

THE ALLIANCE MANUFACTURING COMPANY, INC.

Subsidiary of Consolidated Electronics Industries Corp.

ALLIANCE, OHIO

SUPPLEMENT TO THE ALLIANCE TENNA ROTOR SERVICE MANUAL ALLIANCE TENNA ROTOR MODEL U-100

GENERAL INFORMATION

The Alliance Tenna Rotor Model U-100 is a fully automatic unit. The control knob is turned to the desired direction and the rotor automatically rotates the antenna to that position and stops. The dial lights up when the direction is selected and turns off when the antenna reaches that position. The unit operates at a speed of 1 RPM and is equipped with a motor brake to prevent drifting or windmilling.

The U-100 rotor can be identified by the blue weathershield and the model U-100 stamped into the metal housing.

The U-100 control can be identified by the Model number U-100 stamped on the bottom of the control.

The U-100 Rotor and Control is not interchangeable with any of the former Alliance Models.

PLEASE NOTE:

Although some U-100 parts are interchangeable with the parts used on the U-98, many of the important or critical parts are not. Check the U-100 parts list before replacing any parts. For example - the transformer, solenoid, capacitor, frame and dial assembly and the motor are different and can not be interchanged with parts used on any of our other models.

The outward appearance of the U-100 is identical with the U-98 so be sure to check model number on bottom of the control and model number stamped in rotor housing when ordering replacement units or parts. Note: The U-100 Rotor can be used only with the U-100 control and Vice Versa.

CHANGE NOTICE:

The part number of the transformer listed as item #110 of the parts list has been changed from 8590-R to 8931-R.

SERVICING PROCEDURE:

POWER "OFF" CHECKS
POWER "ON" CHECKS
TROUBLE SHOOTING CHARTS

Follow same procedure as outlined for U-98 in Service Manual.

VOLTAGE CHART - U-100

Measured at terminals of control

Line Voltage 117 Volts AC

(A) Control Only - 4 Conductor Cable disconnected

- Terminal #1 - 2 - 0
- Terminal #1 - 3 - 29 Volts 60 Cycles AC
- Terminal #1 - 4 - 0
- Terminal #2 - 3 - 29 Volts 60 Cycles AC
- Terminal #2 - 4 - 0
- Terminal #3 - 4 - 29 Volts 60 Cycles AC

(B) Locked Rotor - 100 feet of #20 A.W.G. 4 conductor cable connected to control and rotor. With rotor at full clockwise position, turn control knob counter clockwise. While rotor is turning, press reset button twice. This will throw the unit "Out of Synchronization". Return knob to full clockwise position to make voltage checks. Warning: Control should be left "out of synchronization" only long enough to make the checks, then re-synchronize. If left unsynchronized for a long period of time, overheating and damage to the transformer will result.

- Terminal #1 - 2 - 20 Volts 60 Cycles AC
- Terminal #1 - 3 - 18 Volts 60 Cycles AC
- Terminal #1 - 4 - 0
- Terminal #2 - 3 - 15 Volts 60 Cycles AC
- Terminal #2 - 4 - 20 Volts 60 Cycles AC
- Terminal #3 - 4 - 17 Volts 60 Cycles AC

With rotor turning Counter Clockwise, a pulsing reading of 20 to 25 volts will be read between terminals #1 and #4.

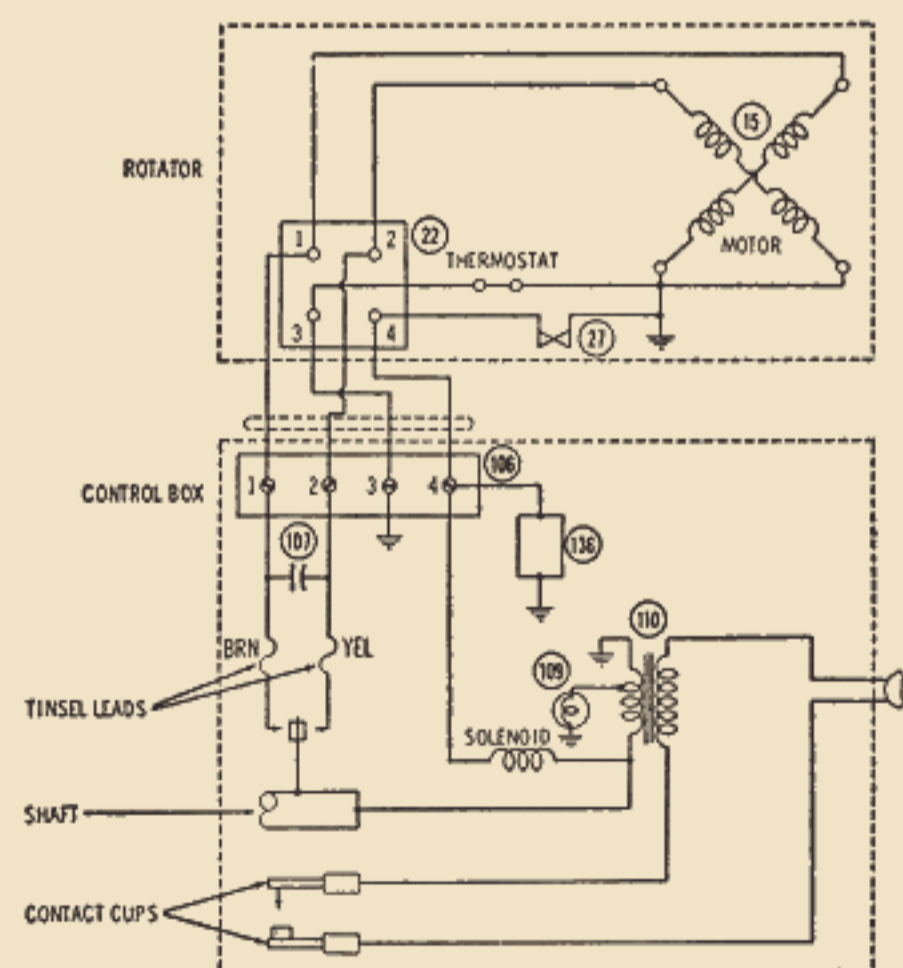
(C) Locked Rotor - With rotor at full counter clockwise position, repeat above.

- Terminal #1 - 2 - 19 Volts 60 Cycles AC
- Terminal #1 - 3 - 15 Volts 60 Cycles AC
- Terminal #1 - 4 - 19 Volts 60 Cycles AC
- Terminal #2 - 3 - 17 Volts 60 Cycles AC
- Terminal #2 - 4 - 0
- Terminal #3 - 4 - 16 Volts 60 Cycles AC

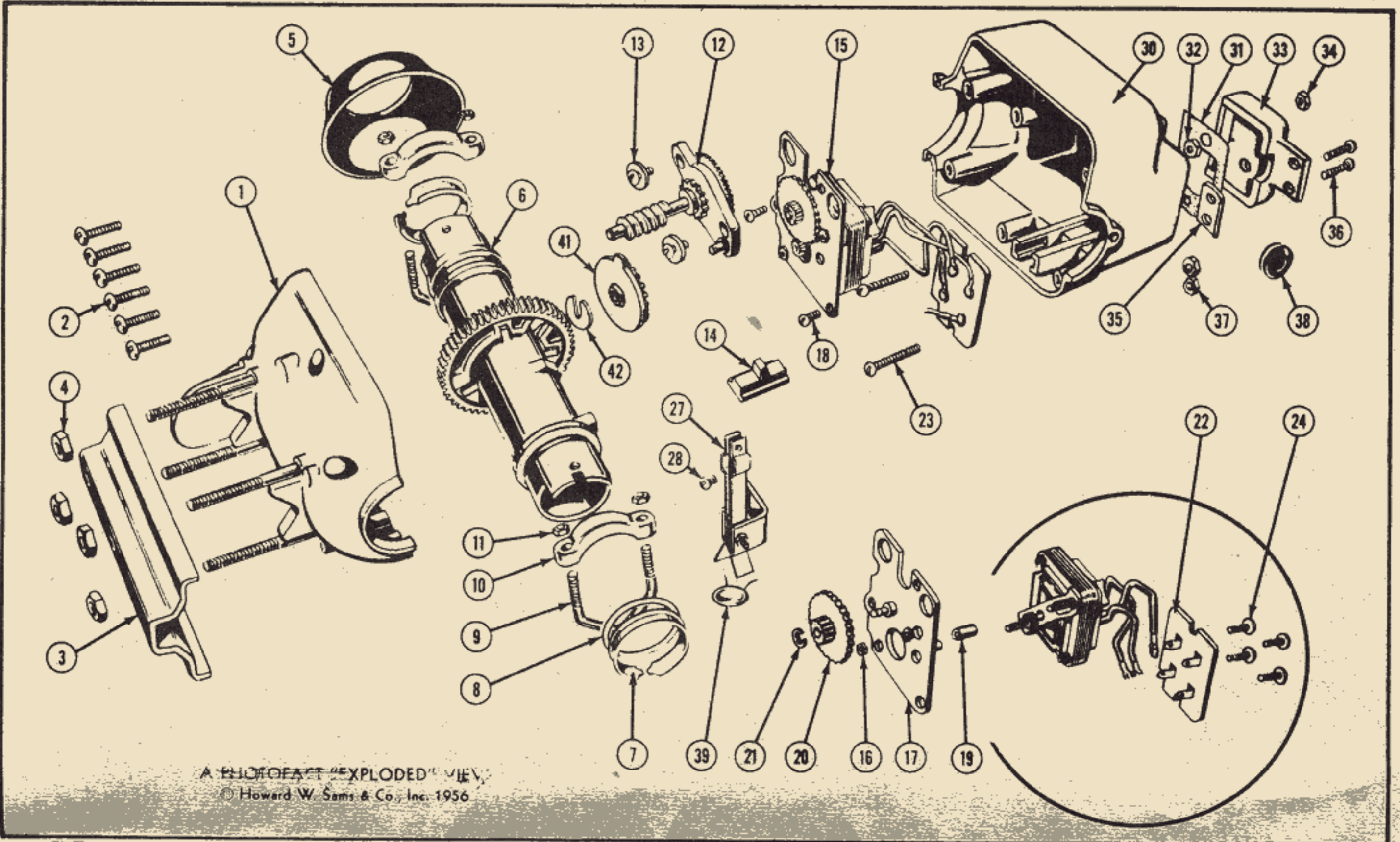
With rotor turning clockwise, a pulsing reading of 20 to 25 volts will be read between terminals #2 and #4.

Re-synchronize unit after checking.

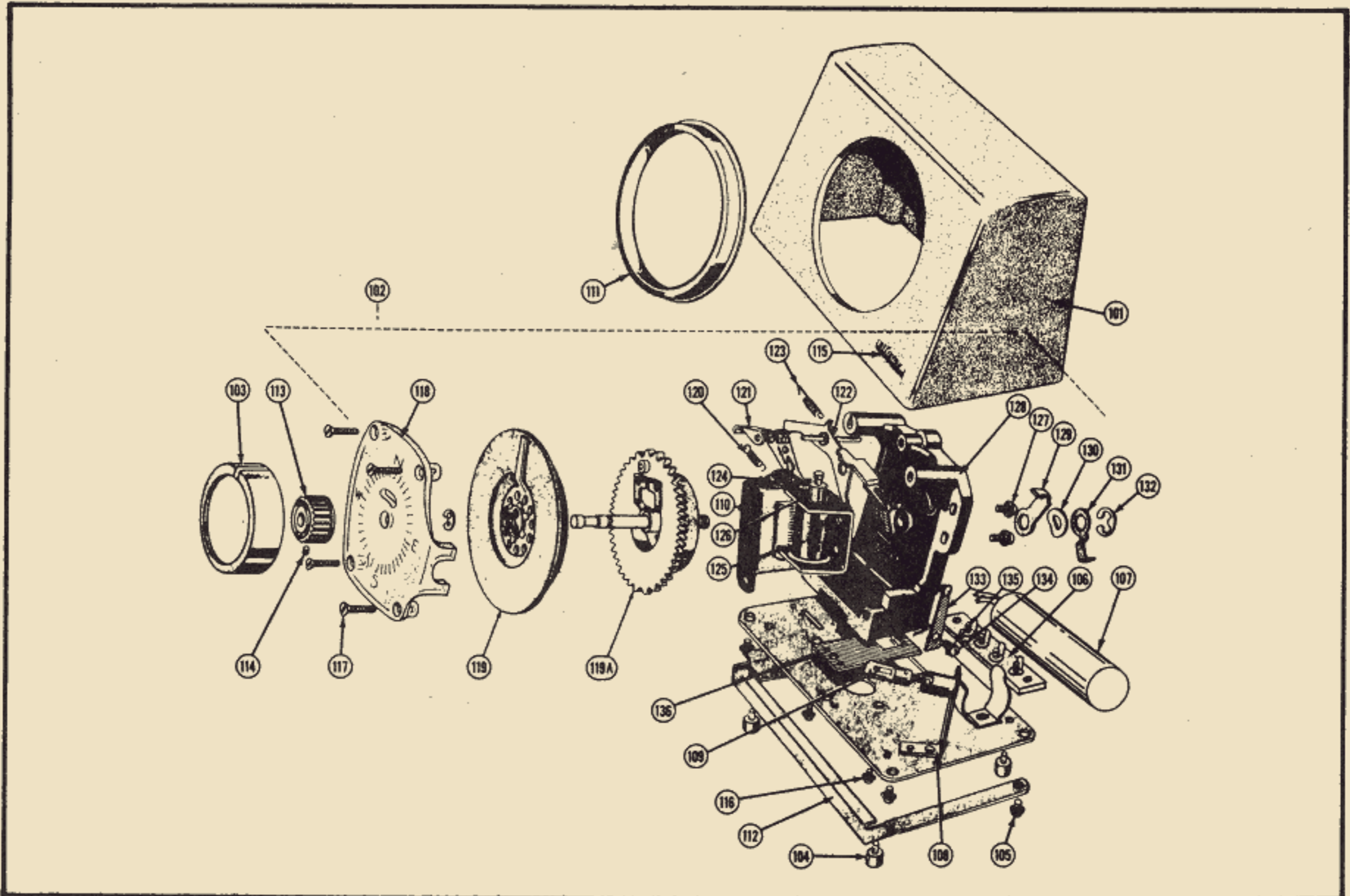
Tolerance \pm 10%



WIRING DIAGRAM



Exploded View of Rotator Unit.



Exploded View of Control Box.

PARTS LIST

R O T O R

C O N T R O L

Item No.	Description	Part No.	Item No.	Description	Part No.
	Rotor Complete	8910-R		Control Complete	8913-R
1	Housing Assy. RH	5454-R	101	Case	5559-A
2	Housing Screws	10-32 x 3/4*	102	Frame & Dial Assy.	8516-S
3	Clamping Plate	5456-A	103	Knob	5556-A
4	Nut, Hex	1/4 x 20*	104	Bumper	5628-A
5	Weathershield	3375-F	105	Screw RH Washer	8-32 x 3/8*
6	Shaft Assembly	5463-T	106	Terminal Strip Assy.	3803-S
7	Bearing Collar	3987-B	107	Capacitor	8588-A
8	Thrust Washer	3376-B	108	Light Socket Assy.	5558-R
9	U Bolt	3377-A	109	Bulb (type 47)	4274-A
10	Mast Clamp	3319-A	110	Transformer	9100-R
11	Nut, Hex	10-32 *	111	Bezel	8525-B
12	Worm Assembly	5474-S	112	Trim Strip	8528-A
13	Screw RH Washer	8-32 x 5/16*	113	Knob Hub	5555-A
14	Stop Slide	3320-A	114	Set Screw	614N *
15	Motor & Term Assy.	8911-R	115	Emblem	8530-A
16	Nut, Hex	6-32 *	116	Screw, Self Tapping	6-20 x 1/2*
17	Mounting Plate Assy.	4263-R	117	Screw, Self Tapping	6-20 x 5/8*
18	Screw, RHM	8-32 x 3/8	118	Dial	8519-A
19	Spacers	4141-A	119.	Spring Motor & Hub Assy.	8534-R
20	Gear & Pinion Assy.	3373-R	119A	Detent & Spr. Mtr. Assy.	5524-R
21	Retaining Ring	4243-H	120	Pawl Spring	5667-A
22	Terminal Plate Assy.	8919-R	121	Pawl	8518-A
23	Screw, RHM	8-32 x 1 *	122	Pawl Lifter Assy.	8512-R
24	Screw Binding Hd.	6-32 x 5/16*	123	Spring Tension	8520-A
27	Contact Sw. Assy.	5908-R	124	Grommet	8509-A
28	Screw, RHM	6-32 x 3/16*	125	Solenoid Assy.	8511-S
30	Housing Assy. LH	8917-A	126	Plunger	8504-A
31	Gasket	5449-A	127	Screw, Hex H Washer	6-32 x 1/2*
32	Nut, Hex	8-32 *	128	Frame Assembly	5515-S
33	Terminal Cover	5327-A	129	Stop Lever	5537-A
34	Nut	8-32 *	130	Spring Washer	5568-A
35	Strain Relief Clamp	3380-A	131	Terminal	5540-A
36	Screw, RHM	6-32 x 1/2*	132	Retaining Ring	4243-B
37	Nut, Hex	6-32 *	133	Indent Spring Assy.	5518-R
38	Grommet	3387-B	134	Screw RHM	6-32 x 3/8*
39	Capacitor	8533-B	135	Washer	5/16 *
41	Cam & Gear	4292-A	136	Tuning Spring	5563-A
42	Spring Clip	2825-A *			

*Parts packed 100 per package