

Service Manual

**CIRCUIT DESCRIPTIONS
REPAIR & ADJUSTMENTS**



**ORDER NO.
ARP-472-0**

FM/AM DIGITAL SYNTHESIZED TUNER

TX-950

MODEL TX-950 COMES IN SEVEN VERSIONS DISTINGUISHED AS FOLLOWS:

Type	Voltage	Remarks
KU	AC120V only	U.S.A. model
KC	AC120V only	Canada model
S	AC110V, 120V, 220V, 240V (switchable)	General export model
S/G	AC110V, 120V, 220V, 240V (switchable)	U.S. Military model
SS	AC110V, 120V, 220V, 240V (switchable)	South Africa model
YP	AC240V only	Australia model
HEZ	AC220V, 240V (switchable)	West Germany model

- This service manual is applicable to the KU type.
For servicing of the KC, S, S/G, SS, YP, HEZ, types please refer to the Additional Service Manual.
- Ce manuel d'instruction se réfère au mode de réglage, en français.
- Este manual de servicio trata del método de ajuste escrito en español.

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9. ADJUSTMENTS

FM Tuner Section (Both TX-950 and TX-950L)

- Connect the FM signal generator (FM SG) to the FM ANTENNA 300Ω terminal through a 300Ω dummy antenna.
- Set the TX-950(L) to the FM band.

(*1) Tune the FM SG to the TX-950 (L).

(*2) Connect the FM multiplex stereo signal generator to the FM SG external modulator terminal. Set the modulation to Main 1kHz/L+R/±67.5kHz deviation, Pilot 19kHz/±7.5kHz deviation.

Step	FM SG (400Hz, ±75kHz deviation)		TX-950 (L) Frequency Display	Adjustment point	Adjustment procedure
	Frequency	Level			
1	98.0MHz(*1)	20dB	98.0MHz	T101, T102	Adjustment until DC voltage between terminal no. 1 and ground is maximum.
2	98.0MHz(*1)	66dB	98.0MHz	T201	Adjust DC voltage between terminal no. 2 and no. 3 to 0V (within ±30mV).
3	98.0MHz(*1) not modulation	86dB	98.0MHz	VR301	Adjust signal between terminal no. 4 and ground to 76kHz (within ±150Hz).
4	98.0MHz(*1) Stereo modulation(*2) (Main=1kHz, L or R)	86dB	98.0MHz	T102 (within ±90°)	Adjust until distortion at OUTPUT L and R terminal is equally minimum.
5	98.0MHz(*1) Stereo modulation(*2)	38dB	98.0MHz	R212	If the STEREO indicator and TUNED indicator are not on, remove R212.

AM Tuner Section

MW Tuner Section (Both TX-950 and TX-950L)

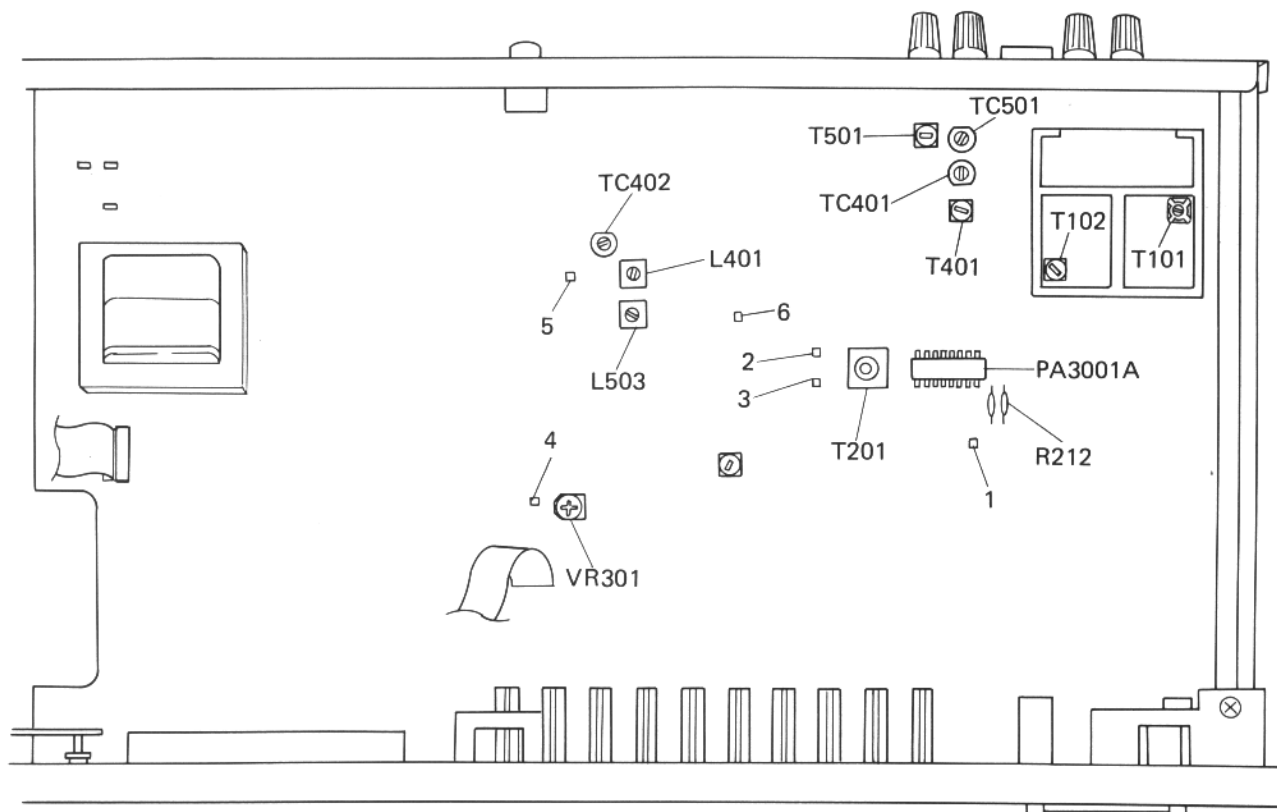
- Connect the furnished AM loop antenna between terminals AM ANTENNA and GND.
 - Connect the AM signal generator (AM SG) to the AM ANTENNA terminal through a 10kΩ resistor.
 - Set the TX-950(L) to the AM (MW) band.
 - Set the AM CHANNEL STEP switch to the 9kHz position (KU, S and S/G types).
- (*3) Tune the AM SG to the TX-950(L).

Step	AM SG (400Hz, 30% modulation)		TX-950 (L) Frequency display	Adjustment point	Adjustment procedure
	Frequency	Level			
1	No signal		531kHz	L401	1.3V DC between terminal no. 5 and ground.
2	No signal		1602kHz	TC402	10V DC between terminal no. 5 and ground.
3	Repeat steps 1 and 2 until both specifications are correct.				
4	603kHz(*3)	76dB	603kHz	T401	Adjust until DC voltage between terminal no. 6 and ground is maximum.
5	1395kHz(*3)	76dB	1395kHz	TC401	
6	Repeat steps 4 and 5 until maximum sensitivity is attained.				

LW Tuner Section (Only TX-950L)

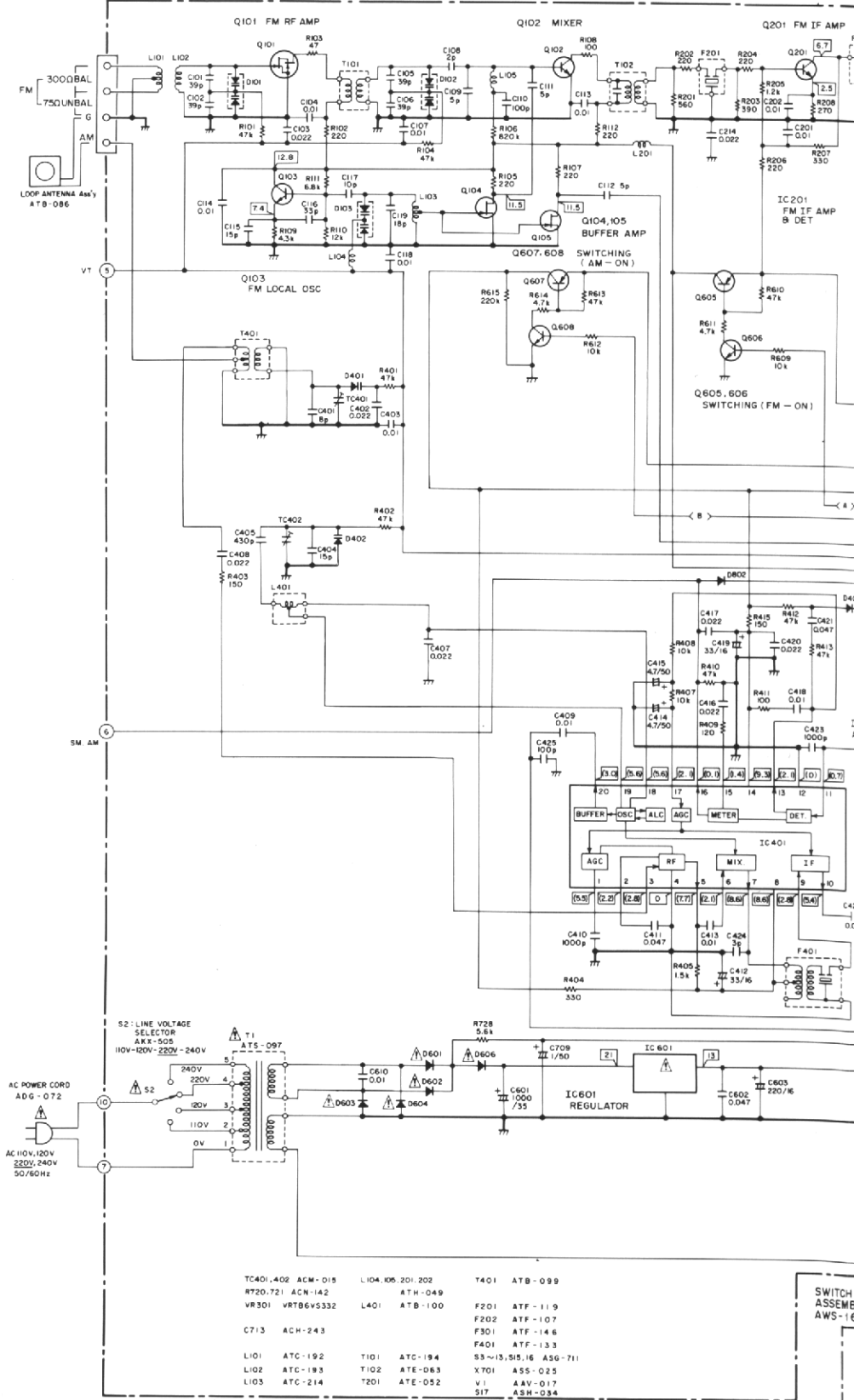
- Connect the furnished AM loop antenna between terminals AM ANTENNA and GND.
 - Connect the AM signal generator (AM SG) to the AM ANTENNA terminal through a 10kΩ resistor.
 - Set the TX-950L to the LW band.
- (*3) Tune the AM SG to the TX-950L.

Step	AM SG (400Hz, 30% modulation)		TX-950L Frequency display	Adjustment point	Adjustment procedure
	Frequency	Level			
1	No signal		281kHz	L503	DC 5.2V ±0.1V between terminal no. 5 and ground.
2	164kHz(*3)	86dB	164kHz	T501	Adjust until DC voltage between terminal no. 6 and ground is maximum.
3	254kHz(*3)	86dB	254kHz	TC501	
4	Repeat steps 2 and 3 until maximum sensitivity is attained.				



SCHEMATIC DIAGRAM (FOR S AND S/G TYPES)

COMPLEX ASSEMBLY GWM - 357



A

B

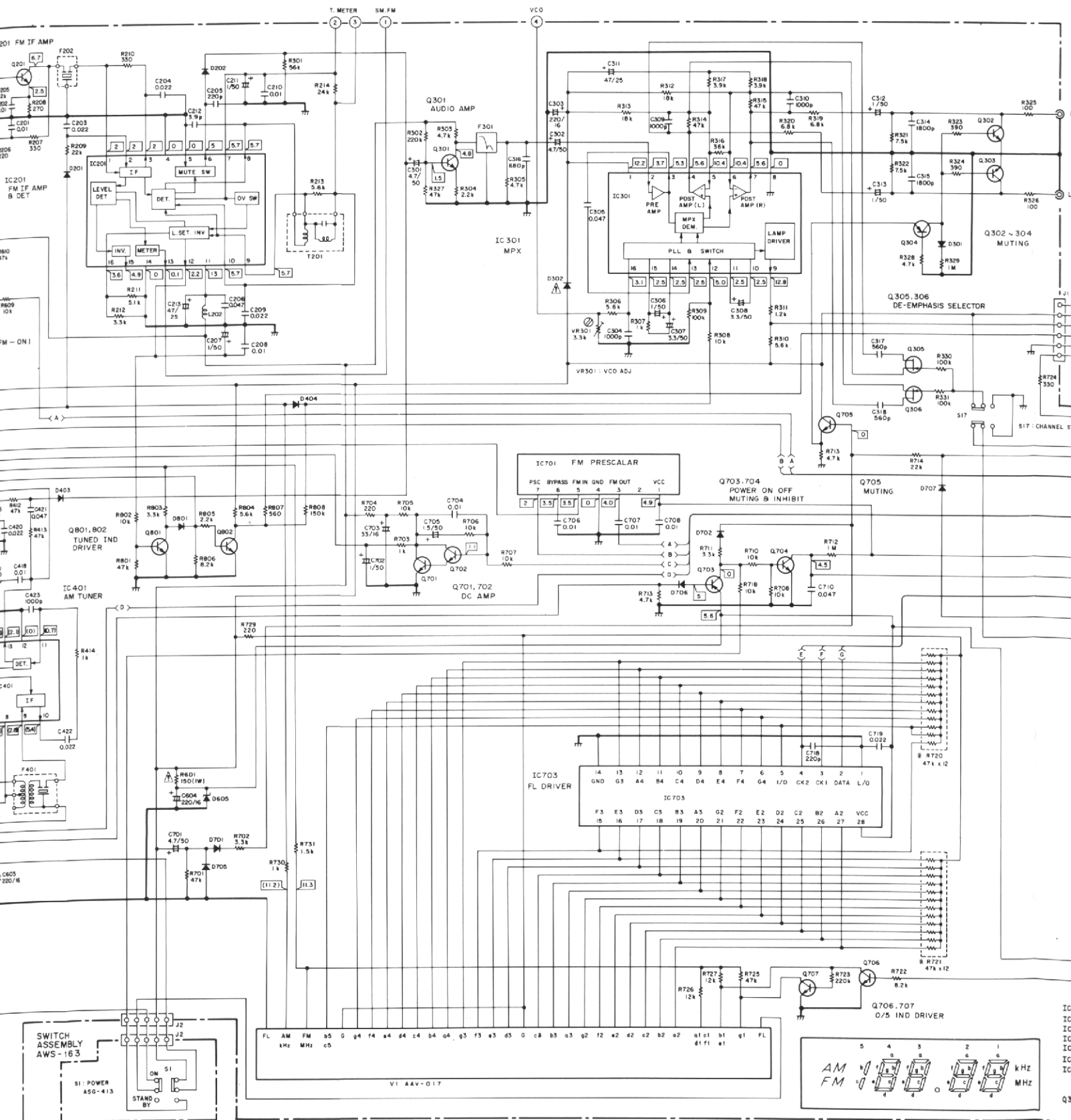
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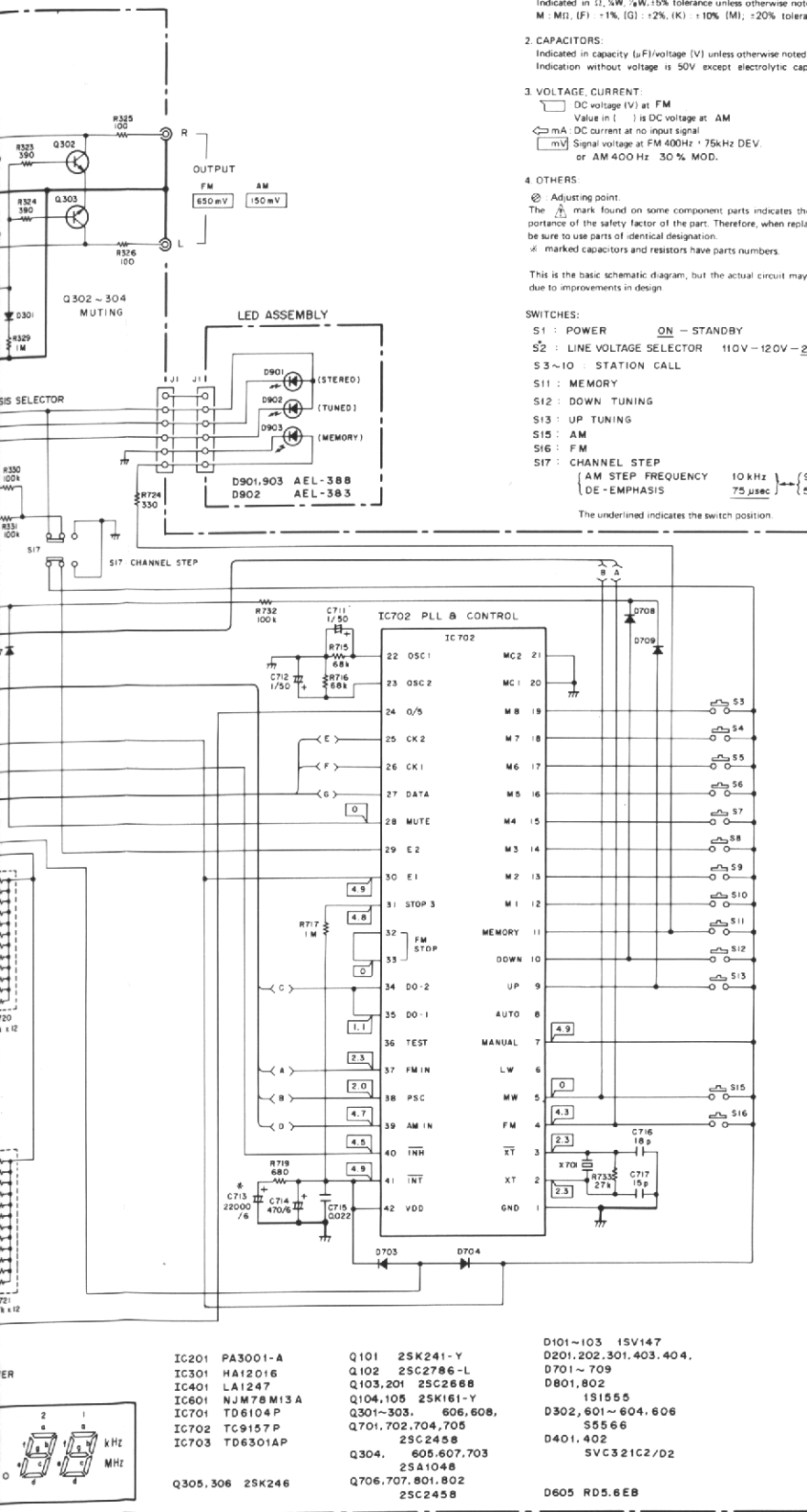
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