

JVC AV 28WR2 EK/EN

General Information

Also Covers
AV 28WT EK, AV 28WT EN.
JF Chassis

Matrix

Item	See Model	Book
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Adjustments

Main Difference List between AV-28WR2 EN and AV-28WR2 EK

Part Name	Model Name	AV-28WR2EN	AV-28WR2EK
MAIN PWB		SJF-1002A-U2	SJF-1902A-U2
IF PWB		SJF0F001A-U2	SJF0F901A-U2
POWER CORD		AEEMP001-185	AEEMP003-185A
RATING LABEL		CM23157-006-E CM23049-006-E	CM23047-004-E
REMOTE CONTROL UNIT		RM-C793-1E	RM-C792-1E
S. DIAGRAM [Only ITALY]		28WR2EN-HSAE	---
INST BOOK		CQ40369-001-E CQ40370-001-E	CQ40367-001-E
SET UP GUIDE		---	CQ40368-001-E
DEC. SHEET		CM22966-009-E	---
EURO LABEL		AEM1038-064-E	AEM1038-065-E

Main Difference List between AV-28WT2 EN and AV-28WT2 EK

Part Name	Model Name	AV-28WT2EN	AV-28WT2EK
MAIN PWB		SJF-1003A-U2	SJF-1903A-U2
IF PWB		SJF0F001A-U2	SJF0F901A-U2
POWER CORD		AEEMP001-185	AEEMP003-185A
RATING LABEL		CM23157-007-E CM23049-009-E	CM23047-006-E
F. CABINET ASSY		CM12833-A0E-E	CM12833-A0D-E
REMOTE CONTROL UNIT		RM-C795-1E	RM-C794-1E
S. DIAGRAM (Only ITALY)		28WT2EN-HSAE	---
INST BOOK		CQ40348-001-E CQ40349-001-E	CQ40350-001-E
SET UP GUIDE		---	CQ40351-001-E
DEC. SHEET		CM22966-013-E	---
EURO LABEL		AEM1038-074-E	AEM1038-073-E

System Constant Set [AV 28WR2 EN]

```

SYSTEM CONSTANT SET
MODEL=28/32WR2 (V1, ****)
COUNTRY : EN
INCH : 28
- + [OK] STORE [EXIT]
JVC JF WIDE V01
***** - *****
    
```

Setting Values of System Constant Set [AV 28WR2 EN/EK]

Setting item	Setting content	Setting value	
		AV-28WR2EN	AV-28WR2EK
1. COUNTRY	EN → EK	EN	EK
2. INCH	28 → 32 → 24	28	28

System Constant Set [AV 28WT2 EN]

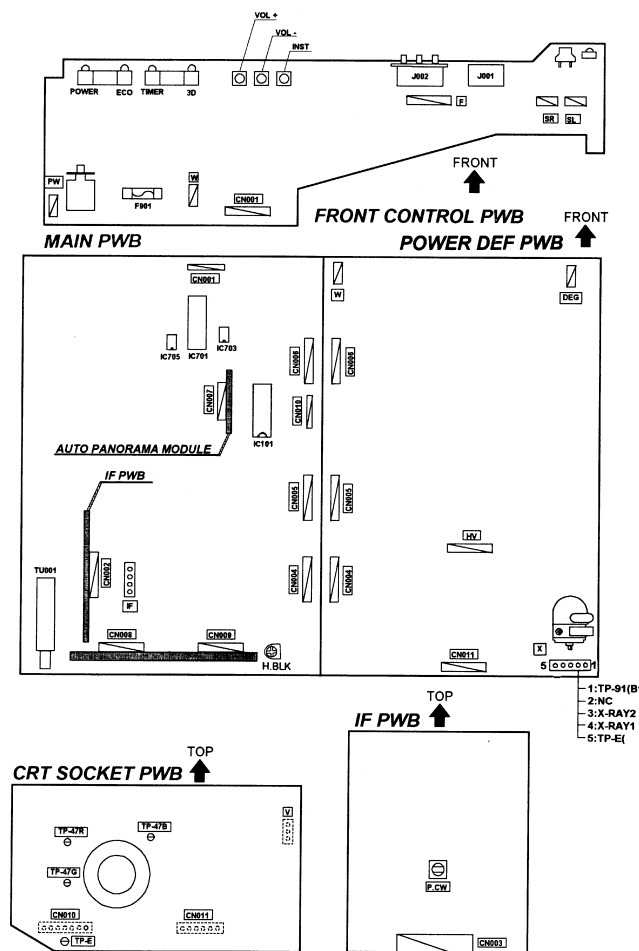
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SYSTEM CONSTANT SET
MODEL=28/32WT2 (V1, ****)
COUNTRY : EN
INCH : 28
- + [OK] STORE [EXIT]
JVC JF 1
***** - *****
    
```

Setting Values of System Constant Set [AV 28WT2 EN/EK]

Setting item	Setting content	Setting value	
		AV-28WT2EN	AV-28WT2EK
1. COUNTRY	EN → EK	EN	EK
2. INCH	28 → 32 → 24	28	28

Adjustment Locations [AV 28WR2 EN/EK]

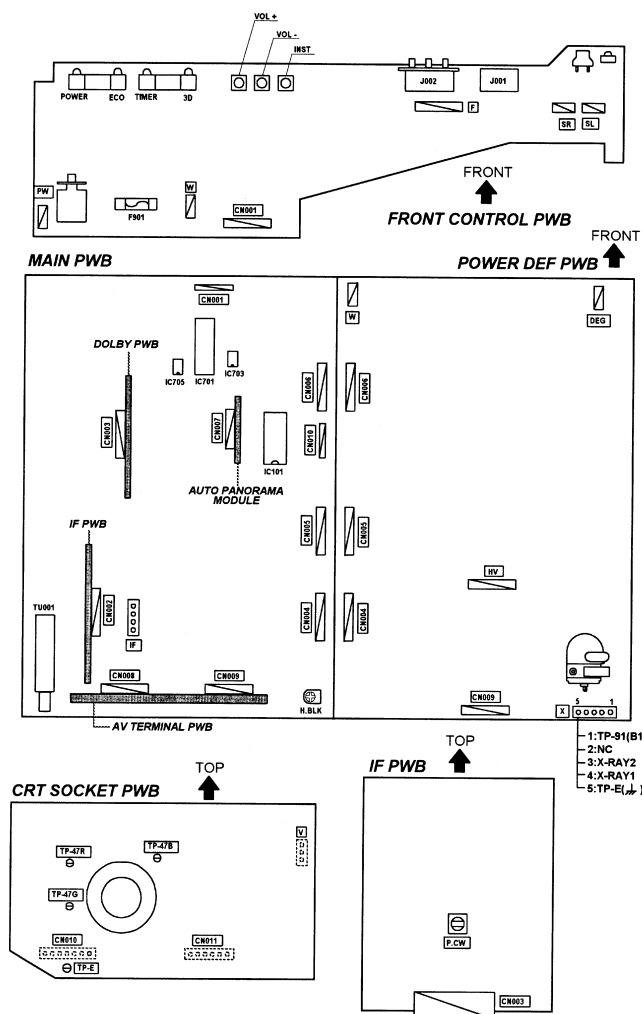


Recommended Safety Parts

Item	Part No.	Description
[AV-28WT2 EN]		
L01	CELD062-001J2	DEGAUSSING COIL
V01	W66ESF002X14	ITC TUBE(C) (Inc.DY,PC,WED)
T2551	CETH019-00AJ1	H.V.TRANSF. (SERVICE)
10	AEEMP001-185	POWER CORD
11	CM46618-A01-E	POWER CORD CLAMP
12	CM12582-A04-E	REAR COVER
14	CM23157-007-E	RATING LABEL For ENG/GER/ITA
15	CM23049-009-E	RATING LABEL For ENG/ESP/FRA
[AV-28WT2 EK]		
L01	CELD061-001J2	DEGAUSSING COIL
V01	W66ESF002X14	ITC TUBE(C) (Inc.DY,PC,WED)
T2551	CETH019-00AJ1	H.V.TRANSF. (SERVICE)
10	AEEMP003-185A	POWER CORD
11	CM46618-A01-E	POWER CORD CLAMP
12	CM12582-A04-E	REAR COVER
14	CM23157-006-E	RATING LABEL For ENG/GER/ITA
15	CM23049-006-E	RATING LABEL For ENG/ESP/FRA
[AV-28WR2 EN]		
L01	CELD061-001J2	DEGAUSSING COIL
V01	W66ESF002X14	ITC TUBE(C) (Inc.DY,PC,WED)
T2551	CETH019-00AJ1	H.V.TRANSF. (SERVICE)
10	AEEMP001-185	POWER CORD
11	CM46618-A01-E	POWER CORD CLAMP
12	CM12582-A04-KD	REAR COVER
14	CM23157-006-E	RATING LABEL For ENG/GER/ITA
15	CM23049-006-E	RATING LABEL For ENG/ESP/FRA
[AV-28WR2 EK]		
L01	CELD061-001J2	DEGAUSSING COIL
V01	W66ESF002X14	ITC TUBE(C) (Inc.DY,PC,WED)
T2551	CETH019-00AJ1	H.V.TRANSF. (SERVICE)
10	AEEMP003-185A	POWER CORD
11	CM46618-A01-E	POWER CORD CLAMP
12	CM12582-A04-KD	REAR COVER
14	CM23047-004-E	RATING LABEL
[AV-28WT2 EN] [AV-28WR2 EN/EK]		
R1252	QRZ0054-470M	F R 47 OHM 1/4W J
R2466	QRD14CJ-2R2SX	C R 2.2 OHM 1/4W J
R2991	QRZ0057-825	C R 8.2M OHM 1W J
C2521	QF70122-242S	MPP CAP. 2400pF 1.8kVH ±3%
C2522	QFZ0117-1202S	MPP CAP. 0.012uF 1.4kVH±2.5%
C2531	QFZ0119-224S	MPP CAP. 0.22uF 200V ±3%
C2902	QCZ9034-472A	C CAP. 4700p FAC400V P
C2903	QCZ9034-472A	C CAP. 4700p FAC400V P
C2904	QCZ9034-472A	C CAP. 4700p FAC400V P
C2934	QFZ9040-473N	MF CAP. 0.047uFAC275V M
C2934	QFZ9040-473N	MM CAP. 0.047uFAC275V M
C2992	QCZ9041-471A	C CAP. 470p FAC400V K
C2993	QCZ9041-332A	C CAP. 3300p FAC400V K
T2901	CETS087-001J4	SW TRANSF.
D2901	D3SBA60	DIODE BRIDGE
Q2521	BU2508AX	POWER TRANSISTOR H.OUT
IC2902	TLP721F (D4-GR)	I.C. (PH. COUPLER)
CP2952	ICP-N50-Y	I.C. PROTECT
CP2953	ICP-N50-Y	I.C. PROTECT
FR2551	QRZ0054-4R7M	F R 4.7 OHM 1/4W J
FR2552	QRH017J-1R0M	F R 1 OHM 1W J
FR2553	QRH017J-1R0M	F R 1 OHM 1W J
FR2953	QRH017K-R82M	F R 0.82 OHM1W K
RY2901	CESK028-002	RELAY
TH2901	CEKP002-003	W. P. THERMISTOR
R3306	QRD141J-100SY	C R 10 OHM 1/4W J
FR3319	QRH017J-561M	F R 560 OHM 1W J
SK3001	CE42535-001J1	C.R.T.SOCKET
R8905	QRZ0111-474	C R 470k OHM 1/2W K
C8901	QFZ9040-474N	MF CAP. 0.47uFAC275V M
F8901	QMF51D2-3R15J1	FUSE 3.15 A
LF8901	CE42144-001J2	LINE FILTER
LF8901	CELFO12-001J7	LINE FILTER
S8901	QSP4K21-C01	PUSH SWITCH MAIN POWER
[AV-28WT2 EN]		
9	CQ40348-001-E	INST BOOK For ENG/GER/FRA/NED/ITA
10	CQ40349-001-E	INST BOOK For FIN/NOR/DEN/SWE/POR
[AV-28WT2 EK]		
11	CQ40350-001-E	INST BOOK

Adjustments Cont'd

Adjustment Locations [AV 28WT2 EN/EK]



VIDEO/CHROMA CIRCUIT ADJUSTMENT

The setting (adjustment) using the REMOTE CONTROL UNIT is made on the basis of the initial setting values. The setting values which adjust the screen to the optimum condition can be different from the initial setting values.

Setting Item (Adjustment Item)	Initial setting value	Colour system	
		PAL SECAM	NTSC 3.58 NTSC 4.43
1.CUTOFF	R	-100	
	G	-100	
	B	-100	
2.DRIVE	R	+0	
	B	+0	
3.BRIGHT		+0	
4.CONTRAST		+0	
5.COLOUR		+0	
6.TINT	Composite VIDEO		+0
	S VIDEO		+0
7.BLACK OFFSET	R-Y	+0	
	B-Y	+0	
8.SHARP		-15	
9.TEXT CONT		0	

SECAM COLOUR [Method of adjustment without measuring instrument]

1. Receive a SECAM full field colour bar signal (75% white).
2. Set the initial setting value of SECAM COLOUR with the FUNCTION \mp key.
3. Adjust SECAM COLOUR and bring the value of (A) of the illustration to +5V.
4. Press the MENU key and memorize the setting value.

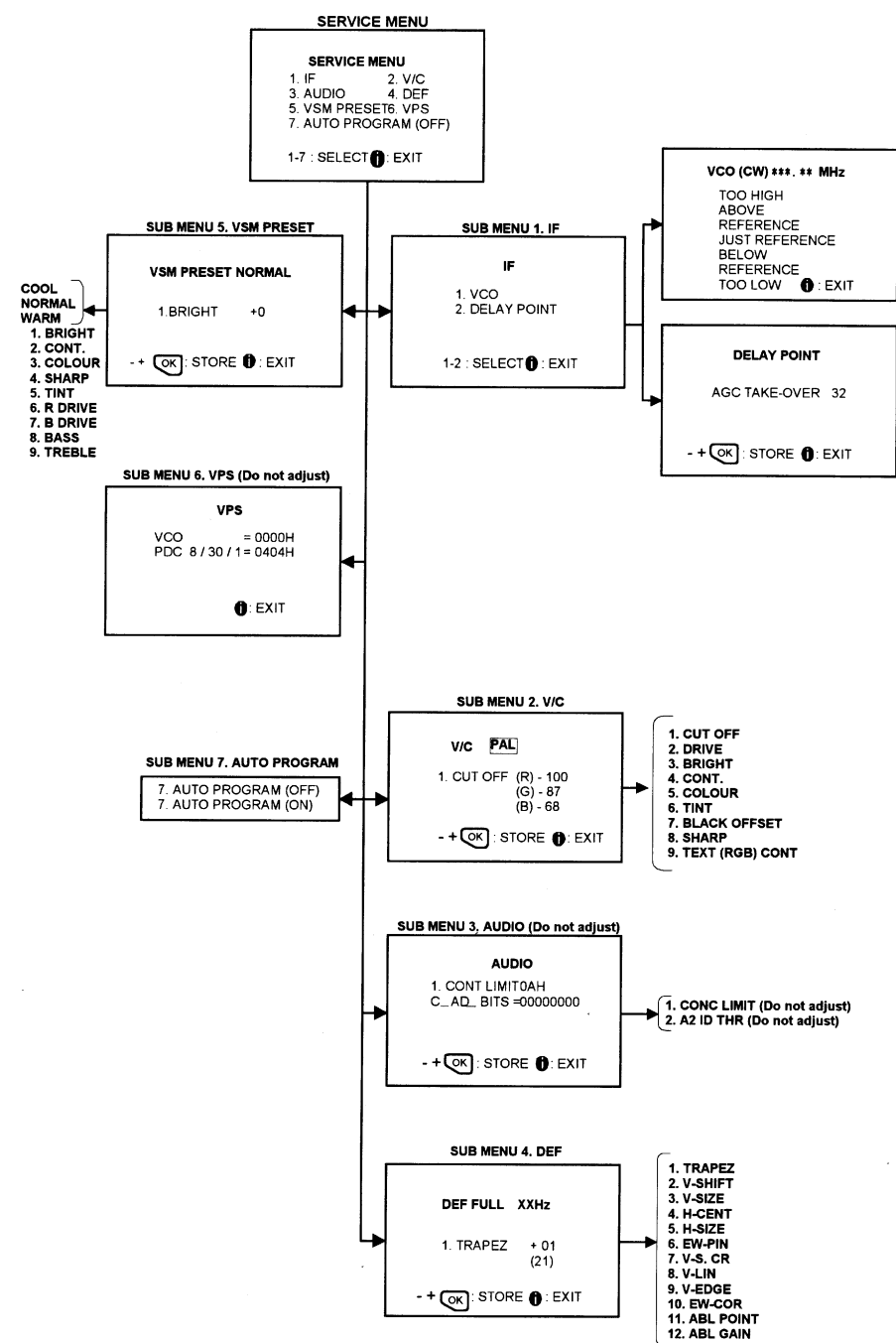
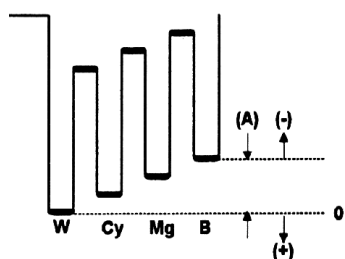


Fig. 3 SUB MENU SCREEN

NTSC COLOUR ADJUSTMENTS

- (NTSC 3.58 COLOUR)**
1. Input a NTSC 3.58MHz COMPOSITE VIDEO signal (full field colour bar with 75% white) from the EXT terminal.
 2. Set the initial setting value of NTSC 3.58 COLOUR with the FUNCTION \mp key.
 3. Adjust NTSC 3.58 COLOUR and bring the value of (A) of the illustration to +8V(W-B) [AV-28WR2 EK] or 0V(W-B) [AV-28WT2 EK].
 4. Press the MENU key and memorize the setting value.

TINT ADJUSTMENTS

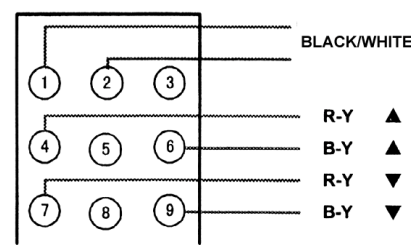
- (NTSC 3.58 TINT)**
1. Input a NTSC 3.58MHz COMPOSITE VIDEO signal (full field colour bar with 75% white) from the EXT terminal.
 2. Select 2.V/C from the SERVICE MENU.
 3. Select 6.TINT with the FUNCTION UP/DOWN key.
 4. Set the initial setting value of NTSC 3.58 TINT with the FUNCTION - or + key.
 5. Connect the oscilloscope between TP-47B and TP-E (***)

6. Adjust NTSC 3.58 TINT to bring the value of (A) in the illustration to +3V [AV-28WR2 EK] or +5V [AV-28WT2 EK] (voltage difference between white (W) and magenta (Mg)).
7. Press the MENU key and memorize the setting value.

Adjustment of BLACK OFFSET (SECAM) I

Measuring Instrument
Remote control unit

- Adjustment Part
7. BLACK OFFSET (R-Y)***
(B-Y)***



1. Receive a SECAM broadcast.
2. Select 2. V/C from SERVICE MENU.
3. Select 7. BLACK OFFSET with the FUNCTION UP/DOWN key.
4. Set the initial setting value for BLACK OFFSET (R-Y) and (B-Y) with 4 and 7 or 6 and 9 keys of the remote control.
5. If the picture is not the best with the initial setting value, make fine adjustment until you get the best picture.
6. Press the MENU key and memorize the setting value.

Adjustment of BLACK OFFSET (SECAM) II

Measuring Instrument
Signal generator
Oscilloscope
Remote control unit

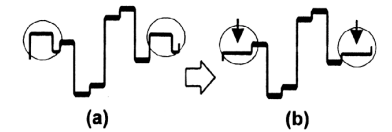
Test Point
35 PIN (R-Y)
38 PIN (B-Y)
IC-101 OF MAIN PWB

- Adjustment Part
7. BLACK OFFSET (R-Y)***
(B-Y)***

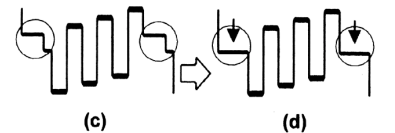
1. Receive a SECAM COLOUR bar signal (full field colour bar 75% white).
2. Select 2. V/C from SERVICE MENU.
3. Select 7. BLACK OFFSET with the FUNCTION UP/DOWN key.
4. Connect the oscilloscope between 35 pin of IC-101 and TP-E (***)
5. By using 4 and 7 keys of the remote control, adjust the BLACK OFFSET (R-Y) so that it becomes the waveform changes from (a) to (b) shown in the figure.
6. Connect the oscilloscope between 36 pin of IC-101 and TP-E.
7. By using 6 and 9 keys of the remote control, adjust the BLACK OFFSET (B-Y) so that it becomes the waveform changes from (c) to (d) shown in the figure.

8. If the picture is not the best when adjusted, make fine adjustment until you get the best picture.
9. Press the MENU key and memorize the setting value.

(R-Y)



(B-Y)



DEFLECTION CIRCUIT ADJUSTMENT

There are 6 modes of the adjustment

- (1) 50Hz mode**
(1) PANORAMIC
(2) FULL
(3) REGULAR
(4) 14:9 ZOOM
(5) 16:9 ZOOM
(6) 16:9 ZOOM SUB TITLE

(2) 60Hz mode

(each aspect mode) depending upon the kind of signals (vertical frequency 50Hz / 60Hz). When the 50Hz PANORAMIC mode has been established, the setting of other modes will be done automatically. However, if the picture quality has not been optimized, adjust each mode again, respectively. The adjustment using the remote control unit is made on the basis of the initial setting values. The setting values which adjust the screen to the optimum condition can be different from the Initial setting values.

[AV-28WR2EN/EK]

Setting Item	Adjustment name	Initial setting value			
		50Hz mode			
		PANORAMIC	14:9 ZOOM	16:9 ZOOM	FULL
1.TRAPEZ	Trapezoidal distortion correction	-12	-1	-1	+1
2.V-SHIFT	Vertical center	+1	+0	-1	+0
3.V-SIZE	Vertical height	-10	+10	+30	-15
4.H-CENT	Horizontal center	-10	-10	-10	-10
5.H-SIZE	Horizontal width	+21	-13	-8	-7
6.EW-PIN	Side pin correction	-7	+0	+7	-7
7.V-S.CR	Vertical height correction	+5	-8	-8	-10
8.V-LIN	Vertical Linearity	+1	-1	-1	-1
9.V-EDGE	Vertical edge correction	+7	+0	+0	+0
10.EW-COR	Side pin four corner correction	+7	-1	+0	-9
11.ABL POINT	Auto beam limiter point	+0	+3	+0	+0
12.ABL GAIN	auto beam limiter gain	+0	+2	+0	+0

Setting Item	Adjustment name	Initial setting value		
		50Hz mode		60Hz mode
		REGULAR	16:9 ZOOM SUB TITLE	PANORAMIC
1.TRAPEZ	Trapezoidal distortion correction	+0	+2	-1
2.V-SHIFT	Vertical center	+2	-16	+5
3.V-SIZE	Vertical height	-12	+24	-2
4.H-CENT	Horizontal center	-10	-10	-6
5.H-SIZE	Horizontal width	-21	-7	+0
6.EW-PIN	Side pin correction	-8	+2	-1
7.V-S.CR	Vertical height correction	-10	-2	+0
8.V-LIN	Vertical Linearity	-1	-7	+0
9.V-EDGE	Vertical edge correction	+0	+0	+0
10.EW-COR	Side pin four corner correction	-7	+1	-2
11.ABL POINT	Auto beam limiter point	+3	+0	+0
12.ABL GAIN	auto beam limiter gain	+2	+0	+0

JVC AV 28WR2 EK/EN

Adjustments Cont'd

[AV-28WT2EN/EK]

Setting Item	Adjustment name	Initial setting value			
		50Hz mode			
		PANORAMIC	14:9 ZOOM	16:9 ZOOM	FULL
1.TRAPEZ	Trapezoidal distortion correction	-13	-1	+0	+0
2.V-SHIFT	Vertical center	-6	+2	-1	+2
3.V-SIZE	Vertical height	-10	+9	+29	-14
4.H-CENT	Horizontal center	-10	-11	-5	-10
5.H-SIZE	Horizontal width	+18	-12	-6	-6
6.EW-PIN	Side pin correction	-9	+2	+7	-6
7.V-S.CR	Vertical height correction	+5	-8	-8	-8
8.V-LIN	Vertical Linearity	+2	-1	-1	-1
9.V-EDGE	Vertical edge correction	+5	-2	-2	+0
10.EW-COR	Side pin four corner correction	+4	+1	+0	-7
11.ABL POINT	Auto beam limiter point	+0	+3	+0	+0
12.ABL GAIN	auto beam limiter gain	+0	+2	+0	+0

Setting Item	Adjustment name	Initial setting value		
		50Hz mode	16:9 ZOOM	60Hz mode
		REGULAR	SUB TITLE	PANORAMIC
1.TRAPEZ	Trapezoidal distortion correction	+1	+3	+1
2.V-SHIFT	Vertical center	+0	-18	+2
3.V-SIZE	Vertical height	-12	+22	-2
4.H-CENT	Horizontal center	-10	-5	-5
5.H-SIZE	Horizontal width	-20	-6	+0
6.EW-PIN	Side pin correction	-8	+3	-1
7.V-S.CR	Vertical height correction	-10	-2	+0
8.V-LIN	Vertical Linearity	-1	-7	+0
9.V-EDGE	Vertical edge correction	-2	+0	+0
10.EW-COR	Side pin four corner correction	-8	+1	-3
11.ABL POINT	Auto beam limiter point	+3	+0	+0
12.ABL GAIN	auto beam limiter gain	+2	+0	+0

Adjustment of H.SIZE [AV 28WT2 EN/EK]

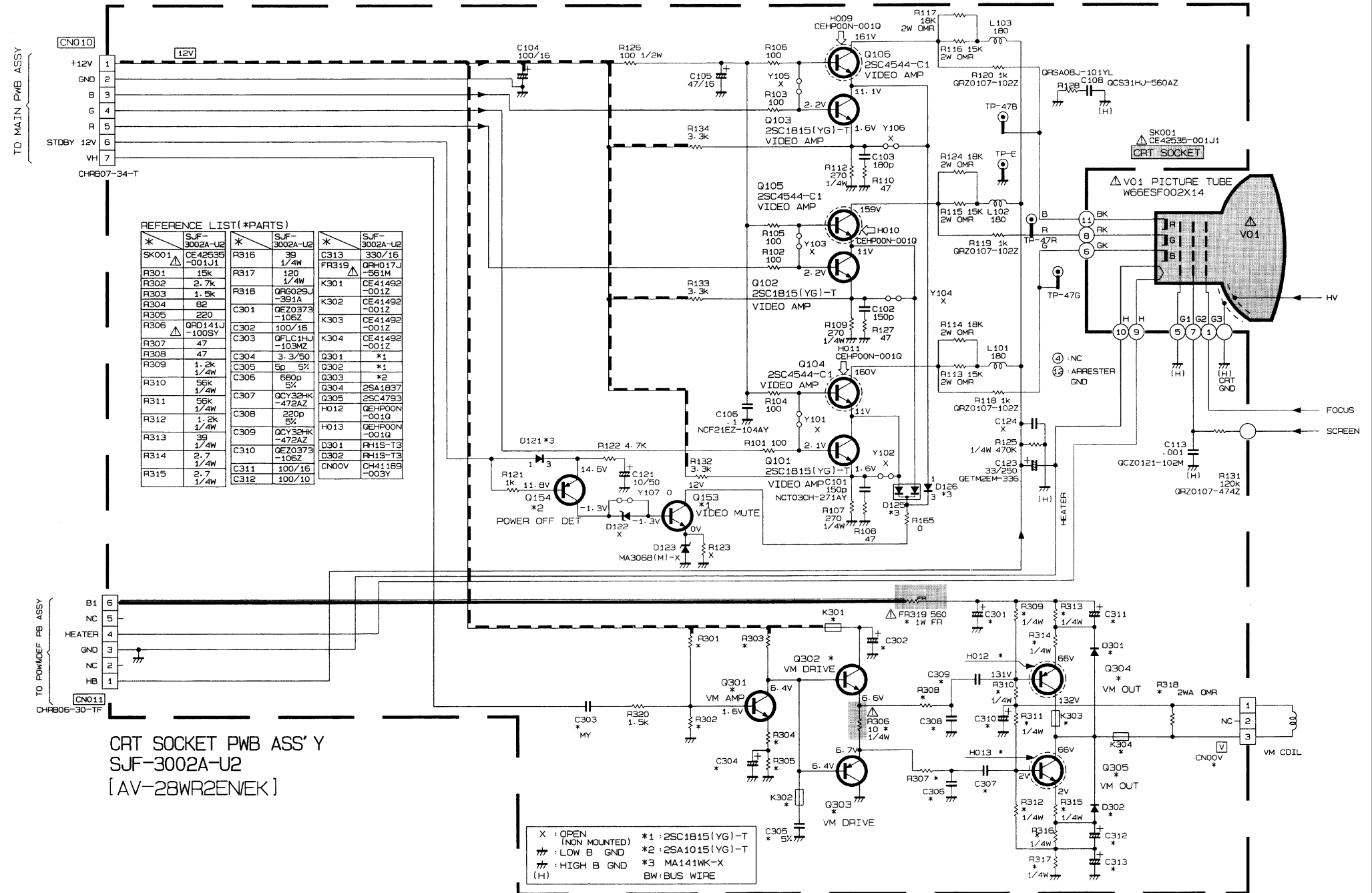
ASPECT MODE	FULL	REGULAR	PANORAMIC	14:9 ZOOM	16:9 ZOOM	16:9 ZOOM
H SIZE	92%	L=440m/m	94%	L=495mm	92%	SUB TITLE

[SCREEN SIZE]

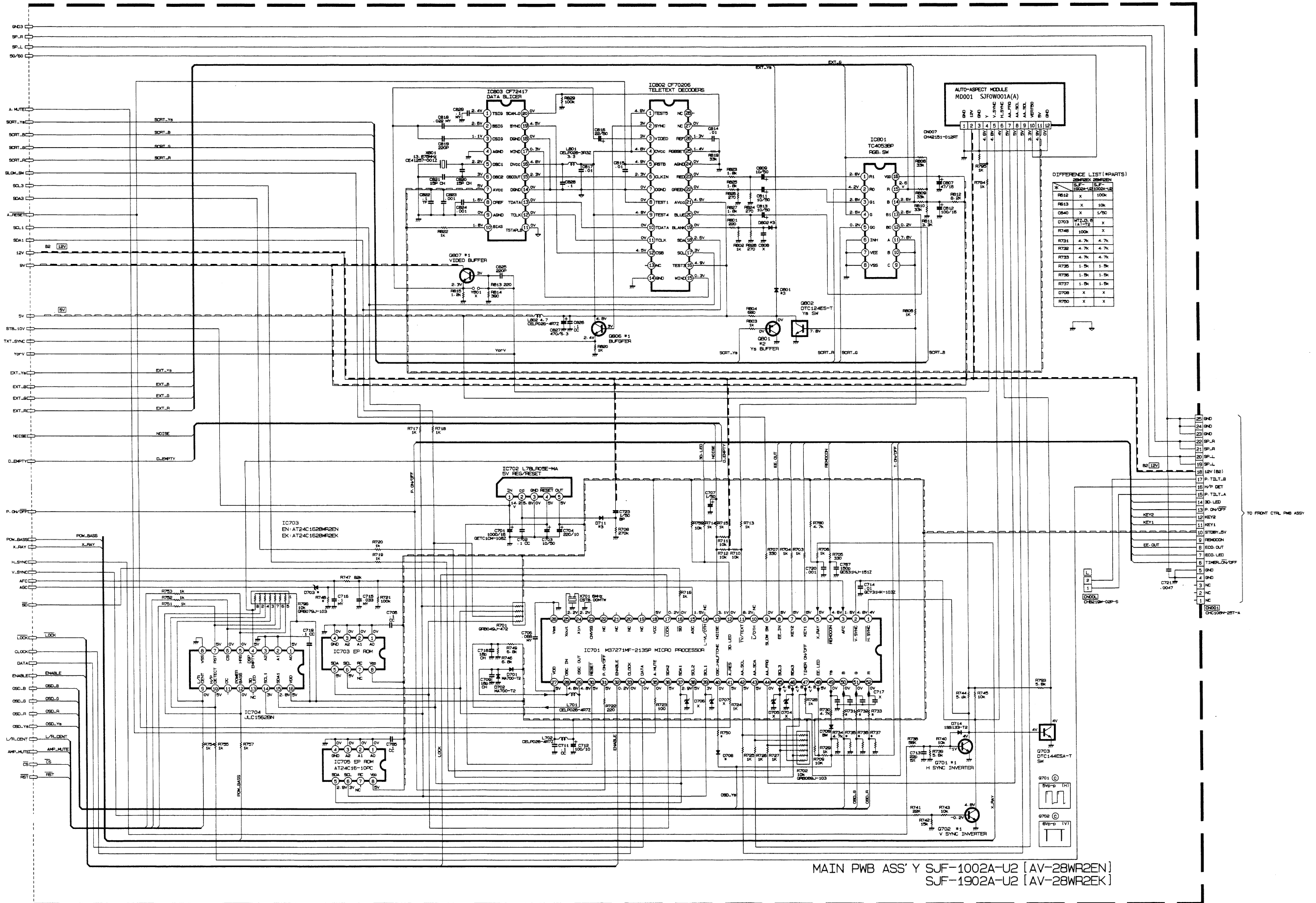
For more adjustments please refer to matrix.

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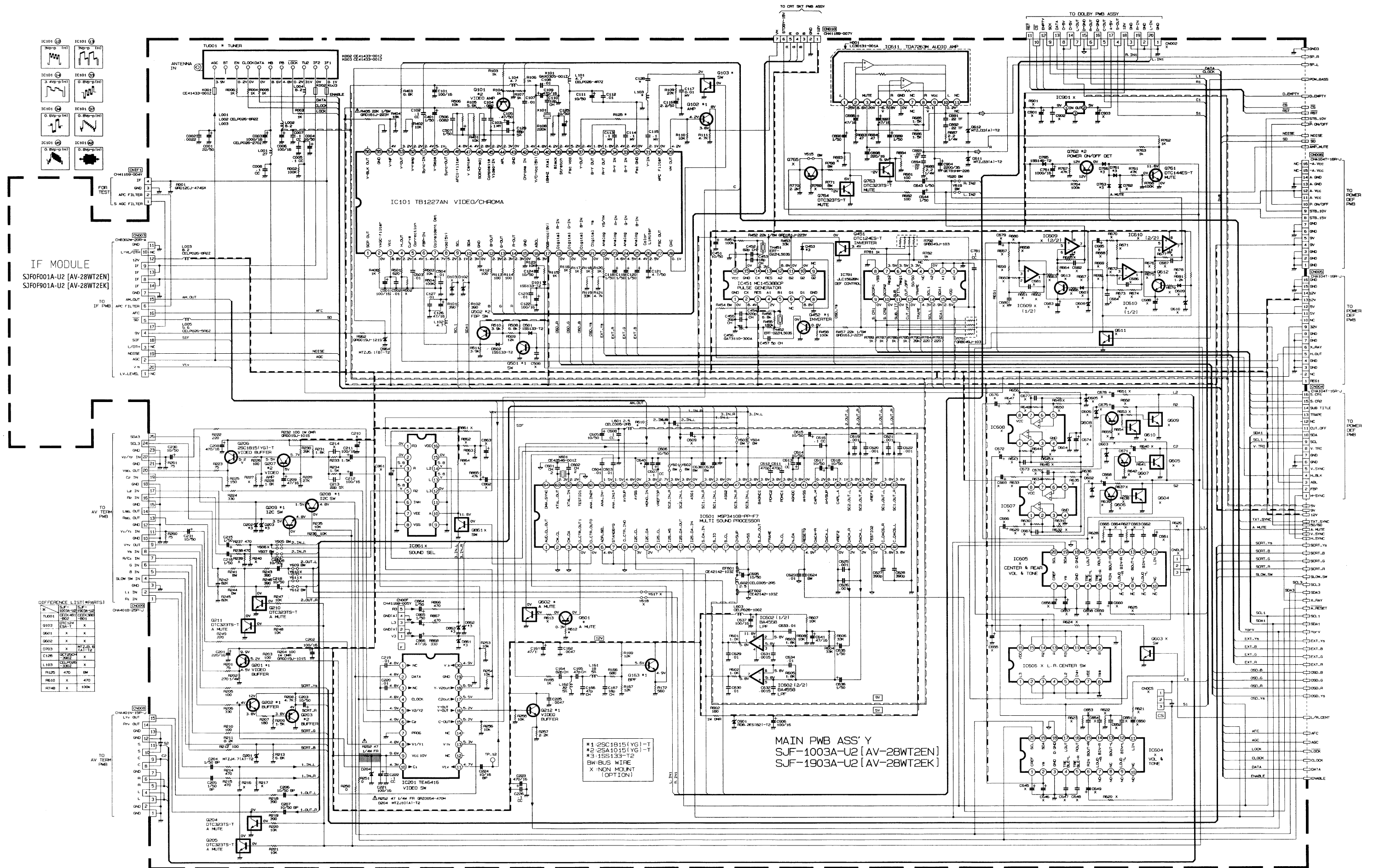
CRT Diagram [AV-28WR2EN/EK]



Main Diagram [AV-28WR2EN/EK]



Main Diagram "A" [AV-28WTEN/EK]



IF MODULE
S3F0F01A-U2 [AV-28WT2EN]
S3F0F01A-U2 [AV-28WT2EK]

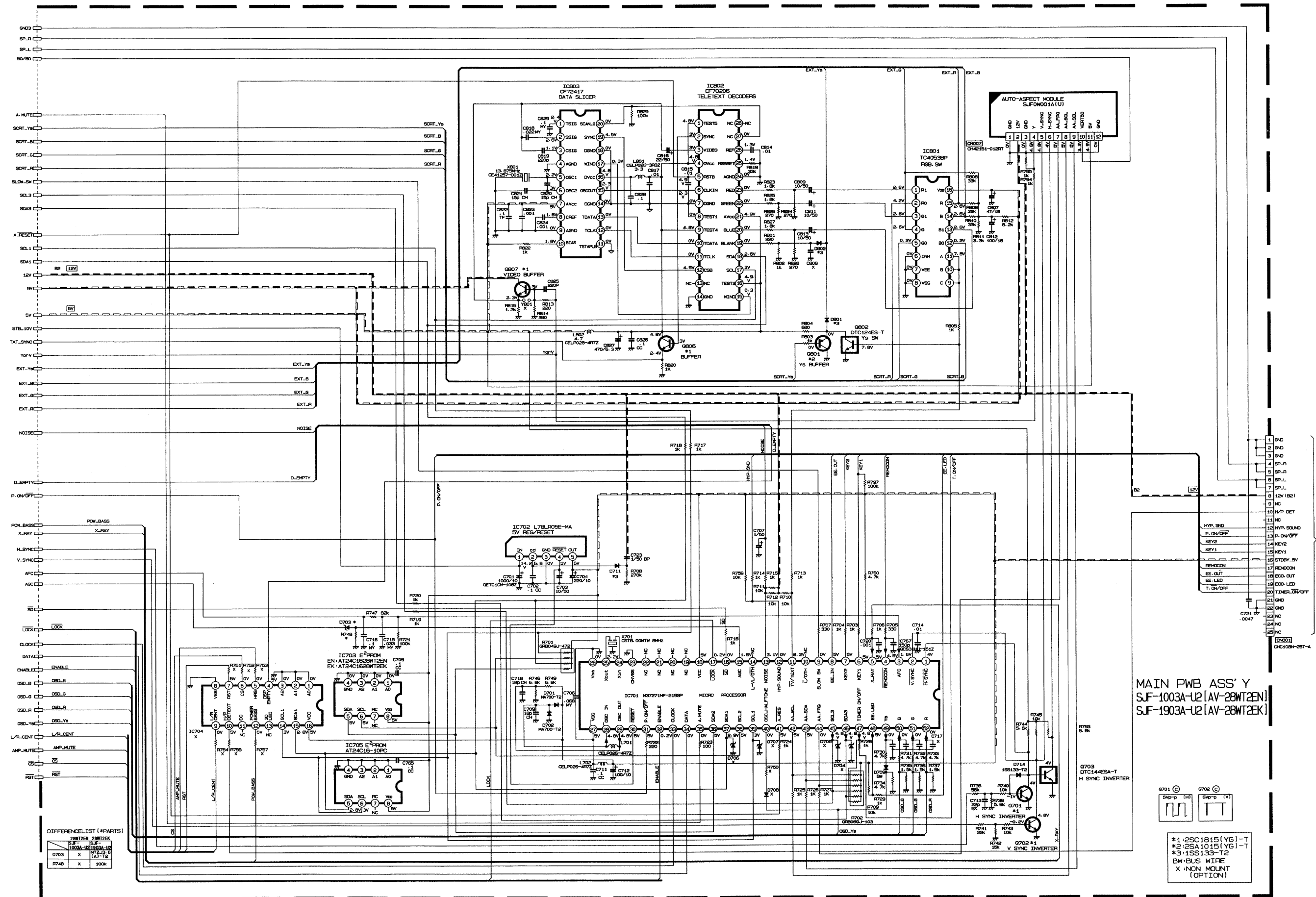
DIFFERENCE LIST (PARTS)

Part No.	Part Name	AV-28WT2EN	AV-28WT2EK
TU001	000A-1610M-148	X	
G101	010A-1610M-148	X	
G601	060A-1610M-148	X	
G602	060A-1610M-148	X	
G703	070A-1610M-148	X	
C106	010A-1610M-148	X	
L103	010A-1610M-148	X	
R125	010A-1610M-148	X	
R610	010A-1610M-148	X	
R748	010A-1610M-148	X	

*1: 25C1815(YG1-T)
*2: 25A1015(YG1-T)
*3: 1S1133-T2
BW-BUS WIRE
X: NON MOUNT (OPTION)

MAIN PWB ASS'Y
SJF-1003A-U2 [AV-28WT2EN]
SJF-1903A-U2 [AV-28WT2EK]

Main Diagram "D" [AV-28WTEN/EK]



MAIN PWB ASS'Y
 SJF-1003A-U2 [AV-28WT2EN]
 SJF-1903A-U2 [AV-28WT2EK]

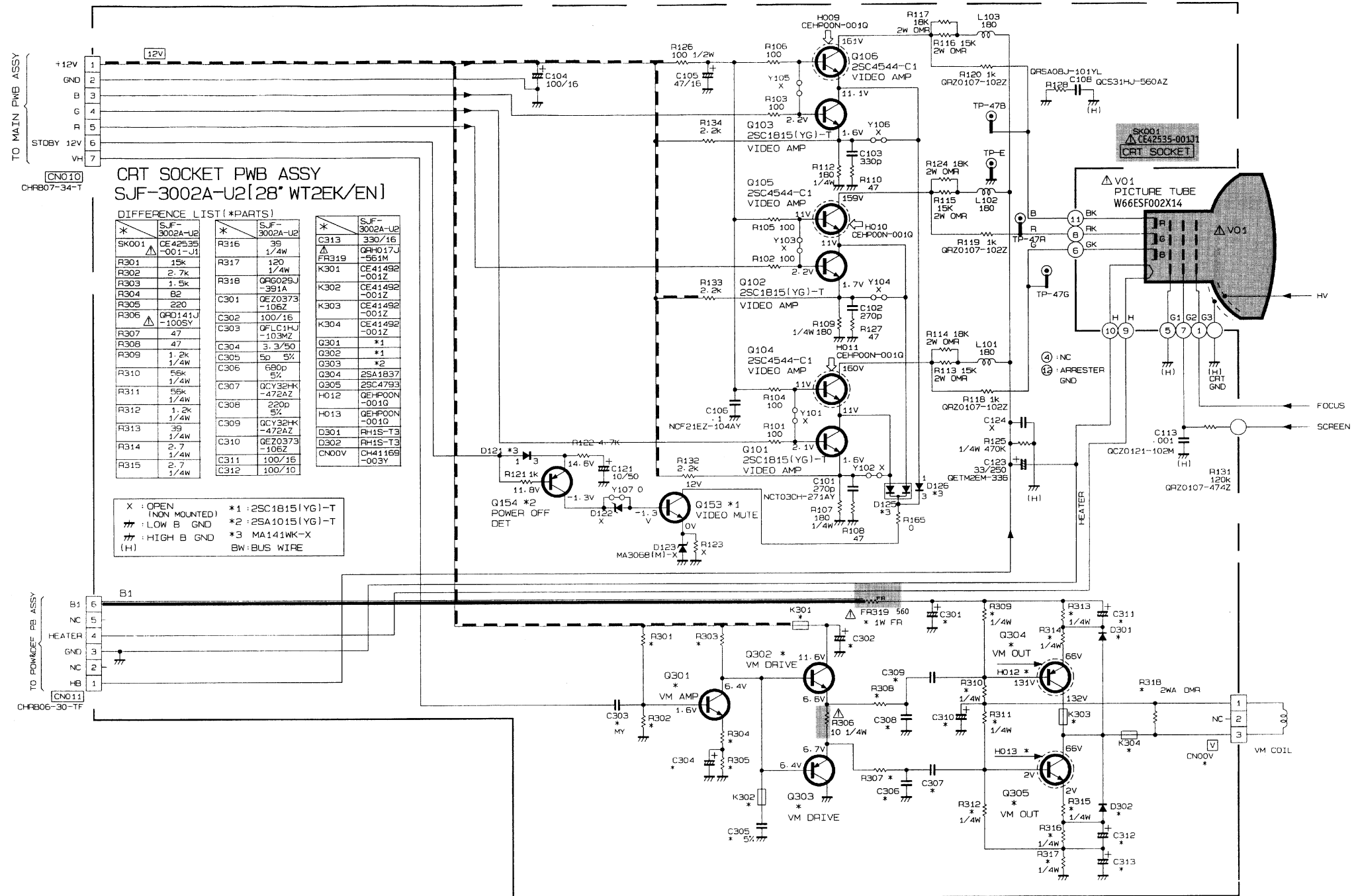
- *1: 2SC1815 (YG)-T
- *2: 2SA1015 (YG)-T
- *3: 1SS133-T2
- BW: BUS WIRE
- X: NON MOUNT (OPTION)

DIFFERENTIAL LIST (#PARTS)

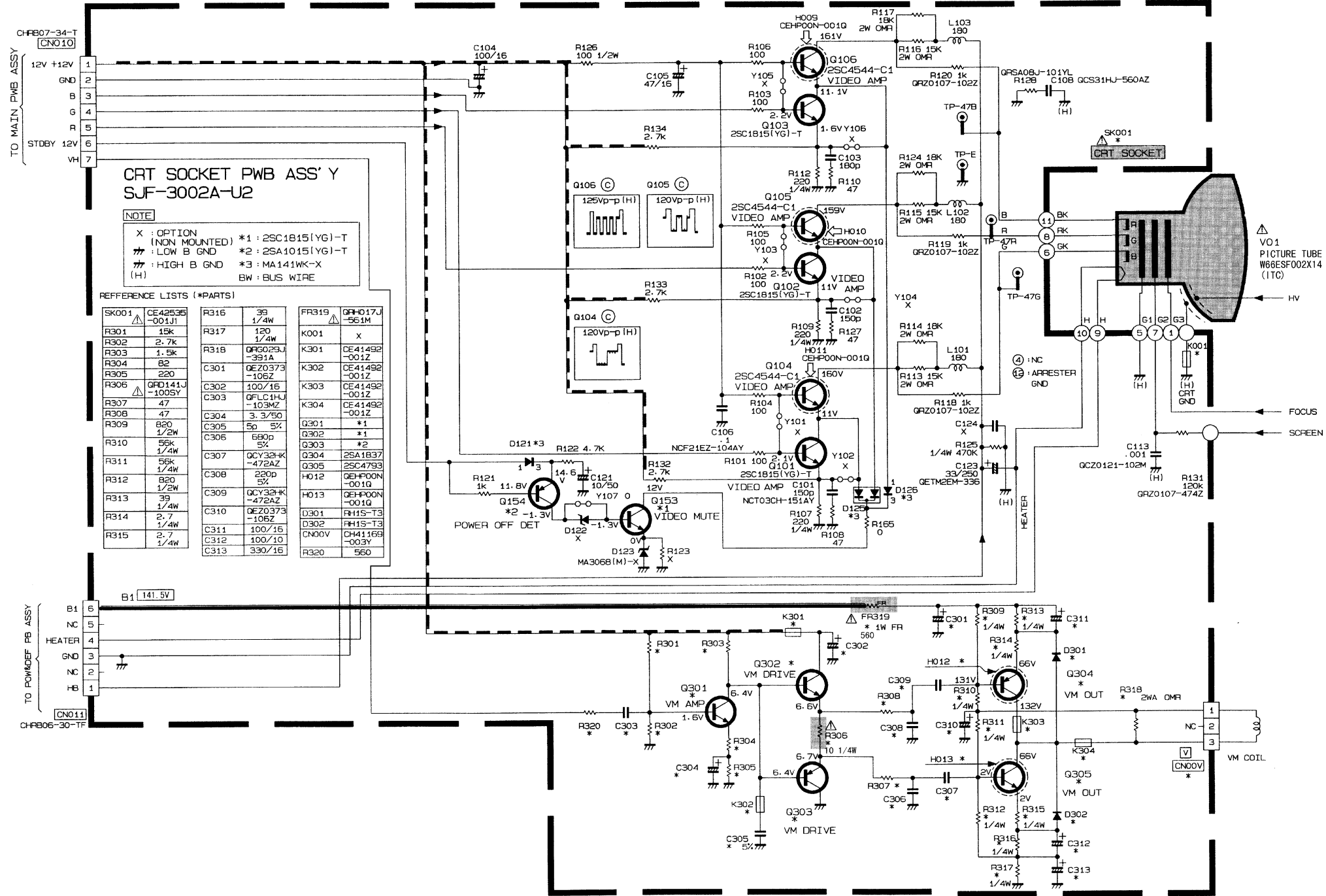
Part No.	QTY	Part No.	QTY
0703	X	1003A-12	100
0748	X	1003B-12	100

TO FRONT CTRL

CRT Diagram "A" [AV-28WTEN/EK]



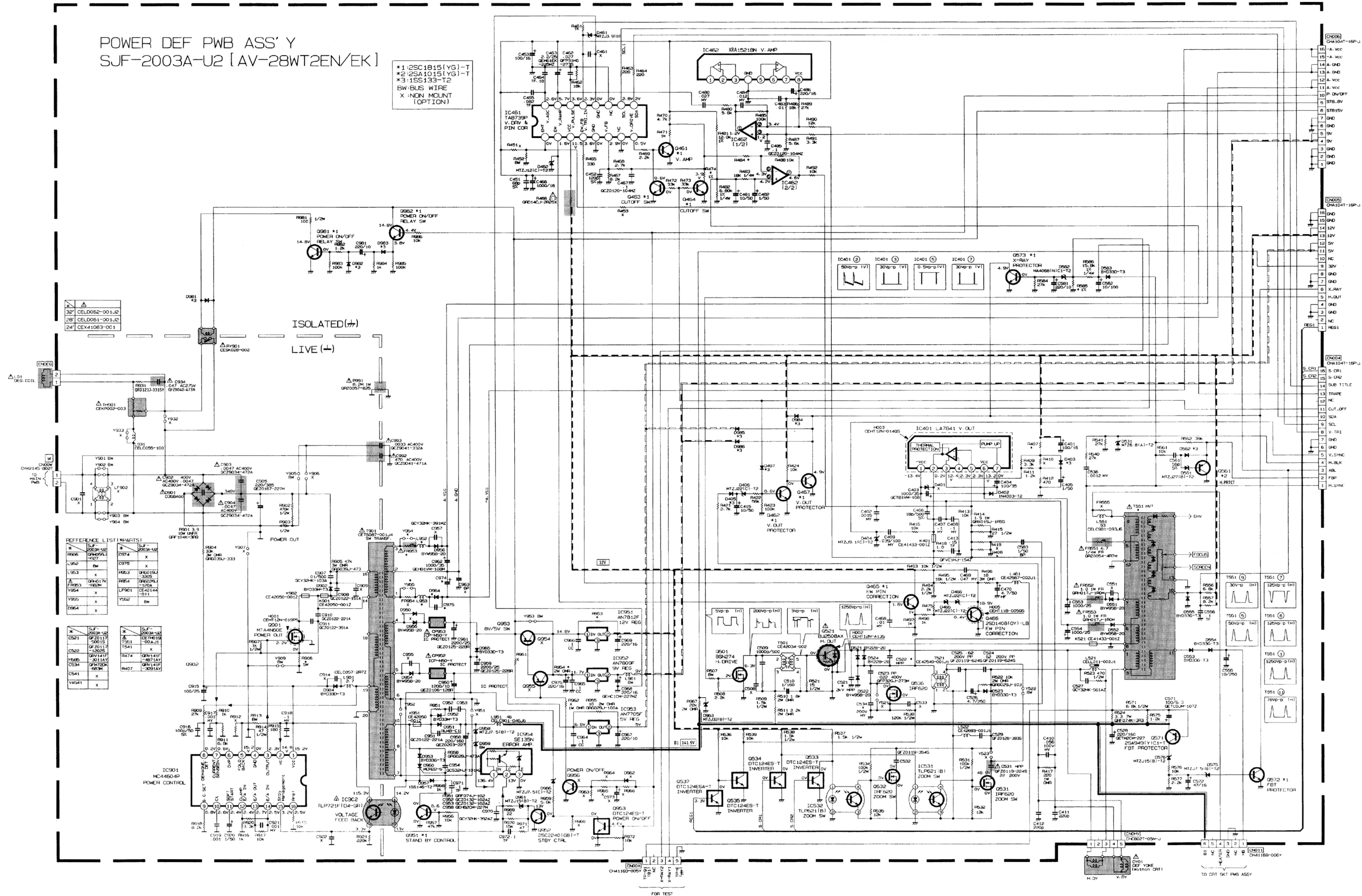
CRT Diagram "B" [AV-28WTEN/EK]



Power Deflection Diagram "A" [AV-28WTEN/EK]

POWER DEF PWB ASS'Y
SJF-2003A-U2 [AV-28WT2EN/EK]

*1: 2SC1815(YG)-T
*2: 2SA1015(YG)-T
*3: 1SS133-T2
BW: BUS WIRE
X: NON MOUNT (OPTION)



REFERENCE LIST (PARTS)

REF	QTY	PART NO.	DESCRIPTION
1	1	2SC1815(YG)-T	TRANSISTOR
2	1	2SA1015(YG)-T	TRANSISTOR
3	1	1SS133-T2	DIODE
4	1	IC901	POWER CONTROL
5	1	IC401	DEFLECTION YOKE DRIVER
6	1	IC402	DEFLECTION YOKE DRIVER
7	1	IC403	DEFLECTION YOKE DRIVER
8	1	IC404	DEFLECTION YOKE DRIVER
9	1	IC462	X-RAY V. AMP
10	1	IC405	THERMAL PROTECTOR

- 16 A.VCC
- 15 A.VCC
- 14 A.GND
- 13 A.VCC
- 12 A.VCC
- 11 A.VCC
- 10 Q.VOP
- 9 STB.BV
- 8 GND
- 7 GND
- 6 GND
- 5 GND
- 4 GND
- 3 GND
- 2 GND
- 1 GND

FOR TEST

Power Deflection Diagram "B" [AV-28WTEN/EK]

POWER PWB ASS'Y
SJF-2003A-U2

*1 2SC1615(YG)-T
*2 2SA1015(YG)-T
*3 4SS133-T2
BW: BUS WIRE
X: NON MOUNT
(OPTION)

REFERENCE LIST (PARTS)

Q982	BW	C974	X	Q981	QF2012B	T901	QF2011B	C984	QF2011B
L983	X	C975	X	Q982	QF2011B	T902	QF2011B	C985	QF2011B
F985	QF917K	F983	QF917K	F986	QF917K	R414	QF2011B	C986	QF2011B
F984	X	F984	QF917K	F987	QF917K	R415	QF2011B	C987	QF2011B
Y985	X	Y982	BW	C541	X	R957	10K	C988	MTZJ17-T
D984	X	L981	QF130B	V981	X	R958	5.6K	R910	1.0K
				R474	QF914F	R959	QF914F		
				R475	QF914F	R960	QF914F		

