CRT Modification Procedure for TM14-20

1. Outline:

This modification procedure sheet shows the way of CRT replacement with substituted CRT, M34AFA63X01(U) for TM14-20RH.

2. Consists of modification kit:

#.	Part No.	Description	Symbol	Location	Q	Remarks
1	CRT	M34AFA63X01(U)	V901	Main Body	1	
2	Degauss Coil	ST-901424A	—	Main Body	1	
3	GND Wire	C4-J90014-1	—	Main Body	1	
4	L-in Chassis	—	—	Main Body	1	w/HV-Board
5	R-in Chassis	—	—	Main Body	1	
6	Lock-Tie	T30R	—	Main Body	4	f/Degauss Coil
7	Washer	8W	—	Main Body	4	f/CRT
8	CRT Support	M4-J90118	—	Main Body	4	f/CRT
9	FBT Harness	C4-N05016	—	Main Body	1	
10	Transformer	ST4-J98180	T1	POWER B/D	1	
11	Diode	RG4A	D23	POWER B/D	1	
12	Capacitor	KMG160VB100M	C36	POWER B/D	1	
13	Resistor	CFS1/2 47K ohm J	R45	POWER B/D	1	
14	Resistor	RSF2B 470 ohm J	—	DEF B/D	1	Additional
15	Resistor	68K-1/4W	R408	DEF B/D	1	
16	Resistor	JP	R417	DEF B/D	1	
17	Resistor	220-1W	R418	DEF B/D	1	
18	Capacitor	0.0056u/1600V	C412	DEF B/D	1	
19	Capacitor	0.0082u/1600V	C413	DEF B/D	1	
20	Capacitor	4.7u/250V	C415	DEF B/D	1	
21	Coil	ST4-B0750	L401	DEF B/D	1	w/Sub B/D

3. Modification Procedure:

1)Main Body

*Remove top over, both side covers and rear cover.

*Remove front right control unit w/connector and two screws on bottom.

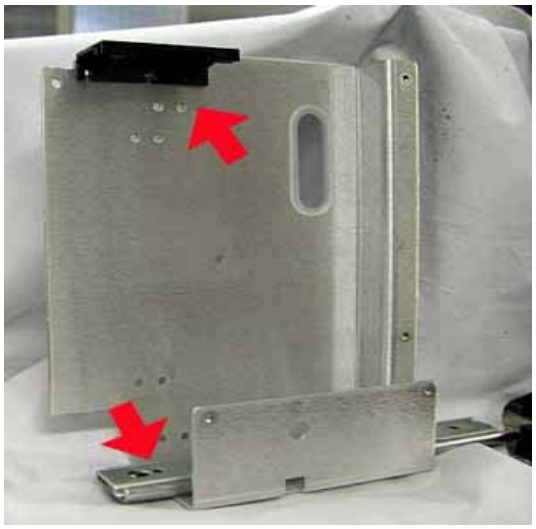
*Remove front escutcheon with CRT and its harness, yoke connector and CRT socket board.

*Remove degauss coil and CRT earth wire. They are not used for modification.

*Eliminate degauss coil and CRT graphite earth wire. Eliminate harness for degauss coil which is connected with 2pin connector to POWER Module and eliminate relay 4pin connectors, too. They will not be used later. New degauss coil of modification kit includes 2pin connector.

*Remove DEF Module and POWER Module.

*Replace R-inner Chassis to new one.



Red arrow marked parts are removed from previous chassis, and attach to new one.

*Replace Left-inner chassis.

Replace left inner chassis to new one.

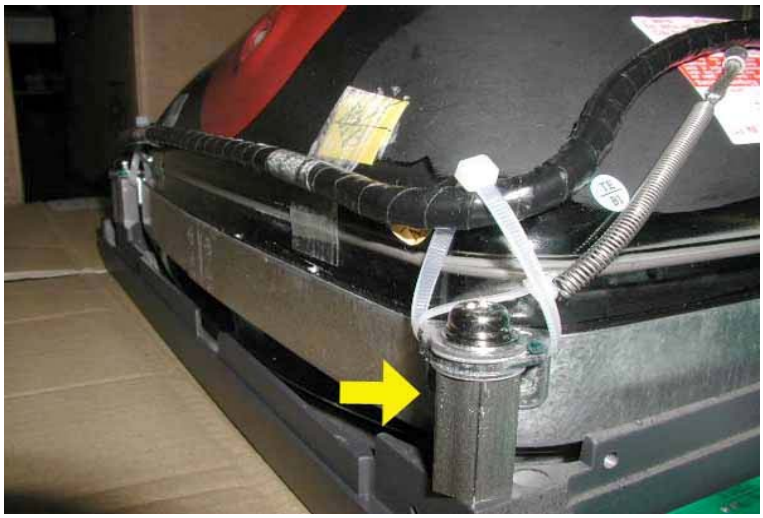
*Modification of CRT Socket Board

(1)Cut red wire for screen and tied in harness

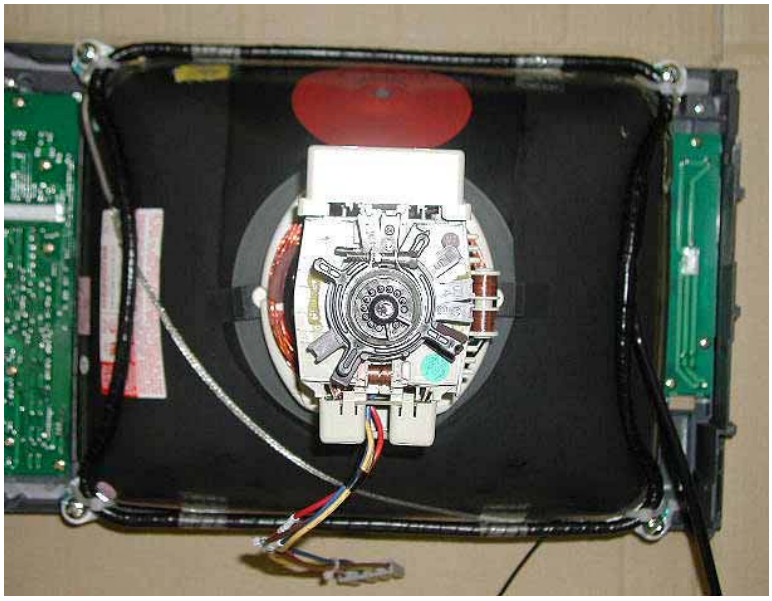
(2)Delete VR1(for screen) and solder white wire from FBT as below picture.

*Attaching CRT onto escutcheon

Attach yellow arrow marked 4 collars on 4 each corners, and fix CRT with screws, WSN5X16+8W. Adjust CRT position and clearance with escutcheon with spacers which were used in the monitor. Fix graphite earth wire on the corner as below picture. Fix degauss coil with cable tie on the corner.



Picture of CRT mount from rear side



*Attach escutcheon with CRT onto main body.

2)Modification of POWER Module

Replace below parts.

Part No.	Previous	New
*T1	ST-902351A	ST4-J98180

Remove blue wire, because it is not used.

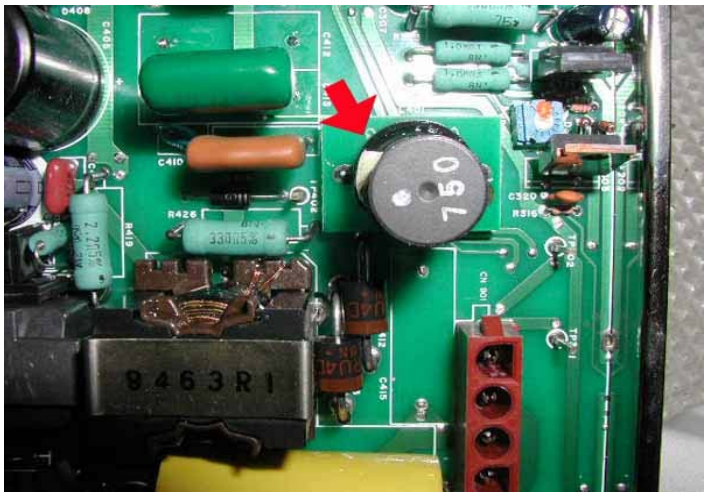
Part No.	Previous	New
*D23	RG4	RG4A
		(required 2mm or more clearance from PCB)
*C36	100u/100V	100u/160V
*R45	100K-2W	47K-1/2W

3)Modification for DEF Board

(1)Replace below parts.

Part No.	Previous	New
* (NIL)	Nome	Add RSF2B470 ohm J
		(Soldering on pads for CN901 pin#3 and pin#4)
*R408	100K-1/4W	68K-1/4W
*R417	470-2W	JP
*R418	470-2W	220-1W
*C412	0.0033u/2000V	0.0056u/1600V
*C413	0.0022u/2000V	0.0082u/1600V
*D412	RU4D	Delete
*D413	RU4D	Delete
*C415	1.5u/200V	4.7u/250V
*L401	ST-90094B	ST4-B0750（Mount on Sub Board）

*Since ST4-B0750 has polarity, mount as white dot mark on R426 side.



(2)Modification for new FBT Kit

As per modification instruction for TM14/20-20 new FBT kit, it requires pattern cut and wire strap etc. on PCB.

4) Assembly

*Install POWER Module and DEF Module and connect harnesses.

*Attach CRT Socket Board onto CRT and connect harnesses.

*Install Front Right Control Unit and connect harnesses.

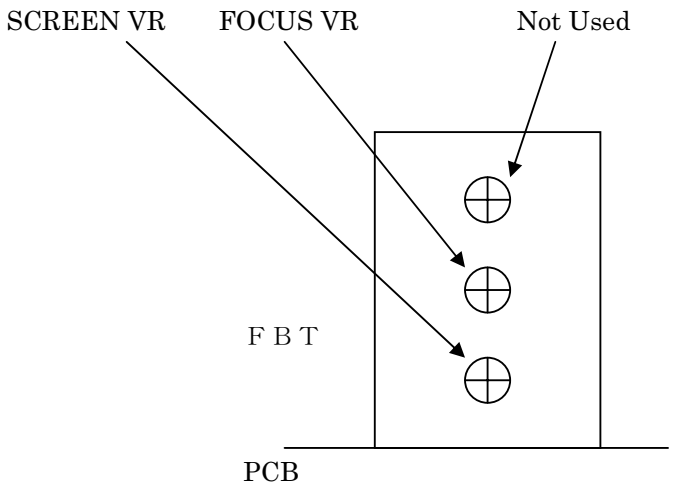
That is all of physical modification.

4. Adjustment

(1)Adjust FBT related portion in accordance with Installation Procedure for new FBT modification kit for TM14/20-20, Section 4.

(2)Screen voltage Adjustment with Screen VR on FBT.

Select SET-UP mode with SET-UP SW in Front Control Panel, and adjust R-Cathode to DC110V in measuring with digital voltage meter.



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