ELECTRICAL ADJUSTMENTS

ACCESSING THE SERVICE MODE

To enter the Service Mode, 'Service In/Out" button on the Service Remote Control or activate the "Picture Menu" with the user remote control and press "8500".
"Red" , "Green", "Yellow" and "Blue" Teletext buttons are for Feature Setup, Geometry, White Balance and AFC menus respectively.
Press "0" button to exit the Service Mode.

1. POWER SUPPLY VOLTAGE

Connect a digital voltmeter to the cathode of D607 diode at the AV1 mode of the TV and set the screen voltage to the minimum. Adjust the main supply voltage +B with P601 potentiometer to the following voltage value. Adjust the screen potentiometer to the level where a picture is just visible.

14"	A34LPE02X01	106 VDC
20"	A48ECR143X51	118 VDC
21"	A51EER133X41	118 VDC

2. AFC ADJUSTMENT

Before starting the adjustment follow the procedure below:
Enter service mode, change "VIDEO" header to the "NEW". Then exit from service mode.
Remarks:
1. The procedure above must always be done after replacing the Video IC (IC101) or EEPROM IC.
2. AFC adjustment must be done again when "VIDEO" header became "NEW" accidentally.

For BG, DK, I, L standards (38.9 MHz) : Supply a 471.25 MHz BG system colour bar RF signal to the set by a pattern generator and find this signal in "setup" menu (C21). In order to deactivate AFT loop, shift value of "fine tuning" from central point by one unit and then shiftback to the central point again (2 small vertical lines are seen in the scale on central point). Store the channel by selecting "Store" and pressing "OK" button. Enter Service Mode and press "Blue" Teletext button. Adjust the "AFT38" item of service menu to read a value between "78" and "7C" (hexadecimal) on the right part of the screen. For example:
AFT38 89 7B

For SECAM L' Standard (33.9 MHz): Supply a 55.75 MHz, L' system colour bar RF signal to the set by a pattern generator and find this signal in "setup" menu (C02). In order to deactivate AFT loop, shift value of "fine tuning" from central point by one unit and then shiftback to the central point again (2 small vertical lines are seen in the scale on central point). Store the channel by selecting "Store" and pressing "OK" button. Enter Service Mode and press "Blue" Teletext button. Adjust the "AFT33" item of the service menu to read a value between "78" and "7C" (hexadecimal) on the right part of value of item "AFT38". For example:
AFT38 : 76 78
AFT33 : 65

3. AGC ADJUSTMENT

Apply a signal at the channel 32 with 70±1dBuV level to the antenna input (switch sound carrier "Off" and switch "Video Ext" to the "On" state).
Connect an oscilloscope between the pin 11 (IF2) of Tuner and ground.
Enter service mode and find "AGC" header.
Adjust the amplitude which is monitored from oscilloscope to the values given below using with Volume +/Volume- key of the remote control .
PAL BG standarts : 750 mVpp±20mVpp
PAL/Secam BG/DK standarts : 750 mVpp±20mVpp
Secam LL' standarts : 600 mVpp±20mVpp
PAL I standarts : 700 mVpp±20mVpp
Adjust "2.AGC" to the same value as "AGC".

For non-Secam LL' system sets if their serial number is lower than 30200001:
Substract 5 from "AGC" value and adjust "2.AGC" to this value.

4. SCREEN ADJUSTMENT

Enter service mode and press "Yellow" teletext button. Select "SCRN" item. Press Vol + or – button. You will see white horizontal line at the bottom of the screen. Adjust the screen potentiometer to the just visibility level of horizontal line. After adjustment press Vol + or Vol – button to see the picture (The value of "SCRN" item will be "0").

5. GEOMETRY ADJUSTMENTS

Enter service mode and press "Green" Teletext button. Check that "Y.DLY" value is "1".
"H.POS" is for horizontal position , "V.POS" is for vertical position "V.HEI" is for vertical size, "LNRTY" is for vertical linearity, "S.COR" is for S-correction, "OSD.H" is for OSD Horizontal Position, "OSD.V" is for OSD Vertical Position adjustment.

6. WHITE BALANCE ADJUSTMENTS

Enter the service mode and press "Yellow" teletext button. Select and adjust "G.CUT" to the "64" for 14" sets and "40" for 20" and 21" sets. Adjust "R.CUT" and "B.CUT" for cut off adjustment. Select and adjust "R.DRV" and "B.DRV" for white balance. Change the "G.CUT" value a few unit if white balance could not be adjusted. Exit from service mode.
Remark: When "VIDEO" item is selected "NEW", optimum "SECBL" value (determined by the IC manufacturer) is loaded to EEPROM. Whereas if the black level of SECAM is not suitable, "SECBL" can be adjusted manually by applying a SECAM pattern that includes black sections and changing value of "SECBL" .

7. FEATURE SETUP

TUNER	SHARP&ALPS, PHILIPS, P.SONIC, TEMIC	
ST.BY	YES	: Automatic switch off is active (when there is no signal for 5 min)
	NO	: Automatic switch off is not active (can be used during repair)
AV2	NO	: Single scart
	YES	: Single scart +front AV
CLR.S	PAL, PAL/NTSC (SECAM system is automatically detected by TV)	
SND.S	BG, I, BG+DK, BG+ LL' (Sound Systems)	
TEXT	NON TEXT	: Teletext not available
	DEFAULT	: Teletext
	FASTTEXT	: Fasttext
LANG	A	: English, German, French, Italian, Spanish, Portugal, Greek, Turkish, Dutch, Swiss, Danish, Norwagian, Finnish, Slovenian, Polish, Hungary, Russian, Hebrew
	B	: English, German, French, Russian, Polish, Bulgarian, Serbian, Hungarian, Romenian, Slovenian, Macedonian, Croatian, Czech, Slovekian, Albanian, Arabian, Persian, Turkish
BGBPF	INT	: Video IC uses internal BG Band Pass Filter (default)
	EXT	: Video IC uses external BG Band Pass Filter
VIDEO	OLD	: Default
	NEW	: Switch once after replacing the Video IC (IC101) or EEPROM IC (Not: If it is switched to "NEW", AFC adjustment must be done again as described in AFC Adj. Sect.).

8. PRESET VALUES OF SERVICE MENU ITEMS

Below given values are average values and can vary according to the CPT type and chassis type.

SIZE	AGC	2.AGC (1)	VIDEO	H.POS	V.POS	V.HEI	LNRTY	S.COR	Y.DLY	OSD.H	OSDV	G.CUT	R.CUT	B.CUT	R.DRV	B.DRV	S.RN	SECBL	AFT38	AFT33 (Sec L')
14"	46	46	OLD	14	4	64	46	0	1	25	33	64	65	64	59	53	0	48	40	61
20"	46	46	OLD	13	4	80	47	0	1	25	33	40	40	40	58	59	0	48	40	61
21"	46	46	OLD	14	4	81	47	0	1	25	33	40	40	40	55	56	0	48	40	61

(1) Please see Section 3 AGC Adjustments.

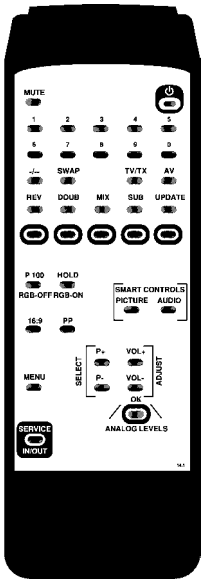

Figure. Service Remote Control