

CONTROLAIRE ELECTRONICS
BOX 345
Fairborn, Ohio

INSTRUCTIONS CONTROLAIRE 3

The Controlaire 3 is a super regenerative, all transistorized, 27.255mc receiver basically designed for model plane & boat use. It can be tuned to any of the new frequencies from 26.995 to 27.255. This receiver requires a tone modulated radio signal 400 - 600 cps. It will work even beyond this cps range though not as well.

Mounting

Shock mount with foam rubber. Use Pliobond or Weldwood cement. Mounting the receiver on a little slide is a good idea as this way it can be used in other craft and is more accessible for maintenance.

Transmitter

We recommend the companion transmitter CONTROLAIRE HH T CW. Other transmitters (tone) that send out a continuous carrier wave are OK so long as they are in the 400 - 600 cps (cycles per second) range.

Battery requirements

3 volts are all that's required. We recommend hookup shown in figure #1 for the simple reason that the escapement drain will not pull the receiver down. Replace batteries when you can see the ma change in the receiver start to drop. Never use batteries when the current change in the receiver is below 20 ma.

Cleaning relay contacts

This is important - use a relay contact burnisher - or real fine emery paper.

Receiver Operation.

With the transmitter off, receiver on, the receiver will idle at 2 to 4 ma. The nervous needle fluctuation is normal. Turn on transmitter. Place transmitter 12 feet away. Note that idle current drops to a steady 1 ma (or thereabouts) steady as the transmitter is sending a constant carrier wave. Plug meter 0-50 ma in receiver circuit (see diagram). Key transmitter. Current will rise to from 25 - 27 ma. This operates relay & actuates escapement or servo.

Swamping

When the transmitter is too close to the receiver the receiver may respond as if transmitter had been keyed. This is swamping and it is normal on super-regenerative receivers. Swamping will disappear when transmitter is moved away.

Extreme Tempera

Controlaire 3 is temperature compensated from 30 to 130 deg. F. check operation when approaching these limits. In extreme cold weather - below ? deg. F. use $4\frac{1}{2}$ v.

Tuning merely involves turning the tuning slug (there is only one) to the position that gives highest meter reading. To do this position your helper & transmitter at 100 yards. On transmitter signal tune for highest meter reading.

Guarantee & repair

Guarantee - 30 days & is void if you dig into or modify the rec.

Repair - Send your receiver & \$2.50 (our minimum) to Controilaire Electronic Box 345 , Fairborn Ohio. Tell them in a note what you think the trouble is. Dont make us guess.

For slow repair service - 3-4 weeks longer.

1. Ignore the above instructions.
2. Send receiver to World Engines instead of Controilaire.
3. Have your dealer send the receiver to us - this really slows things down as the dealers is busy and cannot drop everything to do your mailing for you - and he may elect not to follow the above instruction also.
5. Leave your name off of the returned receiver.

*See
MODIFICATION
NOTE
For
Hook
up*

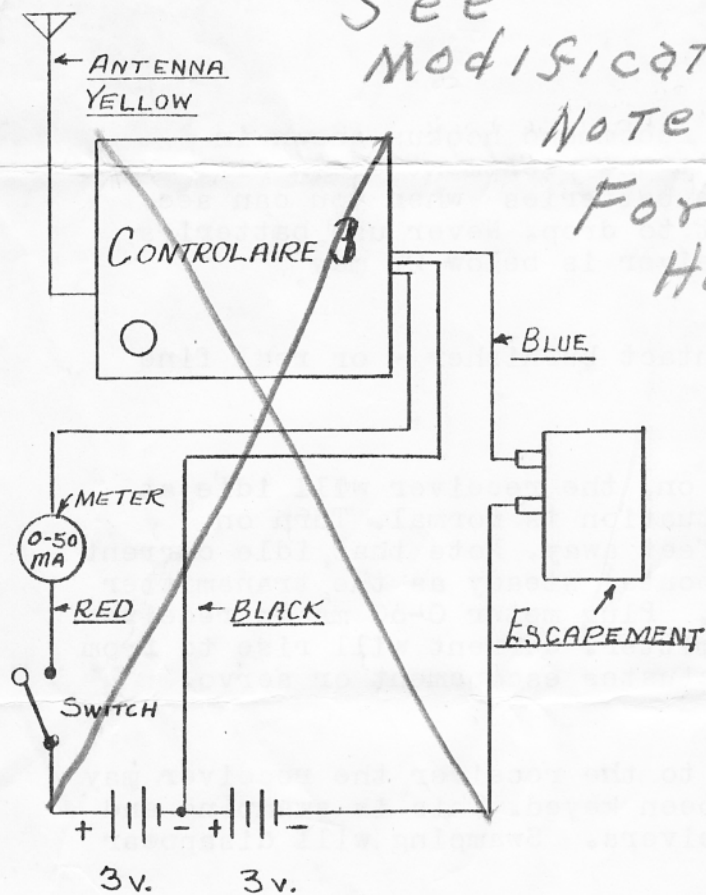


FIGURE # 1

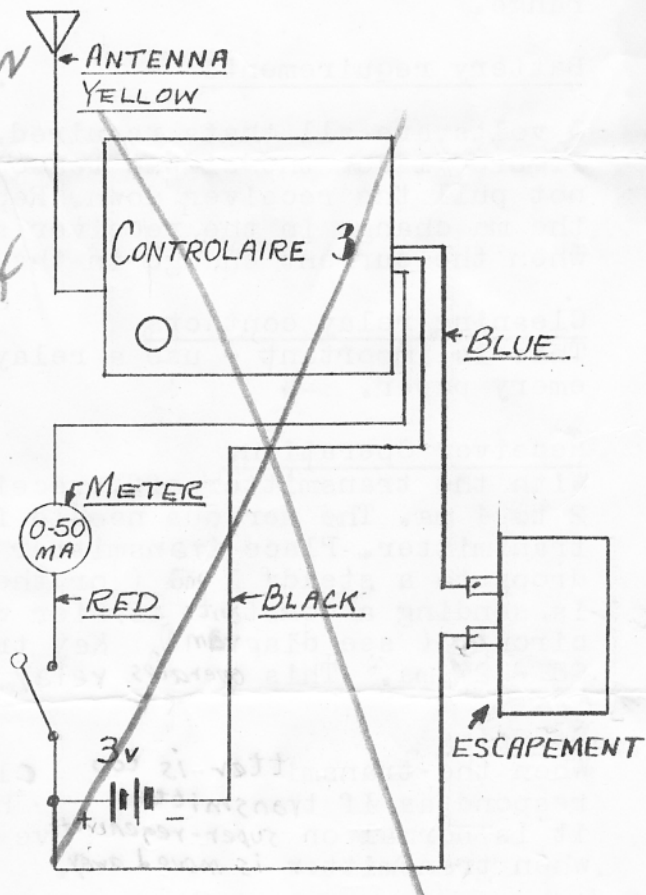


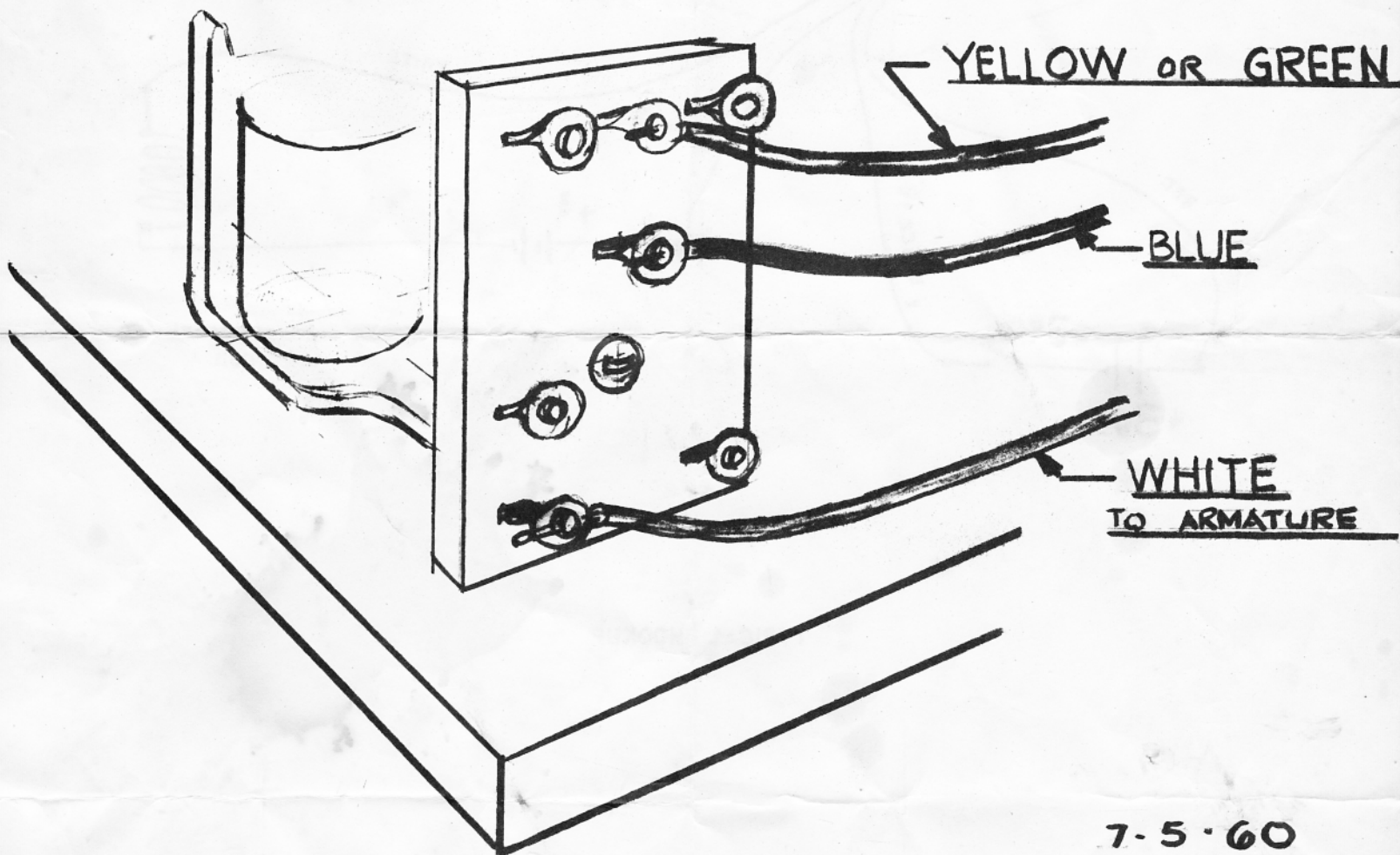
FIGURE # 2

CAUTION - RED WIRE MUST BE CONNECTED TO PLUS
TRANSISTORS WILL BE RUINED OTHERWISE

MODIFICATION NOTES

The following modification has been made to the Controaire 3. The relay is no longer grounded to the negative side of the circuit — the relay is now isolated.

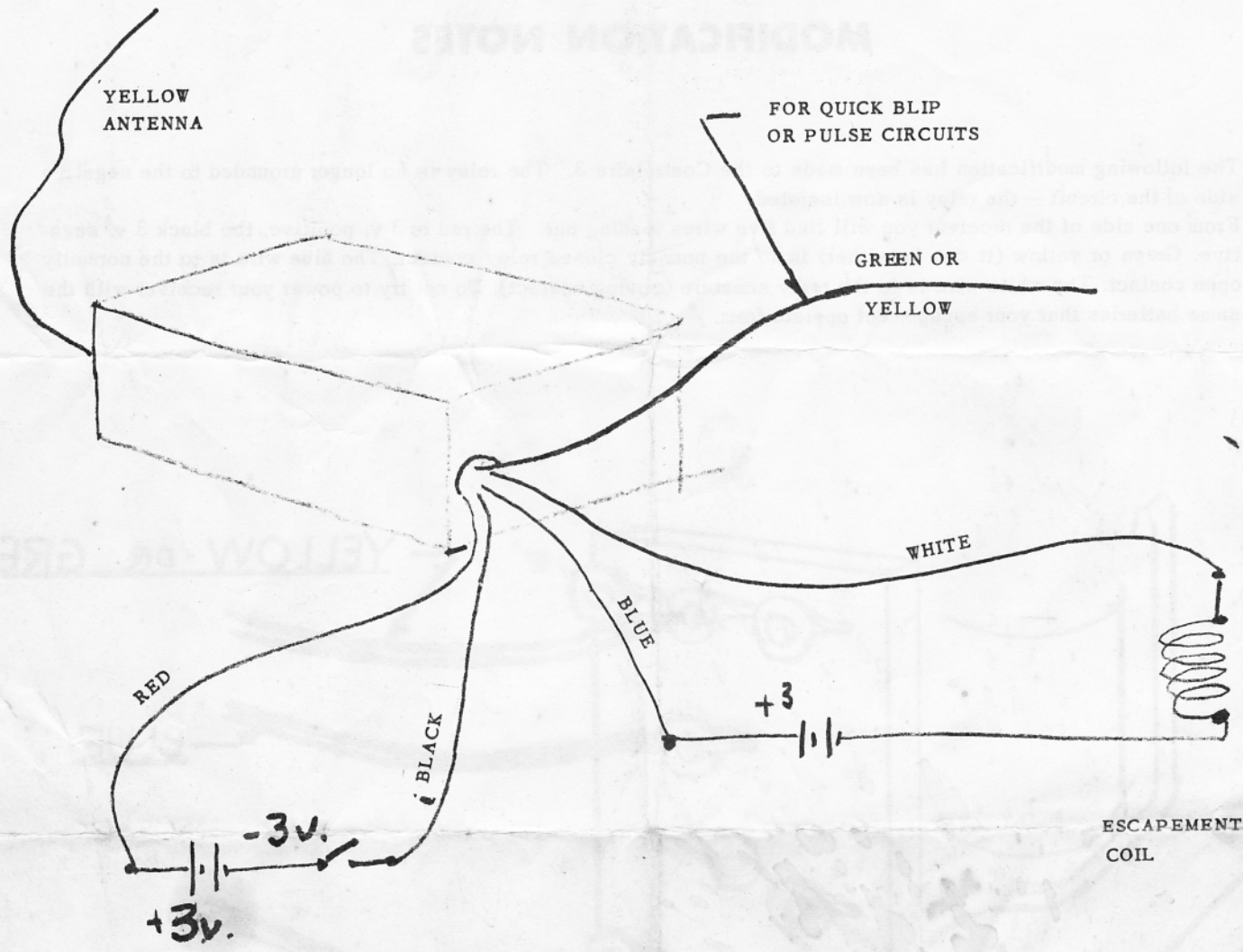
From one side of the receiver you will find five wires leading out. The red is 3 v. positive, the black 3 v. negative. Green or yellow (it can be either) is to the normally closed relay contact. The blue wire is to the normally open contact. The white wire is to the relay armature (moving contact). Do not try to power your receiver with the same batteries that your escapement operate from.



RELAY

7-5-60

MODIFICATION NOTES



TYPICAL HOOKUP

Control Aira — Servo

Green wire	—	Yellow
Blue	—	Blue
White	—	Green

Ear Phone	—	Yellow
3v	}	Black -
		Red +

Red +	}	3v
Black -		
White +		1.5v