

# SERVICE MANUAL for UOC TOP model ( Date: 2008-5-1 )

37M10-6/37M10-7/55FM10-4/55FM10-6/55FM10-7/55SM10-4/55SM10-6/55SM10-7

## ( 1 ) Specifications & feature:

1. AC Power supply : 170~240V, 50/60Hz
2. Remote hand set battery: 3V ( AAA x 2pcs )
3. TV system RF input: PAL SECAM BG/DK , Video input: PAL/SECAM/NTSC 3.58/NTSC 4.43
4. Receiving channels : VHF-L, VHF-H, UHF
5. Program number : 200
6. Intermediate frequency ( Picture ) : 38.9MHz
7. Horizontal frequency: 15625/15750 Hz, Vertical frequency : 50/60 Hz
8. Audio output power : 3W/ 8 ohm ( 2pcs 16 ohm speaker in parallel )
9. Side AV x 1 ( RCA socket )
10. Scart x 1 ( rear )
11. OSD language : English , Russian

## ( 2 ) Adjustment manual:

### 1. +B voltage adjustment

- a). Receive a color bar pattern , set picture to "Standard Mode".
- b). Use voltage meter to measure the DV voltage on Capacitor location C551 .
- c). Adjust rheostat PR551 to get voltage meter reading as:
  - =108 8+/- 1V ----- 14"
  - =112 8+/- 1V -----21" PF
  - =125 8+/- 1V ----- 21" Slim

### 2. Service menu adjustment:

- a) Enter service menu
  - Step 1. Set your TV set in TV mode.
  - Step 2. Press MENU key,digit keys 6,4,8,3 & Call key sequent, then Service manual M0 will appear on the screen. Direct press 0,1,2 keys to go M0,M1,M2 pages.
- b) Use Program +/- to select adjust item, use Volume +/- to set the data.
- c) Enter M3 to M9 pages, need go to SETUP SELECT item in M2 page and press Volume+ , mute then 3 to 9 digit keys. Normally M3 to M9 pages do not need adjustment in production line.
- d) Press STANDBY key to exit Service manual mode.

## ( 3 ) Service menu table:

Page	Item	Description	Range	Default		Remark	
				PAL			
				NTSC			
MO	TEST.SW	Internal test signal	0~2	0	0: OFF 1: Central line 2:Checker	no adjustment need.	
	V.SLOPE	Vertical linearity	0~63/-31~+32	35	-01	Adjust PAL system first, then NTSC.	Need adjust to match with CRT
	V.POSI	Vertical center	0~63/-31~+32	36	-01	Adjust PAL system first, then NTSC.	Need adjust to match with CRT
	V.SIZE	Vertical size	0~63/-31~+32	12	+01	Adjust PAL system first, then NTSC.	Need adjust to match with CRT
	V.SC	Vertical S curve adjustment	0~63/-31~+32	13	+09	Adjust PAL system first, then NTSC.	Need adjust to match with CRT
	V.LINE	Vertical linearity adjustment	0~63/-31~+32	33	-04	Adjust PAL system first, then NTSC.	no adjustment need, for Slim model only
	V.SCR	Vertical over scan adjustment	0~63/-31~+32	32	0	Adjust PAL system first, then NTSC.	no adjustment need, for Slim model only
	H.PHASE	Horizontal phase	0~63/-31~+32	41	+01	Adjust PAL system first, then NTSC.	Need adjust to match with CRT
	EW.W	Horization wide adjust	0~63/-31~+32	53	+02	Adjust PAL system first, then NTSC.	Need adjust to match with CRT, for Slim model only
	EW.PW	Horizontal pincushion adjust	0~63/-31~+32	21	0	Adjust PAL system first, then NTSC.	Need adjust to match with CRT, for Slim model only
	EW.TC	Horizontal trapezia adjust	0~63/-31~+32	24	+04	Adjust PAL system first, then NTSC.	Need adjust to match with CRT, for Slim model only

	EW.UCP	Horizontal top corner adjust	0~63/-31~+32	39	0	Adjust PAL system first, then NTSC.	Need adjust to match with CRT, for <b>Slim model only</b>
	EW.LCP	Horizontal bottom corner adjust	0~63/-31~+32	47	+02	Adjust PAL system first, then NTSC.	Need adjust to match with CRT, for <b>Slim model only</b>
	H.BOW	Horizontal bow adjust	0~63/-31~+32	30	+02	Adjust PAL system first, then NTSC.	Need adjust to match with CRT, for <b>Slim model only</b>
	H.PAR	Horizontal parallelogram adjust	0~63/-31~+32	35	+06	Adjust PAL system first, then NTSC.	Need adjust to match with CRT, for <b>Slim model only</b>
	H.BLK.SW	Horizontal blanking adj. On/Off	ON/OFF		ON		no adjustment need.
	H.BLK.L	Left side Hor. Blanking adj.	0~15		0	available when H.BLK.SW = ON	no adjustment need.
	H.BLK.R	Right side Hor. Blanking adj.	0~15		0	available when H.BLK.SW = ON	no adjustment need.
	V.X	Vertical extention	0~63		24		no adjustment need, for <b>Slim model only</b>
	RGB HSH	RGB/YUV horizontal center adjust	0~63		6		no adjustment need, for <b>Slim model only</b>
	PROG	Program setting	0~199				no adjustment need, <b>not for Slim model.</b>
TV DVD							
M1	CL	RGB gain setting	0~15		10	0: -3dB 7: NORMAL 15: +3dB	no adjustment need.
	BLOC	Black level offset	0~15		10	0:-300mv 8: no offset 15:+300mv	no adjustment need.
	R.BIA	Red cut adj.	0~63		33	White balance adjustment	Need adjust to match with CRT
	G.BIA	Green cut adj.	0~63	32	-32	White balance adjustment ,DVD means component input	Need adjust to match with CRT
	B.BIA	Blue cut adj.	0~63		32	White balance adjustment	Need adjust to match with CRT
	R.DRV	Red drive adj.	0~63		32	White balance adjustment	Need adjust to match with CRT
	G.DRV	Green drive adj.	0~63		23	White balance adjustment	Need adjust to match with CRT
	B.DRV	Blue drive adj.	0~63		36	White balance adjustment	Need adjust to match with CRT
	SUB BRT	Sub-brightness adj.	0~63		20		Need adjust to match with CRT
	VSD	Stop vertical scan				Select this item then press V+ key , horizontal line will appear. Adjust FBT Screen Voltage knob to get a horizontal line that is in minimum brightness.	Need adjust to match with CRT
TEST.S	Test signal selection	0~5		0	0: External signal 1: Black screen 2: White screen 3: Red screen 4: Gree screen 5: Blue screen	no adjustment need.	
PAL NTSC							
M2	RF.AGC	RF AGC adj.	0~63		20	Receive 62dBv RF signal, adjust RF.AGC to set the picture noise just disappear.	Need adjustment
	OSD.V.POS	OSD vertical position adj.	0~63/0~63	18	16	Adjust PAL system first, then NTSC.	no adjustment need.
	OSD.H.POS	OSD Horizontal position adj.	0~63/0~63		15		no adjustment need.
	CURT.POS	Draught screen beginning position selection	0~2		0		no adjustment need.
	OSD BRT	OSD brightness adj.	0~15		15		no adjustment need.
	SHIPPING	Factory initialization				Select this item and press V+ key for system initialization	no adjustment need.
SETUP SELECT	M3 to M9 pages switch	0/1		0	Select this item then press V+,mute keys sequent. Then press 3-9 keys to go M3 - M9 pages.	For change pages	
M3	SUB CONT	Sub-contrast adj.	0~63		63		no adjustment need.
	SUB COLOR	Sub-color adj.	0~63		63		no adjustment need.
	SUB SHARP	Sub-sharpness adj.	0~63		63		no adjustment need.

SUB TINT	Sub-tint adj.	0~63	31		no adjustment need.
COF	Cut off voltage range setting	0/1	0	0:normal range (+/-270mV) 1:increase range (+/-450mV)	no adjustment need.
THAI	Thailand OSD select	ON/OFF	OFF		no adjustment need.
VIETNAM	Vietnam OSD select	ON/OFF	OFF		no adjustment need.
INDONESIAN	Indonesian OSD select	ON/OFF	OFF		no adjustment need.
FRENCH	French OSD select	ON/OFF	OFF		no adjustment need.
TURKISH	Turkish OSD select	ON/OFF	OFF		no adjustment need.
PORTUGUESE	Portuguese OSD select	ON/OFF	OFF		no adjustment need.
BULGARIAN	Bulgarian OSD select	ON/OFF	OFF		no adjustment need.
RUSSIAN	Russian OSD select	ON/OFF	On		no adjustment need.
FARSI	Farsi OSD select	ON/OFF	OFF		no adjustment need.
ARABIC	Arabic OSD select	ON/OFF	OFF		no adjustment need.
RUMANIAN	Rumanian OSD select	ON/OFF	OFF		no adjustment need.
SPANISH	Spanish OSD select	ON/OFF	OFF		no adjustment need.
ITALIAN	Italian OSD select	ON/OFF	OFF		no adjustment need.
GERMAN	German OSD select	ON/OFF	OFF		no adjustment need.
DUTCH	Dutch OSD select	ON/OFF	OFF		no adjustment need.
SWEDISH	Swedish OSD select	ON/OFF	OFF		no adjustment need.
NORWEGIAN	Norwegian OSD select	ON/OFF	OFF		no adjustment need.
HUNGARIAN	Hungarian OSD select	ON/OFF	OFF		no adjustment need.
POLISH	Polish OSD select	ON/OFF	OFF		no adjustment need.
CZECH	Czech OSD select	ON/OFF	OFF		no adjustment need.
SLOVENE	Slovene OSD select	ON/OFF	OFF		no adjustment need.
CROATIAN	Croatian OSD select	ON/OFF	OFF		no adjustment need.
MACEDONIAN	Macedonian OSD select	ON/OFF	OFF		no adjustment need.
SERBIAN	Serbian OSD select	ON/OFF	OFF		no adjustment need.
GREEK	Greek OSD select	ON/OFF	OFF		no adjustment need.
KENYA	Kenya OSD select	ON/OFF	OFF		no adjustment need.

M4	VAI	I system signal output level adj.	0~1	1	0:normal 1: increase 12%	no adjustment need.
	CBS	ABL control method	0~1	1	0: Contrast action first, then brightness 1: Contrast and brightness control at the same time.	no adjustment need.
	RPA	Signal pre-shot , over-shot adj.	0~3	2	0 1:1 1 1.5:1 2 2:1	no adjustment need.
	RPO	Signal pre-shot & over shot level adjustment	0~3	2	0 1:1 1 1:1.3 2 1:1.7 3 1:0.7	no adjustment need.
	TCI2X	CVBS/Y sync signal clamping current	0~1	0	0: 80UA 1:160UA	no adjustment need.
	BKS	Black stretch switch	ON/OFF	ON		no adjustment need.
	BSD	Black stretch level	0~1	1	0:15 IRE 1:30 IRE	no adjustment need.
	AAS	Black area to switch off the black stretch	0~3	1	0:12% back ground 1:20% 2:6% 3:8%	no adjustment need.
	PWL	White level peaking limit	ON/OFF	OFF		no adjustment need.
	SOC	Soft clipping & peak white level difference	0~3	1	0:0% above PWL level 1:5% 2:10% 3:OFF	no adjustment need.
	PWLDAC	Video level of peak white limiting active	0~15	5	0: 0.4V <sub>BL-WH</sub> 15: 0.6V <sub>BL-WH</sub>	no adjustment need.
	CHSE	Color sensitivity setting	0~3	3	0:-34dB 1:-37dB 2:-41dB 3:-46B	no adjustment need.
	S.IDENT	S-VIDEO identify switch	ON/OFF	OFF	Available when S-VHS=ON ,UHF BAND=0 (M9)	no adjustment need.
	GAME	Game selection	ON/OFF	OFF		no adjustment need.
CALENDAR	Calendar selection	ON/OFF	OFF		no adjustment need.	

M5	IF	Tuner IF frequency setting	38M/38.9M/45.75M	38,9		no adjustment need.
	OIF	IF compensation	0~15	8	0~7:negative compensation 8:Off 9~15: positive compensation	no adjustment need.
	FFI	IF PLL fast speed filter	0~1	0	0:Normal 1: Increase	no adjustment need.
	AGCS	AGC SPEED	0~3	2	0: 0.7X 1:NORMAL 2:3X 3:6X	no adjustment need.
	DCXO	Crystal loading capacitor compensation	0~3	2		no adjustment need.
	FSL	Vertical sync cut off level	0~1	1	0:dependent on noise detector 1:fixed slicing level of 60%	no adjustment need.
	SSL	Horizontal sync cut off level	0~1	1	0: 50% 1:30%	no adjustment need.
	GD	Group delay compensation	0~1	1	0:OFF 1: ON	no adjustment need.
	AKB	AKB selection	ON/OFF	ON		no adjustment need.
	ON V.A	Increase vertical scan amplitude in power on mement	0~15	0	available when AKB was on	no adjustment need.
	DFL	Power reset mode after protection	0~1	0	0:Soft start 1: normal	no adjustment need.
	XDT	X-ray protection	0~1	0	0:Standby mode 1: normal	no adjustment need.
	FBC	Fixed beam current switch off	0~1	0	0: RGB blanking 1:power off with a fix beam current.	no adjustment need.
	IFS.RED	IF sensitivity	0~1	1	0:normal 1: reduced	no adjustment need.
MUTE MODE	Mute method in program change period	0/1	0	0: mute on in program change period 1: mute control pin no change.	no adjustment need.	
M6	CLF	internal clamping speed	0~1	0	0:Slow 1:fast	no adjustment need.
	BPB	MONO sound band pass filter setting	0~1	0	0:band pass filter on 1:Bypassed	no adjustment need.
	BPB2	2nd audio band pass filter setting	0~1	1	0:band pass filter on 1:Bypassed	no adjustment need.
	FMWS	FM detection bandwidth setting	0~3	2	0: 100KHZ 1:225KHZ 2:450KHZ 3:900KHZ	no adjustment need.
	AGN	FM detection Gain	0~1	0	0:NORMAL 1:+6dB	no adjustment need.
	AGNE	FM detection Gain extend	0~3	0	0:NORMAL 1:+3.8dB 2:-6dB 3:-3dB	no adjustment need.
	AVL	Auto Volume limit.	ON/OFF	OFF		no adjustment need.
	DSGLS	LOUDSPEAKER OUTPUT gain	0~1	0	0:0dB 1:+6dB	no adjustment need.
	V.P1	Volume curve 1(set audio output level at Vol=1)	0~100	10		no adjustment need.
	V.P25	Volume curve 2(set audio output level at Vol=25)	0~100	50		no adjustment need.
	V.P50	Volume curve 3(set audio output level at Vol=50)	0~100	70		no adjustment need.
	V.P75	Volume curve 4(set audio output level at Vol=75)	0~100	85		no adjustment need.
	V.MAX	Max. Volume setting	0~63	52		no adjustment need.
	ON DL	AC power on delay timing	3~16	3		no adjustment need.
	OFF DL	Standby delay setting	0~7	0	Set to 1 easier for discharge High Voltage	no adjustment need.
	ONOFF MODE	Brightness gradual change in power on/off moment	0~1	0	0: off , 1: on . If set to 1, draught screen inefficacy.	no adjustment need.
BGDM	BANDGAP mode	0~1	0		no adjustment need.	
M7	MAT	Color decode matrix setting	N-JPN/PAL;N-USA/PAL;PAL MAT;N-JPN MAT;N-USA MAT	PAL MAT		no adjustment need.
	ACL	Auto color limit	0~1	0	0:OFF 1:ON	no adjustment need.

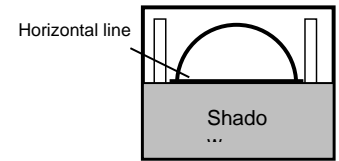
CB	Center frequency of color band pass filter	0~1	0	0:fsc 1: 1.1*fsc	no adjustment need.
BPS	color base band delay	0~1	0	0:delay line on 1:Bypassed	no adjustment need.
FCO	force to color decode on	0~1	0	0:OFF 1:ON	no adjustment need.
Y.P	PAL system Y signal delay	0~15	8	Delay time = YD3*160ns+YD2*160ns+YD1*80ns+YD0*40ns	no adjustment need.
Y.S	SECAM system Y signal delay	0~15	8		no adjustment need.
Y.N	NTSC system Y signal delay	0~15	8		no adjustment need.
Y.AV	AV signal Y delay	0~15	8		no adjustment need.
Y.SVHS	S-VHS signal Y delay	0~15	8		no adjustment need.
PF.P	PAL signal PEAKING centre frequency & delay setting	0~3	1		0: 2.7MHZ 190ns 1: 3.1MHZ 160ns 2: 3.5MHZ 143ns 3: 4.0MHZ 125ns
PF.S	SECAM signal PEAKING centre frequency & delay setting	0~3	1	no adjustment need.	
PF.N	NTSC signal PEAKING centre frequency & delay setting	0~3	1	no adjustment need.	
PF.AV	AV signal PEAKING centre frequency & delay setting	0~3	1	no adjustment need.	
RGB HSH	RGB/YUV signal Horizontal centre adj.	0~63	3		no adjustment need.
C.PHI.1	PHI1 PLL timing selection in draught screen mode	0~1	0	0:Slow 1: NORMAL	no adjustment need.
M8	S.BRT	Standard mode brightness setting	0~100	75	no adjustment need.
	S.CONT	Standard mode contrast setting	0~100	75	no adjustment need.
	S.COLOR	Standard mode color setting	0~100	60	no adjustment need.
	S.SHARP	Standard mode sharpness setting	0~100	50	no adjustment need.
	D.BRT	Dynamic mode brightness setting	0~100	85	no adjustment need.
	D.CONT	Dynamic mode contrast setting	0~100	90	no adjustment need.
	D.COLOR	Dynamic mode color setting	0~100	70	no adjustment need.
	D.SHARP	Dynamic mode sharpness setting	0~100	50	no adjustment need.
	M.BRT	Soft mode brightness setting	0~100	50	no adjustment need.
	M.CONT	Soft mode contrast setting	0~100	50	no adjustment need.
	M.COLOR	Soft mode color setting	0~100	50	no adjustment need.
	M.SHARP	Soft mode sharpness setting	0~100	50	no adjustment need.
	W.BRT	Brightness setting in whit balance adj. mode	0~100	75	no adjustment need.

	W.CONT	Contrast setting in whit balance adj. mode	0~100	75		no adjustment need.
	W.COLOR	Color setting in whit balance adj. mode	0~100	0		no adjustment need.
	SC BRT	Horizontal line brightness setting	0~100	50		no adjustment need.
	COOL	Cool mode white balance setting	0~63	8		no adjustment need.
	WARM	Warm mode white balance setting	0~63	8		no adjustment need.
M9	AV2	AV2 selection	ON/OFF	ON		no adjustment need.
	SVHS	S-VHS selection	ON/OFF	OFF		no adjustment need.
	DVD	DVD selection ( YUV )	ON/OFF	OFF		no adjustment need.
	EURO	EUROPE mode AV selection	ON/OFF	ON		no adjustment need.
	AUTO SND	Auto Audio system detection	ON/OFF	ON	If off, all channel audio system will be set to the same system as current channel after auto program process.	no adjustment need.
	BG	BG system selection	ON/OFF	ON		no adjustment need.
	I	I system selection	ON/OFF	OFF		no adjustment need.
	M	M system selection	ON/OFF	OFF		no adjustment need.
	DK	DK system selection	ON/OFF	ON		no adjustment need.
	SIF PRI	Audio system preset	DK/M/BG/I	BG	Set the first priority ident sound system in Auto program process.	no adjustment need.
	POWER RESET	Power on mode selection	0~3	0	0:TV mode, if last memory is standby mode, keep standby mode. 1:Last memory 2:TV mode 3: Standby mode	no adjustment need.
	BALANCE	Audio balance control selection	ON/OFF	OFF	Off: mono mode, pin58 is for AUDIO MONITOR OUT. On: AV STEREO mode, pin7 is for TV FM sound output, through 4052 switch as MONITOR OUT.	no adjustment need.
	HALFTONE	half tone OSD selection	ON/OFF	ON	If HALFTONE=ON & MENU BG=ON, then OSD = halftone.If HALFTONE=ON & MENU BG=OFF, then OSD = transparency If HALFTONE=OFF & MENU BG=ON, then OSD=opacity	no adjustment need.
	MENU BG	OSD background	ON/OFF	OFF		no adjustment need.
	IR OPT	Remote code selection	SANYO/NEC	SANYO		no adjustment need.
	KEY OPT	Keyboard control selection	SANYO/MEK	SANYO		no adjustment need.
	CURTAIN	Draught screen setting	0~2	0	0:off 1:up/down draught screen 2:left/right draught screen	no adjustment need.
	LOGO	Display LOGO when power on	ON/OFF	OFF		no adjustment need.
	TILT	Tilt control	ON/OFF	OFF		no adjustment need.
	B.BACK	Blue back control	ON/OFF	ON		no adjustment need.
	ASM OPT	Auto program mode	0~1	1	0:Auto search and memory beginning from current program number. 1:Auto search and memory beginning from program number 0	no adjustment need.
	UHF BAND	UHF band selection	0~1	0	0:off 1:on , for 3 band tuner	no adjustment need.
	VH	FS TUNER VHF frequency range setting			For FS tuner only	no adjustment need.
	UHF	FS TUNER UHF frequency range setting			For FS tuner only.	no adjustment need.
	V.MUTE P.OFF	VIDEO MUTE in power off moment	ON/1~7	ON	if set to 1~7, no draught screen in power off moment.	no adjustment need.
	AV OUT	AV output video signal select	CVBS/IF	CVBS		no adjustment need.

#### ( 4 ) Vertical & Horizontal scanning adjustment:

Receive standard Monoscope pattern signal for PAL system . Enter M0 page of service menu.

- a) Adjust V.SLOPE value to get the horizontal line just appear from half bottom shadow.
- b) Adjust V.POSI value to get the center horizontal line correspond to CRT vertical center.
- c) Adjust V.SIZE value to set 90% of vertical picture full scan content.
- d) Adjust H.PHASE value to get the picture horizontal center correspond to CRT horizontal center.
- e) Adjust EW.PW value to get picture pincushion distortion in minume level.
- f) Adjust EW.TC value to get picture trapezia distortion in minume level.
- g) Adjust EW.BOW value to get picture bow distortion in minume level.
- h) Adjust EW.PAR value to get picture parallelogram distortion in minume level.
- i) Adjust EW.UCP value to get picture distortion of top corner in minume level.
- j) Adjust EW.LCP value to get picture distortion of bottom corner in minume level.
- h) Adjust EW.W vlue to set 94% of horizontal picture full scan content.
- i) Receive standard Crosshatch pattern signal for NTSC system, and adjust again for NTSC system.



Remark: step e) to h) are only for Slim CRT.

#### ( 5 ) RF AGC adjustment:

Receive 62dBuV +/- 1 dB color bar signal, adjust AGC value (Adjust from low to high) in M2 page to reduce picture noise to be just disappeared gradually.

#### ( 6 ) Screen voltage adjustment:

- a) Receive Philips pattern
- b) Go to VSD item of M1, press Volume + key then the vertical scan will be stop.
- c) Adjust FBT Screen Voltage knob to get a horizontal line that is in minimum brightness.
- d) Press Volume + or - key again to active vertical scan and Screen voltage adjustment completed

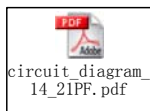
#### ( 7 ) White balance adjustment:

- a) Receive gray and white 2 steps signal.
- b) Enter M1 page of service menu
- c) adjust R.BIA, G.BIA, B.BIA, R.DRV, G.DRV, BDRV items to set a suitable color temperature.

#### ( 8 ) Sub-brightness adjustment:

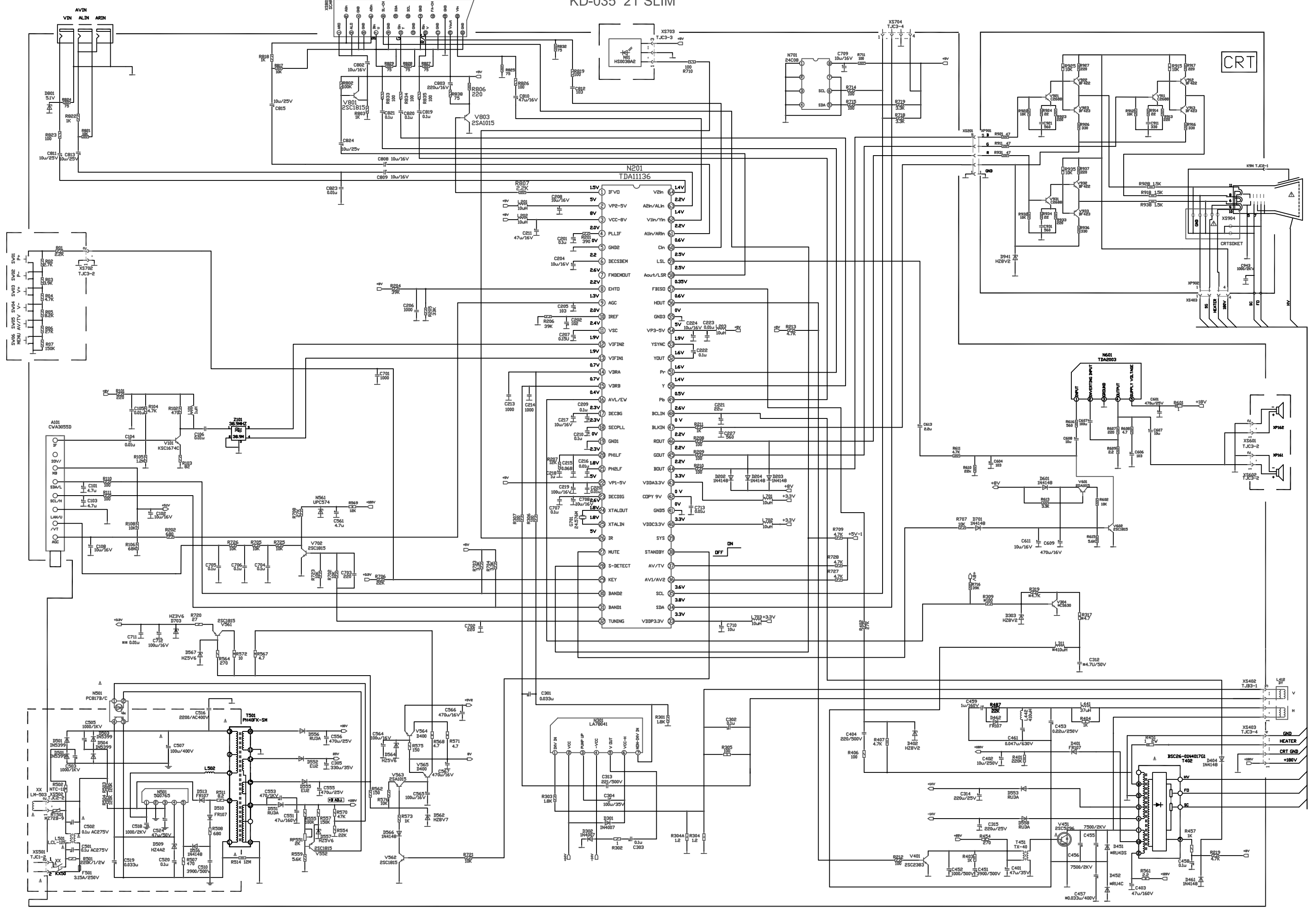
- a) Receive a gray scale signal
- b) Enter Service menu M1 page, use Program +/- keys to select SUB BRT item.
- C) Use Volum +/- keys to set the darkest step to just turn off the light.

#### ( 3 ) Reference Circuit diagram :



**END**

KD-035 21"SLIM





KD-035 14"NF/21"PF

