CHASSIS CTS-AB. DIFFERENCES RESPECT TO CHASSIS CTS-AA SERVICE MANUAL

The CTS-AA chassis software (IC 7600) have been modified in order to allow the option of manufacturing TV Set with manual cut-off. These devices will be marked with a chassis change to CTS-AB.

µController for CTS-AA chassis: SAA5531PS/M4/0329 TXT and SAA5541PS/M5/0330 No TXT **µController for CTS-AB and CTS-AA chassis**: SAA5531PS/M4/0657 TXT and SAA5541PS/M5/0658 No TXT
You can find the B diagram at this document. For the rest of diagrams, please, refer to the Chassis CTS-AA Service Manual.

CTS-AA RANGE:

This range remains unaltered as actual, and it's compatible with both versions of µC. When you put the new µC SAA5531PS/M4/0657 or SAA5541PS/M5/0658 (7600), the adjusts don't have any difference with the Service Manual and you can see than in the Service menu will appear new parameters (from nº 25 to 32), which should be ignored, except nº 28, (TXT V-SHIFT) that can be adjusted if it was necessary.

CTS-AB RANGE:

This range incorporates manual cut-off adjust, whereby it must be used the new µC SAA5531PS/M4/0657 or SAA5541PS/M5/0658 (IC 7600), and the RGB circuit have been changed. For a correct µC working in the manual cut-off mode, the resistor R3683 at pin 52 will be mounted to ground, instead of R3686 to positive as mounted in the CTS-AA chassis.

7.2. RGB AMPLIFIERS (diagram B)

RGB CIRCUIT (see B diagram): the active load transistors and the cathode feedback current transistors at pin 33 of IC 7015 have been suppressed, leaving only the amplification transistors (T7205, T7210 y T7213).

8.1. SERVICE MODE

Parameters 25, 26 and 27 have been added to allow the manual cut-off adjust and 28 for the vertical OSD alignment. Parameters 9, 10 and from 29 to 32 must be ignored (To store the values, you must exit the Service menu by pressing the Menu key or Install key of the remote commander).

Number	Description	Pre-adjust 14"	Pre-adjust 20"/21"	Adjust
13	R Gain	3B	3B	See 8.5 White
14	G Gain	38	37	
15	B Gain	37	33	
25	R MAN C-O	29	68	
26	G MAN C-O	35	6C	
27	B MAN C-O	34	66	

Number	Description	Pre-adjust	Adjust
28	TXT V-SHIFT	3	See 8.6 Geometry
29	ADJ.VG2 A-CO		Don't use
30	RESERVED		Don't use
31	RESERVED		Don't use
32	READ STATUS		Don't use

8.5.1. Manual cut-off (Par. 8 menu):

The Manual C - O parameter must be always 00 (manual).

8.5.2 Grid 2 :

- Connect a white pattern generator.
- Adjust contrast at 00 and brightness at 24 (#00 and #18 in service menu, just they are in hexadecimal)
- Adjust the VG2 potentiometer (in line transformer) until the screen light should be roughly visible.

8.5.3 White checking:

For the white adjust with the gray scale pattern, you must use the service menu parameters for the manual cut-off (number 25, 26 and 27), instead of the automatic Cut-Off parameters (number 9 and 10). Gain parameters will be the same as CTS-AA chassis (numbers 14 and 15). It's recommended to start from the pre-adjust values.

8.6. Geometry

If it's necessary you can correct the OSD (and teletext) alignment using the TXT Horizontal-Shift (Parameter 20) and TXT Vertical-Shift (Parameter 28).

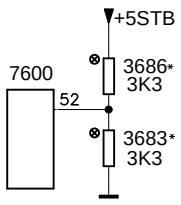
8.8. Error messages

Error message	Error description	Component
E1	New EEPROM memory	Make adjusts
E2	EEPROM communication error	IC7685
E3	Intern µC error	IC7600

Error message	Error description	Component
E4	Bus SDA2/SCL2 communication error	IC7015, PCB tracks
E6	EEPROM Data error	IC7685
E8	Safety input error	IC7015 - pin 46 SAF input

11.1. Replacement parts list.

SEMICONDUCTORS					
DIAG	POS	PART NUMBER	DESCRIPTION	ESPEC	SAF
E	7600	935270805112	IC SAA5541PS/M5/0658 CTS-V1.2 NO TXT	NO TXT	
E	7600	935270806112	IC SAA5531PS/M4/0657 CTS-V1.2 TXT	TXT	
RESISTORS					
B	3202	232A19473123	RES MET.OXID. 12K 2W PM5	14"	⚠
B	3202	406R22030153	RES MET.OXID. 15K 2W PM5	20"	⚠
B	3215	232A19473123	RES MET.OXID. 12K 2W PM5	14"	⚠
B	3215	406R22030153	RES MET.OXID. 15K 2W PM5	20"	⚠
B	3234	232A19473123	RES MET.OXID. 12K 2W PM5	14"	⚠
B	3234	406R22030153	RES MET.OXID. 15K 2W PM5	20"	⚠



A DIAGRAM		
POS	14"	20"/21"
3643	82R	100R
3644	68R	47R
3645	82R	100R
3646	68R	47R
3647	68R	47R
3649	82R	100R
3686	--	--
3683	3K3	3K3

B DIAGRAM		
POS	14"	20"/21"
2204	270P	470P
2217	220P	270P
2230	220P	330P
3202	12K	15K
3204	22R	0R
3208	330R	390R
3215	12K	15K
3221	330R	390R
3234	12K	15K
3244	330R	390R