

Radar Set AN/APN-10, a light weight, interrogator-responder type, airborne navigational equipment, is designed to direct an airplane to within 200 yards of a ground or airborne beacon. The set will provide a good homing signal at a distance of fifty miles from transportable Beacon Transmitter-Receiver AN/TPN-2 or Radio Set SCR-695, and at twenty-five miles from portable Beacon Transmitter-Receiver AN/PPN-1 or AN/PPN-2.

In conjunction with suitable companion beacons, this equipment may be used for landing parachute troops or gliders by night; maintaining airborne supply operations to isolated positions at night; demarcation of bombing line for close support bombers; identification of certain advanced units; homing on airfield beacons; homing on airborne beacons; identification of other friendly airplanes, and as a ground interrogator-responder for identifying friendly airplanes and checking IFF equipment in aircraft during take-off or landing.

This equipment is essentially a radio transmitter-receiver with a cathode ray indicator. A pulse modulated signal is transmitted by Radar Set AN/APN-10, received by the ground or airborne beacon which then automatically transmits a reply on the same or a different frequency, which when received is displayed on the cathode ray indicator.

The airplane is directed toward the beacon by turning until signals of equal amplitude are observed on each side of the indicator.

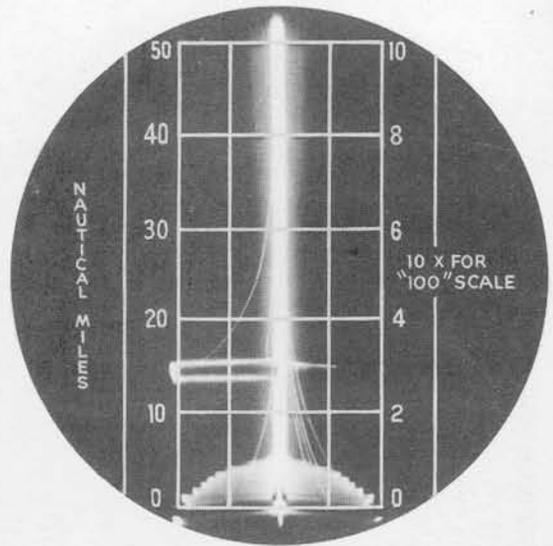
This receiver-transmitter is housed in a single unit and will transmit and receive on any frequency between 160 and 240 mc. Desired frequencies are selected by means of a tuning knob on the front panel of the unit.

Radar Set AN/APN-10 may be installed in bombers, transports, gliders, and fighter airplanes, having a radio operator's or navigator's compartment. One individual is required to operate this equipment.

Radar Set AN/APN-43 is similar to AN/APN-10, and may be used in connection with any Eureka type beacon such as AN/TPN-2, AN/PPN-1, or AN/PPN-2. It also operates in conjunction with YH and YJ type beacons and SCR-695 IFF equipment.

Test equipment required for maintenance and tuning of AN/APN-10 includes Test Equipment IE-45 (depot) and Test Equipment IE-56 (field).

There were no AAF requirements as of 1 February 1945.



AN/APN-10 scope displays ground station responses on two scales with 0 to 5 and 0 to 50 mile ranges, and indicates right-left direction of the ground station relative to the line of flight.

POWER INPUT	100 WATTS @ 22-30 VOLTS DC.
POWER OUTPUT	100 WATTS (PEAK)
FREQUENCY	160-240 MC
TYPE OF SIGNAL	PULSE
RANGE	25-50 MILES

TUBE COMPLEMENT			
NO.	TYPE	NO.	TYPE
1	6F4	1	3BP1
6	6AK5	1	VR-150/30
4	6J6	2	955
3	6C4	1	6V6
1	6AG5	1	8016



RADAR SET AN/APN-10

TOTAL WEIGHT 30 LBS.

Component

Nomenclature

Size

Weight

Transmitter-Receiver-Indicator

RT-XA-16/APN-10(XA-2)

11'' x 8'' x 19''

30 Lbs.

July 1945

Section 4 - Graphic Survey