INSTRUCTIONS FOR THE MINIMAC ALL-TRANSISTOR TONE RECEIVER.

SPECIFICATIONS.

Overall size of case	...	2" x 1.3/8" x 3/4"
Total weight	...	1 oz.
Receiver voltage	...	3 volts maximum.
Receiver current	...	1 - 5 m.a.
Actuator voltage	...	1.1/2 - 6 volts.
Actuator current	...	500 m.a. continuous 1 amp. maximum
Temperature stability	...	30 - 120° F.
Actuator coil resistance	...	8 - 14 Ohms.
Relay coil resistance	...	30 - 100 Ohms.

INTRODUCTION.

The Minimac is a 5-transistor super-regenerative single channel tone receiver. It may be coupled direct to a rubber or clockwork driven actuator, motorised actuator, servo motor or low resistance relay. The receiver has the advantage of being practically immune from pulse interference by relay contacts and motor commutators. For marine use, where a large 12-24 volt electric motor is used for the main drive, no interference will be experienced providing the motor is suppressed as recommended by the manufacturer, and the receiver is positioned at least 6 inches from the motor. At all times the aerial lead must be suspended as far away as conveniently possible from any actuator, electric motor, batteries and their respective wiring.

RECEIVER MOUNTING

The receiver is supplied in a strong plastic case to protect the components. It is suggested that a suitable compartment is made in the model, lined with plastic foam, to accommodate same. For model aircraft the receiver should be mounted vertically with the components facing the front.

TRANSMITTERS.

The Minimac receiver may be operated with any simple, single valve tone transmitter which is capable of providing a good, stable tone in the order of 700 c.p.s. Transmitters may be either constant carrier wave with keyed tone or carrier and tone keyed simultaneously. Tested ground range with our own similar transmitters is in excess of 600 yards.

WIRING.

There are two methods by which the Minimac receiver may be connected to the batteries.

For operation with simple sequential rubber or clockwork driven actuators, a single $4\frac{1}{2}$ volt battery supply may be used as shown in Fig 1. The battery must be discarded however, when down to a level of $3\frac{1}{2}$ volts ON LOAD.

When used with $1\frac{1}{2}$ volt electric motors, 3 volt actuators $4\frac{1}{2}$ - 6 volt servo motors or with a relay, the two battery system as shown in Fig 2. is strongly recommended. With this method, the sensitivity of the receiver is in no way effected by the high current drain of the actuator batteries as it is operating from its own separate 3 volt battery supply. The life of this battery is considerable and in consequence, it is advisable to check from time to time for it must be finally discarded when down to a level of $2\frac{1}{2}$ volts ON LOAD.

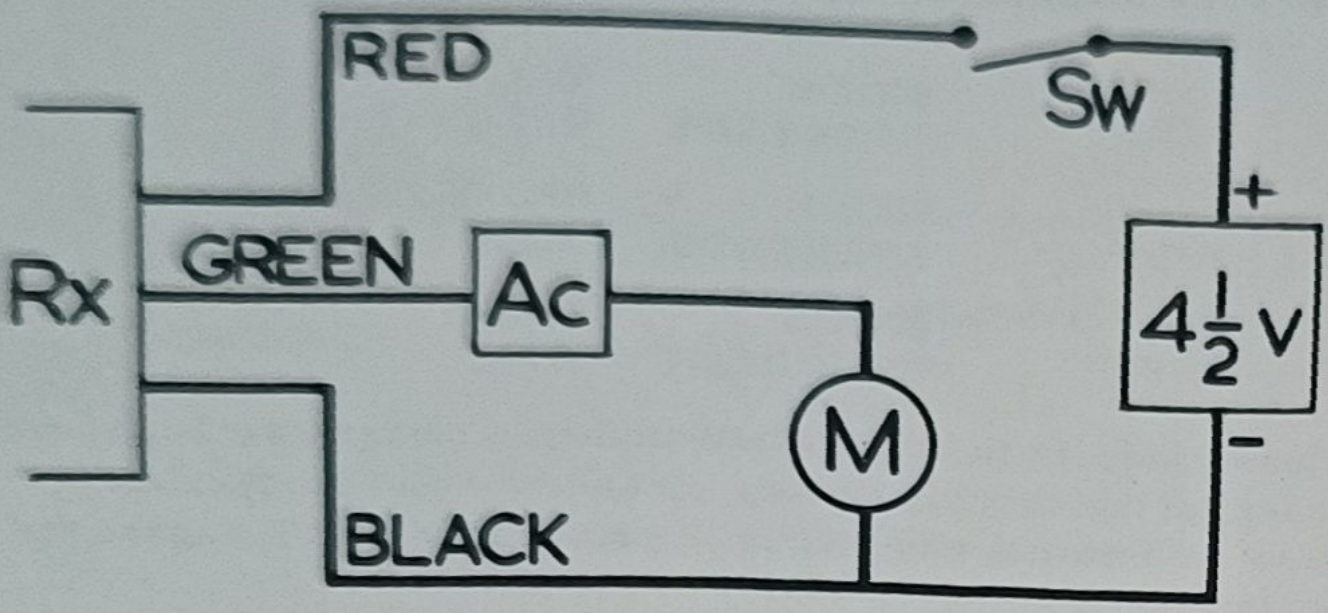

fig.1 SINGLE BATTERY WIRING.

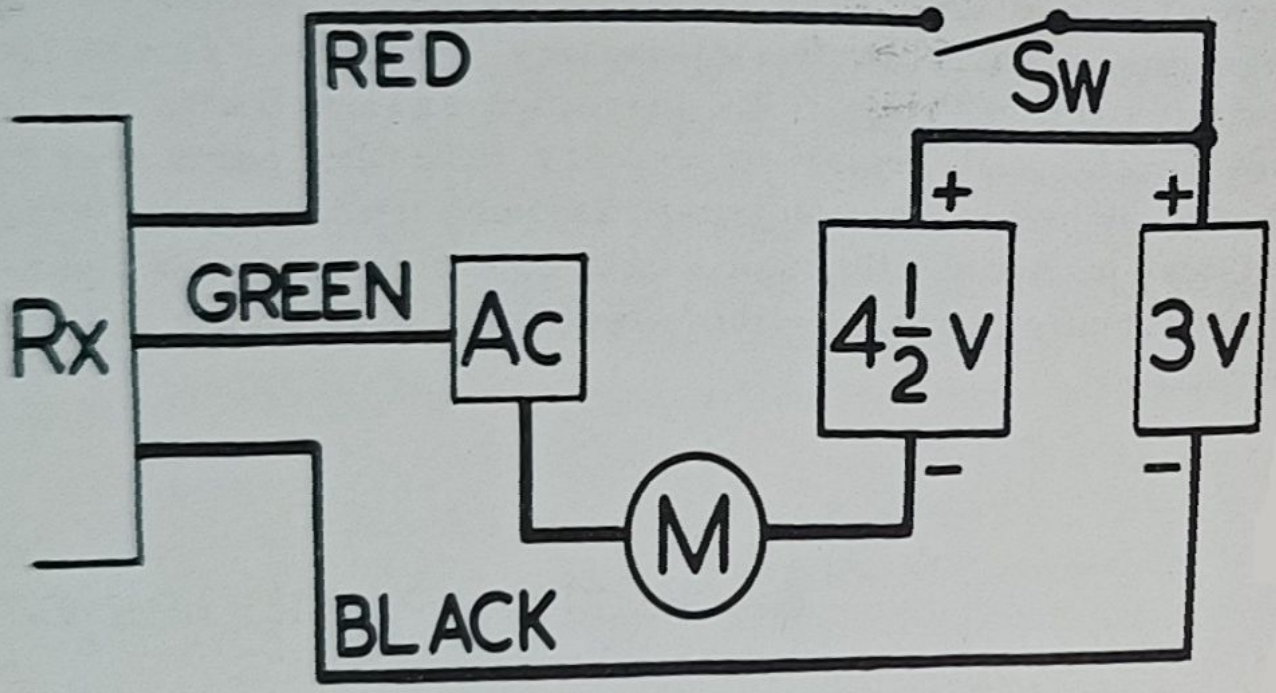

fig.2 TWO BATTERY WIRING.