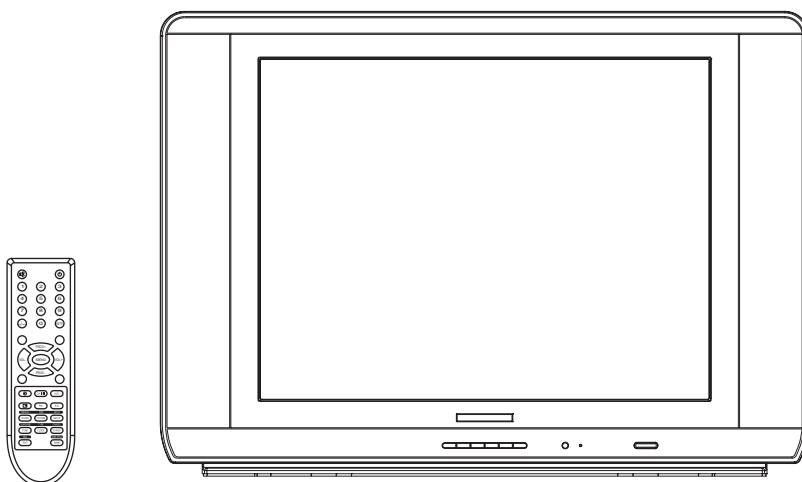


SERVICE MANUAL

5P18 CHASSIS



Design and specifications are subject to change without prior notice
(ONLY REFERENCE)

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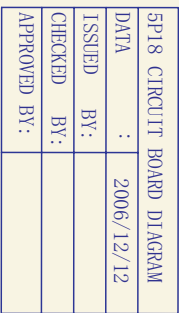
Technical Specification

SPECIFICATIONS

Receiving System	: BG , DK , I , M
Colour System	: PAL / SECAM / NTSC
Picture Tube	: 74cm (29") diagonal
Ext. Antenna	: 75 Ohm Coaxial Cable
Ext. In/Out	: Audio/video -in/out , S-Video Side AV-In
Speaker	: 8Ohm(12W) x 2,
Audio Output(MAX)	: 1KHZ 0.5Vrms, 6Wx2
10% THD Audio Output Power	: 1KHZ 0.5Vrms, 6Wx2
Power Consumption	: AC 90-260V 50/60Hz, 150W MAX
Standby Power Consumption	: AC 220V 50/60Hz, 5W MAX
Dimension	: 804(W) x 513(D) x 573(H)mm
Net Weight	: 45.2kg
REMOTE CONTROL	
Transmitting System	: Infrared
Power Supply	: DC 3V (1.5 x 2)
Dimension	: 28(W) x 155(L) x 45(D)mm
Net Weight	: 83 g

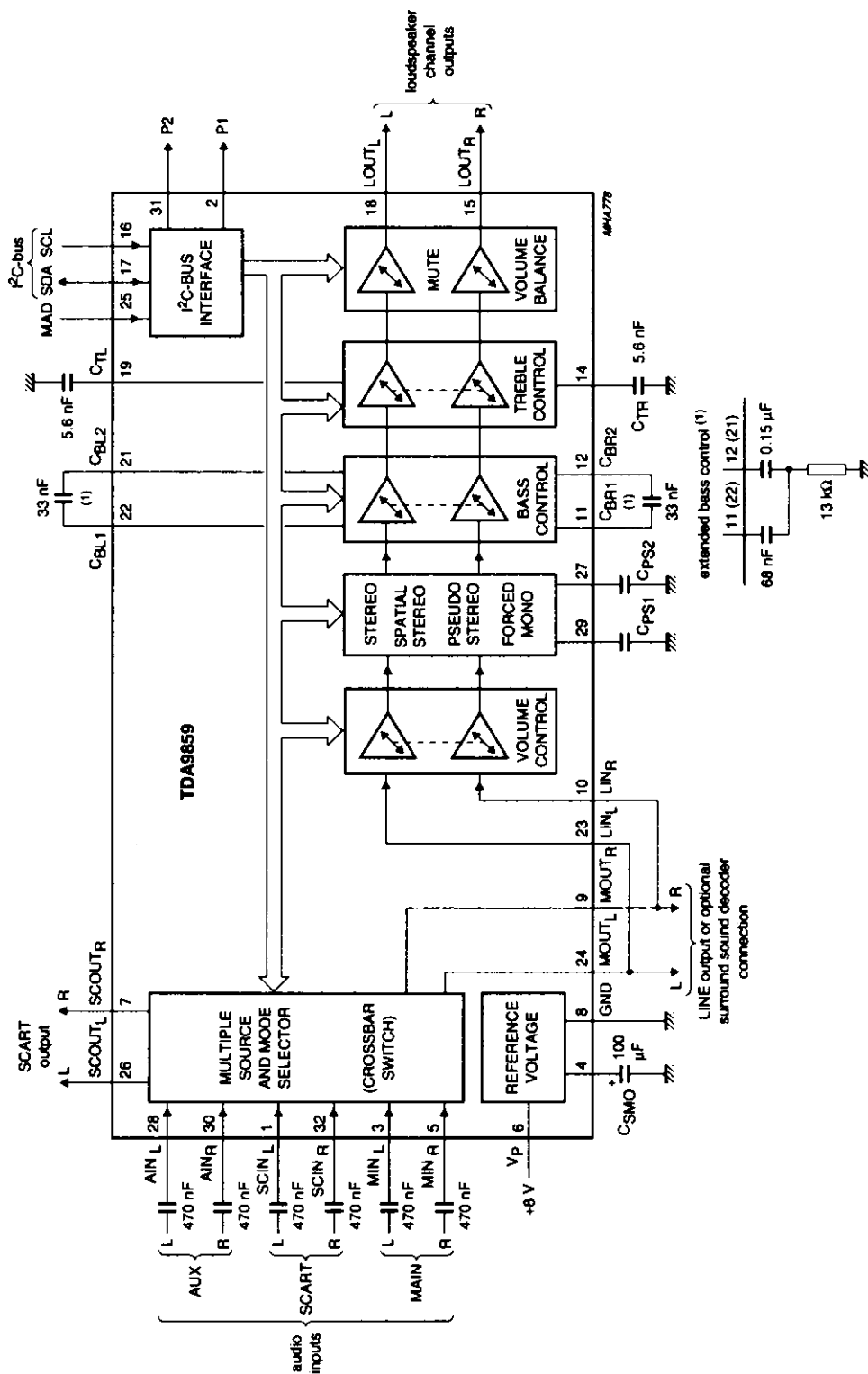
Design and specifications are subject to change without prior notice.

Chassis Block Diagram



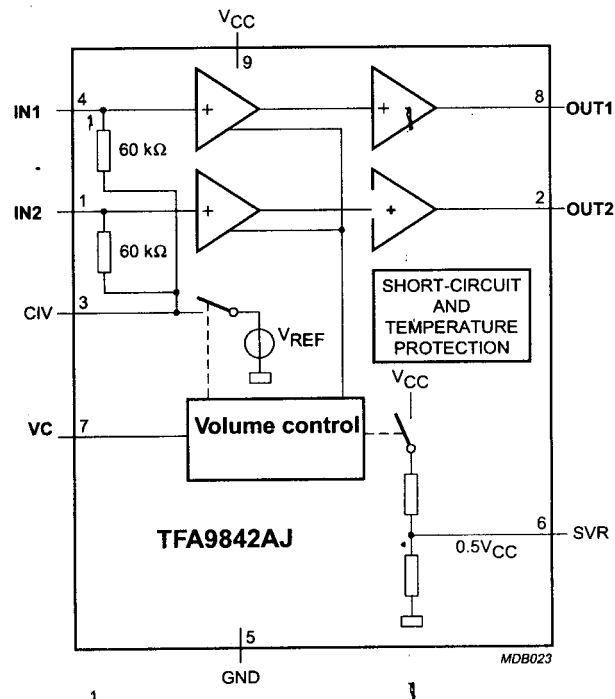
IC Block Diagram

IC701(UNIVERSAL HI-FI AUDIO PROCESSOR FOR TV)TDA9859

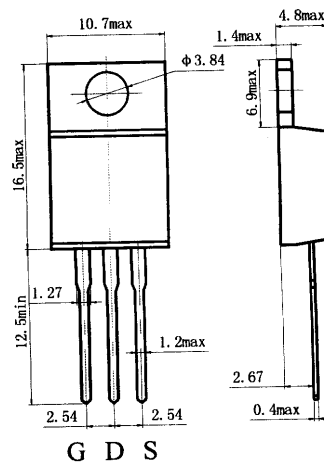


IC Block Diagram

IC 161(2CHANNEL AUDIO AMPLIFIER WITH VOLUME CONTROL)TFA19842AJ

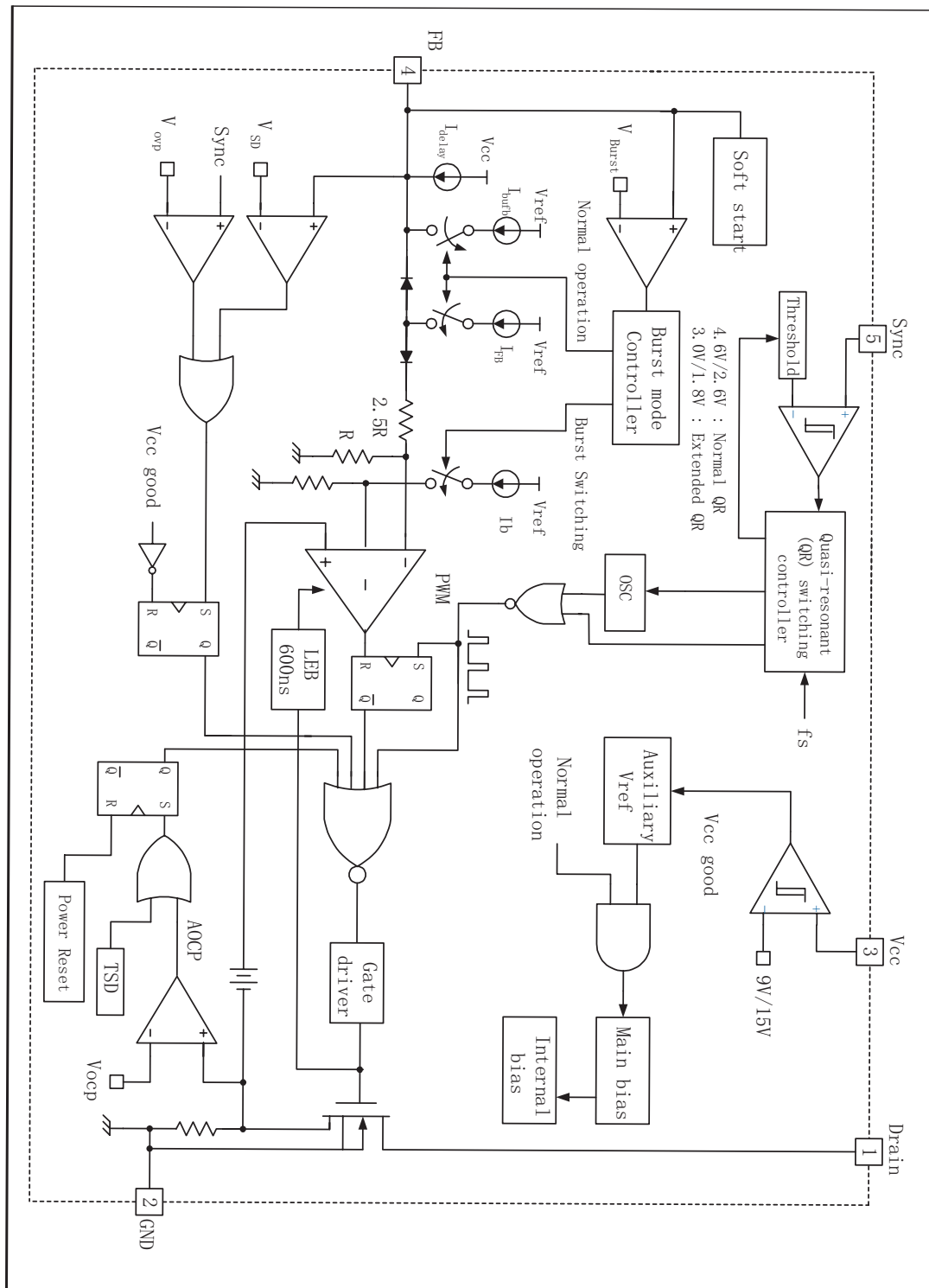


IC301(200V/6.3AN-CHANNEL MOSFET) CS630F



IC Block Diagram

IC601(QUASIRESONANT SWITCHING CONVERTER)FSCQ1265RT



IC Block Diagram

Ic201

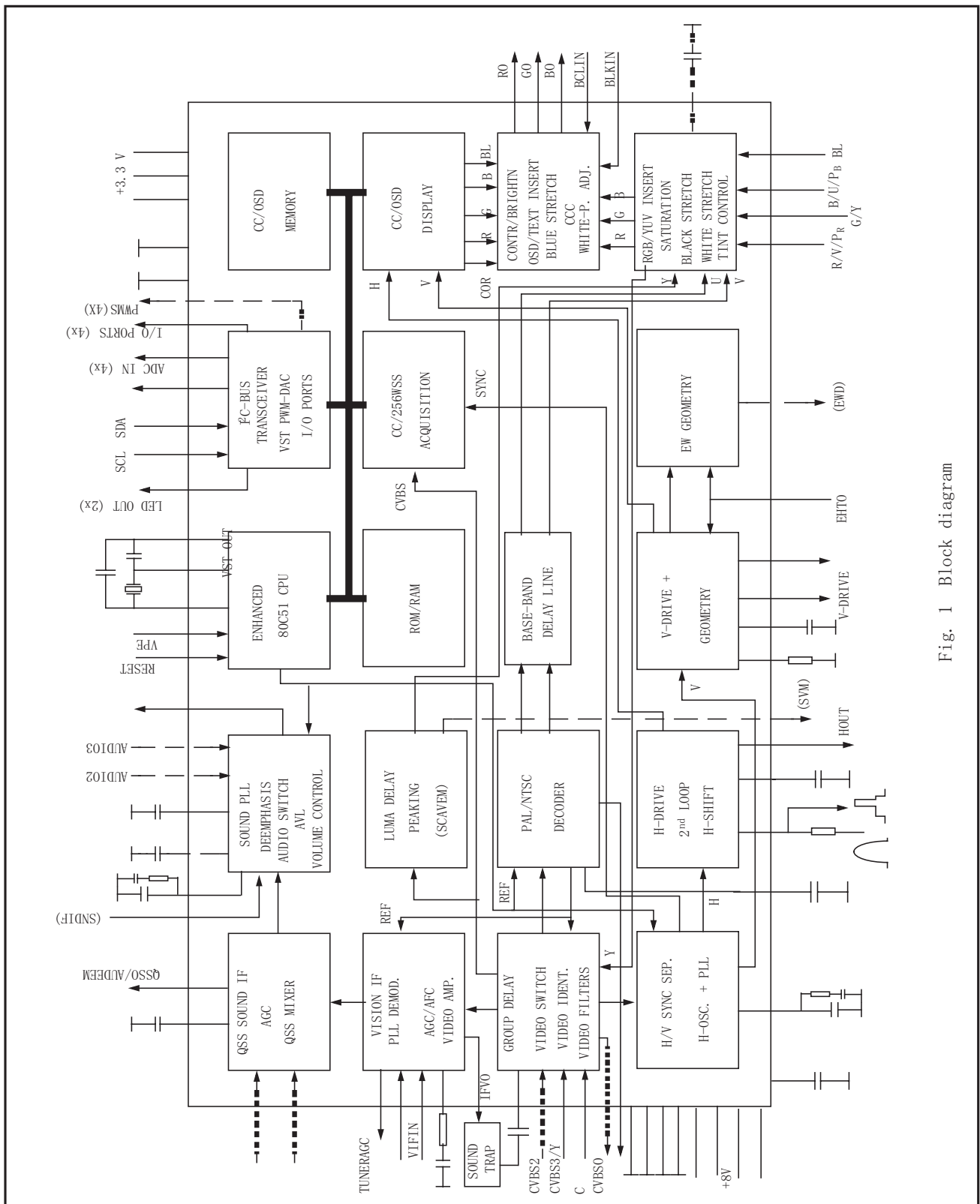
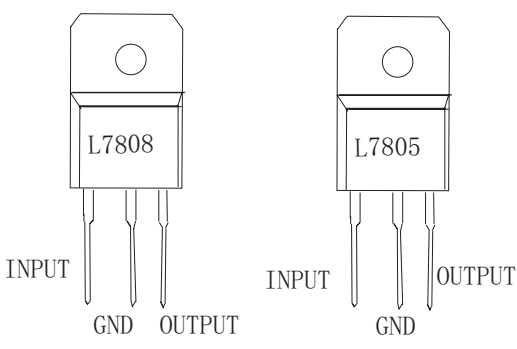
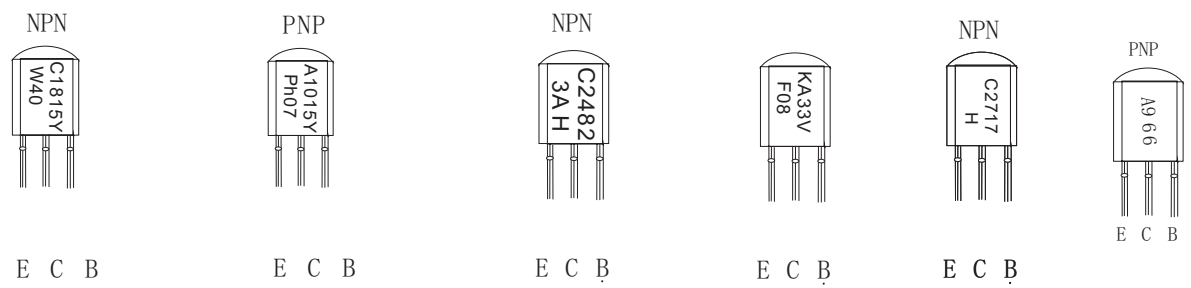
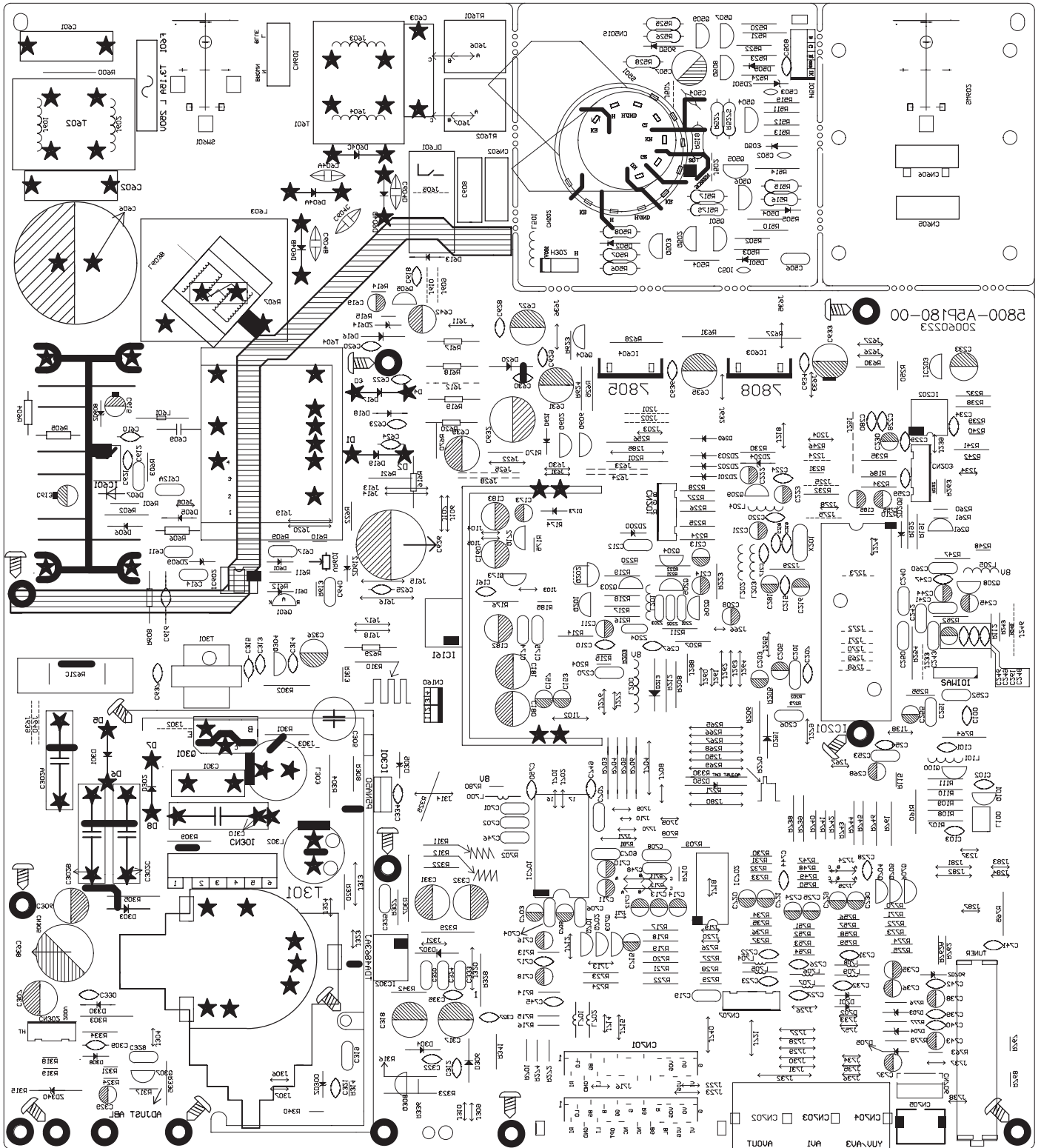


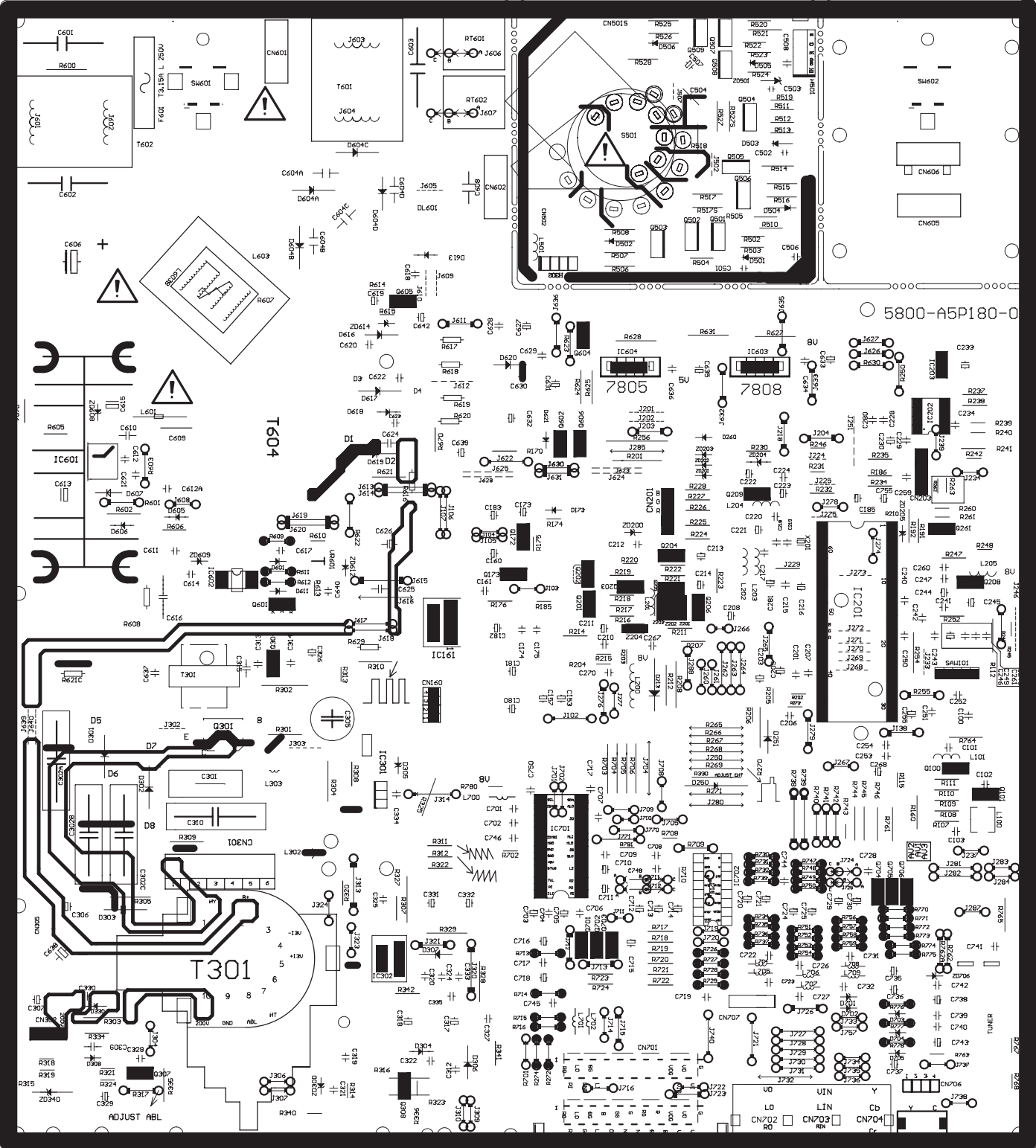
Fig. 1 Block diagram

Transistor Mark



Main PCB Top Layer





Service Adjustments

0、factory centre signals

Items	Sign	Picture carrier wave\	Picture content	System	Sound content	Remark
1	CHN-1CH	49.75	P block	PAL--I	1KHz	
2	WE-6CH	182.25	Red	PAL--BG	L: R:400HZ	stereo /TELETEXT
3	CHN-12CH	695.25	ash/half color bar	SECAM--D/K	Sweep frequency	
4	CHN-13CH	471.25	Pane	PAL—D/K	1KHZ	
5	USA-3CH	61.25	Color bar	NTSC--M	1KHZ	
6		751.25	Digital card	PAL--I	A: Sweep frequency B: music C: 1KHZ	I NICAM
7	WE-S20CH	294.25	half color bar	PAL--BG	A:400HZ B:1KHZ	Double sound
8		224.25	P card	PAL--BG	A: Sweep frequency B: music C: 1KHZ	B/G NICAM
9		85.25	Pane circularity	PAL—D/K	Sweep frequency	16 : 9
10		199.25	Pane	NTSC--M	Sweep	America stereo
11	USA-31CH	573.25	Digital card	NTSC—M	1KHZ	

1. FACTORY MODE:

- (1) Press CLOCK, P.M. and  keys in turn to enter Engineer adjust mode, and press “DISPLAY” to exit.
- (2) Press digital keys to enter every adjust page, use PROG+/- keys to pick adjust items, use VOL+/- keys to adjust the value.
- (3) Press DISPLAY to quit factory mode.

2. B+ VOLTAGE ADJUST

Measure C600A + voltage, adjust VR641 to get proper B+ voltage according to CRT assembly list requirement.

Service Adjustments

- d. If necessary, fine adjust above items.
- e. Receive 50HZ RGB or YUV cross hatch signal, set TV to STANDARD mode, adjust 5RGH till picture horizontal center is at the CRT center.(OPTION)
- f. Receive 60HZ RGB or YUV cross hatch signal, repeat above items.(OPTION)

Instruction: The items with * should be adjusted according to whether the machine has RGB or YUV function.

(5) OSD POSITION:

- a. Menu OSD position adjustment: Receive 50/60HZ cross hatch pattern. Set TV standard status. Press **KEY 2** in factory mode, adjust 5VOF/6VOF and HOF item, to obtain menu OSD at the center of CRT screen;
- b. LOGO position adjustment: Receive 50/60HZ cross hatch pattern. Set TV standard status. Press **KEY 7** in factory mode, adjust XMIN,XMAX,YMIN, and YMAX item, to obtain LOGO at the center upto 1/3 of CRT screen.
- c. TELETEXT OSD position adjustment: Receive 50/60HZ TELETEXT signal. Set TV standard status. Press **KEY 7** in factory mode, adjust TXMI and 5TYM items, to obtain INDEX at the center of CRT screen.

(6) White Balance Adjustment (Applied in factory) (KEY 3)

Normally, this chassis can auto adjust white balance, but for some CRT need to adjust white balance carefully by hand, Set BRIGHTNESS and CONTRAST at normal status , receive GREY SCAL and entering factory mode press KEY 3, set WPR at 31, adjust WPG and WPR to obtain white balance.

(7) Focus adjust:

Check the color purity of CRT , if the color purity is badness, please adjust it as the following items again.

- a. incept point signal, make sure the TV is set to be dynamic.
- b. Loosen the assemble magnetism patch fastness nip, turn the red and the blue magnetism ring, make the two points folded at the center of the screen.
- c. Rotate the red blue-green whisht assemble magnetism ring, make the red, blue and the green point folded at the center of the screen.
- d. Take the fastness wedge of the deflexion winding DY off, lean the deflexion winding in the level and the vertical directions gently in order to get a favorable moving assemble, which can make the points at the edge of the screen clearer, and rotate the fastness nip finally.
- e. Insert the fastness wedge and fix it up, first, insert the left at the bottom one, then the left at the bottom, the right at the top and the left at the top ones.

5、memorizer facture (for engineering department)

(1) E2PROM initialization (KEY 8):

We can use an empty E2PROM when making the sample TV or repairing, also can use

Service Adjustments

the E2PROM which has been full of data, but you must follow the steps below to initialize the E2PROM.

Press the keys **CLOCK** , **P.M.**,  in turn to enter the factory mode。 Press KEY 8,VOL +/- in turn, you may see the OSD"BUSY" after the "INIT" on the screen。About a while, the character"BUSY"will disappear, then POWER OFF and ON the TV, the initialization is completed。

(2) FUNCTION SETTING (KEY 5)

Press the keys "**CLOCK**" , "**P.M.**", "" in turn to enter the factory mode。 Press KEY 5 to enter the setting menu。

b.Set values to OPTION 1- OPTION 7

c.LOGO setting when powered on or no signal: Press key **CLOCK** in factory menu to enter the LOGO edit mode, there are two rows, the 1st can set the customer's name etc, and the 2nd row can set to display the customer's e-mail, phone...。 Press the keys "PROG +/- "to select the character to edit, use keys "VOL+/-" to choose the charater.

The detailed instruction of 3P51/5P18

Item	Storage address	Display string	Range (Index value)		Default value
Information of the factory menu		RELEASE2.0;	Software Version		Fixed, not changeable
Drect key “8”					
Initialization		INIT	initialize	1	0
			uninitialize	0	
Instruction		Press key “VOL +”, you can see the character "INIT BUSY " is active, Exit the menu and turn off the TV after the character disappearing, reopen it can have a success to innitalize。 Then the program has been stored in the memorizer, and then need to readjust the parameter of the factory menu。			
Drect key “0”					
Screen Voltage		A level bright line			
Instruction		Adjust the screen voltage under Tv standard mode and no signal input, just can see the line is ok。			
遥控器按键 “1”					
Horizontal paralellogram 50Hz	29	5PAR	0-63		31
Horizontal bow 50Hz	2A	5BOW	0-63		31
Instruction		The above value be adjusted ± 10 can be OK,the default value is31			

Service Adjustments

Item	Storage address	Display string	Range (Index value)	Default value
Horizontal shift 50Hz	2B	5HSH	0-63	19
EW width 50Hz	2C	5EWW	0-63	33
EW parabola/width 50Hz	2D	5EWP	0-63	19
EW upper corner parabola 50Hz	2E	5UCR	0-63	33
EW lower corner parabola 50Hz	2F	5LCR	0-63	18
EW trapezium 50Hz	30	5EWT	0-63	43
Horizontal parallelogram 60Hz	37	6PAR	0-63	31
Horizontal bow 60Hz	38	6BOW	0-63	31
Horizontal shift 60Hz	39	6HSH	0-63	31
<i>Instruction</i>		The above value be adjusted ± 10 can be OK, the default value is 31		
EW width 60Hz	3A	6EWW	0-63	33
EW parabola/width 60Hz	3B	6EWP	0-63	19
EW upper corner parabola 60Hz	3C	6UCR	0-63	44
EW lower corner parabola 60Hz	3D	6LCR	0-63	10
EW trapezium 60Hz	3E	6EWT	0-63	44
Drect key "2"				
Vertical slope 50Hz	31	5VSL	0-63	31
Vertical amplitude 50Hz	32	5VAM	0-63	10
S-correction 50Hz	33	5SCL	0-63	31
<i>Instruction</i>		generally ,SCL can be setted to be 31。		
Vertical shift 50Hz	34	5VSH	0-63	22
Horizontal shift 50Hz on RGB mode	35	5RGH	0-63	38
OSD vertical position offset 50Hz	36	5VOF	0-63	38
<i>Instruction</i>		Horizontal shift on RGB mode generally between 30 to 42, the direct way is to connect the two Tv's SCART。Adjust the Value		
Vertical slop 60Hz	3F	6VSL	0-63	31
Vertical amplitude 60Hz	40	6VAM	0-63	11
S-correction 60Hz	41	6SCL	0-63	31
Vertical shift 60Hz	42	6VSH	0-63	23
Horizontal shift 60Hz on RGB mode	43	6RGH	0-63	38
OSD vertical position offset	44	6VOF	0-63	31

Service Adjustments

Item	Storage address	Display string	Range (Index value)	Default value
60Hz				
OSD horizontal position offset	45	HOF	0-63	42
Vertical zoom	46	VX	0-63	32
<i>Instruction</i>		Adjust this item when lack of vertical amplitude will lead to the picture can't be full of the screen, then need to adjust the resistance's(R318,R319) value.		
Direct Key "3"				
Black level off-set R		RED	0-63	32
Black level off-set G		GRN	0-63	32
White point R (<i>Direct Key "Red"</i>)		WPR	0-63	31
White point G (<i>Direct Key "Green"</i>)		WPG	0-63	31
White point B (<i>Direct Key "Blue"</i>)		WPB	0-63	45
<i>Instruction</i>		The white balance can be adjusted automatically on this machine, only one or two tube need to be adjusted, generally the value of RED and GRN between 23 to 39,if adjust excessively will lead the picture faded. (Remark: because of the higher colour temperature, it's normal that you feel a little red.)		
Luminance delay time PAL		YDFP	0-15	8
<i>Instruction</i>		This item has the function to adjust the luminance and colour delay, change the NO. on P card, make the boundary of central green and purple accord with the border of above gray pane.		
Y delay time NTSC		YDFN	0-15	8
Y delay time SECAM		YDFS	0-15	8
Y delay time AV		YDAV	0-15	8
Mute delay setting 0-200ms		MUTD	0-20	13
Switch program NICAM mute delay		MDEL	0-127	60
NICAM carrier frequency fine adjust		INIC	0-31	16
NICAM frequency width adjust		FILT	0-3	2

Service Adjustments

3. RF AGC ADJUSTMENT

- (1)Receive 294.25MHz,60dBcolor bar signal.
- (2)Enter factory mode and press digital key “4”.
- (3)Measure tuner AGC point voltage, adjust AGC item till the voltage is 2.4V,or till picture noise just disappears.

4、 FINE ADJUST:

(1) FOCUS ADJUST

- a. Receive cross-hatch pattern signal。
- b. Set picture to “ RICH” mode。
- c. Adjust FBT’s FOCUS knob till picture is clear。

(2) SCREEN VOLTAGE ADJUST(KEY 0):

- a. Set picture to “STANDARD” mode, without signal input;
- b. Enter factory mode and press digital key”0”
- c. Adjust FBT’s SCREEN knob till VG2 voltage flag changes between “LOW” and “HIGH”, press PROG+ key to enter other menu。

(3) HORIZON ADJUST(KEY 1):

(2) SCREEN VOLTAGE ADJUST(KEY 0):

- a. Set picture to “STANDARD” mode, without signal input;
- b. Enter factory mode and press digital key”0”
- c. Adjust FBT’s SCREEN knob till VG2 voltage flag changes between “LOW” and “HIGH”, press PROG+ key to enter other menu。

(3) HORIZON ADJUST(KEY 1):

- a. Receive 50HZ monoscope PATTERN. Set TV to standard mode. Press KEY1 to enter factory mode
- b. Adjust 5HSH(for 60Hz picture,its is 6HSH)to set picture horizontal center to CRT horizontal center.
- c. Receive 60HZ monoscope PATTERN, repeat above b item

(4)VERTICAL&YUV/RGB HORIZON ADJUST(KEY2):

5VSL	50HZ vertical linearity	5SCL	50Hz vertical slope correction
5VSH	50Hz vertical center	5VAM	50Hz vertical size
6VSL	60HZ vertical linearity	6SCL	60HZ vertical slope correction
6VSH	60HZ vertical center	6VAM	60HZ vertical size

- a. Receive 50Hz cross hatch signal, set TV to STANDARD mode, press digital key “2” after enter factory mode, adjust 5VSL so that picture’s vertical line is just at the bottom of the half picture.
- b. Adjust 5VSH to set picture vertical center to CRT center.
- c. Receive 60Hz grille signal, do as (1) (2)again.

Service Adjustments

Item	Storage address	Display string	Range (Index value)		Default value
Instruction		The four items above are added. MUTD is used to set the mute delay . alleviate the sound of switching program impact. MEDL is used to control the mute delay after switching program. INIC is used to adjust the sound carrier frequency, for example: I system NICAM carrier frequency is 6.552MHZ, setting to 16 is frequency deflection. 3KHZ 为 6.549KHZ, if there is noise after switching program or several boot-straps, the sound carrier frequency is imprecise, you should adjust it.. FILT item can adjust the frequency width of NICAM, it effect on the sound over modulate adjustment, 0 is standard state, 2 is middling over modulate, 3is super over modulate state.			
Direct Key “4”					
AGC take-over		AGC	0-63		27
UOC Volume		VOL	0-63		47
TDA9874 plus adjust		9874	0-30		16
Instruction		input 1KHZ 0.5Vrms audio adjust signal in TV, adjust the VOL value, till it reaches to 0.5Vrms. if it is in the NICAM edition, VOL should be adjusted to 0, adjust the 9874value, adjust VOL till it reaches to 0.5Vrms.			
SUB HUE control		SHUE	0-63		35
TDA9859 plus adjust		9859	0-100		90
Instruction		The item is used to adjust the maximal output power of the power amplifier, input 1KHz 0.5Vrms audio signal to AV, adjust the maximal output power of the power amplifier, input 1KHz 0.5Vrms audio signal to AV, adjust the volume to the top, then adjust the 9859till the power reaches 8w(the speaker is 8 Ω /8W).			
IF frequency		IFFS	38.9MHz	2	2
			38.0MHz	3	
Cathode drive level		HDOL	0-15		2
Instruction		Adjust "HDOL" can change the voltage of “R.G.B” obviously, but adjust too high may lead to fade badly, reverse maybe lead to lack of luminance, so should be careful。Generally it's ok when there is no black screen or picture faded change the channel under the maximal beam current			
IF AGC speed		SPD	0.7X	0	1
			Normal	1	
			3X	2	
			6X	3	
VG2 Brightness		VG2B	0-63		31
The maximal bourdon		MBAS	0-19		12

Service Adjustments

Item	Storage address	Display string	Range (Index value)		Default value
TRUBASS on the maximal bourdon		MTBA	0-19		12
The maximal alt		MTRE	0-12		8
TELETEXT brightness control		TRBI	0-63		25
Direct Key “6”					
Contrast –Min pre-set		1CON	0-100		10
Brightness –Min pre-set		1BRI	0-100		10
Colour –Min pre-set		1COL	0-100		0
Sharpness –Min pre-set		1SHP	0-100		0
Contrast –Middle pre-set		2CON	0-100		70
Brightness – Middle pre-set		2BRI	0-100		40
Colour – Middle pre-set		2COL	0-100		40
Sharpness – Middle pre-set	65	2SHP	0-100		60
Contrast – Rich pre-set	66	3CON	0-100		100
Brightness – Rich pre-set	67	3BRI	0-100		100
Colour – Rich pre-set	68	3COL	0-100		100
Sharpness – Rich pre-set	69	3SHP	0-100		100
Instruction		The items above are pre-settings of some image modes, they are changeless unless the clients have special requests.			
Power on delay control		RGBT	0-25		8
Direct Key “7”					
Screen saver / Logo Left position	6A	XMIN	0-255		44
Screen saver Right position	6B	XMAX	0-255		186
Screen saver Top position	6C	YMIN	0-63		4
Screen saver Bottom position	6D	YMAX	0-63		37
Teletext Horizontal position	6E	TXMI	0-255		40
Teletext Vertical position 50Hz	6F	5TYM	0-63		38
Teletext Vertical position 60Hz	70	6TYM	0-63		38
Instruction		The items above can't be changed usually.			
Direct Key “5”					
NVM option 1	71	OP1	0	1	95
VG2 Alignment mode		Bit 0	AVG	VSD	0

Service Adjustments

Item	Storage address	Display string	Range (Index value)		Default value
Instruction		VG2 is usually set to 1, when it set to 0, if the bar is too high ,the TELETEXT "HIGH" will display, or the "LOW". If the "high"and "low" are changing by turns ,the setting is ok. Usually, the TV can adjust it automatically. It's level brightness adjustment when it set to 1.			
YUV or Yprpb		Bit 1	YUV	Yprpb	1
WIDE BAND SOUND PLL		Bit 2	off	On	0
BLACK STRETCH AMOUNT		Bit 3	10%	20%	1
AV2		Bit 4	off	On	0
SVHS		Bit 5	off	On	0
BLACK STRETCH DEPTH		Bit 6	20IRE	30IRE	1
XX		Bit 7	off	On	0
NVM option 2		72	OP2	0	1
63					
AVL		Bit 0	off	on	0 改为 1
Auto sound in autosearch mode		Bit 1	off	on	1
Pan Europe Teletext set		Bit 2	off	on	1
Cyrillic Teletext set		Bit 3	off	on	1
Farsi Teletext set		Bit 4	off	on	1
Arabic Teletext set		Bit 5	off	on	1
Sync On Y (YUV/Yprpb mode)		Bit 6	off	on	0
Slicing lever		Bit 7	dependent on noise	Fixed	0
NVM option 3		73	OP3	0	1
255					
SW1		SW2	Bit 0	Off	On
English Menu		English Menu			
Farsi Menu		Farsi Menu	Bit 1	Off	On
Arabic Menu		Arabic Menu	Bit 2	Off	On
Turkey menu		Serbian Menu	Bit 3	Off	On
France Menu		Bulgaria Menu	Bit 4	Off	On
German menu		German menu	Bit 5	Off	On
Itality Menu		Itality Menu	Bit 6	Off	On
Russia Menu		Russia Menu	Bit 7	HITACHI remote control code	创维码
0change to 1					
NVM option 4		74	OP4	0	1
to 114					
Narrow-band sound PLL window			small	large	0
Power mode			standby	Last Memory	1
Geometry control		Bit 2	off	On	0
Logo		Bit 3	off	On	0
EHT tracking mode		Bit 4	Vertical	Vert. & EW	1
Search tuing mode sensitivity		Bit 5	Normal	Reduced	1
Menu half-tone		Bit 6	Off	On	1

Service Adjustments

Item	Storage address	Display string	Range (Index value)		Default value
Zoom function		Bit 7	Off	on	0
NVM option 5	75	OP5	0	1	255
Sound system DK			Off	On	1
Sound system BG			Off	On	1
Sound system I			Off	On	1
CORING0		Bit 3	Off	On	1
CORING1		Bit 4	X	X	1
COMB_FILTER		Bit 5	off	On	0
Switch-off in vertical overscan		Bit 6	Undefined	Vert. overscan	1
Power on to last status		Bit 7	Off	On	1
NVM option 6	76	OP6	0	1	218
"No signal" OSD when no signal			off	开	0
Blue screen or black screen			Black	Blue	1
16:9 mode			off	On	0
Child lock (Lock local key)			Off	On	1
Top & bottom bar on Menu			Off	On	1
Hotel mode			Off	On	No use
Set "POC" bit when no signal			Off	On	1
Game			off	on	1
<i>Instruction</i>		Black			
NVM option 7	77	OP7	0	1	193
AV1		Bit 0	off	on	1
<i>Instruction</i>		Because of AV1 is back AV, if SCART needed, no back AV, need to set AV 0.			
AV3		Bit 1	0	1	0
TV and monitor out select		Bit 2	Monitor	TV	0
<i>Instruction</i>		Because the output of SCART always follow TV, when back AV is SCART, the value set to 1.			
LISTEN PRESET		Bit 3	off	on	0
Power on always		Bit 4	See OP4 bit 1	Direct On	0
Noise Reduce Off		Bit 5	See Table 1		0
Noise Reduce On		Bit 6			1
NTSC-M Control switch		Bit 7	0high	1low	1
TrueBass control	78	BASS	off	On	0
Comb-filter Control	79	COMB	Off	On	0
NICAM control	7A	NICA	off	On	0
RGB Control	7B	RGB	Off	On	1
YUV Control	7C	YUV	off	On	0

Service Adjustments

Item	Storage address	Display string	Range (Index value)		Default value
Mfunction switch control	7D	M	Off	On	0
Remote control CLOCK key					
Logo edit (9chars.& 20lines)		Logo Text	English letter & number etc		
Instruction		The LOGO edit function will take effect when Bit3 in OP4 set 1, press key 'VOL+/-' to choose character, and press PROG+/- to choose ASC II charater			

Table 1 : Noise Reduce Setting for PAL

Noise Reduce On	Noise Reduce Off	OP7 Bit 5	OP5 Bit 6
2.7MHz	3.1MHz	0	0
2.7MHz	3.5MHz	1	0
3.1MHz	3.5MHz	0	1
3.1MHz	3.5MHz	1	1

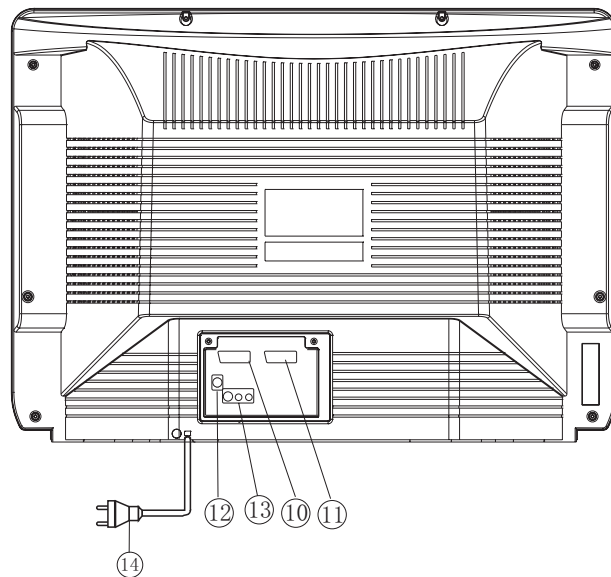
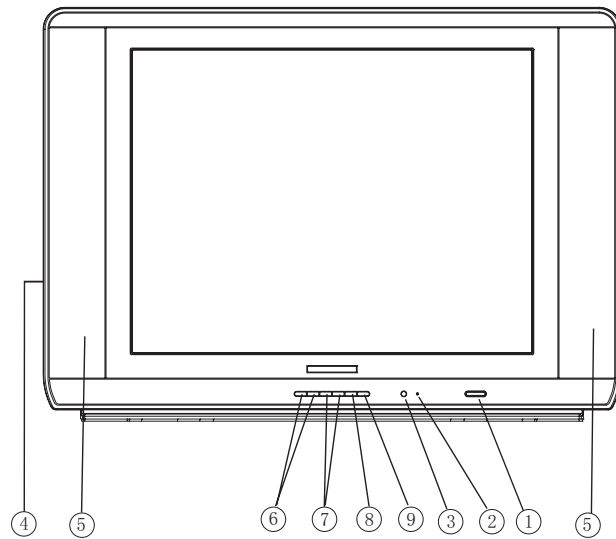
- Remark : NTSC system preset to 2.7 -> 3.1MHz.

Final setting

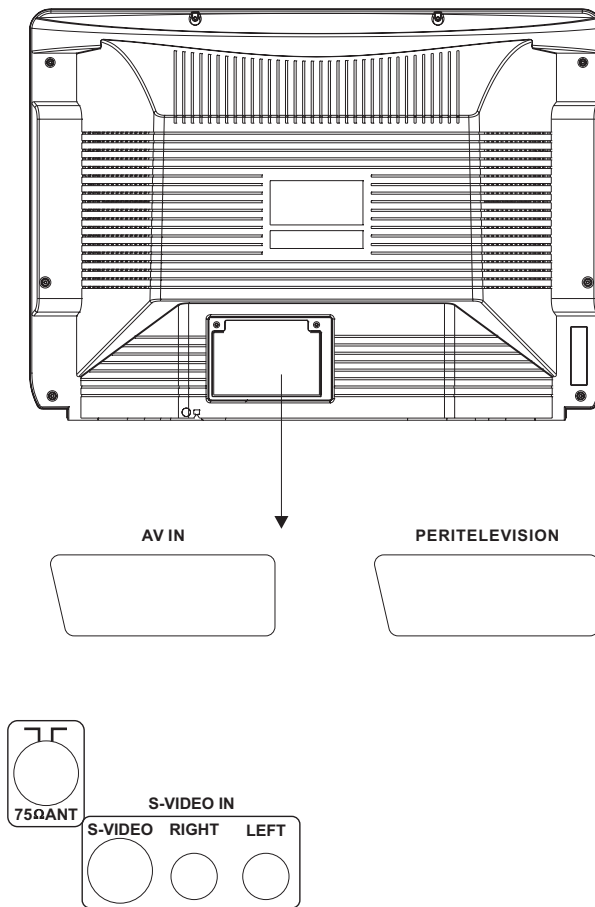
item	SHIP1	SHIP2
Channel number	1	1
volume	0	0
Picture mode	USER	USER
Sound mode	music	music
hue	0	0
balance	0	0
Color system	AUTO	AUTO
Sound system	I	BG
language	ENGLISH	ENGLISH
Black extent	on	on
stereo	off	off
TRUBASS	on	on
COMB-FILTER	on	on
Blue background	on	on
Child lock	on	on

Control Location

1. Main Switch
2. Power Indicator
3. Remote Sensor
4. Side AV In(Optional)
5. Speakers
6. Program Down / Up Button
7. Volume Down / Up Button
8. Menu Button
9. TV/AV Button
10. AV In (Scart Jack)
11. Peritelevision(Scart Jack)
12. Antenna Input Socket(75 Ohm)
13. S-Video In
14. AC Power Cord



Input and Output Terminals



It can be connected to the following appliances: video-tape recorder, video camera, tape recorder and audio amplifier, etc.....

*Please keep AC cord unplugged when connecting TV system.

*Do not Connect Side AV IN and AV IN together.

*Do not connect S and AV IN together at the same time.

Operation Instructions

WARNING: The main power switch (No.1 of the control location page) is the manually operated mechanical switch . The remote control can not cut off power supply to the TV set. For safety purpose, push main switch to the OFF position and make sure the power indicator go out when not use for long time. Push the power "ON/OFF"switch to the ON position, and then power indicator will light up, the picture(or blue screen) will appear within a few seconds.

MENU BUTTON

1.Press this button to select PICTURE、TIME、SETUP、TUNE、EXCHANGE menu cyclically.



2.After entering into each menu, you can select submenu which you will adjust with PROG.+/- Buttons or (GREEN) /BLUE buttons. Then you can adjust it with VOL.+/- Buttons or the +(RED) / -(YELLOW).

Picture Button

PICTURE	
CONTRAST	25
BRIGHTNESS	25
COLOUR	25
SHARPNESS	25
HUE	0
BLACK STRETCH	OFF

1.You can select the CONTRAST.BRIGHTNESS.COLOUR.SHARPNESS.HUE. BLACK STRETCH item by pressing PROG+/- buttons or (GREEN) / (BLUE) buttons.

2.You can adjust the CONTRAST.BRIGHTNESS.COLOUR.SHARPNESS.HUE. item by press VOL+/- buttons or (RED) / (YELLOW) buttons.

3.You can set the BLACK STRETCH.COMB FILTER item ON or OFF by pressing VOL+/- buttons or (RED) / (YELLOW) buttons.

*HUE is displayed only for NTSC system.

Sound Button

SOUND	
VOLUME	6
BASS	50
TREBLE	50
BALANCE	0
TRUBASS	ON
SURROUND	ON

1.You can select the VOLUME.BASS.TREBLE.BALANCE.TRUBASS.SURROUND item with the PROG+/- buttons or the (GREEN) / (BLUE) buttons.

2.You can adjust VOLUME. BASS. TREBLE item with VOL+/- buttons or (RED) / (YELLOW) buttons.

3.You can turn the TRUBASS. SURROUND item ON or OFF with VOL+/- buttons or (RED) / (YELLOW) buttons.

*TRUBASS item is optional.

*TRUBASS technology is incorporated under license from SRS Labs ,Inc.

Operation Instructions

TIMERS

TIME	
CLOCK	--:--
ON TIME	--:--
ON PROG	1
OFF TIME	--:--
SLEEP TIMER	20
REMIND TIME	--:--
REMIND PROG	1

1.CLOCK

Select hour or minute with PROG+/- buttons or (GREEN) / (BLUE) buttons.

Adjust CLOCK time with VOL+/- buttons or (RED) / (YELLOW) buttons,you can press CLOCK buttons to display currently clock time.

2.ON TIME

Select hour or minute with PROG +/- buttons or (GREEN) / (BLUE) buttons.

Adjust ON TIME with Vol+/- buttons (RED) / (YELLOW) buttons.

3.ON PROG.

Select ON PROGRAM with VOL+or (RED) buttons.

4.OFF TIMER

Select hour or minute with PROG+/- buttons or (GREEN) / (BLUE)

Buttons.

Adjust REMIND time with VOL+/- buttons or (RED) /(YELLOW) buttons.

5.SLEEP TIMER

Set SLEEP TIME with VOL+/- buttons or (RED)/ (YELLOW) buttons.

6.REMINDER TIMER

Select hour or minute with PROG+/- buttons or (GREEN)/ (BLUE) buttons.

Adjust REMIND TIME with VOL+/- buttons or (RED)/ (YELLOW) buttons.

7.REMIND PROG

Select REMIND PROGRAM with VOL+/- buttons or (RED)/ (YELLOW) buttons.

* Timer function need reseting when you switch off the TV set by the main power switch or unplugging the power cord,and which runs normally when by remote control.

Operation Instructions

SETUP Button

SETUP	
LANG.	ENGLISH
BACK GROUND	ON
NOISE REDUCE	OFF
CHILD LOCK	OFF
CALENDAR	

You can select the item by pressing PROG+/- buttons or (GREEN)/ (BLUE) Button, then you can adjust it by Vol+/- buttons or (RED)/ (YELLOW) buttons.

1.LANGUAGE

You can select the on-screen display language.

2.BACK GROUND

Press VOL+/- buttons or (RED) / (YELLOW) buttons to set it ON or OFF.

For BACKGROUND, only when no signal is input in TV mode.

3.NOISE REDUCE

Press VOL+/- buttons or (RED) / (YELLOW) buttons to set it ON or

OFF. For Noise REDUCE, only in TV mode.

4.CHILD LOCK

Press VOL+/- buttons or (RED) / (YELLOW) buttons to set it ON or OFF.

If you set it ON, the key on the TV set is disable and only the remote

control functions.

5.CALENDAR

Press VOL+/- buttons or (RED) / (YELLOW) buttons to enter into

CALENDAR menu.

* CALENDAR item is optional . Please see actual TV

CALENDAR

Y:2002			M:12			D:12	
S	M	T	W	T	F	S	
1	2	3	4	5	6	7	
8	9	10	11	12	13	14	
15	16	17	18	19	20	21	
22	23	24	25	26	27	28	
29	30	31					

1.Press VOL+/- buttons or (RED) / (YELLOW) buttons to select

YEAR,MONTH or DATE.

2.Press PROG+/- buttons or (GREEN) / (BLUE) buttons to adjust

YEAR,MONTH or DATE.

3.Press MENU Button to return.

Operation Instructions

TUNE MENU

TUNE	
COLOUR SYS	AUTO
SOUND SYS	M
BAND	VHF-L
SKIP	OFF
PROGRAM	2
SEARCH	
FINE TUNE	
AUTO SEARCH	

You can select the item by press the PROG+/- buttons or the (GREEN) / (BLUE) buttons, move to the menu you select and then do as follows.

1.COLOUR SYS

Press VOL+/- buttons or (RED) / (YELLOW) buttons to set the color system.

2.SOUND SYS

Press VOL+/- buttons or (RED) / (YELLOW) buttons to set the sound system.

3.BAND

Press VOL+/- buttons or (RED)/ (YELLOW) buttons. You can select the Band VHF-L.VHF-H or UHF.

→ VHF-L-----VHF-H-----UHF

4.SKIP

Press VOL+/- buttons or (RED) / (YELLOW) buttons to set skip on or off, when you set skip on, this program will be hidden.

5.PROGRAM

Press VOL+/- buttons or (RED)/ (YELLOW) buttons to set the PROGRAM number.

6.FINE TUNE

For better quality with VOL+/- buttons or (RED) / (YELLOW) buttons.

7.SEARCH

Press VOL+/- buttons or (RED) / (YELLOW) buttons to search for next or previous available program, the set will automatically stop while the signal is received.

8.AUTO SEARCH

Press VOL+/- buttons or (RED)/ (YELLOW) buttons, the TV set will automatically search in 3 bands and store every program.

*In AV mode, only COLOUR SYS displayed under this menu.

*After fine tune. The colour of program number will change from GREEN to YELLOW.

EXCHANGE MENU

EXCHANGE	
PROGRAM	1
PROGRAM	1
EXCHANGE	

In AV mode ,this item will not be displayed.

Select the item by pressing the PROG+/- buttons or the (GREEN)/ (BLUE) buttons.

1.PROGRAM 1

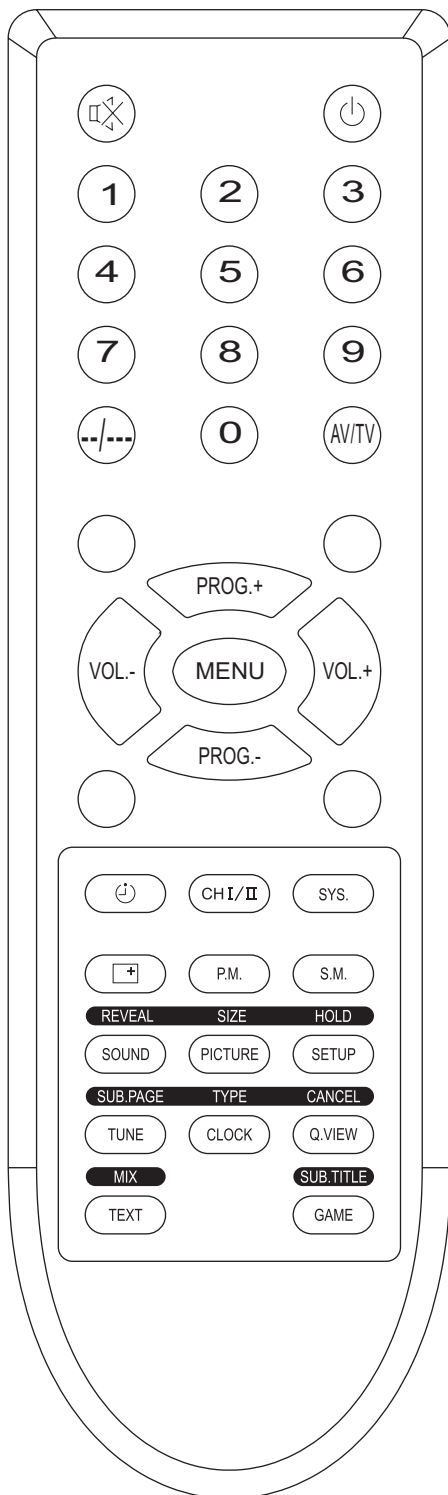
Press VOL+/- buttons or (RED) / (YELLOW) buttons to adjust PROGRAM 1.

2.PROGRAM 2

Press VOL+/- buttons or (RED) / (YELLOW) buttons to adjust PROGRAM 2.

3.Press VOL+/- buttons or (RED) / (YELLOW) buttons to exchange PROGRAM 1 and PROGRAM 2.

Operation Instructions



STANDBY BUTTON (⏻)

Press this button to turn the TV on/off. Press any Number Button or Program Up/Down Button, picture and sound will appear on within a few seconds.

SLEEP BUTTON (⏸)

This key is used to set the sleep timer from in 10 minutes step up to three hours. When the preset time runs to 0, the TV set will go into stand by mode.

*If no program received, the TV set will switch to stand by automatically in 5 minutes.

SOUND SYSTEM BUTTON (SYS.)

When the sound system is incorrect, press this button to select the correct sound system.

STEREO/MONO DUAL (CH I/II)

No use.

PROGRAM UP/DOWN BUTTON (PROG. +/-)

Press the Program Up Button to select the program forwards.

Press the Program Down Button to select the program backwards.

(Use this button for Page Up/Down to increase/decrease page number in TELETEXT mode.)

Operation Instructions

VOLUME UP/DOWN BUTTONS (VOL. +/-)

Press Volume Up/Down Buttons to adjust sound level.

PROGRAM SELECTION BUTTONS(0-9)

Push the number for your desired program and the program indicator will be displayed on the screen.

Press number key 0-199 for program selection.

Press the number keys to select teletext pages in teletext mode.

MUTE BUTTON()

Press once to mute the sound, press again to return to previously set sound level.

MENU RECALL BUTTON()

Press this button sequential to recall for the program number, system, logo etc on the screen..

S.M. BUTTON

No use.

PICTURE MODE BUTTON(P.M.)

Press this button to select the desired picture mode, RICH, USER, SOFT and STANDARD can be selected cyclically.

DIGIT BUTTON(--/---)

Press this button to select program between 0-199 program.

To select a one-digit number: press "--/---" button to display "-", then press 0-9 to select a number 0-9, or press the number 0-9 directly.

To select a two-digit number: press "--/---" button to display "--". then press 0-9 to select a number 10-99.

To select a three-digit number: press "--/---" button to display "1--". then press 0-9 to select a number 100-199.

COLOUR BUTTONS(RED/YELLOW/GREEN/BLUE)

In TV mode, the (GREEN)/(BLUE) buttons has the same function as PROG +/- buttons; the (RED)/(YELLOW) buttons has the same function as VOL +/- button.

In TELETEXT mode, press these colour buttons, the color of page no of teletext will change to the same colour as that of the buttons.

*Picture mode "RICH, SOFT, STANDARD" are fixed by factory, all the change of these settings will be saved into the "USER" mode automatically.

Operation Instructions

MENU BUTTON(MENU/INDEX)

In TV mode, this button is used as MENU command; in TELETEXT mode, used as INDEX key.

MENU: To use MENU button for the turning procedure, please refer to page 7-10 for the details.

INDEX: Press INDEX button to obtain the index page.

AV MODE BUTTON (AV/TV /LANG.)

In TV mode, used as AV command; in TELETEXT mode, used as LANG. key.

AV/TV: Press this button to display external video signal such as VCR or CD video player.

LANG. :Press this button to switch the teletext LANGUAGE such as English or Russian.

SOUND MENU BUTTON(SOUND/ REVEAL)

In TV mode, no use; In TELETEXT mode, used as REVEAL key.

REVEAL :Sometimes the answers of quizzes, jokes etc are hidden. Press REVEAL button to reveal the hidden information.

PICTURE MENU BUTTON(PIC./SIZE)

In TV mode, used as PICTURE menu command; in TELETEXT mode, used as SIZE key.

PIC.:Press this button to enter into the PICTURE menu directly.

SIZE: The top or botton half of any page can be enlarged by pressing this button.

SETUP MENU BUTTON(SETUP/HOLD)

In TV mode, used as SETUP menu command; In TELETEXT mode, used as HOLD key.

SETUP: Press SETUP button to enter into the setup menu directly.

HOLD: Sub-pages will scroll automatically. Press HOLD button a hold a sub-page. To release the page. press HOLD again.

TUNE MENU BUTTON(TUNE/SUB.PAGE)

In TV mode, used as TUNE menu command; In TELETEXT mode, used as SUB.PAGE key.

TUNE: Press this button to enter into the TUNE menu directly.

SUB.PAGE: Some pages attach sub-page,Page number may contain several subpages which are automatically paged by the TV station. Press this button once.0001 will be displayed on screen, use number key(0-9) to look for other sub-pages if available. If there is no sub-page,**** will be displayed. To cancel this, press this button again.

Operation Instructions

GAME BUTTON(GAME/SUB.TIT) (OPTION)

In TV mode, used as GAME command; In TELETEXT mode, used as SUB.TITLE key.

GAME: You can play the game on TV. To speed up with PRGO-, transform with PRGO+. Shift left with VOL-, shift right with VOL+.

SUB.TIT: Press SUB.TIT button to view the sub-titles.

CLOCK BUTTON(CLOCK/TYPE)

In TV mode, used as CLOCK command; In TELETEXT mode, used as TYPE key.

CLOCK: Display the time on the top right corner of the screen.

TYPE: Press this button to switch the teletext TYPE such as west/east type.

TEXT/BUTON(ON/MIX/OFF)

Press this button to display TELETEXT signal, mix TELETEXT page with TV signal and return to TV.

Note: To avoid mixing of External R.G.B while viewing Teletext. Disconnect scart plug or switch off external R.G.B source.

Q.VIEW BUTTON(Q.VIEW/CANCEL)

In TV mode, used as Q.VIEW command; In TELETEXT mode, used as CANCEL key.

Q.VIEW: Press this button to return to the previously viewed program.

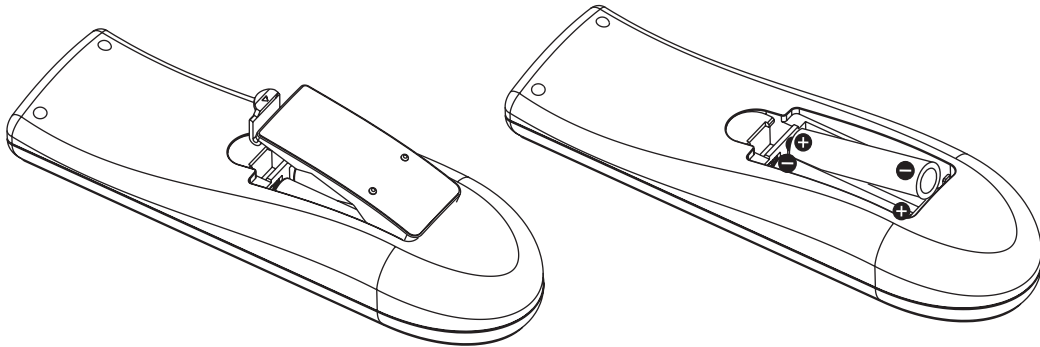
CANCEL: If you want to watch TV but not cancel the TELETEXT mode completely. Press the CANCEL button. When the last selected page is updated, the page number will be appeared at the top of the TV screen Press the CANNEL button again to reveal the page.

Operation Instructions

BATTERY INSTALLATION (REMOTE CONTROL UNIT)

1. Remove the battery cover.
2. Insert the 2 UM4 - AAA 1.5V batteries making sure the polarity (+ or -) of the batteries matches the polarity marks inside the unit.
3. Replace the battery cover.

Replace with new batteries when the TV set begins to show the following symptoms:
Operation is unsteady or erratic. Sometimes the TV set does not function with Remote Control Unit.



Remark:

- 1) Alkaline Batterie Recommended
- 2) Remove batteries when they are exhausted or if the remote control is not to be used for a long time.

THE CAUSES OF INTERFERENCE

Incorporated in your TV receiver are the most up-to-date devices to eliminate interference. Local radiation however, can create disturbances which visibly affect your picture. Proper installation, a good aerial are your best safe-guards against these disturbances.

RF INTERFERENCE

Moving ripples across the screen are caused by nearby transmitting or receiving-short-wave radio equipment.

DIATHERMY

Herringbone pattern and partial picture loss can result from the operation of diathermy equipment from a nearby doctor's surgery or hospital.

SNOW

Weak TV signals from long distant stations result in an instead picture and give the effect of falling snow. An antenna adjustment or antenna amplifier may be needed.

GHOST

Multiple image caused by TV signals reflected back from surrounding buildings, hills, aircraft, etc. is minimized by correct aerial positioning.

CAR IGNITION

Nearby cars and electrical motors can cause small streaks across the picture or make the picture roll.

