HARRIS®

AN/PRC-117F(C)

MULTIBAND
MULTIMISSION RADIO

APPLICATIONS HANDBOOK

FALCON®II SERIES
THE NEXT GENERATION

Introduction

For missions requiring reliable, interoperable communications, Harris has developed the FALCON® II AN/PRC-117F(C), the most advanced multiband, multimode manpack radio in the world… period.

The AN/PRC-117F(C) integrates the capabilities of several distinct radios into one: VHF-FM for combat net radio; VHF-AM for public safety and ground-to-air; UHF-AM for military ground-to-air and UHF TACSAT communications. This radio also utilizes the latest technology to embed many advanced features, such as SINCGARS, HAVEQUICK, as well as Type I encryption. With integrated crypto functions, including black-key management and Crypto Ignition Key (CIK), the AN/PRC-117F(C) is a complete communications package allowing interoperability with all military services in secure and non-secure communications.

And being a software defined radio helps make the FALCON II radios future proof. As new technology and waveforms are developed, you can upgrade your FALCON II systems to be compatible with future radios such as the Joint Tactical Radio System (JTRS) radios…and they will remain compatible with your radios currently in the field.

The AN/PRC-117F(C) manpack can be packaged for vehicular, transit case, or base station applications and we offer a number of accessories and antennas to complete your system.

This Applications Handbook defines the AN/PRC-117F(C) radios and their components, and also helps with your selection of antennas and accessories.

AN/PRC-117F(C)

The AN/PRC-117F(C) is an advanced multiband multimission manpack radio, which provides reliable tactical communications through U.S. Government Type 1 encryption for enhanced secure voice (COMSEC, TRANSEC), high-speed data, ECCM and SATCOM capabilities. The removable keypad/ display unit enables operation on-the-move and acts as a Crypto Ignition Key (CIK) when removed and declassifies a keyed radio.

The AN/PRC-117F(C) transceiver provides continuous frequency coverage from 30 to 512 MHz and delivers a selectable power output (10W FM – low band VHF/20W PEP AM/FM – highband VHF/UHF). Its digital design is fully-programmable for software-based upgrades. A menu-driven interface makes operation easy. One hundred user-defined net presets provide complete radio configuration including radio operating mode, modem setting, COMSEC and TRANSEC keys.

Standard features include: TSEC/KY-57 and ANDVT/ MELP/ KYV-5 voice/data, Fascinator voice, and KG-84C data capability; Transmit and Receive SARK; Embedded DAMA and SATCOM modem (MIL-STD-181B, 182- /A, 183- /A); SINCGARS (ESIP) and Havequick I/II ECCM; embedded data modems with both synchronous and asynchronous interfaces; full remote control capability via the RS232/RS422 interface port; multiband scan allowing the user to scan up to 10 presets in any or all of the frequency bands; black retransmission capability (the ability to operate as a retransmission site without decrypting the retransmitted traffic); cross banding (the ability to retransmit from one net to another net in a different frequency band); radio-to-radio preset cloning, a swept frequency distress beacon (available in any channel), CTCSS tone support for LMR (Land Mobile Radio) repeaters, and an external interface for PLGR and NMEA-protocol GPS units.

Also standard is the High Performance Waveform (HPW) and the High Speed Modem. The High Performance Waveform securely transfers files between external computers over 5 and 25 kHz SATCOM or Line-of-Sight links three to five times faster than previously fielded equipments. The waveform's advanced techniques include: high-speed over-the-air data rates (up to 56 kbps), error free data delivery to COMSEC using black-side Automatic Repeat-Request (ARQ), automatic waveform adaption based on varying channel conditions, and retransmission combining with soft decisions.

The High Speed Modem provides high-speed data over fixed frequency nets at 48 and 64 kbps. This supports applications that require the transmission of large amounts of data. The modem can be used with the embedded digital encryption to provide secure high speed data capabilities.

The AN/PRC-117F(C) includes:

- R/T-1796(P) Manpack Radio
- Battery Box 10513-4800-07
- Manual 10515-0109-4100
- Quick Reference Guide 10515-0109-4000
- Handset 10075-1399
- VHF Blade Antenna 10012-0202
- VHF Blade Flexible Adapter A3140084-2
- VHF/UHF Flex Antenna 10369-0205
- Antenna Bag CW-503/PRC-25
- 6-foot KDU extension cable 10511-0704-12
- Data/Remote Cable 10513-0730-A2
- PPP/HPW Cable 10513-0710-A006
- HPW Software on CD-ROM 10518-8811-02
- Radio Programming Application RF-6550F

Optional Features

These optional features must be ordered with new AN/PRC-117F(C) radios. For software upgrades to existing radios, please refer to the Software Update section.

10513-8141 Embedded IP

The Embedded Internet Protocol (IP) capability of the AN/PRC-117F(C) enables high performance tactical IP networking over UHF tactical satellite communications channels and for Line-of-Sight communications through simple and flexible system configurations.

10513-8142 Wireless Cloning

This option provides radio-to-radio preset cloning of all 110 radio nets over-the-air (OTA). No external cables are needed. A unique user-defined TRANSEC key and frequency provides enhanced security by encrypting the data sent over the air.

AN/PRC-117F(C)-HQ

Ground-to-Air HAVEQUICK I/II Capable Radio

The AN/PRC-117F(C)-HQ is an advanced multiband multimission manpack radio, which provides reliable tactical communications through U.S. Government Type 1 encryption for enhanced secure voice (COMSEC, TRANSEC), high-speed data, ECCM capabilities. The removable keypad/display unit enables operation on the move and acts as a Crypto Ignition Key (CIK) when removed and declassifies a keyed radio.

The AN/PRC-117F(C)-HQ transceiver provides continuous frequency coverage from 30 to 512 MHz and delivers a selectable power output (10W FM – low band VHF/20W PEP AM/FM – highband VHF/UHF). Its digital design is fully-programmable for software-based upgrades. A menu-driven interface makes operation easy. One hundred user-defined net presets provide complete radio configuration including radio operating mode, modem setting, COMSEC and TRANSEC keys.

Standard features include: TSEC/KY-57 voice/data, Fascinator voice, and KG-84C data capability; Transmit and Receive SARK; and Havequick I/II ECCM; embedded 16 kbps modem with both synchronous and asynchronous interfaces; full remote control capability via the RS232/RS422 interface port; multiband scan allowing the user to scan up to 10 presets in any or all of the frequency bands; black retransmission capability (the ability to operate as a retransmission site without decrypting the retransmitted traffic); cross banding (the ability to retransmit from one net to another net in a different frequency band); radio-to radio preset cloning, a swept frequency distress beacon (available in any channel), CTCSS tone support for LMR (Land Mobile Radio) repeaters, and an external interface for PLGR and NMEA-protocol GPS units.

The AN/PRC-117F(C)-HQ includes:
- R/T-1796(P),HQ Manpack Radio
- Battery Box 10513-4800-02
- Manual 10515-0109-4100
- Quick Reference Guide 10515-0109-4000
- Handset 10075-1399
- VHF Blade Antenna 10012-0202
- VHF Blade Flexible Adapter A3140084-2
- VHF/UHF Flex Antenna 10369-0205
- Antenna Bag CW-503/PRC-25
- 6-foot KDU extension cable 10511-0704-12
- Data/Remote Cable 10513-0730-A2
- Radio Programming Application RF-6550F

Optional Features

These optional features must be ordered with new AN/PRC-117F(C)-HQ radios. For software upgrades to existing radios, please refer to the Software Update section.

10513-8142 Wireless Cloning

This option provides radio-to-radio preset cloning of all 110 radio nets over-the-air (OTA). No external cables are needed. A unique user-defined TRANSEC key and frequency provides enhanced security by encrypting the data sent over the air.

AN/PRC-117F(C) and VRC-103
Software Upgrade Kits

Existing customers of the Advanced Multiband Multimission Tactical Radio System can upgrade the features in their fielded radios to the latest capabilities. All features are suitable for either the AN/PRC-117F(C) or the AN/VRC-103. Except as noted, these upgrades are provided as software only and can be performed in any location where the proper tools can be used. The basic upgrade kit consists of a CD ROM that contains the programming application wizard that guides the operator through the process. Using the remote control cable supplied with each radio and a Windows compatible personal computer, a radio can be upgraded in several minutes. Please contact Harris for detailed information regarding programming compatibility and radio configurations.

10513-8121-01
MIL-STD-188-181B Upgrade

The MIL-STD-188-181B software only upgrade provides the latest high-speed SATCOM data capability for the AN/PRC-117F(C). All data rates in both 5 kHz and 25 kHz UHF SATCOM channels are supported.

10513-8122-01
SINCGARS ESIP and Mode 2/3 Fill Upgrade

The SINCGARS ESIP upgrade provides additional data capability for the AN/PRC-117F(C) in SINCGARS VHF frequency operation, including full Tactical Internet capability when used in conjunction with an external data device. Complete interoperability with SINCGARS ESIP radios is assured. In addition, enhanced mode 2/3 fill operation for combined COMSEC/TRANSEC fill is supported. This upgrade requires hardware modifications that must be performed at Harris.

10513-8123-01
MIL-STD-188-182A and 183A DAMA Upgrade

The MIL-STD-188-182A and -183A software only upgrade provides the latest Demand Assigned Multiple Access SATCOM capability for the AN/PRC-117F(C). All data rates in both 5 kHz and 25 kHz UHF SATCOM channels are supported.

10513-8124-01
Embedded IP Upgrade

The Embedded IP software upgrade can be used with radios that contain ICP software version 1.8 or later. The embedded Internet Protocol (IP) capability of the AN/PRC-117F(C) enables high performance tactical networking over UHF tactical SATCOM channels and for Line-of-Sight communications through simple and flexible system configurations. Embedment of the IP capability into the AN/PRC-117F(C) radio provides unsurpassed performance capitalizing on the existing HPW high-speed waveform technologies in the radio and eliminates the need for external front-end IP devices. Because they both use the same channel access technology, IP networks can share channels with HPW networks. The AN/PRC-117F(C) network parameters can be configured through the radio front panel via remote control or via existing Network Management Systems using the Simple Network Management Protocol (SNMP).

10513-8124-02
Embedded IP with Hardware Upgrade

AN/PRC-117F(C) radios that contain ICP software version 1.73 or earlier require a hardware upgrade that must be performed at Harris in order to obtain the Embedded IP software upgrade. The embedded Internet Protocol (IP) capability of the AN/PRC-117F(C) enables high performance tactical networking over UHF tactical SATCOM channels and for Line-of-Sight communications through simple and flexible system configurations. Embedment of the IP capability into the AN/PRC-117F(C) radio provides unsurpassed performance capitalizing on the existing HPW high-speed waveform technologies in the radio and eliminates the need for external front-end IP devices. Because they both use the same channel access technology, IP networks can share channels with HPW networks. The AN/PRC-117F(C) network parameters can be configured through the radio front panel via remote control or via existing Network Management Systems using the Simple Network Management Protocol (SNMP).

VEHICULAR ADAPTER/ AMPLIFIERS

AN/VRC-103(V)1

Vehicular Adapter / Power Amplifier

The AN/VRC-103(V)1 provides a vehicular mounting and power amplification option for the AN/PRC-117F(C). The amplifier provides a 50-watt output in FM mode from 30 to 512 MHz, and 50-watts PEP in AM mode from 90 to 512 MHz. Integrated into the amplifier is a hopping collocation filter for 30 to 90 MHz VHF and a SATCOM collocation filter to provide enhance collocation performance in demanding RF environments. The AN/VRC-103(V)1 operates from a 26 VDC source. The AN/VRC-103(V)1 includes an AN/PRC-117F(C) radio, the AM-7588 power amplifier, a shock mount, operators guide, and cables to connect the radio to the amplifier. In addition, the necessary accessories to allow manpack operation using the AN/PRC-117F(C) as a jerk-and-run configuration are included. **Interconnecting cables from the VRC-103(V)1 to the antenna or to the vehicle power system are not included.**

For connection to a vehicle power supply, use the 10570-0720-01/-02 or the 12013-0716-A025 Vehicle Power Cables. See the Accessories section.

The AN/VRC-103(V)1 can be operated from an AC source using the RF-5051PS-125C or a RF-5055PS Power Supply, and a 10570-0716-A006 / -A025 cable. See the Accessories section.

AM-7588

50 Watt Power Amplifier

The AM-7588 is the power amplifier for the AN/VRC-103(V)1. Existing owners of the AN/PRC-117F(C) can purchase the AM-7588 to create an AN/VRC-103(V)1. The AM-7588 provides a 50-watt output in FM mode from 30 to 512 MHz, and 50-watts PEP in AM mode from 90 to 512 MHz. Integrated into the amplifier is a hopping collocation filter for 30 to 90 MHz VHF and a SATCOM collocation filter to provide enhance collocation performance in demanding RF environments. The AM-7588 operates from a 26 VDC source, and includes, a shock mount, operators guide and cables to connect the AN/PRC-117F(C) manpack to the amplifier.

AN/VRC-103(V)2

Advanced Multiband Multimission Tactical Radio System Vehicular/Base Station Adapter with the VHF and UHF Collocation Filter Options

The AN/VRC-103(V)2 provides a vehicular mounting and power amplification option for the AN/PRC-117F(C). The amplifier provides a 50-watt output in FM mode from 30 to 512 MHz, and 50-watts PEP in AM mode from 90 to 512 MHz. Integrated into the amplifier is a hopping collocation filter for 30 to 90 MHz VHF, a SATCOM collocation filter, and a UHF filter collocation to provide enhance collocation performance in demanding RF environments. The AN/VRC-103(V)2 operates from a 26 VDC source. The AN/VRC-103(V)2 includes an AN/ PRC-117F(C) radio, the AM-7588A power amplifier, a shock mount, operators guide and cables to connect the radio to the amplifier. In addition, the necessary accessories to allow manpack operation using the AN/PRC-117F(C) as a jerk-and-run configuration are included. **Interconnecting cables from the VRC-103(V)2 to the antenna or to the vehicle power system are not included.**

For connection to a vehicle power supply, use the 10570-0720-01/-02 or the 12013-0716-A025 Vehicle Power Cables. See the Accessories section.

The AN/VRC-103(V)2 can be operated from an AC source using the RF-5051PS-125C or a RF-5055PS Power Supply, and a 10570-0716-A006 / -A025 cable. See the Accessories section.

AM-7588A

Power Amplifier

The AM-7588A is the power amplifier for the AN/VRC-103(V)2. Existing owners of the AN/PRC-117F(C) can purchase the AM-7588 to create an AN/VRC-103(V)2. The AM-7588 provides a 50-watt output in FM mode from 30 to 512 MHz, and 50-watts PEP in AM mode from 90 to 512 MHz. Integrated into the amplifier is a hopping collocation filter for 30 to 90 MHz VHF and a SATCOM collocation filter to provide enhance collocation performance in demanding RF environments. The AM-7588A operates from a 26 VDC source, and includes, a shock mount, operators guide, and cables to connect the AN/PRC-117F(C) manpack to the amplifier.

Amplifier Accessories
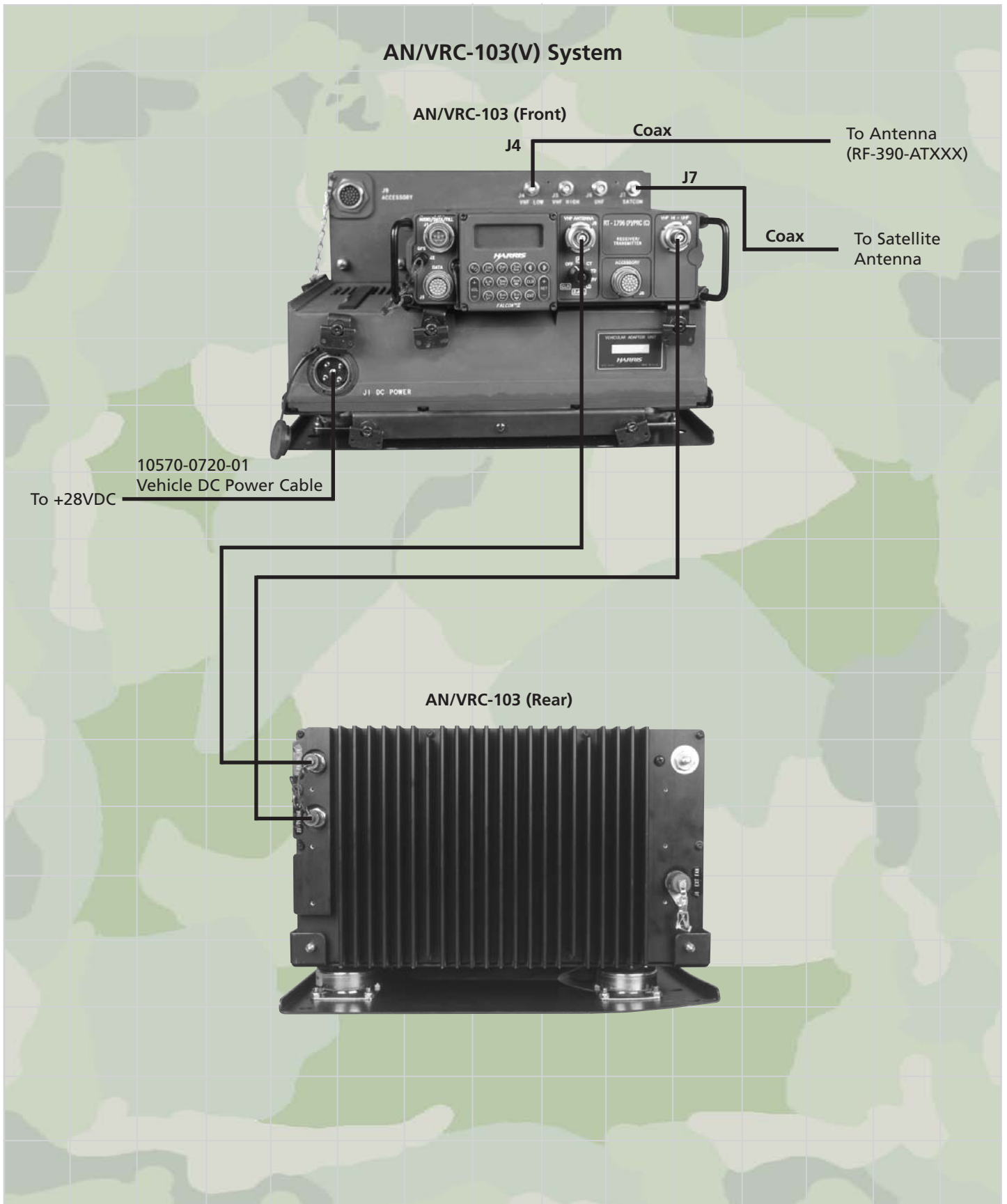
12005-7100-01
External Fan Kit

The External Fan Kit extends the transmission time of the amplifiers when operating at high ambient temperatures. The kit mounts to the rear heat sink assembly, and is automatically controlled to turn on and cool the amplifier when a preset internal temperature is reached. The kit includes fans, mounting brackets, and a power cable that connects to the rear of the amplifier. The kit is compatible with the AN/VRC-103(V)1, AN/VRC-103(V)2, AM-7588, and the AM-7588A.

12005-1200
Locking Kit

The Locking Kit provides a method to secure either the AN/VRC-103(V)1 or AN/VRC-103(V)2 with a user-supplied lock.

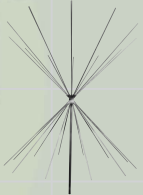## AN/VRC-103 *System Interconnect Diagram*

AN/VRC-103(V) System

AN/VRC-103 (Front)

Coax — To Antenna (RF-390-ATXXX)

J4

J7

Coax — To Satellite Antenna

10570-0720-01
Vehicle DC Power Cable

To +28VDC

AN/VRC-103 (Rear)

BASE STATION ANTENNAS

RF-9070

VHF / UHF Base Station Antenna - 100 to 420 MHz

An omnidirectional, biconical base station antenna. Power handling capability is 400 watts. The antenna comes with a 10-foot coaxial cable with a Type N female on the radio end. Mounting is by a 1.3-inch threaded hole for the RF-9071 mast. See RF-9071 Mounting Mast.

NOTE: This antenna does not cover 30 to 80 MHz. See the RF-9072-AT001 below.

RF-9071

Mounting Mast for the RF-9071

Mounting Mast for RF-9070 Antenna. It provides a 6.5-foot length of 1.3-inch diameter mast complete with mounting clamps. The mast is threaded at one end for use with the RF-9070 antenna.

RF-9072-AT001

VHF Low Band Base Station Antenna - 30 to 108 MHz

An omnidirectional, discone base station antenna. Power handling capability is 100 watts. The antenna has a Type N female connector, and is supplied with a mounting arm that attaches to any vertical mast or tower.

MANPACK ANTENNAS

10512-0201-01

VHF Blade Antenna Kit - 30 to 108 MHz

The kit includes the 10012-0202 48-inch flexible blade antenna with an adjustable "gooseneck" base. One is supplied with each AN/PRC-117F(C) radio.

10512-0240-01

VHF Whip Antenna - 30 to 108 MHz

An 8.7-foot whip antenna built of collapsible sections, with a spring base adapter. Provides better performance than the 10512-0201-01 VHF blade antenna.

10369-0205
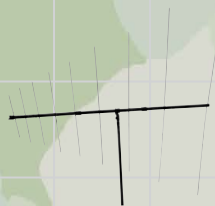
VHF/ UHF Antenna - 90 to 512 MHz

This is a 13-inch dual-band antenna with a swivel base for VHF High Band and UHF. One is supplied with each AN/PRC-117F(C) radio.

TACTICAL ANTENNAS

RF-289B-AT001

Tactical VHF Low-Band Antenna, 30 to 108 MHz

The RF-289B is a tactical, log-periodic antenna system for use from 30 to 108 MHz. The forward gain-over-average soil condition is 7.0 dBi with a front-to-back ratio of 15 dB. This antenna may be configured in vertical or horizontal polarization. The antenna system comes packaged in two canvas bags containing the antenna, a sectional 20-foot mast, 50 feet of coax cable, ground stakes, a mounting base, guy ropes, and a hammer. The antenna has a BNC connector.

RF-290

Tactical VHF Low-Band Omnidirectional Antenna, 30 to 88 MHz

The RF-290 is an easily erected, transportable Bicone antenna designed for use from 30 to 88 MHz, though it

is usable up to 108 MHz. The system comes packaged in a canvas bag containing the antenna, a 3-foot mast, an 80-foot coax cable with BNC connectors, ground stakes, a mounting base, guy assemblies, and a hammer.

RF-291-AT001

Tactical VHF High / UHF Omnidirectional Antenna, 100 to 512 MHz

The RF-291 is an omni-directional transportable discone antenna designed for use from 100 to 512 MHz, though it is usable up to 1,000 MHz. The 12-lb antenna is easily deployed on the sectional 8.5-m mast. Antenna, mast, guy-lines, a 15-m coax cable with BNC connectors, and ground stakes all stow in a canvas bag for transportability. The antenna is deployable in less than 15 minutes.

SATCOM ANTENNAS

RF-3080-AT001

SATCOM Antenna, 240 to 400 MHz

The antenna is a rapid deploy, high gain, crossed yagi antenna for SATCOM communications. It folds down to a compact 18.5 x 6 x 6 inch package and is 40 x 24 x 24 inches when deployed. This antenna provides +7.0 to 11 dBic gain with right hand polarization. The 3 dB beamwidth is 85 in. The RF-3080-AT001 includes the crossed dipole driven elements, a set of reflectors, two director extension kits, tripod, a coaxial cable with BNC connectors, carrying case, and instructions. Deployment time is less than one minute.

12006-9000-01

High-Gain, Foldable SATCOM Antenna

This SATCOM antenna is a high gain, crossed yagi antenna for applications that require more gain in a tactical package. This antenna provides +9.0 to 15 dBic gain with right hand polarization. The antenna weighs 35 lbs. and can be broken down and transported in the carrying bag provided.

12006-9001-01

X-WING SATCOM Antenna – Bolt Mount

The X-WING SATCOM antenna allows bolt on for permanent installation onto vehicles, shelters and other metal objects. The rugged design allows the antenna to be used for SATCOM-On-The-Move (SOTM) operations.

12006-9002-01

X-WING SATCOM Antenna – Magnet Mount

The X-WING SATCOM antenna has magnetic mounts allowing temporary installations onto vehicles, shelters, and other metal objects. The rugged design and magnet mounts are strong enough to allow the antenna to be used for SATCOM-On-The-Move (SOTM) operations.

12006-1010-01

Tripod Mount for RF-390-AT00x Antenna

This tripod mount allows the use of the RF-390-AT00x Vehicular Whip in a tactical application. The mount consists of three legs and a center base for attaching the RF-390 antenna. The three legs also act as a ground plane for the antenna. The tripod stands at approximately 7 feet and can be broken down and transported in the carry bag provided. The RF-390 Antenna is not included.

VEHICLE ANTENNAS

RF-387-AT001

VHF Low-Band Whip Antenna 30 to 108 MHz – Center Fed

The RF-387-AT001 is a vehicular center-fed whip antenna with a flexible spring feed-through mounting base. 100 Watts. This antenna does not need a good ground plane. Length is 120-inches nominal whip height, 131-inches including mounting base. The antenna mounts directly to an RF-292 Mounting Base, which should be ordered separately. Color: RF connector is a BNC female connector on underside of the base.

RF-390-AT00x

VHF/UHF Vehicular Whip Antenna 30 to 512 MHz – End Fed

The RF-390-AT00x multiband vehicular whip antenna is an end-fed vertical whip for use from 30 to 512 MHz. The exceptional bandwidth is obtained from distributive passive components along the antenna's length. Antenna length is 110 inches. The RF-390-AT001 has equivalent gain to other narrowband antennas. This antenna is the ideal choice for multiband radios because it reduces the vertical signature by replacing three antennas with a single antenna. The antenna comes with single or dual port to be compatible with both its AN/PRC-117F(C) and the vehicular adapters. The feed-through spring base mounts directly to the RF-292 Universal Antenna Mount, which should be ordered separately.

The RF-390-AT00x antenna is available in different colors and different connectors:

RF-390-AT001	Dual BNC port CARC Green 383
RF-390-AT002	Dual BNC port CARC Tan
RF-390-AT003	Single Type N port CARC Green 383
RF-390-AT004	Single Type N port CARC Tan
RF-390-AT005	Single BNC port CARC Green 383
RF-390-AT006	Single BNC port CARC Tan

RF-394

VHF High-Band Vertical Antenna, 116 to 174 MHz – Center Fed

The RF-394 is a military-grade, center-fed, broadband dipole antenna covering the 116- to 174- MHz frequency range (70 watts max). This 42-inch (1.1-m) antenna installs on the standard mounting brackets found on most military vehicles or ships or the RF-292 Universal Antenna Mount, which should be ordered separately. The unit includes the antenna and its mounting hardware. RF connector is BNC female.

RF-397

UHF Vertical Antenna, 225 to 420 MHz – Center Fed

The RF-397 is a military-grade, center-fed, broadband dipole antenna covering the 225- to 420- MHz frequency range (60 watts). This 33.5-inch (0.9-m) antenna and spring mount installs on the standard mounting brackets found on most military vehicles or ships or the RF-292 Universal Antenna Mount, which should be ordered separately. The unit includes the antenna and mounting hardware. RF connector is type N female.

RF-398-01

VHF Low-Band Vertical Antenna, 30 to 90 MHz – End Fed

The RF-398-01 is a vertically polarized, end-fed monopole antenna useable from 30 to 90 MHz (70 watts max). The low profile, EMP protected, vehicular antenna is designed for installation where short antenna length (75 inches) or low detect-ability is desired. The feed-through spring mounts directly to an RF-292 Universal Antenna Mount, which should be ordered separately. A tie down is included. RF connector is BNC female.

RF-398-03

VHF Low-Band Vertical Antenna, 30 to 108 MHz – Center Fed

The RF-398-03 is a center-fed dipole, vertically polarized whip antenna useable from 30 to 108 MHz (100 watts maximum). The EMP protected, broadband antenna is designed for permanent mounting on vehicles, shelters, towers, etc. The RF-398-03 does not require a good ground plane for optimum performance. Therefore, it is ideal for tower or rooftop installations where good ground plane is not available. The unit consists of two fiberglass-radiating sections and a mount with a flexible

spring, and includes the antenna sections, a base, tie down kit, and mounting hardware. The antenna mounts directly to an RF-292 Universal Antenna Mount for vehicular mounting or the RF-1584 Antenna Mast Mount for mast mounting. The RF-292 and RF-1584 mounts are ordered separately. RF connector is BNC female.

ANTENNA ACCESSORIES

RF-292

Universal Antenna Mount

The RF-292 is used to mount antennas to a vehicle, shelter, etc. Mounting hardware is included. Color: Olive Drab. Order the RF-292-01 for CARC Green 383, RF-292(S) for CARC Forest Green, RF-292(S)1 for CARC Tan.

RF-1584

Mounting Mast for Vehicular Antennas

A rugged, aluminum bracket for 1- to 2-inch diameter masts. Designed for mast-mounting antennas such as the RF-387, RF-394, the RF-397, or the RF-398-02. Includes a mount and mast mounting hardware.

10564-3070-01

Diplexer Assembly

The 10564-3070-01 Diplexer Assembly combines the two antenna ports on the AN/PRC-117F(C) manpack into a single antenna port that covers the entire 30 to 512 MHz frequency range. The antenna connection to the Diplexer is a BNC connector. The assembly is attached to the AN/PRC-117F(C) by using the threads on one of the antenna connectors. Two short coax cables are included to connect the Diplexer Assembly to the AN/PRC-117F(C).

DATA AND REMOTE CABLES

10511-0707-A006

Generic Audio / Data Cable, Pigtail Termination

A generic Audio/Data Cable that is unterminated on the opposite end. Length is 6 feet.

15013-0710-A006

High Performance Waveform (HPW) Cable – J3

This cable is an asynchronous, PPP cable for use with the HPW and IP functions on the AN/PRC-117F(C). It connects to the front panel J3 Data and a COM port on a computer using a 9 pin D style connector. Length is 6 feet.

10535-0780-A006

Synchronous / Asynchronous Data Cable – J3

This cable provides a synchronous or asynchronous RS-232 data interface to the radio. It can be used with HUITS over an AN/PRC-117F(C). The data terminal connection end utilizes a 25-pin (DB-25) connector. Length is 6 feet.

10513-0730-A1 / -A2

Data / Remote Control Cable – J3

This cable provides both a synchronous/asynchronous data interface and RS-232 remote control interface. This is a Y-cable that connects to the front panel Data connector, J3. This cable can be used with the RF-6550F Radio Programming Application. Length of the 10513-0730-A1 is 6 feet, and the 10513-0730-A2 is 10 feet. One 10513-0730-A2 is supplied with each AN/PRC-117F(C) manpack.

10513-0740-A006

Remote Control and Programming Cable – J6

This cable provides both RS-232 remote control and programming interface to the radio via the front panel Accessory connector, J6. This cable can be used with the RF-6550F Radio Programming Application. Length is 6 ft.

10513-0750-A006

Remote Control and Programming Cable – J3

This cable provides both RS-232 remote control and programming interface to the radio via the front panel Data connector, J3. This cable can be used with the RF-6550F Radio Programming Application. Length is 6 ft.

10535-0760-A006

Remote Control and Programming Cable – J9

This cable provides both RS-232 remote control and programming interface to the radio via the rear panel connector, J9. This cable can be used with the RF-6550F Radio Programming Application. Length is 6 ft.

10518-1694-A006

Data / Remote Control Y Cable for use with RF-5800R-RC200

This cable provides both an synchronous/asynchronous data interface and RS-232 remote control interface to the RF-5800R when used with the AN/PRC-117F(C). This is a Y cable that connects to the front panel J3 connector. The opposite end utilizes a 25-pin D style connector for data and a 9-pin D style connector for remote control. Length is 6 feet.

NOTE: This cable can only be used on the RF-5800R Remote Control. It will not work connected directly to the AN/PRC-117F(C) manpack. A 10518-1694-A006 cable comes with each RF-5800R-RC200

CLONING CABLES

10513-0700-A006

Clone Cable - J9

Cable for cloning of one radio's programming (preset, nets, etc.) to another radio using the J9 rear panel connector. Length is 6 feet.

12013-0720-A006

Clone Cable - J6

Cable for cloning of one radio's programming (preset, nets, etc.) to another radio using the J6 (Blue Dot) front panel connector. Length is 6 feet.

RETRANS CABLES

12005-0717-A012

Retransmission Cable

Interconnects two AN/PRC-117F(C) radio units via J3 Data Connector to provide retransmission capability with 12 feet separation.

10511-0717-01

Retransmission Cable

Interconnects two AN/PRC-117F(C) radio units via J3 Data Connector to provide retransmission capability with 50 feet separation.

VEHICLE POWER CABLES

10570-0720-01 / -02

AN/VRC-103(V)1 to Vehicle DC Power Cable Kit

This cable connects an AN/VRC-103(V)1 Vehicular Adapter or AM-7588 Amplifier to a 28 VDC power source or 28 VDC vehicle supply. Includes fuses, fuse holder, and split bolts to connect to existing power cables from vehicle battery. Length of the 10570-0720-01 is 21 feet and the 10570-0720-02 is 35 feet.

12013-0716-A025

AN/VRC-103(V)1 to Vehicle DC Power Cable

This cable connects an AN/VRC-103(V)1 Vehicular Adapter or AM-7588 Amplifier to a 28VDC power source or 28 VDC vehicle supply. The cable has preinstalled fuse holder and lugs. Length is 25 feet.

POWER SUPPLY CABLES

10570-0716-A006 / -A025

AN/VRC-103(V)1 to Power Supply Cable

This cable connects an AN/ VRC-103(V1) Vehicular Adapter or AM-7588 Amplifier to a RF-5051PS-125C Power Supply, RF-5055PS AC/DC Supply or the RF-5052PS 12/24 VDC Converter. Length of the 10570-0716-A006 is 6 feet and the 10570-0716-A025 is 25 feet.

10570-0717-A003 / -A006 / -A025

AN/VRC-103(V)1 to RF-5056PS Cable

This cable connects an AN/VRC-103(V1) Vehicular Adapter or AM-7588 Amplifier to a RF-5056PS 12/24 DC/DC Converter. Length of the 10570-0717-A003 is 3 feet, the 10570-0717-A006 is 6 feet and the 10570-0717-A025 is 25 feet.

10181-9831-009

AC Power Cable - RF-5051PS-125C

This cable connects the RF-5051PS-125C to a standard U.S. style AC outlet. Length is 9 feet.

12027-0205-A020

DC Power Cable - RF-5851-AD001

The cable connects the RF-5851-AD001 to DC power. Length is 20 feet

10373-0030

DC Power Cable - RF-5056PS

This cable connects the RF-5056PS DC/DC Converter to the vehicle DC power source. Opposite end is unterminated. Length is 15 feet.

PLGR and GPS CABLES

12005-0730-A006

PLGR Interface Cable

Interface cable to connect a PLGR to the radio via the front panel J2 Connector. Length is 6 feet.

12005-0740-A009

NEMA Interface Cable

Interface cable to connect a NEMA compatible GPS receiver to the radio via the front panel J2 connector. GPS end is a 9 pin D style male connector. Length is 9 feet.

KDU EXTENSION CABLES

10511-0704-012

KDU Extension Cable – 6 feet

10511-0704-150

KDU Extension Cable – 75 feet

This cable allows the user to operate the KDU when removed from the front panel of the radio.

HANDSET EXTENSION CABLES

11042-0104-A0xx

Handset Extension Cable

This cable extends the distance of the attached cord on the handset. Specify length in feet (xx = length). Available lengths are 12 foot (–A012), 15 foot (-A015) or 33 feet (- A033).

COAX CABLES

10513-0810

Low Loss Coax Cable - N to N Connector

This low loss coax cable is for applications that require long runs over 100 feet. Coax is LMR 400 cable. Specify length when ordering. Not recommended for lengths greater that 300 feet.

10513-0811

Low Loss Coax Cable - N to BNC Connector

This low loss coax cable is for applications that require long runs over 100 feet. Coax is LMR 400 cable. Specify length when ordering. Not recommended for lengths greater that 300 feet.

10513-0812

Low Loss Coax Cable - BNC to BNC Connector

This low loss coax cable is for applications that require long runs over 100 feet. Coax is LMR 400 cable. Specify length when ordering. Not recommended for lengths greater that 300 feet.

10369-7212-xxx

Coax Cable - RG-213 BNC to BNC Connector

This RG-213 style coax cable has male BNC type connectors on each end. Specify length xxx in feet; i.e., -025 would be 25 feet. Maximum length is 250 feet, but not recommended for lengths greater than 100 feet, especially in the UHF range.

W-1887

7/8 inch, Semi-Rigid, Foam Dielectric Coax Cable

This low-loss coaxial cable is used for long runs greater than 250 feet. It requires special connectors, J95-0004-000 connectors, ordered separately.

J95-0004-000

Type N Male Connector for W-1887

These are male type N connectors for use with the W-1887 coax cable.

MATING CONNECTORS

J69-0016-001

Mating connector for the J3 DATA connector on the AN/PRC-117F(C) (see J09-0039-001 for backshell).

J69-0016-002

Mating connector for the J6 ACCESSORY connector on the AN/PRC-117F(C) (see J09-0039-001 for backshell).

J09-0039-001

Backshell for the J69-0016-001 and J69-0016-002 connectors.

J69-0001-623

Mating connector for J1 AUDIO/DATA/FILL connector on the AN/PRC-117F(C).

UG-88C/U

Male BNC mating connector for J5 VHF LOW and J8 VHF HI / UHF connectors on the AN/ PRC-117F(C), and for J4 through J7 antenna connectors on the AN/VRC-103 or AM-7588. This connector can be used with RG-58 or RG-223 coax.

J29-0007-107

Mating connector for the KDU connector on the AN/PRC-117F(C). This also mates with the connector on the KDU itself.

J29-0014-017

Mating connector for the J2 GPS connector on the AN/PRC-117F(C).

J22-0126-026

Mating connector for the J9 ACCESSORY connector on the rear panel of the AN/PRC-117F(C). (see J55-0155-515 for the backshell).

J55-0155-515

Backshell for the J22-0126-026 connector.

M39012/20-0101

Right angle male BNC connectors used to interconnect the AN/PRC-117F(C) J5 and J8 antenna connectors to the J2 VHF and J3 UHF input connectors on the AN/VRC-103 or AM-7588. This connector can be used with RG-58 or RG-223 coax.

M55181/1-03

Mating connector for the J1 DC POWER connector on the AN/VRC-103 or AM-7588.

BATTERIES

10075-1345-01 (BB-590/U)

Rechargeable Nickel-Cadmium Battery

The 10075-1345-01 (BB-590/U) is a rechargeable nickel-cadmium battery that works well up to 50°C.

BB-390A/U

Rechargeable Nickel Metal-Hydride Battery

The BB-390A/U is a rechargeable, nickel-metal hydride battery that provides about 60% more capacity than a BB-590/U. Not recommended for use above 60°C.

BA-5590/U

Non-Rechargeable, Disposable Lithium Battery

The BB-5590/U provides approximately three times the operation life of the BB-590/U Rechargeable Nickel-Cadmium Battery. The BA-5590/U cannot be recharged, and is recommended for use in high temperature applications when temperatures exceed 55°C.

BB-2590/U Type

Rechargeable Lithium-Ion Battery

The BB-2590-type battery is a very high capacity, rechargeable, Lithium-Ion battery that provides up to 300% the energy density and 250% of the capacity of the BB-590/U. It is the same physical size, but is about 20% lighter than the BB-390 and BB-590 Batteries. The battery has a built-in battery life indicator. Use with the RF-5058-CH002 or RF-5058-CH006 Battery Chargers.

BATTERY CHARGERS

RF-5058-CH002

2-Bay Battery Charger/Conditioner

RF-5058-CH006

6-Bay Battery Charger/Conditioner

The RF-5058-CH00X Battery Charger/Conditioner family includes 2-bay and 6-bay versions that will charge and condition BB-590/U NiCd, BB-390/U NiMH, and BB-2590/U Type Li-Ion batteries. The charger units are identical except for physical size and weight and the number of batteries that can be simultaneously handled. A mixed combination of up to two (CH002 unit) or six batteries (CH006 unit) of these types can be simultaneously charged and/or conditioned. Indicators are provided to display the charge or conditioning status of each battery to the operator. The charging and conditioning cycles are automatic and will shut off when charging is completed or under faulty battery conditions. Typical charging times for fully discharged batteries vary with battery capacity, temperature, and battery age, but are typically 2.5 hours for BB-590, 4 hours for BB-390, and 6 hours for BB-2590 type batteries. The Charger/Conditioner is packaged in a waterproof case for transport and operation. The system operates on 95 - 260 VACS, 47 to 440 Hz, or 12 to 36 VDC autoranging. An instruction manual and a detachable DC power cable with alligator clips are included. Also includes a detachable AC cable with U.S. NEMA 5-15P male on one end and IEC 60320 female on the other.

RF-5059-CH002

NiMH/NiCd Battery Charger/Discharger

The RF-5059-CH002 is a quick-charger system for 10075-1345-01 (BB-590/U) and BB-390A/U batteries. It is powered by AC (95-265V) or DC (10-36V) power. AC and DC Input Cables should be ordered separately:

10488-1386-01	AC cable, U.S. (8 ft)
10488-1387-01	AC cable, Continental Europe (2.5 m)
10488-1388-A008	AC cable, UK (8 ft)
10488-1385-A005	DC cable, Alligator clip to charger (5 ft)

POWER SUPPLIES

RF-5051PS-125C

Power Supply

The RF-5051PS-125C provides power for the AN/VRC-103(V)1 or AM-7588 Amplifier in a base station, shipboard, or transportable operation. DC output is 28-VDC nominal at 30 amps. Input is 15 or 230 VAC, 47 to 400 Hz. Requires 10181-9831-009 AC Power Cable (included).

RF-5055PS

AC/DC Power Supply

The RF-5055PS provides power for the AN/VRC-103(V)1 or AM-7588 Amplifier in a low-profile package. The power supply accepts 115 or 230 VAC and supplies 26.4 VDC at 18 amps. When used with the RF-5056PS DC/DC Converter, the RF-5055PS will supply power to the auxiliary power input of the RF-5056PS to conserve vehicular battery life when AC power is available. A 9-foot AC power cable is included.

RF-5056PS

DC/DC Converter

The RF-5056 DC/DC converter provides a regulated 26.5 VDC at 20 amps peak when supplied with a 12 VDC, 24 VDC or 28 VDC from a vehicle DC power system. In 150-watt systems the duty cycle is restricted to 20%. This DC/DC Converter will also accept an auxiliary power input from a RF-5055PS AC/DC Power Supply - when power is present at the auxiliary input, the RF-5056 converter shuts down to conserve the vehicle's battery life. The low profile design allows mounting under the RF-5055PS sharing the same shock tray. The RF-5056 will also mount on the RF-5071VSM-03 Shock Mount for use in severe shock applications. No cables or mating connectors are provided. Use the 10373- 0030 DC Power Cable for connection to the vehicle DC Power (order separately).

RF-5052PS

12/24 VDC Converter

The converter provides 26.5-volts DC at 17 continuous amps and 20-amps peak from a 12-volt DC source. It permits the operation of the AN/VRC-103(V)1 or AM-7588 Amplifier in vehicles with 12-volt electrical systems. It is designed for mounting in engine compartments or other harsh environments. The converter includes a 15-foot DC input fused cable.

BATTERY ELIMINATOR/ DC POWER ADAPTER

RF-5850-PS001

Battery Eliminator

The Battery Eliminator is used in place of the battery box to provide operation of the AN/PRC-117F(C) from 85 to 270 VAC, 47 to 440 Hz, or 9 to 36 VDC. The power supply contains a battery to permit radio operation for short time periods without external prime power. The battery is recharged when external prime power is reapplied. The unit is supplied with both a DC power cable and an AC power cable with a U.S. style plug attached. It can be used with the RF-5870-VM001 Shock Mount in vehicle applications.

RF-5850-PS002

Battery Eliminator

The RF-5850-PS002 Battery Eliminator is used in place of the battery box to provide operation of the RF-5800R Remote Control from 85 - 270 VA, 47 to 440 Hz, or 9 to 36 VDC. The unit is supplied with both a DC power cable and an AC power cable with US style plug attached.

RF-5851-AD001

DC Power Adapter

The DC Power Adapter is used in place of the battery box to provide operation of the AN/PRC-117F(C) from 22- to 32-VDC. The adapter provides protection from overvoltage, undervoltage ripple, etc. and is designed to meet MIL-STD-1275. The 12027-0205-A020 (20 foot) DC Power Cable should be ordered separately. It can be used with the RF-5870-VM001 Shock Mount in vehicle applications.

REMOTE CONTROL

RF-5800R-RC100

Remote Control System

The RF-5800R-RC100 provides remote control of the AN/PRC-117F(C) up to a distance of 3.5-kM over standard field wire. Full remote control of transmit and receive Audio, Data, and Control (using a keypad display unit) of the manpack is possible from the remote site. All the functions controlled by the KDU are available from the Remote Control. The system supports the full range of data applications for the AN/PRC-117F(C) including, RF-6550F Radio Programming Application, and RF-6710W Wireless Messaging Terminal, with the exception of HPW. The RF-5800R-RC100 does not support the HPW function of the AN/PRC-117F(C). It includes a Remote Control Unit RF-5800R-RC003 (RCU), a Local Control Unit RF-5800R-RC002 (LCU), handset, manual, and carrying bag. The RCU is powered by a single BA-5590, BB-390, or BB- 590 battery. The RF-5800R-RC100 requires a 10518-1694-A006 cable for data applications. See the RF-5800R-RC200 below if HPW functionality is required.

RF-5800R-RC200

Remote Control System

The RF-5800R-RC200 provides remote control of the AN/PRC-1117(C) up to a distance of 3.5-kM over standard field wire. Full remote control of transmit and receive Audio, Data, and Control (using a keypad display unit) of the manpack is possible from the remote site. All the functions controlled by the KDU are available from the Remote Control. The system supports the full range of data applications for the AN/PRC-117F(C) including HPW, RF-6550F Radio Programming Application, and RF-6710W Wireless Messaging Terminal. It includes a Remote Control Unit RF-5800R-RC003 (RCU), A Local Control Unit RF-5800RRC002 (LCU), handset, manual, and carrying bag. The RCU is powered by a single BA-5590, BB-390, or BB- 590 battery. The RF-5800R-RC100 includes a 10518-1694-A006 cable for data applications. See the RF-5800R-RC100 above if HPW functionality is not required.

12027-0050-075

Short Distance Remoting Kit

The short distance remoting kit allows remote audio and control of the AN/PRC-117F(C) up to a distance of 75 feet. The 10181-5180-01 Amplified Speaker is used for audio and handset remoting. The kit includes three cables: a 10535-0707-075 for audio, a 10535- 0706-075 for speaker power, and a 10511-0704-150 KDU extension cable. The speaker requires an external 26 VDC power source.

AMPLIFIED SPEAKERS

10181-5180-01
Tactical Amplifier Speaker

Amplifies the audio output for vehicular applications. The speaker features dual 6-pin handset/headset connectors, individual handset/headset and speaker volume controls, individual handset/headset and speaker power switches, and a vehicular mounting bolt. It requires external 26-VDC power. Two cables are required (ordered separately).

1. Speaker power cables:

10535-0706-A009	9-foot long speaker to 4 pin power connector
10535-0706-A075	75-foot long speaker to 4-pin power connector
10535-0708-A009	9-foot long speaker to pigtail leads
10535-0708-A075	75-foot long speaker to pigtail leads
11068-0018-A009	9-foot long speaker to RF-5850-PS001 Battery Eliminator

2. Audio cable:

10535-0707-A009	audio cable that connects to the PRC-117F(C) audio connector J1.

10570-3500-22
Tactical Amplifier Speaker

This speaker connects to the J3 Data Connector on the AN/PRC-117F(C). It is powered off the radio's battery. It can be used with the AN/VRC-103(V)1 or AM-7588 amplifiers. Speaker must be disconnected if the data connector is required for other use.

BACKPACKS

10512-0465-01
FALCON II Backpack Carrying Bag

Designed for short duration, dismounted missions. This Olive Drab colored bag has pouches for accessories, antennas, and two additional batteries. The bag has holes in the top for deployment of the antennas, the Keyboard/Display Unit Extension Cable, the handset cable, and other accessory cables while the bag is closed.

10530-0460-01
Backpack Carrying Bag

This Olive Drab colored bag is heavily padded and designed for use in airborne jump applications. It has HERCULON reinforced areas, and has adjustable web to set the carrying depth of the radio. It has room to store cables and two spare batteries. It is designed to fit inside a larger ALICE rucksack.

HANDSETS

10075-1399
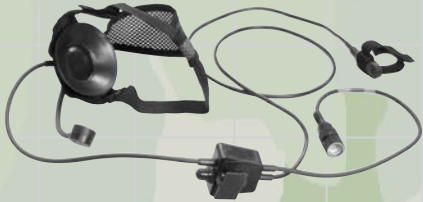Lightweight Handset - H-250/U (modified)

The 10075-1399 is a high-grade, lightweight MIL handset for use with the FALCON II tactical radio systems. One handset is supplied with each radio.

HEADSETS

RF-3020-HS001/HS002

Lightweight Headsets

The RF-3020-HS001 headset is a lightweight tactical headset with a single earphone, a gooseneck boom mounted microphone, and a push-to-talk switch with a clothing clip for attachment. The RF-3020-HS002 (shown) is identical to the RF-3020-HS001, but has a second, silent push-to-talk button in sniper switch fashion. The headsets are rugged, submersible, and designed to meet tactical environmental requirements.

HUB BATTERY

B41-0010-003

Hold Up Battery (HUB)

Replacement Hold Up Battery for the AN/PRC-117F(C) radio. NSN 6135-01-461-5322

KDU WRIST STRAP

10512-0470-01

KDU Wrist Strap Assembly

This assembly provides a method to mount the removable Keypad/Display Unit (KDU) from the radio to the left or right forearm using adjustable Velcro fasteners for size adjustment.

SOFTWARE APPLICATIONS

HPW – see SOFTWARE UPGRADES

RF-6550F

Radio Programming Application (RPA)

This software application allows the user to enter frequency, mode, ALE network information and other parameters into a Windows-based computer program and save it to a file. The program also downloads the operating parameter into a radio using a 10535-0775-A006 Asynchronous Data (PPP) cable. The computer file can program all the radios in a network. The RF-6550H RPA and 10535-0075-A006 cables are provided with each AN/PRC-117F(C) manpack.

RF-6710W

Wireless Message Terminal Software

When installed on a Harris- or customer-provided computer, the RF-6710W Wireless Message Terminal (WMT) forms a multi-media messaging system that provides transparent relay of e-mail and files over VHF or UHF, operating like a standard PC with email. The RF-6710W automatically sends messages and data to the final destination.

RF-6705

Tactical IP Chat

This software application allows the user to exchange text messages and files among field and networked data terminals. It uses either ARQ or broadcast data transfer among members of an IP subnetwork. The software runs on PCs and Pocket PC-based PDAs. Requires IP option in AN/PRC-117F(C) Manpack.

SHOCK MOUNTS

RF-5870-VM001

Adjustable Shock Mount

This shock mount allows installation of the AN/PRC-117F(C) Manpack into vehicular, shelter, or other applications that require shock isolation. The mount adjusts to allow the battery box, the RF-5850-PS001, or the RF-5851-AD001 to be used with the manpack.

RF-5870-VM002

Security Lock

This kit attaches to the RF-5870-VM001 to prevent unauthorized removal of the radio from the shock mount. The kit requires the use of a padlock, which is not included.

RF-5071VSM-03

Shock Mount

This shock mount allows installation of the RF-5051PS-125C Power Supply into vehicular, shelter or other applications that require shock isolation.

12005-1920-01

Shock Mount for AN/VRC-103 / AM-7588

This shock mount allows installation of the AN/VRC-103 Vehicular Adapter or AM-7588 Power Amplifier into vehicular, shelter, or other applications that require shock isolation. Note: this mount is supplied with each AN/VRC-103 or AM-7588.

MOUNTS

10564-6045-02

Rack Mount Kit

This Rack Mount Kit allows installation of the AN/PRC-117F(C) radio into a standard 19-inch wide x 24-inch deep rack. The kit consists of a metal shelf and hardware for installation into the rack. It also includes a RF-5870-VM001 Shock Mount to mount the AN/PRC-117F(C) manpack on the metal shelf. When installed the shelf and radio are stationary and do not extend on rack slides.

11071-0900-04

KDU Gimbaled Mount

The 11071-0900-04 KDU Gimbaled Mount is used for remote mounting of the Keypad Display Unit (KDU) from the AN/PRC-117F(C). The mount can be used in vehicles or on a desktop. The KDU is easily unlatched from the radio and latched to the Gimbaled Mount for installation. It is just as easily reattached to the radio for jerk-and-run operation. The Gimbaled Mount can be used with the 10511-0704-012 6-foot KDU Extension Cable. Three 10-32 x 0.75 inch hex mounting bolts with washers and locking nuts, and five black cable ties are included to facilitate installation. KDU and cables are not included.

10564-2400-01

Manpack Transit Case – with Remote Speaker/KDU Mount
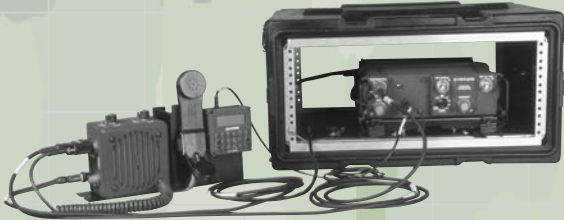
This transit case provides an easily transportable, water tight case for the AN/PRC-117F(C) manpack and its accessories. It includes a RF-5870-VM001 shock tray for mounting the manpack and the standard battery box. The tray also accommodates the RF-5851-AD001 DC Filter or the RF-5850-PS001 Battery Eliminator, which are purchased separately. An accessory bag is attached to the back cover to hold the antennas, cables, and handset. The AN/PRC-117F(C) is not included and must be purchased separately.

A removable mount holds the 10181-5180-01 speaker, the KDU, and a handset bracket allowing the radio to be operated remotely from a distance up to 9 feet away. The 10181-5180-01 speaker is not included and must be purchased separately. Three cables are required, which must be purchased separately:

1. 10535-0707-A009   9-foot audio
2. 10511-0704-020   10-foot KDU extension cable
3. 11068-0018-A009   9-foot DC power cable if using the RF-5850-PS001

   or

10535-0708-A009   9-foot long DC power cable with unterminated leads

10564-2400-02

Manpack Transit Case

This transit case provides an easily transportable, water tight case for the AN/PRC-117F(C) manpack and its accessories. It includes a RF-5870-VM001 shock tray for mounting the manpack and the standard battery box. The tray also accommodates the RF-5851-AD001 DC Filter or the RF-5850-PS001 Battery Eliminator, which are purchased separately. An accessory bag is attached to the back cover to hold the antennas, cables, and handset. The AN/PRC-117F(C) is not included and must be purchased separately.

ADF – Audio/Data/Fill. KDU display item referring to the J1 port on the front of the radio. This is an auto-sensing port that automatically configures the radio for voice or data depending on what is connected (i.e., a handset or data device).

ANDVT – Advanced Narrowband Digital Voice Terminal. A COMSEC mode used in 5 kHz Narrowband SATCOM and DAMA. Compatible with the KY-99, KY-99A, and KY-100 COMSEC encryption devices.

COMSEC – Communications Security.

CTCSS – Continuous Tone Coded Squelch Subsystem. Sub-audible tones used to prevent or deny access into LMR repeaters and handheld radios (i.e., FRS radios).

DAMA – Demand Assigned Multiple Access. SATCOM communications mode of operation that uses a TDMA-like technique to provide time-shared SATCOM channels.

dB – Decibel. Unit used to measure RF signal strength with reference to 1 Watt. (i.e., 1 Watt = 0 dB).

ECCM – Electronic Counter/Counter Measures. Refers to frequency hopping capabilities (i.e., SINCGARS and HAVEQUICK I/II).

ESIP – Enhanced SINCGARS Improvement Program. Added additional data capabilities to the existing SINCGARS mode. Features available for 30 – 87.975 MHz LOS and SINCGARS frequency hopping.

FASCINATOR – Type 1 COMSEC mode used by some Motorola SABER II handheld radios.

GPS – Global Positioning System. Satellite system that is used to obtain positioning and time information. Typically used with the radio to load TOD for frequency hopping or HPW.

HALF-DUPLEX – Refers to presets that use different frequencies for transmit and receive (i.e., SATCOM).

HAVEQUICK – A frequency hopping mode used by the US Air Force in the UHF range.

HPW – High Performance Waveform. Satellite waveform that can be used on both wideband and narrowband UHF satellites. HPW offers high speed, reliable, error-free delivery of data.

HUB – Hold Up Battery. 3.6 VDC commercially available lithium battery (SAFT P/N LS14250, Tadiran P/N TL-2150, Harris P/N B41-0010-003, NSN 6135-01-435-4921; size _ AA). It is recommended to replace the HUB annually. HUB voltage level can be tested by conducting a BIT.

INFOSEC – Information Security. This refers to the circuit board in the radio that performs all CRYPTO related tasks.

INC – Internet Controller. Equipment that provides SINCGARS capable radios an interface to battlefield IP connectivity; acts as a router to gain access to the Tactical Internet (TI) to use applications like FBCB2.

IP – Internet Protocol. The AN/PRC-117F(C) supports TCP and UDP transport protocols.

KDU – Keypad Display Unit. Removable radio interface control unit.

KG-84 – COMSEC mode used for data traffic (i.e., HPW, TCM).

KYV-5 – COMSEC mode used for SINCGARS ESIP EDM data traffic.

LOS – Line Of Sight. LOS refers to fixed frequency (simplex) presets.

MELP – Mixed-Excitation Linear Predictive coding. Voice encoding technique used for narrowband SATCOM and HF communications.

MIL-STD – Military Standard.

MIL-STD-188-181B – The Military Standard that describes non-DAMA SATCOM, including the CPM data capabilities. Referred to as MS181 in the radio (as opposed to HPW).

MIL-STD-188-182A – The Military Standard that describes 5 kHz DAMA SATCOM.

MIL-STD-188-183A – The Military Standard that describes 25 kHz DAMA SATCOM.

MIL-STD-188-184 – The Military Standard that describes a data protocol to be used over non-DAMA SATCOM (typically used by Viasat® Data Controllers such as the VDC-400).

NMEA – National Marine Electronics Association 0183 Interface Standard. Defines the interface to connect to a commercial GPS device (i.e., Garmin 12 Series).

OTAR – Over The Air Rekey. Used to transmit/receive COMSEC variables from one radio to another.

PLGR – Precision Lightweight GPS Receiver. Another name for the AN/PSN-11, which is the GPS device used by DoD.

PPP – Point To Point Protocol. An industry standard protocol that provides a method for transmitting datagrams (IP traffic – TCP/IP and UDP) over serial point-to-point links.

RS-232 – Data protocol for unbalanced data interfaces.

RS-422 – Data protocol for balanced data interfaces.

SA – Situational Awareness. Mode used to send and receive positional information.

SARK – Saville Automatic ReKey. Another name for OTAR.

SAT – Satellite.

SATCOM – Satellite Communications.

SIMPLEX – Refers to presets that use the same frequency for both transmit and receive.

SINCGARS – Single Channel Ground and Airborne Radio System. VHF-Low ground-to-ground frequency hopping mode used by the U.S. Army.

TACSAT – Tactical Satellite.

TCM – Trellis Code Modulation. Technique used for high speed LOS data operations (48 and 64 kbps).

TRANSEC – Transmission Security.

Type 1 – NSA-approved encryption algorithms used by the DoD; capable of handling classified information.

UHF – Ultra High Frequency. 225 MHz to 512 MHz in the AN/PRC-117F(C).

VAU – Vehicular Adapter Unit (i.e. AN/VRC-103).

VHF-HI – Very High Frequency – High Range. 90 MHz to 225 MHz in the AN/PRC-117F(C).

VHF-LO – Very High Frequency – Low Range. 30 MHz to 90 MHz in the AN/PRC-117F(C).

WMT – Wireless Messaging Terminal. Refers to the software application RF-6710, which is used along with Microsoft® Outlook for HPW messaging.