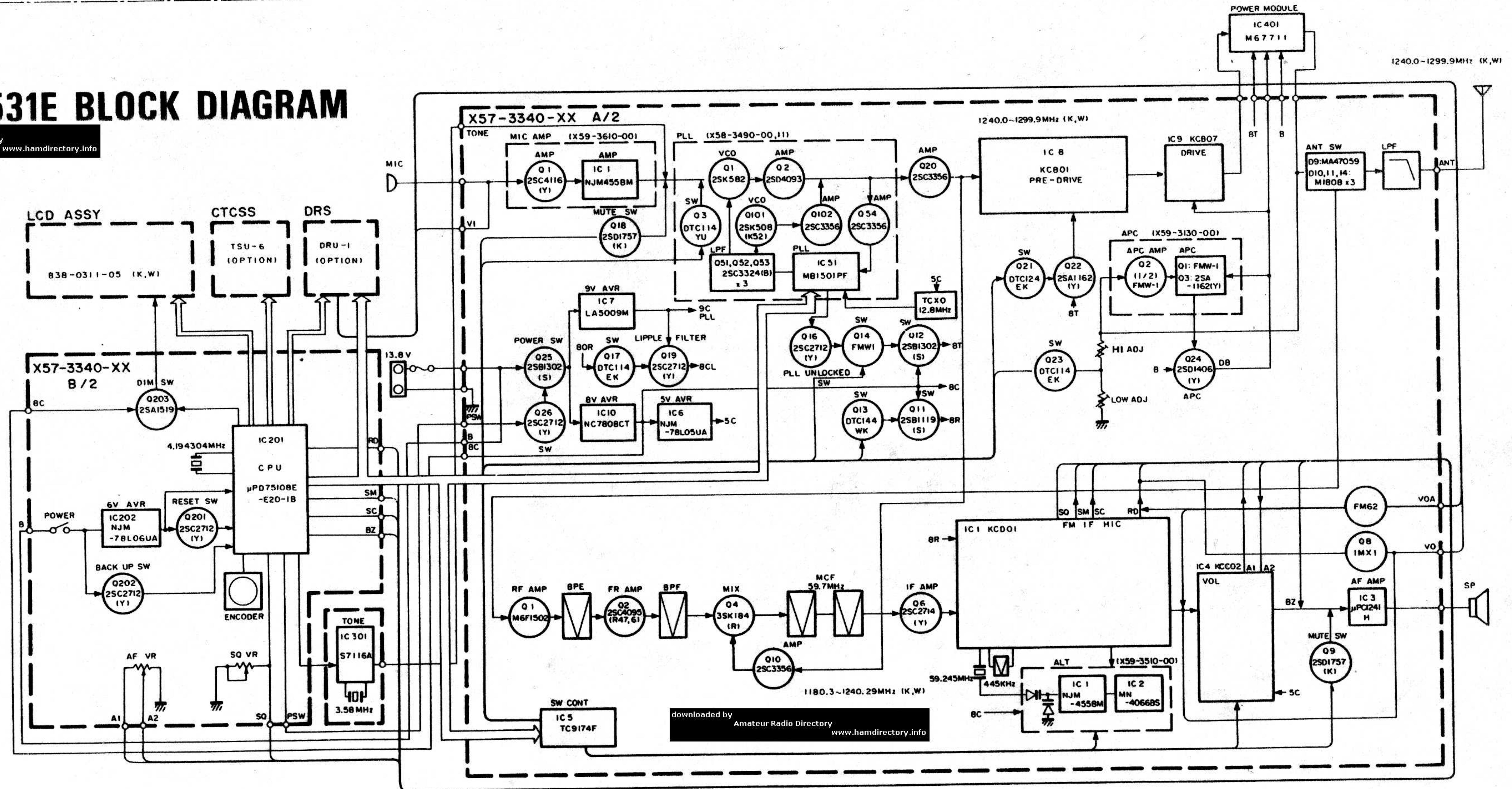


# 8-3. TM-531A/531E BLOCK DIAGRAM

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○ SC  
 ○ LD  
 ○ 8C  
 ○ XI  
 ○ 8OR  
 ○ DP  
 ○ CP  
 ○ EP  
 P VIEW)

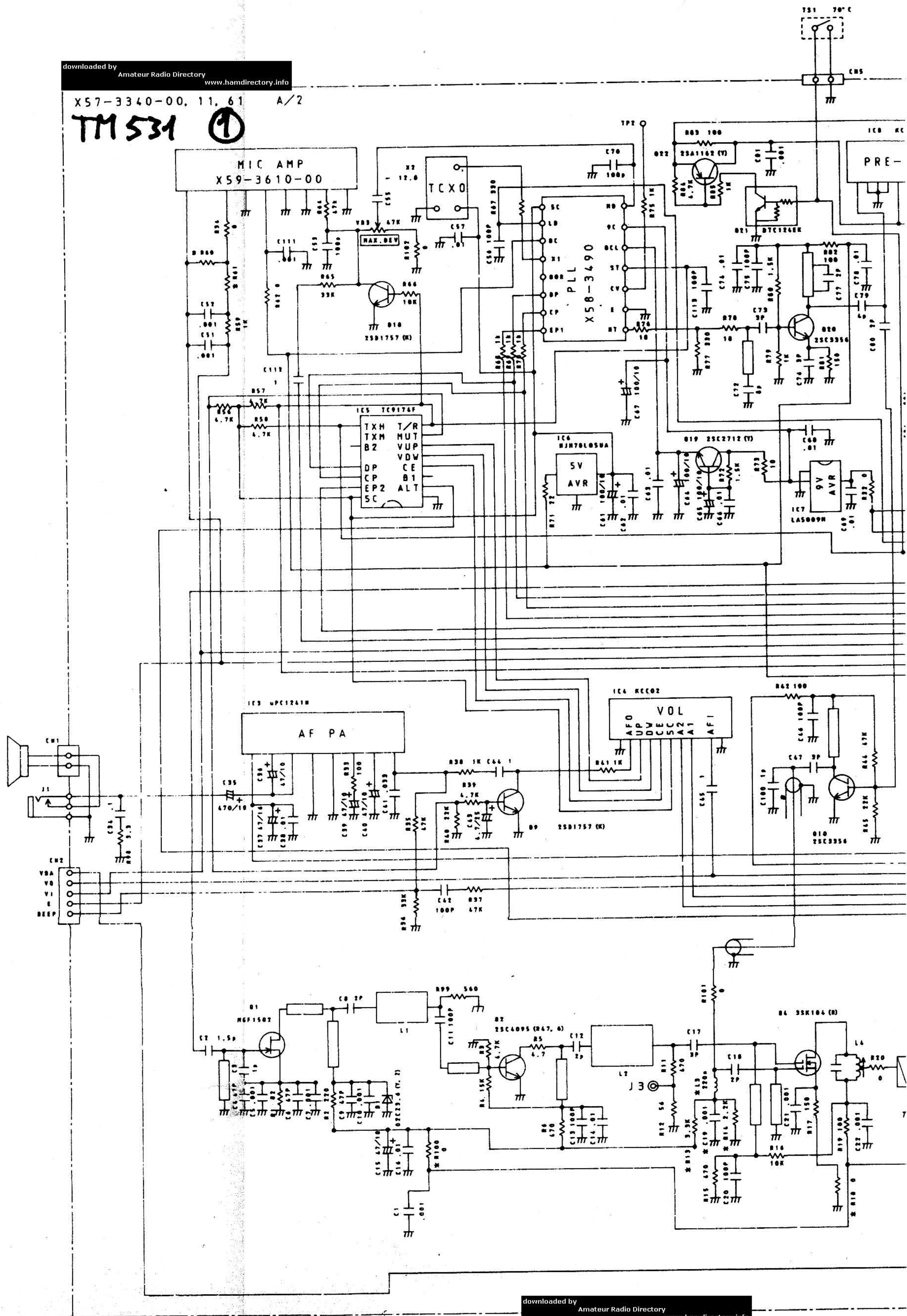
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Note:



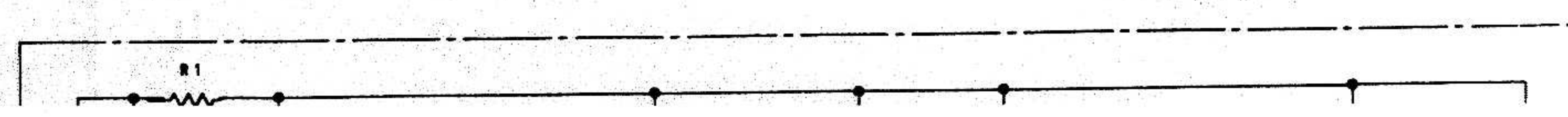
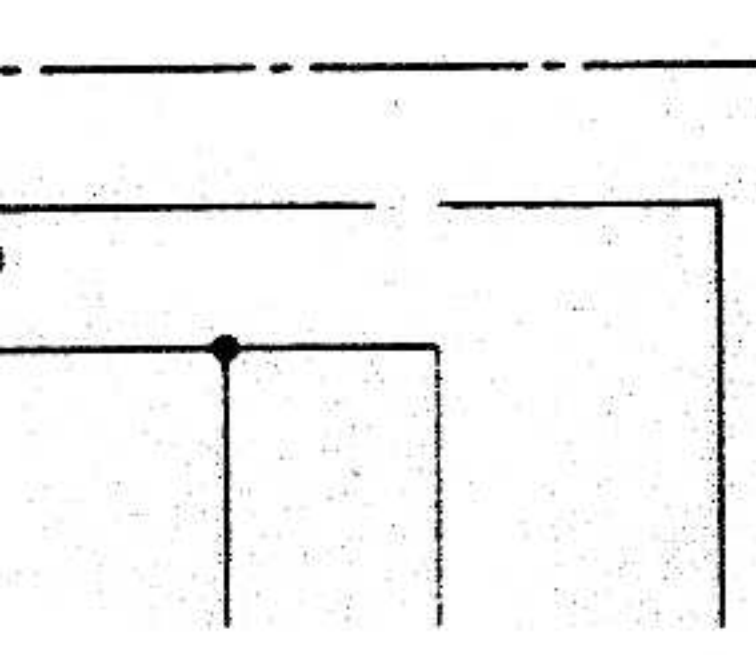
X57-3340-00, 11, 61 A/2

TM531 ①



A/2

	R7	R8	R9	R10	R13	R14	R18	R43	R60	R61	R100	R101	C19	Q3	Q5	L3	D2	Q1
TM-531A	—	—	—	—	—	—	○	—	3.9k	2.2k	○	○	—	—	—	○	○	○
TM-531E	—	—	—	—	—	—	○	—	10k	0	○	○	—	—	—	—	—	—

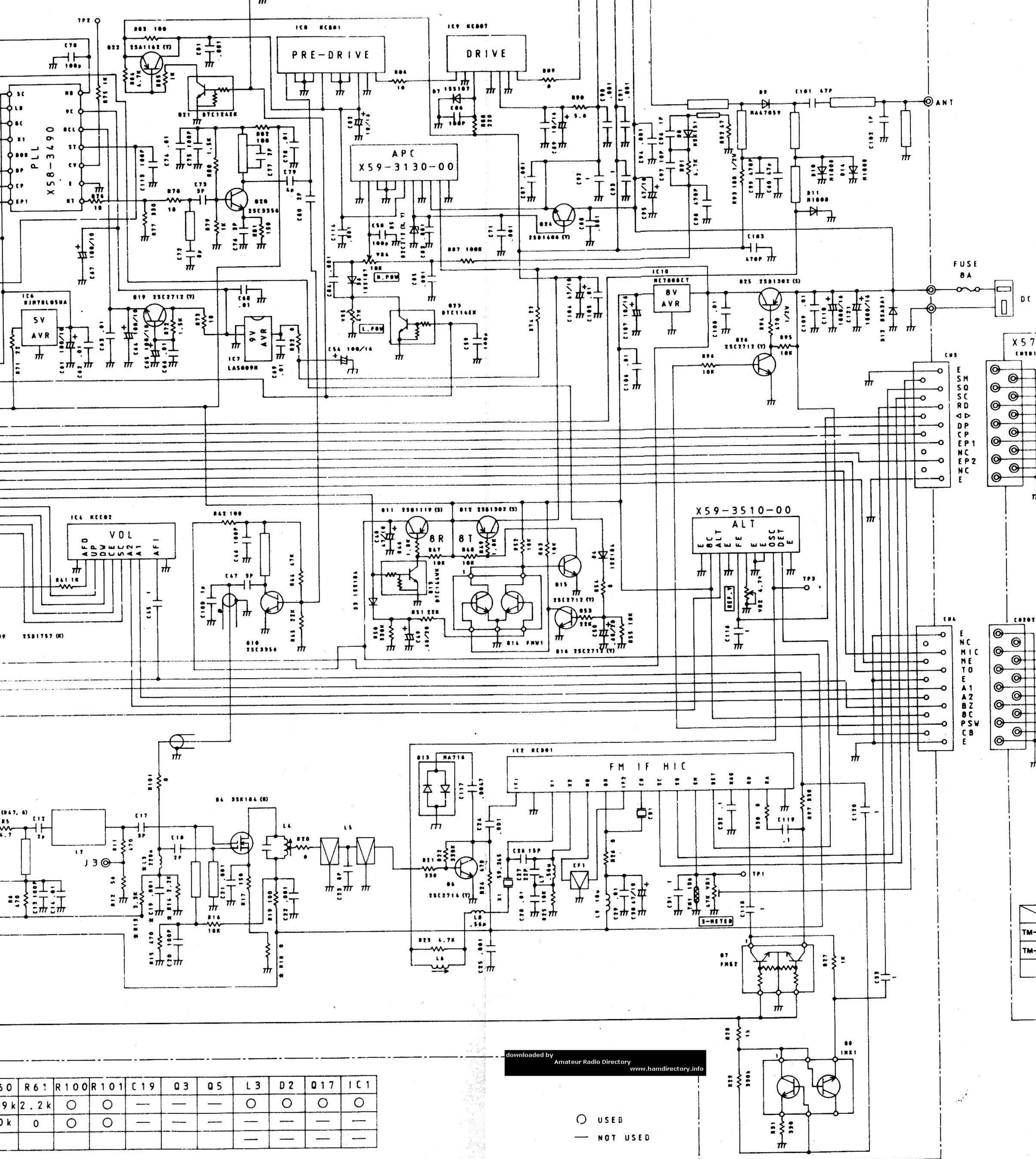




TM531(2)

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M67711



50	R61	R100	R101	C19	Q3	Q5	L3	D2	Q17	IC1
9k	2.2k	○	○	—	—	—	○	○	○	○
3k	0	○	○	—	—	—	—	—	—	—

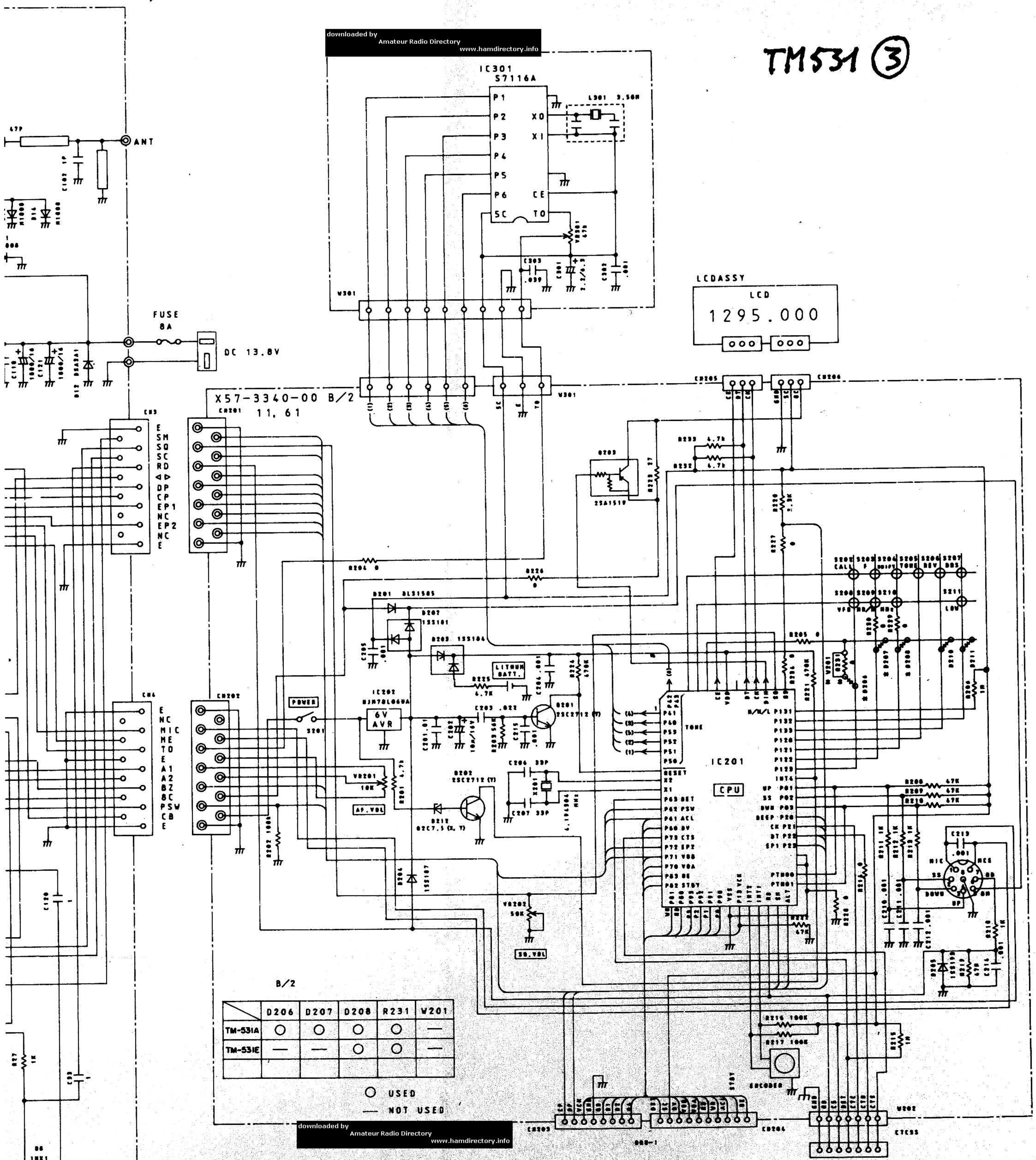
downloaded by Amateur Radio Directory www.hamdirectory.info

○ USED  
— NOT USED

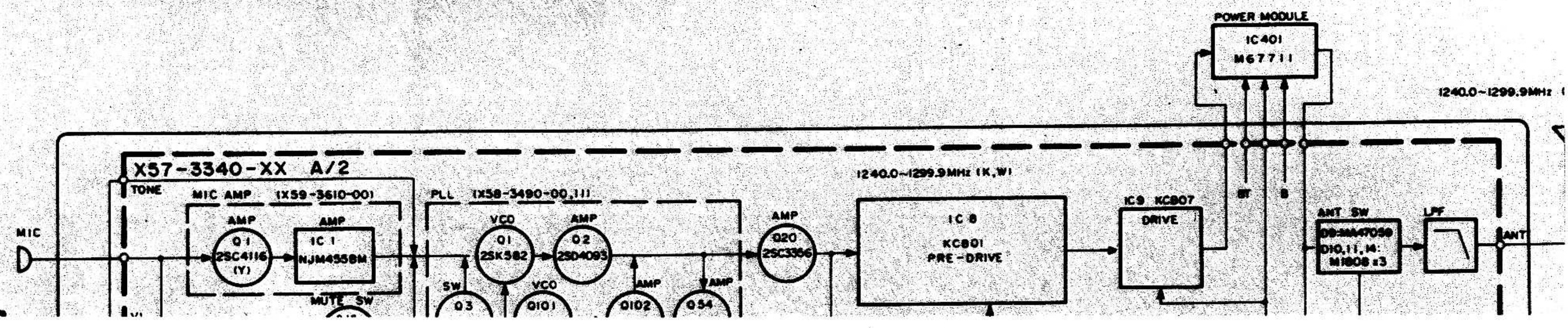
### 8-3. TM-531A/531E BLOCK DIAGRAM



TM531 ③

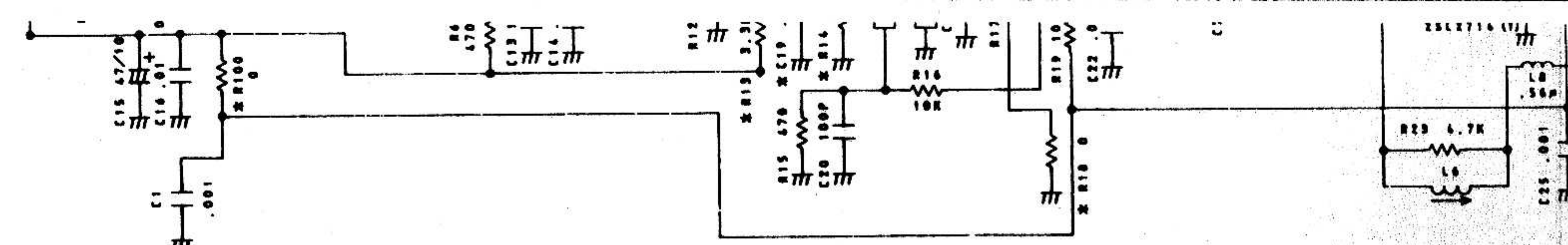


CK DIAGRAM



CTCSS DRS

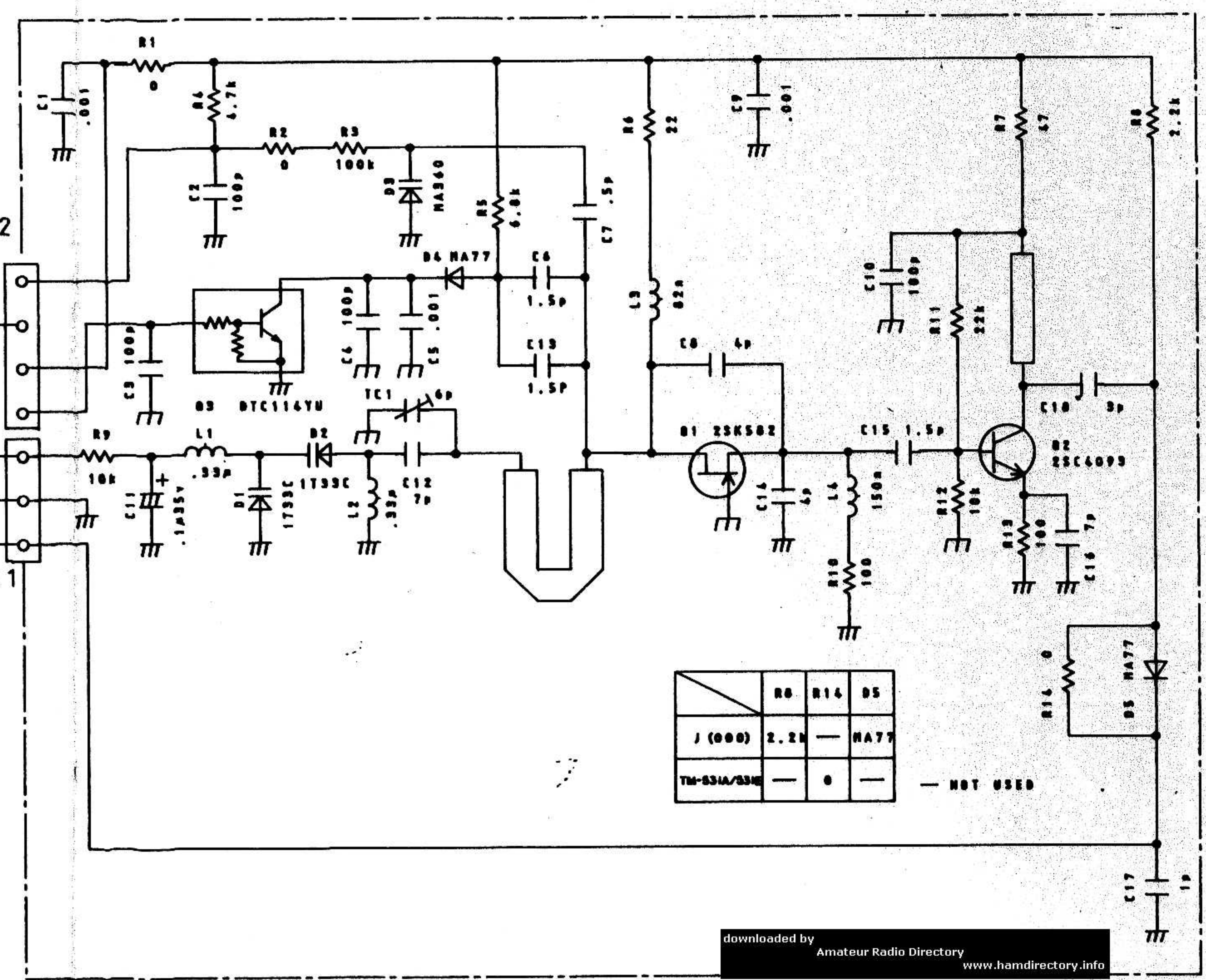
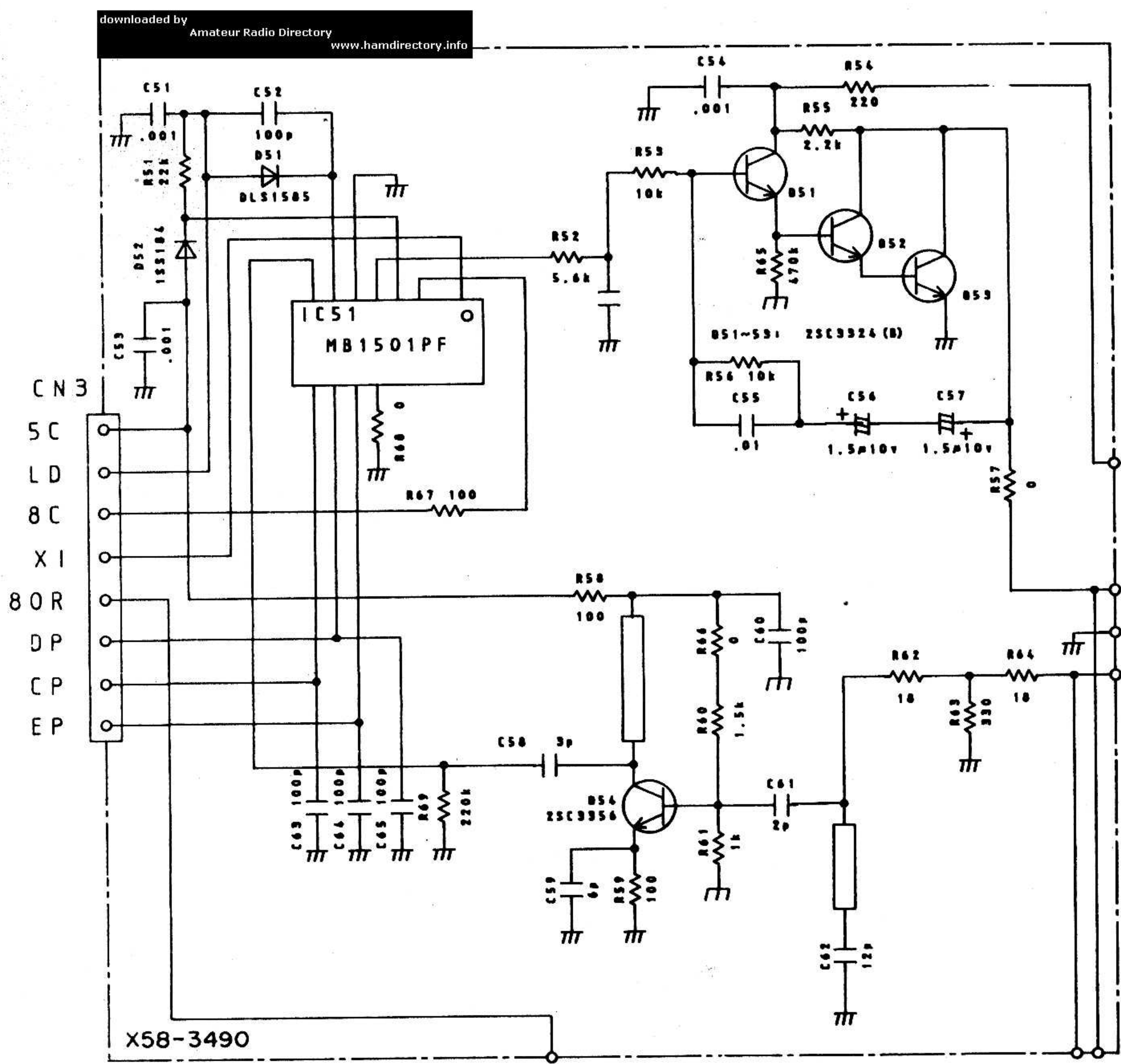




A/2

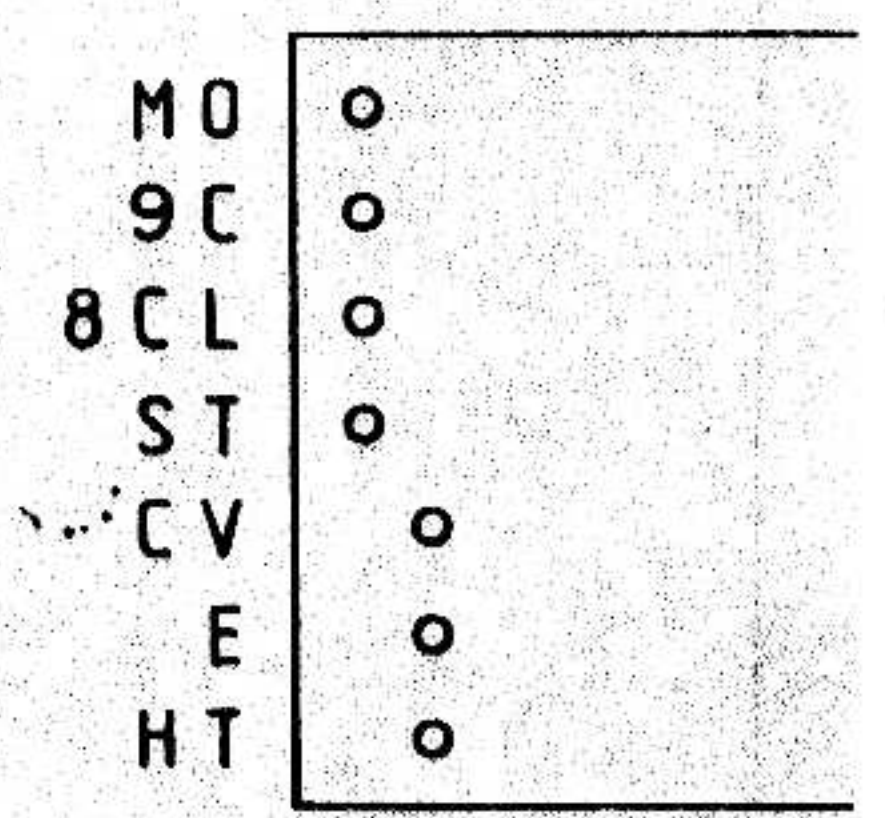
	R7	R8	R9	R10	R13	R14	R18	R43	R60	R61	R100	R101	C19	Q3	Q5	L3	D2	Q17	IC1
TM-531A	—	—	—	—	—	—	○	—	3.9k	2.2k	○	○	—	—	—	○	○	○	○
TM-531E	—	—	—	—	—	—	○	—	10k	0	○	○	—	—	—	—	—	—	—

# TM 531 (4)



	R0	R14	D5
J (000)	2.2k	—	HA77
TM-531A/531E	—	0	—

— NOT USED



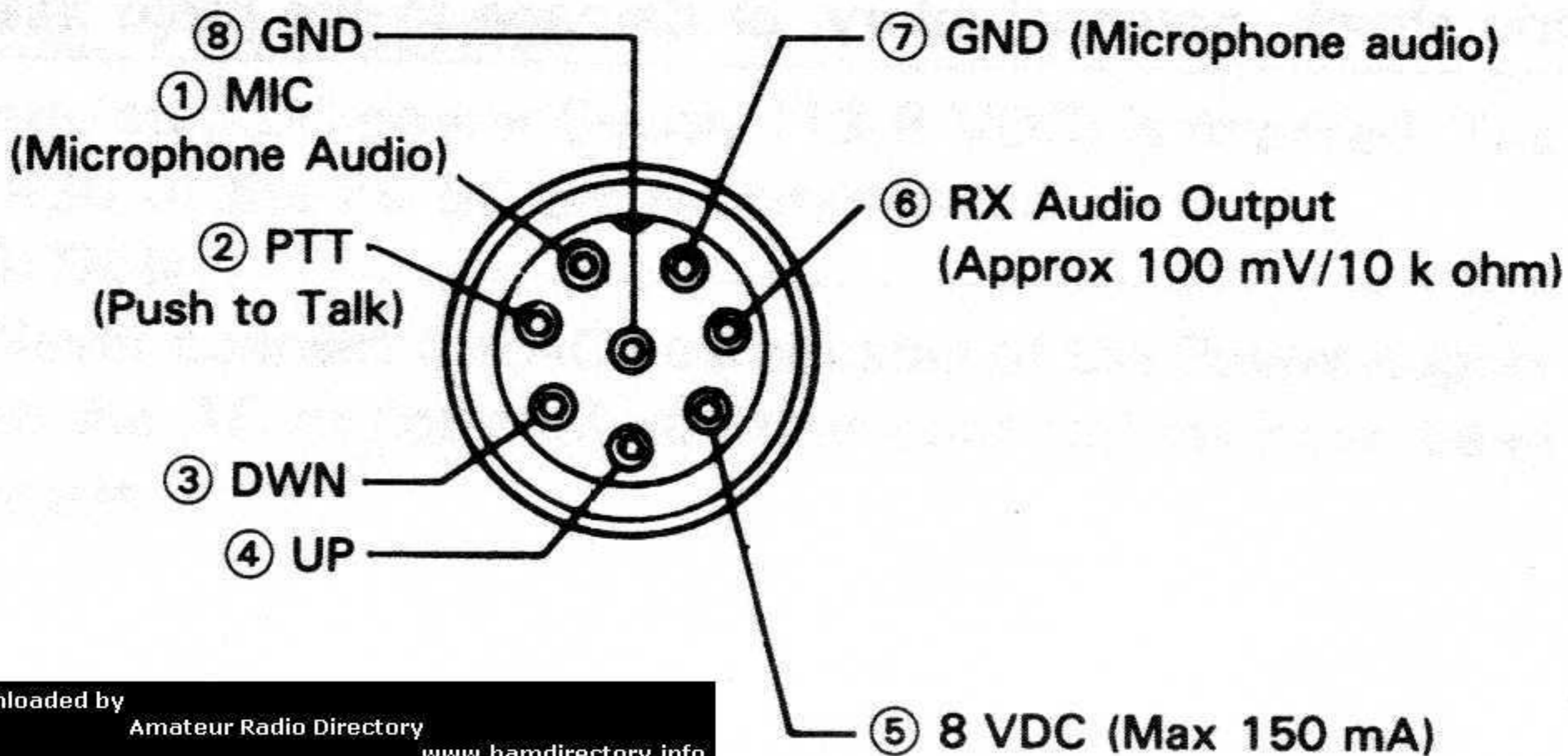
(TOP)



sities.

## ⑥ Microphone connector

Attach the supplied microphone to this connector. The pin out of the connector is described in the accompanying illustration.





# 2. SPECIFICATIONS AND ACCESSORIES

## 2-1. SPECIFICATIONS

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Specifications		Models	TM-231A	TM-231E	TM-431A (U.S.A. version)	TM-431A/431E	TM-531A	TM-531E	
General	Frequency range	[MHz]	144 to 148	144 to 146	438 to 450	430 to 440	1240 to 1300		
	Mode		F3E (FM)						
	Antenna impedance		50 Ω						
	Power requirements		13.8 VDC ± 15% (11.7 to 15.8)						
	Ground		Negative						
	Frequency stability		Less than ± 10 ppm						
	Current drain	Transmit mode		Less than 11 A		Less than 9.5 A		Less than ± 3 ppm	
		Receiver mode with no signal				Less than 0.6 A		Less than 5.5 A	
	Operating temperature		- 20 °C to + 60 °C (- 4 °F to + 140 °F)						
	Dimensions (W×H×D) (Projection included)	[mm]	140×40×160 (5-1/2" × 1-37/64" × 6-19/64") (141×42×171 (5-9/16" × 1-21/32" × 6-47/64"))						
Weight	[kg]	1.2 (2.65 lbs)							
Transmitter	Output power*	HI	50 W		35 W		10 W		
		MID	10 W		10 W		—		
		LOW	Approx. 5 W		Approx. 5 W		1 W		
	Modulation		Reactance modulation						
	Spurious radiation		Less than - 60 dB						
	Maximum frequency deviation		± 5 kHz						
Audio distortion (at 60% modulation)		Less than 3% (300 to 3000 Hz)							
Microphone impedance		500 to 600 Ω							
Receiver	Circuitry		Double conversion superheterodyne						
	Intermediate frequency	1st/2nd	10.7 MHz/455 kHz		30.825 MHz/455 kHz		59.7 MHz/455 kHz		
	Sensitivity (12 dB SINAD)		Less than 0.16 μV						
	Selectivity	- 6 dB		More than 12 kHz					
		- 60 dB		Less than 24 kHz					
	Squelch sensitivity		Less than 0.1 μV						
Output (5% distortion)		More than 2 W across 8 Ω loads							
External speaker impedance		8 Ω							

### Notes:

1. Circuit and ratings are subject to change without notice due to advancements in technology.
2. \* Recommended duty cycle: 1 minute Transmit, 3 minutes Reception.

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