

Radio Set AN/CPN-6, an air transportable coded beacon for ground installation, provides range, direction and identification for the guidance of aircraft and is similar to Radio Set AN/CPN-3 but operates on a higher frequency.

This equipment is a homing beacon which, when used in conjunction with suitable airborne radar interrogator-responder equipment, will aid aircraft in navigating to a designated spot on the ground.

When attempting to home on this beacon an aircraft equipped with airborne interrogation equipment flies toward the beacon with the interrogator operating. Signals from the aircraft, when received at the beacon actuate the beacon transmitter, causing a coded group of pulse signals to be generated which are 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 accepts 2 to 5 microseconds interrogating pulses, rejecting pulses shorter than 2 microseconds or longer than 5 microseconds. A selection of 56 codes are available in each transmitter.

This equipment has a linear array of slotted wave guide elements, 12 for the receiver and 12 for the transmitter. The pattern is uniform in azimuth, 3 db down at 5 degrees above or below the horizontal. There is a special two-element broad beam antenna for shipboard installation.

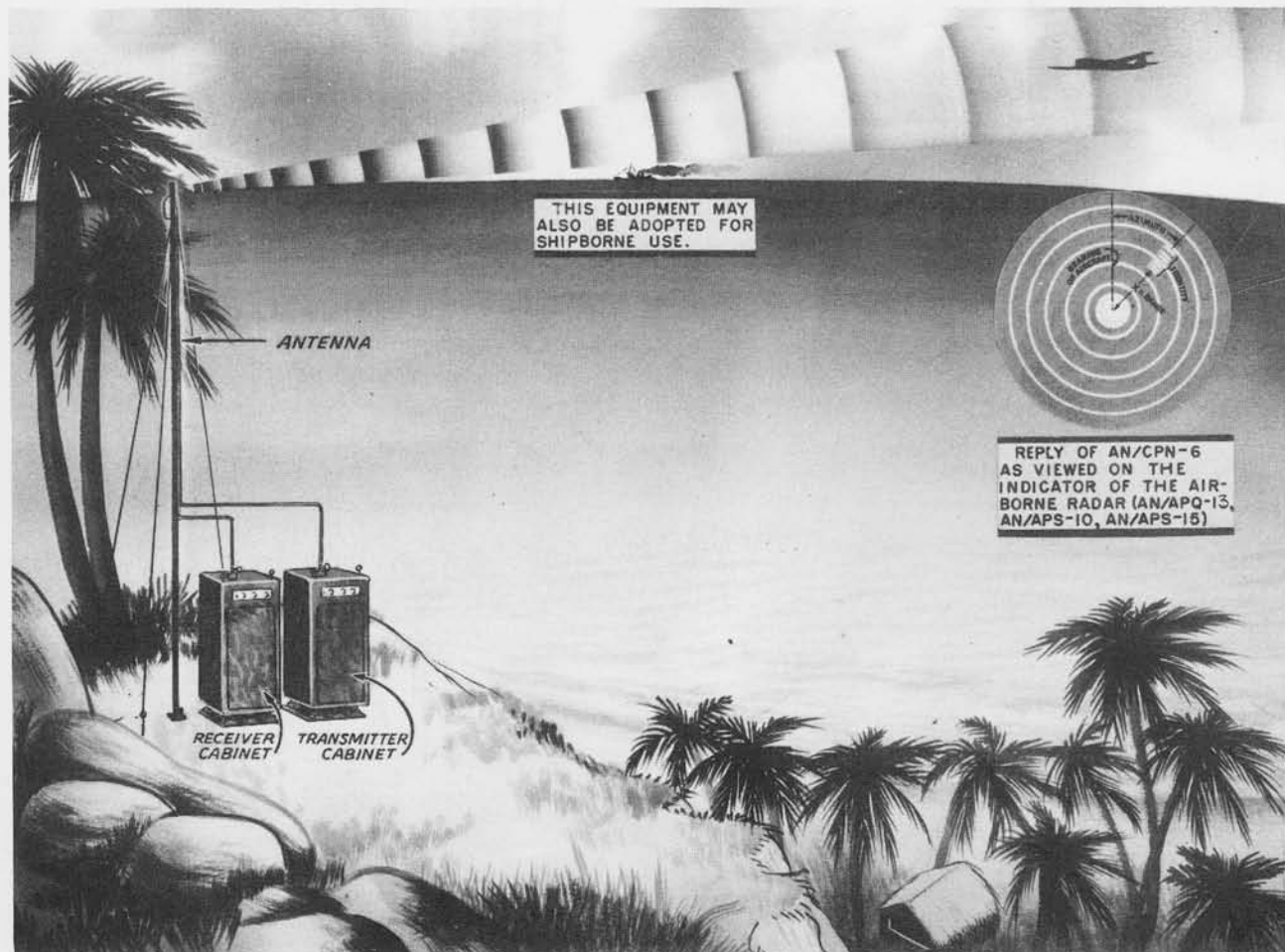
Power is obtained from a 115/230 volt, 50-70 cps source with a power consumption of 2 kilowatts and a peak power output of 25 to 50 kilowatts. Maximum range of the equipment is 100 miles.

Test equipment required for the maintenance of Radio Set AN/CPN-6 includes Detector Amplifier Assembly AN/UPA-1, Voltmeter IS-189, Synchroscope TS-28/UPM, Voltage Divider TS-89/AP, Radio Frequency Test Load TS-108/AP, Test Set TS-120/UP.

AAF requirements as of 1 February 1945 were 240 for the calendar year 1945 and 60 for 1946.

POWER INPUT	2 KW @ 115/230 VOLTS 50-70 CPS
POWER OUTPUT	25-50 KW (PEAK)
FREQUENCY	TRANSMITTER 9310 MC: RECEIVER 9320- 9430 MC
TYPE OF SIGNAL	RANGE CODED
RECEIVER SENSITIVITY	0.0004 MICROWATTS
RANGE	100 MILES
PULSE LENGTH	1/2 MICROSECOND

TUBE COMPLEMENT			
NO.	TYPE	NO.	TYPE
1	723B	5	OD3/VR-150
14	6AC7	1	6AG7
7	6SN7GT	1	815
7	6SL7GT	2	5D21
6	5R4GY	1	2J48
3	6B4G	2	705A
2	6SJ7GT	2	IN23
1	OC3/VR-105		



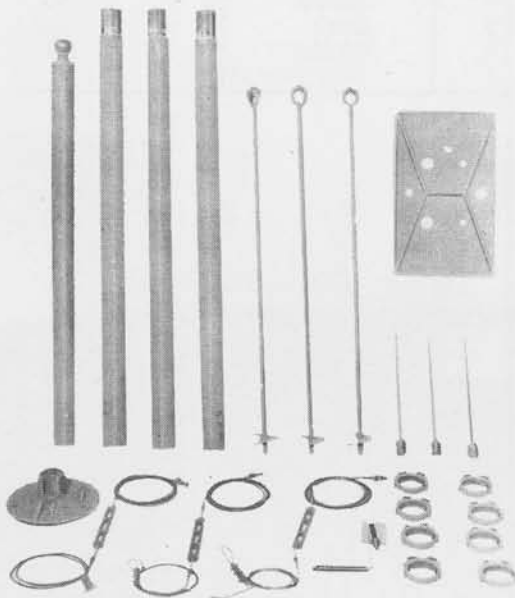
Radio Set AN/CPN-6 installed as ground station for homing identification and guidance of aircraft.



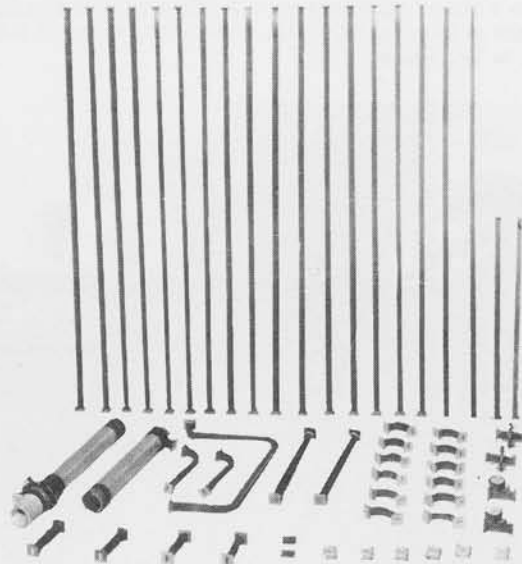
Receiver Cabinet



Transmitter Cabinet



Antenna Mast Assembly (AB-42/CPN-6)



Antenna Assembly (AS-119/CPN-6)

RADIO SET AN/CPN-6

TOTAL WEIGHT 1800 LBS.

Nomenclature	Component	Size	Weight
Antenna Assembly	AS-119/CPN-6		177 Lbs.
Antenna Mast Assembly	AB-42/CPN-6	20" x 4" dia.	193 Lbs.
Transmitter-Modulator	T-79/CPN-6	17" x 15" x 20"	115 Lbs.
Radar Receiver	R-88/CPN-6	11" x 16" x 20"	45 Lbs.
Coder	KY-6/CPN-6	11" x 16" x 20"	57 Lbs.
Modulator Driver	AM-44/CPN-6	11" x 16" x 20"	74 Lbs.
Discriminator	F-12/CPN-6		45 Lbs.
Transmitter Power Supply	PP-93/CPN-6	18" x 17" x 12"	143 Lbs.
Auto Transformer	MX-202/CPN-6	12" x 8" x 10"	66 Lbs.
Receiver Cabinet	CY-170/CPN-6	18" x 50" x 24"	265 Lbs.
Transmitter Cabinet	CY-169/CPN-6	18" x 50" x 24"	265 Lbs.

and includes set of connecting and interconnecting cords and test accessories kit.