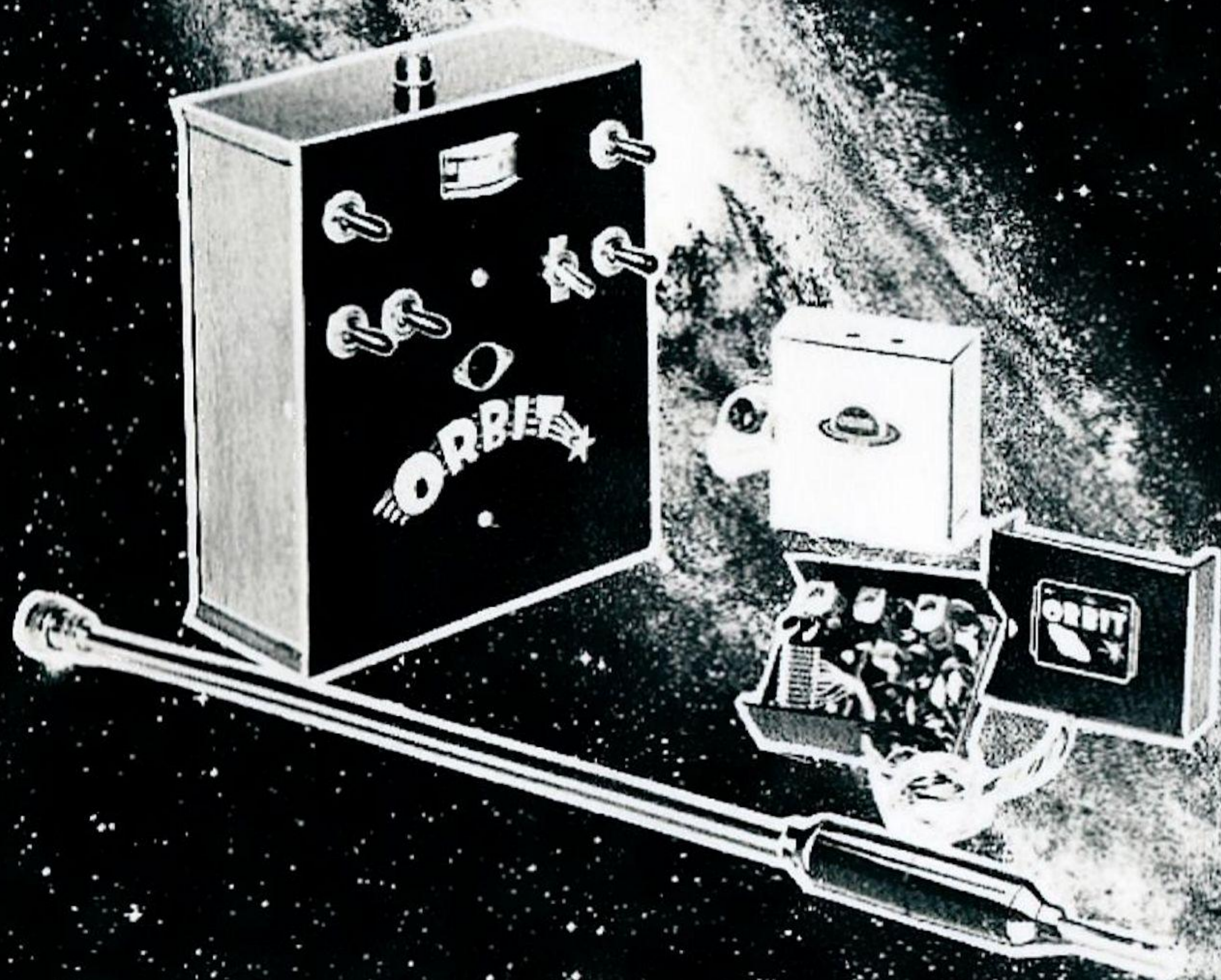


# ORBIT ELECTRONICS

10 AND 12 CHANNEL  
SUPER-HETERODYNE RECEIVER  
AND HIGH POWER ALL-  
TRANSISTORIZED TRANSMITTER



26.995

INSTRUCTION MANUAL

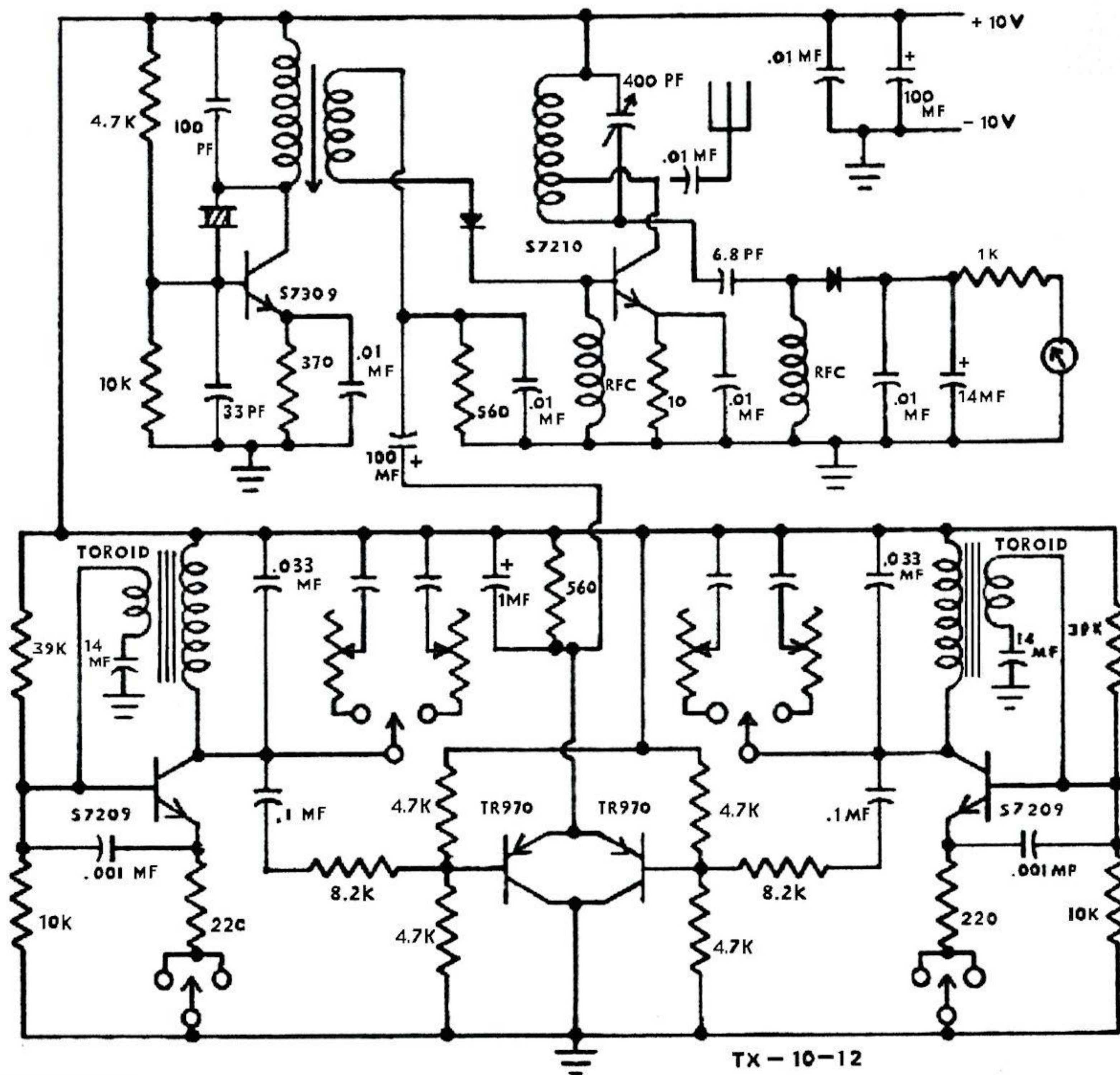
25¢

# 10 AND 12 CHANNEL ALL TRANSISTOR TRANSMITTER

10 CHANNEL TRANSMITTER	\$118.50
12 CHANNEL TRANSMITTER	\$133.50
POWER PACK & CHARGER FOR EITHER (10V)	\$ 39.95

The ORBIT 10 volt all-transistor multi-channel transmitters represent a new standard of stability and high output. Temperature compensated throughout, these units offer maximum reliability under rigorous climatic extremes. Silicon transistors of very high quality are utilized in all critical circuits contributing greatly to long life and stability of operation. Compactness of design, and lightness in weight result in maximum comfort and convenience in operation. The built-in 10 volt nickel-cadmium power supply is another development by ORBIT and is designed for the specific requirements of the transmitter.

SIZE - 3" x 6½" x 7¾"

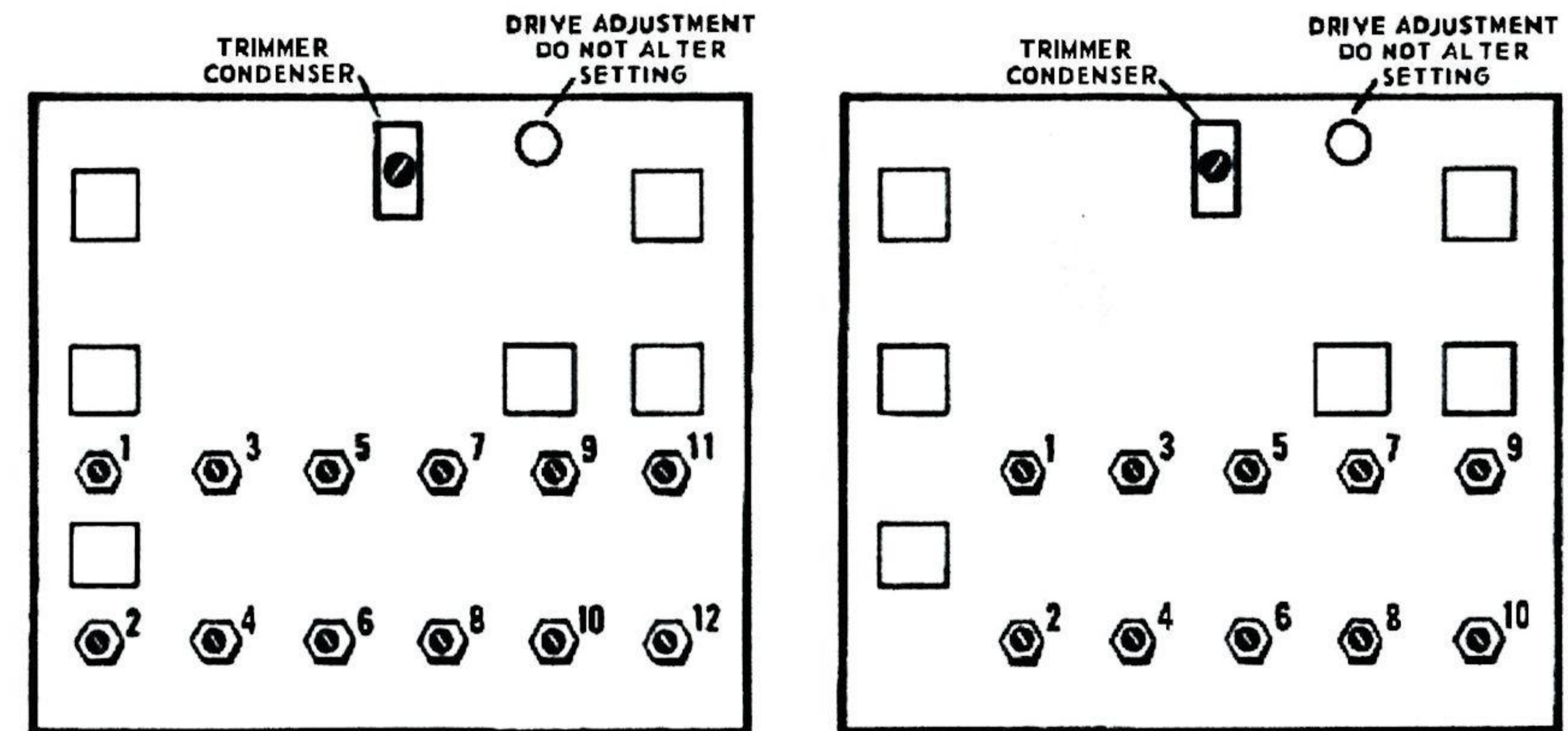


# 10 AND 12 CHANNEL TRANSMITTER TUNING INSTRUCTIONS

**DRIVE ADJUSTMENT:** (¼" dia. coil form with tuning slug). This adjustment is pre-set at the factory and should not be altered. Maladjustment of this control will yield incorrect modulation percentage.

## TUNING ADJUSTMENT: Trimmer Condenser:

All units are factory tuned and since tuning will not arbitrarily change, no adjustment should ever be required. The following procedure may be used if you feel unit is in need of tuning. Antenna must be installed and fully extended. Transmitter should be held in the lap for maximum loading effect of body capacity. A field strength meter should be used for this tuning operation, since the meter on the transmitter face may indicate greater than maximum deflection (meter needle pinned) depending on battery condition. Rotate the screw in the ceramic trimmer condenser (use nonmetallic wand) to indicate peak output on field strength meter.



### 12 CHANNEL

- 1 - AUXILIARY
- 2 - AUXILIARY
- 3 - RIGHT RUDDER
- 4 - LEFT RUDDER
- 5 - RIGHT AILERON
- 6 - LEFT AILERON
- 7 - LOW MOTOR
- 8 - HIGH MOTOR
- 9 - UP ELEVATOR
- 10 - DOWN ELEVATOR
- 11 - UP TRIM
- 12 - DOWN TRIM

1 2 3 4 5 6 7 8 9 10 11 12



### 10 CHANNEL

- 1 - RIGHT RUDDER
- 2 - LEFT RUDDER
- 3 - RIGHT AILERON
- 4 - LEFT AILERON
- 5 - LOW MOTOR
- 6 - HIGH MOTOR
- 7 - UP ELEVATOR
- 8 - DOWN ELEVATOR
- 9 - UP TRIM
- 10 - DOWN TRIM

1 2 3 4 5 6 7 8 9 10



## TUNING TRANSMITTER TONES TO RECEIVER REEDS:

Transmitter tones are pre-aligned to receiver reeds at the factory and should require no adjustment. However, at some future time, it may be necessary to "touch-up" this pot tuning. This necessity would be indicated by an occasionally missed and/or shaky simultaneous response. Following procedure is used in the event this readjustment is necessary. Hold rudder control at one position (generally left) while elevator and engine pots are adjusted. Left aileron is keyed while tuning trim channel pots. Hold "up" elevator while tuning aileron and rudder pots and low auxilliary reeds, in the case of twelve channel. As an example; "down" elevator is not responding properly with simultaneous aileron. Key the aileron and hold, (either right or left) and then key "down" elevator rapidly. If reed fails to pick up and drive, hold "down" and very slowly rotate "down" elevator pot counter-clockwise. When reed picks up and drives fully against contact screw, stop pot rotation and leave in this position. If no response is noted, while turning pot counter-clockwise, or next lower reed begins to drive, try rotation clockwise. If reed begins to drive while turning clockwise, continue rotation until reed suddenly stops driving. Then commence counter-clockwise until reed is driving fully against the screw. Clockwise rotation of pot raises tone frequency; counter-clockwise lowers tone frequency. ALWAYS approach reed frequency from high to low. That is, with counter-clockwise rotation of pot for accurate setting of simultaneous.

## POWER PACK:

Before the initial use of the transmitter power supply it is most important that it be charged for at least 24 hours to assure that it is up to full charge and then generally it should be charged over night when operation is intended the next day.

# FLY SAFELY



## JOIN THE A.M.A.

## 10 AND 12 CHANNEL SUPER-HETERODYNE RECEIVER

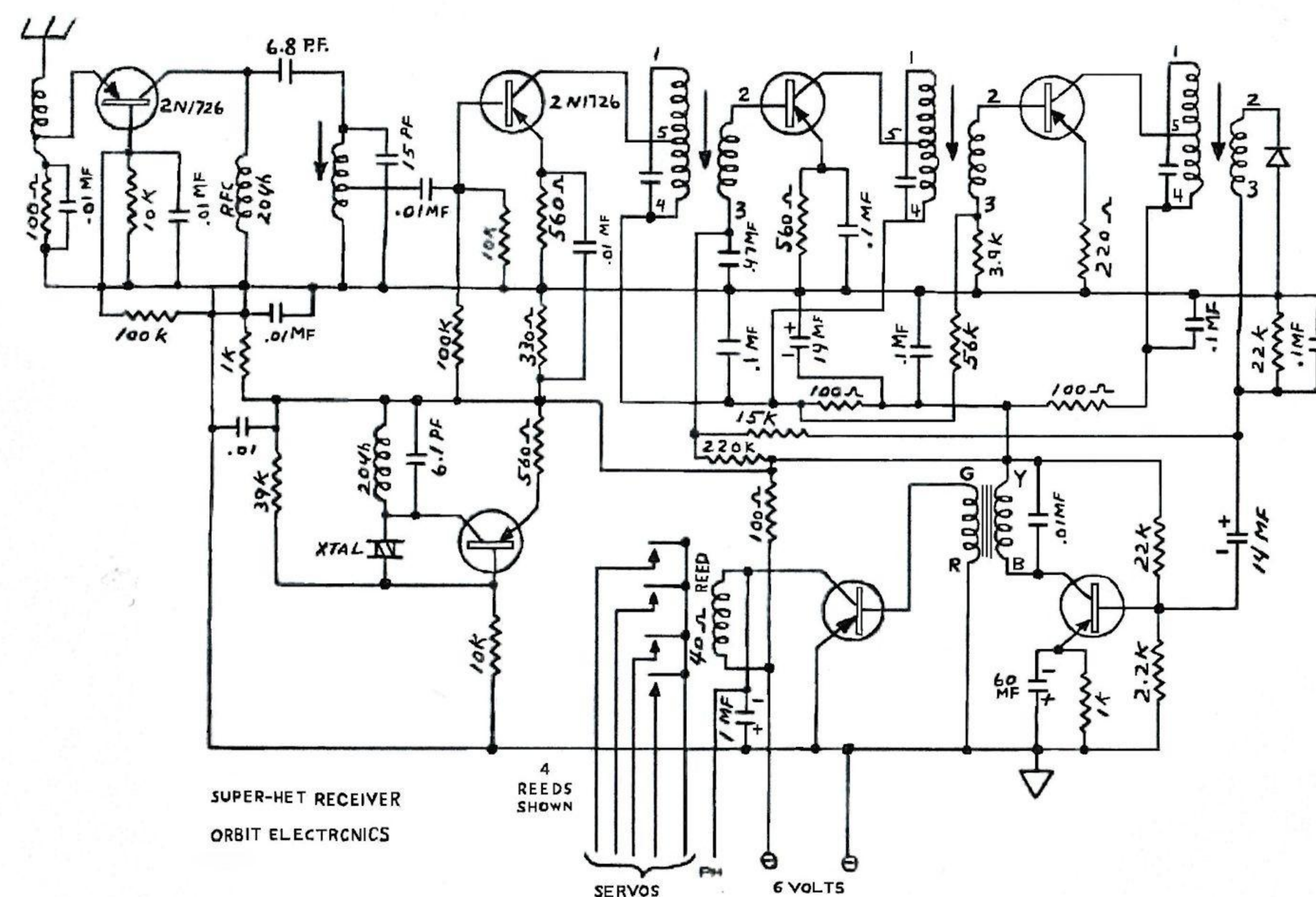
10 CHANNEL RECEIVER	\$89.95
12 CHANNEL RECEIVER	\$99.95
COMPANION MEDCO PM5 - 6V Pack & Charger for either	\$24.95

The ORBIT super heterodyne receiver represents the highest standard of stability, selectivity, and sensitivity. A high degree of packaging density offers minimum size and weight with maximum ruggedness. High gain, fully temperature compensated circuitry in RF and audio sections yield useable signal recovery to as low as 1.5 microvolts input.

SIZE - 2 1/8" x 2 7/8" x 1"

WEIGHT - 5 OUNCES

(Applies to both 10 and 12 Channel versions.)



SUPER-HET RECEIVER  
ORBIT ELECTRONICS

4  
REEDS  
SHOWN

SERVOs  
PH  
6 VOLTS

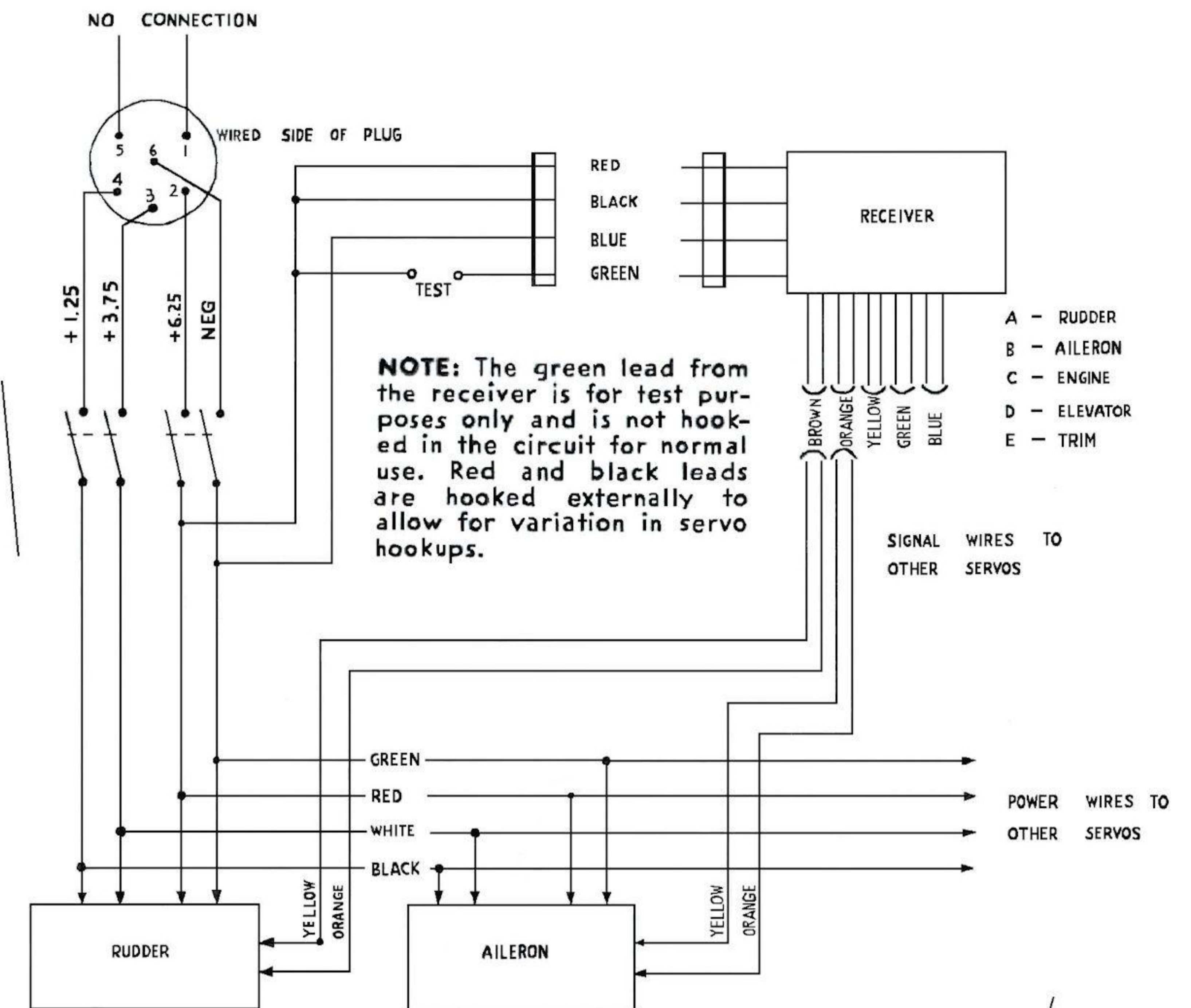
## RANGE CHECK:

Tuning adjustments on this unit are factory set and readjustments are not required nor are attempts to do so recommended. A constant check on receiver condition is possible only through ground range-checking. This is accomplished by removing transmitter antenna and backing away from the receiver (receiver antenna extended) and note the maximum range available. (Transmitter will be somewhat directional with antenna removed). If in the future, there should be a serious drop-off in this range, it may be considered an indication of trouble. Minor differences of about 20 percent can be ignored since varying conditions and terrain characteristics will have this much effect. Ground range checking is the individuals only reference to receiver condition, so apply the principle as often as conscience deems necessary. If you should note a drop-off in range severe enough to cause misgivings, it is strongly urged that the unit be returned to the factory for check. If not possible or practicable to return, the following paragraph details tuning and alignment procedures using an oscilloscope. However, it is felt that knowledge of the workings of a super-heterodyne receiver is necessary, so if possible, enlist the aid of someone familiar with these types.

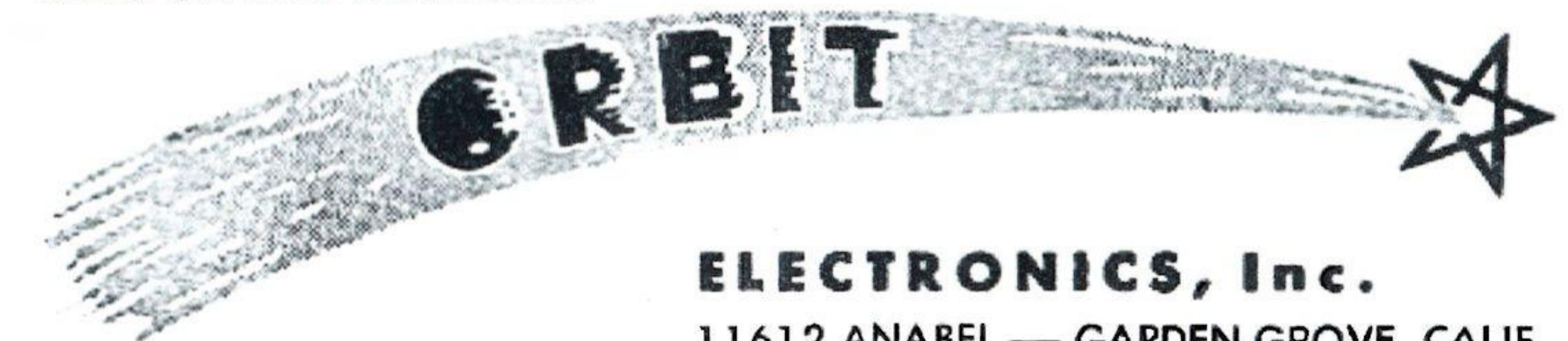
## TUNING:

Using additional jumper wire, hook the green lead from RECEIVER FIVE PRONG PLUG to the vertical input jack of the oscilloscope. Another jumper is used from the receiver battery PLUS lead to GROUND of the 'scope. Remove receiver top, and coil up the antenna. With transmitter on and a tone being transmitted, either back out the slug in the tuning coil form, or have someone carry the transmitter far enough away to give a very weak signal indication, BUT AT NO TIME SHOULD THE SIGNAL INDICATE FULL SATURATION DURING THE ACTUAL TUNING OPERATION, A weak signal will appear sinisoidal in character, while saturation is indicated by flattening of the peaks. Re-check I.F. tuning, and than replace cover on receiver. Uncoil the antenna, and peak the R.F. tuning slug to maximum signal indication again keeping the signal weak enough so that saturation does not occur. It will very likely be necessary to carry the transmitter off to a considerable distance at this time. This completes the alignment procedure, and receiver is now ready for use. Above procedures should be carried out with transmitter antenna REMOVED BUT WITH BACK OF TRANSMITTER ON.

## WIRING SCHEMATIC FOR SUPER-HET SYSTEM



RADIO CONTROL ELECTRONICS



**ELECTRONICS, Inc.**

11612 ANABEL — GARDEN GROVE, CALIF.

