GOLDEN EAGLE MARK III RECEIVER EXPANDED CHANNEL MODIFICATION

RECEIVER DIAL INSTALLATION -

- Please read instructions fully before proceeding.
- Remove Channel Selector Knob (2 Allen set screws).
- Remove Top Cover and Bottom Plate.
- Remove Channel Selector lamp clip from front panel and carefully lay on chassis near V6.
- Loosen two #6/32 screws on Channel Dial bushing located just behind the dial.
- Rotate Channel Selector Knob full (CCW) counter clockwise. Be sure not to bend tuning condenser plates.
- Remove bare wire at left side of main tuning condenser. This will be reconnected later.
- Remove two #6-32 screws and nuts on chassis, which hold U shaped tuning condenser bracket. Use extreme care both Top and Bottom of Chassis not to move or damage any components.
- Carefully slant and slide out Main Tuning Condenser with dial. Be sure not to damage main tuning coil located in back of main tuning condenser.
- Slide off from shaft old dial with bushing while removing the main tuning condenser.
- Remove two screws which connect dial with bushing.
- Mount new dial and bushing with two screws (Do not tighten yet.) Slide new dial and bushing on Main Tuning Shaft. (Dial printing towards front panel, dial bushing mounted on back side of dial.)
- Carefully mount main tuning condenser with bracket and dial back in its original place again being careful not to hit or damage oscillator coil.
- Line up condenser bracket with chassis holes and re-install 6/32 screws, nuts and lock washers.
- Position condenser as far back as possible, center condenser shaft through the front panel hole and be sure both sides of the dial have equal clearance from the front panel.
- Now tighten main tuning condenser bracket screws, and now tighten the two (2) screws holding dial to bushing.
- Adjust main tuning shaft MAX (CCW) counter clockwise so tuning plates are against the stop. Rotate dial so hair line on panel lines up with calibration line on dial just past channel 23B. Carefully tighten dial shaft bushing being sure dial is as far back against main tuning condenser as possible.
- Double check main tuning shaft for full (CCW) counter clockwise alignment of hair line on panel with calibration mark on Dial past 23B. If accurate rotate dial 180° (approx. Channel 12) and tighten down other dial bushing screw. Reconnect and solder bare wire at Main Tuning condensor.
- Install channel selector light clip on front panel.
- Install main tuning knob and tighten both Allen screws.

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- Carefully unsolder and remove 31.4 crystal connected between V3 Pin 2 and ground. Be sure to save crystal and as much lead length as possible.
- Remove bare wire at Pin 8 of tuning switch and connect to Pin 7 of tuning switch.
- Remove bare wires between Pins B & C of blue crystal socket and tuning switch.
- Remove bare wire at Pin 12 of tuning switch and connect to ground Point A.
- Remove dial light ground wire from Pin 1 of tuning switch and connect to ground Point A.
- Connect bare jumper wires between Pins 8 and 9 and between Pins 1 and 11 of tuning switch.
- Remove bare wire connected between Pin 2 of tuning switch and Pin 3 of RF Gain control.
- Add new wire 7" insulated #18 solid. One end Pin 2 of tuning switch other end Pin 2 of V3. (Same size as red and white wire on Pin 10 of tuning switch.) Dress this wire halfway between tube sockets and bottom plate.
- Add jumper wire between Pins 4 and 5 of tuning switch.
- Remove tuning knob and loosen tuning switch.
- Rotate switch slightly so Pin 12 is nearest to the bottom of the set. CAUTION: It may be necessary to cut and lengthen C52B (220 mica) at terminal strip end (Point F) before the tuning switch can be rotated. Do not pull blue and white wire too hard or it will break coil on other end of wire.
- Tighten switch and reinstall tuning knob.
- Connect one end of 31.4 MHz crystal to Pin 1 of tuning switch.
- Connect other end to Pin H on RF Gain control.
- Cut two leads to 3/4" length on 31.72 MHz crystal.
- Connect one end of 31.720 MHz crystal to Pin 12 of tuning switch.
- Connect other end to Pin G on RF Gain control.
- Solder all connections and check for shorts.
- Remove crystal socket Pins B and C.
- Carefully position the two crystals (31.4 and 31.72 MHz) so they are not touching each other and allow enough clearance for the bottom plate.

L3 OSCILLATOR ADJUSTMENT

- Install transmitter octal plug at rear of receiver.
- Connect VTVM Pin 2 to ground of V3. Turn tuning switch to HF (center position) with proper plastic hex tool from bottom of chassis. Slowly tune L3 clockwise until little or no-volts is obtained on VTVM.
- Slowly tune L3 counter-clockwise until peak-volts is obtained. Continue slowly counter-clockwise 1/8 turn for OSC. stability.
- Voltage range should be -5 to -12V DC.
- Turn tuning switch to CB (Left Position) and observe -5 to -12V DC.
- If no oscillator voltage or low voltage is observed, check for correct wiring or a defective crystal.
- This completes the Receiver modification. If dial calibration is off slightly, refer to service manual for the proper calibration procedure.

NOTE:

MANUAL POSITION operates C.B. CHANNELS.

XTAL 1 operates HIGH FREQUENCY CHANNELS.

XTAL II operates RECEIVER EXTERNAL XTAL SOCKET.

GOLDEN EAGLE MARK III RECEIVER, EXPANDED CHANNEL MODIFICATION