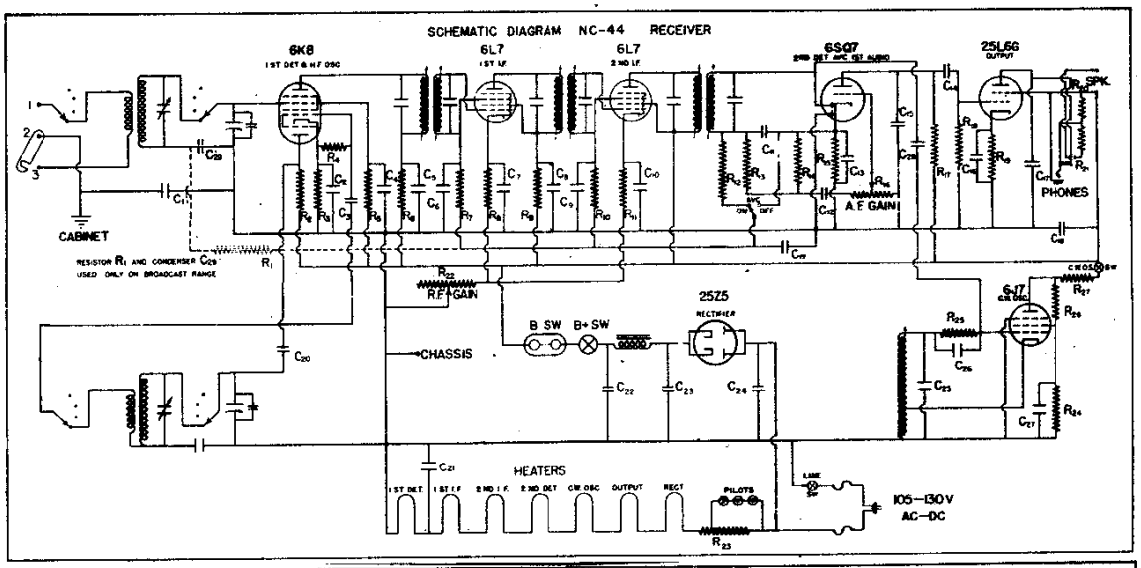
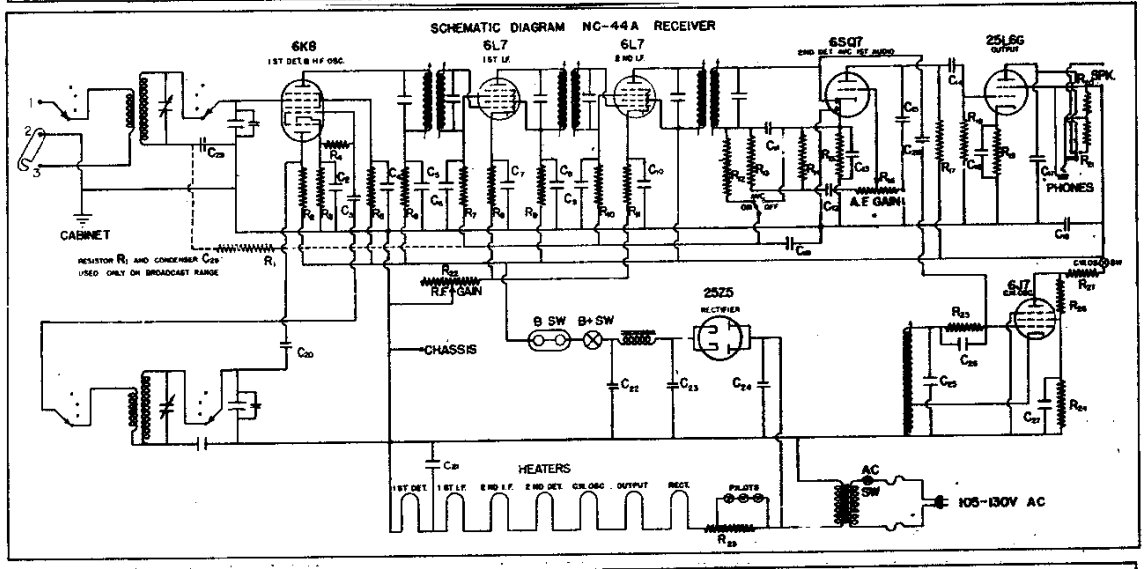
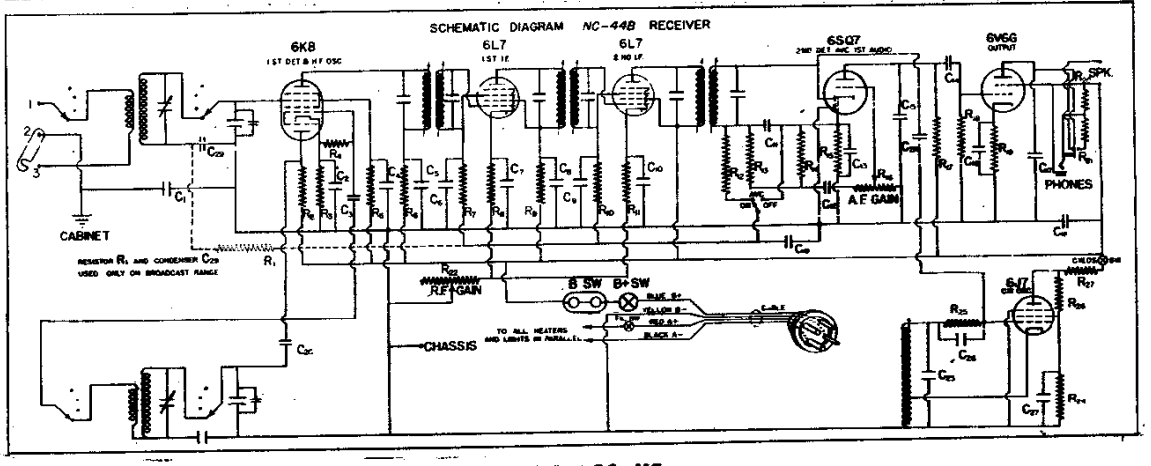
NATIONAL CO., INC.

MODEL NC-44
MODEL NC-44A
MODEL NC-44B







IF PEAK 456 KC

PROTECTIVE DEVICES: A double fuse block is mounted underneath the chassis and contains two standard fuses designated as the type 3AG, having a rating of 2 amperes. One fuse is connected in either side of the line and will provide adequate protection against damage to the various tubes and circuit elements which might result from any short-circuit or ground.

The operator who uses break-in, or who is experimenting with various types of transmitting and receiving antennae should provide some means of preventing excessive R.F. pick-up which might harm the input circuit of the receiver. In case of doubt, it is recommended that an R.F. ammeter be connected in the antenna lead-in, or in one of the doublet feeders close to the receiver, in order to measure the actual R.F. pick-up. This current should not exceed .1 ampere.

DIAL LAMPS: From the circuit diagram, it may be seen that the dial is illuminated by three lamps connected in series across a portion of the series heater resistor. These lamps are the standard "brown bead" type, designed for 6.3 volts and drawing .15 ampere. Since they necessarily form a part of the heater circuit of the receiver, burned out lamps should be replaced promptly, for, although the receiver will not be harmed, the various tubes will not function quite as efficiently if the dial lamps are not lighted.

NATIONAL NC-44 RECEIVER

AC-DC Model

CAPACITORS

	mfd.	volts		mfd.	volts
C1-	.1	400	C15-	.0005	mica
C2-	.1	400	C16-	25.	50
C3-	.0001	mica	C17-	.001	mica
C4-	.1	400	C18-	.1	400
C5-	.1	400	C19-	.01	400
C6-	.01	400	C20-	.005	mica
C7-	.1	400	C21-	.1	400
C8-	.1	400	C22-	40	200
C9-	.01	400	C23-	40	200
C10-	.1	400	C24-	.1	400
C11-	.00025	mica	C25-	.0001	mica
C12-	.01	400	C26-	.0001	mica
C13-	25	50	C27-	.1	400
C14-	.1	400	C28-	.000002	
			C29-	.01	400

RESISTORS

	ohms	watts		ohms	watts
R1-	.5 meg-	1/2	R15-	5,000	1/2
R2-	10,000	1/2	R16-	.5 meg-	
R3-	200	1/2		A.F.Gain	
R4-	25,000	1/2	R17-	.1 meg-	1/2
R5-	1,000	1/2	R18-	.5 meg-	1/2
R6-	1,000	1/2	R19-	140	1
R7-	.5 meg-	1/2	R20-	500	1/2
R8-	300	1/2	R21-	1,000	2
R9-	1,000	1/2	R22-	10,000	
R10-	.5 meg-	1/2		R.F.Gain	
R11-	300	1/2	R23-	132	10
R12-	1. meg-	1/2	R24-	.1 meg-	1/2
R13-	.5 meg-	1/2	R25-	50,000	1/2
R14-	1. meg-	1/2	R26-	.1 meg-	1/2
			R27-	.1 meg-	1/2

THE NC-44A RECEIVER

AC Model

Recommendations pertinent to the NC-44 (AC-DC) receiver apply also to the NC-44A (AC) model, except as follows:

The NC-44A is designed for operation from 105-130 volt, 50-60 cycle lines only and draws approximately 50 watts. Attempted operation from other AC sources or from DC lines will cause serious damage to the receiver.

The schematic diagram below shows the circuit of the NC-44A model.

Parts List same as NC-44, except that C1 is not used.

THE NC-44B RECEIVER

Battery Model

The NC-44B (Battery Operated) is basically the same as the NC-44 (AC-DC) model, the power supply being omitted. In general, the data given applies to the NC-44B. Data applicable to the NC-44B only is as follows:

The tube complement is the same as the NC-44 except that a type 6V6G tube is used in the audio output stage; the rectifier tube is omitted. The heater circuit requires 2.25 amps. at 6 volts; a "B" supply of 90-135 volts is recommended. The "B" drain is approximately 40-65 milliamperes.

If desired, the NC-44B may be operated entirely from a 6-volt DC source in conjunction with a National Type 686 Vibrator Power Pack. On special order and at an increase in price, the receiver can be furnished with a built-in vibrator pack (Type NC-44BV).

Operation from AC lines is made possible by employing a National Type 5886AB Power Supply.

Receiver power cable color code and connector plug connections are shown on the circuit diagram below. Plug prong connections match the output socket wiring of the Types 686 and 5886AB Power Supplies.

As stated above, the output stage employs a 6V6G tube. The loud speaker furnished with the receiver is equipped with a coupling transformer to match the load impedance of the output tube - 5000 ohms. Since both speaker and headphone outputs are obtained from the output tube, it is not possible to operate the receiver with this tube removed from its socket.

The main dial is illuminated by two dial lamps connected in parallel across the heater circuit. These lamps are the standard "brown bead" type, designed from 6.3 volts and drawing .15 ampere each.

CAPACITORS

	mfd.	volts		mfd.	volts
C1-	.1	400	C14-	.1	400
C2-	.1	400	C15-	.0005	mica
C3-	.0001	mica	C16-	25	50
C4-	.1	400	C17-	.001	mica
C5-	.1	400	C18-	.1	400
C6-	.01	400	C19-	.01	400
C7-	.1	400	C20-	.005	mica
C8-	.1	400	C25-	.0001	mica
C9-	.01	400	C26-	.0001	mica
C10-	.1	400	C27-	.1	400
C11-	.00025	mica	C28-	.000002	
C12-	.01	400	C29-	.01	400
C13-	25	50			

RESISTORS

	ohms	watts		ohms	watts
R1-	.5 meg-	1/2	R15-	5,000	1/2
R2-	10,000	1/2	R16-	.5 meg-	Pot.
R3-	200	1/2		A.F.Gain	
R4-	25,000	1/2	R17-	.1 meg-	1/2
R5-	1,000	1/2	R18-	.5 meg-	1/2
R6-	1,000	1/2	R19-	350	1
R7-	.5 meg-	1/2	R20-	500	1/2
R8-	300	1/2	R21-	1,000	2
R9-	1,000	1/2	R22-	10,000	Rheo.
R10-	.5 meg-	1/2		R.F.Gain	
R11-	300	1/2	R24-	.1 meg-	1/2
R12-	1.0 meg-	1/2	R25-	50,000	1/2
R13-	.5 meg-	1/2	R26-	.1 meg-	1/2
R14-	1.0 meg-	1/2	R27-	.1 meg-	1/2