

SERVICE



MANUAL

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CAUTION: THIS SERVICE MANUAL IS ONLY FOR PROFESSIONAL SERVICE PERSONNEL'S REFERENCE. BEFORE SERVICING THIS CHASSIS, PLEASE READ THE FOLLOWING NOTICE ITEMS.

SAFETY INSTRUCTION

Before servicing and aligning this equipment, please read the following “**X-RAY RADIATION PRECAUTION**”, “**SAFETY PRECAUTION**” and “**PRODUCT SAFETY NOTICE**”.

X-RAY RADIATION PRECAUTION

- 1) Excessive high voltage can produce potentially hazardous X-RAY RADIATION. To avoid such hazards, the high voltage must not be above the specified limit. The normal value of the high voltage of this receiver is 29 or 26.5kV(20”) at zero beam current (minimum brightness) under 120V AC power source. the high voltage must not, under any circumstances, exceed 32kV.
- 2) Each time a receiver requires servicing, the high voltage should be checked following the HIGH VOLTAGE CHECK procedure in this manual. It is recommended the reading of the high voltage be recorded as a part of service record. It is important to use an accurate and reliable high voltage meter.
- 3) This receiver is equipped with a Fail Safe (FS) circuit which prevents the receiver from producing an excessively high voltage even if the B+ voltage increases abnormally. Each time the receiver is serviced, the FS circuit must be checked to determine that the circuit is properly functioning, following the FS CIRCUIT CHECK procedure in this manual.
- 4) The primary source of X-RAY RADIATION in this TV receiver is the picture tube. For continuous X-RAY RADIATION protection, the replacement tube must be exactly the same type tube as specified in the parts list.
- 5) Some parts in this receiver have special safety-related characteristics for X-RAY RADIATION protection. For continuous safety, parts replacement should be undertaken only after referring to the PRODUCT SAFETY NOTICE below.

SAFETY PRECAUTION

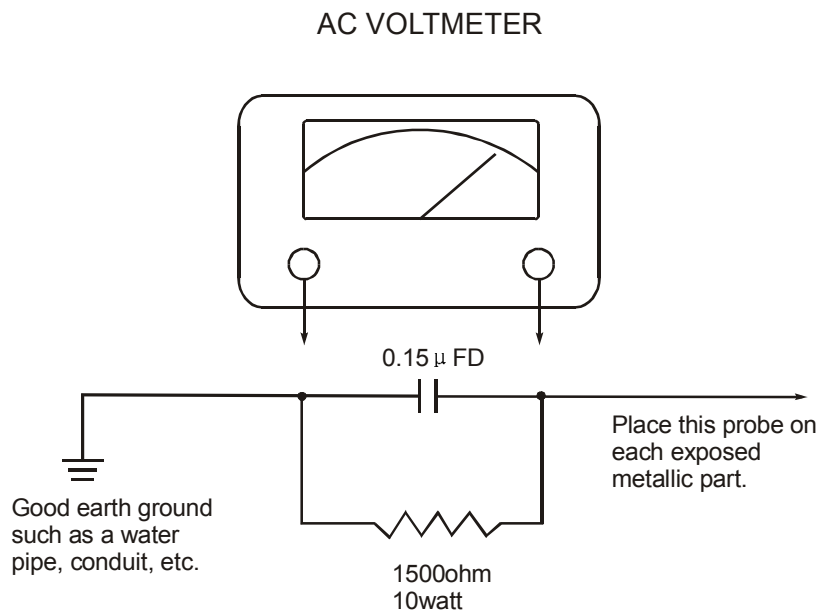
WARNING:

Service should not be attempted by anyone unfamiliar with the necessary precaution on this receiver. The following are the necessary precautions to be observed before servicing this chassis.

- 1) Since the power supply circuit of this receiver is directly connected to the AC power line, an isolation transformer should be used during any dynamic service to avoid possible shock hazard.
- 2) Always discharge the picture tube anode to the CRT conductive coating before handling the picture tube. The picture tube is highly evacuated and if broken, glass fragments will be violently expelled. Use shatter proof goggles and keep picture tube away from the unprotected body while handling.
- 3) When replacing a chassis in the cabinet, always be certain that all the protective devices are put back in place, such as: non-metallic control knobs, insulating covers, shields, isolation resistor-capacitor network etc.
- 4) When replacing parts or circuit boards, disconnect the power cord.
- 5) When replacing a high wattage resistor (oxide metal film resistor) on the circuit board, keep the resistor 10mm (1/2in) away from circuit board.
- 6) Connection wires must be kept away from components with high voltage or high temperature.
- 7) If any fuse in this TV receiver is blown, replace it with the FUSE specified in the chassis parts list.

- 8) Before returning the set to your customer, always perform an AC leakage current check on the exposed metallic parts of the cabinet, such as antennas, terminals, screwheads, metal overlays, control shafts etc. to be sure the set is safe to operate without danger of electrical shock. Plug the AC line cord directly into a 120V AC outlet (do not use a line isolation transformer during this check). Use an AC voltmeter having 5000 ohms per volt or more sensitivity in the following manner:

Connect a 1500 ohm 10 watt resistor, paralleled by a 0.15 μ F, AC type capacitor, between a known good earth ground (water pipe, conduit, etc.) and the exposed metallic parts, one at a time. Measure the AC voltage across the combination of 1500 ohm resistor and 0.15 μ F capacitor. Reverse the AC plug at the AC outlet and repeat AC voltage measurements for each exposed metallic part. Voltage measured must not exceed 0.3 volts RMS. This corresponds to 0.2 milliamp. AC. Any value exceeding this limit constitutes a potential shock hazard and must be corrected immediately.



PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the chassis have special safety-related characteristics. These characteristics are often passed unnoticed by a visual inspection and the X-RAY RADIATION protection afforded by them cannot necessarily be obtained by using replacement components rated for higher wattage, etc. Replacement parts which have these special safety characteristics are identified in this manual and its supplement electrical components having such features are shaded on the schematic diagram and the parts list. Before replacing any of these components, read the parts list in this manual carefully. The use of substitute replacement parts which do not have the same characteristics as specified in the parts list may create shock, fire, X-RAY RADIATION or other hazards.

B+ CHECK

- 1) Prepare the test equipment.
- 2) Use the DC voltmeter at DC 200V position to test B+ test point, i.e. B+.

- 3) Connect the power plug to AC 120V/60Hz, turn on the power switch, wait for normal raster, Check $B^+ = 100V \pm 0.2V$.

Test point	B+	B1-5V	B2-9V	B3-10V	B4-32V	TH-12V	TH-20V	TH-200V
DC(V)	100	5	9	12	32	12	20(22)	200

INSTALLATION AND SERVICE ADJUSTMENTS

GENERAL

In the majority of cases, a color television receiver will need only slight touch – up adjustment upon installation. Check the basic characteristics such as FS,EHV,and focus. Observe the picture for good black and white details without objectionable color shading. If color shading is evident, demagnetize the receiver.

If color shading still persists, perform purity and convergence adjustments. This should be all that is necessary to achieve optimum receiver performance.

FOCUS ADJUSTMENT

Adjust the FOCUS control (on T301) for well defined scanning lines on the picture screen.

HIGH VOLTAGE CHECK

CAUTION: There is no HIGH VOLTAGE ADJUSTMENT on this chassis. Checking should be done following the steps below.

1. Connect an accurate high voltage meter to the second anode of the picture tube.
2. Turn on the receiver. Set the BRIGHTNESS and CONTRAST controls to minimum (zero beam current).
3. High voltage will be measured below 29 (20")KV.
4. Vary the BRIGHNESS control to both extremes to be sure the high voltage does not exceed the limit under any conditions.

General instruction

1. This chassis' EEPROM (N801 M24C08) should copy standard data, if necessary, deal it with "factory adjustment". If directly use blank EEPROM, should first preset I²C data, then go on other common alignment. For factory adjustment method, refer to **The appendix: factory menu**.
2. If without special indication, the alignment is conducted on the below condition:
 - a) AC power supply 120 V/60 Hz.
 - b) The whole unit is preheated for more than 30 min.
3. There is built-in auto degaussing circuit, it will degauss automatically within 1second after turning on.
4. If CRT is with magnetism and affects color purity and convergence, the internal degaussing can not degauss completely, can use degaussor to degauss externally. If color purity and convergence is still poor, then do color purity and convergence adjustment.

Alignment items and procedure

1. B+ voltage check
2. RF AGC voltage adjustment
3. Focus adjustment
4. Screen-grid voltage and white balance adjustment
5. Horizontal,vertical scan center adjustment
6. Horizontal,vertical scan amplitude adjustment
7. Pattern correction adjustment
8. The alignment flow chart see figure below.

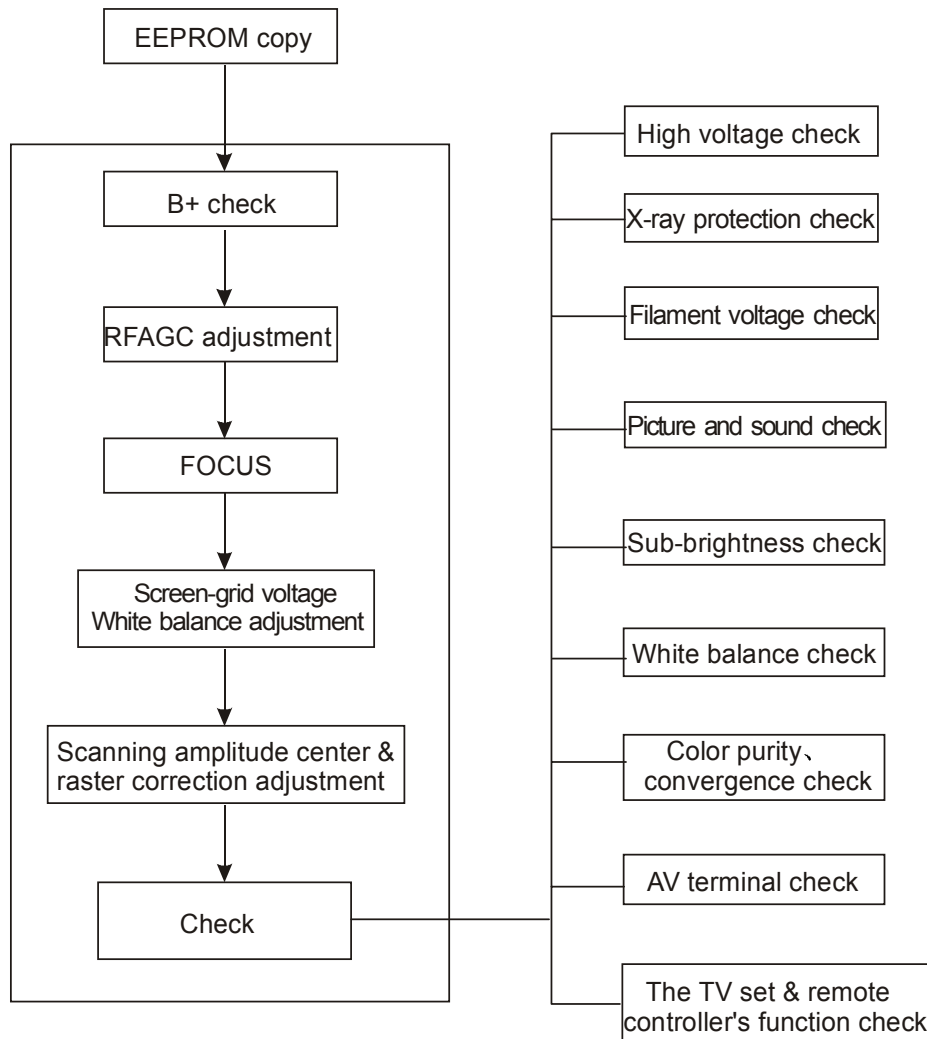


Figure 1: Alignment flow chart

Factory adjustment mode

1. B+ voltage test

- a) Make sure the AC power is 120 V/60 Hz
- b) Connect digital voltmeter to B+ test point, receive A-7 signal, set picture control to “DYNAMIC” state, test B+, the test voltage should be $100\text{ V} \pm 0.5\text{ V}$ (21” PF), or $110\text{ V} \pm 0.5\text{ V}$ (14” PF AND 21”), or 140 V (25”).

2. AGC adjustment

- a) Receive 60 dB split field A-7 signal.
- b) Use oscilloscope or digital voltmeter to monitor test N201 pin 43 voltage (AGC output) .
- c) Press R-AGC button, by making use of [←][→] button, increase the value from low to high until the voltage just reach 4.0 V, at this time picture noisy spot should basically disappear, otherwise continue fine tune R-AGC button.

3. Focus adjustment

- 3.1 Receive A-12 signal, set user control to “DYNAMIC” state.
- 3.2 Adjust FBT’s focus potentiometer, to make the screen’s B area’s focus optimum.

4. Accelerating electrode adjustment method (use A-7 signal)

- 4.1 Roughly adjust white balance, fix GCUT value, adjust RCUT、BCUT、RDRV、BDRV’s value to make

white balance basically normal.

- 4.2 Set the color to 0, contrast to 10, use oscilloscope to adjust CRT's red gun's waveform (see below figure), adjust brightness to make the seventh step's (the darkest) DC level be 180V, adjust accelerating electrode to make the seventh step slightly light up (just can separate the seventh step and below dark field).

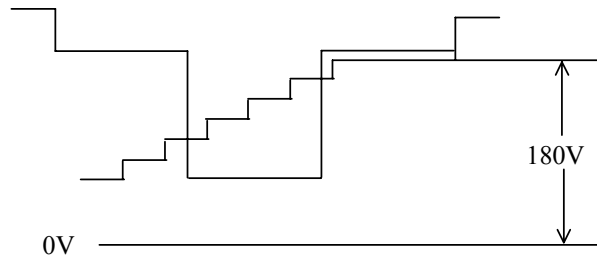


Fig 2: red gun waveform

- 4.3 Fine adjust white balance (color temperature: $12000\text{K} \pm 8\text{MPCD}$ $X=0.270 \pm 0.008$ $Y=0.283 \pm 0.008$)

- 4.4 Set contrast, brightness, color all to 0, adjust BRTN to make A-7's upper left 2 lattice slightly light up.

5. Horizontal, vertical scan center adjustment

NTSC (60Hz) H-center, V-center adjustment

Receive A6 signal, set user control to "DYNAMIC" state, adjust V-center V-SHIFT, H-PHASE to make picture's center be in accordance with screen's center.

6. Vertical scan amplitude adjustment

NTSC (60 Hz) V-amplitude adjustment

Receive A 12 signal, set user control to "DYNAMIC" state, adjust V-amplitude V-SIZE to make picture's upper and lower overscanning be screen size's 8%.

Checking point

1. High voltage check

- 1.1 Connect high voltage meter to CRT's second anode and GND.
- 1.2 Receive A-7 signal, set user control to "DYNAMIC" state, the high voltage should be $29.0\text{ kV} \pm 1\text{ kV}$ (21" PF and 25") or $25.0\text{ kV} \pm 1\text{ kV}$ (14" PF) or $26.5\text{ kV} \pm 1\text{ kV}$ (21").
- 1.3 When brightness and contrast be set to minimum (zero beam current), the high voltage should not exceed 32 kV.

2. CRT filament voltage check

Receive A-7 signal, set picture control to "DYNAMIC" state, use effective value voltmeter to test CRT filament voltage, the reading should be $(6.3 \pm 0.3)\text{Vrms}$.

3. X-ray protection check

- 3.1 Receive A-7 signal, set user control to "DYNAMIC" state.
- 3.2 Short R305 (TP301, TP302) X-ray protection circuit should effect.

4. Picture and sound check

- 4.1 Receive standard TV signal.
- 4.2 Making use of picture control buttons to check color,contrast,brightness,sharpness,tint's control function.
- 4.3 Making use of sound control buttons to check volume control function.

5. Sub-brightness check

Receive A-7 signal, set color ,contrast,brightness all to 0 , picture's left side first grid slightly lights.

6. Color purity and convergence check(Use common regulation)

7. AV terminals (AV IN/OUT check)

8. Other control buttons (on the set and on the remote controller) function check.

Preset the following in factory

- 1. **Picture menu :**
 - CONTRAST 60
 - BRIGHTNESS 30
 - COLOR 30
 - SHARPNESS 30
 - TINT ± 00
 - PICTURE PERSONAL
 - MODE
 - ▽MORE

- 2. **Volume preset to 30.**

- 3. **Set OSD language to English.**

- 4. **TV mode : channel position number CABLE 3.**

Factory menu

- 1. **Enter into factory menu to operate.**
 - 1.1 Press "DSP SLEEP PIC" button (The period of two-press should be within 5 seconds) , enter into factory menu.
 - 1.2 Use CH+/CH- button to select the menu , use VOL+/VOL- button to enter the function menu.
 - 1.3 In factory menu status, press MENU button to exit.

2. Factory menu contents

1: VCJ ADJ	
1. VIF VCO AUTO ADJ OFF	Use for adjustment of VIF VCO free running frequency
2. RF DELAY ADJ	Use for adjustment tuner AGC takeover point
2: RASTER ADJ	
1. V POSITION	Vertical ramp start timing adjustment
2. V-SIZE	Vertical ramp amplitude adjustment
3. H-POSITION	Horizontal phase adjustment
4. WHITE-BACK	White back mode selection
3: CRT ADJ	
1. CUT OFF-R	R OUT pedestal level adjustment (factory control only)
2. CUT OFF-G	G OUT pedestal level adjustment (factory control only)
3. CUT OFF-B	B OUT pedestal level adjustment (factory control only)
4. DRIVE R	R OUT amplitude adjustment (factory control only)
5. DRIVE B	B OUT amplitude adjustment (factory control only)
4: PICTURE ADJ	
1. SUB BRIGHTNESS	Brightness control (end user control)
2. SUB CONTRAST	Contrast control (end user control)
5: USER MENU RESET OFF	
6: SERVICE MENU	
1. H VCO ADJ	H VCO free running-frequency adjustment
2. TRAP FINE ADJ	Chroma trap adjustment
3. SUB TINT	TV tint control (end user control)
4. SUB TINT AV	AV tint control (end user control)
5. SUB TINT YUV	YUV tint control (end user control)
6. SUB COLOR	Color control (end user control)
7. C-ANGLE95	Chroma relational angle fo demodulation switch
8. TAKE OFF	Chroma BPF/Take off switch
9. OSD LEVEL	OSD output level switch
10. Y-DL TIME	Luminance delay time adjustment
11. S-SLICE DOWN	Sync det slice level selection
12. AFC12	Horizontal AFC12 gain switch
13. Y SW LPF	Y SW OUT, LPF ON/OFF
14. ABCL	Auto brightness and contrast limiter
15. ABCL GAIN	ABCL GAIN low or high switch
16. GAMMA	Luminance gamma threshold
17. BLACK ST OFF	Black stretch function ON/OFF
18. BLACK ST ADJ	Charging time adjustment
19. AV OPTION	Av out mode switch
20. INT MONITORING	
21. AUDIO ATT	AUDIO OUT pin 51 amplitude adjustment
22. ODS HR ADJ	OSD position adjustment
23. NUM ADJ	EEPROM data adjustment
24. LANGUAGE	OSD language switch.

CONVERGENCE MAGNET ASSEMBLY POSITIONING

Convergence magnet assembly and rubber wedges need mechanical positioning. Refer to below figure 1.

COLOR PURITY ADJUSTMENT

NOTE: Before attempting any purity adjustment, the receiver should be operated for at least fifteen minutes.

1. Demagnetize the picture tube and cabinet using a degaussing coil.
2. Set the CONTRAST and BRIGHTNESS controls to the maximum.
3. Receive PM5515 monochromatic signal (such as G) to provide a green raster on the screen.
4. Loosen the clamp screw holding the yoke, and slide the yoke backward to provide vertical green belt (zone) in the picture screen.
5. Remove the Rubber Wedges.
6. Rotate and spread the tabs of the purity magnet around the neck of the picture tube until the green belt is in the center of the screen. At the same time, center the raster vertically by adjusting the magnet.
7. Move the yoke slowly forward or backward until a uniform green screen is obtained. Tighten the clamp screw of the yoke temporarily.
8. Check the purity of the red and blue raster.
9. Obtain a white raster, referring to "CRT WHITE BALANCE ADJUSTMENT".
10. Proceed with convergence adjustment.

FIG.3

CONVERGENCE ADJUSTMENT

NOTE: Before attempting any convergence adjustments, the receiver should be operated for at least fifteen minutes.

CENTER CONVERGENCE ADJUSTMENT

1. Receive crosshatch pattern with a color bar signal generator.
2. Adjust the BRIGHTNESS and CONTRAST controls for well defined pattern.

3. Adjust two tabs of the 4-Pole Magnets to change the angle between them (see figure 4) and superimpose red and blue vertical lines in the center area of the picture screen. (see figure 5)
4. Turn the both tabs at the same time keeping the constant angle to superimpose red and blue horizontal lines at the center of the screen.(see figure 5)
5. Adjust two tabs of 6-Pole Magnets to superimpose red/blue line with green one. Adjusting the angle affects the vertical lines and rotating both magnets affects the horizontal lines.
6. Repeat adjustments 3,4,5, keeping in mind red, green and blue movement, because 4-Pole Magnets and 6-Pole Magnets interact and make dot movement complex.

CIRCUMFERENCE CONVERGENCE ADJUSTMENT

1. Loosen the clamping screw of deflection yoke to allow the yoke to tilt.
2. Put a wedge as shown in figure 1 temporarily. (Do not remove cover paper on adhesive part of the wedge.)
3. Tilt front of the deflection yoke up or down to obtain better convergence in circumference. (See figure 5).
Push the mounted wedge into the space between the picture tube and the yoke to hold the yoke temporarily.
4. Put other wedge into bottom space and remove cover paper to stick.
5. Tilt front of the yoke right or left to obtain better convergence in circumference (see figure 5)
6. Keep the yoke position and put another wedge in either upper space. Remove cover paper and stick the wedge on the picture tube to fix the yoke.
7. Detach the temporarily mounted wedge and put it in another upper space. Stick it on the picture tube to fix the yoke.
8. After fixing three wedges, recheck overall convergence. Tighten the screw firmly to fix the yoke tightly in place.
9. Stick three adhesive tapes on wedges as shown in figure 3.

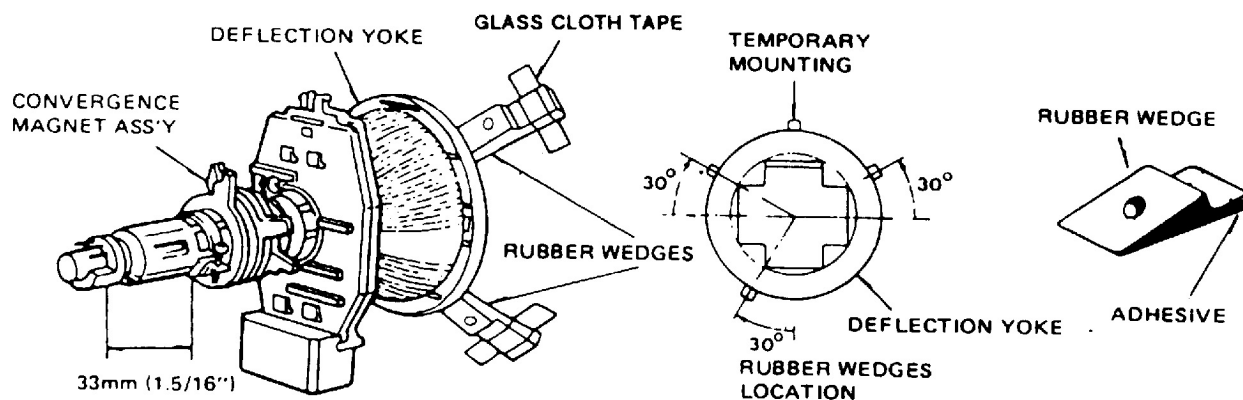


Fig.3

Fig5. Dot Movement Pattern

USA CHANNEL FREQUENCY TABLE (181 CH)

P IF=45.75 MHz

C IF=42.17MHz

S IF=41.25MHz

UNIT: MHz

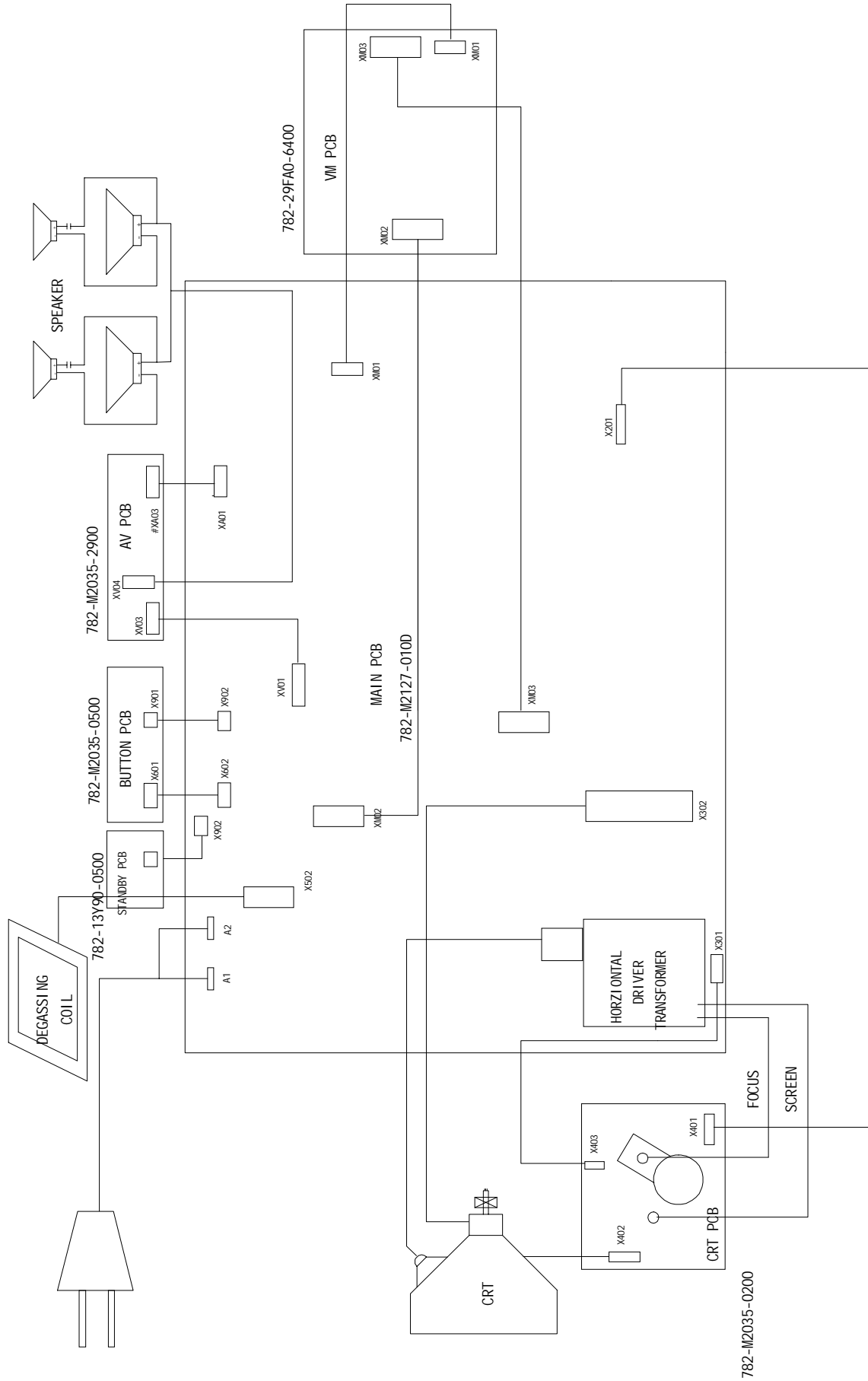
BAND	CHANNEL	P CARRIER	S CARRIER	LOCAL	BAND	CHANNEL	P CARRIER	S CARRIER	LOCAL
VHF Low	2	55.25	59.75	101	UHF	W+11	361.25	365.75	407
	3	61.25	65.75	107		W+12	367.25	371.75	413
	4	67.25	71.75	113		W+13	373.25	377.75	419
	5	77.25	81.75	123		W+14	379.25	383.75	425
	6	83.25	87.75	129		W+15	385.25	389.75	431
	A-6	85.25	89.75	131		W+16	391.25	395.75	437
	A-5	91.25	95.75	137		W+17	397.25	401.75	443
	A-4	97.25	101.75	143		W+18	403.25	407.75	449
	A-3	103.25	107.75	149		W+19	409.25	413.75	455
	A-2	109.25	113.75	155		W+20	415.25	419.75	461
	A-1	115.25	119.75	161		W+21	421.25	425.75	467
	A	121.25	125.75	167		W+22	427.25	431.75	473
	B	127.25	131.75	173		W+23	433.25	437.75	479
	VHF High	C	133.25	137.75		179	W+24	439.25	443.75
D		139.25	143.75	185		W+25	445.25	449.75	491
E		145.25	149.75	191		W+26	451.25	455.75	497
F		151.25	155.75	197		W+27	457.25	461.75	503
G		157.25	161.75	203		W+28	463.25	467.75	509
H		163.25	167.75	209		W+29	469.25	473.75	515
I		169.25	173.75	215		14	471.25	475.75	517
7		175.25	179.75	221		15	477.25	481.75	523
8		181.25	185.75	227		16	483.25	487.75	529
9		187.25	191.75	233		17	489.25	493.75	535
10		193.25	197.75	239		18	495.25	499.75	541
11		199.25	203.75	245		19	501.25	505.75	547
12		205.25	209.75	251		20	507.25	511.75	553
13		211.25	215.75	257		21	513.25	517.75	559
J		217.25	221.75	263		22	519.25	523.75	565
K		223.25	227.75	269		23	525.25	529.75	571
L		229.25	233.75	275	24	531.25	535.75	577	
M		235.25	239.75	281	25	537.25	541.75	583	
N		241.25	245.75	287	26	543.25	547.75	589	
O		247.25	251.75	293	27	549.25	553.75	595	
P		253.25	257.75	299	28	555.25	559.75	601	
Q		259.25	263.75	305	29	561.25	565.75	607	
R		265.25	269.75	311	30	567.25	571.75	613	
S		271.25	275.75	317	31	573.25	577.75	619	
T		277.25	281.75	323	32	579.25	583.75	625	
U		283.25	287.75	329	33	585.25	589.75	631	
V		289.25	293.75	335	34	591.25	595.75	637	
W		295.25	299.75	341	35	597.25	601.75	643	
W+1		301.25	305.75	347	36	603.25	607.75	649	
W+2		307.25	311.75	353	37	609.25	613.75	655	
W+3		313.25	317.75	359	38	615.25	619.75	661	
W+4		319.25	323.75	365	39	621.25	625.75	667	
W+5		325.25	329.75	371	40	627.25	631.75	673	
W+6		331.25	335.75	377	41	633.25	637.75	679	
W+7	337.25	341.75	383	42	639.25	643.75	685		
W+8	343.25	347.75	389	43	645.25	649.75	691		
W+9	349.25	353.75	395	44	651.25	655.75	697		
W+10	355.25	359.75	401	45	657.25	661.75	703		

USA CHANNEL FREQUENCY TABLE (181 CH)

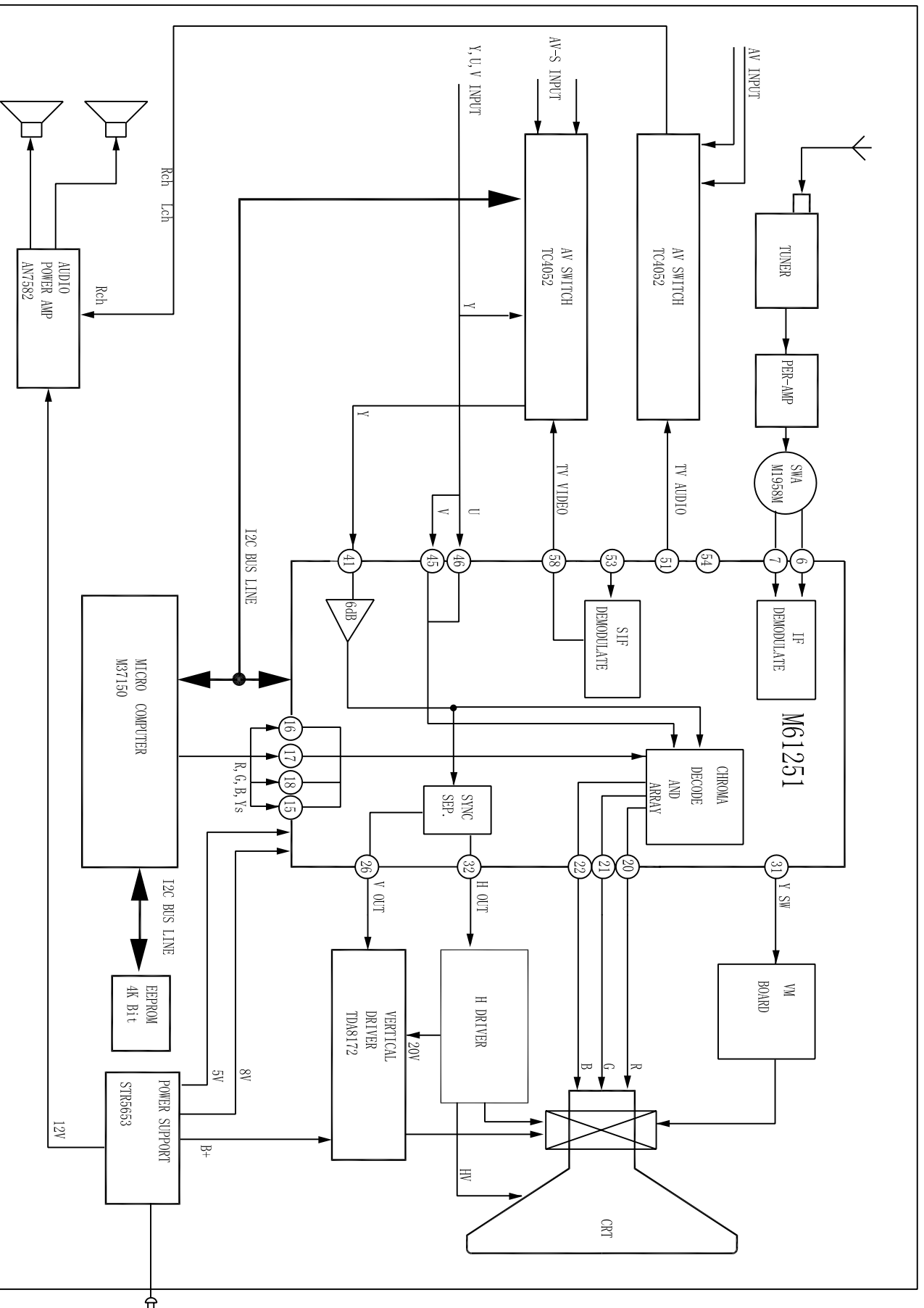
P IF=45.75 MHz
 C IF=42.17MHz
 S IF=41.25MHz
 UNIT: MHz

BAND	CHANNEL	P CARRIER	S CARRIER	LOCAL
UHF	46	663.25	667.75	709
	47	669.25	673.75	715
	48	675.25	679.75	721
	49	681.25	685.75	727
	50	687.25	691.75	733
	51	693.25	697.75	739
	52	699.25	703.75	745
	53	705.25	709.75	751
	54	711.25	715.75	757
	55	717.25	721.75	763
	56	723.25	727.75	769
	57	729.25	733.75	775
	58	735.25	739.75	781
	59	741.25	745.75	787
	60	747.25	751.75	793
	61	753.25	757.75	799
	62	759.25	763.75	805
	63	765.25	769.75	811
	64	771.25	775.75	817
	65	777.25	781.75	823
	66	783.25	787.75	829
	67	789.25	793.75	835
	68	795.25	799.75	841
	69	801.25	805.75	847

WIRING DIAGRAM

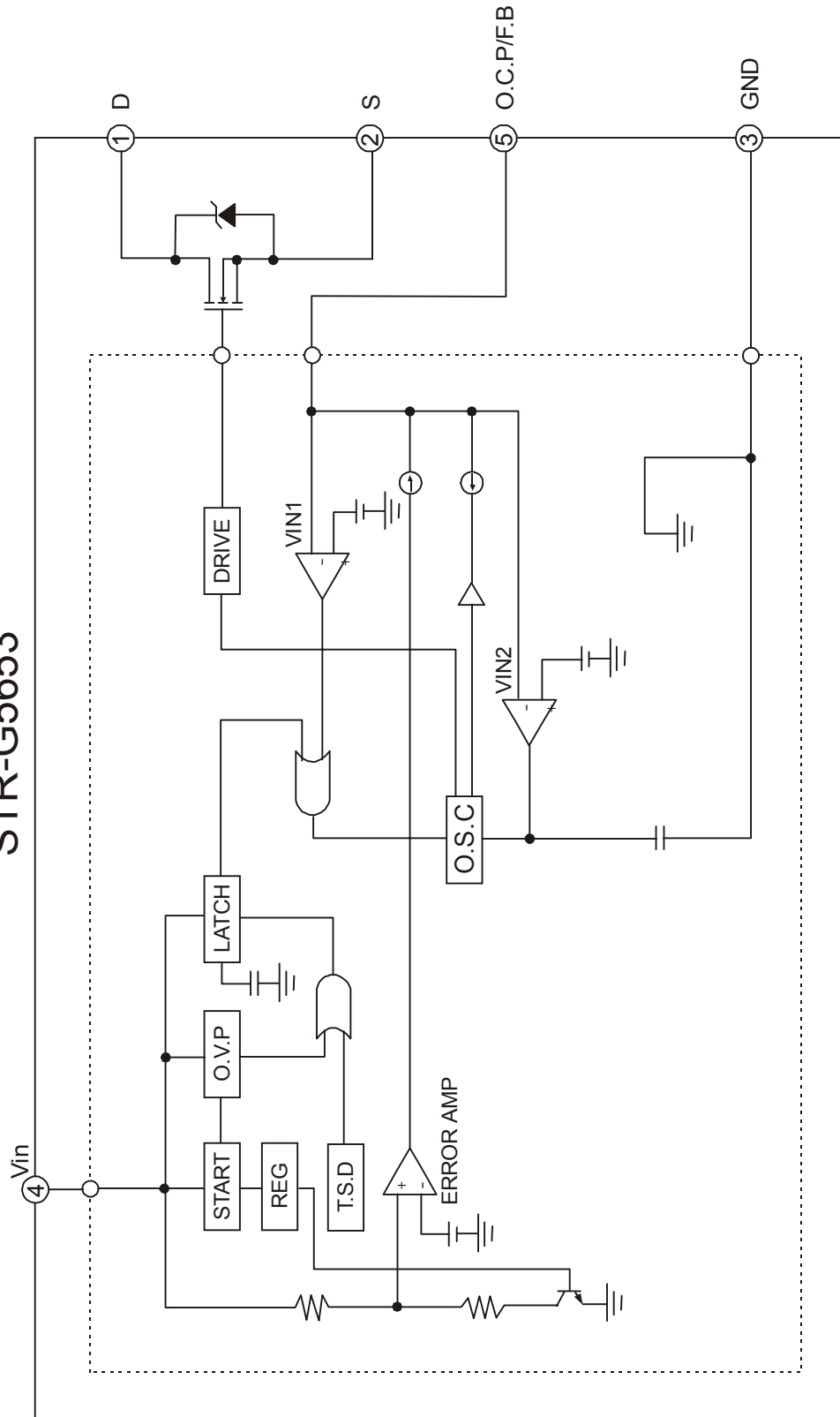


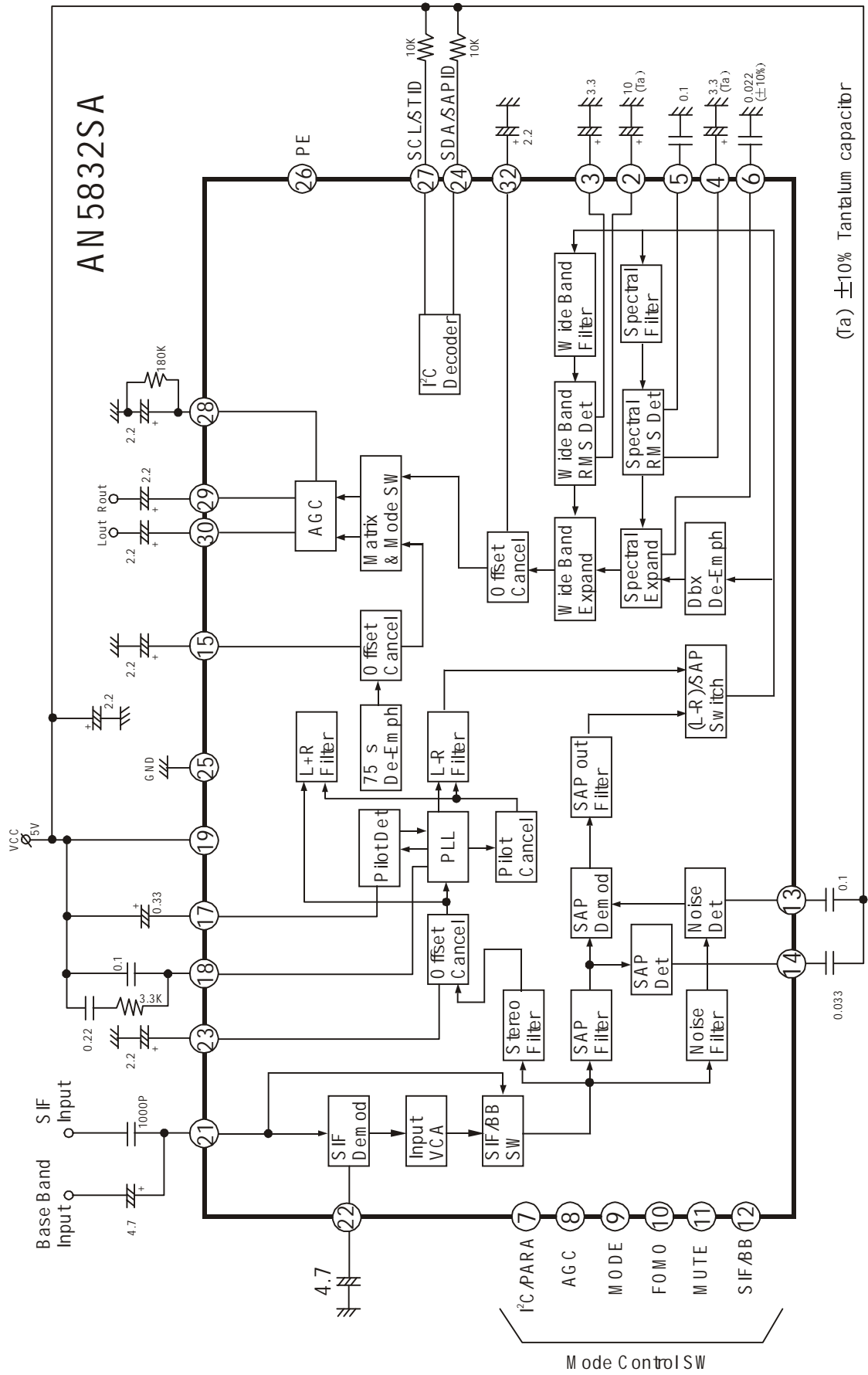
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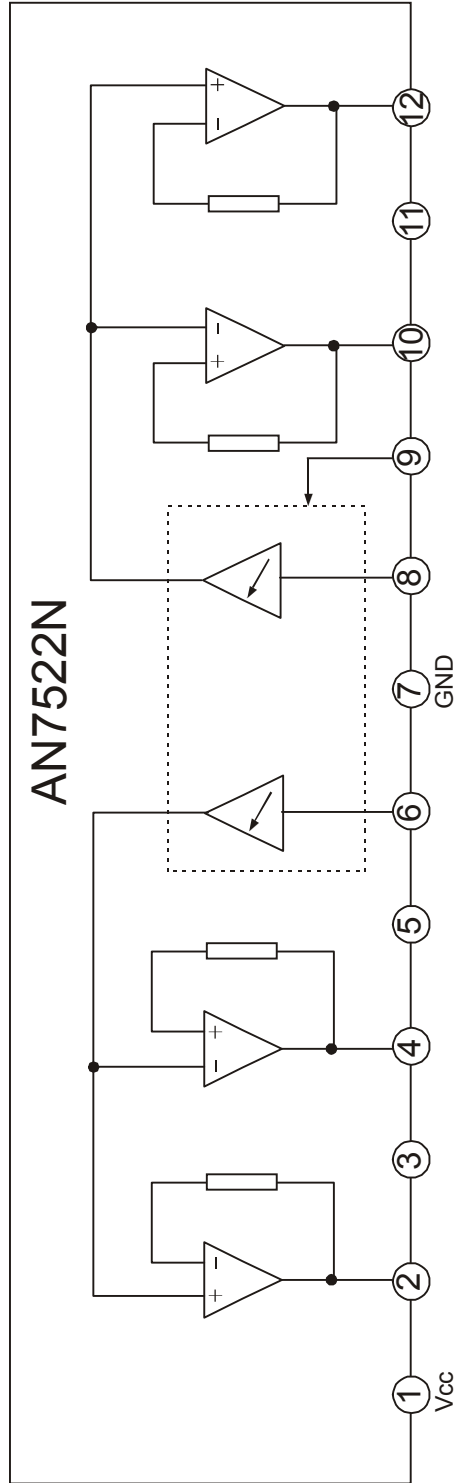


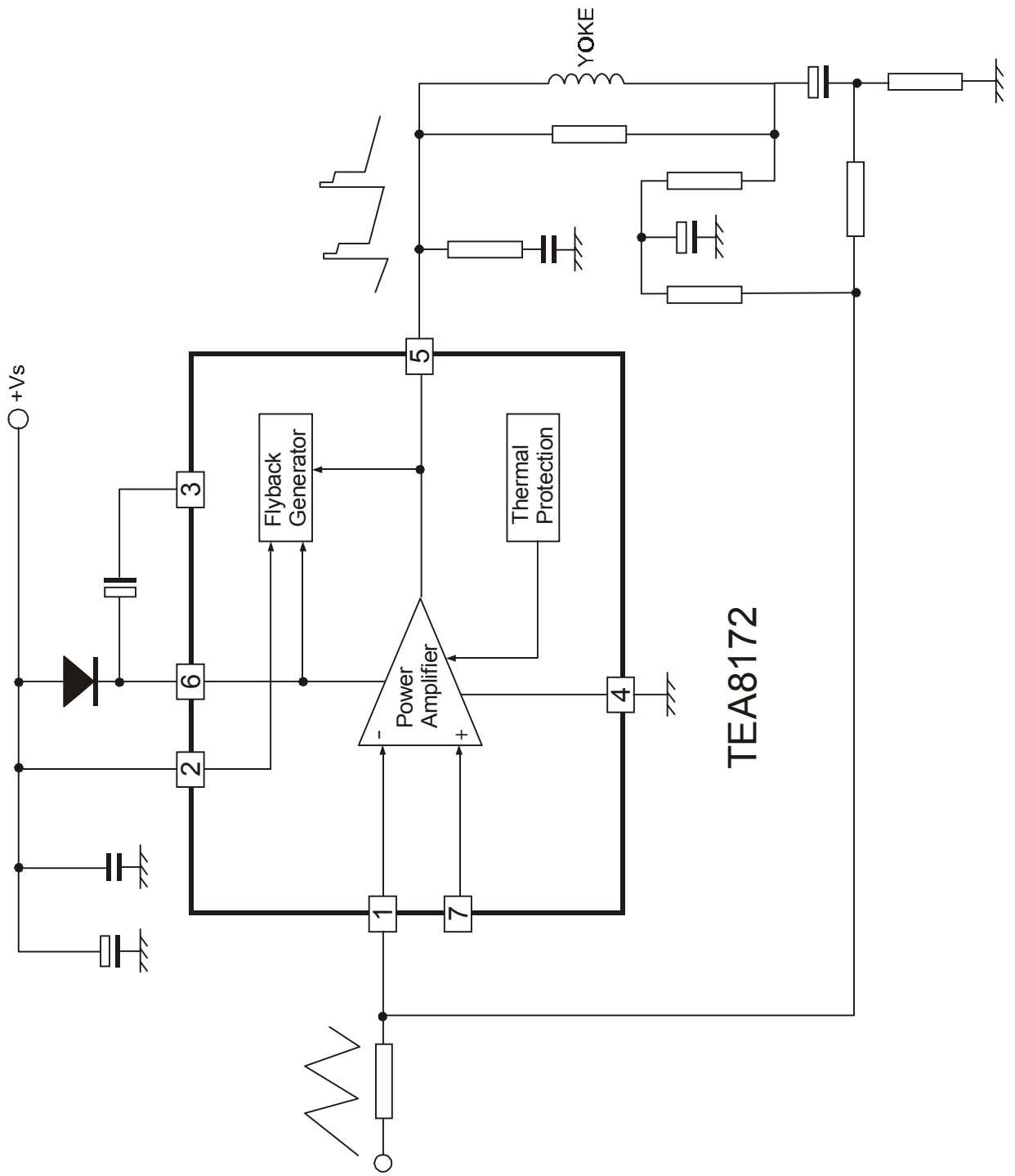
IC BLOCK DIAGRAM

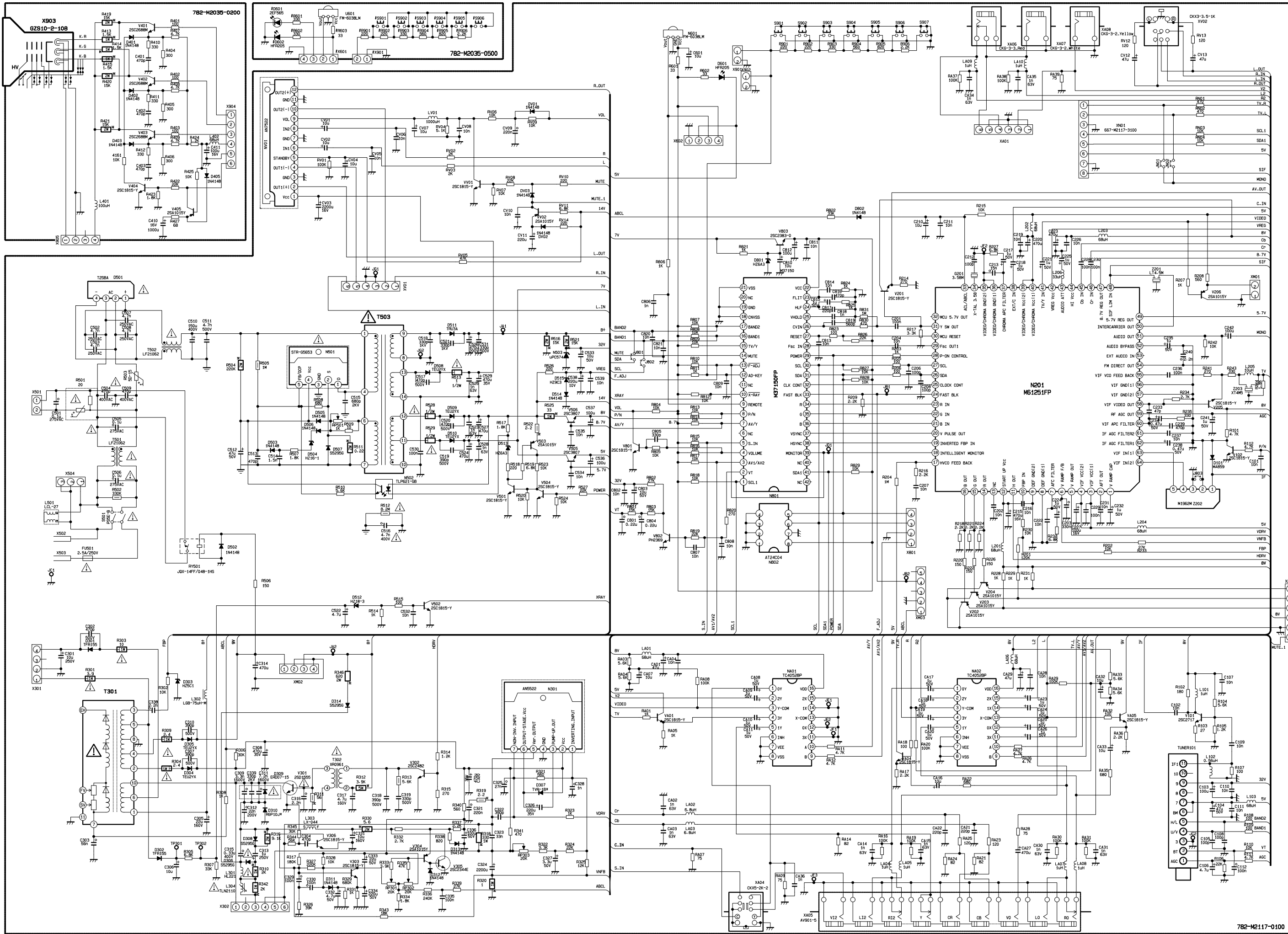
STR-G5653











WARNING: BEFORE SERVICING THIS CHASSIS, READ THE “X-RAY RADIATION PERCAUTION”, “SAFETY PRECAUTION” AND “RPRODUCT SAFETY NOTICE” ON PAGE 1&2 OF THIS MANUAL.

CAUTION: 1. The shaded areas makes in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with type identical to those in the original circuit or specified in the parts list. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE on page 2.
2. Do not degrade the safety of the receiver through improper servicing.

ELECTRICAL PARTS LIST

MAIN BOARD

SYMBOL	PART NO.	DESCRIPTION
	782-M2117-010D	MAIN PCB
CRYSTAL		
G201	329-53601-00	JA25A 3.579545MHZ
DIODE		
D505	340-00010-00	S5295G
D304	340-00291-00	TEU2YX
D305	340-00291-00	TEU2YX
D508	340-00291-00	TEU2YX
D509	340-00291-00	TEU2YX
D510	340-00291-00	TEU2YX
D511	340-00292-00	TRU3A
D502	340-00001-003	1N4148
D503	340-00001-003	1N4148
D506	340-00001-003	1N4148
D514	340-00001-003	1N4148
D802	340-00001-003	1N4148
DV01	340-00001-003	1N4148
DV02	340-00001-003	1N4148
DV03	340-00001-003	1N4148
D507	340-00010-003	S5295G
D306	340-00010-003	S5295G
D307	340-00086-003	TVR-1B
D301	340-00288-003	TFR155

SYMBOL	PART NO.	DESCRIPTION
D302	340-00288-003	TFR155
REGULATED DIODE		
D303	340-50500-003	HZ5C1
D513	340-50550-003	HZ6A3
D801	340-50550-003	HZ6A3
D515	340-50790-003	HZ9A1
D504	340-51560-003	* HZ16-1
D512	340-51850-003	HZ18-3
RECTIFIER		
D501	340-80022-00	T2SB60
TRANSISTOR		
V301	343-18030-80	ST1803DHI
V803	343-23830-60	2SC2383-0
V302	343-24820-00	2SC2482
V101	343-27170-00	2SC2717
V505	343-01800-00	KSE180 TO-126
V506	343-01800-00	KSE180 TO-126
V202	343-10150-104	2SA1015Y Pr2.5
V203	343-10150-104	2SA1015Y Pr2.5
V204	343-10150-104	2SA1015Y Pr2.5
V503	343-10150-104	2SA1015Y Pr2.5
VV02	343-10150-104	2SA1015Y Pr2.5
V205	343-18150-114	2SC1815-Y
V501	343-18150-114	2SC1815-Y
V502	343-18150-114	2SC1815-Y
V504	343-18150-114	2SC1815-Y
V801	343-18150-114	2SC1815-Y
VV01	343-18150-114	2SC1815-Y
VA01	343-18150-114	2SC1815-Y
IC		
N503	352-05740-00	uPC574 (D)
N502	352-06210-70	TLP621-GB(UL) (O)!
N802	352-24040-50	AT24C04 (D)
N801	352-37150-70	*M37150EFFF (M)
NA02	352-40520-60	TC4052BP (M)
NA01	352-40520-60	TC4052BP (M)
N501	352-56530-00	STR-G5653 (M)
N201	352-61251-70	M61251AFP (M)
NV01	352-75220-00	AN7522N (M)
N301	352-81720-10	TDA8172 (M)

SYMBOL	PART NO.	DESCRIPTION
RELAY		
RY501	457-12019-90	JQX-14FF-012-1HS !
SAW FILTER		
Z202	458-07009-00	M1859M
CERAMIC CAPACITOR		
C504	459-B147M-20	ECK-DNS471MBX !
C509	459-B147M-20	ECK-DNS471MBX !
C516	459-B222M-20	ECK-DNS222MEX !
C502	459-B247R-00	DE0807F472ZAC250V !
C503	459-B247R-00	DE0807F472ZAC250V !
C507	459-B247R-00	DE0807F472ZAC250V !
C508	459-B247R-00	DE0807F472ZAC250V !
THIN-FILM CAPACITOR		
C501	462-2B410-M0V	250VAC-0.1uF-M !
C505	462-2B410-M0V	250VAC-0.1uF-M !
C506	462-2B410-M0V	250VAC-0.1uF-M !
METAL RESISTOR		
R318	467-2F115-H0	1W-150Ω-JL
R319	467-2EA22-H0	1/2W-2.2Ω-JL
R522	467-2EA22-H0	1/2W-2.2Ω-JL
R516	467-2G315-H0	2W-15kΩ-JL
R521	467-2G315-H0	2W-15kΩ-JL
R313	467-2E256-H0	1/2W-5.6kΩ-JL
R320	467-2FA15-H0	1W-1.5Ω-JL
R525	467-2F033-H0	1W-33Ω-JL
R310	467-2F220-H0	1W-2KΩ-JL
R342	467-2F220-H0	1W-2KΩ-JL
R511	467-2GB15-H0	2W-0.15Ω-JL
R504	467-2G422-H0	2W-220K-JL
WIRE-ROUND RESISTOR		
R312	467-B0239-H0	RX25-5W-3.9K-J
MELTABLE RESISTOR		
R304	467-4FA24-H0	1W-2.4Ω-JL
R309	467-4FA27-H0	1W-2.7Ω-JL
R301	467-4FA39-H0	1W-3.9Ω-JL
R528	467-4E001-H0	1/2W-1Ω-JL
R529	467-4E001-H0	1/2W-1Ω-JL
R303	467-4F010-H0	1W-10Ω-JL
R513	467-4EB33-H0	1/2W-0.33Ω-JL

SYMBOL	PART NO.	DESCRIPTION
CARBON RESISTOR		
R502	467-8E433-H0	1/2W-330kΩ-JL !
R512	467-8E582-H0A	1/2W-8.2MΩ-J !
THERMISTOR		
R501	469-10023-00	96708 (9Ω)
R503	469-40004-00	5D2-14LC
SWITCH TRANSFORMER		
T503	470-00272-00	SR3601B !
INDUCTANCE WITH COLOUR CODES		
LA06	471-1068H-00	EL0606SKI-680J
LA02	471-2A82K-00	SPT0305-8R2K-5
LA03	471-2A82K-00	SPT0305-8R2K-5
L101	471-2B56K-00	SPT0305-R56K-5
LA04	471-2001K-A0	SP0203-1uH-K
LA05	471-2001K-A0	SP0203-1uH-K
LA07	471-2001K-A0	SP0203-1uH-K
LA08	471-2001K-A0	SP0203-1uH-K
LA09	471-2001K-A0	SP0203-1uH-K
LA10	471-2001K-A0	SP0203-1uH-K
LA01	471-1068H-00	EL0606SKI-680J
L205	471-1015H-00	EL0606SKI-150J
LV01	471-2210K-10	LGA0410-1000uH-K
L102	471-2B56K-003	SPT0305-R56K-5
L103	471-2068K-103	LGA0410-68uH-K
L201	471-2068K-103	LGA0410-68uH-K
L202	471-2068K-103	LGA0410-68uH-K
L203	471-2068K-103	LGA0410-68uH-K
L204	471-2068K-103	LGA0410-68uH-K
H-DRIVE TRANSFORMER		
T302	472-10001-00	XR0961
CERAMIC FILTER		
Z201	475-15451-00	LT4.5MH
CERAMIC TRAPFILTER		
Z203	475-25451-00	XT4.5MB
H-LINEARITY COIL		
L301	477-00062-00	HL1830H-X12
POWER FILTER		
T501	477-20028-00	LF21065
T502	477-20028-00	LF21065

SYMBOL	PART NO.	DESCRIPTION
ADJUSTABLE INDUCTANCE		
L304	477-30026-00	TLN2130
FIXED INDUCTANCE		
L302	477-40031-00	LG750
FBT		
T301	472-24207-00	BSC25-3368K*!
OTHER		
TUNER	590-40707-00	115-B-8035AZ
POWER CORD	491-702D0-02	UL !
FUSE(FU501)	569-16101-90	51S 2.5A/250V !
CRT SOCKET	364-58204-00	GZS8-17(UL) !
SPEKER	384-40908-J1	ST313-1B
CRT	335-14233-00U	A36LXE190X-02
DEGAUSSING COIL	477-11410-00	DX37(03)

CRT BOARD

SYMBOL	PART NO.	DESCRIPTION
	782-J2130-0200	CRT PCB
DIODE		
VD401	340-00001-00	1N4148
VD402	340-00001-00	1N4148
VD403	340-00001-00	1N4148
TRANSISTOR		
V404	343-18150-10	2SC1815-Y
V401	343-26880-60	2SC2688M
V402	343-26880-60	2SC2688M
V403	343-26880-60	2SC2688M
CARBON RESISTOR		
R413	467-8E227-H0A	1/2W-2.7K Ω -J !
R414	467-8E227-H0A	1/2W-2.7K Ω -J !
R415	467-8E227-H0A	1/2W-2.7K Ω -J !
INDUCTANCE WITH COLOUR CODES		
L401	471-1068H-00	EL0606SKI-680J
L402	471-2068K-00	SPT0305-680K-5
METAL RESISTOR		
R419	467-2G312-H0	2W-12k Ω -JL
R420	467-2G312-H0	2W-12k Ω -JL
R421	467-2G312-H0	2W-12k Ω -JL

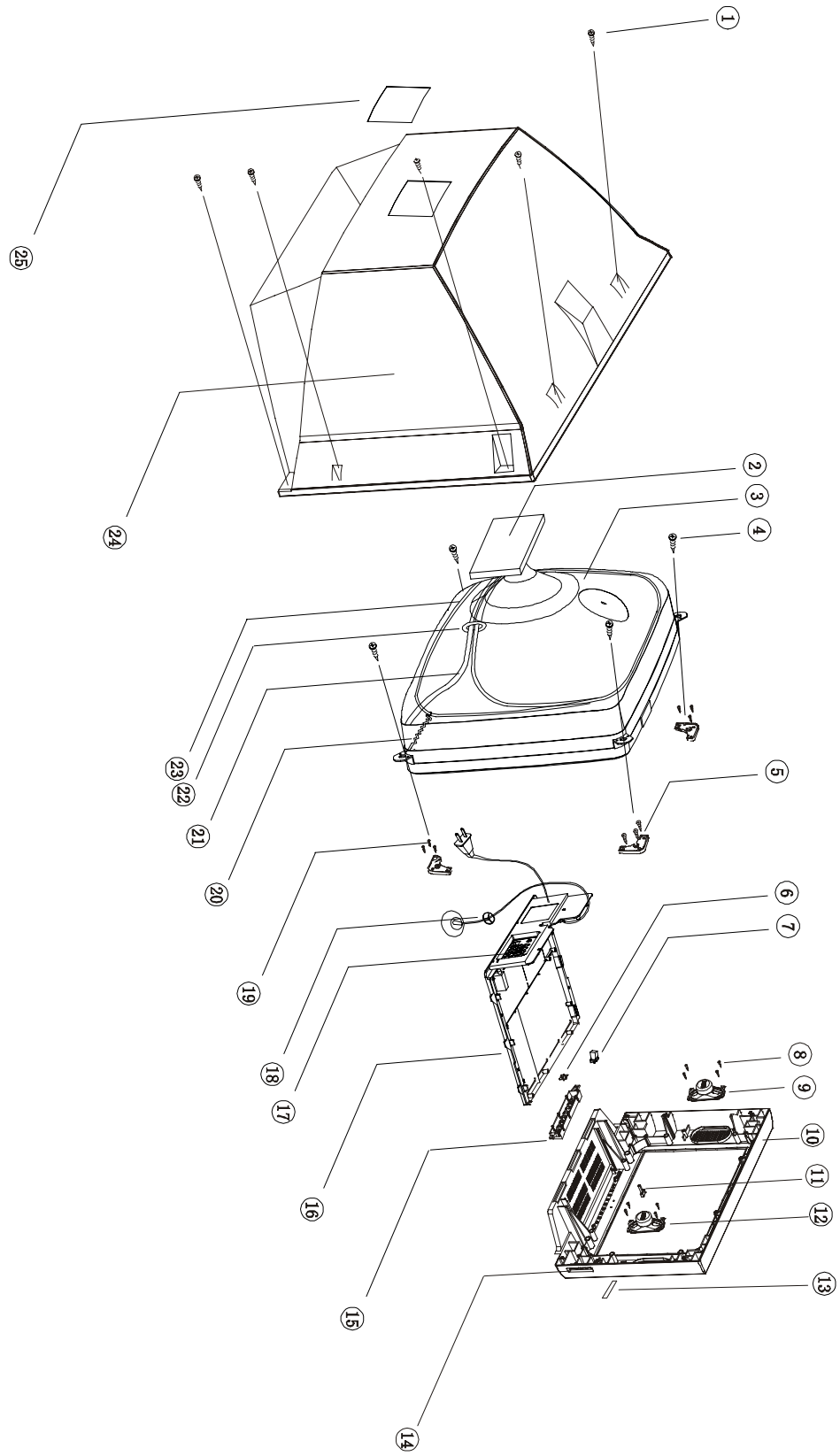
BUTTON BOARD

SYMBOL	PART NO.	DESCRIPTION
	782-M1435-0500	BUTTON PCB
LIGHT-EMITTING DIODE		
VD601	340-10055-90	HFT505M
IC		
V601	352-38060-60	HRM138BB3006 (M)

AV BOARD

SYMBOL	PART NO.	DESCRIPTION
	782-M1435-2900	AV PCB
ELECTROLYTIC CAPACITOR		
CV01	464-6D647-M0	CD110-16V-47uF-M
CV02	464-6D647-M0	CD110-16V-47uF-M
CARBON RESISTOR		
RV01	467-1D112-H0	RT14-1/4W-120Ω-J
RV02	467-1D112-H0	RT14-1/4W-120Ω-J

EXPLODED VIEW



PARTS LIST OF EXPLODED VIEW

NO.	NAME	PART NO.	NO.	NAME	PART NO.
1	SCREW	851-24020-14	16	MAIN BOARD ASSEMBLY	667-M1435-01
2	CRT BOARD	667-M1435-02	17	REAR PANEL	808-60763-05
3	CRT	335-14233-00U	18	THREAD CLASP	742-30032-00
4	SCREW	851-24020-14	19	SCREW	851-24020-14
5	CRT FIXER	615-10285-00	20	BRAIDED PULLING SPRING	838-10164-00
6	LED COLUMN	700-60150-00	21	DEGAUSSING COIL	477-11410-00
7	POWER SWITCH	360-10001-00	22	LINE CLASP	742-30032-00
8	SCREW	851-53012-31	23	BRAIDED PULLING	123-30001-04
9	SPEAKER	384-14233-00U	24	BACK CABINET	780-10887-J20
10	FRONT CABINET	780-10875-JE1	25	LABEL	880-10205-293
11	Standby BUTTON	877-60536-E0			
12	SPEAKER	384-14233-00U			
13	LOGO	880-10470-00			
14	SIDE AV	667-M1435-29			
15	BUTTON ASSEMBLY	667-M435-29			