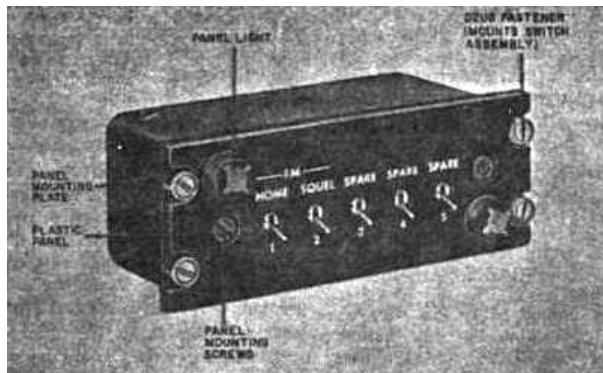


AN/ARA-31 FM Homing (1953) for FM liason radio ARC-44

Equipment



Antenna group AN/ARA-31 and Switch assembly SA-474/AR are used as auxiliary equipment to extend the operational use of the AN/ARC-44 FM liason set.

This equipment respectively provides the FM liason set with homing operation and remote switching operation for homing, and for squelch control of the FM receiver-transmitter.

Only the first two toggle switches on the switch assembly (HOME and SQUELCH) are used, the other three are spares.

Antenna Group AN/ARA-31 consists of Keyer **KY-149(*)/AR**, Mounting **MT-1620/AR**, two Network, Impedance matching **CU-459/AR**, and four antenna elements **AT-624(*)/AR**. Two antenna elements **AT-624(*)/AR** and one Network, Impedance matching **CU-459/AR** make up a homing antenna. There are two identical homing antennas: one for the left side of the aircraft, and one for the right side.

Keyer **KY-149(*)/AR** is a separately housed unit mounted on flat mounting base **MT-1620/AR**. The keyer is enclosed by a sliding cover which is held in place by a single spring lock fastener on the rear of the cover. The front panel of the keyer contains four coaxial connectors and a 2-pin connector for a 28 V power input. The keyer is secured to the mounting by two mounting screws located at the front of the unit.

Network, Impedance matching **CU-459/AR** has a bullet shaped, black nylon shell. Two antenna connectors are mounted on the outer surfaces of the bullet, one on each side. All the components within the bullet housing are permanently sealed to prevent changes in impedance characteristics which might be caused by a shifting of the component's positions.



Keyer KY-149

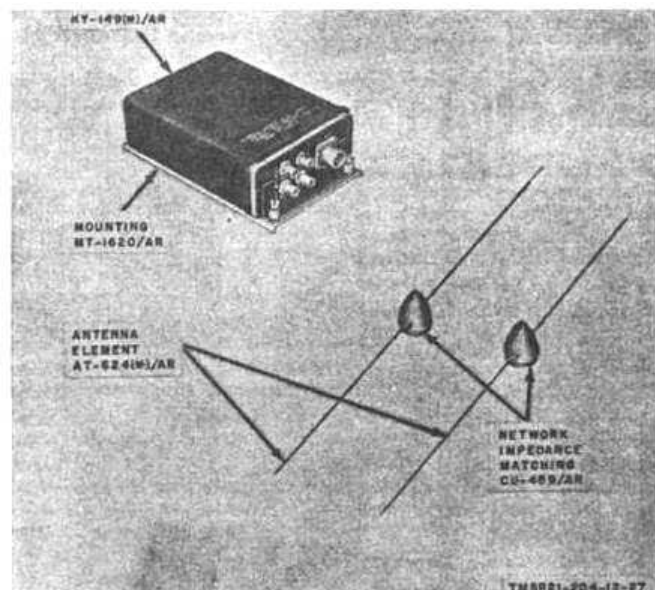


Figure 14. Antenna Group AN/ARA-31.

Operation

Set the FM HOME toggle switch on the switch panel to its on position

Rotate the frequency selector on the FM control panel to the desired operating frequency. The coded D and U signals or steady 400 cps on-course tone should be present in the operator's headset-microphone (or both operators' headsets in a two-position installation)

Transmitting station is on the left: A keyed 400Hz tone with predominantly code D (dah-dit-dit)

Transmitting station is on the right: A keyed 400Hz tone with predominantly code U (dit-dit-dah)

Transmitting station on course* : A steady 400Hz tone

* either ahead or behind aircraft

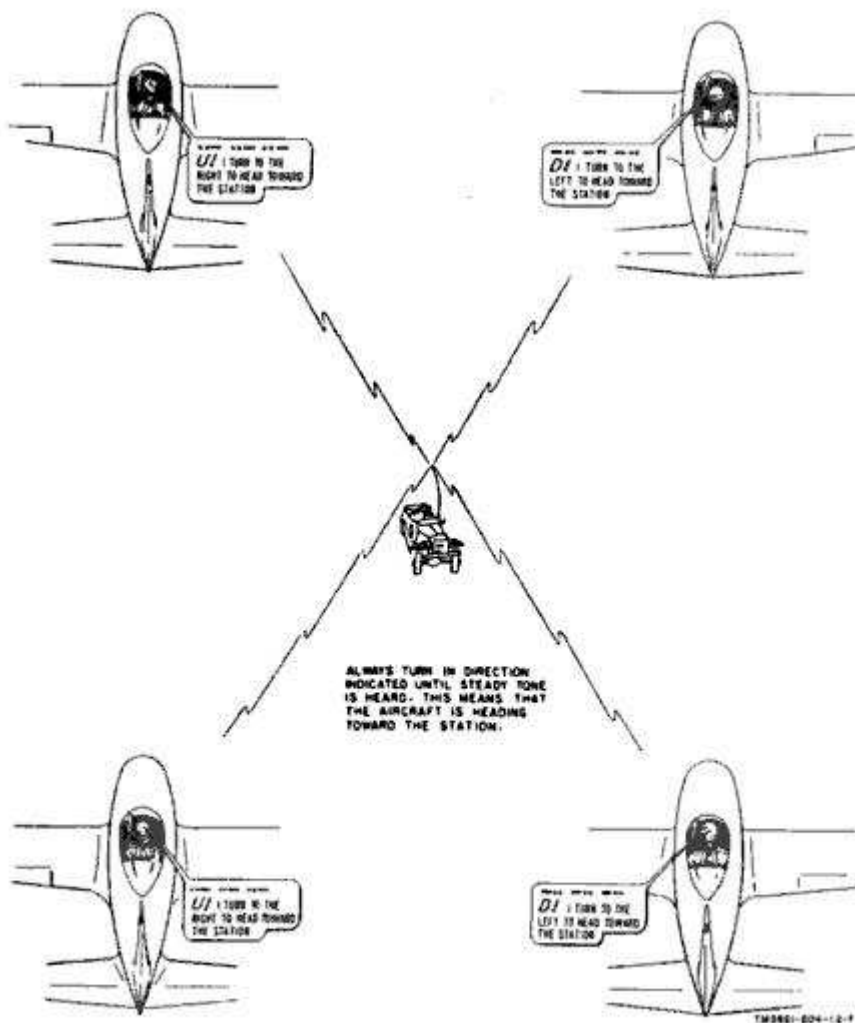


Figure 15. Identifying homing signals.

Circuit diagram

