ORDER No. CRCI-2007

NATIONAL Service Manual

AM RADIO PACK

MODEL CJ-901N

SPECIFICATIONS

Frequency Range :	535 - 1605 Kc (561 - 187m)	
Intermediate Frequency :	450 Kc	
Transistors :	2SC829	RF Amplifier
	2SC829	Converter
	2SC829	IF Amplifier
	2SC828	AF Amplifier
Diodes :	OA90	AGC×2
	OA90	Det.

Power Supply Voltage :	DC 11 - 16 V (standard voltage 13.2 V) Negative Ground	
Dimensions :	Height	22.5 mm ($^7/_8$'')
	Width	101 mm (4'')
	Depth	148 mm ($5^{13}/_{16}$'')
Weight :	Approx.	270 g ($^3/_5$ lbs.)

<EXPORT DIVISION>
MATSUSHITA ELECTRIC TRADING CO., LTD.
P. O. Box 288, Central Osaka, Japan

MATSUSHITA COMMUNICATION INDUSTRIAL CO., LTD.
CAR RADIO DEPT.

REF. NO.	CODE NO.	PART NO.	DESCRIPTION
C_{18}	210225	CC613SL181KZ50	180pf 50WV, ±10%, Titanium
C_{19}	208189	ECE-A6V33	33μf 6WV, Electrolytic
C_{20}	207010	MS-05103K	0.01μf 50WV, ±10%, Polyester
C_{21}	207006	MS-05503M	0.05μf 50WV, ±20%, Polyester
C_{22}	207006	MS-05503M	0.05μf 50WV, ±20%, Polyester
C_{23}	208188	ECE-A6V10	10μf 6WV, Electrolytic
C_{24}	208059	ECE-B16V220	220μf 16WV, Electrolytic
C_{25}	208188	ECE-A6V10	10μf 6WV, Electrolytic
		VARIABLE CAPACITOR	
$C_{1,7}$ & $_{14}$	203504	PVC-3Y16	
		COMPONENT COMBINATION	
M_1	231002	RC-11010KYZ	R : 1KΩ, C : 0.05μf
		COILS AND TRANSFORMERS	
L_1	224054	Lo-004	Coil, Loading
L_2	226040	ANT-26042	Coil, Antenna
L_3	224054	Lo-004	Coil, Loading
L_4	226103	RF-26043	Coil, RF
L_5	227045	OSC-27043	Coil, Oscillator
T_1	225091	IF-22046	1st IF : 450 Kc
T_2	225092	IF-22047	2nd IF : 450 Kc
T_3	225093	IF-22048	3rd IF : 450 Kc
T_4	225094	IF-22049	4th IF : 450 Kc
		MISCELLANEOUS	
	233074	No. 40006	Switch, Sensitivity Changeover
	256011		Contact-Point Ass'y.
	256012		Contact-Point Ass'y., Retainer
	245046		Rubber Pad
	251140		Knob, Dial
	251178		Knob, Switch
	243064	Dial Pointer, 024	
	238105	Pully, 001	
	245043		Dial Cord Spring
	291047		Insulator Mylar
	253022		Case, Assembly "A" (Includes Dial Plate and Ornament Panel)
	253023		Case, Assembly "B" (Include a Dummy Plate)

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CONTENTS

LOCATION OF PARTS ..... (1)

DISASSEMBLY INSTRUCTIONS ..... (3)

DIAL CORD STRINGING GUIDE ..... (3)

CIRCUIT BOARD ..... (4)

SCHEMATIC DIAGRAM ..... (5)

REPLACEMENT PARTS LIST ..... (6)

LOCATION OF PARTS

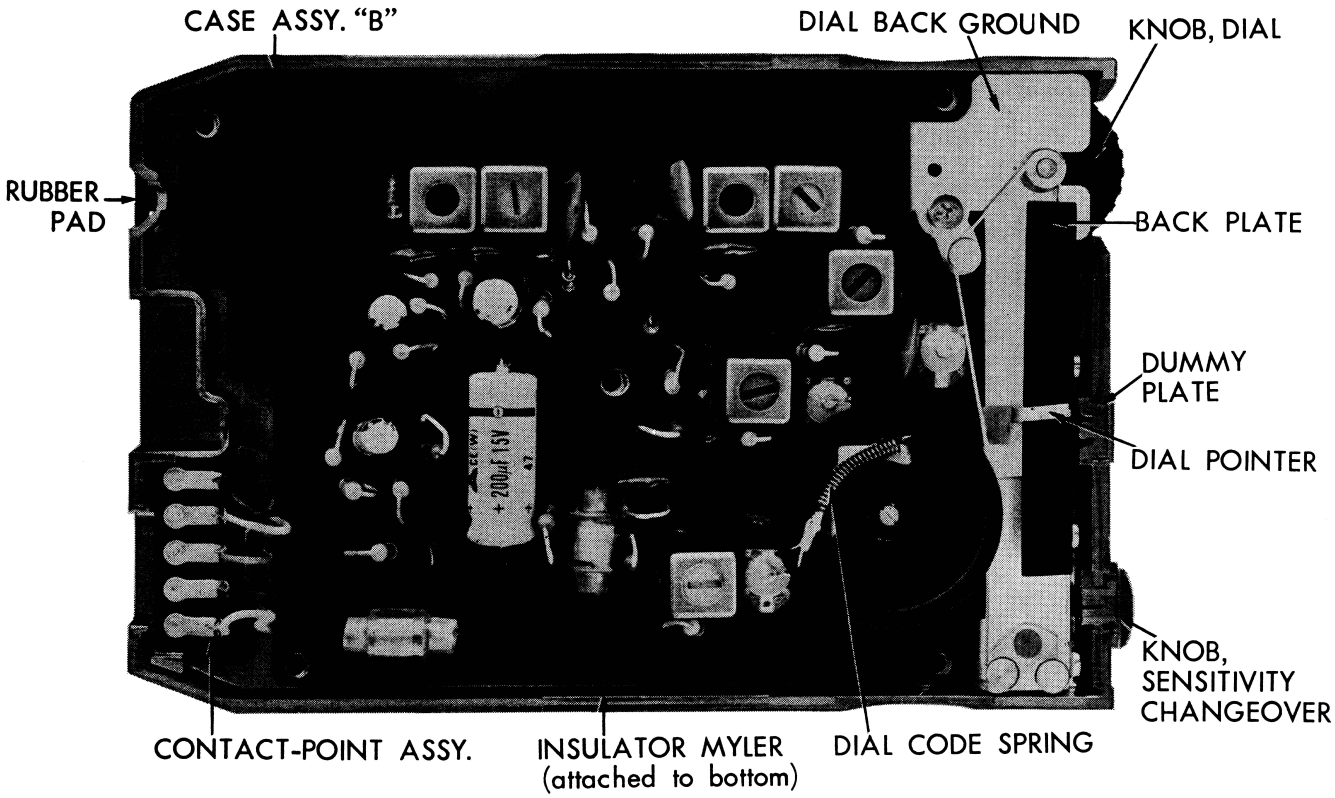


Fig. 1 Top View — Parts Identification

RESISTORS

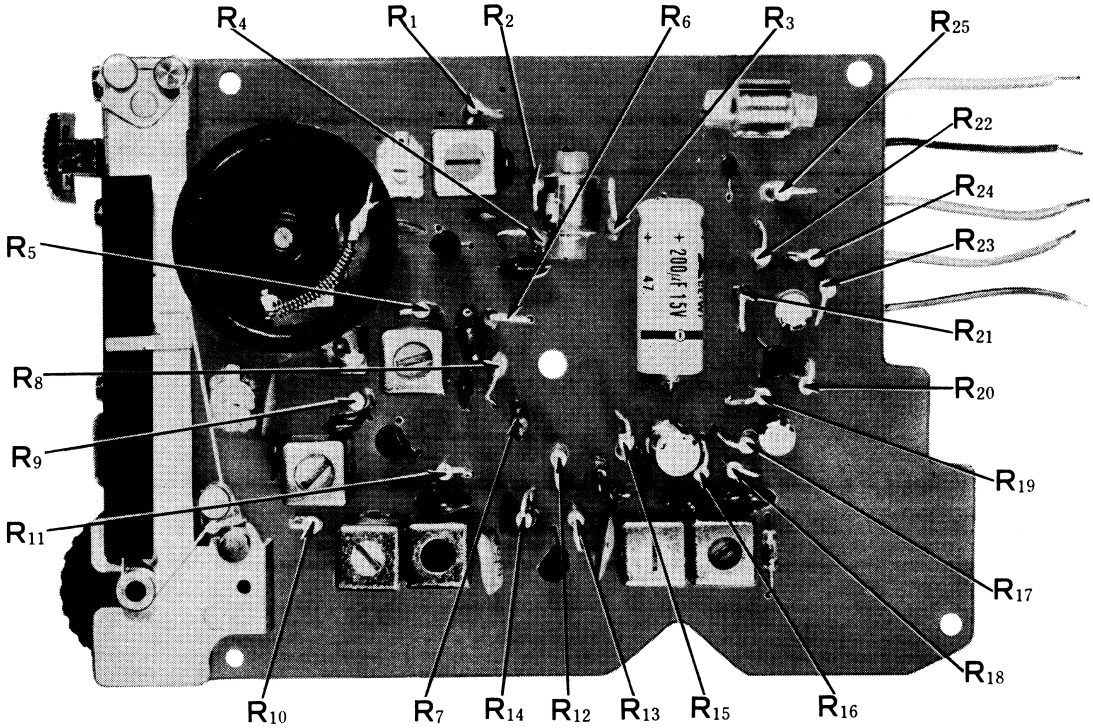


Fig. 2 Component View — Parts Identification

TRANSISTORS, CONDENSERS, TRANSFORMERS & COILS

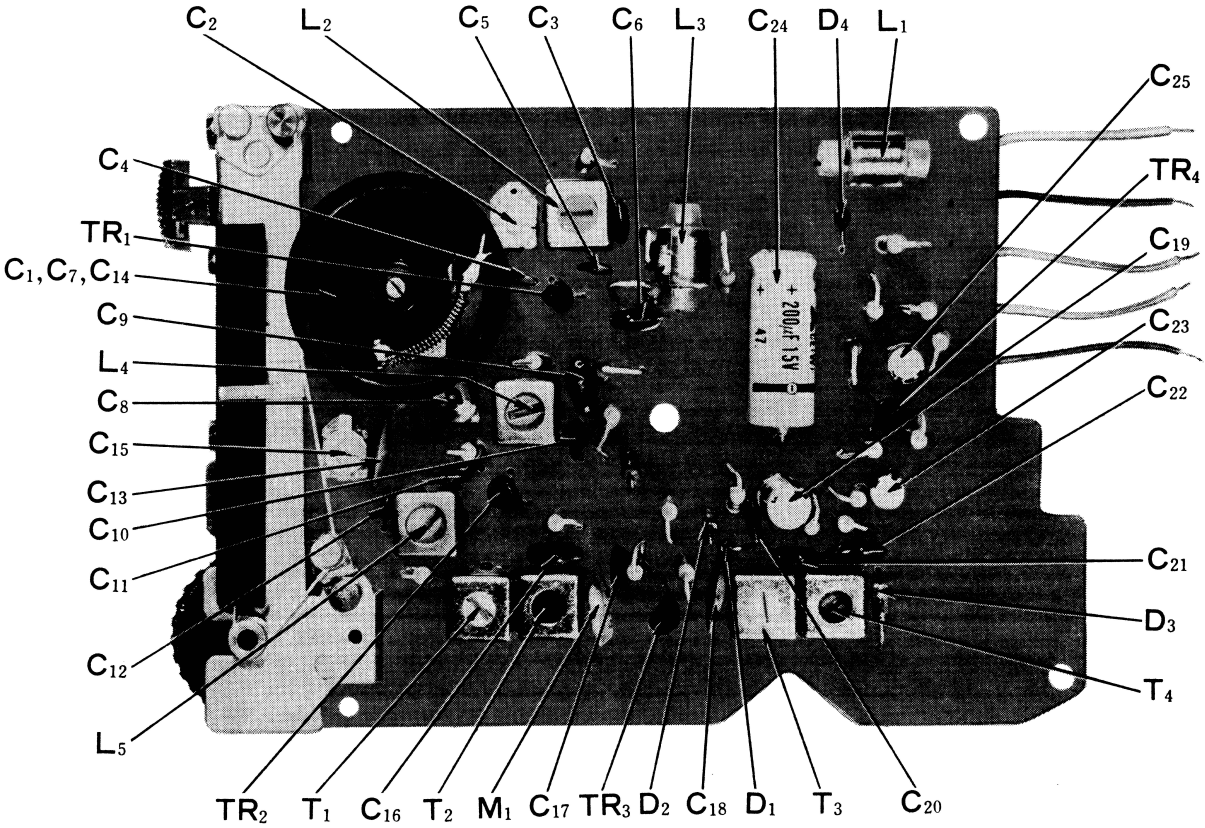


Fig. 3 Component View — Parts Identification

DISASSEMBLY INSTRUCTIONS

1. Remove five (5) Phillips-head screws as illustrated in Fig. 5.
2. Remove case assembly "A" from case assembly "B".
3. Remove circuit board from case assembly "B".
4. To reassemble, reverse the above procedure.

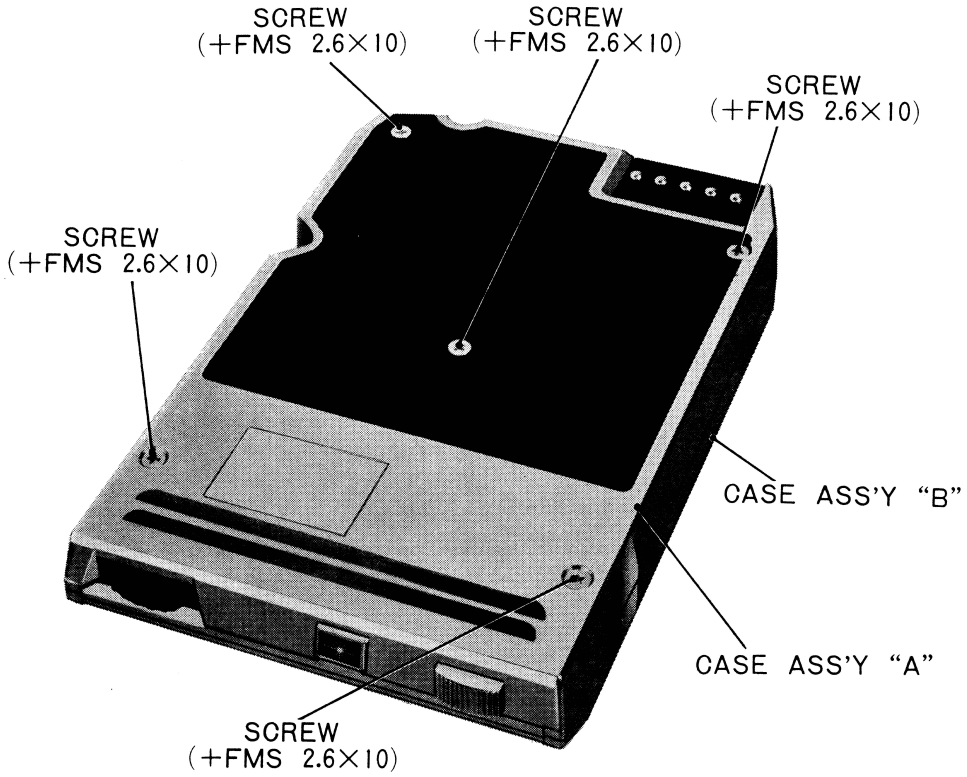


Fig. 4 Bottom View — Disassembly Points

DIAL CORD STRINGING GUIDE

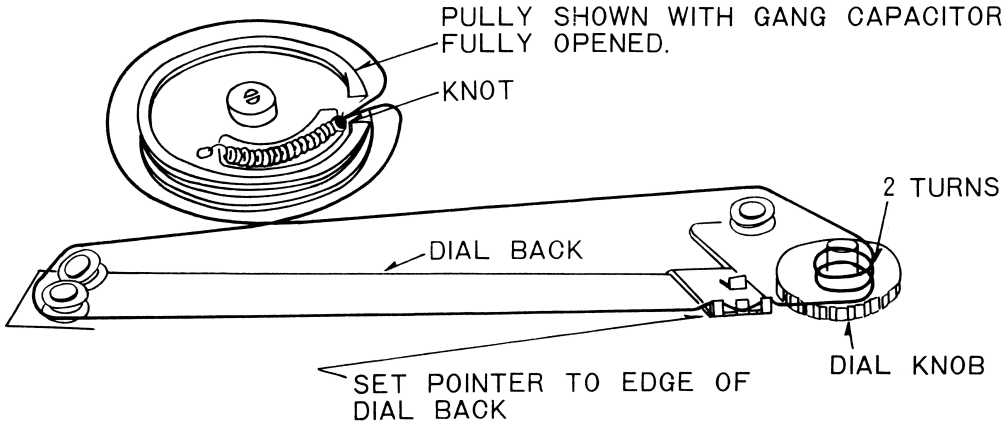
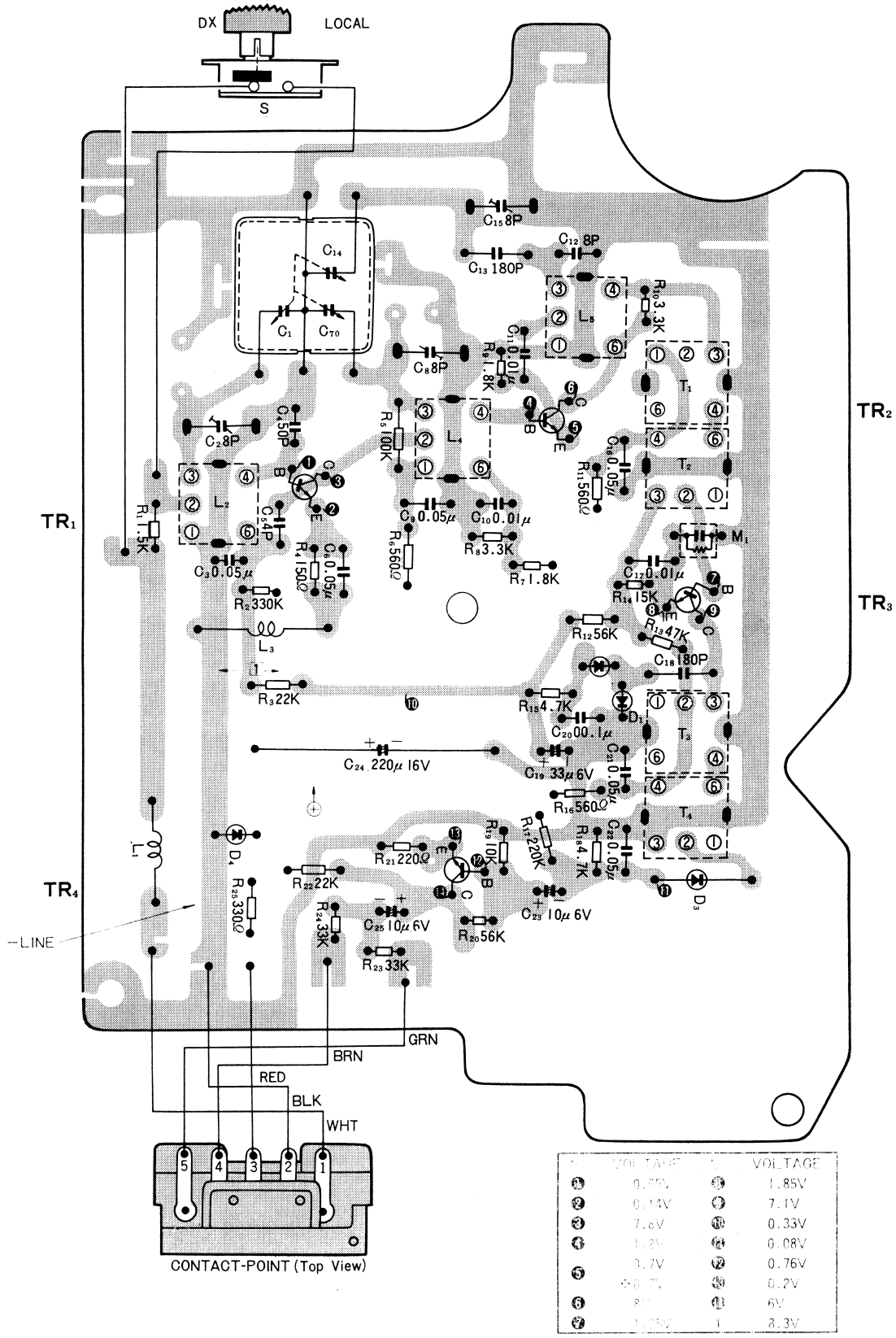


Fig. 5 Dial Cord Stringing Detail

CIRCUIT BOARD (Conductor Side) MODEL CJ-901N



	VOLTAGE		VOLTAGE
1	0.55V	9	1.85V
2	0.14V	10	7.1V
3	7.6V	11	0.33V
4	1.2V	12	0.08V
5	3.7V	13	0.76V
	*0.7V	14	0.2V
6	8V	15	6V
7	1.35V	1	8.3V

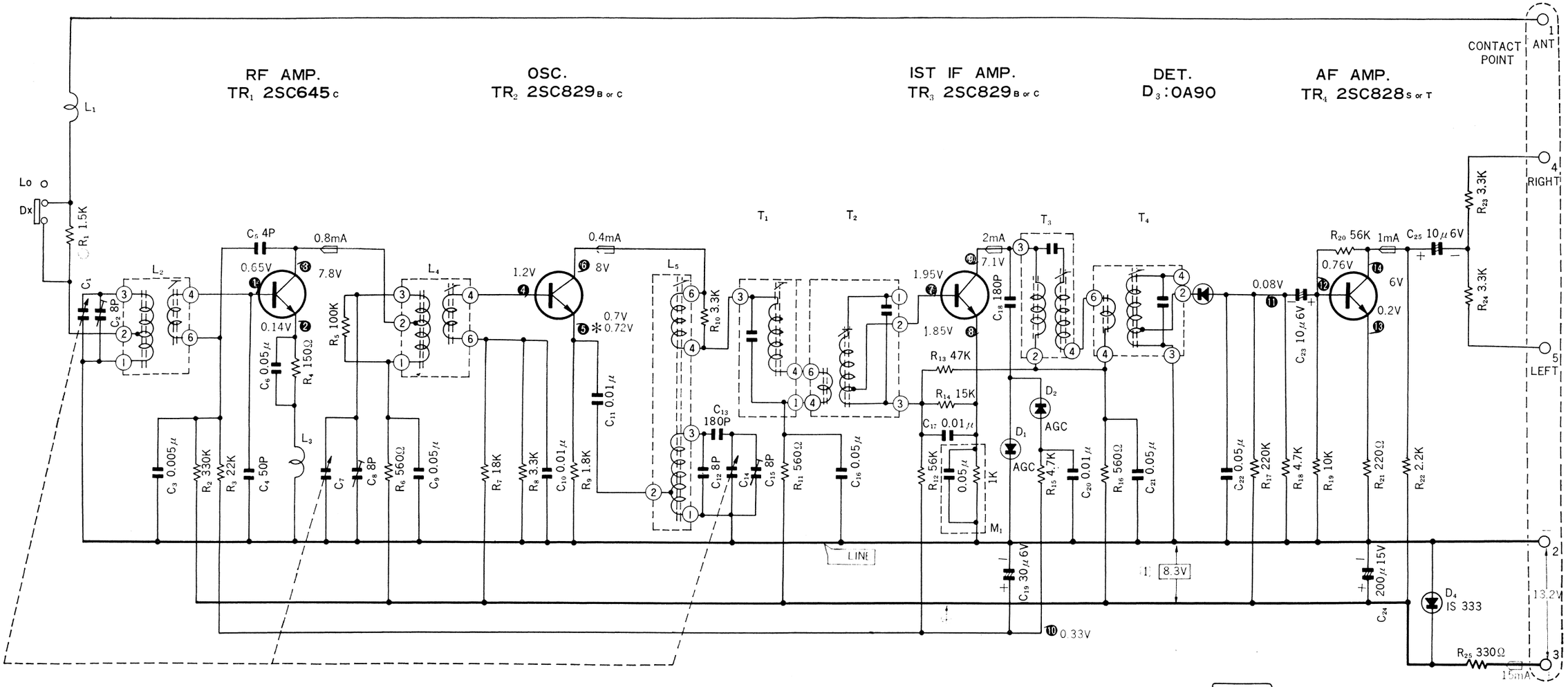
NATIONAL AM RADIO PACK

REPLACEMENT PARTS LIST

MODEL CJ-901NB

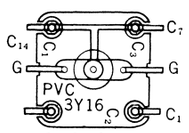
REF. NO.	CODE NO.	PART NO.	DESCRIPTION
		TRANSISTORS AND DIODES	
TR_1	215079	2SC829 C	RF Amp.
TR_2	215079	2SC829 B, C	Converter
TR_3	215079	2SC829 B, C	IF Amp.
TR_4	215079	2SC828 T, S	AF Amp.
D_1	216003	0A90	AGC
D_2	216003	0A90	AGC
D_3	216003	0A90	Det.
D_4	216015	IS333	Voltage Stabilizer
		RESISTORS	
R_1	202637	TRD-14VK152	1.5KΩ ¼Watt, ±10%, Carbon
R_2	202836	TRD-14VK334	330KΩ ¼Watt, ±10%, Carbon
R_3	202638	TRD-14VK223	22KΩ ¼Watt, ±10%, Carbon
R_4	202615	TRD-14VK151	150Ω ¼Watt, ±10%, Carbon
R_5	202624	TRD-14VK683	68KΩ ¼Watt, ±10%, Carbon
R_6	202628	TRD-14VK561	560Ω ¼Watt, ±10%, Carbon
R_7	202647	TRD-14VK183	18KΩ ¼Watt, ±10%, Carbon
R_8	202605	TRD-14VK332	3.3KΩ ¼Watt, ±10%, Carbon
R_9	202648	TRD-14VK182	1.8KΩ ¼Watt, ±10%, Carbon
R_{10}	202605	TRD-14VK332	3.3KΩ ¼Watt, ±10%, Carbon
R_{11}	202628	TRD-14VK561	560Ω ¼Watt, ±10%, Carbon
R_{12}	202604	TRD-14VK563	56KΩ ¼Watt, ±10%, Carbon
R_{13}	202609	TRD-14VK473	47KΩ ¼Watt, ±10%, Carbon
R_{14}	202614	TRD-14VK153	15KΩ ¼Watt, ±10%, Carbon
R_{15}	202643	TRD-14VK472	4.7KΩ ¼Watt, ±10%, Carbon
R_{16}	202628	TRD-14VK561	560Ω ¼Watt, ±10%, Carbon
R_{17}	202617	TRD-14VK224	220KΩ ¼Watt, ±10%, Carbon
R_{18}	202608	TRD-14VK472	4.7KΩ ¼Watt, ±10%, Carbon
R_{19}	202623	TRD-14VK103	10KΩ ¼Watt, ±10%, Carbon
R_{20}	202604	TRD-14VK563	56KΩ ¼Watt, ±10%, Carbon
R_{21}	202832	TRD-14VK221	220Ω ¼Watt, ±10%, Carbon
R_{22}	202607	TRD-14VK222	2.2KΩ ¼Watt, ±10%, Carbon
R_{23}	202605	TRD-14VK332	3.3KΩ ¼Watt, ±10%, Carbon
R_{24}	202605	TRD-14VK332	3.3KΩ ¼Watt, ±10%, Carbon
R_{25}	202836	TRD-14VK331	330Ω ¼Watt, ±10%, Carbon
		CAPACITORS	
C_2	203076	IT-8M	8pf ±20%, Trimmer
C_3	207001	MS-05502K	0.005μf 50WV, ±10%, Polyester
C_4	210224	CC603SL500KZ50	50pf 50WV, ±10%, Titanium
C_5	210223	CC602SL040CZ50	4pf 50WV, ±0.25pf, Titanium
C_6	207006	MS-05503M	0.05μf 50WV, ±20%, Polyester
C_8	203076	IT-8M	8pf ±20%, Trimmer
C_9	207006	MS-05503M	0.05μf 50WV, ±20%, Polyester
C_{10}	207010	MS-05103K	0.01μf 50WV, ±10%, Polyester
C_{11}	207010	MS-05103K	0.01μf 50WV, ±10%, Polyester
C_{12}	210206	CC601SL080CZ50	8pf 50WV, ±10%, Titanium
C_{13}	210225	CC613SL181K50	180pf 50WV, ±10%, Titanium
C_{15}	203076	IT-8M	8pf ±20%, Trimmer
C_{16}	207026	MS-05503M	0.05μf 50WV, ±20%, Polyester
C_{17}	207010	MS-05103K	0.01μf 50WV, ±10%, Polyester

SCHEMATIC DIAGRAM MODEL CJ-901N

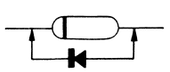


NOTES

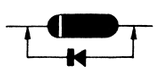
1. Voltage should be measured with a 20,000 ohms-per-volt VOM.
2. Dial pointer is set at the highest receiving frequency point.
3. Voltage is measured when there is no signal with a power supply voltage of 13.2 volts.
4. Measured values are from terminal to − line.
5. Voltages of ✻ TR_2 are the measured when the dial pointer is set at the lowest receiving frequency.
6. Resistance values of coils are for DC current.
7. The wattage rating of all resistors is $\frac{1}{4}$ watt.



C_1 C_7 & C_{14} TERMINAL GUIDE

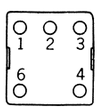


D_1 D_2 D_3 TERMINAL GUIDE



D_4 TERMINAL GUIDE

TR_1 THRU TR_4 TERMINAL GUIDE



L_1 THRU L_5 & T_1 THRU T_4 TERMINAL GUIDE (BOT. VIEW)

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