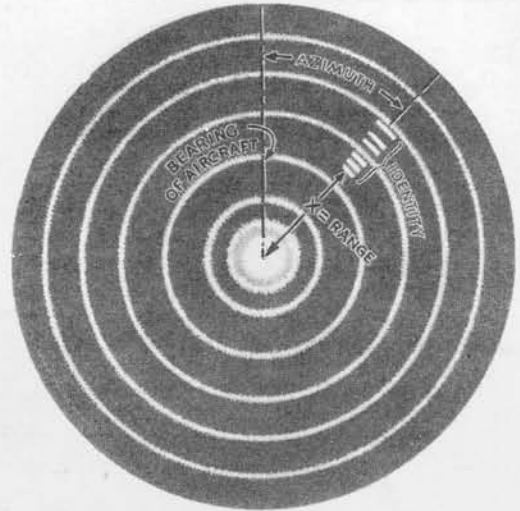


RadioSet AN/CPN-8, an air transportable coded beacon for ground installations is similar to Radio Set AN/CPN-3 except that AN/CPN-8 is much smaller. Designed to respond to 10 cm band radar sets having provision for beacon interrogation, provides range, direction and identification for the guidance of planes.

When attempting to home on this beacon, an aircraft equipped with airborne interrogation equipment flies towards the beacon with the interrogator operating. The signals from the aircraft, when received at the beacon actuate the beacon transmitter, causing a group of coded pulse signals to be generated and transmitted to the aircraft where they appear as echoes on the indicator of the interrogator-responder equipment. The distinctive keying or pulse grouping of the beacon signals identifies the beacon to the homing aircraft. The discriminator rejects pulses shorter than 2 micro-seconds or longer than 4 micro-seconds. Coding is provided by means of 6 code pips, making 50 codes possible.

The antenna consists of a linear array of vertically stacked triple dipoles, 14 in transmitting and 14 in receiving antennas. It is omnidirectional in azimuth with 7 degree vertical half power beam width, mounted on a mast so that total height is 25 feet. Usual polarization is horizontal but vertically polarized antennas are available.

Radio Set AN/CPN-8 transmits coded pulses on 3256 mc. and receives in the frequency range of 3267 to 3333 mc. The equipment operates on 100-130 volts or 200-260 volts, 50-70 cycles. An input of 1300 watts produces a peak power output of 2.25 kw or more. The maximum range of the equipment is more than 100 miles.



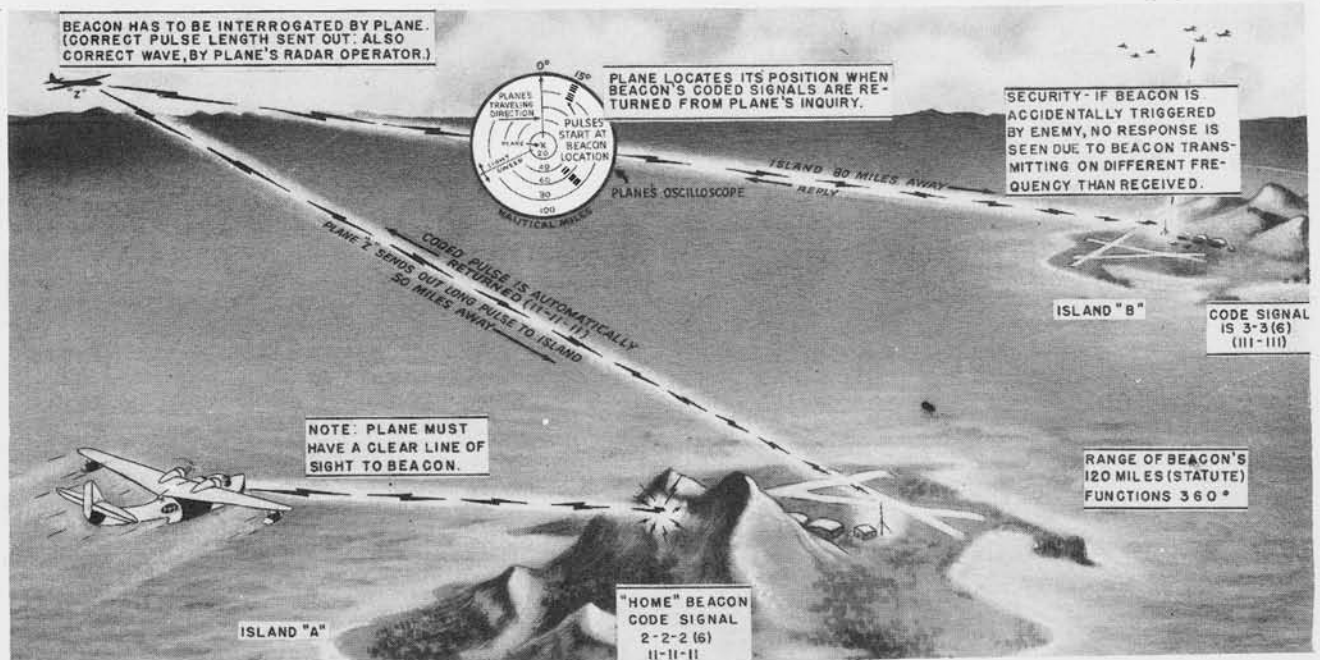
Airborne Equipment Records Beacon Range (distance from center of scope to first pip), azimuth (position on scope), and identity (number & arrangement of pips)

Test equipment required for the maintenance of Radio Set AN/CPN-8 includes: Wavemeter TS-111/CP, Voltage Divider TS-89/AP, Phantom Antenna and Attenuator TS-74/UPM, Antenna Dipole Assy. AS-23/AP, Power Meter TS-125/AP, and Voltmeter IS-189.

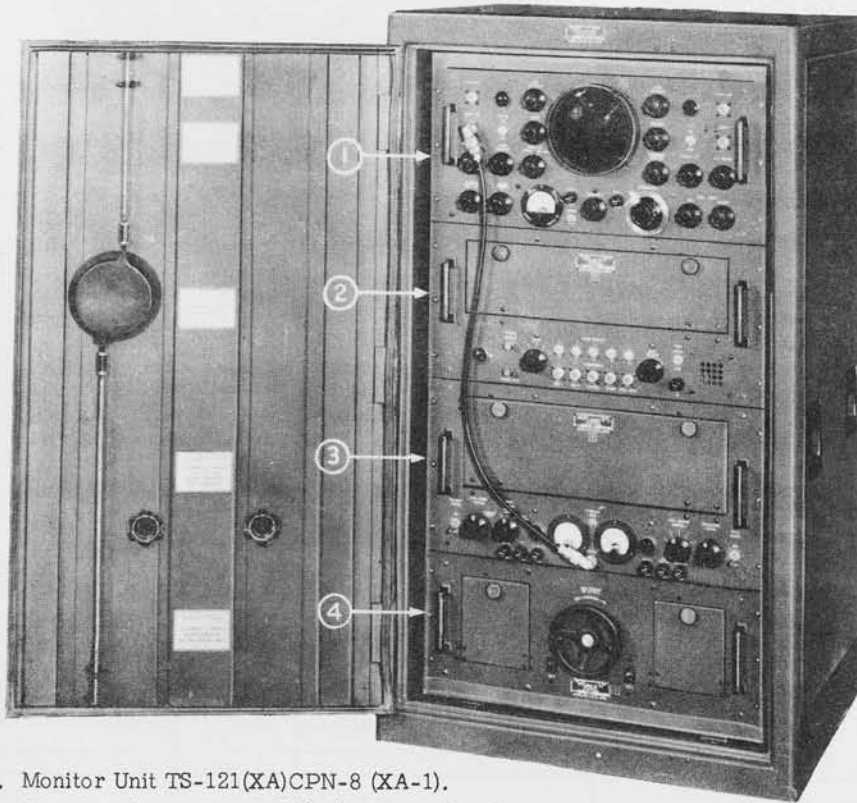
Army Air Forces requirements as of 1 February were 338 for the calendar year 1945 and 40 for 1946.

TUBE COMPLEMENT			
NO.	TYPE	NO.	TYPE
2	5R4GY	3	3B24
11	6AC7	4	6X5GT/G
3	6AG7	1	715B
2	6B4G	2	807
1	6SJ7	2	OD3/VR-150
7	6SL7GT	1	5CP1
10	6SN7GT	2	2X2
3	OC3/VR-105	2	6H6
1	2J38	1	446B or 2C40

POWER INPUT	1.3 KW @ 100-130 OR 200-260 VOLTS
POWER OUTPUT	2.25 KW (PEAK)
FREQUENCY	TRANSMITTER 3256 MC RECEIVER 3267-3333 MC
TYPE OF SIGNAL	CODED PULSE
RANGE	100 MILES
PULSE LENGTH	.5 MICRO SECONDS



Radio Set AN/CPN - 8 is an Air Transportable Radar Beacon designed to provide range, direction, and identification for homing 10 cm band radar equipped aircraft.



1. Monitor Unit TS-121(XA)CPN-8 (XA-1).
2. Receiver Coder Unit R-56(XA)CPN-8 (XA-1).
3. Modulator & Transmitter Unit T-50(XA)CPN-8 (XA-1)
4. Voltage Control Unit CN-11(XA) CPN-8 (XA-1)

RADIO SET AN/CPN-8

TOTAL WEIGHT 1900 LBS.

Component	Nomenclature	Size	Weight
Receiver Coder Unit	R-56/CPN-8	10" x 17" x 22"	73 Lbs.
Transmitter and Modulator	T-50/CPN-8	11" x 17" x 22"	110 Lbs.
Voltage Control Unit	CN-11/CPN-8	8" x 17" x 22"	64 Lbs.
Monitor Unit	TS-121/CPN-8	10" x 17" x 22"	90 Lbs.
Mast Head	AS-72/CPN-8	5" x 4" dia.	25 Lbs.
Mast Head	AS-80/CPN-8	6" x 5" dia.	30 Lbs.
Case	CY-68/CPN-8	23" x 27" x 46"	188 Lbs.
Antenna Support	AB-18/CPN-8	20" x 4" dia.	90 Lbs.
Case	CY-166/CPN-8	15" x 17" x 68"	110 Lbs.
Case (2 Operating spares)	CY-248/CPN-8	32" x 26" x 20"	450 Lbs.
Transmission Line	CG-172/CPN-8	44' long	25 Lbs.
Transmission Line	CG-173/CPN-8	48' long	25 Lbs.
Cord	CG-119/U		

and includes connecting and interconnecting cords