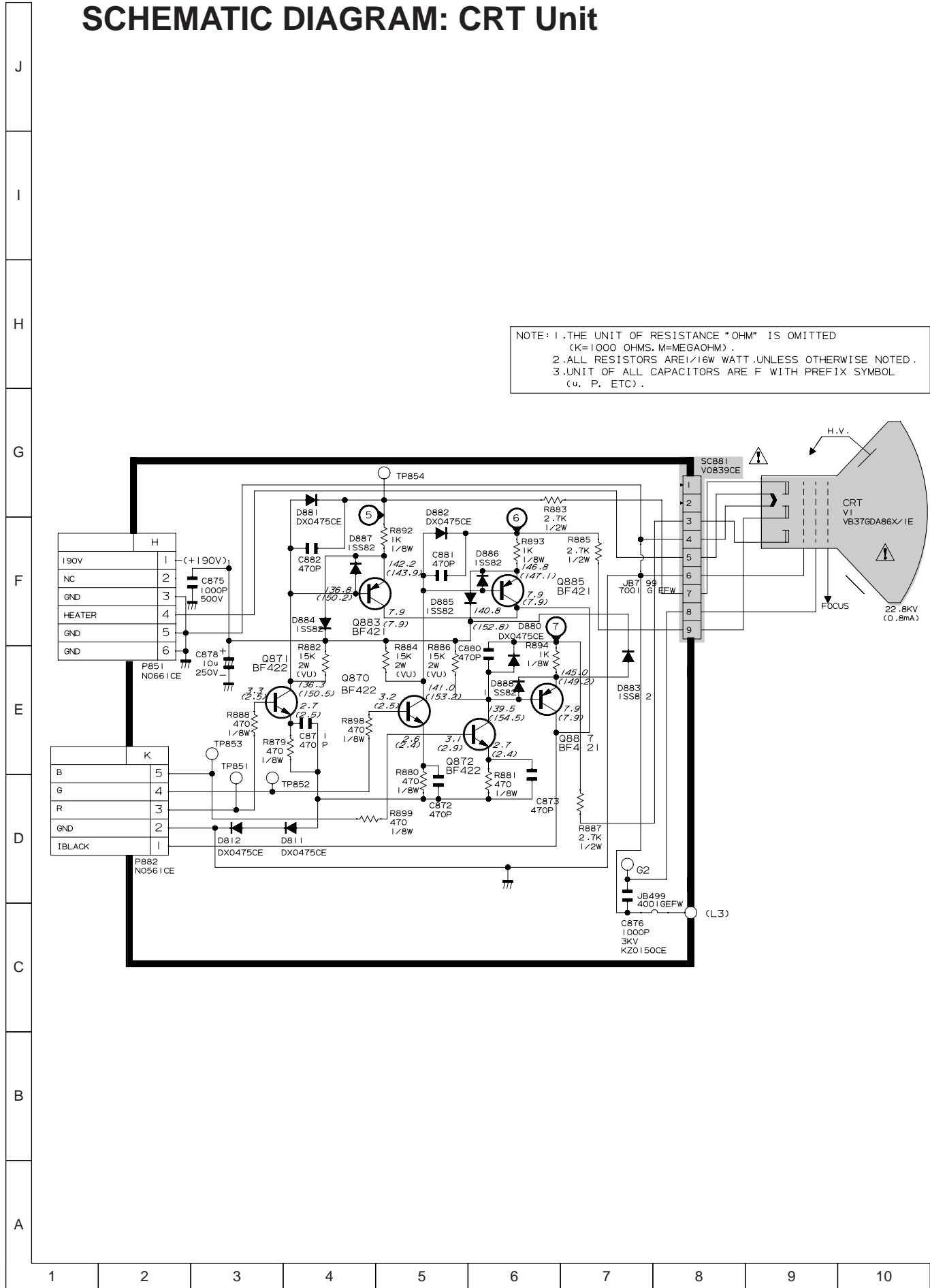


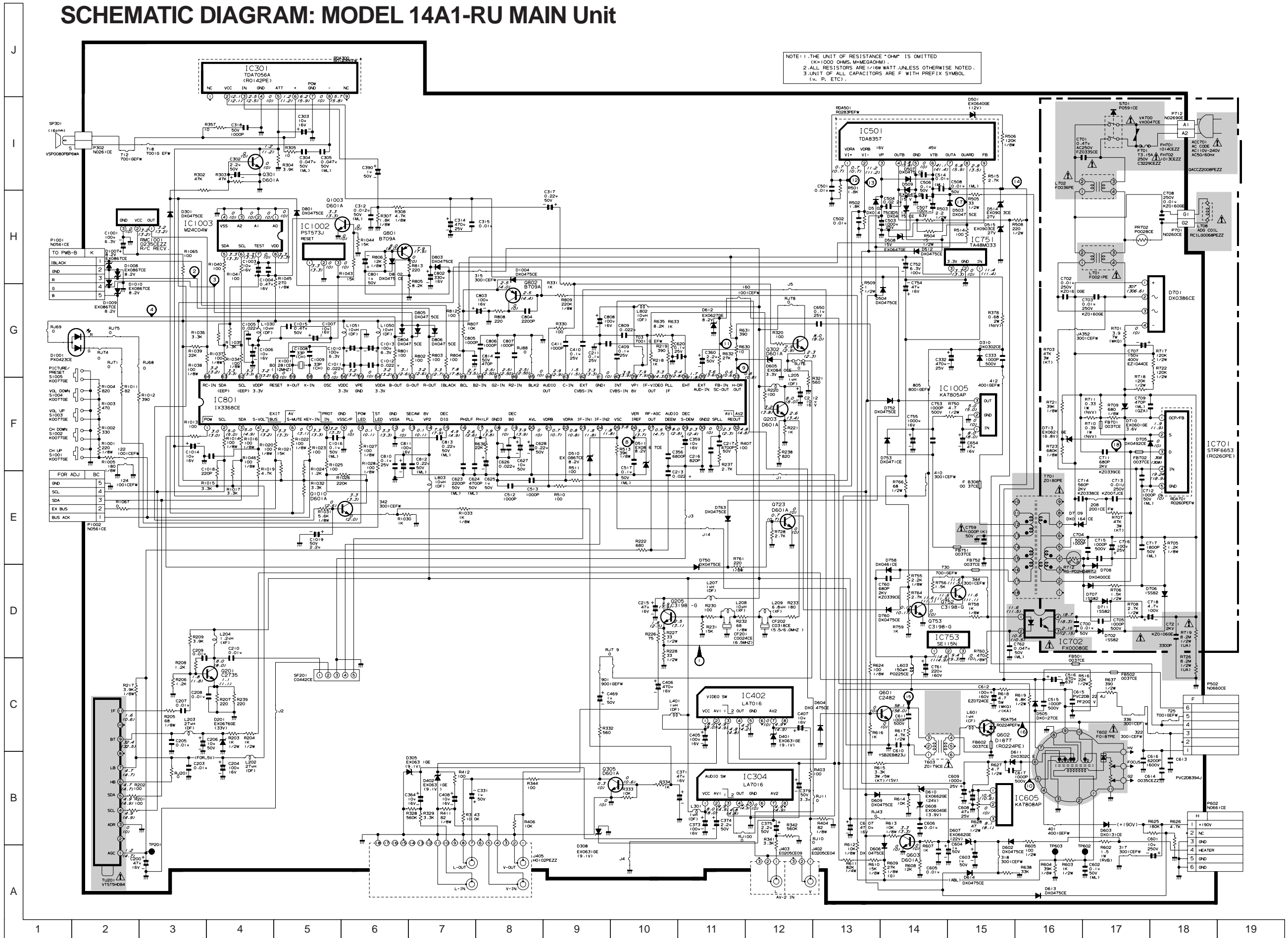
SCHEMATIC DIAGRAM: CRT Unit

NOTE: 1. THE UNIT OF RESISTANCE "OHM" IS OMITTED
(K=1000 OHMS, M=MEGAOHM).
2. ALL RESISTORS ARE 1/16W WATT UNLESS OTHERWISE NOTED.
3. UNIT OF ALL CAPACITORS ARE F WITH PREFIX SYMBOL
(u, P, ETC).

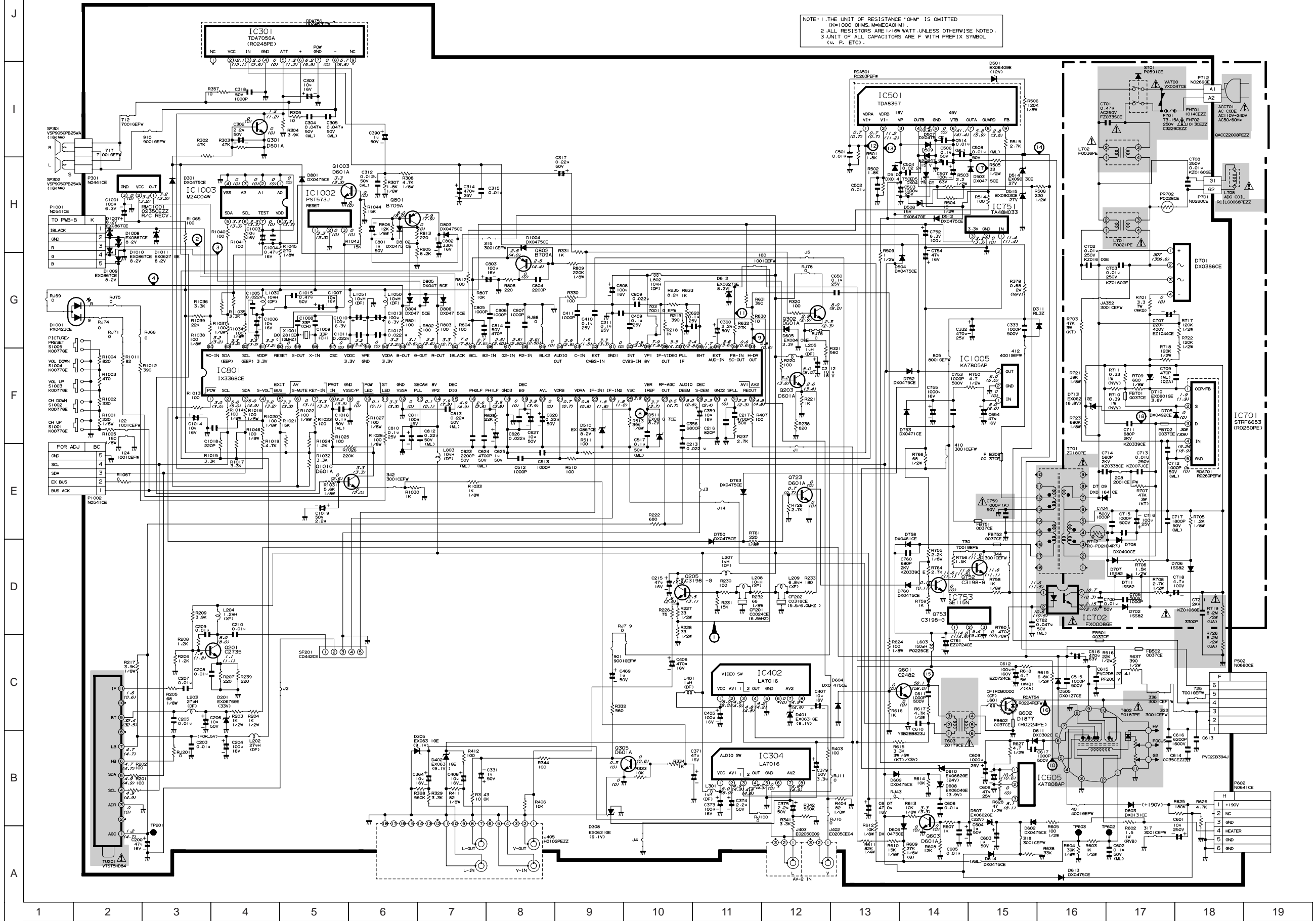


SCHEMATIC DIAGRAM: MODEL 14A1-RU MAIN Unit

NOTE: 1. THE UNIT OF RESISTANCE "OHM" IS OMITTED
(K=1000 OHMS, M=MEG-OHM)
2. ALL RESISTORS ARE 1/8W WATT UNLESS OTHERWISE NOTED.
3. UNIT OF ALL CAPACITORS ARE F WITH PREFIX SYMBOL
(u, P, ETC.)



SCHEMATIC DIAGRAM: MODEL 14A2-RU MAIN Unit



ADJUSTMENT PRECAUTIONS

This model's setting are adjusted in two different ways: through the I²C bus control and in the conventional analog manner. The adjustments via the I²C bus control include preset-only items and variable data.

1. Setting the service mode by the microprocessor.

- ①. Short JA 122 & JA 124 for 1 second and release to switch to the service mode position, and the microprocessor is in input mode. (Adjustment through the I²C bus control). (Use JWS Key to set as well).
- ②. Press the CH DOWN / UP key on the remote controller to get ready to select the mode one by one.
- ③. Press the CH DOWN / UP key on the remote controller to select the modes reversibly one by one.
- ④. Using the VOLUME UP/ DOWN key on the remote controller, the data can be modified.
- ⑤. Short JA 122 & JA 124 for 1 second and release to switch to the normal mode (OFF) position, and the microprocessor is in out of the service mode.

2. Factory Presetting.

- ①. Short JA 122 & JA 124 for 1 second and release to switch to the service mode position and turn on the main power switch. Initial values are automatically preset, only when a new EEPROM is used (Judge with the first 4 bytes).
- ②. The initial data are preset as listed in page 5 & 6.
- ③. Make sure the data need modify or not (Initial data).

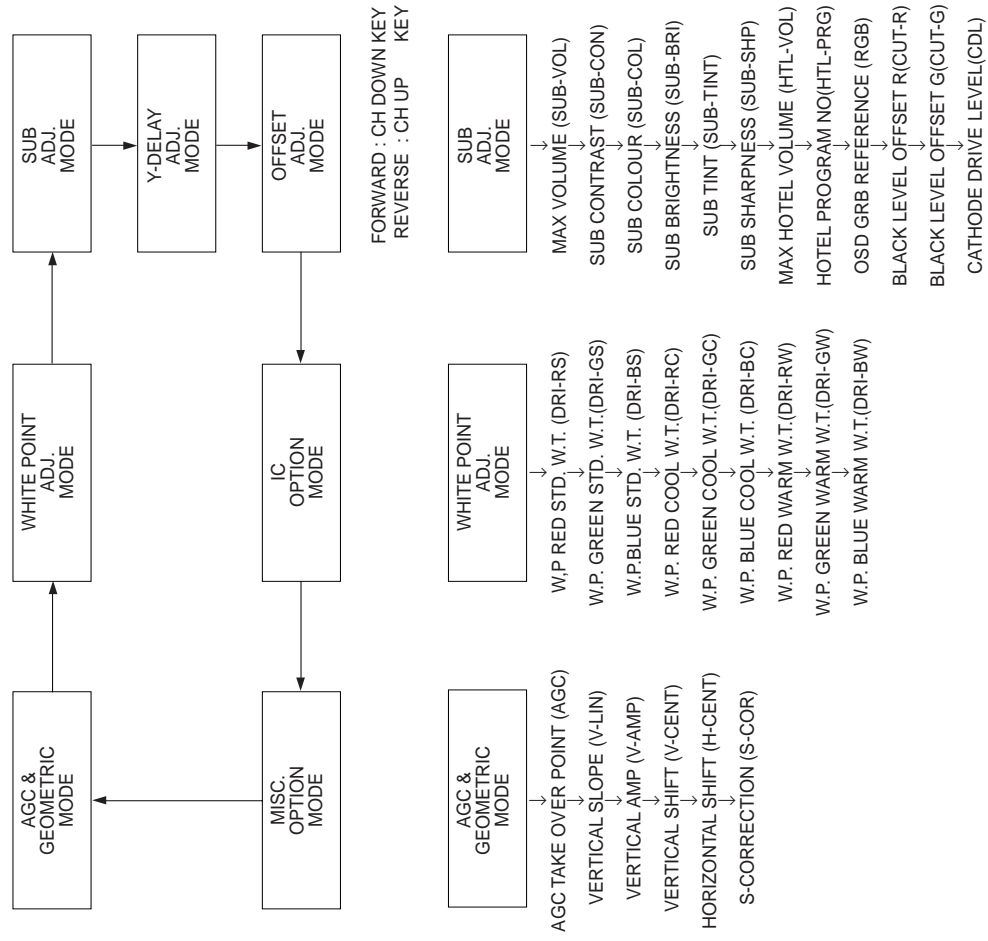
Note: Once the chassis has been assembly together and ready to be POWER ON for the FIRST TIME, make sure to short JA122 & JA124 to switch to the service mode position first and then turn on the main power switch (See 2-(1) above).

Precaution: If haven't done this initiation, it may possibly generate excessive Beam current.

3. For reference please check with memory map (UA1 Series type RH-IX3368CE Attachment)

SERVICE MODE

(1) In the Service Mode, Key is used to select the mode in the following order.



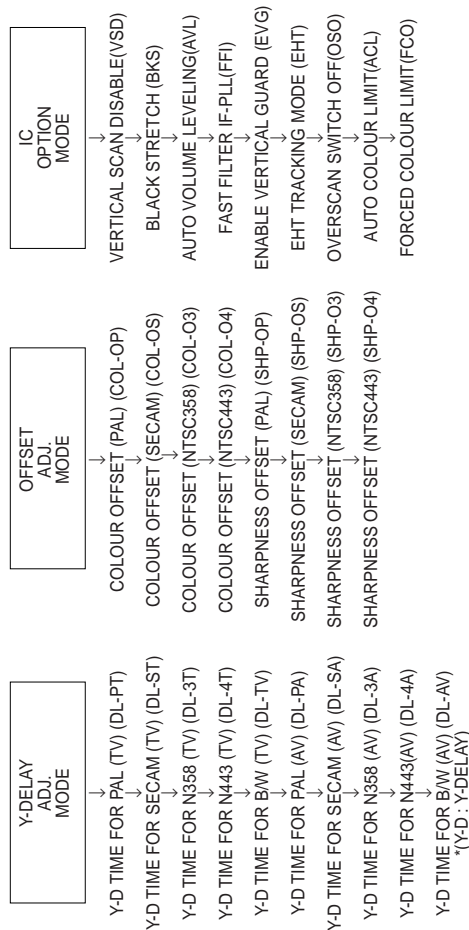
FORWARD : CH DOWN KEY
REVERSE : CH UP KEY
* () means OSD display.

USER DATA IN SERVICE MODE

* While SERVICE mode ON, EEPROM DATA will switch to the service data.
Also, once SERVICE mode OFF, EEPROM will switch back to previous USER DATA.
* In the service mode, the user data establish as below,

MODE	USER DATA
CONTRAST	MIN (1/60)
COLOUR	MIN (1/60)
BRIGHTNESS	MIN (1/60)
TINT	MIN (1/60)
SHARPNESS	MIN (1/60)
WHITE TEMP	STANDARD
S-VOLUME	MIN (1/60)
BLUE BACK	OFF
C SYSTEM	AUTO
S SYSTEM	*1

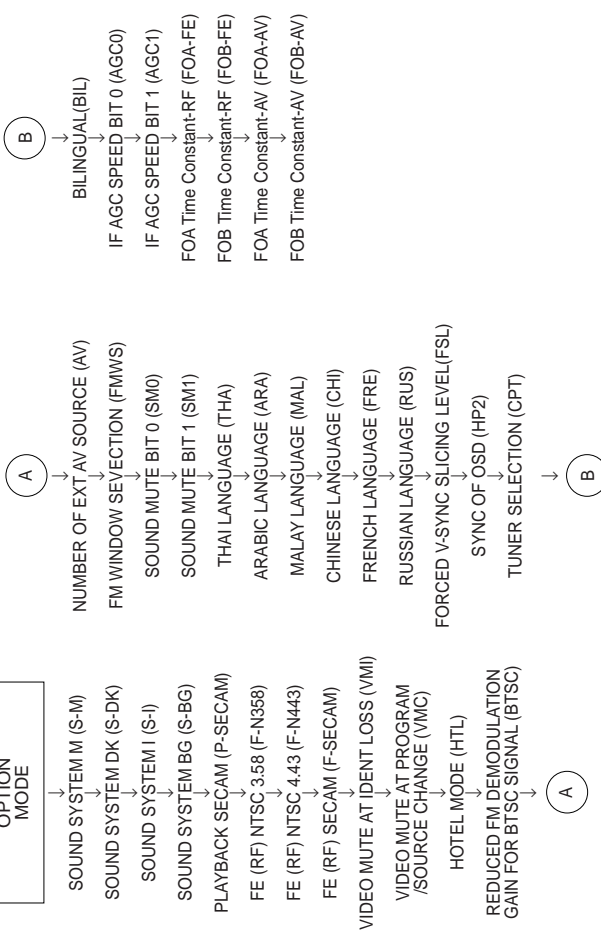
*1 : For each CH, before changing service mode setting.



The flow of Mode lists as following.

* Direct Key-in Step1 Mode

RC COMMAND	SERVICE-ITEM
FUNCTION	AGC
CONTRAST DOWN	V-LIN
COLOUR DOWN	V-AMP
BRIGHTNESS DOWN	V-CENT
TINT DOWN	H-CENT
SHARPNESS DOWN	EW / /
SYSTEM	HB
BLUEBACK	S-COR
TIMER	SUB-VOL
CONTRAST UP	SUB-CON
COLOUR UP	SUB-COL
BRIGHTNESS UP	SUB-BRI
TINT UP TINT	SUB TINT
SHARPNESS UP	SUB-SHP



AFTER SHORT JA 122 & JA 124 AND TURN ON THE MAIN POWER SWITCH, READ DATA FROM EEPROM ADDRESS 00H ~ 03H, AND COMPARE TO THE LIST BELOW, IF DIFFERENT, INITIALIZE THE EEPROM.

Address : Data
00H : 55H
01H : 4FH
Address : Data
02H : 43H
03H : A1H

EEPROM ITEMS	OSD	DATA LENGTH	INITIAL DATA	FIX/ADJ	REMARK
AGC TAKE OVER POINT	AGC	0-63	14	ADJ	
VERTICAL SLOPE	V-LIN	0-63	32	ADJ	
VERTICAL AMPLITUDE	V-AMP	0-63	32	ADJ	
VERTICAL SHIFT	V-CENT	0-63	32	ADJ	
HORIZONTAL SHIFT	H-CENT	0-63	32	ADJ	
S-CORRECTION	S-COR	0-63	0	FIX	
WHITE POINT RED STD WHITE TEMP	DRI-RS	0-63	32	FIX	
WHITE POINT GREEN STD WHITE TEMP	DRI-GS	0-63	32	ADJ	
WHITE POINT BLUE STD WHITE TEMP	DRI-BS	0-63	32	ADJ	
WHITE POINT RED COOL WHITE TEMP	DRI-RC	0-63	32	FIX	
WHITE POINT GREEN COOL WHITE TEMP	DRI-GC	0-63	32	FIX	(DRI-GS)-7 DATA
WHITE POINT BLUE COOL WHITE TEMP	DRI-BC	0-63	32	FIX	(DRI-BS) DATA
WHITE POINT RED WARM WHITE TEMP	DRI-RW	0-63	25	FIX	
WHITE POINT GREEN WARM WHITE TEMP	DRI-GW	0-63	32	FIX	(DRI-GS)-7 DATA
WHITE POINT BLUE WARM WHITE TEMP	DRI-BW	0-63	32	ADJ	(DRI-BS)-7 DATA
MAX VOLUME	SUB-VOL	0-63	63	FIX	
SUB CONTRAST	SUB-CON	0-63	63(50 *3)	FIX	
SUB COLOUR	SUB-COL	0-63	32	ADJ	
SUB BRIGHTNESS	SUB-BRI	0-63	32	ADJ	
SUB TINT	SUB-TINT	0-63	32	ADJ	
SUB SHARPNESS	SUB-SHIP	0-63	32	ADJ	
MAX HOTEL VOLUME	HTL-VOL	0-63	32	ADJ	
HOTEL PROGRAM NUMBER	HTL-PRG	0-99 OR-99FOR NONE	255	FIX	
OSD GRB REFERENCE	RGB	0-15	15	FIX	
BLACK LEVEL OFF-SET R	CUT-R	0-15	8	FIX	
BLACK LEVEL OFF-SET G	CUT-G	0-15	8	FIX	
CATHODE DRIVE LEVEL	CDL	0-15	0	FIX	
Y-DELAY TIME FOR PAL(TV) [YD]	DL-PT	0-15	12	FIX	
Y-DELAY TIME FOR SECAM(TV) [YD]	DL-ST	0-15	15	FIX	
Y-DELAY TIME FOR NTSC358(TV) [YD]	DL-3T	0-15	12	FIX	
Y-DELAY TIME FOR N443(TV) [YD]	DL-4T	0-15	12	FIX	
Y-DELAY TIME FOR B/W(TV) [YD]	DL-TV	0-15	12	FIX	
Y-DELAY TIME FOR PAL(AV) [YD]	DL-PA	0-15	12	FIX	
Y-DELAY TIME FOR SECAM(AV) [YD]	DL-SA	0-15	15	FIX	
Y-DELAY TIME FOR N358(AV) [YD]	DL-3A	0-15	12	FIX	
Y-DELAY TIME FOR N443(AV) [YD]	DL-4A	0-15	12	FIX	
Y-DELAY TIME FOR B/W(AV) [YD]	DL-AV	0-15	12	FIX	
COLOUR OFFSET(PAL)	COLOP	0-15	8	FIX	
COLOUR OFFSET(SECAM)	COLOS	0-15	8	FIX	
COLOUR OFFSET(NTSC358)	COL-O3	0-15	4	FIX	
COLOUR OFFSET(NTSC443)	COL-O4	0-15	4	FIX	
SHARPNESS OFFSET(PAL)	SHP-OP	0-15	8	FIX	
SHARPNESS OFFSET(SECAM)	SHP-OS	0-15	4	FIX	
SHARPNESS OFFSET(NTSC358)	SHP-O3	0-15	12	FIX	
SHARPNESS OFFSET(NTSC443)	SHP-O4	0-15	8	FIX	

EEPROM ITEMS	OSD	DATA LENGTH	INITIAL DATA	FIX/ADJ	REMARK
VERTICAL SCAN-DISABLE	VSD	0(DISABLE)/1(ENABLE)	0	FIX	
BLACK STRETCH	BKS	0(DISABLE)/1(ENABLE)	1	FIX	
AUTOMATIC VOLUME LEVELING	AVL	0(DISABLE)/1(ENABLE)	1	FIX	
FAST FILTER IF-PLL	FFI	0(DISABLE)/1(ENABLE)	0	FIX	
ENABLE VERTICAL GUARD(RGB BLANKING)	EVG	0(DISABLE)/1(ENABLE)	1	FIX	ONLY BLK
EHT TRACKING MODE (HCO)	EHT	0(DISABLE)/1(ENABLE)	1	FIX	
OVERSCAN SWITCH OFF	OSO	0(DISABLE)/1(ENABLE)	0	FIX	
AUTO COLOUR LIMIT	ACL	0(DISABLE)/1(ENABLE)	0	FIX	
FORCED COLOUR LIMIT	FCO	0(DISABLE)/1(ENABLE)	0	FIX	
SOUND SYSTEM M	S-M	0(DISABLE)/1(ENABLE)	0	FIX	
SOUND SYSTEM DK	S-DK	0(DISABLE)/1(ENABLE)	0	FIX	
SOUND SYSTEM I	S-I	0(DISABLE)/1(ENABLE)	0	FIX	
SOUND SYSTEM BG	S-BG	0(DISABLE)/1(ENABLE)	1	FIX	
PLAYBACK SECAM	P-SECAM	0(DISABLE)/1(ENABLE)	1	FIX	
FE (RF) NTSC 3.58	F-N358	0(DISABLE)/1(ENABLE)	0	FIX	
FE (RF) NTSC 4.43	F-N443	0(DISABLE)/1(ENABLE)	1	FIX	
FE (RF) SECAM	F-SECAM	0(DISABLE)/1(ENABLE)	1	FIX	
VIDEO MUTE AT IDENT LOSS	VMI	0(DISABLE)/1(ENABLE)	1	FIX	
VIDEO MUTE AT PROGRAM/SOURCE CHANGE	VMC	0(DISABLE)/1(ENABLE)	1	FIX	
HOTEL MODE	HTL	0(DISABLE)/1(ENABLE)	0	FIX	
REDUCED FM DEMODULATOR GAIN FOR BTSC SIGNAL	BTSC	0(DISABLE)/1(ENABLE)	0	FIX	
NUMBER OF EXTERNAL AV SOURCE	AV	0(FOR 1AV)/1(FOR 2AV)	1	FIX	
FM WINDOW SELECTION	FMWS	0(DISABLE)/1(ENABLE)	0	FIX	
SOUND MUTE BIT 0	SM0	0(DISABLE)/1(ENABLE)	1	FIX	
SOUND MUTE BIT 1	SM1	0(DISABLE)/1(ENABLE)	0	FIX	
THAI LANGUAGE	THA	0(DISABLE)/1(ENABLE)	1	FIX	*1
ARABIC LANGUAGE	ARA	0(DISABLE)/1(ENABLE)	1	FIX	*1
MALAY LANGUAGE	MAL	0(DISABLE)/1(ENABLE)	1	FIX	*1
CHINESE LANGUAGE	CHI	0(DISABLE)/1(ENABLE)	1	FIX	*1
FRENCH LANGUAGE	FRE	0(DISABLE)/1(ENABLE)	1	FIX	*1
RUSSIAN LANGUAGE	RUS	0(DISABLE)/1(ENABLE)	1	FIX	
FORCED V-SYNC SLICING LEVEL	FSL	0(DISABLE)/1(ENABLE)	0	FIX	
SYNC OF OSD	HP2	0(DISABLE)/1(ENABLE)	0	FIX	
TUNER SELECTION (0:SHARPIALPS; 1:MURATA)	CPT	0(BR-ZL)/1(ARGENTINA)	0	FIX	
BILINGUAL	BIL	0(DISABLE)/1(ENABLE)	0	FIX	
IF AGC SPEED BIT 0	AGC0	0(DISABLE)/1(ENABLE)	1	FIX	
IF AGC SPEED BIT 1	AGC1	0(DISABLE)/1(ENABLE)	0	FIX	
PHI-1 TIME CONSTANT (RF)	FOA-FE	0(DISABLE)/1(ENABLE)	0	FIX	
PHI-1 TIME CONSTANT (RF)	FOB-FE	0(DISABLE)/1(ENABLE)	0	FIX	
PHI-1 TIME CONSTANT (OFF AIR)	FOA-AV	0(DISABLE)/1(ENABLE)	1	FIX	
PHI-1 TIME CONSTANT (OFF AIR)	FOB-AV	0(DISABLE)/1(ENABLE)	1	FIX	

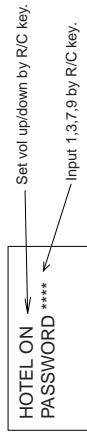
NOTE : FIXED DATA, PLEASE DO NOT CHANGE WITHOUT SPECIFIC INSTRUCTION.
*1: MANUALLY CHANGE 1 TO 0.

UA1 HOTEL MODE APPLICATION

How to enable/disable the "Hotel Mode" ?

Ans: a) Press the R/C (FUNCTION) (1) key until language selection appear. within five second press the (one/two digit) (2) key and keep pressing it for five second, then you can see the hotel mode with four digits password.

b) Key in the four digits password starting with number "1", "3", "7", "9", then the hotel mode will be enable, you can switch on/off the hotel mode by using R/C (volume up/down) {3} key.



#1 Ch 1 is your selected channel for hotel mode.

* We recommend

Before set the hotel mode, it is better to choose ch 1 & set s-vol level Up to 75% full scale.
After set hotel mode, starting channel will be always ch 1 & maximum sound level out will be set the half of full scale.

* If you set hotel mode in AV, starting channel will be the last ch which you received before power off (same as normal operation)

CONDITION:

When using hotel mode, user can control "contrast", "brightness", "sharpness" and "tint" function.
But after power off, it will return to the initial setting.

You can't use:--

- Preset mode
- Fine tuning
- Skip mode
- System selection

The others function is allowed to be used.