MANUAL CHANGES

NATIONAL CAR RADIO

ALL TRANSISTOR — Model **CR-1453A**

★ Parts of RF amplifier, AF amplifier, and driver were partially changed for the standardization of the printed circuit board. These changes are applicable to the sets whose serial numbers are 600781 and higher.

★ Changed parts:

R_2 : 3.3kΩ → 1.5kΩ
R_{15} : 10kΩ → 27kΩ
R_{16} : 3.3kΩ → 4.7kΩ
R_{22} : 18kΩ → 15kΩ
R_{23} : 3.3kΩ → 1.5kΩ
R_{24} : 220Ω → 270Ω
R_{29} : 56Ω → 100Ω
R_{30} : 47kΩ → 27kΩ
T_5 : TIT-021 → TIT-019

★ Since the input transformer (T_5) is determined by the circuit constants of AF amplifier section, it lacks in interchangeability. One with the same code number must be used when replacing.

Symbol	Code Number	Type Number (new)	Type Number (old)
R_2 R_{23}	002243	ERC–12BK152	ERC–12BK332
R_{15}	002246	ERC–12BK273	ERC–12BK103
R_{16}	002223	ERC–12BK472	ERC–12BK332
R_{22}	002262	ERC–12BK153	ERC–12BK183
R_{24}	002665	ERC–12BK271	ERC–12BK221
R_{29}	002202	ERC–12BK101	ERC–12BK560
R_{30}	002246	ERC–12BK273	ERC–12BK473
T_5	223021	TIT–019	TIT–021

★ Please annex this "MANUAL CHANGES to the SERVICE NOTE of CR-1453A delivered before.

MATSUSHITA COMMUNICATION INDUSTRIAL CO., LTD.
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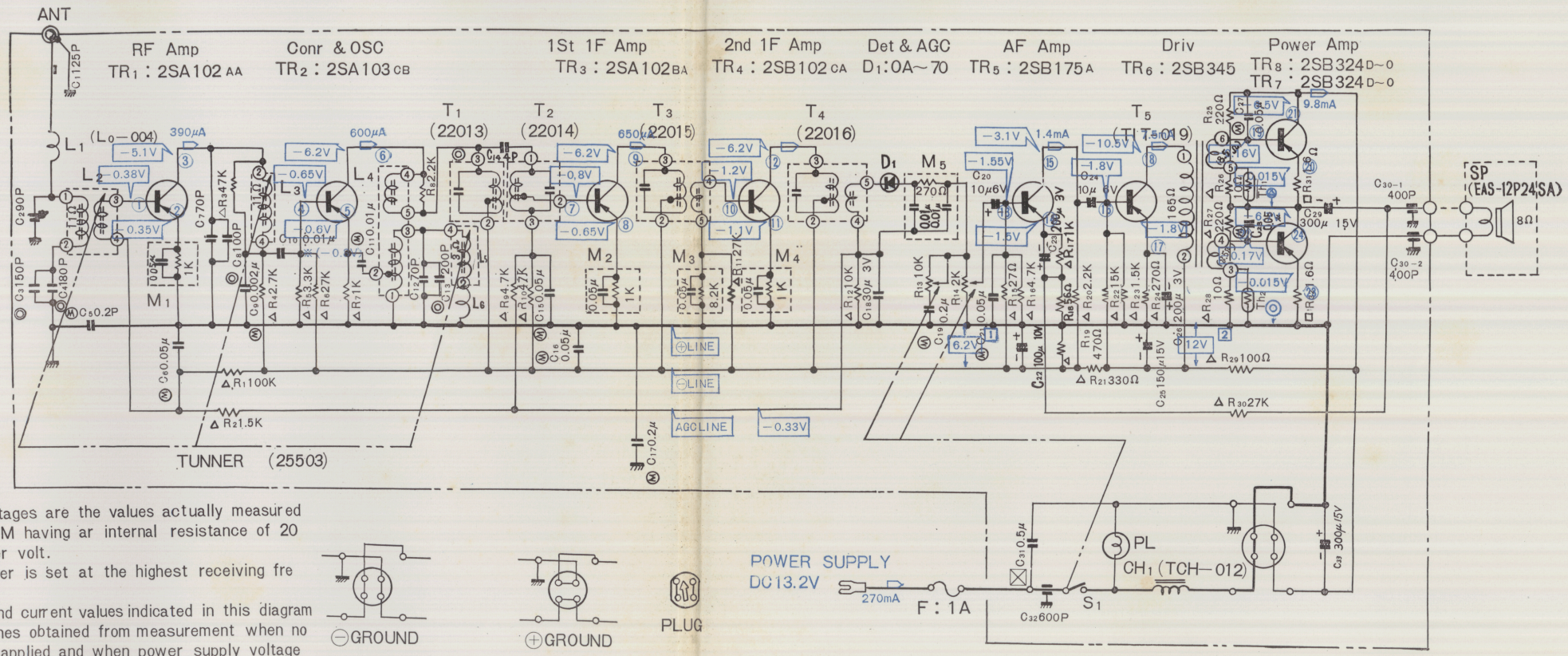
PRINTED IN JAPAN

CR-1453A SCHEMATIC DIAGRAM



(1) Listed voltages are the values actually measured with a VOM having ar internal resistance of 20 kilohms per volt.

(2) Dial pointer is set at the highest receiving fre-quency.

(3) Voltage and current values indicated in this diagram are the ones obtained from measurement when no signal is applied and when power supply voltage is 13.2volts DC.

(4) Reference points for measurement.

TR1 to TR6 : ⊕ line
TR7 : △ mark
TR8 : ◎ mark

(5) The voltage values of marked with ※ are the ones measured with the dial pointer at the lowest receiving frequency.

(6) Resistance coils etc. are DC resistance values.

(7) SYMBOL

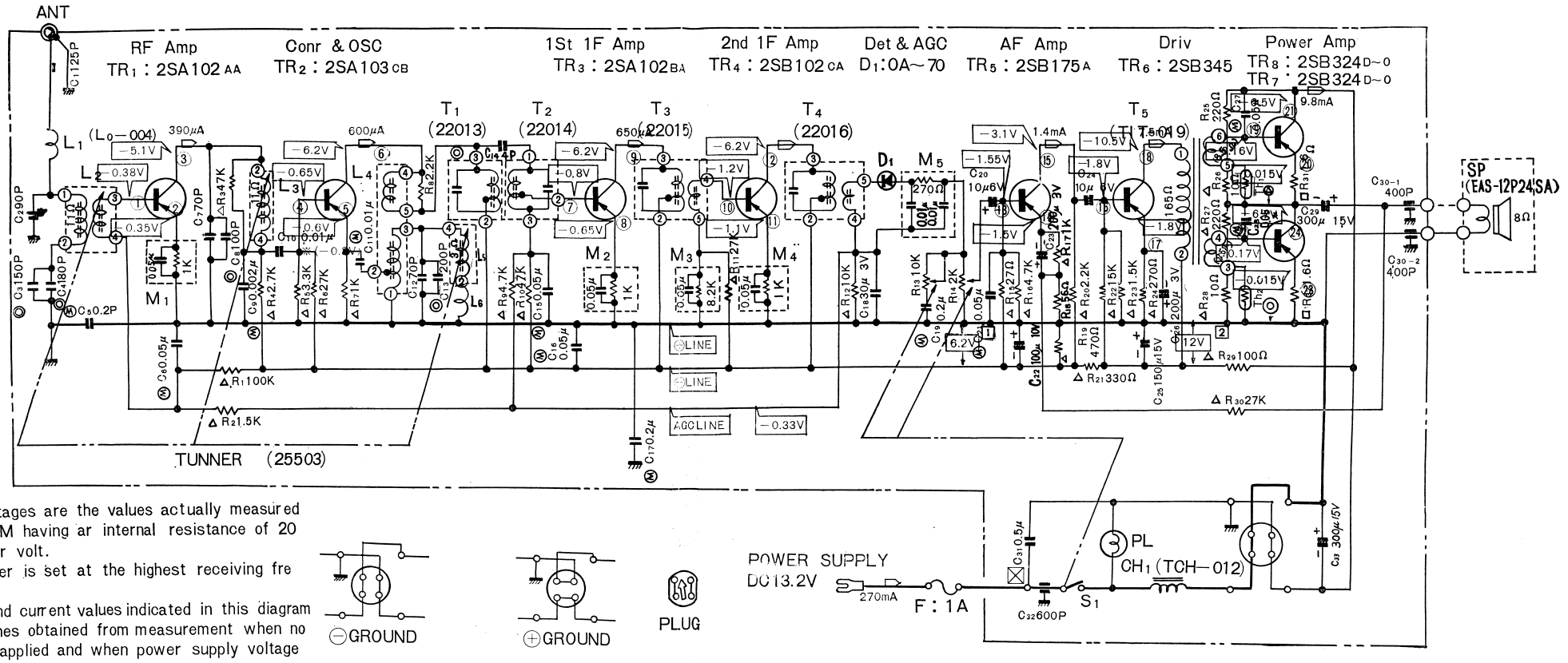
△ : SOLID RESISTOR
□ : WIRE WOUD WOUND RESISTOR
◎ : TITANIUM CONDENSER
Ⓜ : POLYESTER FILM CONDENSER
⊠ : PAPER CONDENSER
⊥⊥ : ELECTROLYTIC CODENSER

■ DIAGRAM SHOWS THE CASE IN WHICH ⊖ IS GROUNDED

R	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
C.M.	3	2	4	1	5	M1	6	7	8	9	10	11	12	13	14	15	16	M2	17	M3	M4	18	M5	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	1.2
T.Th.L. CH.		L1	L2					L3				L4	L5	L6	T1	T2			T3			T4	D1							CH1	T5		Th1	Th2					

● ...PARTS CHANGED □ ...PARTS ADDED × ...PARTS REMOVED

CR-1453A SCHEMATIC DIAGRAM



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T.Th.L. CH.		L1	L2					L3				L4	L5	L6	T1		T2			T3		T4	D1							CH1	T5		Th1	Th2					

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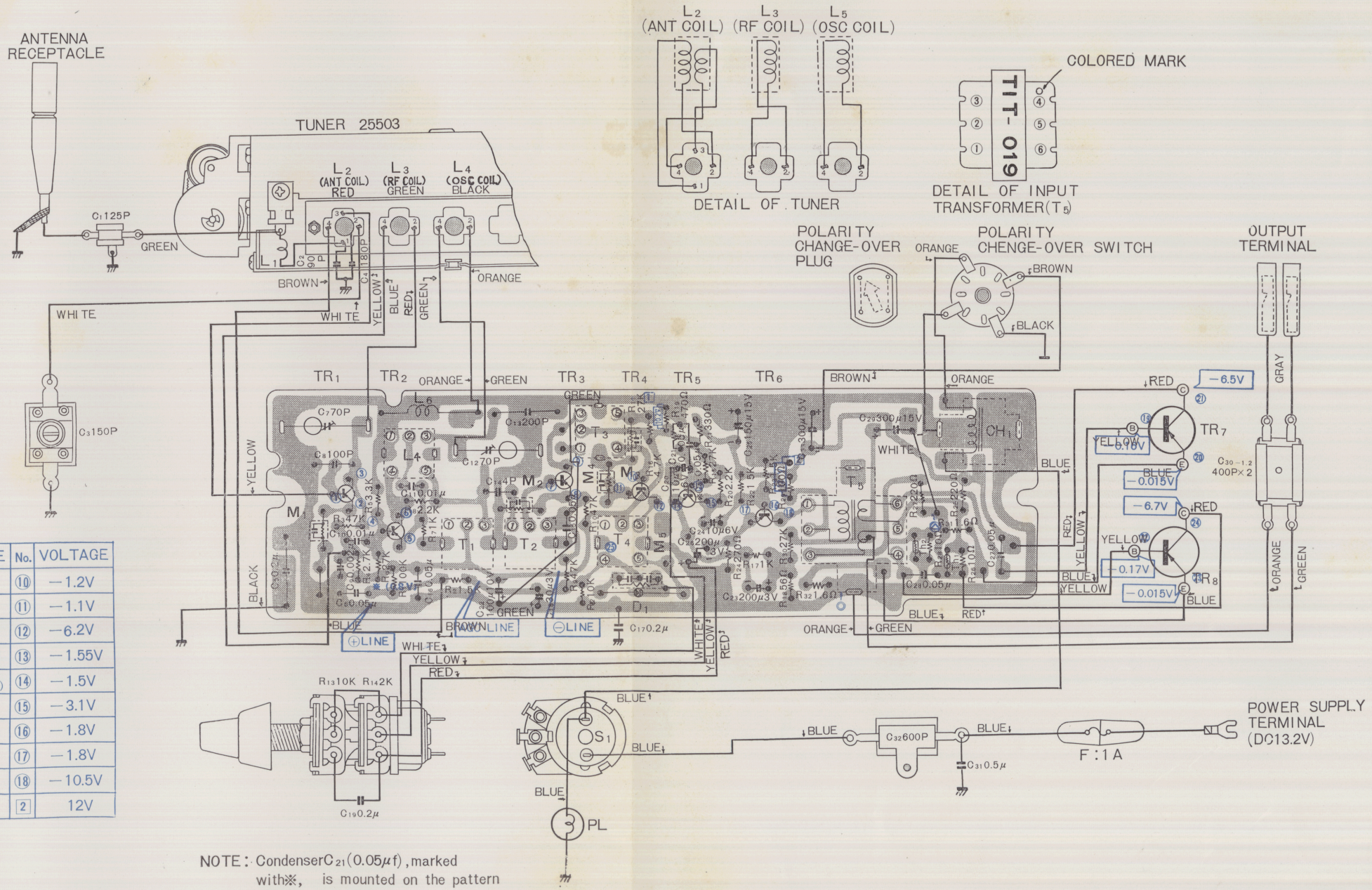
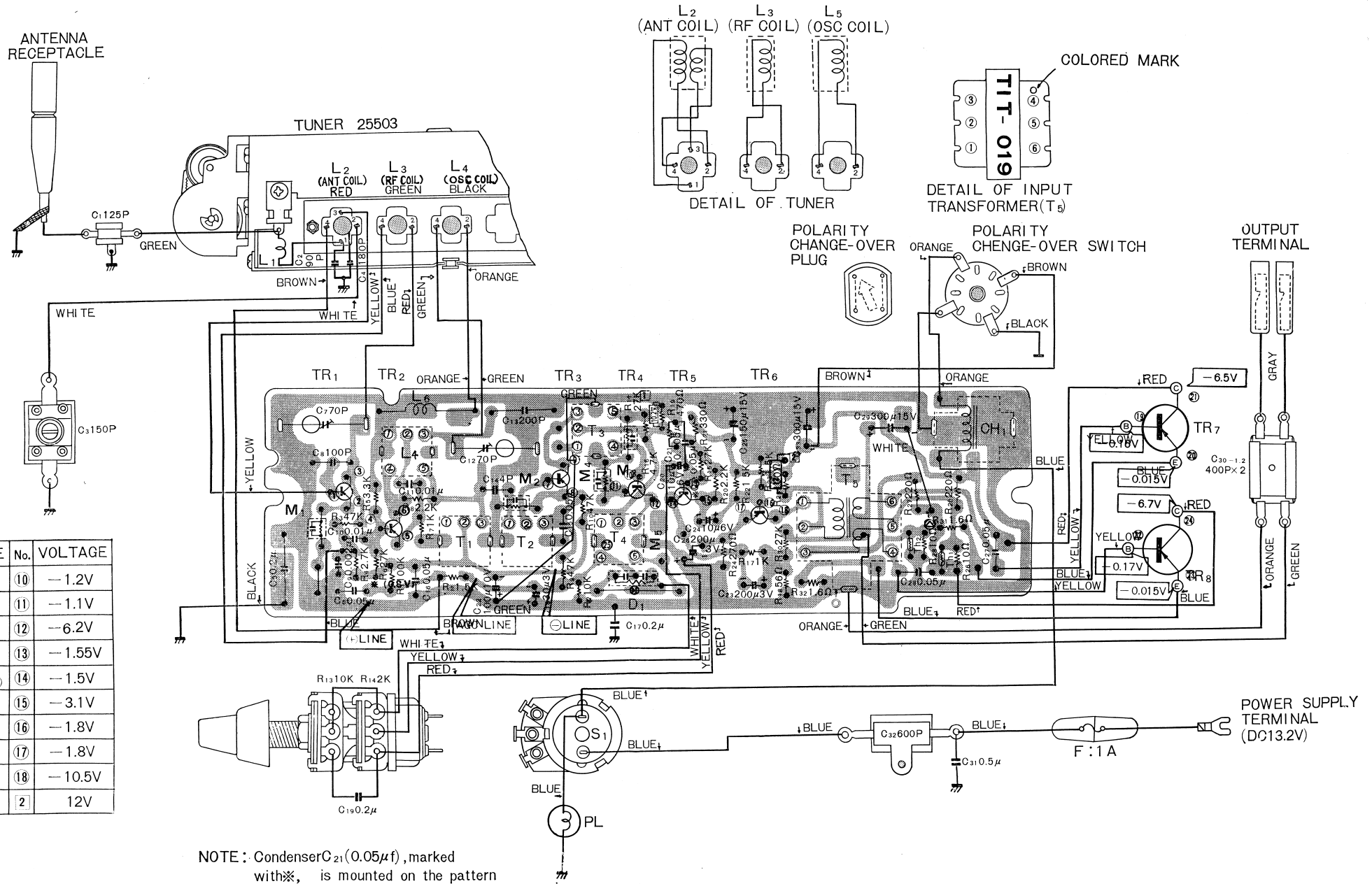
CR-1453A PRINTED CIRCUIT BOARD



No	VOLTAGE	No.	VOLTAGE
①	−0.38V	⑩	−1.2V
②	−0.35V	⑪	−1.1V
③	−5.1V	⑫	−6.2V
④	−0.65V	⑬	−1.55V
⑤	−0.6V ※(−0.8V)	⑭	−1.5V
⑥	−6.2V	⑮	−3.1V
⑦	−0.8V	⑯	−1.8V
⑧	−0.65V	⑰	−1.8V
⑨	−6.2V	⑱	−10.5V
1	6.2V	2	12V

NOTE: Condenser C_{21} (0.05μf), marked with※, is mounted on the pattern side (copper thin plate)

CR-1453A PRINTED CIRCUIT BOARD



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