

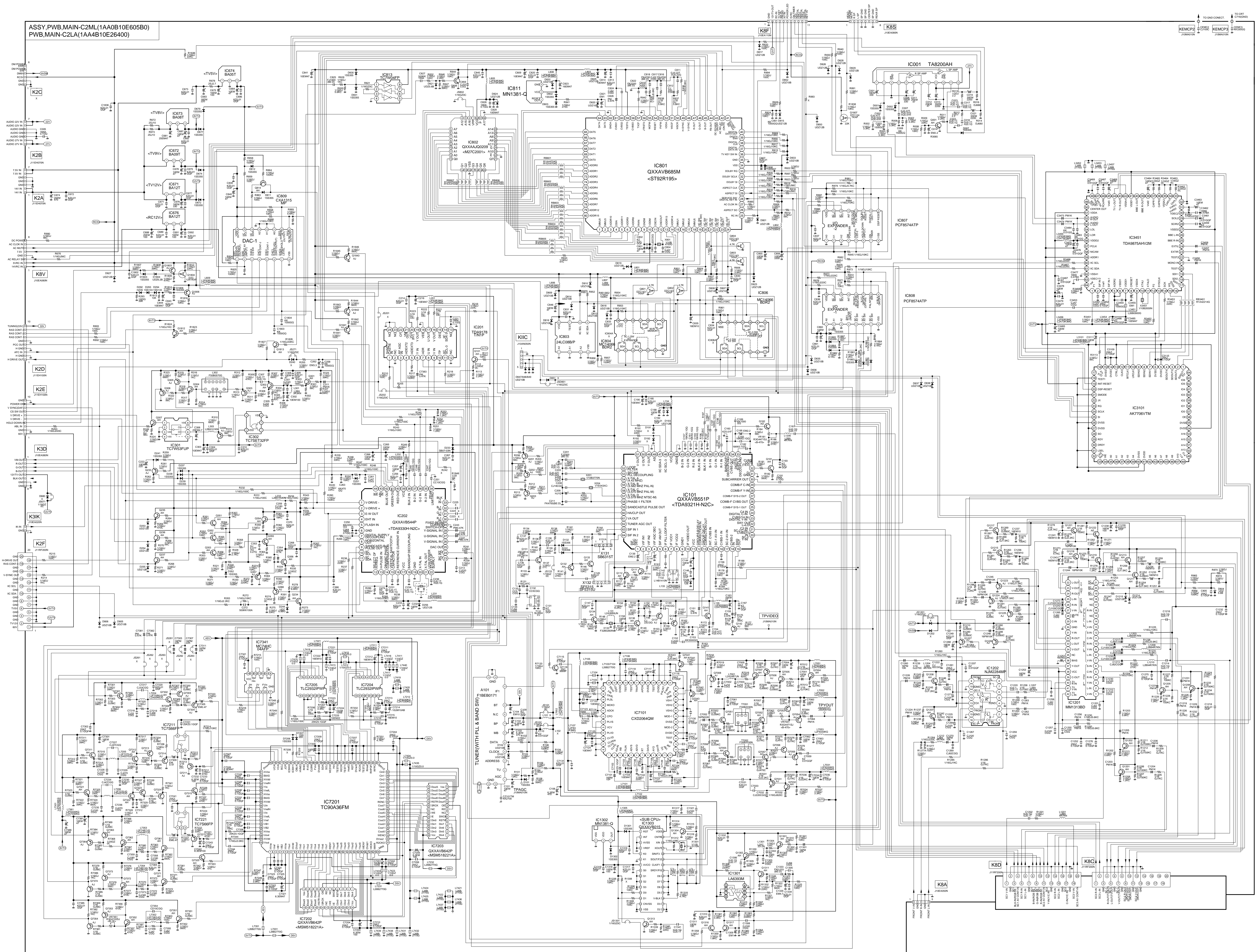
Chip Components

A : Anode
K : Kathode

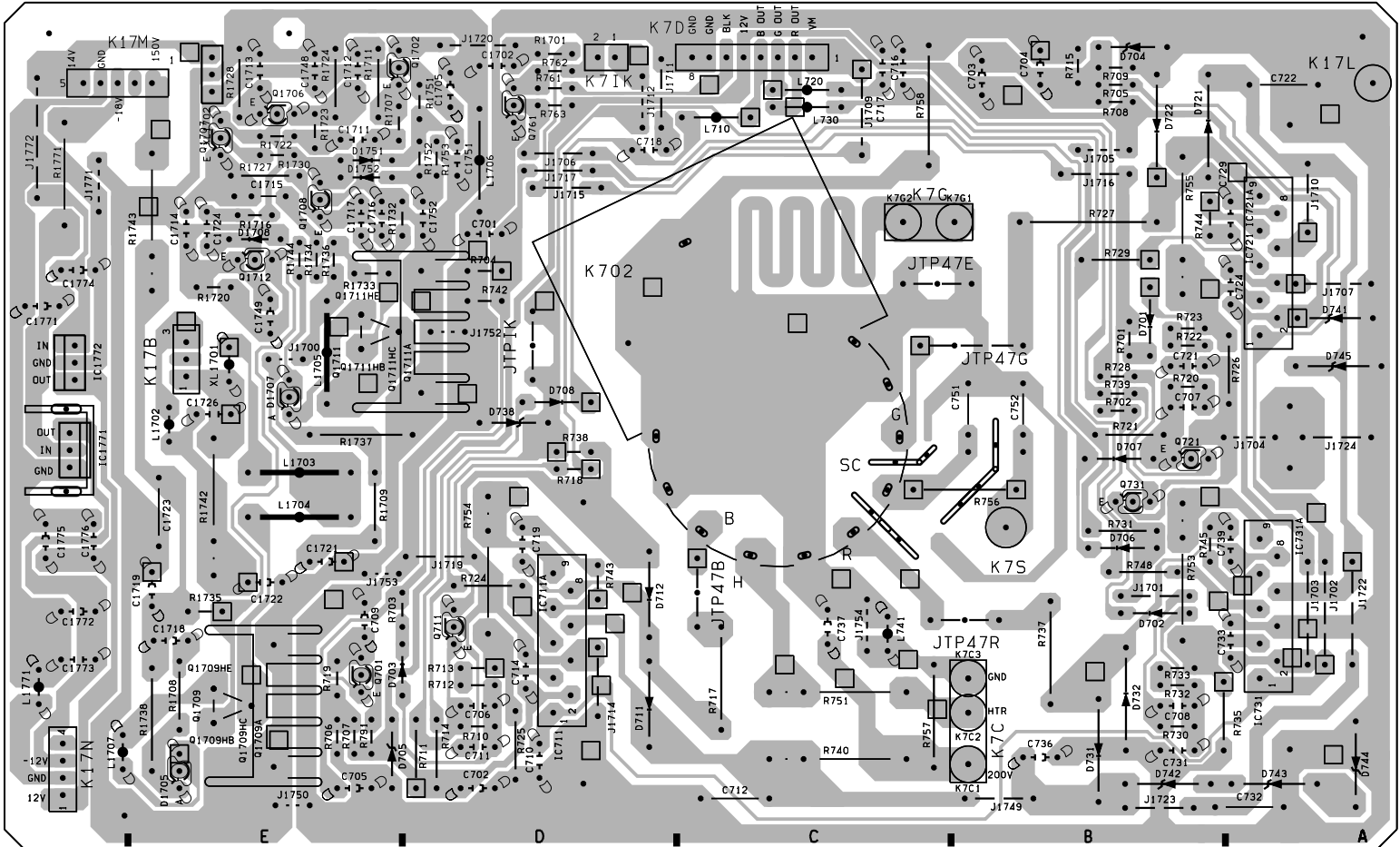
1 2

1 2 3

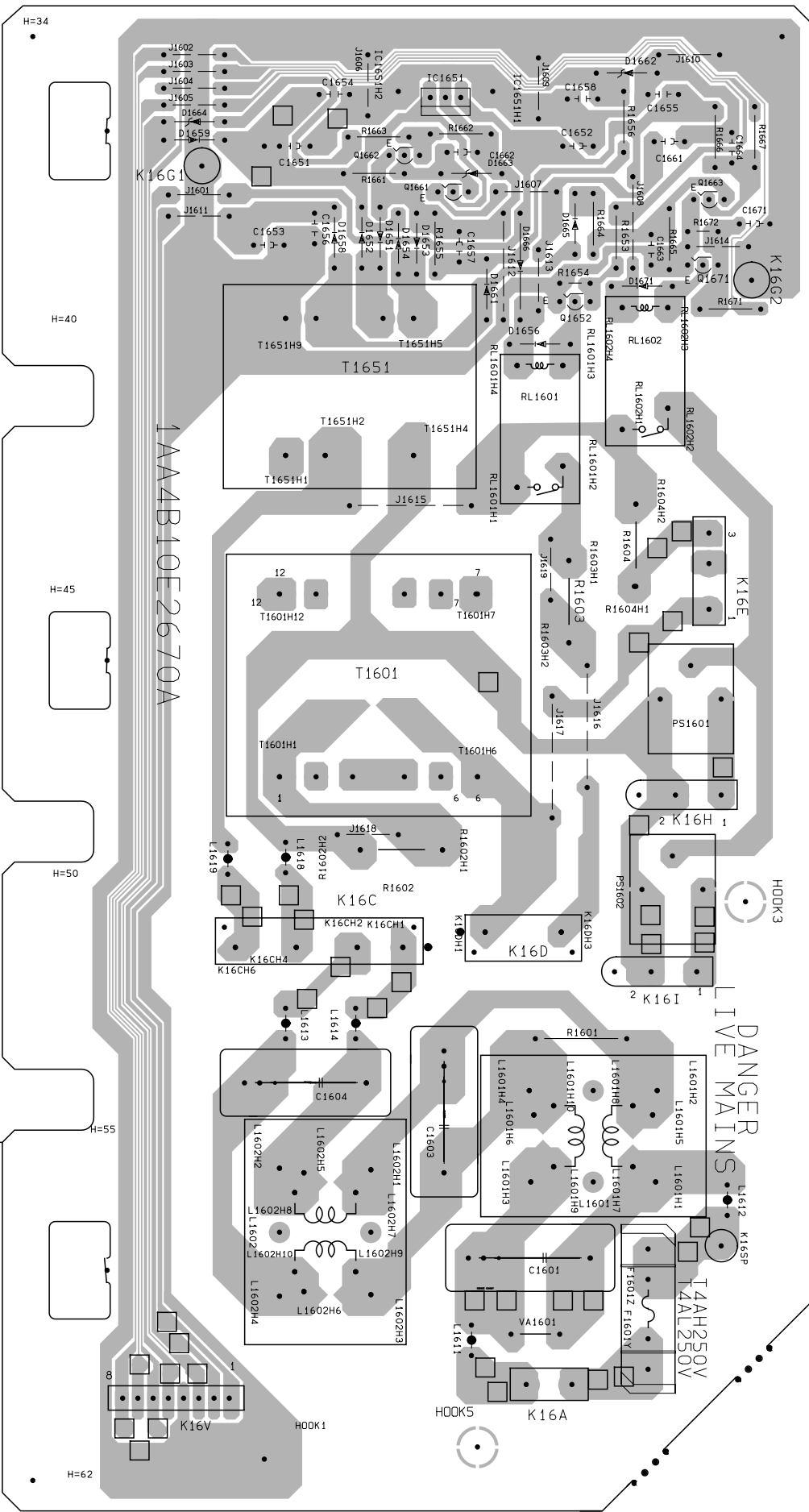
1 2



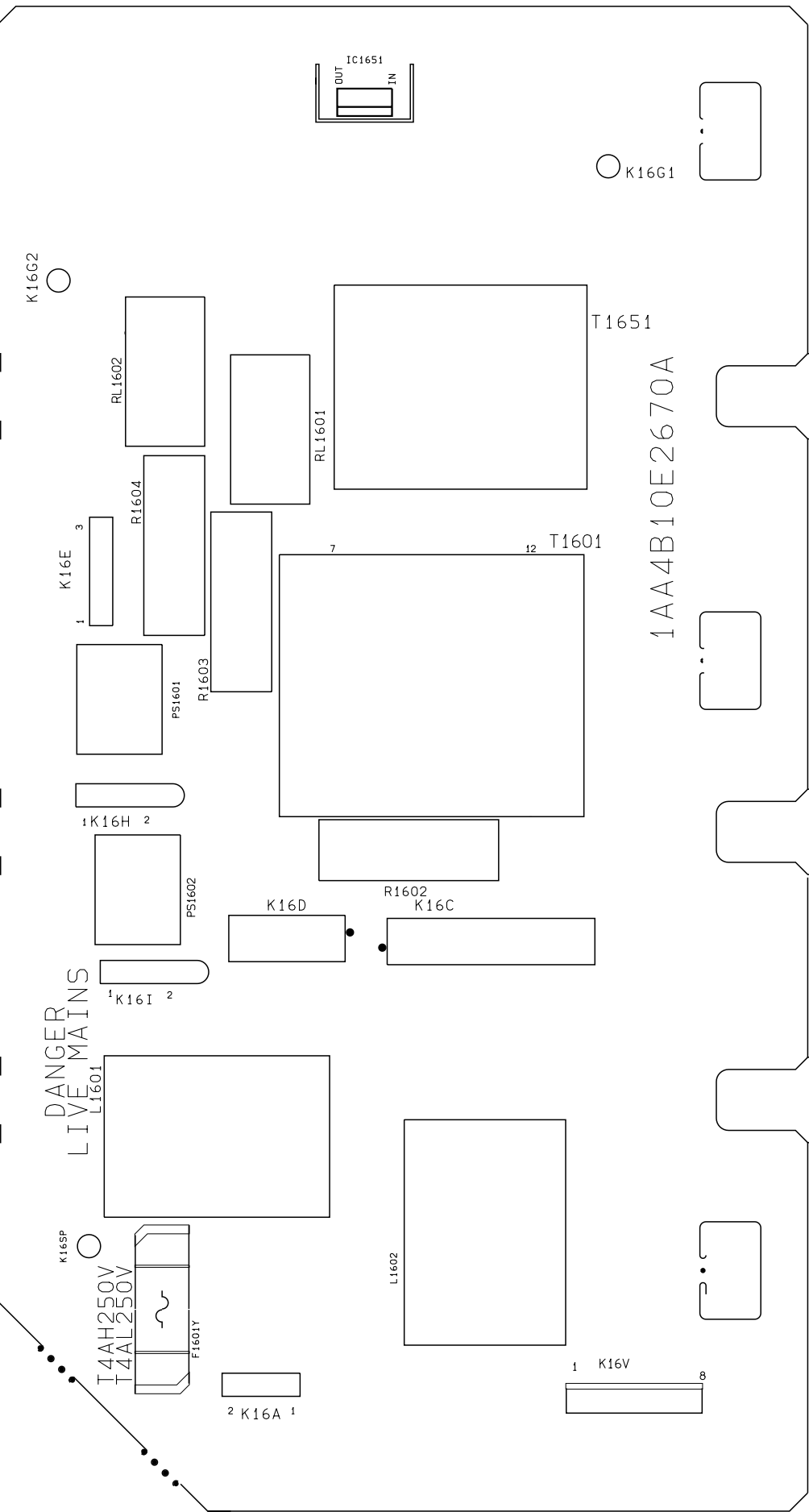
CRT BOARD (CIRCUIT SIDE)



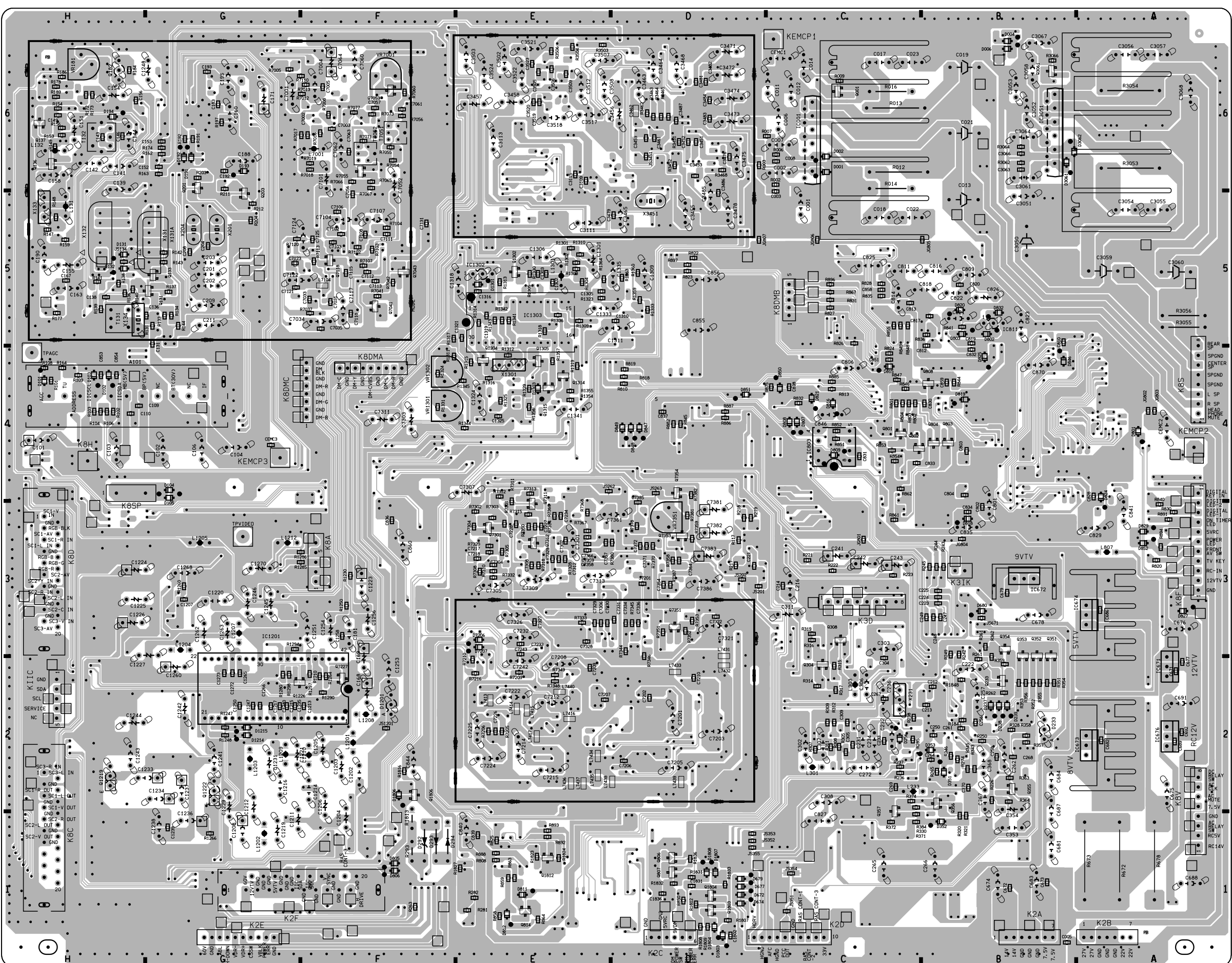
SUB POWER BOARD (CIRCUIT SIDE)



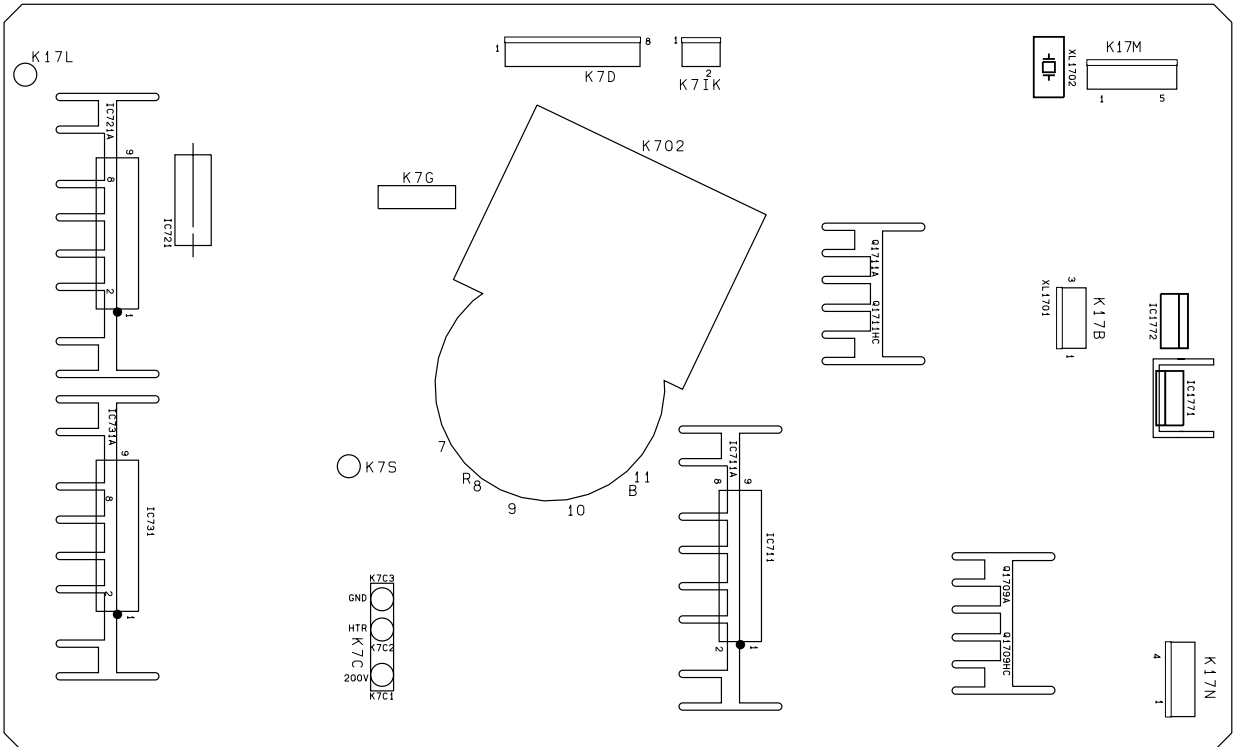
SUB POWER BOARD COMPONENT LOCATION



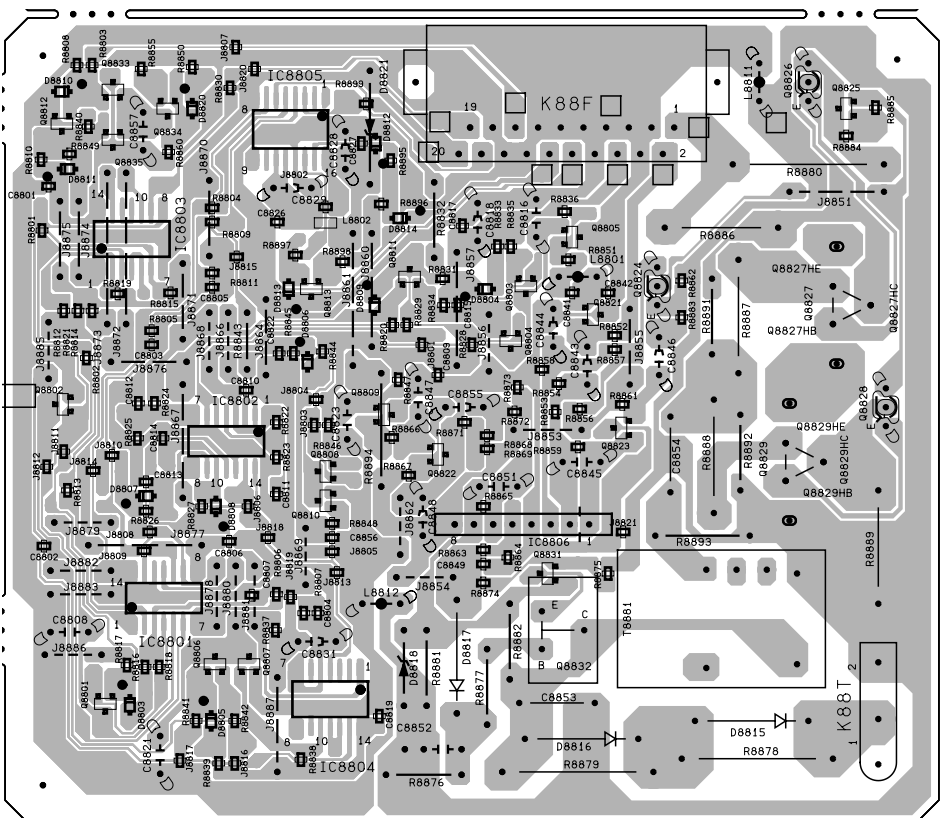
MAIN BOARD (CIRCUIT SIDE)



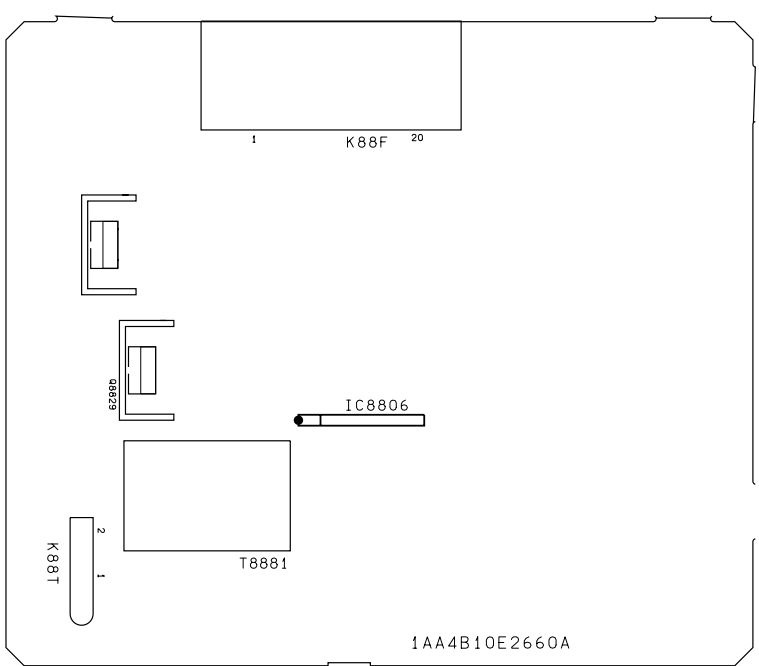
CRT BOARD COMPONENT LOCATION



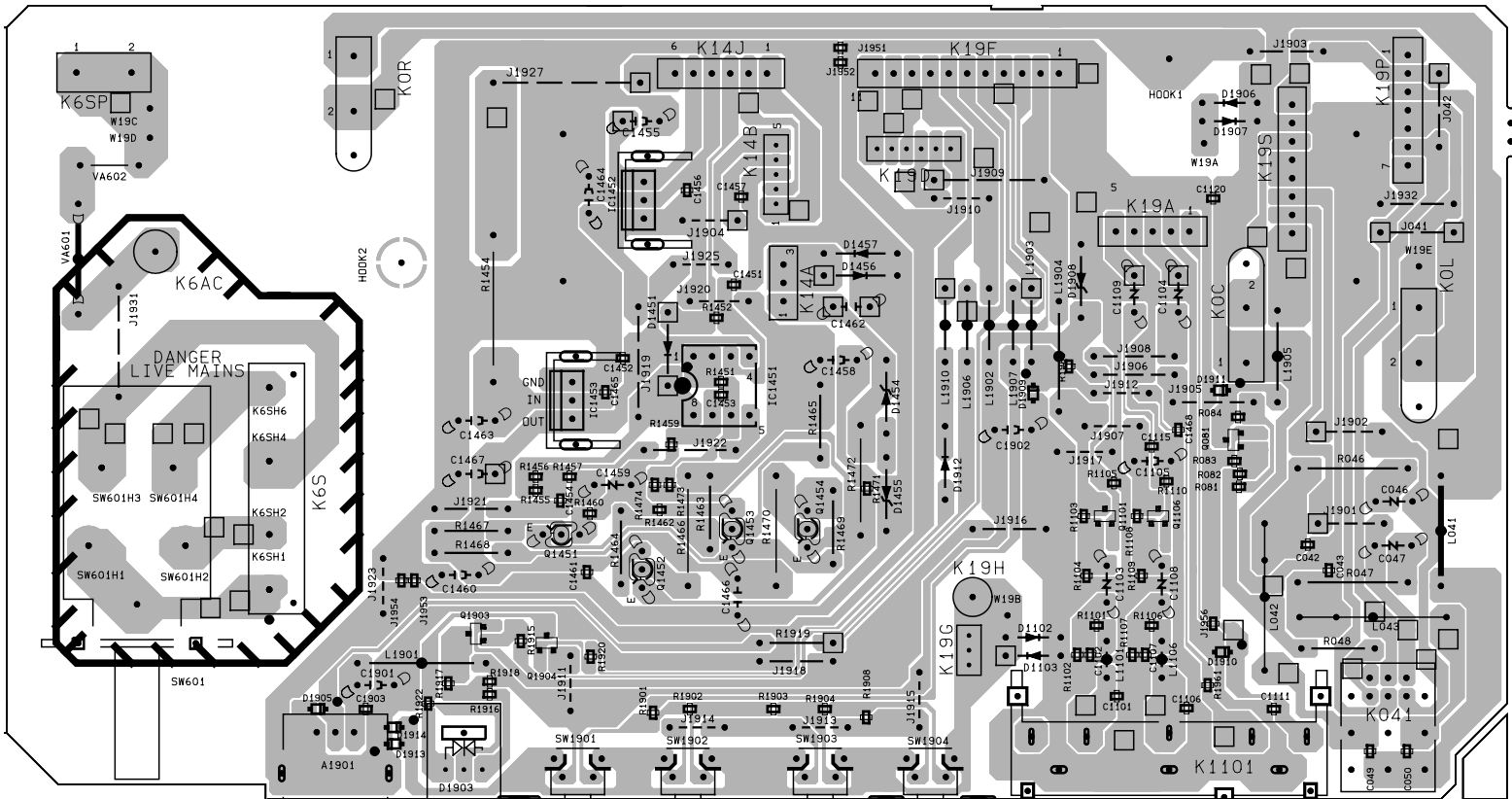
DAF BOARD (CIRCUIT SIDE)



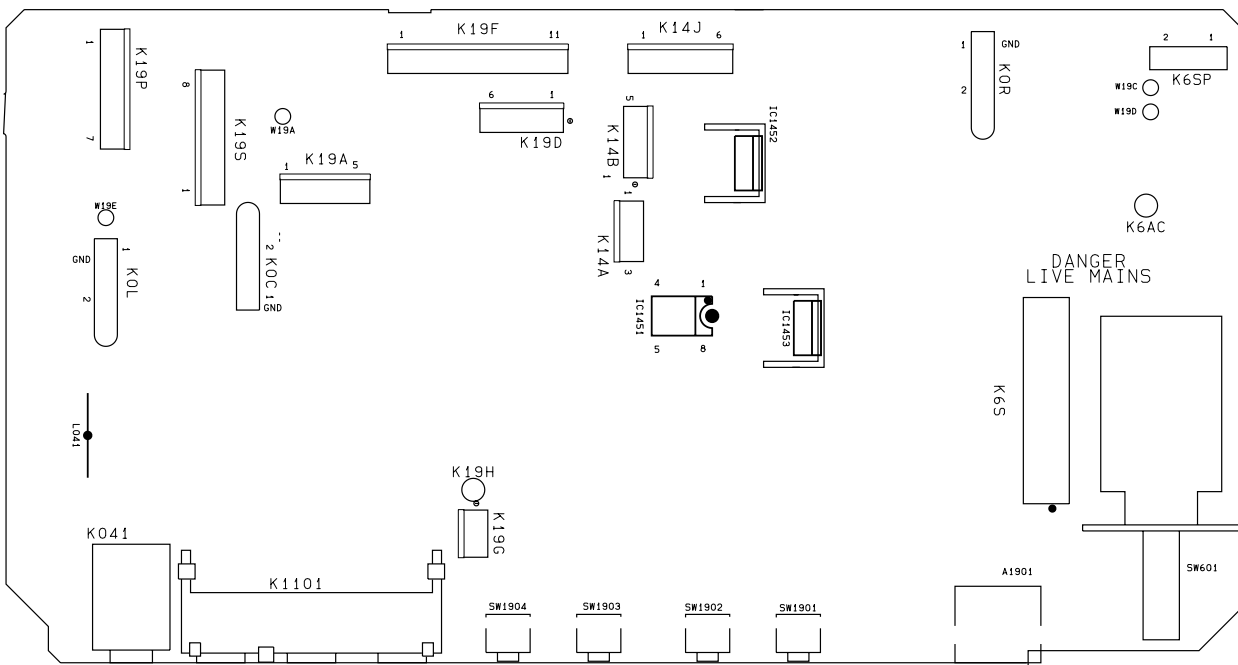
DAF BOARD COMPONENT LOCATION



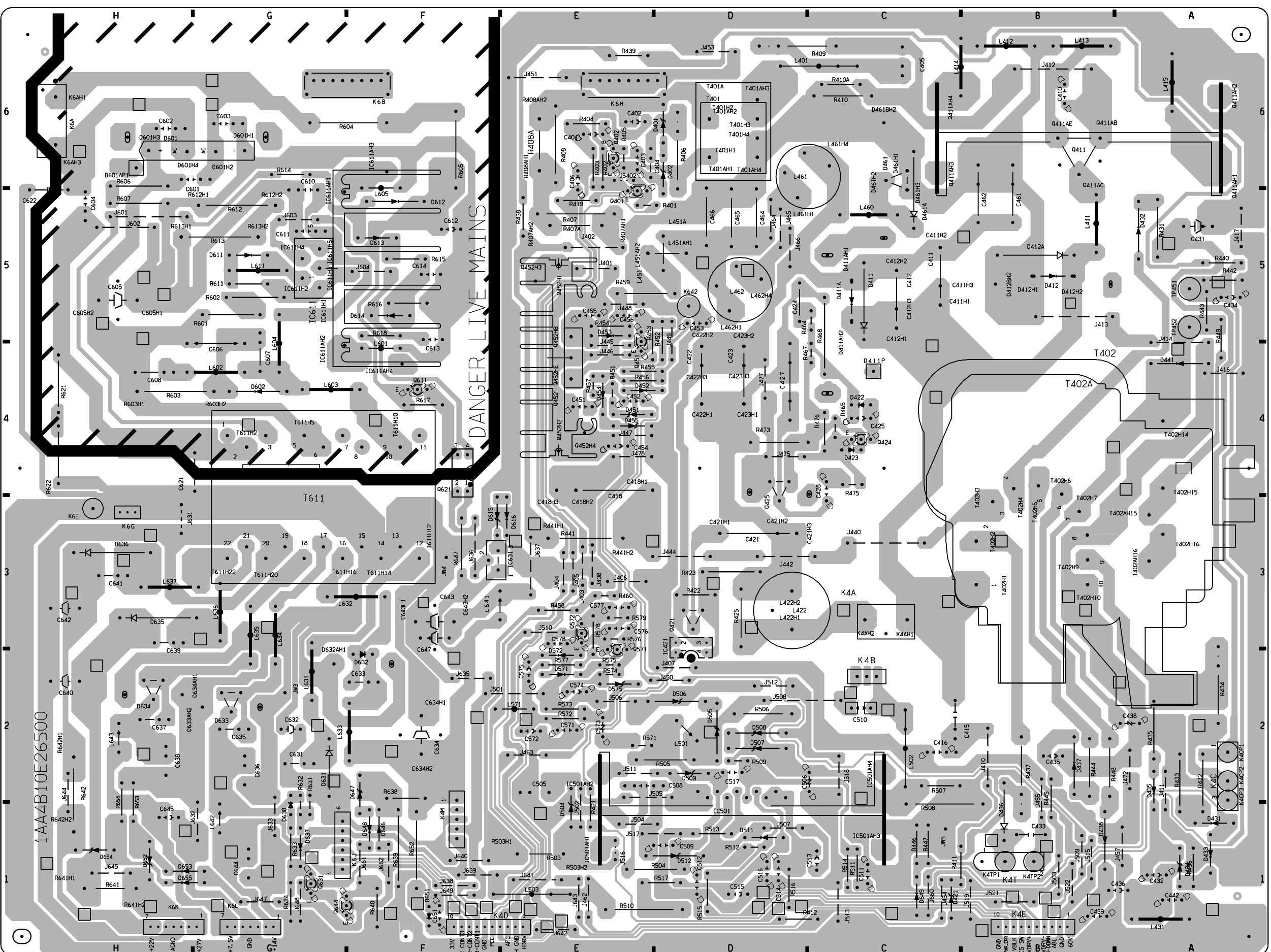
FRONT BOARD (CIRCUIT SIDE)



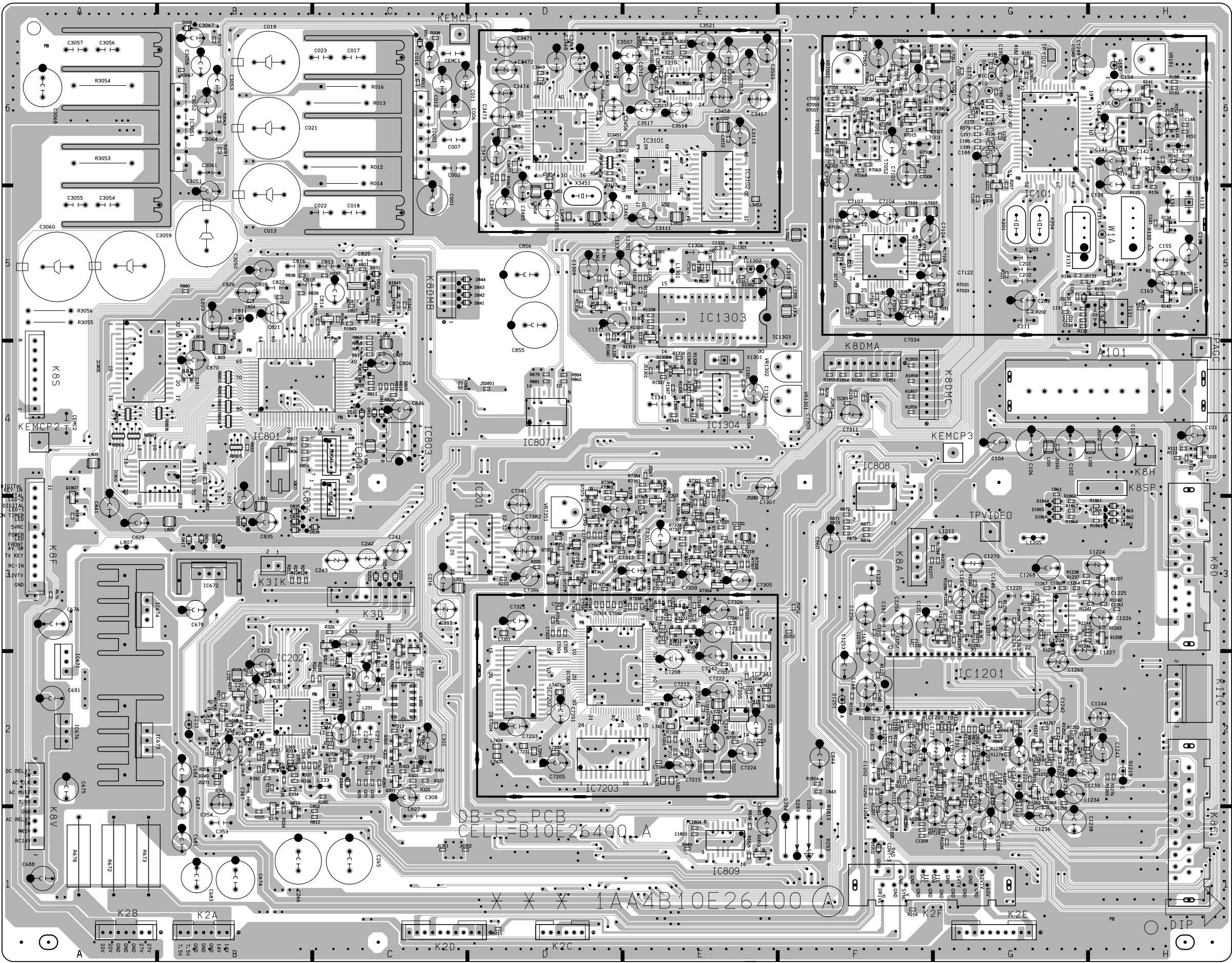
FRONT BOARD COMPONENT LOCATION



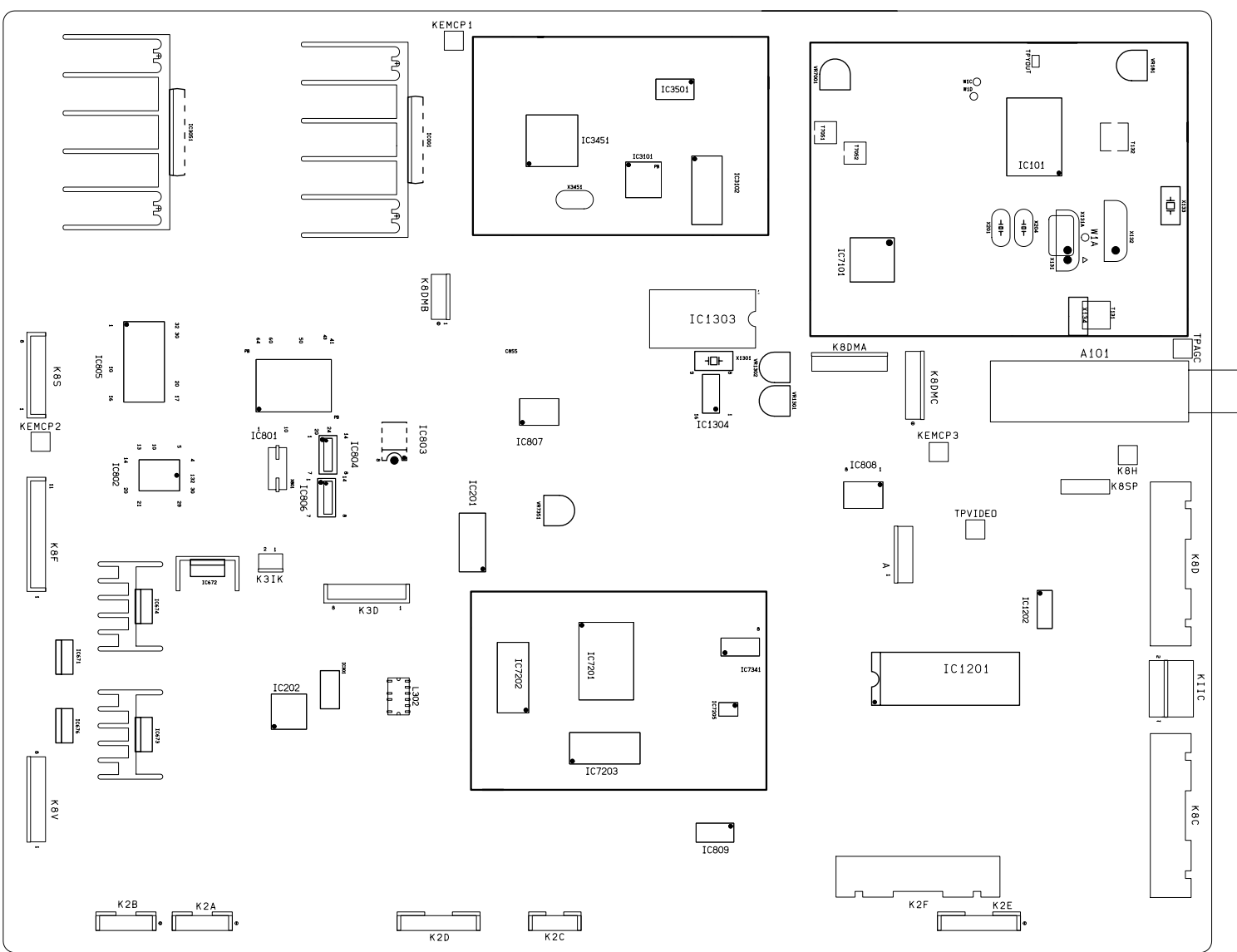
POWER & DEFLECTION BOARD (CIRCUIT SIDE)



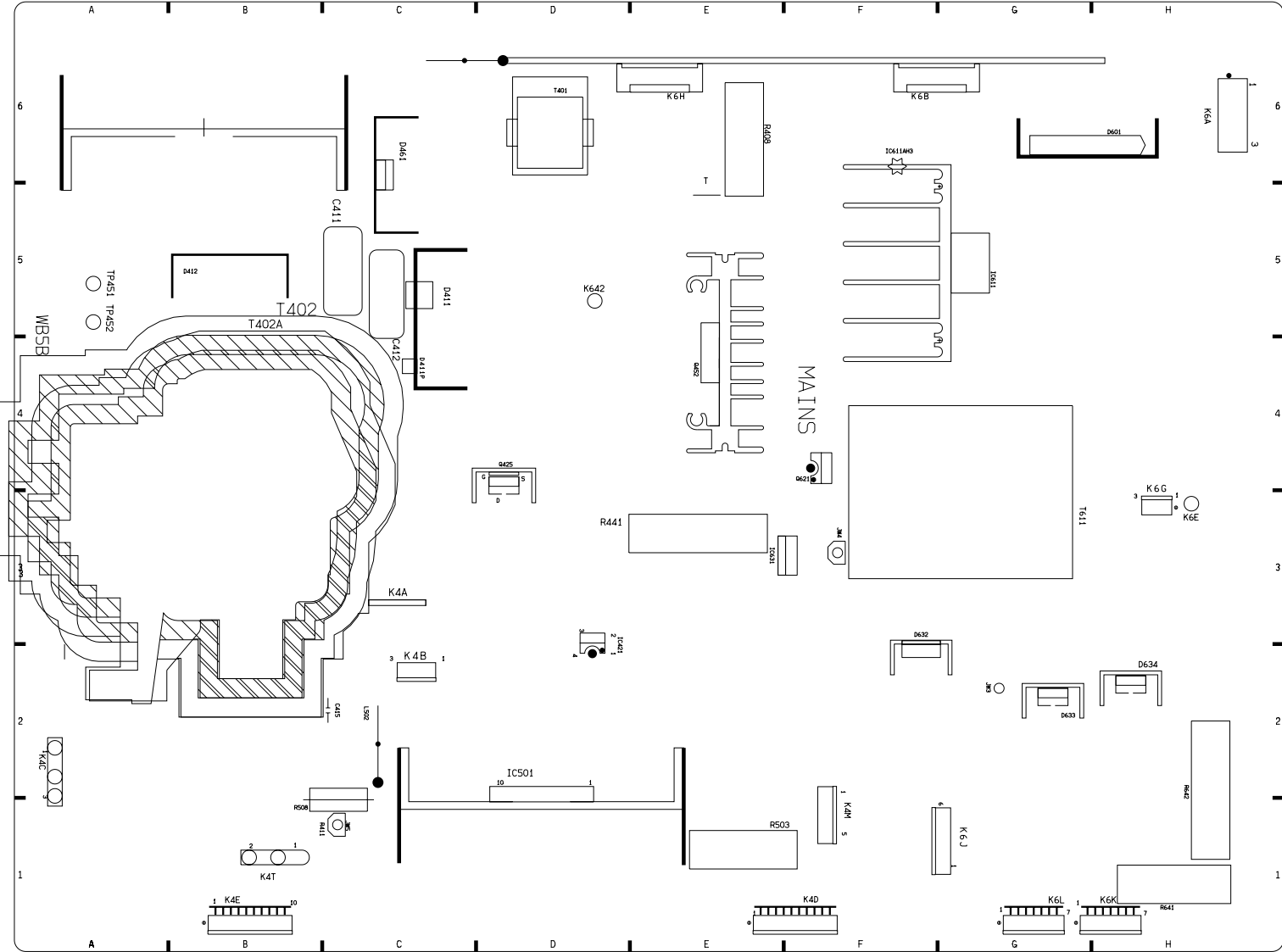
MAIN BOARD (COMPONENT SIDE)



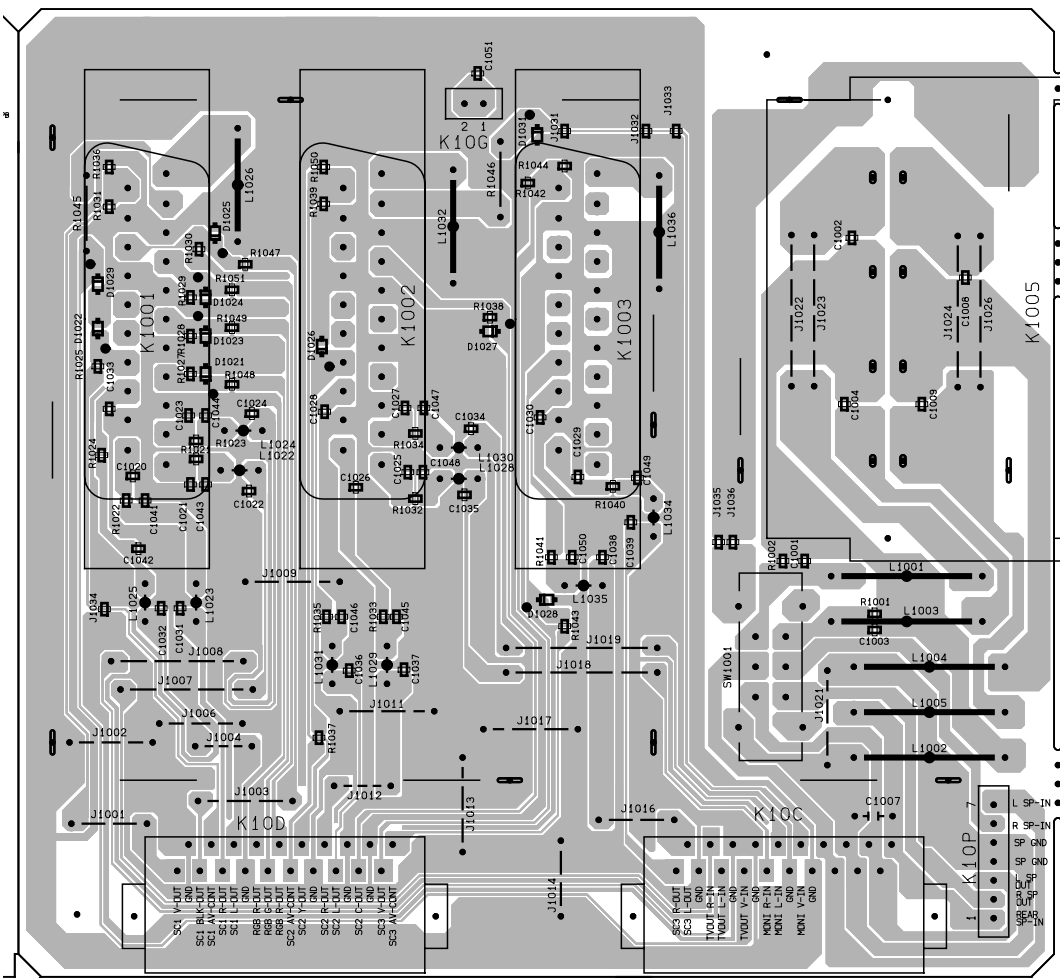
MAIN BOARD COMPONENT LOCATION



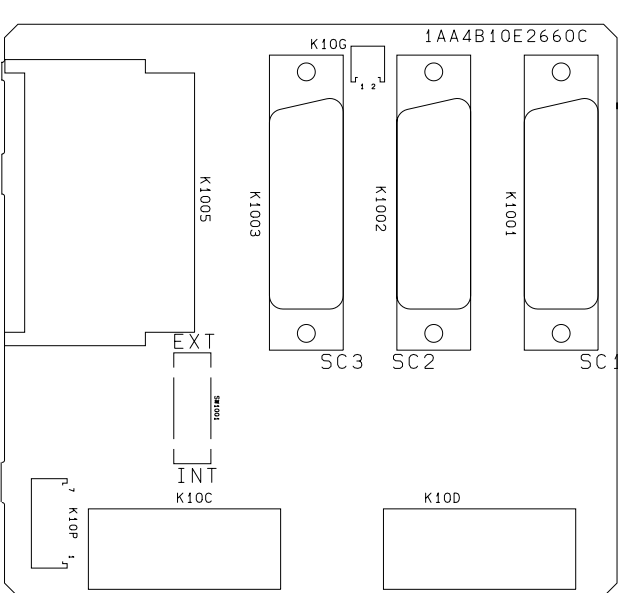
POWER & DEFLECTION BOARD COMPONENT LOCATION



BACK TERM BOARD (CIRCUIT SIDE)



BACK TERMINAL BOARD LOCATION

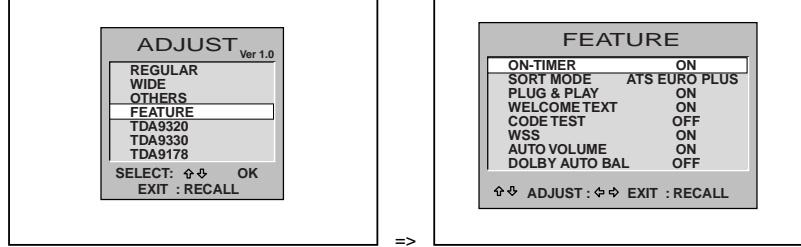


SERVICE ADJUSTMENTS

[After replacing the Memory IC (IC803)]
The memory IC, IC803, stores the feature setting data of TV set and service adjustments data for each circuit, therefore, when the memory IC is replaced, it should be performed by following "FEATURE SETTING" and "SERVICE ADJUSTMENT".

[FEATURE SETTING]

To enter to the Feature Setting Mode
+ Press and hold the "GREEN" button on the remote control and P button on the front control panel. The adjustment window will appear on the screen.
+ Highlight the FEATURE menu by using the ▲ or ▼ button and then press the OK button. The window will change to the feature setting window.



To set the feature mode
+ Highlight the desired feature item by using the ▲ or ▼ button.
+ To change the feature mode, use the ◀ or ▶ button.
+ The data which is set in the feature mode is stored into the memory IC automatically.

Following table shows the available feature items and default setting. (The features of item ATS EURO PLUS mode and DOLBY AUTO BAL mode are not operate properly even if the mode can be selected.)

Feature items	Mode	Description & Note
ON-TIMER	ON or OFF	On-timer available, default "ON"
SORT MODE	AUTO TUNE/SORT or AUTO TUNE or ATS EURO PLUS	Tuning mode, default "AUTO TUNE/SORT"
PLUG & PLAY	ON or OFF	Plug & Play mode, default "ON"
WELCOME TEXT	ON or OFF	Display message when first set up, default "ON"
CODE TEST	OFF or ON	For factory use, default "OFF"
VSS	OFF or ON	Wide Screen Signaling available, default "OFF"
AUTO VOLUME	ON or OFF	Auto Volume function available, default "ON"
DOLBY AUTO BAL	OFF or ON	Dolby Auto balance mode, default "OFF"

Exit from the Feature Setting Mode

+ Press the RECALL button on the remote control.

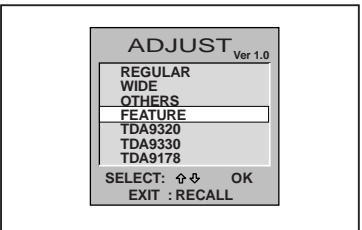
SERVICE ADJUSTMENTS

[SERVICE ADJUSTMENT]

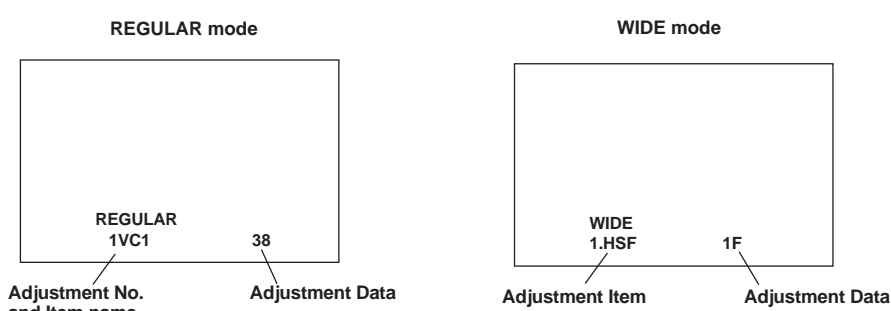
Note: Some items of the service adjustments for this chassis are controlled by the CPU, IC801, and the adjustments are carried out by using the RC handset.

IMPORTANT NOTICE
Do not attempt to adjust service adjustments not listed below otherwise it may cause loss of performance and product safety.

To enter to the Service Mode
+ Press and hold the "GREEN" button on the remote control and P button on front control panel. The adjustment window will appear on the screen.



To select the mode and service item and change data value
+ Highlight the desired adjustment mode (REGULAR or WIDE mode) by using the ▲ or ▼ button and then press the OK button.
+ To select the adjustment item, use the ◀ or ▶ button.
+ To change the service data, use the ◀ or ▶ button.
+ The data which is set in the service mode is stored into the memory IC automatically.



SERVICE ADJUSTMENTS

ADJUSTABLE SERVICE ADJUSTMENT

IMPORTANT NOTICE

Do not attempt to change the data value of service items not listed in the table below otherwise it may cause loss of performance and product safety. If you can not restore the data value for each service item, please initialize the memory IC following as the description below "INITIALIZATION OF MEMORY IC" and re-adjust all of service adjustments.

Item No.	OSD	Description
1	1VC1	VCO Adjustment
3	3AGC	AGC Adjustment
4	4SCR	Screen Adjustment
5	5GRY	White Balance Adjustment
8	8OSD	OSD Positioning Adjustment

[WIDE] There are many available adjustments (up to item 230), only those listed below should be adjusted.

Item No.	OSD	Description
2	2 P V-PS	Full vertical scroll
4	4 P V-WA	Vertical Height Adjustment
6	6 P V-L	Vertical Linearity Adjustment
8	8 P H-P	Horizontal Centring Adjustment
9	9 P H-W	Horizontal Width Adjustment
10	10 P HAD	Full H-size (IDA (as item 9) but finer adjustment)
11	11 P-PCC	PCC Adjustment
12	12 P PAR	Full Horiz. Parallelogram
13	13 P H-B	Full Horiz. bow
14	14 P CNT	Full E-W corner (top)
15	15 P CNB	Full E-W corner (bottom)
16	16 P-TRP	PCC-Tilt Adjustment

Exit from the Service Mode

+ Press the RECALL button or turn off the TV set by using the Mains switch.

[INITIALIZATION OF MEMORY IC]

To initialize the memory IC (IC803), press and hold the "NORMAL" button and then press the P button on the front control panel, and then turn the Mains switch Off and On. Now the initialization is completed.
When the memory IC is initialised, all of the setting data (feature setting data, option data and service adjustment data) stored in the IC are reset to the default value. So it is necessary to set the feature setting, option setting and readjust the service adjustments as listed on page 11 and 12.

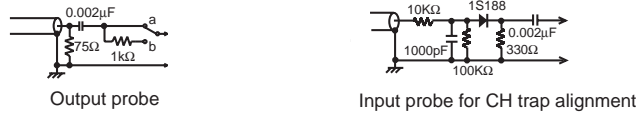
SERVICE ADJUSTMENTS

[ADJUSTMENTS]
How to adjust each service data. Please see "SERVICE ADJUSTMENT" on page 12 for Entering the Service mode, Selecting service item and Adjusting the service data value.

IMPORTANT NOTICE

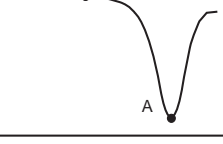
Do not attempt to adjust the following service adjustments except those requiring the readjustments in servicing otherwise it may cause loss of performance and product safety.

Adjustment Tools



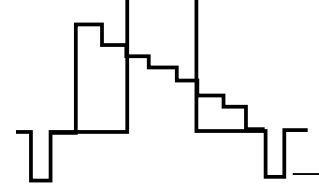
CH TRAP ALIGNMENT

1. Apply 8.0Vdc to pin "C1156 +V" and GND.
2. Connect output probe to terminal "TUNER IF".
3. Connect input probe to pin "Q131-C".
4. Set the sweep attenuator to 11dB.
5. By using T131, adjust "A" to be minimum amplitude.



VIDEO LEVEL ALIGNMENT

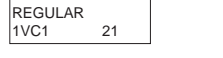
1. Receive a colour bar pattern.
2. Connect oscilloscope to terminal "TPVIDEO" and GND.
3. Adjust amplitude "a" to be 2.0Vp-p by using VR181.



IF VCO ALIGNMENT

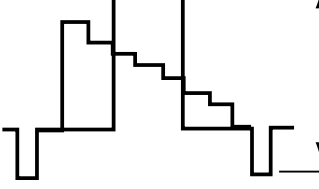
PAL VCO ALIGNMENT

1. Apply 39.5MHz signal to IF terminal on the tuner.
2. Enter to the service mode and select mode "REGULAR", item "REGULAR 1VC1".
3. Press the ◀ or ▶ button to set the upper value to be "10".



Y-OUT LEVEL ALIGNMENT

1. Receive a colour bar pattern.
2. Connect oscilloscope to terminal "TPYOUT" and GND.
3. Adjust amplitude "a" to be 1.0Vp-p by using VR7001.



FOCUS ALIGNMENT

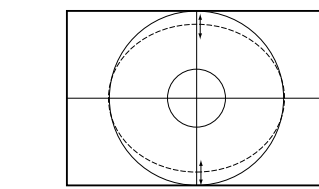
1. Adjust focus of vertical lines by H-VR
2. Adjust focus of horizontal lines by V-HR

SERVICE ADJUSTMENTS

GREY SCALE ALIGNMENT

SCREEN ALIGNMENT

1. Select AV1 mode and no signal input.
2. Enter to the service mode and select mode "REGULAR", item "REGULAR 4SCR".
3. Turn the SCREEN VR to set data value to "11".

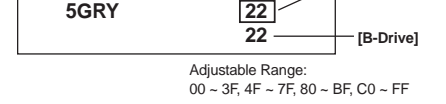


GREY SCALE ALIGNMENT

4. Select item "REGULAR 5GRY".
5. Adjust [R-Drive] and [B-Drive] control to obtain proper white balance by using LEVEL+ or LEVEL- button.
a) Select [R-Drive] or [B-Drive] by using the P▲ or P▼ button.
b) Adjust [R-Drive] or [B-Drive] by using the ◀ or ▶ button.

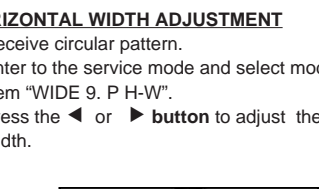
HORIZONTAL WIDTH ALIGNMENT

1. Receive a circular pattern.
2. Enter to the service mode and select mode "WIDE", item "WIDE 9 P H-W".
3. Press the ◀ or ▶ button to adjust the horizontal width.



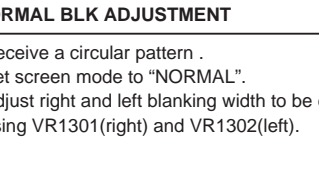
HORIZONTAL CENTRING ALIGNMENT

1. Receive a circular pattern.
2. Enter to the service mode and select mode "WIDE", item "WIDE 8 P H-P".
3. Press the ◀ or ▶ button to adjust horizontal centre.



NORMAL BLK ALIGNMENT

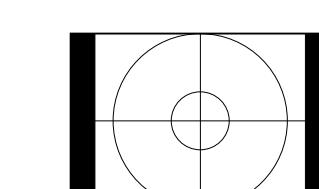
1. Receive a circular pattern.
2. Set screen mode to "NORMAL".
3. Adjust right and left blanking width to be equal by using VR1301(right) and VR1302(left).



VERTICAL ALIGNMENT

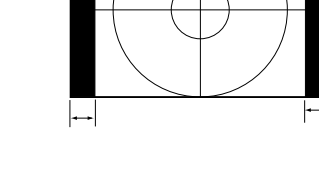
VERTICAL CENTRING ALIGNMENT

1. Receive a circular pattern.
2. Enter to the service mode and select mode "WIDE", item "WIDE 6 P V-L".
3. Press the ◀ or ▶ button to adjust vertical centre.



VERTICAL HEIGHT ALIGNMENT

1. Receive a circular pattern.
2. Enter to the service mode and select mode "WIDE", item "WIDE 4 P V-WA".
3. Press the ◀ or ▶ button to adjust the vertical height.

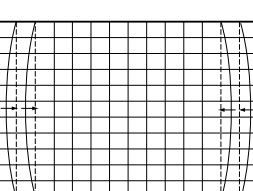


SERVICE ADJUSTMENTS

PCC ALIGNMENT

PCC ALIGNMENT

1. Receive a cross-hatch pattern.
2. Enter to the service mode and select mode "WIDE", item "WIDE 11 P-PCC".
3. Press the ◀ or ▶ button to adjust the vertical line around the left and right side edges of the screen to be straight.

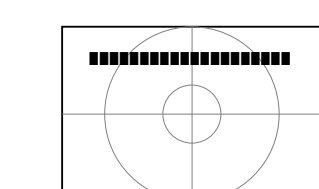


HIGH-VOLTAGE CONFIRMATION

1. Receive a circular pattern.
2. Connect the high voltage meter to CRT anode and GND.
3. Set controls to maximum.
4. Confirm high voltage to be 29.5 ± 1 KV.

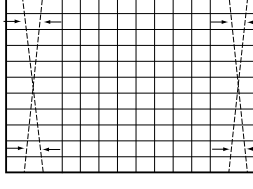
OSD CENTRING ALIGNMENT

1. Receive a circular pattern.
2. Enter to the service mode and select mode "REGULAR", and select item no. 8 "REGULAR 8 OSD". The OSD test bar will appear on the top of screen.
3. Press the ◀ or ▶ button to adjust proper OSD positioning.



PCC-TILT ALIGNMENT

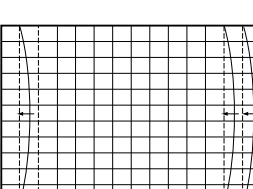
1. Receive a circular pattern.
2. Select item "WIDE 16 P-TRP".
3. Press the ◀ or ▶ button to correct the tilt of vertical lines.



SUB PCC ALIGNMENT

SUB PCC ALIGNMENT

1. Receive a cross-hatch pattern.
2. Adjust left and right vertical lines to be straight by switching the housing socket "JWPH" to pins "LOW", "MID" or "HIGH".
3. If the vertical lines can not be straight in step 2, use VR2301 to make straight vertical lines.



RSTER SHIFT ALIGNMENT

4. If the linearity of the right side screen becomes bad due to the above adjustment, switch housing socket "JWRS" to pin "RIGHT". The right side linearity will be

