

# UNCLASSIFIED

# CONFIDENTIAL

# AN/UPN-1

Radar Beacon AN/UPN-1, sometimes known as BUPS, is an ultra portable beacon for ground, paratroop or shipboard use having a range of 35-50 miles. The set is capable of being interrogated by airborne radars operating on beacon function and replying with a coded signal permitting the beacon to be located in range and azimuth.

Capable of transmitting five different codes, this beacon is housed in a rectangular chassis containing a control panel with a knob for selecting operation (on-off-stand-by-tune), a knob for selecting codes and a knob for tuning the transmitter. The antenna consists of a dual linear array of six dipoles each (receiving and transmitting) housed in a weatherproof plastic cylinder and having horizontal polarization. It transmits signals on 3256 mc. and receives over the frequency range of 3267 to 3333 mc.

Power is obtained from a special 12 volt battery pack with power input of 36 watts. Peak Power output of the equipment is 50 watts.

Twelve experimental d-c units were built for field tests and are now in operational use. Production deliveries were being made in April 1945.

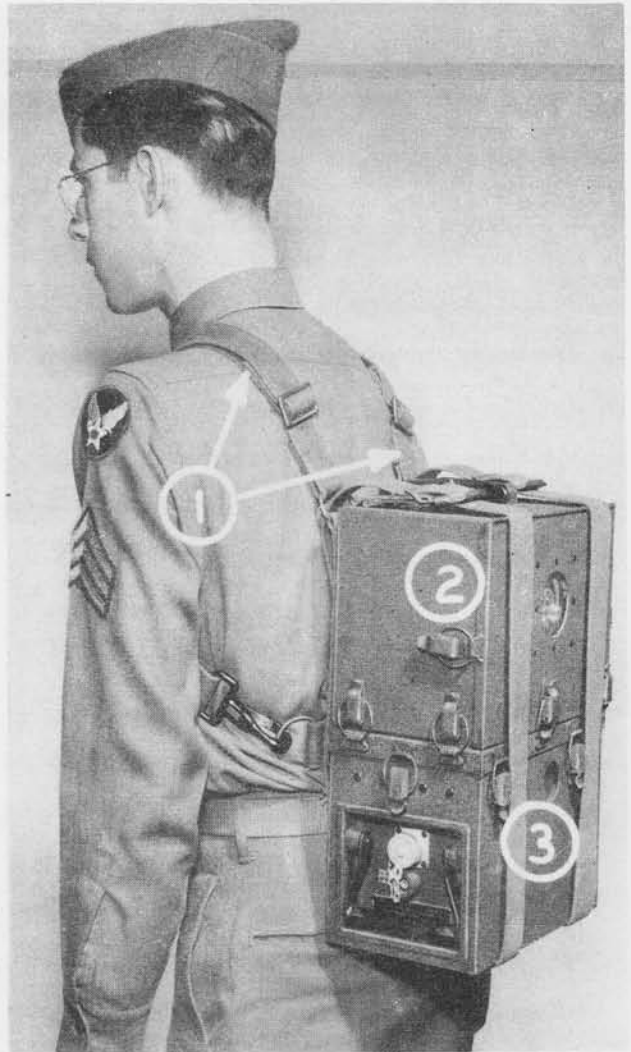
Test equipment used in the maintenance of Radar Beacon AN/UPN-1 includes Test Set TS-3/AP, Test Set TS-14/AP, Oscilloscope TS-34/AP, Voltmeters IS-185 and 189, and Audio Oscillator Hewlett-Packard 200C.

Army Air Forces requirements as of 28 February 1945 were 672 for the calendar year 1945 and 45 for 1946.



Aircraft Interrogation Triggers Beacon Reply which establishes its identity & position in range and azimuth.

July 1945



Battery Charger & Battery in carrying position-entire equipment may be packed in 2 packages & carried by one man. (1) Harness MX-253/UPN-1 (2) Rectifier Battery Charger PP-116/UPN (3) Battery Case CY-222/UPN-1.

POWER INPUT	36 WATTS AT 12 VOLTS
POWER OUTPUT	50 WATTS (PEAK)
FREQUENCY	RECEIVER 3267-3333 MC
	TRANSMITTER 3256 MC
TYPE OF SIGNAL	PULSE
TYPE PRESENTATION	CODE DISPLAY ON THE RADAR SCREEN
DATA SUPPLIED (TO AIRBORNE SET)	IDENTIFICATION, RANGE AND BEARING FROM BEACON
RANGE	35-50 MILES AIRBORNE RADAR TO GROUND
PULSE LENGTH	0.5/MICROSECONDS

TUBE COMPLEMENT			
NO.	TYPE	NO.	TYPE
5	1LN5	2	8016
2	7F8	1	446B
6	3B7/1291	2	1N27

Section 4 - Graphic Survey

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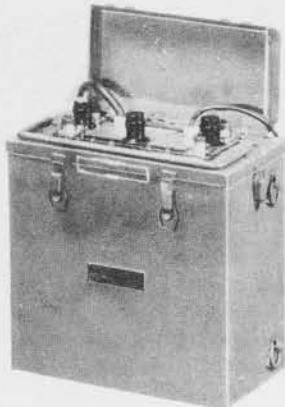
Battery Case CY-222/UPN-1



Harness MX-252/UPN-1



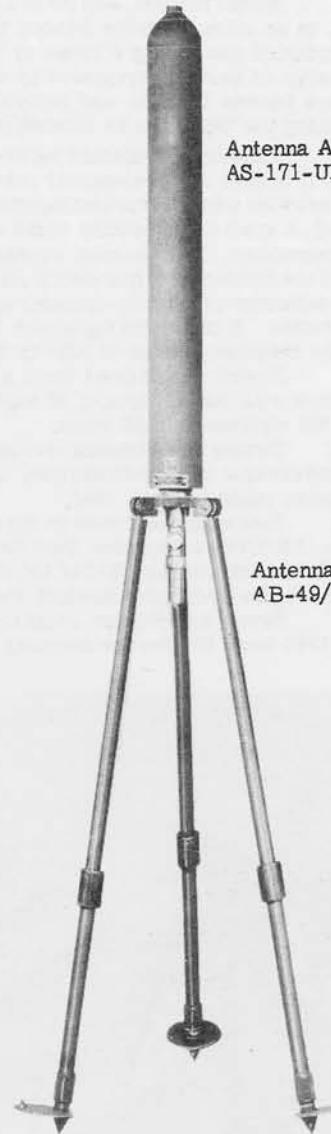
Rectifier Battery Charger  
PP-116/UPN-1



Receiver Transmitter RT-72/UPN-1



Case CY-225/UP



Antenna Assembly  
AS-171-UP

Antenna Support  
AB-49/UP

**RADAR BEACON AN/UPN-1**

**TOTAL WEIGHT 115 LBS.**

Component	Nomenclature	Size	Weight
Transponder Assembly	RT-72/UPN-1	13" x 7" x 13"	27 Lbs.
Case	CY-220/UPN-1	13" x 7" x 15"	8 Lbs.
Harness	MX-242/UPN-1		1 Lb.
*Chest	CY-221/UPN-1	13" x 13" x 9"	12 Lbs.
Battery Case	CY-222/UPN-1 (2 each)	7" x 8" x 11"	25 Lbs.
Rectifier Battery Charger	PP-116/UPN-1	7" x 8" x 11"	14 Lbs.
Harness	MX-253/UPN-1		1 Lb.
Antenna Assembly	AS-172/AP	4" x 7" x 14"	5 Lbs.
Antenna Assembly	AS-171/UP	25 1/2" x 4" Diameter	10 Lbs.
Cord	CX-237/U	50'	2 Lbs.
Cord	CG-92/U (2 each)	4' 6" long	**
Antenna Support	AB-49/UP	32" high	7 Lbs.
Case	CY-225/UP	6" x 6" x 40"	1 Lb.

\*includes operating spare parts  
\*\*weight less than one pound.