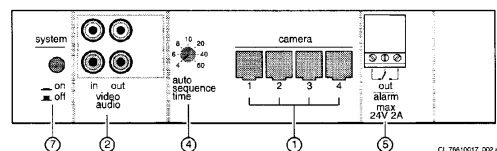
1. Camera inputs 1-4
2. Audio & Video / In & outputs
3. Slave output
4. Sequence time adjustment
5. Alarm output
6. Next camera input
7. Power on/off

Controls and connections of VSS2260/00R & 22MS605R & VS22605R (Retail)



B-1

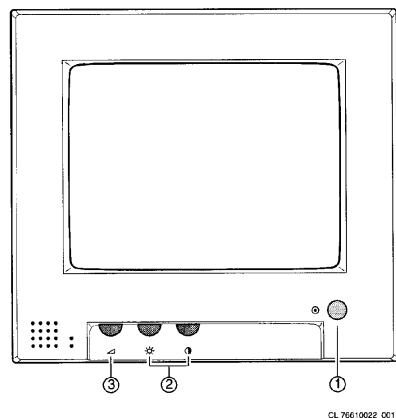
1. Stand by
2. Camera selection 1-4
3. Auto
4. VCR
5. Contrast
6. Brightness
7. Volume
8. Talk
9. Speaker



B-2

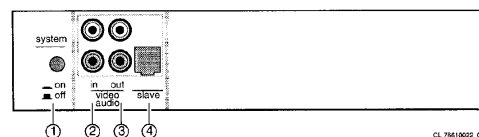
1. Camera inputs 1-4
2. Audio & Video / In & outputs
4. Sequence time adjustment
5. Alarm output
7. Power on/off

Controls and connections of VSS4460/00T & VS44605T (Slave)



C-1

1. Stand by
2. Contrast & Brightness
3. Volume



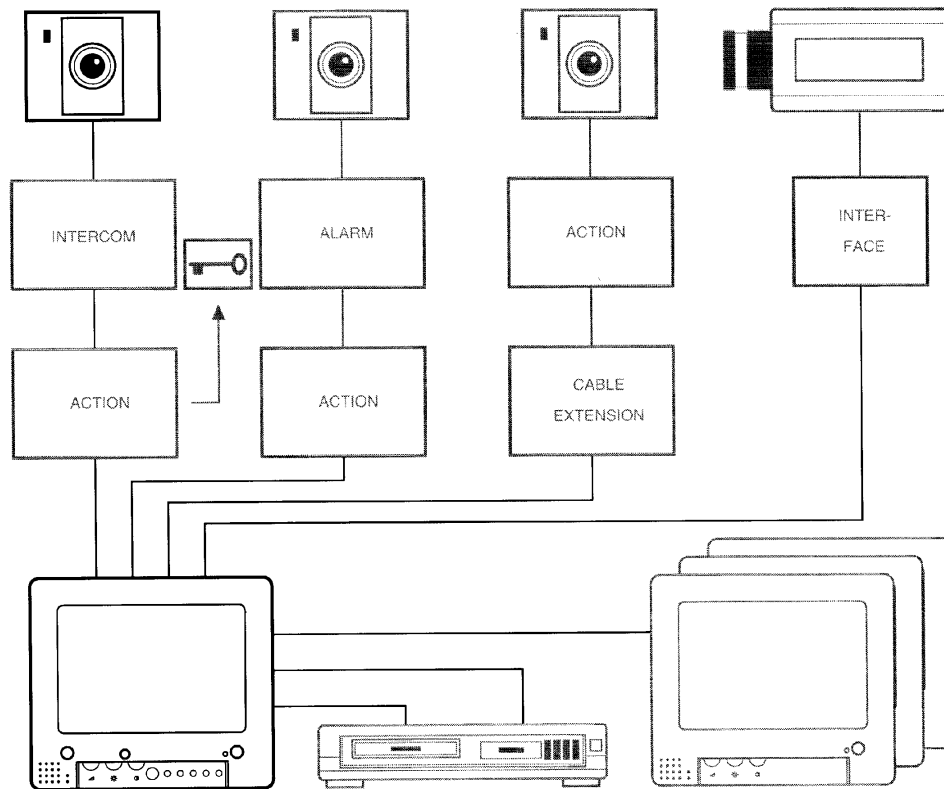
C-2

1. Power on/off
2. Audio & Video Input
3. Audio & Video output
4. Slave input

Camera Compatibility

	VCM8638/00T VCM8637/00T	VC86785T VC86775T	VCM8630/00R	68MC305R	VCM8936/00T VCM8935/00T	VC89785T VC89775T VC89765T VC89755T	VCM8932/00T	VC89355T	98MC350R 98MC355R
VSS2360/00T	Yes	--	--	--	Yes	--	--	--	--
VSS2260/00R	--	--	Yes	--	--	--	Yes	--	--
VSS4460/00T	Yes	--	--	--	Yes	--	--	--	--
VS23605T	--	Yes	--	--	--	Yes	--	Yes	--
VS23655T	--	Yes	--	--	--	Yes	--	Yes	--
VS22605R	--	--	--	Yes	--	--	--	--	Yes
VS44605T	--	Yes	--	--	--	Yes	--	Yes	--
22MS605R	--	--	--	Yes	--	--	--	--	Yes

Connection possibilities




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3. Safety Instructions, Maintenance Instructions, Warnings and Notes

Maintenance Instructions

Safety Instructions for Repairs

1. Safety regulations require that during a repair:
 - the set should be connected to the mains via an isolating transformer;
 - safety components, indicated by the symbol , should be replaced by components identical to the original ones;
 - when replacing the CRT, safety goggles must be worn.
2. Safety regulations require also that after a repair:
 - the set should be returned in its original condition;
 - the cabinet should be checked for defects to avoid touching, by the customer, of inner parts;
 - the insulation of the mains lead should be checked for external damage;
 - the mains lead strain relief should be checked on its function;
 - the cable form and EHT cable are routed correctly and fixed

with the mounted cable clamps in order to avoid touching of the CRT, hot components or heat sinks;

- the electrical resistance between mains plug and the secondary side is checked.

This check can be done as follows:

- unplug the mains cord and connect a wire between the two pins of the mains plug ;
- measure the resistance value between the pins of the mains plug and the metal shielding of the tuner or the aerial connection on the set. The reading should be between 4.5 MΩ and 12 MΩ.
- switch off the monitor and remove the wire between the two pins of the mains plug;
- thermally loaded solder joints should be re-soldered. This includes components like LOT, the line output transistor, fly-back capacitor.

It is recommended to have a maintenance inspection carried out periodically by a qualified service employee. The interval depends on the usage conditions.

- When the set is used in a living room the recommended interval is 3 to 5 years.
- When the set is used in the kitchen or garage this interval is 1 year.

During the maintenance inspection the above mentioned "safety instructions for repair" should be carried out. The power supply and deflection circuitry on the chassis, the CRT panel and the neck of the CRT should be cleaned.

Warnings

1. When a camera or accessory is connected or disconnected, the monitor **should** always be switched off by the power switch (at the rear side of the monitor). Only operating the **stand-by** knob is not sufficient !
2. In order to prevent damage to **ICs** and transistors, all high-voltage flash-overs must be avoided. In order to prevent damage to the picture tube, the method shown in Fig. 3.1 should be used to discharge the picture tube. Use a high-voltage probe and a multimeter (position DC-V). Discharge until the meter reading is **0 V** (after approx. 30s).

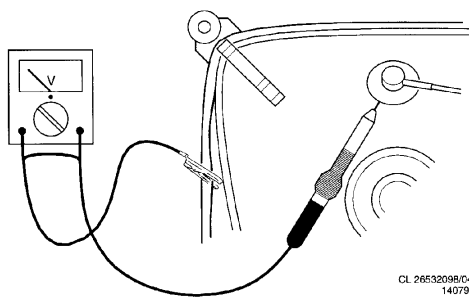


Fig. 3.1

3. ESD

All **ICs** and many other semiconductors are sensitive to electrostatic discharges (ESD). Careless handling during repair can drastically shorten the life. Make sure that during repair you are connected by a pulse band with resistance to the same potential as the earth of the unit. Keep components and tools also at this same potential.

4. Be careful when taking measurements in the high-voltage section and on the picture tube panel.
5. When making settings, use plastic rather than metal tools. This will prevent any short-circuit and the possibility of false made adjustments

6. Never replace modules or other components while the unit is switched on (pull-out the mains cord to switch-off the monitor).
7. After repair the wiring should be fastened once more in the cable clamps for this purpose.
8. It is necessary to connect first the cameras to the camera inputs, before switching on the monitor. In this way you can prevent short circuit of camera input during camera connection and therefore prevent damaging of input transistor.
9. When no input signals are connected to the monitor, the screen will be blanked.

Notes

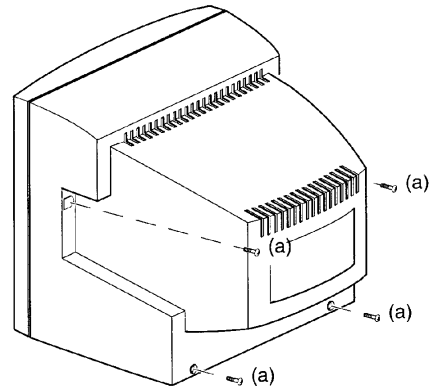
1. The direct voltages and oscillograms are average voltages. They have been measured by using a camera with a random picture and under the following conditions:
 - Adjust brightness and contrast control for the mechanical mid-position;
 - Volume control in middle position.
2. The semiconductors indicated in the circuit diagram(s) and in the parts lists are completely interchangeable per position with the semiconductors in the unit, irrespective of the type indication on these semiconductors.
3. Diagram notes;

The circuit diagrams are prepared for different types of system monitors. On each diagram symbols may be add to components to identify for which type of monitor that component is available in the diagram.

4. Mechanical instructions

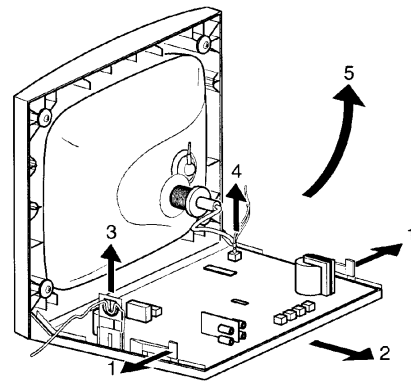
4.1 Disassembly of the monitor :

Unplug the system from the mains then remove the screws (a) on each side of the back cover.



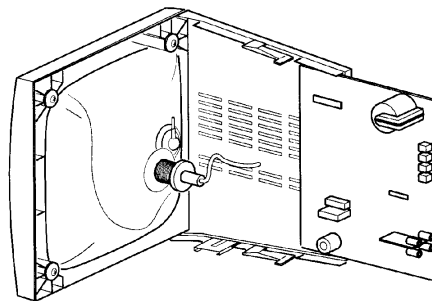
4.2 Removing the main panel:

- Remove the mains pull relief plug "3".
- Remove plug number "4" (Speaker / microphone).
- Press clips "1" slightly away from the panel.
- Shift simultaneously with clips "1" the panel out in direction "2".
- Turn the monitor in direction "5".



4.3 Service position:

The main panel is now in its service position. In this position all the service repairs can be executed by the repair technicians.

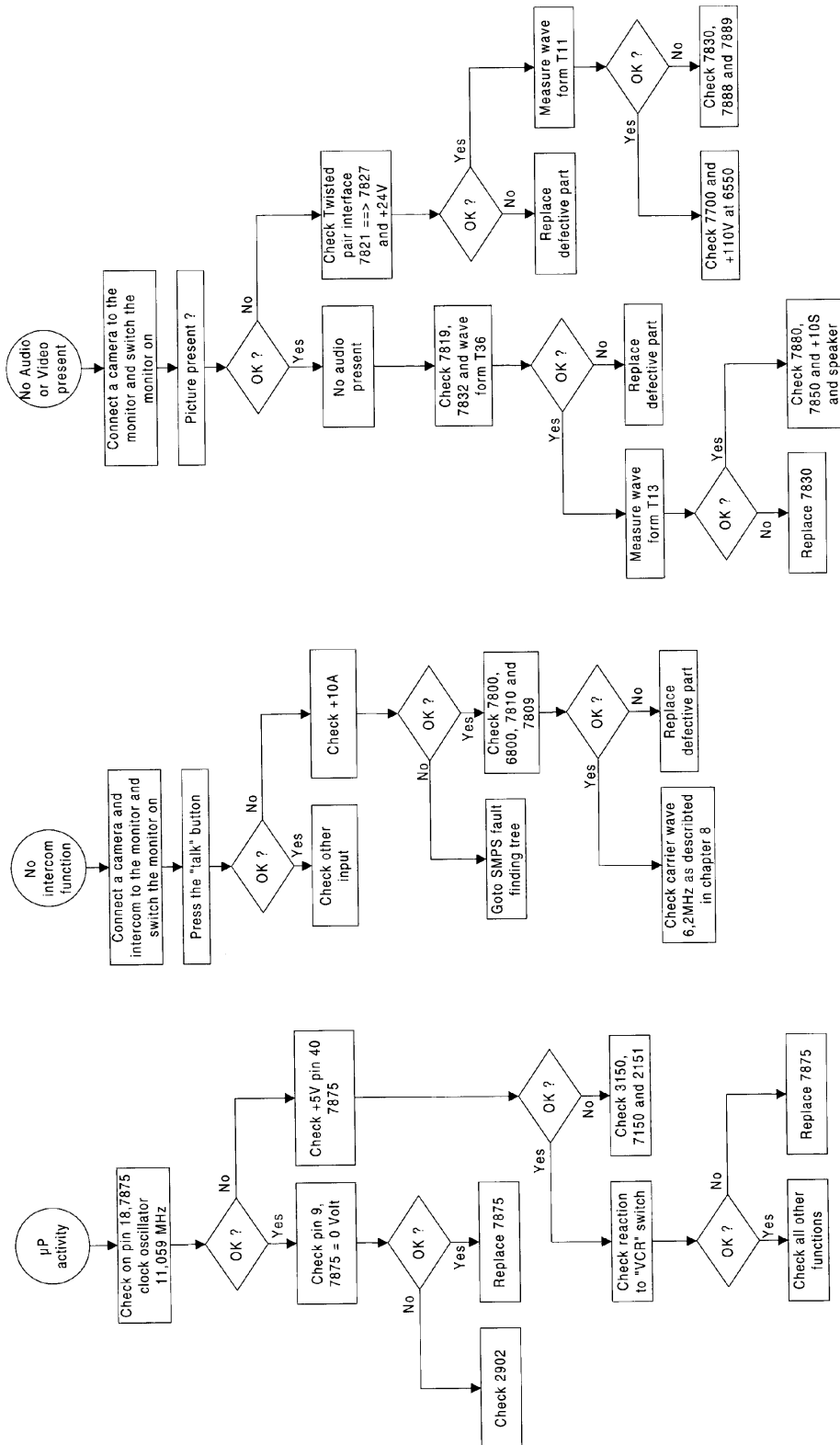


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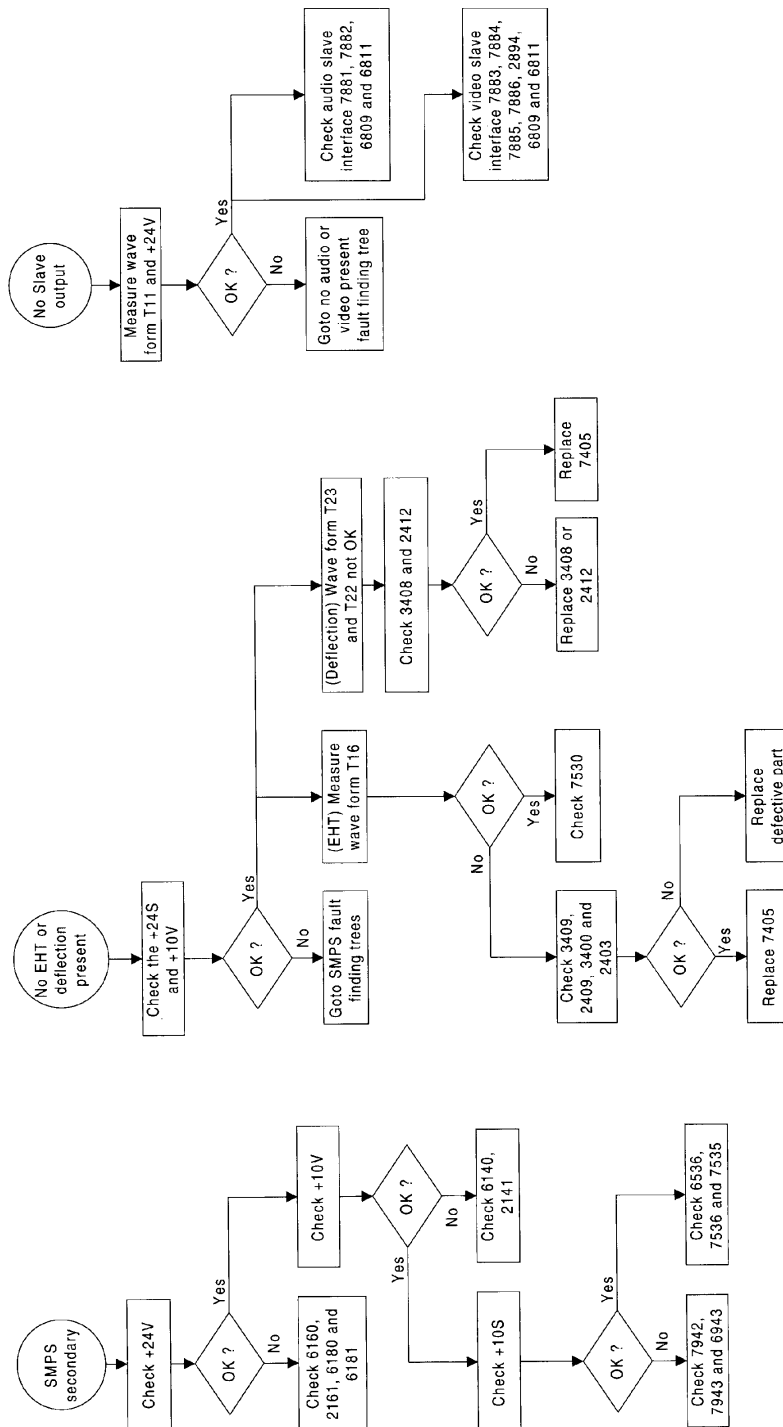
4.4 Closing the monitor :

After repair the remounting is in the opposite way.

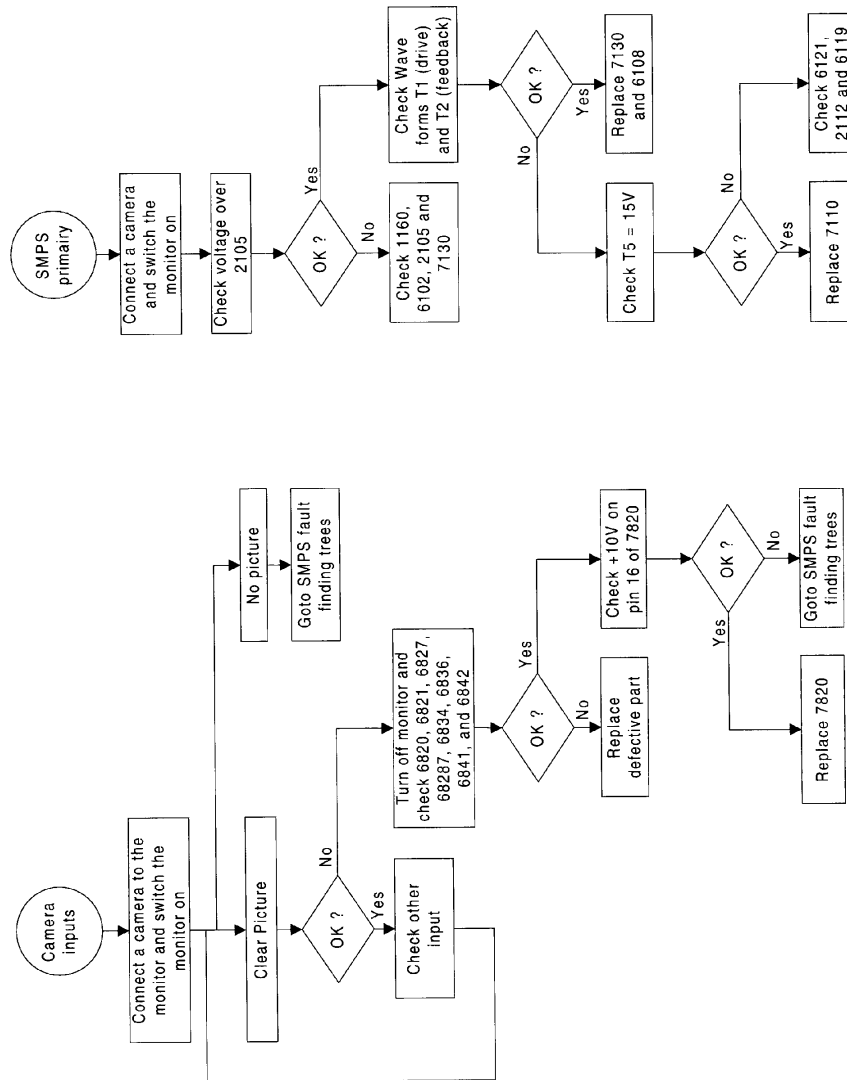
6 Fault Finding Tree's



6 Fault Finding Tree's

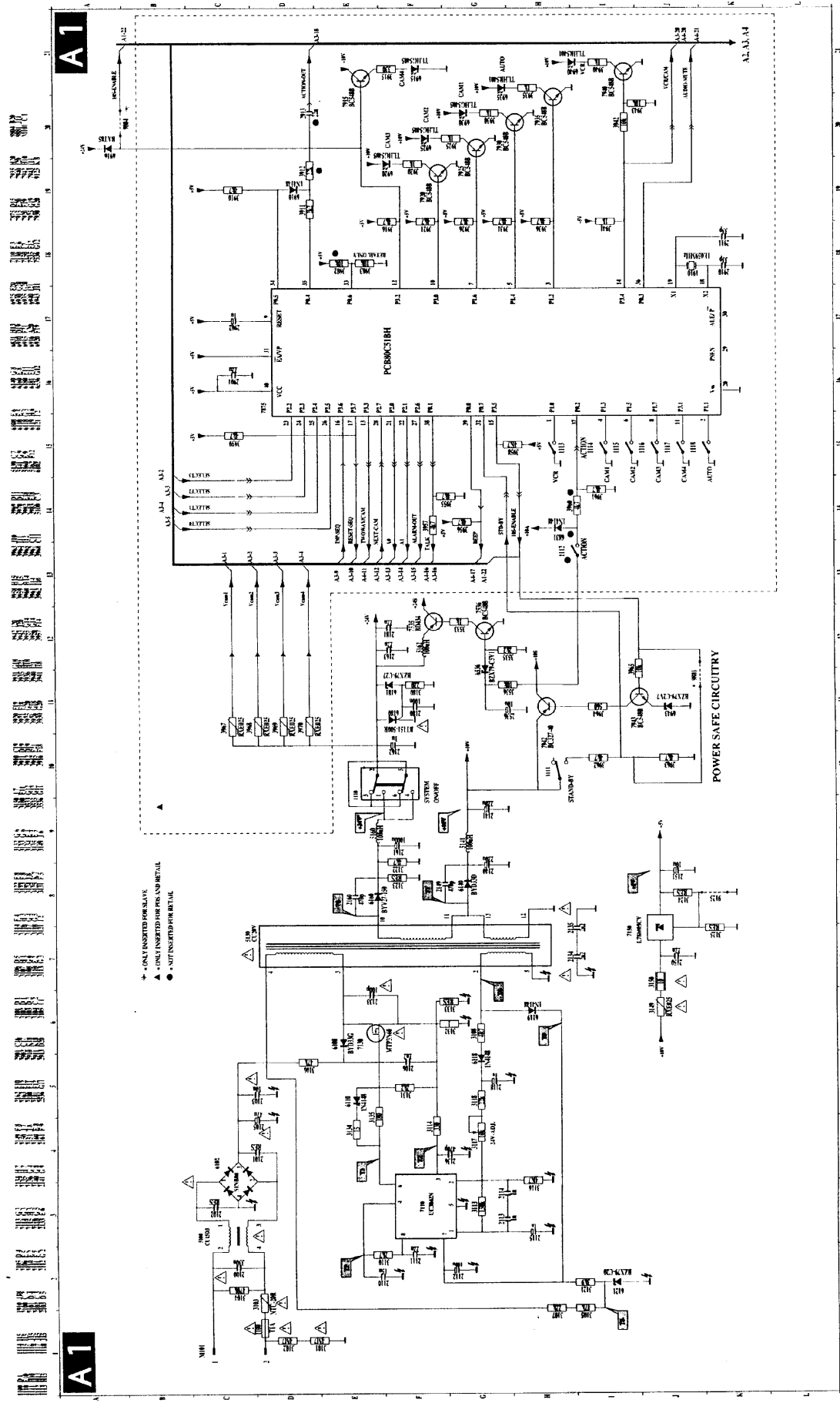


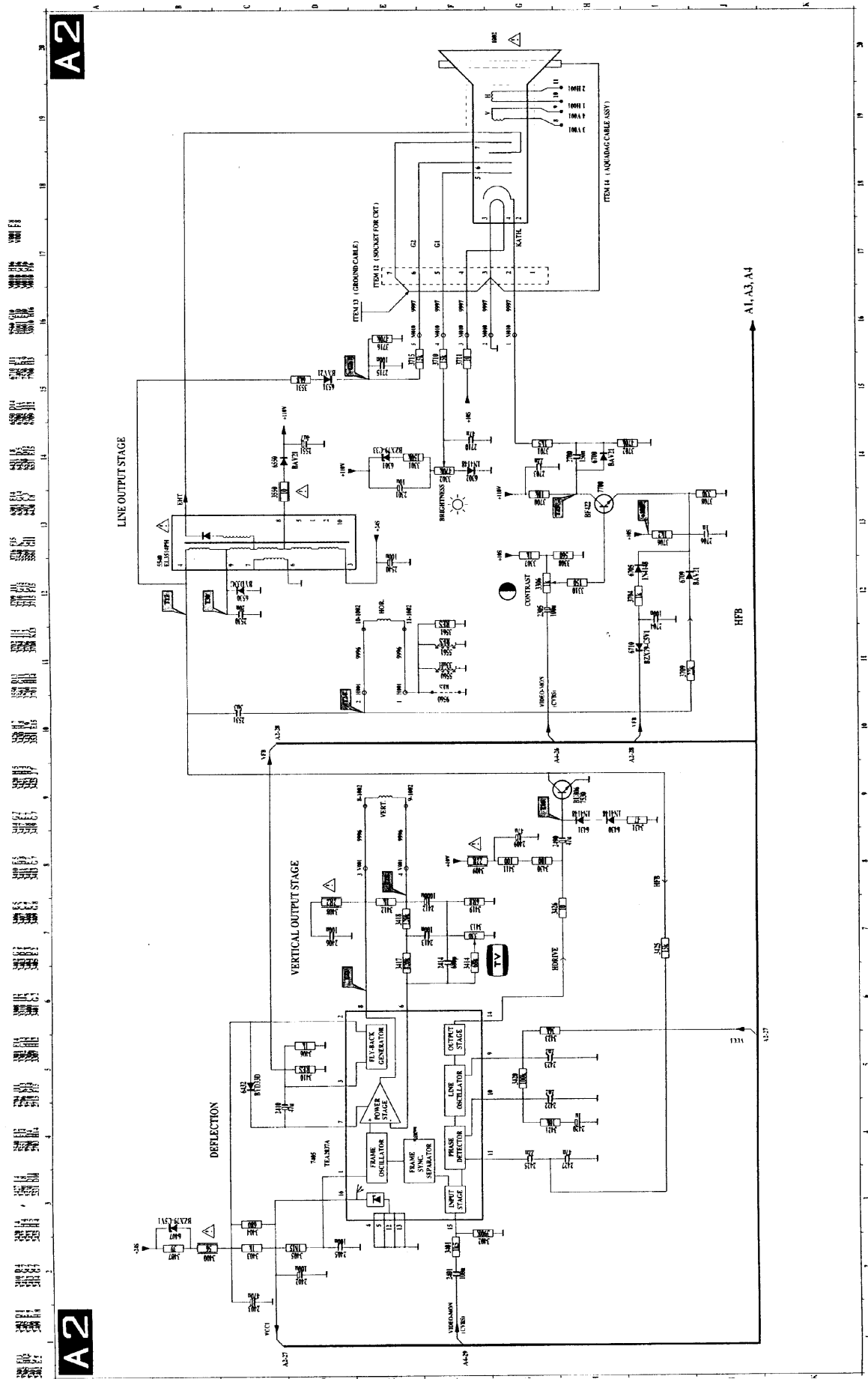
6 Fault Finding Tree's

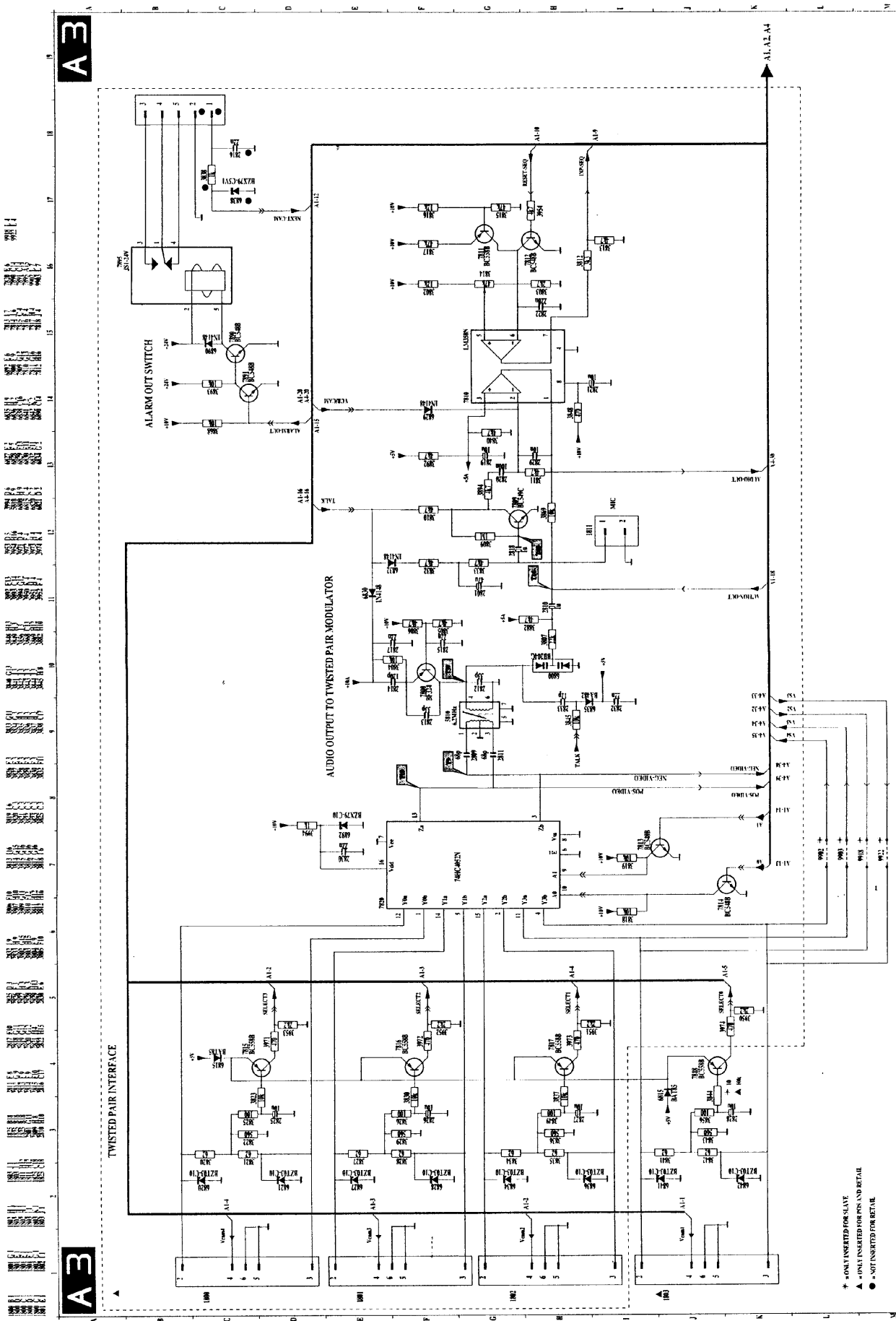


7. Electrical diagrams & PWB layouts

VM6 11







* - ONLY INSERTED FOR SLAVE
 ▲ - FINAL INSERTED FOR POS. AND RETAIL
 ● - NOT INSERTED FOR RETAIL