SYSTEMS

# Radiological Detection System

D-tect's Radiological Detection System is the approved replacement to the AN/PDR-77. The Base Unit, which detects Beta and Gamma radiation, acts as a common interface for six probes that can be used for specialized radiation detection applications. It was developed after the joint forces faced equipment interoperability challenges during Operation Tomadachi (the cleanup after the nuclear disaster in Fukushima, Japan).

- One of the system's defining features is its smart probe technology.
- Any RDS probe can be connected to any Base Unit without recalibration.
- 45 hours of stored data easily transferable to a computer for further analysis.
- The Base Unit is ergonomically designed and can be used with protective gloves.
- Stealth mode and headphone functionality for use in combat situations.
- Known as the AN/PDR-120, and also available through NATO Stock Numbers.

#### **Base Unit** NSN: 6665-01-671-4539

Weight	1.7 lbs (0.75 kg)
Dimensions	8" x 3.3" x 2.2" (21 x 9 x 6 cm)
Power	DC, operates on AA-size batteries
Detection	Gamma & Beta
Dose Rate Units of Measurement	Count Rate - cpm, cps. Dose/Exposure Rate - rad/hr, Gy/hr, rem/hr, Sv/hr, R/hr Total Dose/Exposure - rad, Gy, rem, Sv, R
Alarms	Audible and Visual - user specified
Headset Audio	Audio jack for headset operations
Data Logging	Records detection readings, date/time, and location
Data Storage	45+ hours of data storage
Detection	Gamma/x-ray radiation - 0.1 µGy/hr - 100+ Gy/hr Photon detection - 60 keV - 3 MeV Beta detection - 200 keV - 3 MeV Neutron & Alpha detection with external probe
Typical Sensitivity	2.7 cps/µGy/hr

# FEATURES

- Common Base Unit Interface
- 6 Individual Probes
- Smart Probe Technology
- 45 Hours of Data Storage

#### Alpha-Beta Probe NSN: 6665-01-671-4479

Weight	1.9 lbs. (0.86 kg)
Dimensions	11.6" x 3.7" x 3.8" (22 x 9 x 10 cm)
Power	Powered by the base unit
e Rate Units	Count Rate - cpm, cps. Count Rate per Unit Area - cpm/cm², cps/cm²
Detection	Alpha range - 3 MeV - 8 MeV Beta range - 10 keV - 5 MeV



Dose

#### Sensitive Gamma Probe NSN: 6665-01-671-4250

Weight	1.3 lb. (0.58 kg)
Dimensions	12.49" x 1.95" x 1.65" (32 x 5 x 4 cm)
Power	Powered by the base unit
Dose Rate Units	Count Rate - cpm, cps.
	Exposure Rate - µR/hr
Detection	Gamma range - 50-5000 µR/hr
	Gamma energy range - 30 keV - 1.5 MeV
Typical Sensitivity	500 cps/µGy/hr





#### **D-tect** Radiological Detection System

## ABG Pancake Probe

#### NSN: 6150-01-671-4413

Weight Dimensions Power Dose Rate Units

Detection

1 lb. (0.47 kg) 5.4" x 2.7" x 4.7" (14 x 7 x 12 cm) Powered by the base unit Count Rate - cpm, cps Count Rate per Unit Area - cpm/cm2, cps/cm2 Beta range - 100 keV - 5 MeV



### **Beta-Photon Probe**

NSN: 6665-01-671-4352

Weight	0.78 lb. (0.35 kg)
Dimensions	9.3" x 1.2" x 1.6" (24 x 3 x 4 cm)
Power	Powered by the base unit
	Count Rate - cpm, cps
Dose Rate Units	Dose/Exposure Rate - rad/hr, Gy/hr, rem/hr,
	Sv/hr, R/hr
	Total Dose/Exposure - rad, Gy, rem, Sv, R
Detection	Photon range - 60 keV - 3 MeV
	Beta range - 200 keV - 3 MeV
	Gamma/x-ray - 0.1 µGy/hr to 100 Gy/hr
Typical Sensitivity	2.7 cps/µGy/hr

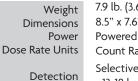


# FIDLER Probe

NSN: 6665-01-671-4239

Weight	11.8 lb. (5.33 kg)
Dimensions	8.3" x 8.3" x 12.4" (21 x 21 x 32 cm)
Power	Powered by the base unit
	Count Rate - cpm, cps
Dose Rate Units	Dose/Exposure Rate - mRad/hr, μGy/hr, mrem/hr, μSv/hr
Detection	Total Dose/Exposure - mRad, µGy, mrem, µSv
	Neutron energy range - thermal (0.025 eV) - 15 MeV
Typical Sensitivity	50 cpm/µSv/hr

**Neutron Probe** NSN: 6665-01-671-4376



7.9 lb. (3.60 kg) 8.5" x 7.6" x 17.2 - 26.7" (22 x 19 x 44-68 cm) Powered by the base unit Count Rate - cpm, cps

- Selective Detection
- 13-18 keV (L x-rays)
- 59-60 keV (Am-241)
- 143-220 keV (U-235)
- 13-220 keV (gamma)





Telescoping Probe Handle

MARIA



2.8 lbs. (1.27 kg) 39.8" x 1.4" (101 cm x 4 cm) Extended: 127" x 1.4" (323 cm x 4 cm)



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