

MANPACK F81

Tactical HF Manpack System



The MANPACK F81

A military-grade, fully integrated tactical manpack system. It combines the long-range communication power of the Icom IC-F8101 HF Land Mobile Transceiver with an advanced, rugged exoskeleton infrastructure featuring a built-in 300Wh portable power station. Engineered for defense, disaster response, and remote field operations, this all-in-one tactical pack provides continuous, long-distance communication without relying on regional infrastructure.



125W

125W

HF RADIO POWER



300WH

BUILT-IN BATTERY



Rugged Armor
Exoskeleton



MIL-Spec
Durability



Multi-Device
Power Hub



MODULAR BACKPACK, POWER STATION & ANTENNA TRIPOD ALL-IN-ONE



Reinforced Combat
Exoskeleton



Dual Tactical
Antenna Mounts



300Wh Integrated
Command Battery



Heavy-Duty Radio
Radio Cradle Dock



Weather-Sealed
Accessory Pouches

KEY SYSTEM SPECIFICATION

Feature

Radio Transceiver
Mode
Frequency Coverage

Frequency Stability
RF Output Power
Channel Capacity
Integrated Battery

Power Output Ports
Solar Charging Ports
Environment Protection
Chassis Material
Net Weight

Antenna Type
Input Power
Element Length
Antenna Tuner

Technical Specification

Icom IC-F8101 HF Transceiver
J3E, A3E, A1A, F1B, J2B
Receive: 0.5 - 29.9999 Mhz
Transmit: 1.6 - 29.9999 Mhz
min. +/- 0.5 ppm
Selectable 125W, 50W, or 10W PEP
500 Programmable Channels / 500 ALE / 500 Selcall Memories
300Wh High-Capacity Lithium (LFP) Power Station with Dynamic LCD
Display (Detachable).

2x USB-C (100W PD), 2x USB-A, Dual AC Outlets, 120W DC
Supports up to 25W Solar Panel on-the-go charging
IP54 Dust & Water Resistant Radio (MIL-STD-810-G Framework)
High-Strength, Heavy-Duty Composite Exoskeleton and Backpack
15kg

Dipole Antenna
100W
25000mm Max
ICOM AH-705

CORE PERFORMANCE FEATURES

Unmatched Long-Range HF Communication



- **125W PEP Output Power:** Delivers maximum signal propagation across vast distances over mountain ranges and remote terrains.
- **Automatic Link Establishment (ALE):** Automatically finds, tests, and locks onto the optimum available HF channel for stable transmission.
- **Selective Calling (Selcall):** Supports CCIR493-4 based 4-digit and 6-digit signaling for dedicated message, position, and emergency calls.
- **Digital Signal Processing (DSP):** Features Icom's Clear Talk technology to separate voice signals from background ambient noise.

Autonomous Field Power Infrastructure



- **300Wh Command Center:** Powers the HF transceiver at full operational duty cycles while simultaneously charging field laptops, drones, or satellite devices via 100W Power Delivery (PD) USB-C lines.
- **Solar Harvesting Loop:** Integrates directly with auxiliary tactical solar blankets to replenish energy reserves while on foot.

Ergonomic Exoskeleton Carrier



- **Shock-Absorbing Cage:** Structural outer framework absorbs blunt impacts, shielding critical radio modules and terminal connections from harsh drops.
- **Modular Rigging System:** Equipped with up to 16 universal anchor points and a comprehensive MOLLE system to secure field gear, antennas, and tools.
- **Weight Distribution Control:** Multi-level shoulder and lumbar straps reduce fatigue during long field marches.