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HARRIS RF COMMUNICATIONS

AN/PRC-150(C) FALCON II® MANPACK RADIO APPLICATIONS HANDBOOK







FALCON® II
HF RADIOS





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TECHNICAL SUPPORT

Technical support is available by:

- Telephone: (585) 242-3561
- Toll Free: (866) 264-8040
- Fax: (585) 242-4483
- Email: rfcsrvc@harris.com
- Web: www.rfcomm.harris.com/support



FALCON II AN/PRC-150(C)

SOFTWARE-DEFINED RADIO INNOVATION

The AN/PRC-150(C) is the most advanced and integrated HF radio in the world. The radio features Automatic Link Establishment (ALE), data rates up to 9600 bps with advanced error-free protocols, MELP digital voice, Citadel encryption, digital ECCM, and a built-in Internet Protocol (IP) interface. Covering the 1.6 to 60 MHz spectrum in 10 Hz steps, it goes beyond the standard HF band, making it a highly versatile HF-SSB/VHF FM transceiver. The built-in multi-waveform modem and 600/2400 bps vocoders provide high data throughput and secure digital voice over the most challenging HF channels.

- ENCRYPTION
- ENHANCED FREQUENCY HOPPING (ECCM)
- HIGH-SPEED MODEM WAVEFORMS
- MELP AND LPC-10, 600/2400 BPS DIGITAL VOICE
- MIL-STD-188-141B, APPENDIX A AUTOMATIC LINK ESTABLISHMENT (ALE)
- STANAG 4538 THIRD GENERATION HF LINK AUTOMATION
- TACTICAL INTERNET





AN/PRC-150(C) MANPACK



AN/PRC-150(C)

The AN/PRC-150(C) is an advanced, nomenclatured HF/VHF manpack radio that provides reliable tactical communications through U.S. government Type-1 encryption for enhanced secure voice and data performance, reduced size/weight, and extended battery life. The removable Keypad Display Unit enables operation on the move with the transceiver stowed in the user's backpack. The AN/PRC-150(C) HF-SSB/VHF-FM transceiver covers 1.6 to 60 MHz at 20 watts PEP/Average for HF and 10 watts for VHF. Modes include USB, LSB, CW, AME, and FM. Two types of encryption are included in this radio, U.S. government Type-1 and coalition encryption.

A simple, menu-driven, man-machine interface makes operation easy. Seventy-five user-defined net presets provide complete radio configuration, including radio operating mode, modem settings, COMSEC and TRANSEC keys. This unit is interoperable with non-Type-1 radios in secure mode with radios that include standard Citadel encryption in both the HF and VHF bands. The unit is also interoperable in non-secure mode in fixed frequency and ALE with other HF and VHF radio systems. Additional standard features include a removable Keypad Display Unit, 24 VDC or self-contained battery operation, and RS-232 ASCII remote control. Finish/Color: CARC Green 383

Features

ENCRYPTION

Two types of embedded encryption are included in this radio: U.S. government Type-1 and Coalition. The Type-1 encryption is interoperable with KY-99, KY-100, and KG-84 cryptos for HF systems and KY-57 crypto for VHF systems. Coalition encryption is based on the Harris Citadel encryption and can be used to interoperate with RF-5800H radio systems in secure mode.

ENHANCED FREQUENCY HOPPING (ECCM)

A proprietary serial tone, ECCM provides digital voice and data performance comparable to single-channel serial tone modem.

HIGH-SPEED MODEM WAVEFORMS

The embedded modem waveform suite offers the most advanced HF data capability available in the tactical radio marketplace. The supported MIL-STD-188-110B waveforms include the serial tone (2400 bps) modem, high data rate (9600 bps) modem, parallel tone (2400 bps) modem, as well as a set of narrowband FSK waveforms. Also included are the STANAG 4285 and STANAG 4415 serial tone waveforms. Adaptive excision filtering and equalization improve the data modem performance in fading and noisy channels, and counteract jamming.

MELP AND LPC-10, 600/2400 BPS DIGITAL VOICE

The digital voice mode utilizes the latest military MELP and LPC-10 algorithms for high-quality secure narrowband voice at 2400 bps. The Harris 600 bps vocoders extend the communication range beyond conventional 2400 bps systems.

MIL-STD-188-141B, APPENDIX A AUTOMATIC LINK ESTABLISHMENT (ALE)

ALE allows the transceiver to automatically locate the best available channel and link with a desired station or net. The radio also provides AL-1 Linking Protection.

STANAG 4538 THIRD GENERATION HF LINK AUTOMATION

The latest integrated high-performance Automated Link Establishment (ALE) and data link protocols provide superior linking and error-free data performance. Fast link setup (FLSU) protocol suite is supported.

TACTICAL INTERNET

Tactical Internet is an embedded wireless networking capability that provides the ability to connect outside IPV4 devices and applications over HF circuits. It utilizes third generation HF Link Automation to efficiently route secure IP-based traffic.

SOFTWARE OPTIONS

Product Number	Product Name	Qty
10535-8010-0002	LPI/LPD Option	1

ANCILLARY ITEMS

Product Number	Product Name	Qty
10515-0117-4200	Operator Manual	1
10515-0103-4100	Operator Card	1
10372-0240-02	OE-505 Manpack Antenna Kit	1
10372-1260-01	Antenna Assembly Adapter	1
10075-1399	H-250/U Lightweight Handset (Modified)	1
10513-4800-02	Battery Box	1
10511-0704-012	KDU Cable	1
10303-1008-01	Ground Stake Kit	1
RF-6550H	Radio Programming Application	1
10535-0775-A006	Simultaneous Control & Data Cable Assembly	1
RF-6551H	Tactical Chat Comms Software	1
RF-5930-CA002	Falcon II Ranger Bag	1



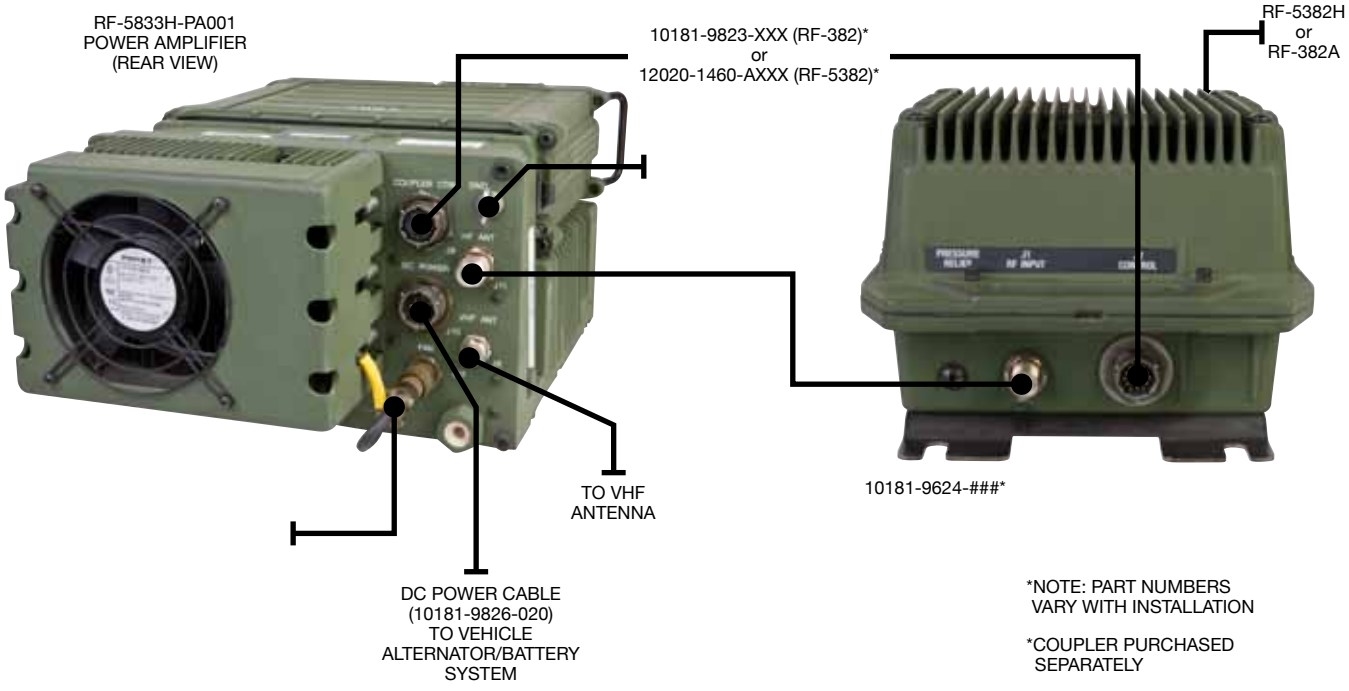
R/T SPECIFICATIONS

Function	Specification
GENERAL	
Frequency Range	Single Sideband (SSB): Upper Sideband (USB) and Lower Sideband (LSB), and Amplitude Modulation Equivalent (AME) Modes: 1.6 MHz to 29.99999 megahertz, (MHz) in 100 Hz steps from the front panel and in 10 Hz steps from the REMOTE port. Frequency Modulation (FM) Modes: 20 MHz to 59.99999 MHz in 100 Hz steps from the front panel and in 10 Hz steps from the REMOTE port.
Frequency Stability	1.0 x 10-6 for not less than 30 days
Radio Frequency (RF) Input/ Output (I/O) Impedance	50 ohms
Power Input	+26 VDC nominal; normal operations from +23 to +32 VDC, +34.5 VDC Li-ION; when battery voltage reaches 21 VDC, the radio shuts down. Reduced power output by -6 dB of full power 21 VDC to 23 VDC (If power output is set -6 dB of full power.
Receiver Sensitivity	-113 dBm for 10 dB Signal + Noise + Distortion/Noise + Distortion (SINAD) ([SSB], 2.7 kHz IF Bandwidth [BW] -98 dBm for 10 dB SINAD AME, 6.0 kHz BW, 30% modulation -117 dBm for 10 dB SINAD (Continuous Wave [CW], 0.25 kHz BW -107 dBm for 10 dB SINAD (FM, 22 kHz, 8 kHz deviation)
Audio Output	≥15 mW into a 1000-ohm load
Image Rejection	First Intermediate Frequency (IF): >80 dB Second IF Image: >60 dB
Intermediate Frequency (IF) Rejection	First IF: >80 dB Second IF: >70 dB 1.6 to 2.4 MHz, 80 dB 2.4 to 60 MHz
Internally Generated Spurious Signals	Below -112 dBm on 99% of 3 kHz USB/LSB channels over 1.6 to 60 MHz
Transmitter Power Output	High: 20 W Peak Envelope Power (PEP)/Average SSB; 10 W Average FM Medium: 5 W PEP/Average SSB or FM Low: 1 W PEP/Average SSB or FM
Carrier Suppression	>60 dB below PEP
Undesired Sideband Rejection	>60 dB below PEP
Transmit Intermodulation Distortion	1.6 to 29.99999 MHz: -24 dB (3rd order or higher) 30 MHz to 59.99999 MHz: -18 dB (3rd order or higher)
Receiver Spurious Responses	Down at least 55 dB when 2.5% to 30% from center frequency
Audio Input	1.5 mV rms with 150-ohm source impedance
Dimensions (with battery box)	10.43 W x 13.31 D x 3.2 H in (26.5 W x 33.8 D x 8.1 H cm)
Weight (with battery box and two BB-590/U batteries)	17.2 lbs (7.8 kg)

Note: BA-5390/U and BA-5590/U batteries are primary cells.

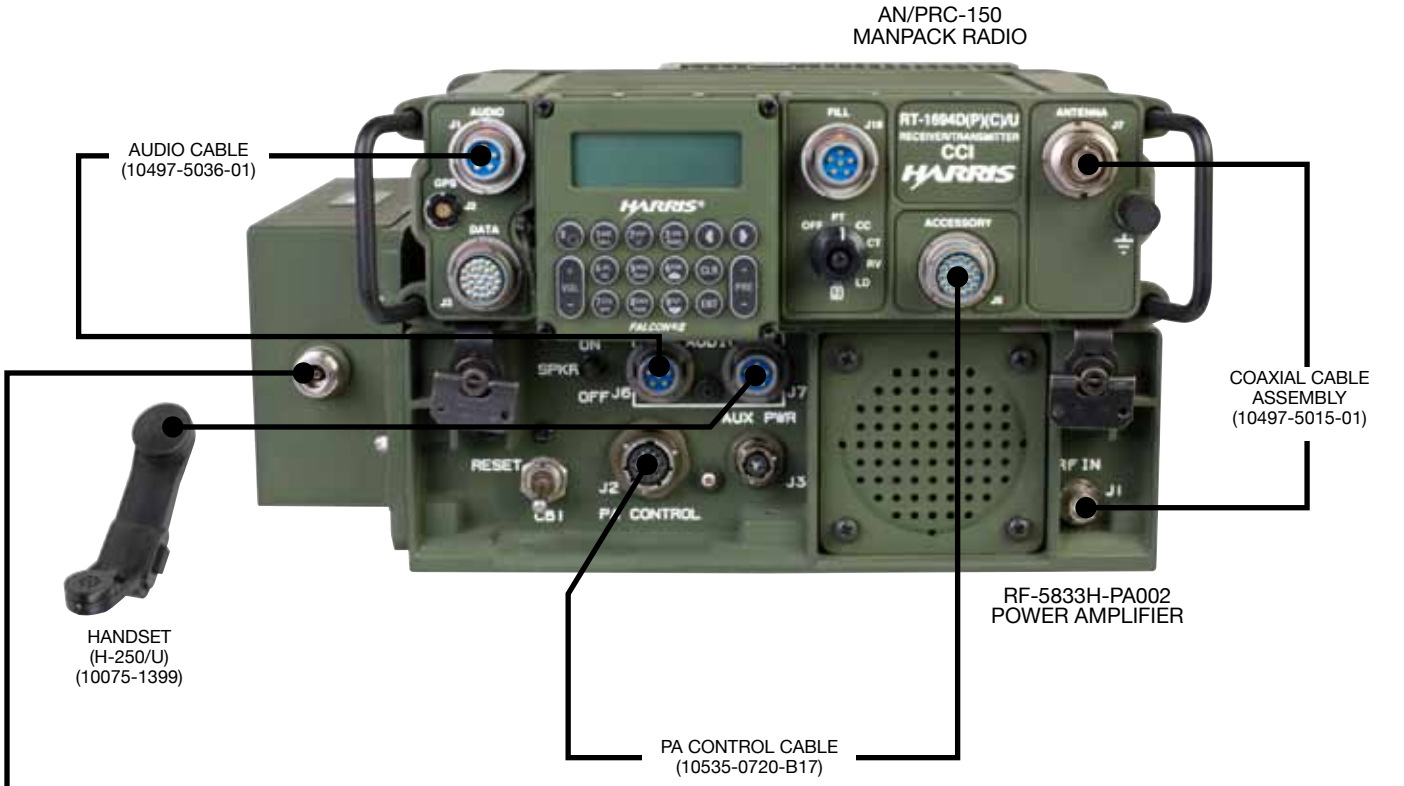
RF-5800H-V001

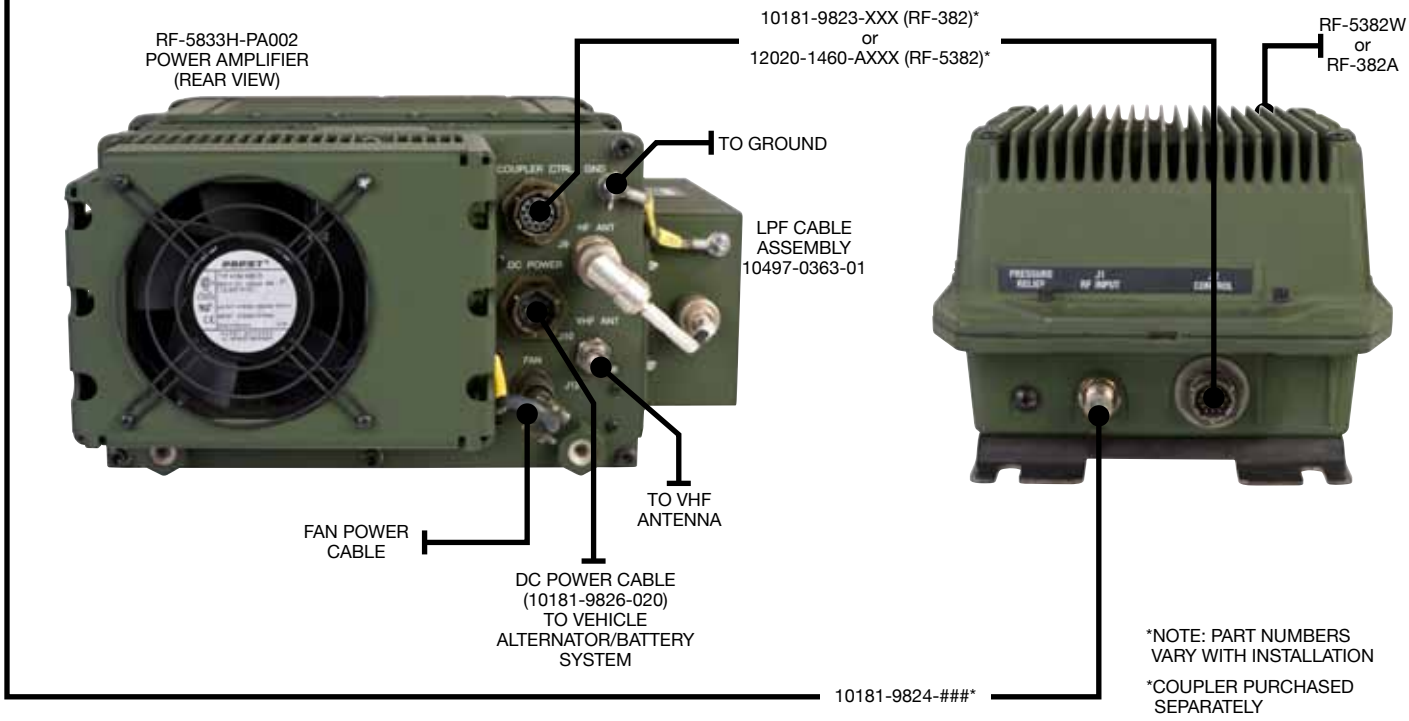




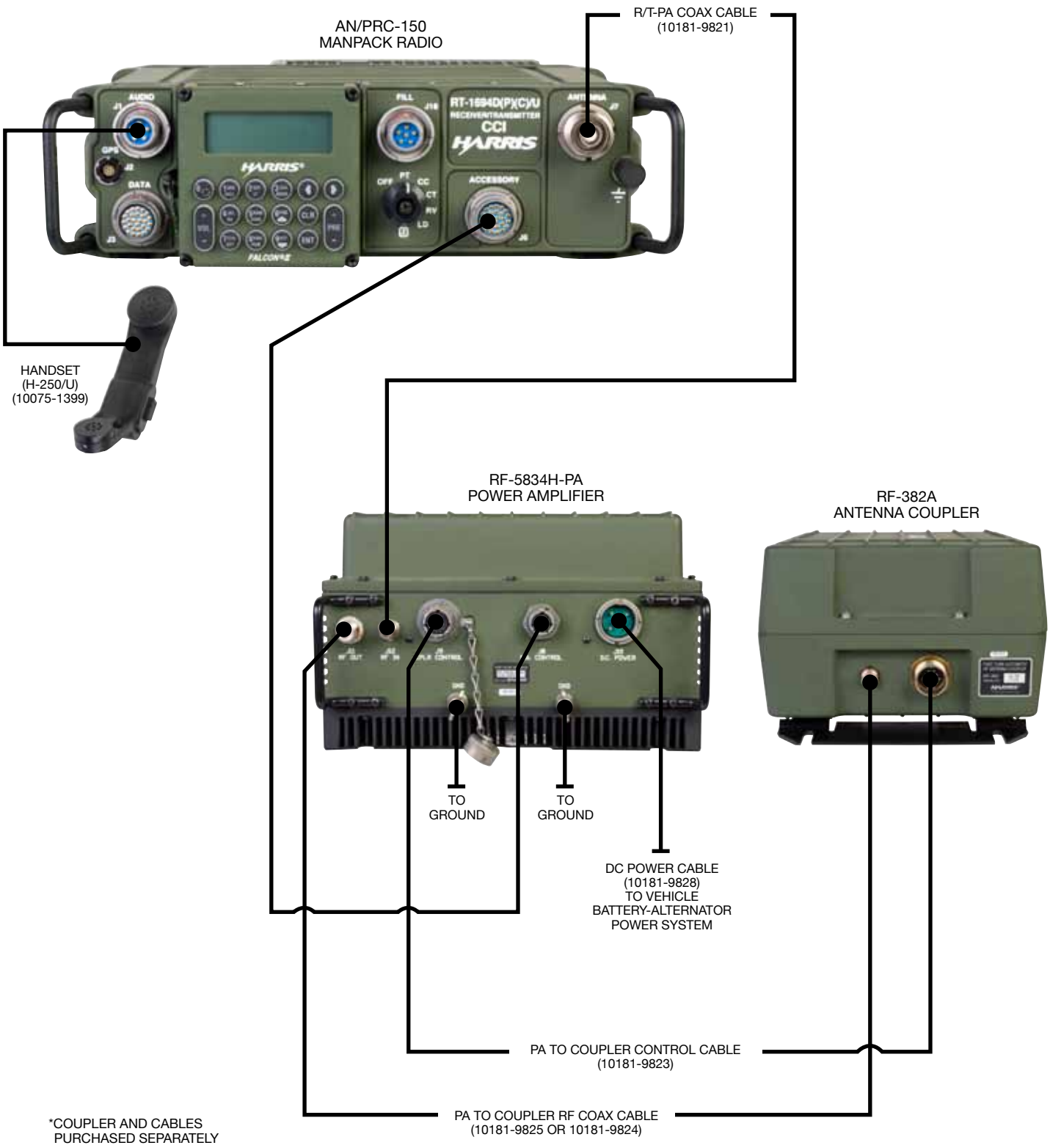
System Interconnect Diagrams

RF-5800H-V002





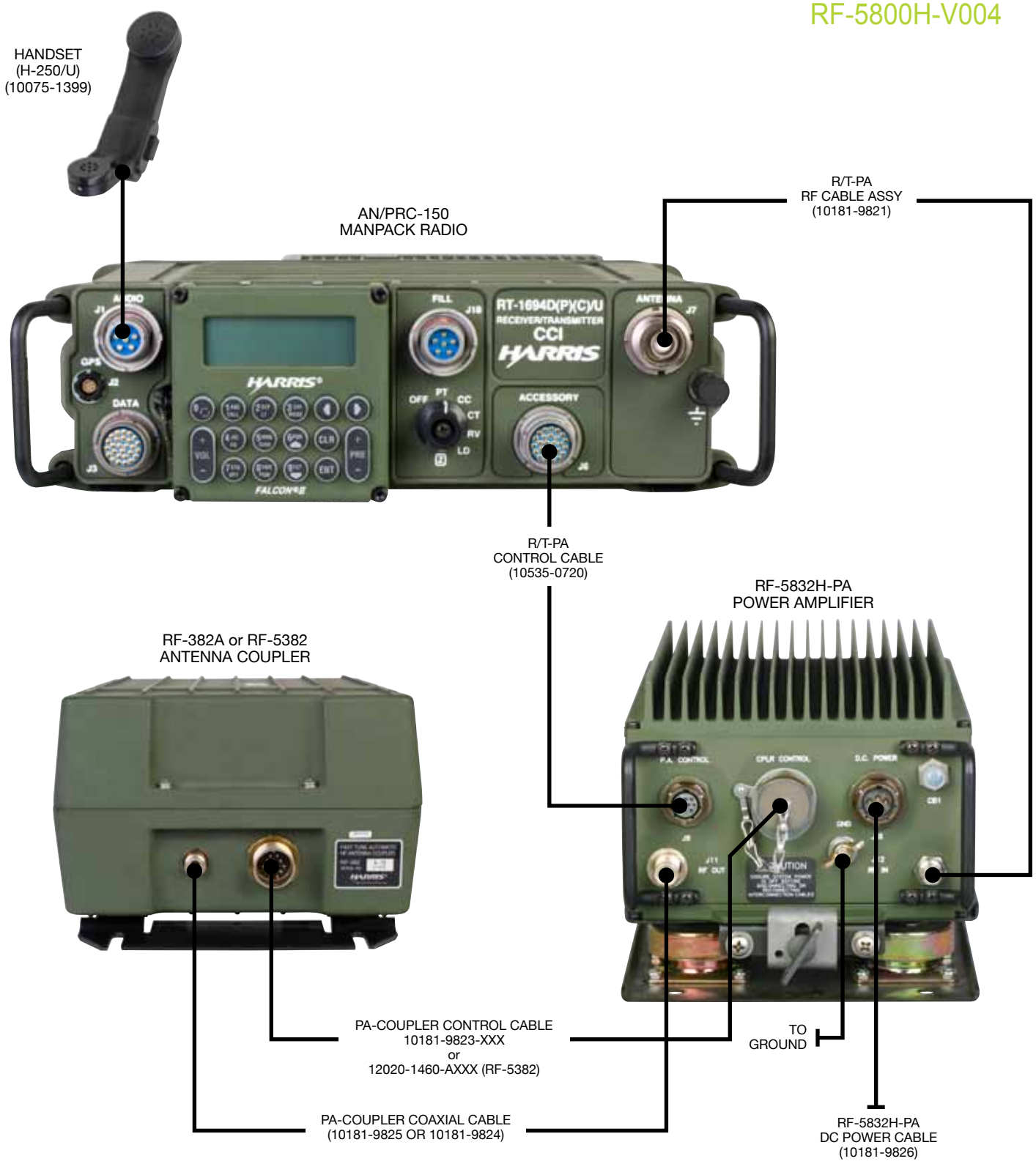
RF-5800H-V003



*COUPLER AND CABLES
PURCHASED SEPARATELY

System Interconnect Diagrams

RF-5800H-V004



*COUPLER PURCHASED SEPARATELY

RF-5800H-V006

HANDSET
(H-250/U)
(10075-1399)

SPEAKER
RF-5980-SA001

SPEAKER
POWER CABLE
10535-0708-AXXX

24V DC POWER SOURCE

10535-0707-AXXX

R/T TO DISTRIBUTION
PANEL
(12045-5700-A30)

28 VDC
VEHICULAR
POWER

DC POWER
CABLE ASSEMBLY
(10181-9826-020)

AN/PRC-150 MANPACK RADIO



RF-5211VSM-052
SHOCK MOUNT



RF-5211VSM-052
SHOCK MOUNT/
DISTRIBUTION MODULE
(REAR VIEW)

N TO BNC CABLE
(10369-7211-015)

(REAR VIEW)
RF-5382H-CU001
ANTENNA COUPLER



COUPLER CONTROL
CABLE
(12020-1460-A020)

(FRONT VIEW)
RF-5382H-CU001
ANTENNA COUPLER



TO
GROUND

HF
ANTENNA

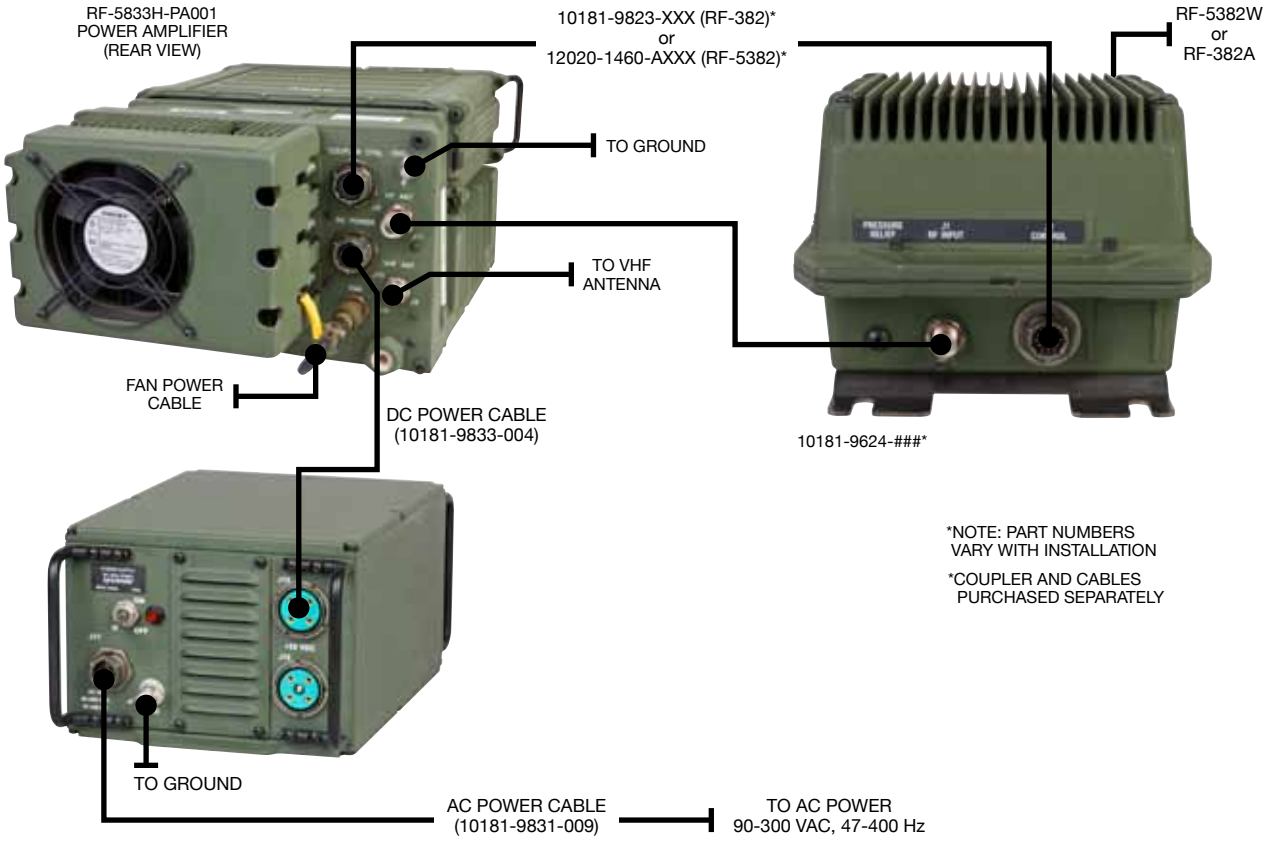
HF ANTENNA

*COUPLER PURCHASED
SEPARATELY

NOTES:
ENSURE THAT THE VEHICULAR
SHOCK MOUNTS ARE GROUNDED
PER INSTRUCTIONS GIVEN IN MANUAL.

RF-5800H-B001



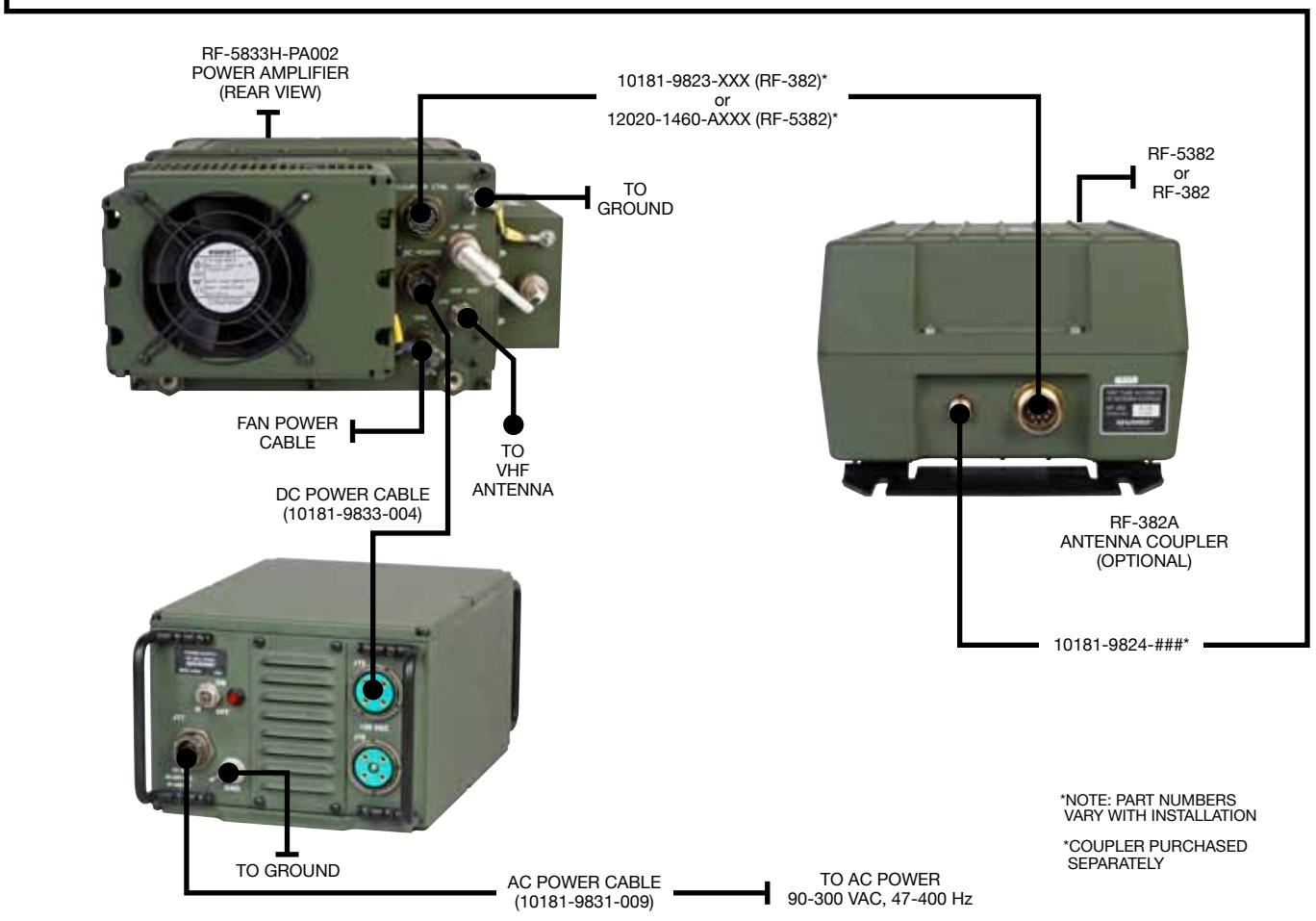


*NOTE: PART NUMBERS VARY WITH INSTALLATION

*COUPLER AND CABLES PURCHASED SEPARATELY

RF-5800H-B002



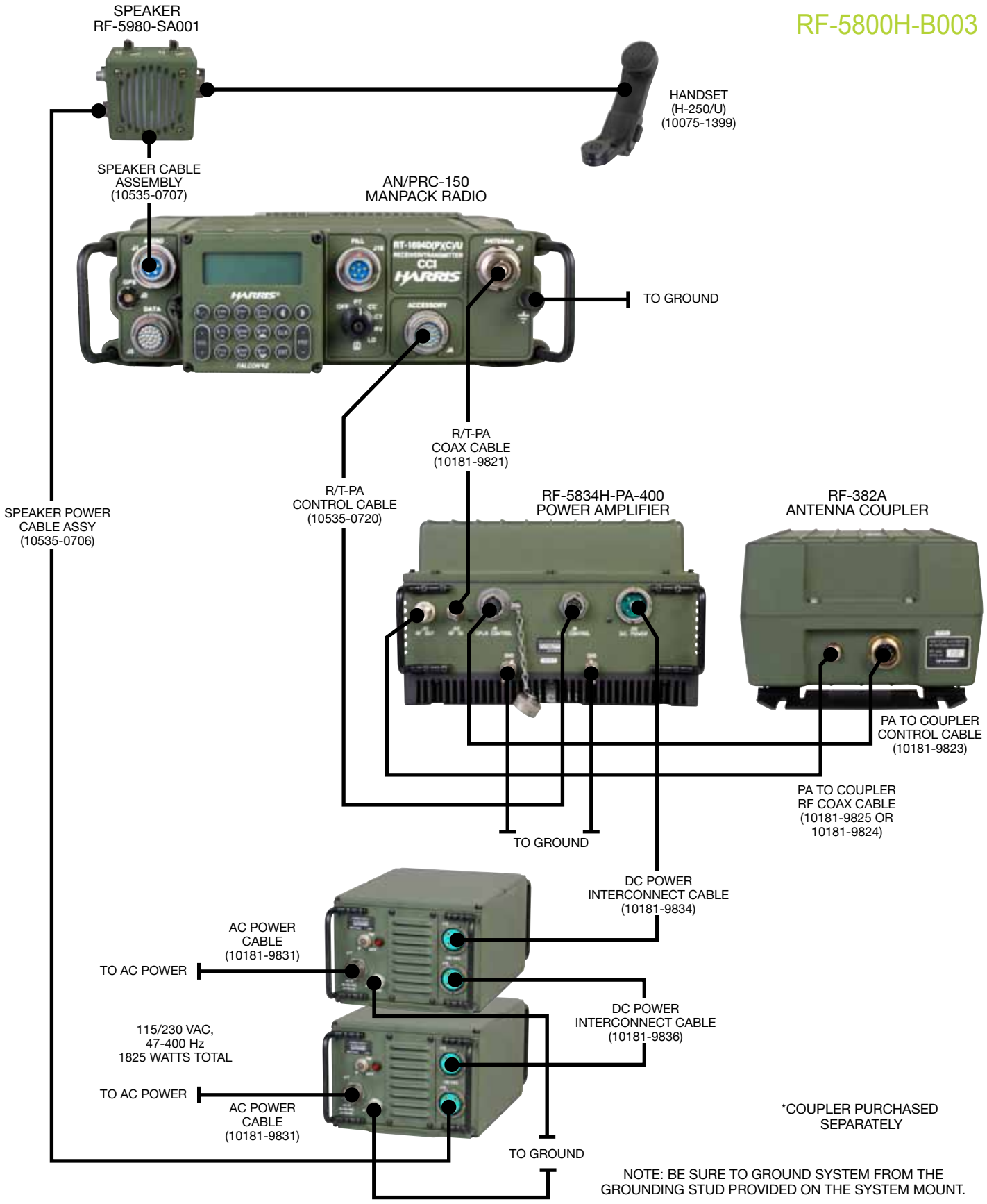


*NOTE: PART NUMBERS VARY WITH INSTALLATION

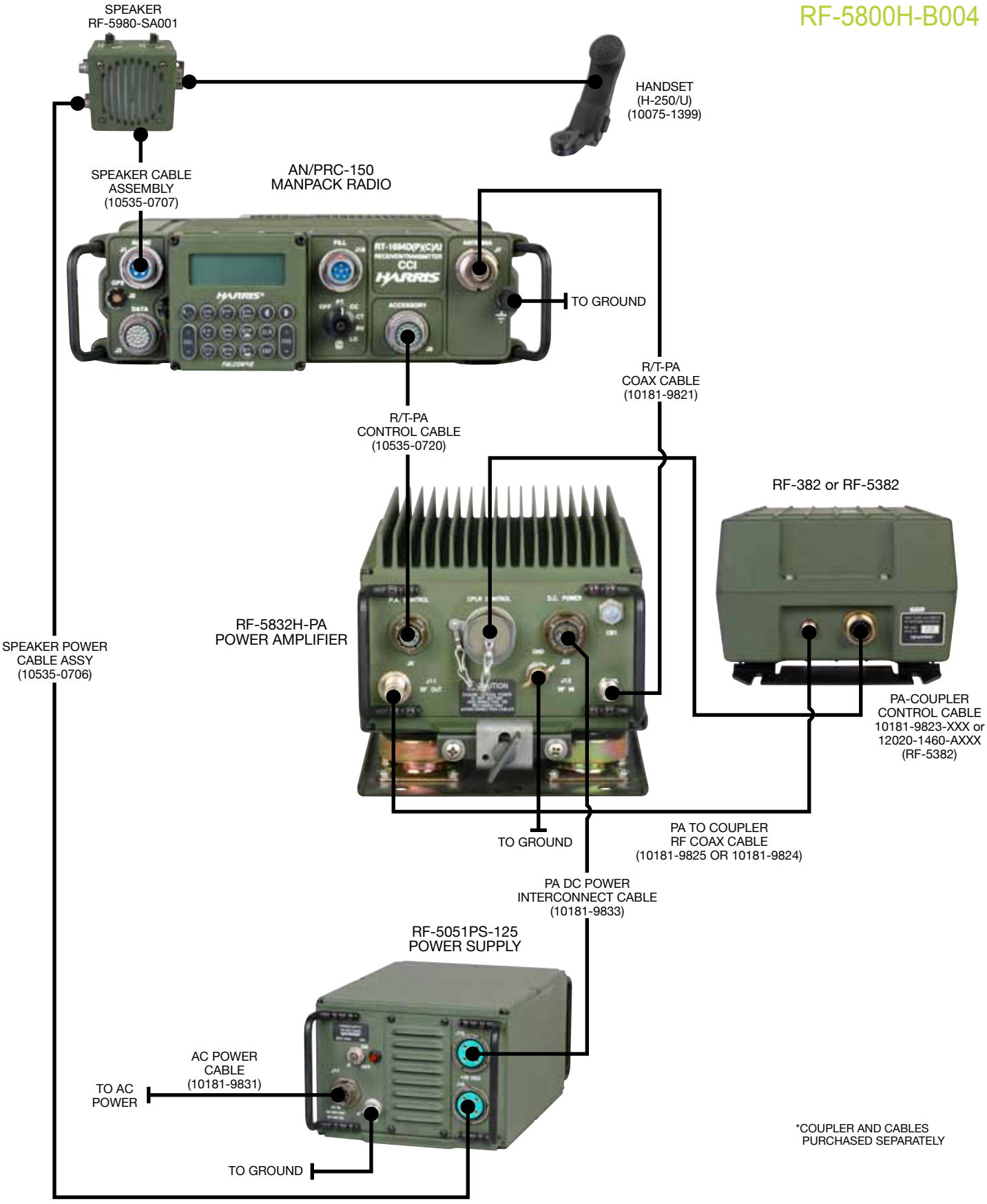
*COUPLER PURCHASED SEPARATELY

System Interconnect Diagrams

RF-5800H-B003



RF-5800H-B004



*COUPLER AND CABLES
PURCHASED SEPARATELY

VEHICULAR SYSTEMS

20-WATT HF-SSB/VHF-FM VEHICULAR ADAPTER



RF-5800H-V006

The RF-5800H-V006 provides the equipment complement necessary to transform the transceiver to a 20-watt HF-SSB (10-watt VHF-FM) vehicular system using the internal power amplifier. The adapter facilitates rapid conversion to a manportable configuration. This system is recommended for vehicular applications where the radio-to-antenna separation is greater than 3.3 feet (~1 meter).

Features

- A distribution unit on shock mount that provides power conditioning and switched auxiliary power output for a speaker or other accessories
- 1.6-60 MHz frequency range
- Separate ports for HF and VHF antennas
- Fully ruggedized per MIL-STD-810F
- Matches standard 8-ft. (~2.4-m), 10-ft. (~3-m), 16-ft. (~5-m), and 35-ft. (~11-m) whip antennas
- Operation from 26.5 VDC nominal with external coupler
- Overload protection
- Built-In Test (BIT)

The RF-5800H-V006 includes:

Product Number	Product Name	Qty
RF-5211VSM-052	R/T Vehicular Shock Mount with Distribution Unit	1
12045-5700-A30	RT to Distribution Box Cable	1
10181-9826-020	Power Cable Assembly	1
10515-0289-4200	20-Watt System Installation Manual	1

125-WATT HF-SSB VEHICULAR ADAPTER



RF-5800H-V004

The RF-5800H-V004 provides the equipment complement necessary to transform the transceiver into a 125-watt PEP/Average HF-SSB vehicular system. The adapter facilitates rapid conversion to a manportable configuration. Color: Green.

Note: The Receiver/Transmitter is not included and must be ordered separately.

Features

- USB, LSB, CW, and AME operation in the 1.6-30 MHz HF frequency band
- Solid-state, broadband RF power amplifier
- Small size and weight
- Fully ruggedized and submersible per MIL-STD-810F
- Overload protection
- Operates from 26.5 VDC nominal
- Built-In Test (BIT)

The RF-5800H-V004 includes:

Product Number	Product Name	Qty
RF-5211VSM	R/T Vehicular Shock Mount	1
RF-5071VSM-03	PA Vehicular Shock Mount	1
RF-5832H-PA001	125-Watt PA	1
10181-9821-020	Coax Cable Assembly	1
10181-9826-020	Power Cable Assembly	1
10515-0124-4200	125-Watt Installation Manual	1
10535-0720-A020	Control Cable Assembly, PA-RT	1
10400-1136-A006	Ground Strap	1

Note: Configuration is for HF communications only and will not operate in the 30 to 60 MHz frequency band.



150-WATT HF/VHF VEHICULAR ADAPTER



RF-5800H-V001

The RF-5800H-V001 provides the equipment complement necessary to transform the transceiver into a 150-watt PEP/Average HF-SSB (60-watt VHF-FM) vehicular system. The adapter facilitates rapid conversion to a manportable configuration.

Color: Green.

Note: The Receiver/Transmitter is not included and must be ordered separately.

Features

- USB, LSB, CW, AME, and FM operation from 1.6-60 MHz frequency band
- Solid-state, broadband RF power amplifier
- Built-in loudspeaker
- Separate HF and VHF RF outputs
- Small size and weight
- Fully ruggedized per MIL-STD-810F
- Heatsink and fan for continuous keydown
- Overload protection
- Operates from 26.5 VDC
- Built-In Test (BIT)

The RF-5800H-V001 includes:

Product Number	Product Name	Qty
10497-0200-01	PA Vehicular Shock Mount	1
RF-5833H-PA001	150-Watt PA	1
10497-5020-A08	Coax Cable Assembly	1
10497-5036-01	Audio Cable Assembly	1
10181-9826-020	Power Cable Assembly	1
10515-0122-4200	150-Watt Installation Manual	1
10535-0720-B17	Control Cable Assembly (PA-RT)	1
7147-1167-3	Ground Strap	1

150-WATT HF/VHF VEHICULAR ADAPTER WITH COLLOCATION FILTERING



RF-5800H-V002

The RF-5800H-V002 provides the equipment complement necessary to transform the transceiver to a 150-watt PEP/Average HF-SSB (60-watt VHF-FM) vehicular system. The adapter includes the RF-5245 Pre/postselector and an HF low-pass filter for the attenuation of unwanted signals in collocated applications. The adapter facilitates the rapid conversion to a manportable configuration.

Color: Green.

Note: The Receiver/Transmitter is not included and must be ordered separately.

Features

- USB, LSB, CW, AME, and FM operation from 1.6-60 MHz frequency band
- Solid-state, broadband RF power amplifier
- Built-in loudspeaker
- Built-in pre/postselector provides attenuation of unwanted signals at frequencies 10% or greater from the carrier
- Integral low-pass filter provides additional attenuation of unwanted signals at frequencies greater than 35 MHz
- Separate HF and VHF RF outputs
- Small size and weight
- Fully ruggedized per MIL-STD-810F
- Heatsink and fan for continuous keydown
- Operates from 26.5 VDC

The RF-5800H-V002 includes:

Product Number	Product Name	Qty
10497-0200-01	PA vehicular shock mount	1
RF-5833H-PA004	150-Watt PA with RF-5245	1
10497-0360-02	25 MHz Low Pass Filter	1
10497-5020-A08	Coax Cable Assembly	1
10497-5036-01	Audio Cable Assembly	1
10181-9826-020	Power Cable Assembly	1
10515-0122-4200	150-Watt Installation Manual	1
10535-0720-B17	Control Cable Assembly (PA-RT)	1
7147-1167-3	Ground Strap	1

400-WATT HF-SSB VEHICULAR ADAPTER



RF-5800H-V003

The RF-5800H-V003 provides the equipment complement necessary to transform the transceiver into a 400-watt PEP/Average HF-SSB vehicular system. The adapter facilitates rapid conversion to a manportable configuration. *Configuration is for HF communications only and will not operate in the 30 to 60 MHz frequency band.*

Color: Green.

Note: The Receiver/Transmitter is not included and must be ordered separately.

Features

- SSB, LSB, CW and AME operation in the 1.6-30 MHz HF frequency band
- Solid-state, broadband RF power amplifier
- Small size and weight
- Fully ruggedized per MIL-STD-810F
- Overload protection
- Operates from 26.5 VDC nominal
- Built-In Test (BIT)



The RF-5800H-V003 includes:

Product Number	Product Name	Qty
RF-5834H-PA001	400-Watt Power Amplifier	1
10181-5074-03	PA Vehicular Shock Mount	1
RF-5211VSM	R/T Vehicular Shock Mount	1
10181-9821-020	Coax Cable Assembly	1
10181-9828-020	Power Cable Assembly	1
10515-0123-4200	400-Watt Installation Manual	1
10535-0720-A020	Control Cable Assembly, PA-RT	1
7147-1167-3	Ground Strap	1

AN/VRC-104(V)3 150-WATT VEHICULAR SYSTEM



RF-5800H-V002

The AN/VRC-104(V)3 provides the equipment complement necessary to transform the transceiver to a 150-watt PEP/ Average HF-SSB (60-watt VHF-FM) vehicular system. The adapter includes the RF-5245 Pre/postselector and an HF low-pass filter for the attenuation of unwanted signals in collocated applications. The adapter facilitates the rapid conversion to a manportable configuration. This system includes everything needed for a Humvee installation including antenna and coupler.

Color: Green.

Note: The Receiver/Transmitter is not included and must be ordered separately.

Features

- 150-watt PEP/ Average
- 1.6 to 30 MHz
- 30 to 60 MHz FM Operation
- Internal ALE and 3rd Generation ALE
- Internal High Speed Modem
- Internal Type I Encryption
- Internal Digital Voice
- 26.6 VDC Operation
- See System Interconnect Diagrams for equipment list

Part Number	Description
10181-5178-06	Mounting Kit, Humvee Ant
10497-0200-01	Shk Mt Assy, RF-5073 Vm, CARC Green 383
10535-0960-01	Ancillary Items, RF-5800H-V001
10540-0900-01	Ancillary Items, 150 Watt Vehicle Sys (20 Ft Cplr Cbl)
11080-3970-01	DC Switch Assy, 150w, CARC Green 383
RF-3120-AT360	Antenna, 35 Ft. Locking, Tilt, Hv, Green
RF-382A-15	RF-382A-15, CARC Green
RF-384VM-03	Shock Mount, O.D. CARC
RF-5833H-PA004	Falcon II 150W PA W/Cosit & Prepost

BASE SYSTEMS

125-WATT HF-SSB BASE STATION ADAPTER



RF-5800H-B004

The RF-5800H-B004 provides the equipment complement necessary to transform the transceiver to a 125-watt PEP/Average HF-SSB base station system. The adapter facilitates the rapid conversion to a manportable configuration. A U.S. power connector (NEMA5-15P) is supplied as the standard AC power connector.

Color: Green.

Note: The Receiver/Transmitter is not included and must be ordered separately.

Features

- USB, LSB, CW, and AME operation in the 1.6-30 MHz HF frequency band
- Solid-state, broadband RF power amplifier
- Small size and weight
- Integrated loudspeaker
- Fully ruggedized per MIL-STD-810F
- Overload protection
- 115 or 230 VAC, 47-400 Hz power operation
- Built-In Test (BIT)
- Removable Radio Tray

The RF-5800H-B004 includes:

Product Number	Product Name	Qty
10558-2000-04	Base Station Mount	1
RF-5832H-PA101	Falcon II 125-Watt PA	1
RF-5051-PS001	Power Supply	1
RF-5980-SA001	Loudspeaker	1
10535-0707-A003	Speaker Audio Cable Assembly	1
10535-0706-A015	Speaker Power Cable Assembly	1
10181-9821-015	Coax Cable Assembly	1
10181-9833-004	DC Power Cable Assembly	1
10515-0124-4200	125-Watt Installation Manual	1
10535-0720-A015	Control Cable Assembly, PA-RT	1
10181-9831-009	AC Power Cable (NEMA 5-15P) P/O RF-5051-PS001	1
10400-1136-A006	Ground Strap	1

Note: Configuration is for HF communications only and will not operate in the 30 to 60 MHz frequency band.

150-WATT HF/VHF BASE STATION ADAPTER



RF-5800H-B001

The RF-5800H-B001 provides the equipment complement necessary to transform the transceiver to a 150-watt PEP/Average HF-SSB (60-watt VHF-FM) Base Station system. The adapter facilitates the rapid conversion to a manportable configuration. A U.S. power connector (NEMA 5-15P) is supplied as the standard AC power connector. Order UK or EU cord separately.

Color: Green.

Note: The Receiver/Transmitter is not included and must be ordered separately.

Features

- USB, LSB, CW, AME, and FM operation from 1.6-60 MHz frequency band
- Solid-state, broadband RF power amplifier
- Built-in loudspeaker
- Separate HF and VHF RF outputs
- Small size and weight
- Fully ruggedized per MIL-STD-810F
- Heatsink fan for continuous keydown
- Overload protection
- 115 or 230 VAC, 47-400 Hz power operation
- Built-In Test (BIT)

RF-5800H-B001 consists of:

Product Number	Product Name	Qty
10497-0850-03	Stack Bracket (Black)	1
RF-5833H-PA001	Power Amplifier - 150 Watts PEP/ Average	1
RF-5051-PS001	Power Supply	1
10497-5015-01	Coax Cable Assembly	1
10497-5036-01	Audio Cable Assembly	1
10515-0122-4200	150-Watt Installation Manual	1
10535-0720-B17	Control Cable Assembly, (PA/RT)	1
10181-9833-004	DC Power Cable Assembly	1
10181-9831-009	AC Power Cable (NEMA 5-15P) P/O RF-5051 -PS001	1
10400-1136-A006	Ground Strap	1

A U.S. power connector (NEMA 5-15P) is supplied as the standard AC power connector.

150-WATT HF/VHF BASE STATION ADAPTER WITH COLLOCATION FILTERING



RF-5800H-B002

The RF-5800H-B002 provides the equipment complement necessary to transform the transceiver to a 150-watt PEP/Average HF-SSB (60-watt VHF-FM) base station system. The adapter includes the RF-5245 Pre/postselector and an HF low-pass filter for the attenuation of unwanted signals in collocated applications. The adapter facilitates rapid conversion to a manportable configuration.

Color: Green.

Note: The Receiver/Transmitter and the UK or EU Cord are not included and must be ordered separately.

Features

- USB, LSB, CW, AME, and FM operation from 1.6-60 MHz frequency band
- Solid-state, broadband RF power amplifier
- Built-in loudspeaker
- Built-in pre/postselector provides attenuation of unwanted signals at frequencies 10% or greater from the carrier
- Integral low-pass filter provides additional attenuation of unwanted signals at frequencies greater than 35 MHz
- Separate HF and VHF RF outputs
- Small size and weight
- Fully ruggedized per MIL-STD-810F
- Heatsink fan for continuous keydown
- Overload protection
- 115 or 230 VAC, 47-400 Hz power operation
- Built-In Test (BIT)

The RF-5800H-B002 includes:

Product Number	Product Name	Qty
10497-0850-03	Stack Bracket	1
RF-5833H-PA002	150-Watt PA with RF-5245	1
10497-0360-02	25 MHz Low Pass Filter	1
10299-5051-03	Power Supply	1
10497-5015-01	Coax Cable Assembly	1
10497-5036-01	Audio Cable Assembly	1
10515-0122-4200	150-Watt Installation Manual	1
10535-0720-B17	Control Cable Assembly (PA/RT)	1
10181-9833-004	DC Power Cable Assembly	1
10181-9831-009	AC Power Cable (NEMA 5-15P) P/O RF-5051-PS001	1
10400-1136-A006	Ground Strap	1

400-WATT HF-SSB BASE STATION ADAPTER



RF-5800H-B003

The RF-5800H-B003 provides the equipment complement necessary to transform the transceiver to a 400-watt PEP/Average HF-SSB base station system. The adapter facilitates the rapid conversion to a manportable configuration.

Color: Green.

Note: The Receiver/Transmitter and the UK or EU Cord are not included and must be ordered separately.

Features

- USB, LSB, CW, and AME operation in the 1.6-30 MHz HF frequency band
- Solid-state, broadband RF power amplifier
- Small size and weight
- Integrated loudspeaker
- Fully ruggedized per MIL-STD-810F
- Overload protection
- 115 or 230 VAC, 47-400 Hz power operation
- Built-In Test (BIT)

The RF-5800H-B003 includes:

Product Number	Product Name	Qty
RF-5834H-PA001	400-Watt Power Amplifier	1
10558-2000-03	Base Station Mount	1
RF-5051-PS001	AC Power Supply	2
RF-5980-SA001	Tactical Loudspeaker	1
10535-0707-A003	Speaker Audio Cable Assembly	1
10535-0706-A015	Speaker Power Cable Assembly	1
10181-9821-015	Coax Cable Assembly	1
10181-9834-004	DC Power Cable Assembly	1
10515-0123-4200	400-Watt Installation Manual	1
10535-0720-A015	Control Cable Assembly (RT to PA)	1
10400-1136-A12	Ground Strap	2
10400-1136-A30	Ground Strap	2
10400-1136-A48	Ground Strap	1

Note: Configuration is for HF communications only and will not operate in the 30 to 60 MHz frequency band.

TRANSPORTABLE SYSTEMS

125-WATT HF-SSB MINI-TRANSIT CASE ADAPTER



RF-5800H-TM004

The RF-5800H-TM004 provides the equipment complement necessary to transform the transceiver to a 125-watt PEP/Average HF-SSB Mini-Transit Case system. The transit case adapter provides the durability of a base station with the transport flexibility and portability of a vehicular system. A clip on each corner of the case can be used to clamp the cases together to create a portable rack. If the cases are installed in a shelter and the system needs to be removed, it is easy to separate the cases from each other. Storage of all interface cables in the cases facilitates easy equipment deployment. The adapter facilitates the rapid conversion to a manportable configuration. *Note: Configuration is for HF communications only and will not operate in the 30 to 60 MHz frequency band.*

Note: The Receiver/Transmitter and the UK or EU Cord are not included and must be ordered separately.

Features

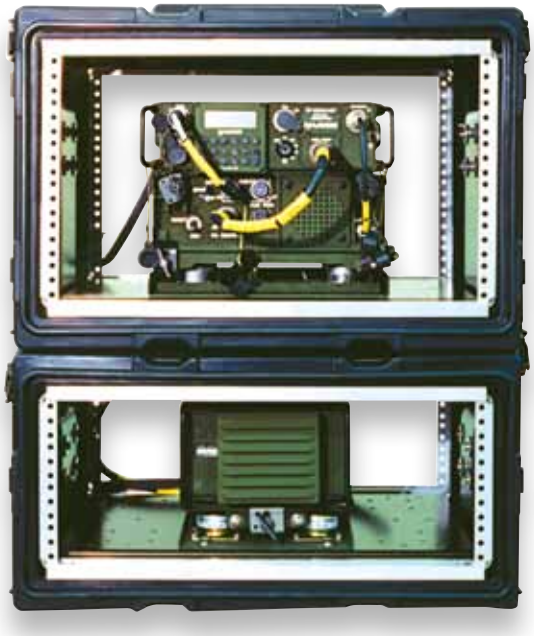
- USB, LSB, CW, and AME operation in the 1.6-30 MHz HF frequency band
- Solid-state, broadband RF power amplifier
- Black double-ended environmentally sealed cases
- Weight: Less than 80 lbs. (~36.3 kg) per case
- Integrated loudspeaker
- Fully ruggedized per MIL-STD-810F
- Overload protection
- 115 or 230 VAC

The RF-5800H-TM004 includes:

Product Number	Product Name	Qty
RF-5832H-PA101	125-Watt PA	1
10400-0562-04	Black Mini-Transit Cases	2
10558-2000-04	Base Station Mount	2
RF-5051-PS001	Power Supply	1
RF-5980-SA001	Loudspeaker	1
10535-0707-A003	Speaker Audio Cable Assembly	1
10535-0706-A015	Speaker Power Cable Assembly	1
10181-9821-015	RT-PA Coax Cable Assembly	1
10181-9833-004	DC Power Cable Assembly	1
10515-0240-4200	125-Watt Installation Manual	1
10535-0720-A015	Control Cable Assembly PA-RT	1
10181-9831-009	AC Power Cable (NEMA 5-15P) P/O RF-5051	1
10400-1136-A006	Ground Strap	1



150-WATT HF/VHF MINI-TRANSIT CASE ADAPTER



RF-5800H-TM001

The RF-5800H-TM001 provides the equipment complement necessary to transform the transceiver to a 150-watt PEP/Average HF-SSB/VHF-FM Mini-Transit Case system. The transit case adapter provides the durability of a base station with the transport flexibility and portability of a vehicular system. A clip on each corner of the case can be used to clamp the cases together to create a portable rack. If the cases are installed in a shelter and the system needs to be removed, it is easy to separate the cases from each other. Storage of all interface cables in the cases facilitates easy equipment deployment. The adapter facilitates the rapid conversion to a manportable configuration.

Color: Black.

Note: The Receiver/Transmitter and the UK or EU Cord are not included and must be ordered separately.

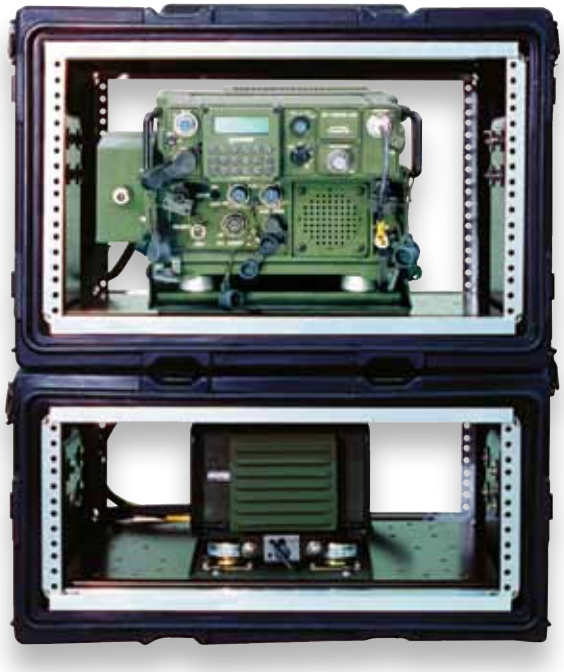
Features

- USB, LSB, CW, AME, and FM operation from 1.6-60 MHz
- Solid-state, broadband RF power amplifier
- Built-in loudspeaker
- Built-in Pre/Postselector provides attenuation of unwanted signals at frequencies 10% or greater from the carrier
- Integral low-pass filter provides additional attenuation of unwanted signals at frequencies greater than 35 MHz
- Separate HF and VHF RF outputs
- Small size and weight
- Fully ruggedized per MIL-STD-810F
- Heatsink fan for continuous keydown
- Overload protection
- 115 or 230 VAC, 47-400 Hz power operation
- Built-In Test (BIT)

The RF-5800H-TM001 includes:

Product Number	Product Name	Qty
RF-5833H-PA001	150-Watt PA	1
10400-0532-04	Black Mini-Transit Cases	2
RF-5051-PS001	RF-5051-001 Power Supply	1
10497-5015-01	Coax Cable Assembly	1
10497-5036-01	Audio Cable Assembly	1
10535-0720-B17	Control Cable Assembly (PA-RT)	1
10181-9833-004	DC Power Cable Assembly	1
10181-9831-009	AC Power Cable	1
10515-0122-4200	150-Watt Installation Manual	1
10400-1136-A006	Ground Strap	1

150-WATT HF/VHF MINI-TRANSIT CASE ADAPTER WITH COLLOCATION FILTERING



RF-5800H-TM002

The RF-5800H-TM002 provides the equipment complement necessary to transform the transceiver to a 150-watt PEP/Average HF-SSB/VHF-FM mini-transit case system. The adapter includes the RF-5245 Pre/postselector and an HF low-pass filter for the attenuation of unwanted signals in collocated applications. The transit case adapter provides the durability of a base station with the transport flexibility and portability of a vehicular system. A clip on each corner of the case can be used to clamp the cases together to create a portable rack. If the cases are installed in a shelter and the system needs to be removed, it is easy to separate the cases from each other. Storage of all interface cables in the cases facilitates easy equipment deployment. The adapter facilitates the rapid conversion to a manportable configuration.

Note: The Receiver/Transmitter and the UK or EU Cord are not included and must be ordered separately.

Features

- USB, LSB, CW, AME, and FM operation in the 1.6-60 MHz frequency band
- 150-watt HF/SSB 1.6-30 MHz; 60-watt VHF-FM 30-60 MHz
- Built-in pre/postselector provides attenuation of unwanted signals in collocated applications
- Integral low-pass filter provides attenuation of unwanted signals at frequencies greater than 25 MHz
- Solid-state, broadband RF power amplifier
- Separate HF and VHF RF outputs
- Heatsink fan for continuous keydown operation
- Black double-ended environmentally sealed cases
- Weight: Less than 80 lbs. (~36.3 kg) per case
- Integral loudspeaker
- Fully ruggedized per MIL-STD-810E
- Overload protection
- 115 or 230 VAC, 47-400Hz power operation

The RF-5800H-TM002 includes:

Product Number	Product Name	Qty
RF-5833H-PA004	150-Watt PA with RF-5245 Pre/ Postselector	1
10400-0562-04	Black Mini-Transit Cases	2
RF-5051-PS001	Power Supply	1
10497-5015-01	Coax Cable Assembly	1
10497-5036-01	Audio Cable	1
10181-9833-004	DC Power Cable	1
10515-0122-4200	150-Watt Install Manual	1
10535-0720-B17	Control Cable Assembly, PA-RT	1
10181-9831-009	AC Power Cable	1
10497-0360-02	25 MHz Low-Pass Filter	1
10400-1136-A006	Ground Strap	1

400-WATT HF-SSB MINI-TRANSIT CASE ADAPTER



RF-5800H-TM003

The RF-5800H-TM003 provides the equipment complement necessary to transform the transceiver to a 400-watt PEP/Average HF-SSB mini-transit case system. The transit case adapter provides the durability of a base station with the transport flexibility and portability of a vehicular system. A clip on each corner of the case can be used to clamp the cases together to create a portable rack. If the cases are installed in a shelter and the system needs to be removed, it is easy to separate the cases from each other. Storage of all interface cables in the cases facilitates easy equipment deployment. The adapter facilitates the conversion to a manportable configuration. *Note: Configuration is for HF communications only and will not operate in the 30 to 60 MHz frequency band.*

Note: The Receiver/Transmitter and the UK or EU Cord are not included and must be ordered separately.

Features

- USB, LSB, CW, and AME operation in the 1.6-30 MHz HF frequency band
- Solid-state, broadband RF power amplifier
- Black double-ended environmentally sealed cases
- Weight: Less than 80 lbs. (~36.3 kg) per case
- Integrated loudspeaker
- Fully ruggedized per MIL-STD-810F
- Overload protection
- 115 or 230 VAC, 47-400 Hz power operation
- Built-In Test (BIT)

The RF-5800H-TM003 includes:

Product Number	Product Name	Qty
RF-5834H-PA001	400-Watt Power Amplifier	1
RF-5072VSM	Dual Shock Mount	1
10181-9836-002	DC Power Jumper Cable	1
10400-0562-04	Transit Case	1
10400-1136-A12	Ground Strap, (12 in; ~30.5 cm)	2
10400-1136-A24	Ground Strap, (24 in; ~61 cm)	4
RF-5051-PS001	AC Power Supply	2
RF-5074VSM	Shock Mount	1
10181-9834-004	Transit Case	1
RF-5980-SA001	Tactical Loudspeaker	1
10181-9804	Ground Strap	1
10181-9821-008	Coax Cable Assembly	1
10400-0422-02	Transit Case	1
10400-0585-01	Base Mount	4
10400-0586-01	Bracket Base Plate	2
10391-9999-01	Handset/Mic Bracket	1
10488-1226-01	Pouch Case	1
10535-0707-A002	Speaker Audio Cable Assembly	1
10535-0706-A008	Speaker Power Cable Assembly	1
10588-1017-01	Mounting Plate	1
10558-1018-01	Speaker Bracket	1
10588-1019-01	Speaker Support	1
10588-1020-01	Mounting Plate	1
10515-0123-4200	400-Watt Installation Manual	1
10535-0720-A008	Control Cable Assembly, PA-RT	1

150-WATT ANTENNA COUPLER MINI-TRANSIT TWO-CASE SET



RF-5382H-TM001

The RF-5382H-TM001 is a set of two cases designed to complement the RF-5800H-TM001, -TM002, and -TM004 transit mini-case systems. Case 1 contains the antenna coupler, ruggedly mounted on a removable tray. A whip antenna mount is located on the coupler tray. Case 2 is used to store the control and coax cable assemblies that interface to the radio system.

Color: Black.

The RF-5382H-TM001 includes:

Product Number	Product Name	Qty
RF-5382H	Antenna Coupler	1
N/A	Whip Antenna Mount	1
12020-1460-A250	Control Cable	1
10181-9824-250	Coax Cable	1

Case 1:
60 lbs. (~27.2 kg)
22.5 W x 22.5 D x 14.5 H in. (~57.2 W x 57.2 D x 36.8 H cm)

Case 2:
20 lbs. (~9 kg)
22.5 W x 22.5 D x 24.5 H in. (~57.2 W x 57.2 D x 62.2 H cm)

Also included with the RF-5382H-TM001 is the following:

- 250-foot (approximately 76 meters) Control Cable
- 250-foot (approximately 76 meters) Coax Cable

400-WATT ANTENNA COUPLER MINI-TRANSIT TWO-CASE SET



RF-382A-15TM

The RF-382A-15TM is a set of two cases designed to complement the RF-5800H-TM003 400-watt transit mini-case system. Case 1 contains the antenna coupler, ruggedly mounted on a removable tray. A whip antenna mount is located on the coupler tray. Case 2 is used to store the control and coax cable assemblies that interface to the radio system.

Color: Black.

The RF-382A-15TM includes:

Product Number	Product Name	Qty
RF-382A-15	Antenna Coupler	1
N/A	Whip Antenna Mount	1
10181-9823-250	Coupler Control Cable	1
10181-9824-250	Coax Cable	1

Case 1:
65 lbs. (~29.5 kg)
22.5 W x 22.5 D x 14.5 H in. (~57.2 W x 57.2 D x 36.8 H cm)

Case 2:
20 lbs. (~9 kg)
22.5 W x 22.5 D x 24.5 H in. (~57.2 W x 57.2 D x 36.8 H cm)



ANTENNA COUPLERS

150-WATT HF FAST-TUNE ANTENNA COUPLER



RF-5382H-CU001

The RF-5382H automatically matches the output of transceivers and power amplifiers to a wide variety of whip, dipole, and longwire antennas over the frequency range of 1.6 to 30 MHz. The coupler features BIT, overload, and lightning surge protection and is designed to handle 150 watts PEP/Average and includes a 50-ohm output connector (type N female) for applications where it is desirable to quickly change from tuning a whip antenna to tuning a 50-ohm antenna. It provides automatic switching to the 50-ohm port for VHF (30 to 60 MHz) operation. Typical tune time is 150 msec after an initial learning tune cycle of typically less than one second. When used in 125-watt and 150-watt configurations, the antenna coupler requires lengths of 10181-9824 coaxial cable and 12020-1460 control cable. Standard lengths are 25, 75, 150, and 250 feet (~7.6, 23, 46, 76 meters). Use the RF-5800H-V006 Vehicular Adapter for 20-watt configurations with lengths of 10369-7211 Coaxial Cable and 12020-1460 Control Cable. The antenna coupler must be installed onto RF-5384-VM-01 shock mount when deployed in mobile applications.

Finish/Color: CARC Green 383

The RF-5382H-CU001 includes:

Product Number	Product Name	Qty
RF-5382H-CU001	Coupler Unit	1
10515-0154-4300	Intermediate Maintenance Manual	1
12020-0003-01	Ground Strap	1
12020-1350-02	High Voltage Safety Shield	1

HF FAST-TUNE AUTOMATIC ANTENNA COUPLER



RF-382A-15

The RF-382A-15 automatically matches the output of transceivers and power amplifiers to a wide variety of whip, dipole, and longwire antennas over the frequency range of 1.6 to 30 MHz. The coupler features BIT, overload, and lightning surge protection. It includes a 50-ohm output connector (type N female) for applications where it is desirable to quickly change from tuning a whip antenna to tuning a 50-ohm antenna. Its tune time is 200 msec after an initial learning tune cycle of typically less than three seconds. This antenna coupler requires lengths of 10181-9824 Coaxial Cable, and 10181-9823 Control Cable. Standard lengths are 25, 75, 150, and 250 feet (~7.6, 23, 46, and 76 meters).

Finish/Color: CARC Green 383

The RF-382A-15 includes:

Product Number	Product Name	Qty
RF-382A-15	Coupler Unit	1
10515-0008-4300	Intermediate Maintenance Manual	1
10208-0009	Ground Strap	1



ANTENNA COUPLER OPTIONS AND ACCESSORIES

	RF-5382H-CU001	RF-382A-15
Coax RF Cable	10181-9824-XXX (125-watt and 150-watt systems) 10369-7211-XXX (20-watt systems)	10181-9824-XXX
Control Cable	12020-1460	10181-9823-XXX
Sun Shield	12020-1194-01	10330-9250
Safety Cover	12020-1350-02 (included with RF-5382H)	10208-0014-01
Shock Mounts	RF-5384-VM-01	RF-383VM-01 (tracked vehicle) RF-384VM-03 (wheeled vehicle)
Mounting Plate		RF-285-04
Siting Kits	RF-5351-AT Series	RF-5351-AT Series
Transit Case Systems	RF-5382H-TM001	RF-382A-15TM

AUDIO AND SPEAKER CABLES

SPEAKER POWER, RF-5980/RF-5850

11068-0018-AXXX

Speaker power cable for connection between the RF-5980-SA001 Tactical Amplified Speaker and RF-5850-PS series power supplies. Standard length is 9 feet (~2.7 meters).

Specify cable length by replacing 'AXXX' above:

A009	9 ft. (~2.7 m)	A020	20 ft. (~6 m)
A015	15 ft. (~4.6 m)	A075	75 ft. (~23 m)

POWER AMPLIFIER CONTROL CABLES

REMOTE AND PA CONTROL "Y" CABLE

10535-0730-AX

This cable allows for simultaneous operation of the radio RS-232 ASCII remote control interface and control of the HF power amplifiers. Since both of these interfaces are present on the J6 accessory port, this cable is in a "Y" configuration. The A1 configuration provides for a 10-foot (~3-meter) separation between the R/T and power amplifier and 10 feet (~3 meters) between the R/T and DTE. The A2 configuration provides for a 2-foot (~0.6-meter) separation between the R/T and power amplifier and 7 feet (~2.1 meters) between the R/T and DTE. The data terminal connection utilizes a 9-pin D-connector. Overall length is 10 feet (~3 meters).

PA CONTROL CABLE

10535-0720-AXXX

Cable that interconnects the HF R/T and various power amplifiers, including the RF-5832H-PA101, RF-5833H-PA series, and the RF-5834H-PA001. A version of this cable is included with each RF-5800H-V series vehicular adapter and RF-5800H-B series base station adapter. It is not recommended for lengths greater than 150 feet (~46 meters). Standard length is 20 feet (~6 meters).

Specify cable length by replacing 'AXXX' above:

A002	2 ft. (~0.6 m)	A020	20 ft. (~6 m)
A004	4 ft. (~1.2 m)	A024	24 ft. (~7 m)
A006	6 ft. (~1.8 m)	A030	30 ft. (~9 m)
A008	8 ft. (~2.4 m)	A040	40 ft. (~12 m)
A010	10 ft. (~3 m)	A050	50 ft. (~15 m)
A012	12 ft. (~3.7 m)	A060	60 ft. (~18.3 m)
A015	15 ft. (~4.6 m)		



COUPLER CONTROL CABLES

COUPLER CONTROL CABLE, RF-5382H-CU001

12020-1460-AXXX

Coupler control cable for the RF-5382H-CU001 150-Watt HF Fast-Tune Antenna Coupler. Maximum recommended length is 250 feet (~76 meters).

Specify cable length by replacing 'AXXX' above:

A003	3 ft. (~0.9 m)	A050	50 ft. (~15 m)
A010	10 ft. (~3 m)	A075	75 ft. (~23 m)
A020	20 ft. (~6 m)	A100	100 ft. (~30 m)
A025	25 ft. (~7.6 m)	A150	150 ft. (~46 m)
A030	30 ft. (~9 m)	A200	200 ft. (~60 m)
A040	40 ft. (~12 m)	A250	250 ft. (~76 m)

COUPLER CONTROL CABLE, RF-382A-15

10181-9823-XXX

Coupler control cable for the RF-382A-15 400-Watt HF Fast-Tune Antenna Coupler. Maximum recommended length is 250 feet (~76 meters). Specify cable length by replacing 'XXX' above:

A003	3 ft. (~0.9 m)	A050	50 ft. (~15 m)
A010	10 ft. (~3 m)	A075	75 ft. (~23 m)
A020	20 ft. (~6 m)	A100	100 ft. (~30 m)
A025	25 ft. (~7.6 m)	A150	150 ft. (~46 m)
A030	30 ft. (~9 m)	A200	200 ft. (~60 m)
A040	40 ft. (~12 m)	A250	250 ft. (~76 m)

COAXIAL CABLES

COAXIAL CABLE, RG-213, TYPE N TO BNC

10369-7211-XXX

Preassembled M17/74-RG213 coaxial cable assembly with one type N male and one BNC male connector end. Due to losses at higher frequencies, this cable is not recommended at lengths greater than 100 feet (~30 meters) for VHF High and UHF.

Specify cable length by replacing 'XXX' above:

007	7 ft. (~2.1 m)	50	50 ft. (~15 m)
09	9 ft. (~2.7 m)	075	75 ft. (~23 m)
010	10 ft. (~3 m)	80	80 ft. (~24 m)
015	15 ft. (~4.6 m)	090	90 ft. (~27 m)
20	20 ft. (~6 m)	99	99 ft. (~30 m)
25	25 ft. (~7.6 m)	130	130 ft. (~39.6 m)
30	30 ft. (~9 m)	150	150 ft. (~46 m)
040	40 ft. (~12 m)		

COAXIAL CABLE, RG-213, BNC TO BNC

10369-7212-XXX

Preassembled M17/74-RG213 coaxial cable assembly with BNC male connectors. Due to losses at higher frequencies, this cable is not recommended at lengths greater than 100 feet (~30 meters) for VHF High and UHF.

Specify cable length by replacing 'XXX' above:

005	5 ft. (~1.5 m)	075	75 ft. (~23 m)
010	10 ft. (~3 m)	080	80 ft. (~24 m)
015	15 ft. (~4.6 m)	090	90 ft. (~27 m)
020	20 ft. (~6 m)	100	100 ft. (~30 m)
025	25 ft. (~7.6 m)	117	117 ft. (~35.6 m)
030	30 ft. (~9 m)	150	150 ft. (~46 m)
040	40 ft. (~12 m)	250	250 ft. (~76 m)
050	50 ft. (~15 m)		
060	60 ft. (~18.3 m)		



COAXIAL CABLE, LOW LOSS, TYPE N TO TYPE N

10513-0810-AXXX

Low-loss preassembled coaxial cable, with type N male connectors, especially designed for antenna runs in an outdoor environment. The cable is designed for 20-year outdoor use, incorporating a UV resistant jacket and waterproofing compound inside the jacket. The shielding is typically 90 dB versus 40 dB typical for single shielded cables, making it ideal for reducing interference in multi-radio environments. Typical attenuation is 0.7 dB/100 feet (~30 meters) at 30 MHz and 2.7 dB/100 feet (~30 meters) 450 MHz.

Specify cable length by replacing 'AXXX' above:

A006	6 ft. (~1.8 m)	A100	100 ft. (~30 m)
A010	10 ft. (~3 m)	A150	150 ft. (~46 m)
A025	25 ft. (~7.6 m)	A200	200 ft. (~60 m)
A050	50 ft. (~15 m)	A250	250 ft. (~76 m)
A075	75 ft. (~23 m)		

COAXIAL CABLE, LOW LOSS, TYPE N TO BNC

10513-0811-AXXX

Low-loss preassembled coaxial cable, with one type N male and one type BNC connector, especially designed for antenna runs in an outdoor environment. The cable is designed for 20-year outdoor use, incorporating a UV resistant jacket and waterproofing compound inside the jacket. The shielding is typically 90 dB versus 40 dB typical for single shielded cables, making it ideal for reducing interference in multi-radio environments. Typical attenuation is 0.7 dB/100 feet (~30 meters) at 30 MHz and 2.7 dB/100 feet (~30 meters) at 450 MHz.

Specify cable length by replacing 'AXXX' above:

A010	10 ft. (~3 m)	A075	75 ft. (~23 m)
A025	25 ft. (~7.6 m)	A100	100 ft. (~30 m)
A030	30 ft. (~9 m)	A150	150 ft. (~46 m)
A050	50 ft. (~15 m)		

COAXIAL CABLE, LOW LOSS, BNC TO BNC

10513-0812-AXXX

Low-loss preassembled coaxial cable, with type BNC male connectors, especially designed for antenna runs in an outdoor environment. The cable is designed for 20-year outdoor use, incorporating a UV resistant jacket and waterproofing compound inside the jacket. The shielding is typically 90 dB versus 40 dB typical for single shielded cables, making it ideal for reducing interference in multi-radio environments. Typical attenuation is 0.7 dB/100 feet (~30 meters) at 30 MHz and 2.7 dB/100 feet (~30 meters) at 450 MHz.

Specify cable length by replacing 'AXXX' above:

A010	10 ft. (~3 m)	A100	100 ft. (~30 m)
A025	25 ft. (~7.6 m)	A150	150 ft. (~46 m)
A030	30 ft. (~9 m)	A200	200 ft. (~60 m)
A050	50 ft. (~15 m)	A250	250 ft. (~76 m)
A085	85 ft. (~26 m)		

COAXIAL CABLE, RG-213, TYPE N TO N

10181-9824-XXX

M17/74-RG213 cable with type N male connectors. Commonly used to interconnect RF-5832H-PA101, RF-5834H-PA001, or RF-5835H-PA001 HF Power Amplifiers to the RF-382A-15 or RF-5832H-CU001 antenna couplers, but can be used in other applications. Maximum recommended length is 250 feet (~76 meters).

Specify cable length by replacing 'XXX' above:

002	2 ft. (~0.6 m)	030	30 ft. (~9 m)
004	4 ft. (~1.2 m)	040	40 ft. (~12 m)
005	5 ft. (~1.5 m)	050	50 ft. (~15 m)
006	6 ft. (~1.8 m)	070	70 ft. (~20 m)
008	8 ft. (~2.4 m)	075	75 ft. (~23 m)
010	10 ft. (~3 m)	080	80 ft. (~24 m)
012	12 ft. (~3.7 m)	100	100 ft. (~30 m)
013	13 ft. (~4 m)	120	120 ft. (~37 m)
015	15 ft. (~4.6 m)	150	150 ft. (~46 m)
016	16 ft. (~4.9 m)	165	165 ft. (~50 m)
020	20 ft. (~6 m)	200	200 ft. (~60 m)
025	25 ft. (~7.6 m)	250	250 ft. (~76 m)



COLLOCATION AND FILTERING

DIGITAL PRE/POSTSELECTOR OPTION FOR THE RF-5833H 150-WATT POWER AMPLIFIER

RF-5245

The RF-5245 is an internal, compact solution to collocation filtering for RF-5833H 150-watt HF/VHF radio systems. Used in high interference or collocated environments, the pre/postselector provides superior radio system performance. Built-in test of this option is provided by the comprehensive BITE of the standard RF-5800H radio system.

Features

- 1.6-30 MHz frequency range
- 25 dB of attenuation of unwanted signals at frequencies 10% or greater from the carrier
- Fully automatic tuning and switching with no operator control required
- Ruggedized for reliable operation in extreme environments
- Rapid tune time of 20 ms or less
- Fully protected against signals up to 300 VRMS
- Embedded in the RF-5833H-PA002 150-Watt Power Amplifier

The RF-5245 includes:

Product Number	Product Name	Qty
10497-1800-01	Digital Pre/Postselector Module	1
10497-1802-01	Support Block	1
10497-1131-01	Cable Assembly, BNC to SMB	1
10497-1132-03	Cable Assembly, SMB to SMB	1

200-WATT LOW PASS FILTER KIT FOR THE RF-5832H 125-WATT POWER AMPLIFIER

10497-0340-01

The 10497-0340-01 low-pass filter kit is used to reduce transmitter and receiver signals from 25 MHz and above. Its ultimate stop band is greater than -60 dB from 25 to 90 MHz.

Finish/Color: CARC Green 383.

The kit contains all items necessary to mount to the low-pass filter to a flat surface:

Product Number	Product Name	Qty
10497-0350-01	Low-Pass Filter, 200 watts	1
10497-0358-01	Ground Strap	1
10497-0356-01	Mounting Plate	1

200-WATT LOW PASS FILTER KIT FOR THE RF-5833H 150-WATT POWER AMPLIFIER

10497-0360-02

The 10497-0360-02 low-pass filter kit is used to reduce transmitter and receiver signals from 25 MHz and above. Its ultimate stop band is greater than -60 dB from 25 to 90 MHz. The 10497-0360-02 is included in the RF-5800H-V002 Vehicular Adapter, RF-5800H-B002 Base Station Adapter, and the RF-5800H-TM002 Transit Case Adapter.

Finish/Color: CARC Green 383

The unit contains all items necessary to attach to the RF-5833H-PA:

Product Number	Product Name	Qty
10497-0350-01	Low-Pass Filter, 200 watts	1
10497-0357-01	Ground Strap	1
10497-0363-01	Coax Cable, N to N	1



500-WATT LOW PASS FILTER KIT FOR THE RF-5834H 400-WATT POWER AMPLIFIER AND THE RF-5800H-V003 400-WATT VEHICULAR ADAPTER

10286-0900-01

The 10286-0900-01 low-pass filter kit is used to reduce transmitter and receiver signals from 25 MHz and above. Its ultimate stop band is greater than -60 dB from 25 to 90 MHz.

Finish/Color: CARC Green 383.

The kit contains all items necessary to mount to the low-pass filter in the RF-5800H-V003 Vehicular Adapter:

Product Number	Product Name	Qty
10564-1720-05	Low Pass Filter, 500 watts	1
10181-9825-002	Coax Cable, N to N	1
10400-1136-A30	Ground Strap	1
10286-1162-01	Bracket	1

500-WATT LOW PASS FILTER KIT FOR THE RF-5834H 400-WATT POWER AMPLIFIER AND THE RF-5800H-B003 400-WATT BASE STATION ADAPTER

10286-0900-02

The 10286-0900-02 low-pass filter kit is used to reduce transmitter and receiver signals from 25 MHz and above. Its ultimate stop band is greater than -60 dB from 25 to 90 MHz.

Finish/Color: CARC Green 383.

The kit contains all items necessary to mount to the low-pass filter in the RF-5800H-B003 Base Station Adapter:

Product Number	Product Name	Qty
10564-1720-05	Low Pass Filter, 500W	1
10181-9825-001	Coax Cable, N to N	1
10400-1136-A09	Ground Strap	1

DIGITAL PRE/POSTSELECTOR



RF-5845H-PP101

The Pre/postselector provides significant attenuation of both unwanted receive signals and spurious transmitter outputs for 125-watt and 400-watt systems. The RF-5845H-PP101 is utilized with the RF-5800H-MP.

Used in high-interference or collocated environments, the Pre/postselector provides greater than 40 dB attenuation of unwanted signals at frequencies 10% removed from the carrier frequency. Built-in test (BIT) and all operational controls are from the transceiver front panel.

Features

- 1.6 to 30 MHz frequency range
- Fully automatic tuning and switching with no operator controls required
- Ruggedized for reliable operation in extreme environments; MIL-STD-810D compliant
- Rapid tune time of less than 20 msec
- Fully protected against signals up to 300 volts RMS

Unit price includes manual and all interconnecting cables. Use the RF-5072VSM-03 for wheeled vehicular applications, RF-5075VM for tracked vehicular applications, or the 10299-0580 Base Station Extension when stationary.

Finish/Color: CARC Green 38



SITING KITS

DIPOLE ANTENNA 20-METER REMOTE SITING KIT FOR THE RF-5382H ANTENNA COUPLER

RF-5351-AT001

The RF-5351-AT001 is a complete kit designed to allow a vehicle-based RF-5382H Antenna Coupler to disconnect from the vehicle and be remotely located up to 20 meters (approximately 66 feet) away. The mounting plate provides the ability to connect to the strain relief on a dipole antenna. It provides the mounting plate, extender cables on winders, ground rod, anchor stakes, and a carrying bag for the loose parts. It does not include the vehicular shock mount assembly (RF-5384VM-01 recommended).
Finish/Color: CARC Green 383

DIPOLE ANTENNA 50-METER REMOTE SITING KIT FOR THE RF-5382H ANTENNA COUPLER

RF-5351-AT002

The RF-5351-AT002 is a complete kit designed to allow a vehicle-based RF-5382H Antenna Coupler to disconnect from the vehicle and be remotely located up to 50 meters (approximately 164 feet) away. The mounting plate provides the ability to connect to the strain relief on a dipole antenna. It provides the mounting plate, extender cables on a reel, ground rod, anchor stakes, and a carrying bag for the loose parts. It does not include the vehicular shock mount assembly (RF-5384VM-01 recommended).
Finish/Color: CARC Green 383

WHIP AND DIPOLE ANTENNA 20-METER REMOTE SITING KIT FOR THE RF-5382H ANTENNA COUPLER

RF-5351-AT003

The RF-5351-AT003 is a complete kit designed to allow a vehicle-based RF-5382H Antenna Coupler to disconnect from the vehicle and be remotely located up to 20 meters (approximately 66 feet) away. The mounting plate provides a whip antenna base as well as the ability to connect to the strain relief on a dipole antenna. A 32-foot (approximately 10-meter) whip antenna is included in the kit. The kit includes the mounting plate with hinged antenna base for SB-V series whip antenna, extender cables on winders, ground rod, radials, guys and stakes, anchor stakes, and a carrying bag for the whip antenna and loose parts. It does not include the vehicular shock mount assembly (RF-5384VM-01 recommended).
Finish/Color: CARC Green 383

WHIP AND DIPOLE ANTENNA 50-METER REMOTE SITING KIT FOR THE RF-5382H ANTENNA COUPLER



RF-5351-AT004

The RF-5351-AT004 is a complete kit designed to allow a vehicle-based RF-5382H Antenna Coupler to disconnect from the vehicle and be remotely located up to 50 meters (approximately 164 feet) away. The mounting plate provides a whip antenna base as well as the ability to connect to the strain relief on a dipole antenna. A 32-foot (approximately 10-meter) whip antenna is included in the kit. The kit includes the mounting plate with hinged antenna base for SB-V series whip antenna, extender cables on a reel, ground rod, radials, guys and stakes, anchor stakes, and a carrying bag for the whip antenna and loose parts. It does not include the vehicular shock mount assembly (RF-5384VM-01 recommended).
Finish/Color: CARC Green 383

WHIP AND DIPOLE ANTENNA SITING KIT FOR THE RF-5382H AND RF-382A ANTENNA COUPLERS

RF-5351-AT005

The RF-5351-AT005 is a siting kit designed for temporary installations of dipole or whips systems utilizing the RF-5382H or RF-382A antenna couplers. The mounting plate provides a whip antenna base as well as the ability to connect to the strain relief on a dipole antenna. The kit includes the mounting plate, ground rod, radials, guys and stakes, anchor stakes, and a carrying bag for the loose parts. It does not include extender cable assemblies.
Finish/Color: CARC Green 383

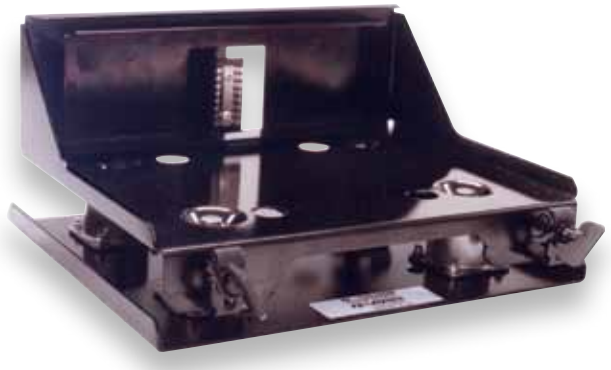


RF-5351 SITING KIT MODELS

Part RF-5351	AT001	AT002	AT003	AT004	AT005	AT006	AT011	AT012	AT013	AT014
Antenna Coupler	RF-5382H	RF-5382H RF-382A	RF-5382H	RF-5382H	RF-5382H	RF-5382H	RF-382A	RF-382A	RF-382A	RF-382A
Dipole Compatible	●	●	●	●	●	●	●	●	●	●
Whip Compatible			●	●	●	●			●	●
Extension Cable Length	20 meters (~66 feet)	50 meters (~164 feet)	20 meters (~66 feet)	50 meters (~164 feet)	50 meters (~164 feet)	50 meters (~164 feet)	20 meters (~66 feet)	50 meters (~164 feet)	20 meters (~66 feet)	50 meters (~164 feet)
Cable Winders	●		●				●		●	
Cable Reel		●		●		●		●		●
Whip Antenna Base			●	●	●	●			●	●
32-foot (~9.8-meter) Whip Antenna			●	●					●	●
Control Extension Cable	●	●	●	●		●	●	●	●	●
RF Coax Extension Cable	●	●	●	●		●	●	●	●	●
Ground Radials			●	●	●	●				
Whip Antenna Guy Assemblies			●	●	●	●			●	●
Bag for Accessories	●	●			●	●	●	●		
Bag for Whip and Accessories	●	●							●	●

MOUNTING SYSTEMS

MOUNTING SYSTEMS R/T SHOCK MOUNT



RF-5211VSM

The RF-5211VSM is a short profile vehicular mount for the RF-5800H-MP manpack that is used specifically for vehicles with space constraints. The RF-5800H-MP is mounted directly to the shock mount without the battery case. Power is supplied to the transceiver via a Power Amplifier Control Cable connected between the RF-5800H-MP and the external power amplifier. The transceiver can be removed from this mount and connected to a battery case with batteries for “Jerk-and-Run” operation.

Finish/Color: Black

SECURITY LOCKING KIT FOR THE RF-5211VSM

10372-0874-01

The 10372-0874-01 attaches to the RF-5211VSM shock mount to prevent unauthorized removal of the radio transceiver from the shock mount. The 10372-0874-01 requires the use of a padlock, which is not included.

ADJUSTABLE SHOCK MOUNT FOR THE RF-5800H-MP WITH BATTERIES OR BATTERY ELIMINATOR



RF-5870-VM001

The RF-5870-VM001 is an adjustable shock mount that mounts the RF-5800H Manpack Transceiver for use on mobile systems when the use of the full Vehicular Adapter Kit is not required. It is adjustable to mount the manpack when used with the battery pack, RF-5850-PS001 Power Supply, or RF-5851-AD001 DC Adapter.

Finish/Color: Black

SECURITY LOCKING KIT FOR THE RF-5870-VM001

RF-5870-VM002

The RF-5870-VM002 Security Lock attaches to the RF-5870-VM001 Shock Mount to prevent unauthorized removal of the radio transceiver from the shock mount. The RF-5870-VM002 requires the use of a padlock, which is not included.

SINGLE SHOCK MOUNT FOR RF-5832H 125-WATT POWER AMPLIFIER OR RF-5051-PS001 POWER SUPPLY



RF-5071VSM-03

The RF-5071VSM-03 is a single shock mount for the RF-5832H-PA or the RF-5051-PS001 to provide isolation from high-impact shock and vibration in vehicular installations.

Finish/Color: Black

DUAL SHOCK MOUNT FOR TWO RF-5832H POWER AMPLIFIERS, TWO RF-5051-PS001 POWER SUPPLIES, OR RF-5845H PRE/POSTSELECTORS



RF-5072VSM-03

The RF-5072VSM-03 is a dual shock mount for two RF-5832H-PAs or two RF-5051PS-125s.The RF-5072VSM may also be used to mount one RF-5845H-PP Digital Pre/Postselector.The unit provides isolation from high-impact shock and vibration in vehicular installations.

Finish/Color: Black

SYSTEM SHOCK MOUNT FOR RF-5833H 150-WATT POWER AMPLIFIER



RF-5073VSM

System shock mount for RF-5833H-PA.

Finish/Color: CARC Green 383

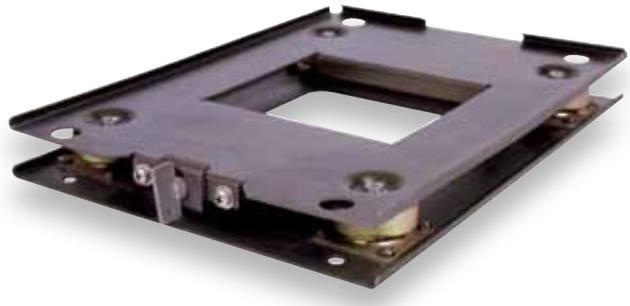
SECURITY LOCKING KIT FOR THE 150-WATT SYSTEM

10497-0870-01

The 10497-0870-01 is a locking kit containing locking mechanisms for securing the RF-5800H to the RF-5833H-PA Power Amplifier and a mechanism to lock the RF-5833H-PA to the RF-5073VSM shock mount. It prevents unauthorized removal of the radio transceiver from the shock mount. Requires the use of two padlocks, which are not included.

Finish/Color: Black

SINGLE SHOCK MOUNT FOR RF-5834H-PA 400-WATT POWER AMPLIFIER



RF-5074VSM-03

The single shock mount provides isolation from high-impact shock and vibration in vehicular installations.

Finish/Color: Black

SHOCK MOUNT FOR RF-5382H ANTENNA COUPLER



RF-5384VM-01

This quick-release shock mount for the RF-5382H Antenna Coupler is designed to provide isolation from the high-impact shock and vibration encountered in wheeled and tracked vehicles. The shock mount incorporates a quick release feature that allows rapid relocation of the RF-5382H between the vehicle and the RF-5351 series of siting kits.

Finish/Color: Black



SHOCK MOUNT FOR RF-382A-15 ANTENNA COUPLER FOR TRACKED VEHICLES



RF-383VM-01

This quick release shock mount for the RF-382A-15 Antenna Coupler is designed to provide isolation from the shock and vibration of tracked vehicles such as MB Tanks, APCs, and SPGs. The shock mount incorporates a quick release feature that allows rapid interchangeability between the vehicle and the RF-5351 series of siting kits. Must be mounted horizontally.

Finish/Color: CARC Green 383

SHOCK MOUNT FOR RF-382A-15 ANTENNA COUPLER FOR WHEELED VEHICLES



RF-384VM-03

This quick release shock mount for the RF-382A-15 Antenna Coupler is designed to provide isolation from the high-impact shock and vibration encountered in wheeled vehicles such as military Humvees. The shock mount incorporates a quick release feature that allows rapid relocation of the RF-382 between the vehicle and the RF-5351 series of siting kits.

Finish/Color: CARC Green 383

AC/DC POWER SUPPLY

AC/DC POWER SUPPLY



RF-5051-PS001 (Green), RF-5051-PS005 (Tan)
RF-5054-PS001 (Green), RF-5054-PS005 (Tan)

The RF-5051-PS001 is a high performance, regulated, switching power supply that provides +28 VDC at up to 30 amps. It is intended for use with the Falcon II/Falcon III series systems in base station, shipboard or transportable configurations. The unit features advanced output capabilities and will automatically recover from many error conditions once the fault has been corrected. Two RF-5051-PS001 units may be connected in parallel as an RF-5054-PS001, using a DC/DC Jumper Cable Assembly, to provide power for 400-watt Falcon series systems. The RF-5054-PS001 provides +28 volt DC at up to 60 amps.

Finish/Color: Powder Coat Green 383

Features

- High Reliability
- Configurations for 50, 125 and 400-watt systems
- Ruggedized packaging
- Automatic self fault recovery

ANCILLARY KIT, AC/DC POWER SUPPLY

12045-4005-01

The 12045-4005-01 Ancillary Kit is for use with the RF-5051-PS001 and RF-5054-PS001 AC/DC power supplies and includes:

Product Number	Product Name
10181-9831-009	AC Power Cable, US NEMA 5-15P supplied as standard
12045-4006-A12	AC Ground Cable Assembly
10515-0153-4100	Operator Card

AC/DC POWER SUPPLY



RF-5055PS

The RF-5055PS AC/DC power supply provides a regulated 26.4 volts DC at 18 amps in a low-profile package for use with the RF-5833H-PA 150-watt power amplifiers in tactical installations with duty cycles up to 20%. When used with the RF-5056PS DC/DC converter, the RF-5055 is designed to supply power to the auxiliary input of the RF-5056PS to conserve vehicular battery life when AC power is available. A 9-foot (~3-meter) AC power cable is included. The RF-5055PS may be mounted on the RF-5071VSM-03 Shock Mount for use in the most severe environments. The unit price includes a 9-foot (~3-meter) AC power cable.

Finish/Color: Green 383

Features

- Input automatically accepts 115 or 230 VAC, 47 to 63 Hz input
- Compact size
- Ruggedized construction; MIL-STD-810F
- Submersible
- 16 amp continuous output at 25 degrees Celsius ambient (77 degrees Fahrenheit)
- 12 amp continuous output at 70 degrees Celsius ambient (158 degrees Fahrenheit)

A U.S. power connector (NEMA 5-15P) is supplied as the standard AC power connector. European connector (CEE 7) and UK/Ireland connector (BS 1363) are available at no additional charge if specified at time of order.

AC AND DC CABLES FOR THE POWER SUPPLY

Product Number	Product Name
10181-9814-009	AC Power Cable, 9 feet (~2.7 m) EU (CEE 7)
10181-9809-009	AC Power Cable, 9 feet (~2.7 m) UK/Ireland (BS1363)
10181-9831-XXX	AC Input Power Cable Assembly
10181-9836-XXX*	DC/DC Jumper Cable
10181-9834-XXX^	DC Power Cable

*10181-9836 should be used for RF-5054-PS001 Configurations

^10181-9834 should be used for RF-5051-PS001 Configurations

POWER SUPPLY AC/DC INPUT



RF-5850-PS001

The RF-5850-PS001 Power Supply may be used in place of a wide body Falcon II battery box to provide operation of the manpack transceiver 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 (less than one hour) periods without external prime power. The battery is recharged when external prime power is reapplied. For use with RF-5800H, RF-5800M, AN/PRC-117F(C), AN/PRC-150(C) and RF-6010 manpack transceivers. The resulting system may be mounted for mobile operation using the RF-5870-VM001 shock mount and optional RF-5870-VM002 security lock.

Color: Green 383

The RF-5850-PS001 includes:

Product Number	Product Name
10513-5850-01	Power Supply
10513-0515-A1	6-foot (~2-meter) AC power cable
10513-0516-A1	6-foot (~2-meter) DC power cable with alligator clips
Z52-0003-006	Universal AC plug adapter
10515-0304-4100	Instruction manual

ADAPTER, DC POWER



RF-5851-AD001

The RF-5851-AD001 Adapter provides DC voltage limiting and filtering to permit operation of several models of Falcon II radio transceivers directly from 22 to 32 VDC vehicle power when use of the full vehicular adapter kit is not required. It is designed to meet MIL-STD-1275 for vehicular power. The Adapter mounts directly to the rear of the transceiver in place of the standard battery box and can be used with the RF-5800H, RF-5800M, AN/PRC-117F(C), AN/PRC-150(C) and RF-6010 manpack transceivers. The resulting radio system may be used with the RF-5870-VM001 shock mount and optional RF-5870-VM002 security lock to provide vehicular mounting. Order power cable, 12027-0205-A020 (20 feet; ~6 meters), separately.

Finish/Color: Green 383

POWER SUPPLY AC/DC INPUT



RF-5910-PS003

The RF-5910-PS003 Power Supply may be used in place of a wide body Falcon II battery box to provide operation of the manpack transceiver from 95 to 270 VAC at 47 to 440 Hz or 11 to 36 VDC. The power supply contains a Li Ion battery (BB-2590) to permit short term operation (nominal capacity, 6.2 amp. hours) of the radio without external power. The battery is recharged when the external power is applied. The RF-5910-PS003 is for use with the RF-5800H, RF-5800M, AN/PRC-117F(C), AN/PRC-150(C) and RF-6010 transceivers. The resulting system may be mounted on a RF-5870-VM001 shock mount for mobile operation.

Color: Green 383

The unit includes:

Product Number	Product Name
10513-0600-01	Power Supply w/Lithium Ion Battery
10513-0604-A1	6-foot (~2-meter) DC power cable with alligator clips
10513-0604-A1	6-foot (~2-meter) AC power cable with US NEMA 5-15P plug
Z52-0003-006	Universal AC plug adapter
10515-0301-4100	Instruction manual

DC/DC POWER SUPPLY

12/24 VOLT DC/DC CONVERTER



RF-5056PS

The RF-5056PS DC/DC converter provides a regulated 26.5 volts at 20 amps peak when supplied with 12, 24, or 28 volts from a vehicle DC system. It permits operation of the RF-5833H-PA 150-watt power amplifiers in tactical installations with duty cycles up to 20%. This DC/DC converter will also accept an auxiliary input from the RF-5055PS AC/DC power supply. While power is present at the auxiliary input, the DC/DC converter shuts its regulator down to conserve vehicular battery life. The DC/DC converter's low-profile design allows mounting under the RF-5032PA-125E or RF-5832H-PA001 Power Amplifiers and RF-5056PS and sharing the same shock tray. The RF-5056PS may be mounted on the RF-5071VSM-03 Shock Mount for use in the most severe environments. No mating cables or connectors are included. A 15-foot (~4.6-meter) DC power cable assembly, 10373-0030, is included. Finish/Color: Green 383

Features

- Output capable of sustained voice and multi-tone data operation and intermittent FSK for 150-watt HF systems and continuous duty for 10 or 50 watt VHF systems
- Input automatically accepts DC input from 12, 24, 28 VDC systems
- Compact size
- Ruggedized construction; MIL-STD-810E
- Submersible
- 16 amp output



DC/DC CONVERTER



RF-5061-PS001

The RF-5061-PS001 is a 12 VDC to 28 VDC DC/DC converter intended for use in 12 VDC vehicles. The RF-5061-PS001 is capable of providing 30 amps at 28 VDC, making it compatible with the Falcon II family of products. The RF-5061-PS001 is qualified for tactical environments and does not require shock tray mounting. The unit includes an ancillary kit and 11081-5009-01 DC input cable. A DC output cable must be ordered separately.

Color: Black

Features

- 30 amp output
- Ruggedized construction for tactical environments
- Compact size
- Immersion tolerant

The ancillary kit includes:

Product Number	Product Name
7147-1167-3	Ground strap
Miscellaneous	Mounting Hardware
10515-0288-4100	Instruction Manual

REMOTE CONTROLS

SHORT-DISTANCE REMOTING KIT

12027-0050-075

This kit provides remote control of the RF-5800H-MP, RF-5800M-MP, RF-5800V-MP, AN/PRC-117(C) and AN/PRC-150(C) families of manpack radios and of the vehicular and base station systems using these manpacks as Receivers-Transmitters (RTs). The Remoting Kit is capable of operating to a distance of 75 feet (~23 meters) from the RT. It provides control of all radio functions that can be controlled by the radio Keyboard/Display Unit (KDU) as well as providing key line and audio interconnect, and audio level control. Note that selection of clear text, cipher text, zeroizes, and other functions related to encryption must be selected from the RT front panel and cannot be remotely controlled. There is no encryption at the remoting kit and all audio and/or data to and from the kit is RED audio.

The KDU provided with the radio may be unplugged and remoted by the cable provided in the kit. A separate KDU is not provided. Standard handsets, microphones, or headsets using standard U-329/U connectors may be connected to one of the two six-pin audio connectors on the remote amplifier speaker. The remote speaker may be used or its volume may be turned down and the handset used.

The kit requires 24 VDC to operate. The power cable supplied includes a standard military four-pin power connector on the power end which may be connected to a vehicle power bus, RF-5051 power supply, or similar source of DC power, or may be cut off to provide pigtail leads to the power source. See separate description of the 10181-5180-01 Amplifier Speaker.

Options

Product Number	Product Name
10181-5180-01	Amplifier Speaker
10511-0704-150	Cable, KDU Extension
10535-0706-A075	Cable, Speaker Power
10535-0707-A075	Speaker Cable, Audio

SYSTEMS AND UNITS

UNIVERSAL REMOTE CONTROL SYSTEM



RF-7800R-RC

The RF-7800R-RC Remote Control provides full remote control capability for the AN/PRC-117F(C) and AN/PRC-150(C) Falcon II radios, plus Falcon III capabilities to support the AN/PRC-117G and AN/PRC-152 radios. The package includes two remote control units whose modular design allow either unit to function as the Local Control Unit (LCU) or the Remote Control Unit (RCU). All radio functions controlled by the Keypad Display Unit (KDU) can be controlled by the RF-7800R, including Automatic Link Establishment (ALE), frequency hopping and modem selections. The system provides TX/RX, data and control legacy functions using field wire, but also adds fiber optic and Ethernet capabilities. An external media converter is required for fiber and is not included.

The RF-7800R includes:

Product Name
2 Remote Control Units (same on both ends)
2 Battery Boxes
1 H-250 Handset
Radio specific cables
Operator Card

Ordering Options:

Product Number	Product Name
RF-7800R-RC001 (includes cable)	Falcon II Manpack
RF-7800R-RC002 (includes cable and KDU)	AN/PRC-152
RF-7800R-RC003 (includes cable and KDU	AN/PRC-117G

Height: 3.2 in. (8.1 cm)
Depth: 8.9 in. (22.6 cm)
Width: 7.8 in. (19.8 cm)
Weight: ~ 3.5 pounds (1.6 kg), Remote Control without KDU



LOCAL CONTROL UNIT



RF-7800R-RC502

The RF-7800R-RC502 Local Remote Unit (LCU) is included with the RF-7800R series of remote control systems. The LCU is placed on the radio in place of the Keypad/Display Unit (KDU) and is powered from the radio.

Finish: CARC Green 383.

REMOTE CONTROL UNIT



RF-7800R-RC503

The RF-7800R-RC503 Remote Control Unit (RCU) is included with the RF-7800R series of remote control systems. The Keypad/Display Unit (KDU) from the radio is placed on the RCU, which is powered from a single manpack battery or battery eliminator. The KDU/Remote Control Unit combination is connected via a required length of field wire (up to 3.5 km, ~ 2.2 miles) to the Radio/LCU combination.

Finish: CARC Green 383.

REMOTE CONTROL SYSTEM WITH HIGH-SPEED INTERFACE (HSI)



RF-7800R

The RF-7800R-RC511 Remote Control Systems with high-speed interface provides full remote control capability for the Falcon II family of manpack radios. It provides remote transmit and receives audio, data, and control, up to a distance of 3.5 km (~2.2 miles) using standard field wire or RS-449 digital interface. Radios supported are RF-5800H-MP, RF-5800V-MP, and RF-5800M-MP.

The RF-7800R-RC511 consists of a Remote Control Unit (RCU) and a Local Control Unit (LCU) and two High-Speed Interfaces. The LCU is placed on the radio in place of the KDU and is powered from the radio. The HSI is connected to the LCU with the data cable provided. The KDU from the radio is placed on the Remote Control Unit (RCU), which is powered from a single manpack battery or battery eliminator. The second HSI is then connected to the RCU with the data cable provided. The HSI is intended to interface to a COTS transmission medium (F/O or modem) via a simplified RS-422/V.36 protocol on a RS-449 37-pin D connector.

Finish: CARC Green 383. HSI Color: Black.

The RF-7800R includes:

Product Number	Product Name
12028-3000-01	High-speed interface kit
10075-1399	Lightweight Handset - H-250 (Modified)
12028-0700-A18	Interconnecting Cable from the LCU to the radio
10515-0305-4200	Operation Manual
10515-0296-4100	Operator Card, RCU
10515-0296-4101	Operator Card, LCU
12028-0026-01	Carrying Bag



ACCESSORIES

KDU GIMBALED MOUNT



RF-5940-MT001

The RF-5940-MT001 KDU Gimbaled Mount is used for remote mounting of the Keypad Display Unit (KDU) from the Falcon II Manpack radios. The mount can be used in vehicles or on a desktop and can be easily repositioned by loosening a thumbscrew, reorienting the KDU, and retightening the thumbscrew. 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 six-foot (approximately 1.8 meter) KDU Extension Cable. It can also be used with the 75-foot (approximately 23 meter) 12027-0050-075 short distance remoting kit, which includes cables and a remote amplifier speaker with handset connections and volume control, to form a complete remote control position. Three 10 x 32 x 0.75 inch (approximately 25 x 81 x 2-centimeter) hex mounting bolts, with washers and locking nuts, and five black cable ties are included to facilitate installation. KDU and cables not included.

Color: Black



BATTERY OVERVIEW

	BA-5390/U	BA-5590/U	BB-390B/U	BB-590/U	BB-2590/U	12041-2100
Nominal Capacity (Ah)	11.1	7.5	4.9	2.2	6.2	4.7
Chemistry	Li-MNO2	Lithium	NiMH	NiCd	Li Ion	Li Ion
Type	Disposable	Disposable	Rechargeable	Rechargeable	Rechargeable	Rechargeable
Weight pounds (kg)	2.3 (1)	2.3 (1)	3.8 (1.8)	3.4 (1.5)	3.1 (1.4)	0.9 (0.4)
Size	Manpack	Manpack	Manpack	Manpack	Manpack	Handheld

BATTERIES AND BATTERY CHARGER COMPATIBILITY

	BB-390B/U	BB-590/U	BB-2590/U	12041-2100
Ruggedized Charger				
RF-5058-CH002	●	●	●	
RF-5058-CH006	●	●	●	
Tactical Charger				
RF-5902-CH008	●	●	●	●
Solar Charger				
RF-5900-CH001	●	●		
RF-5903-CH001				●
RF-5904-CH001			●	
Vehicular				
RF-5852-CH001				●
Hand Crank				
RF-5901-CH001	●	●	●	

Note: BA-5390/U and BA-5590/U batteries are primary cells.



NOTE: The following diagrams are for comparison purposes only. They show typical transmit range capabilities for each antenna assuming that appropriate power levels and transmit frequencies are selected.

TYPICAL HF MANPACK ANTENNA RANGES

Groundwave		Skywave	
0-80 km	NVIS 0-500 km	Med. Range 500-2000 km	Long Range 2000-10,000 km
10372-0245-01 "OE-505"	10372-0240-02		
	RF-1940 Dipole		
	RF-1941 Dipole		
RF-1940/41 in "L" configuration			
	RF-1940/41 in sloping configuration		
	RF-1944 (no coupler needed)		

TYPICAL HF VEHICULAR ANTENNA RANGES

Groundwave		Skywave	
0-80 km	NVIS 0-500 km	Med. Range 500-2000 km	Long Range 2000-10,000 km
SB-V16F			
SB-V35F	SB-V35F		
	SB-V16/35 tilted with tilt whip adapter on RF-1980-AT003 spring base		
	RF-1936V-10, RF-1938AT-10		
RF-1942-AT001 Antenna Kit			

TYPICAL HF TRANSPORTABLE ANTENNA RANGES

Groundwave		Skywave	
0-80 km	NVIS 0-500 km	Med. Range 500-2000 km	Long Range 2000-10,000 km
RF-1937		RF-1937	
SB-V16 (B/C)	SB-V35F		
SB-V35 (B/C)	SB-V16/35 tilted with tilt whip		
RF-1936/38 with Monopole Conversion Kit RF-1950-AT001	RF-1912 in Dipole configuration		
RF-1912 in Monopole configuration		RF-1912	in Monopole configuration
	Special Order LPA Antennas		



HF MANPACK ANTENNAS

OE-505 MANPACK HF/VHF WHIP ANTENNA KIT



10372-0245-01

This antenna kit is a standard lightweight, collapsible whip antenna kit for the RF-5800H-MP radio. The 10372-0245-01 is capable of 20-watt operation from 2 to 60 MHz and is utilized for groundwave communications. The antenna is automatically tuned by the radio's internal coupler. Color: Green

The kit is supplied with the RF-5800H-MP radio and includes:

- Collapsible whip antenna
- Flexible base
- Base adapter
- Antenna bag

PORTABLE HF DIPOLE ANTENNA

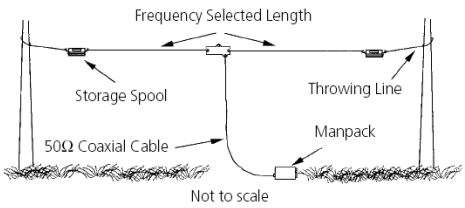


RF-1940-AT001

The RF-1940-AT001 is a lightweight, durable portable dipole antenna capable of 400-watt maximum operation from 3 to 30 MHz. It is utilized for NVIS communications and can be configured for other requirements. The antenna is stored on self-contained flat spools that form an integral part of the antenna. During operation, the spool is unwound to the appropriate frequency marker and deployed; the unused portion of wire remains on the spool. Each spool contains throwing weights for connection to trees, buildings, or masts. The RF-1940-AT001 can be directly connected to the RF-5800H-MP radio using the built-in antenna coupler or connected to an external antenna coupler for ALE operation. The RF-1940-AT001 can be configured as a dipole, sloping dipole, or a sloping vee. The antenna bag has clip points to attach to a military rucksack.

The antenna includes:

- Heavy-duty carrying bag
- 33-ft. (~10-m) RG-58 coaxial cable with BNC male connectors
- BNC to type N adapter
- Instruction Card



Deployed size:	150 ft. (~46 m)
Transport size:	6.0 W x 12 H x 3 D in. (~15 x 30 x 8 cm)
Weight:	5 lbs. (~2 kg)
Color:	Green with black winders

Accessories

TECHNICAL MANUAL

Product Number	Product Name
10515-004-4200	Instruction Manual

PORTABLE HF DIPOLE ANTENNA

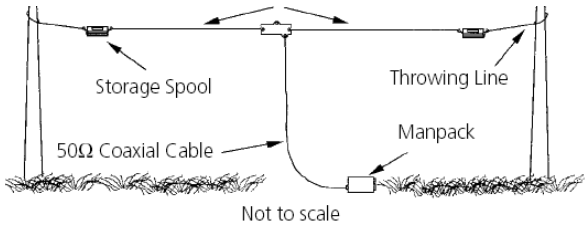


RF-1941

The RF-1941 is a lightweight, durable portable dipole antenna. The antenna is capable of 400 watt maximum operation from 2 to 30 MHz. It is utilized for NVIS communications and can be configured for other communications. It is stored on self-contained flat spools that form an integral part of the antenna. During operation, the spool is unwound to the appropriate frequency marker and deployed; the unused portion of wire remains on the spool. Each spool contains throwing weights for connection to trees, buildings or masts. The RF-1941 can be directly connected to the RF-5800H-MP radio using the built-in antenna coupler or connected to an external antenna coupler for ALE operation. The RF-1941 can be configured as a dipole, sloping dipole, or a sloping vee. The antenna bag has clip points to attach to a military rucksack.

The antenna includes:

- Heavy-duty carrying bag
- 33-ft. (~10-m) RG-58 coaxial cable with BNC male connectors
- BNC to type N adapter
- Instruction Manual



Deployed max size:	250 ft. (~76 m)
Transport size:	6.0 W x 12 H x 3 D in. (~15 x 30 x 8 cm)
Weight:	5 lbs. (~2 kg)
Color:	Green with black winders

Accessories

TECHNICAL MANUAL

Product Number	Product Name
10515-0040-4200	Instruction Manual

20-WATT MANPORTABLE BROADBAND INVERTED VEE ANTENNA



RF-1944-AT020

The RF-1944-AT020 antenna is a lightweight, manportable broadband dipole antenna that provides radiation patterns ideal for HF skywave communications from zero to 500 miles (~800 km). Used for up to 20 watts, the RF-1944-AT020 supports a rugged, yet simple design that allows quick installation into its primary inverted vee configuration. The antenna does not include a mast.

The RF-1944-AT020 includes:

- Balun
- Dipole radiating elements (2)
- Terminating loads (2)
- Ground stakes (2)
- Coaxial cable with male BNC connectors for direct balun attachment
- Weighted throwing line
- Carrying bag
- Instruction Card

Deployed length:	164 ft. (~59.9 m)
Transport size:	12 W x 7 H x 3 D in. (~30 x 20 x 8 cm)
Weight:	4 lbs. (~2 kg)
Color:	Green

Accessories

TECHNICAL MANUAL

Product Number	Product Name
10515-6390	Instruction Card

HF VEHICULAR ANTENNAS

FEED-THROUGH BASE 16-FOOT HF WHIP ANTENNA

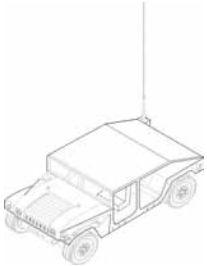


SB-V16B

The SB-V16B is a self-supporting, fiberglass whip antenna that is easily assembled and raised. The antenna is capable of 1 kW maximum operation from 2 to 30 MHz. It provides an omni-directional, low angle radiation pattern for groundwave propagation. This antenna requires the use of an antenna coupler. The antenna sections are constructed by embedding the RF conductor in a sheath of woven fiberglass that produces an exceptionally tough, but flexible, antenna. For vehicular applications, it mounts directly to the RF-292-01 Universal Antenna Mount via a 2-inch (~5-centimeter) hole adapter plate, included with the RF-292-01 (must be ordered separately).

The antenna consists of:

- Feed-through base
- Tapered 4-ft. (~1-m) sections, extendable to 16 ft. (~4.8 m)
- Mounting hardware
- Instruction manual



Deployed size: 16 ft. (~4.8 m)
Weight: 5 lbs. (~2 kg)
Color: Green

Accessories

TECHNICAL MANUAL

Product Number	Product Name
100-5016-XX	Instruction Manual

FLANGE BASE 16-FOOT HF WHIP ANTENNA



SB-V16C

The SB-V16C is an easily-assembled, self-supporting fiberglass whip antenna designed for stationary applications. The antenna is capable of 1 kW maximum operation from 2 to 30 MHz. It provides an omni-directional, low angle radiation pattern for groundwave propagation. The antenna sections are constructed by embedding the RF conductor in a sheath of woven fiberglass that produces an exceptionally tough, but flexible, whip antenna. An antenna coupler is required.

The antenna consists of:

- Flange base
- Four tapered 4-ft. (~1-m) sections, extendable to 16 ft. (~4.8 m)
- Mounting hardware
- Instruction manual

Deployed size: 16 ft. (~4.8 m)
Weight: 9 lbs. (~4 kg)
Color: Green

Accessories

TECHNICAL MANUAL

Product Number	Product Name
100-0010	Instruction Manual

SPRING BASE 16-FOOT HF WHIP ANTENNA



SB-V16F

The SB-V16F is a self-supporting, fiberglass whip antenna that is easily assembled and raised. The antenna is capable of 1 kW maximum operation from 2 to 30 MHz. It provides an omni-directional, low angle radiation pattern for groundwave propagation. An antenna coupler is required. The antenna sections are constructed by embedding the RF conductor in a sheath of woven fiberglass that produces an exceptionally tough, but flexible, antenna. The SB-V16-F mounts directly to a NATO standard 4.5-inch (~11-centimeter) bolt circle (mount must be ordered separately).

The antenna consists of:

- Spring base
- Four tapered 4-ft. (~1-m) sections, extendable to 16 ft. (~4.8 m)
- Mounting hardware
- Instruction manual



Deployed size: 16 ft. (~4.8 m)
Weight: 14 lbs. (~6.4 kg)
Color: Green

Accessories

TECHNICAL MANUAL

Product Number	Product Name
100-0010	Instruction Manual

SELF-SUPPORTING 16-FOOT HF WHIP ANTENNA



SB-V16T

The SB-V16T is a coated metal whip antenna capable of 400-watt maximum operation from 2 to 30 MHz. It provides an omnidirectional, low angle radiation pattern for groundwave propagation. This antenna requires the use of an antenna coupler. The SB-V16T can be affixed to an RF-292-01 Universal Antenna Mount (must be ordered separately), via a 2-inch (~5-centimeter) hole adapter plate included with the RF-292-01. The SB-V16T antenna may not be used with any of the RF-1980-AT001 series tilt whip adapters.

The antenna consists of:

- Feed-through base
- Five 3-ft. (~0.9-m) metallic sections, extendable to 16 ft. (~4.8 m)
- Mounting hardware for attachment to RF-292-01 Universal Antenna Mount
- Instruction manual



Deployed size: 16 ft. (~4.8 meters)
Weight: 5 lbs. (~2 kg)
Color: Green

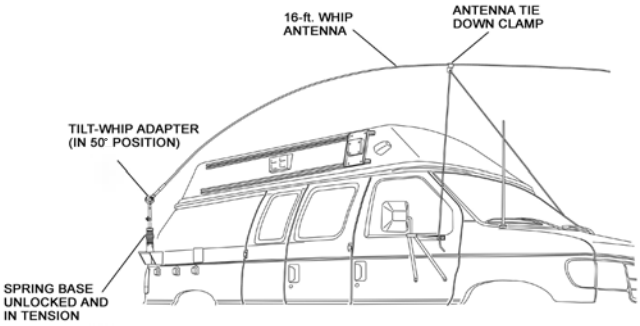
Accessories

TECHNICAL MANUAL

Product Number	Product Name
10251-0045	Instruction Manual

SPRING BASE 16-FOOT HF TILT WHIP ANTENNA





RF-1980F-AT003 CARC Green
RF-1980F-AT004 CARC Tan

The RF-1980-AT003 is a self-supporting, fiberglass whip antenna that is easily assembled. The antenna is capable of 1 kW maximum operation from 2 to 30 MHz. It provides an omnidirectional, low-angle radiation pattern for groundwave communication or can be tilted over for skywave communication. This antenna requires the use of an antenna coupler.

The RF-1980F-AT003 antenna sections are constructed by embedding the RF conductor in a sheath of woven fiberglass that produces an exceptionally tough, but flexible, antenna. The tilt adapter mechanism allows the antenna to tilt at 0 degrees (vertical), 50 degrees, 70 degrees, and 90 degrees (horizontal). This unique capability allows a groundwave whip to tilt over and become ideal for NVIS communications on the move. The RF-1980F-AT003 bolts directly to a NATO standard 4.5-inch (~11-centimeter) bolt circle. Antenna mount must be ordered separately.

The antenna consists of:

- Spring base
- Tilt whip adapter
- Four tapered 4-ft. (~1.2-m) sections, extendable to 16 ft. (~5 m)
- Instruction manual

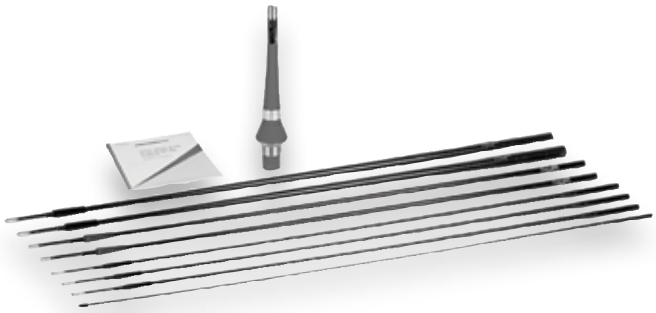
Deployed size: 16 ft. (~4.8 m)
Weight: 25 lbs. (~11kg)

Accessories

TECHNICAL MANUAL

Product Number	Product Name
100-0010	Instruction Manual

FEED-THROUGH BASE 32-FOOT HF WHIP ANTENNA

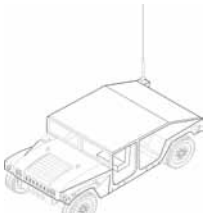


SB-V35B

The SB-V35B is a self-supporting fiberglass whip antenna that is capable of 1 kW maximum operation from 2 to 30 MHz. It provides an omnidirectional, low-angle radiation pattern for groundwave and skywave propagation. This antenna requires the use of an antenna coupler. The antenna sections are constructed by embedding the RF conductor in a sheath of woven fiberglass that produces an exceptionally tough, but flexible, antenna. For vehicular applications, the SB-V35B mounts directly to the RF-292-01 Universal Antenna Mount (must be ordered separately) only, via a 2-inch (~5-centimeter) hole adapter plate included with the RF-292-01.

The antenna consists of:

- Feed-through base
- Four straight 4-ft. (~1-m) sections, extendable to 32.5 ft. (~9.91 m)
- Four tapered 4-ft. (~1-m) sections, extendable to 32.5 ft. (~9.91 m)
- Mounting hardware
- Instruction manual



Deployed size: 32 ft. (~9.7 m)
Weight: 11 lbs. (~3.4 kg)
Color: Green

Accessories

TECHNICAL MANUAL

Product Number	Product Name
100-0010	Instruction Manual

FLANGE BASE 32-FOOT HF WHIP ANTENNA



SB-V35C

The SB-V35C is a self-supporting, fiberglass whip antenna that is designed for stationary applications. The antenna is capable of 1 kW maximum operation from 2 to 30 MHz. The antenna provides an omnidirectional, low-angle radiation pattern for groundwave and skywave propagation. This antenna requires the use of an antenna coupler. The antenna sections are constructed by embedding the RF conductor in a sheath of woven fiberglass that produces an exceptionally tough, but flexible, antenna. The SB-V35C may be guyed.

The antenna consists of:

- Flange base
- Four straight 4-ft. (~1-m) sections, extendable to 32.5 ft. (~9.91 m)
- Four tapered 4-ft. (~1-m) sections, extendable to 32.5 ft. (~9.91 m)
- Mounting hardware
- Instruction manual

Deployed size: 32 ft. (~9.8 m)
Weight: 15 lbs. (~6.8 kg)
Color: Green

Accessories

TECHNICAL MANUAL

Product Number	Product Name
100-0010	Instruction Manual

LOCKING SPRING BASE 32-FOOT HF WHIP ANTENNA



SB-V35F

The SB-V35F is a self-supporting, fiberglass whip antenna with a locking spring base. The antenna is capable of 1 kW maximum operation from 2 to 30 MHz. It provides an omnidirectional, low-angle radiation pattern for groundwave and skywave propagation. This antenna requires the use of an antenna coupler. The spring base permits the flexible spring to be locked in either a rigid vertical position (stationary operations) or left in a flexible mode (mobile or NVIS operations). The antenna sections are constructed by embedding the RF conductor in a sheath of woven fiberglass that produces an exceptionally tough, but flexible, antenna. The SB-V35F mounts directly to a NATO standard 4.5-inch (11-centimeter) bolt circle. Antenna mount must be ordered separately.

The antenna consists of:

- Spring base
- Four straight 4-ft. (~1-m) sections, extendable to 32.5 ft. (~9.91 m)
- Four tapered 4-ft. (~1-m) sections, extendable to 32.5 ft. (~9.91 m)
- Mounting hardware

Deployed size:	32 ft. (~9.91m)
Weight:	20 lbs. (~9 kg)
Color:	Green

SHIPBOARD FLANGE BASE 35-FOOT HF WHIP ANTENNA

SB-V35S

The SB-V35S is a heavy-duty fiberglass whip antenna intended for shipboard or stationary use. The antenna is capable of 5 kW maximum operation from 2 to 30 MHz or 1 kW maximum operation from 1.6 to 2.0 MHz. It provides an omnidirectional, low angle radiation pattern for groundwave and skywave propagation. This antenna requires the use of an antenna coupler. The SB-V35S mounting flange uses four bolts around a 6-inch (~15-centimeter) bolt circle. The SB-V35S is not compatible with the RF-1980-AT001 series of tilt whip adapters.

The antenna consists of:

- Flange base
- Two sections, extendable to 35 ft. (~11 m)
- Instruction manual

Deployed size:	35 ft. (~11 m)
Weight:	65 lbs. (~30 kg)
Color:	Navy Gray

Accessories

TECHNICAL MANUAL

Product Number	Product Name
100-0012	Instruction Manual

HF NVIS LOOP ANTENNA



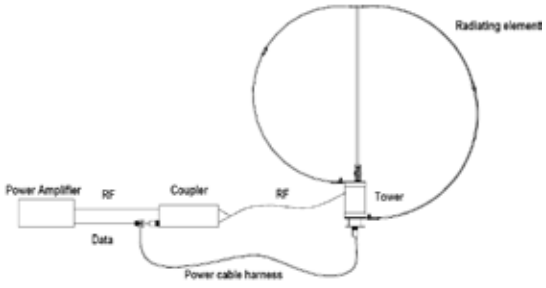
RF-3134-AT003 (for RF-382A couplers)

RF-3134-AT005 (for RF-5382 couplers)

The RF-3134-AT00X Full Loop Antenna is designed for HF near vertical incident skywave (NVIS) communications. It is a Hi-Q magnetic loop antenna with an extremely narrow bandwidth, making it optimal for NVIS and for operation where multiple antennas are co-located. The RF-3134-AT00X provides limited groundwave capability to maintain line-of-sight (LOS) links. It works with the RF-382A and RF-5382 couplers, differing only in the associated power and control cable. Its light weight and loop profile make it easy to install and uninstall from the standard RF-292 Antenna Mount for quick interchange to other types of antennas. It does not depend on a ground plane and can be mounted on most vehicles, masts/tripods, or fixed installations. In vehicular installations, it can provide NVIS Communications-on-the-Move (COTM), dependent on the vehicles' attitude dynamics over terrain.

The RF-3134-AT00X includes:

- HF magnetic full loop antenna elements and tower
- Protective boot
- Coupler/PA cable
- High voltage cable installation kit
- Operator's manual



SHIPBOARD FLANGE BASE 24-FOOT HF WHIP ANTENNA

RF-1930CHD

The RF-1930CHD is a heavy-duty fiberglass whip antenna intended for shipboard or stationary use. The antenna is capable of 1 kW maximum operation from 2 to 30 MHz. The antenna provides an omnidirectional, low-angle radiation pattern for groundwave and skywave propagation. This antenna requires the use of an antenna coupler. The RF-1930CHD mounting flange uses four bolts around a 5-inch (13-centimeter) bolt circle. The RF-1930CHD is not compatible with the RF-1980-AT001 series of tilt whip adapters.

The antenna consists of:

- Feed-through base
- Two sections, extendable to 24 ft. (7 m)
- Instruction manual

Deployed size:	24 ft. (~7.3 m)
Weight:	8 lbs. (~4 kg)
Color:	White

Accessories

TECHNICAL MANUAL

Product Number	Product Name
100-0018	Instruction Manual

PORTABLE VEHICLE MOUNTED HF CROSSED DIPOLE ANTENNA



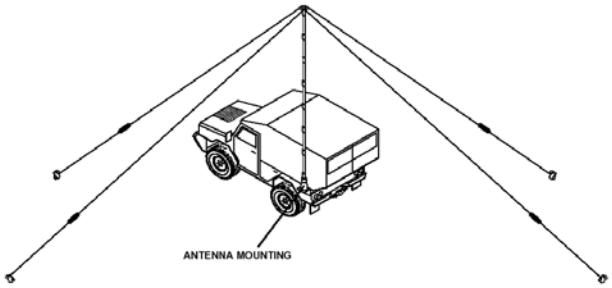
RF-1936V-10 CARC Green
RF-1936V-20 CARC Tan
RF-1936V-30 Green

The RF-1936V-10 is a portable, vehicle-mounted, rapid-deployment crossed dipole antenna. It is designed for NVIS communications up to 420 miles (~680 km) and is capable of 400-watt maximum operation from 2 to 30 MHz. This 12-pound (~5.5-kg) antenna is easy to carry and can be raised by two people in five minutes. The RF-1936V-10 is

used in conjunction with the SB-V16B, SB-V16C, SB-V16F, SB-V35B, SB-V35C, or SB-V35F whip antenna mounting bases to provide improved operation when the vehicle is in a fixed, temporary location. This antenna can also be used with the RF-5351 series siting kits. The RF-1936V-10 requires an antenna coupler and is not compatible with the SB-V16T, SB-V35S or RF-1930CHD bases. An HF whip base is not included.

The antenna consists of:

- NVIS antenna adapter
- Tie-down stake kit
- Sledge hammer
- Antenna manual
- Instruction manual



RF-1936 Vehicular Configuration

Deployed size:	61 L x 61 W x 15 H ft. (~18 x 18 x 4.6 m)
Transport size:	7-in. diameter x 26 in. (~20-cm diameter x 65 cm)
Weight:	15 lbs. (~6.8 kg)

Accessories

TECHNICAL MANUAL

Product Number	Product Name
10251-0007	Instruction Manual

HF VEHICULAR ANTENNA KIT



RF-1942-AT001

The RF-1942-AT001 HF antenna kit includes all accessories needed for quick deployment of mobile and stationary configurations. The antenna is capable of 1 kW maximum operation from 2 to 30 MHz and requires use of an antenna coupler.

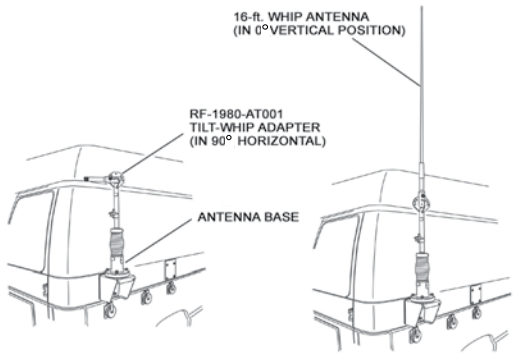
The RF-1942-AT001 is a combination of antennas that can be configured into:

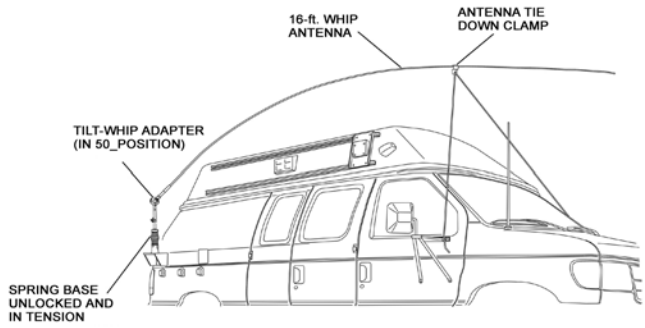
- 32-foot whip for exceptionally efficient groundwave and low-angle skywave
- 16-foot tilt whip for on-the-move NVIS communications
- Inverted vee for enhanced skywave performance

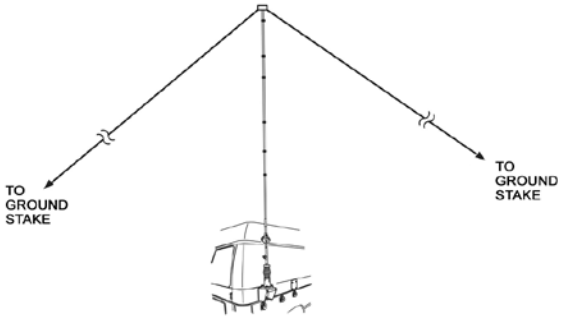
The antenna is stowed in a canvas bag for transportability. The RF-1942-AT001 mounts to a standard NATO 4.5-inch (~11-centimeter) bolt circle pattern. The RF-292-01 Universal Antenna Mount (must be ordered separately) can be used to mount the antenna to a vertical surface.

The RF-1942-AT001 includes:

- Whip sections
- Locking Spring Base
- Stakes (3)
- Antenna Tie-down
- Dipole Kit
- Guy Assembly
- Tilt whip adapter
- Canvas bag
- Instruction manual







Deployed size: (Inverted vee) 72 W x 16.4 H ft. (~22 x 4.99 m)
Weight: 37 lbs. (~17 kg)
Color: Green antenna, black dipole elements

Accessories

TECHNICAL MANUAL

Product Number	Product Name
10251-0051	Instruction Manual

HF TRANSPORTABLE ANTENNAS

HF FAN DIPOLE ANTENNA RADIATING ELEMENT

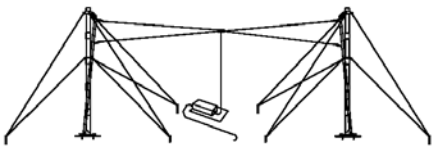


RF-1912E-AT001

The RF-1912E-AT001 is a fan dipole antenna radiating element capable of 1 kW maximum operation from 1.6 to 30 MHz. The RF-1912E-AT001 has been optimized for both NVIS communications between 1.6 and 10 MHz and medium-range skywave out to 746 miles (~1200 km) for 10 to 30 MHz. The element length and height above ground have been designed to optimize take-off-angle for HF skywave propagation. The antenna can also be configured as a top-loaded monopole for short-range groundwave and long-range skywave. It achieves near 100% radiation efficiency because it does not contain any resistive loads. Broadband operation requires an antenna coupler. Antenna mast is not included.

The RF-1912E-AT001 includes:

- Radiating elements
- 24 ft. (~7.3 m) of vertical feedline
- 100 ft. (~30 m) of rope for attaching to mast
- Instruction manual



Deployed size: 105 L x 26 W x 30 H ft. (~32 x 7.9 x 9 m) typical
Actual width and height are determined by customer-provided mast system.
Transport size: 18.0 L x 8 W x 4 H in. (~206 x 20 x 10 cm)
Weight: 7 lbs. (~3 kg)
Color: Radiating element is black

Accessories

TECHNICAL MANUAL

Product Number	Product Name
10515-0120-7200	Video Tutorial for HF Dipole Antennas Instruction manual

HF FAN DIPOLE ANTENNA WITH SECTIONAL MAST

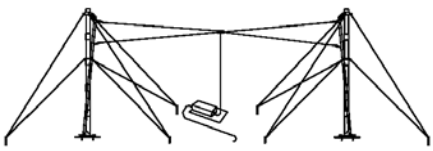


RF-1912T-AT002 (with green storage bags)
RF-1912T-AT001 (with tan storage bags)

The RF-1912T-AT00X is a transportable fan dipole antenna with lightweight mast sections that includes all the components needed to transport and temporarily install the antenna. The antenna is capable of 1 kW maximum operation from 1.6 to 30 MHz, and has been optimized for both NVIS communications between 1.6 and 10 MHz and medium-range skywave out to 746 miles (~1200 km) for 10 to 30 MHz. The element length and height above ground have been designed to optimize take-off-angle for HF skywave propagation. The antenna can also be configured as a top-loaded monopole for short-range groundwave and long-range skywave. It achieves near 100% radiation efficiency because it does not contain any resistive loads. Broadband operation requires an antenna coupler.

The RF-1912T-AT00X includes all materials for transportable construction:

- Aluminum masts (2)
- Guy assemblies
- Halyards
- Ground stakes
- Pre-constructed radiating element assembly
- Vertical feedline
- Transportable storage bags (2)



Deployed size:	105 L x 26 W x 30 H ft. (~32 x 7.9 x 9 m)
Transport size:	81 L x 11 W x 7 H in. (~206 x 28 x 20 cm) and 23 L x 14 W x 12 H in. (~58 x 35 x 30 cm) (two bags)
Weight:	135 lbs. (~61.4 kg)
Color:	Radiating element is black.

Accessories

SPARES KIT

Product Number	Product Name
6906-3117-01	Spare Parts Kit

TECHNICAL MANUAL

Product Number	Product Name
10515-0120-7200	Video Tutorial for HF Dipole Antennas

HF FAN DIPOLE ANTENNA WITH TELESCOPING MASTS



RF-1912T-AT101 (with tan storage bags)
RF-1912T-AT102 (with green storage bags)

The RF-1912T-AT101 is a transportable fan dipole antenna with telescoping mast that includes all the components needed to transport and temporarily install the antenna. The antenna is capable of 1 kW maximum operation from 1.6 to 30 MHz and has been optimized for both NVIS communications between 1.6 and 10 MHz and medium-range skywave out to 1200 km for 10 to 30 MHz. The element length and height above ground has been designed to optimize take-off-angle for HF skywave propagation. It can also be configured as a top-loaded monopole for short-range groundwave and long-range skywave. The antenna achieves near 100% radiation efficiency because it does not contain any resistive loads. Broadband operation requires an antenna coupler.

The RF-1912T-AT101 antenna includes:

- 30-ft. (~9-m) fiberglass telescoping masts (2)
- Guy assemblies
- Halyards
- Ground stakes
- Pre-constructed radiating element assembly
- Vertical feedline
- Transportable storage bags
- Instruction manual

Deployed size:	30-ft. L x 3.3-in. diameter base (~9 m x 8.4 cm)
Transport size:	Bag 1: 23 L x 14 W x 12 H in. (~58 x 36 x 30 cm) (in 3 bags) Bag 2: 79 L x 8 W x 8 H in. (~2m x 20 x 20 cm) Bag 3: 79 L x 8 W x 8 H in. (~2m x 20 x 20 cm)
Weight:	100 lbs. (~50 kg)
Color:	Radiating element is black, masts are green

SPARES KIT

Product Number	Product Name
6906-3117-01	Spare Parts Kit

TECHNICAL MANUALS

Product Number	Product Name
10515-0120-7200	Video Tutorial for HF Dipole Antennas
10515-0665-4100	Instruction Manual

PORTABLE HF CROSSED DIPOLE ANTENNA

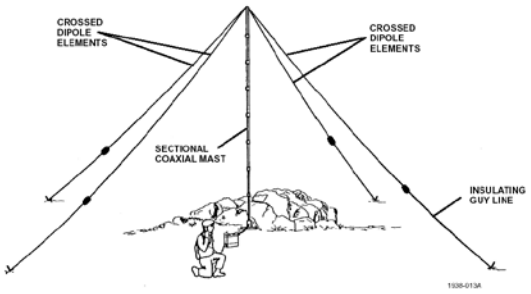


RF-1936P-10 CARC Green
RF-1936P-20 CARC Tan
RF-1936P-30 Green

The RF-1936P-10 is a manportable, rapid-deployment crossed dipole antenna designed for NVIS communications up to 420 miles (~680 km) and is capable of 400-watt maximum operation from 2 to 30 MHz. This antenna is easy to carry and can be assembled by two people in five minutes. The RF-1936P-10 is designed for free-standing operation when set up on the ground or on flat surfaces. The antenna requires an antenna coupler.

The RF-1936P-10 includes:

- Antenna base
- NVIS antenna
- Ground rod
- Ground strap
- Stakes
- Sledge hammer
- Instruction manual



RF-1936 Portable Configuration

Deployed size: 61 L x 61 W x 15 H ft. (~19 x 19 x 5 m)
Transport size: 7-in. diameter x 26 in. (~20-cm diameter x 66 cm)
Weight: 15 lbs. (~6.8 kg)

Accessories

TECHNICAL MANUALS

Product Number	Product Name
10251-0007-7200	Video Tutorial for RF-1936/1938 HF Transportable Cross Dipole Antenna
10251-0007	Instruction Manual

TRANSPORTABLE HF GROUND STAKE ANTENNA KIT



RF-1937

The RF-1937 is a transportable, vertically-raised, ground stake antenna designed around the SB series whip antennas. The antenna is capable of 1 kW maximum operation from 2 to 30 MHz and is intended for use for groundwave or long distance skywave communications. It can be set up with whip heights between 16 feet (~5 meters) and 32 feet (~10 meters), and requires the use of antenna coupler. The RF-1937 is designed for ground-level mounting. The base mount is installed on a base stake driven into the ground. One man can easily carry this antenna.

The kit contains:

- Guy rope assembly
- Ground radials on wheels (4)
- Canvas carrying bag
- Instruction manual



Deployed size: 70 W x 32 H ft. (~20 x 10 m)
Transport size: 6 L x 6 W x 54 H in. (~15 x 15 x 140 cm)
Weight: 10 lbs. (~5 kg)
Color: Green

Accessories

TECHNICAL MANUALS

Product Number	Product Name
10515-0261-7200	Video Tutorial for RF-1937 HF Ground Stake Antenna
10251-0033	Instruction Manual

EXTENDED HEIGHT HF CROSSED DIPOLE ANTENNA

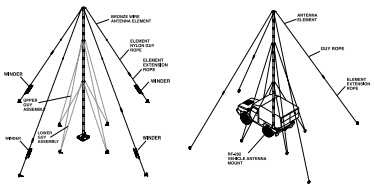


RF-1938AT-10 CARC Green
RF-1938AT-30 Green

The RF-1938AT-10 is a manportable, rapid-deployment crossed dipole antenna designed for NVIS communications up to 420 miles (~680 km). The antenna is capable of 400 watts maximum operation from 2 to 30 MHz. The RF-1938AT-10 has an extended height of 29 feet (~8.7 meters) to provide up to 10 dB of additional NVIS antenna gain at low operating frequencies (2 to 4 MHz) as compared to smaller crossed dipoles. The RF-1938AT-10 can be used both portable and vehicular applications. It requires the use of an antenna coupler.

The RF-1938AT-10 includes:

- Antenna base
- NVIS antenna adapter
- Ground rod
- Ground strap
- Stakes
- Sledge hammer
- Instruction manual



Deployed size: 61 L x 61 W x 28 H ft. (~19 x 19 x 9 m)
Transport size: 7 in. diameter x 26 in. (~20 x 66 cm) (two bags)
Weight: 27 lbs. (~12 kg)

TECHNICAL MANUALS

Product Number	Product Name
10515-0007-7200	Video Tutorial for RF-1936/1938 HF Transportable Cross Dipole Antenna
10251-0007	Instruction Manual

150-WATT TRANSPORTABLE HF BROADBAND INVERTED VEE ANTENNA



RF-1944-AT150
RF-1944-AT151 (with sledge hammer)

The RF-1944-AT150 and RF-1944-AT151 are low-profile, lightweight, tactical broadband dipole antennas for operation in an inverted vee configuration. The antennas are capable of 150 watts maximum operation from 1.6 to 30 MHz and is utilized for NVIS communications. The RF-1944-AT150 and RF-1944-AT151 antennas provide instantaneous bandwidth performance over the entire frequency range by properly terminating the dipole ends. This bandwidth makes the RF-1944-AT150 and RF-1944-AT151 antennas an excellent choice when operating with frequency-agile waveforms because an antenna coupler is not required. Antenna masts are not included.

The RF-1944-AT150 includes:

- Balun
- Dipole elements
- Termination resistors
- 33-ft. (~10-m) coaxial cable
- Halyard
- Ground stakes
- Canvas bag
- Instruction manual

The RF-1944-AT151 includes:

- All of the above, plus a sledge hammer

Deployed size: 164 ft. (~49.9 m)
Transport size: 12 L x 20 W x 3 H in. (~30 x 50 x 8 cm)
Weight: (RF-1944-AT150): 11 lbs. (~4.9 kg)
(RF-1944-AT151): 14 lbs (~6.3 kg)
Color: Green



Accessories

TECHNICAL MANUAL

Product Number	Product Name
10515-0177-4200	Instruction Manual

400-WATT TRANSPORTABLE HF BROADBAND INVERTED VEE ANTENNA

RF-1944-AT400

The RF-1944-AT400 is a low-profile, lightweight, tactical broadband dipole antenna for operation in an inverted vee configuration. The antenna is capable of 400 watt maximum operation from 1.6 to 30 MHz and is utilized for NVIS communications. The RF-1944-AT400 antenna provides instantaneous bandwidth performance over the entire frequency range by properly terminating the dipole ends. This bandwidth makes the RF-1944-AT400 antenna an excellent choice when operating with frequency-agile waveforms because an antenna coupler is not required. Antenna mast is not included.

The RF-1944-AT150 includes:

- Balun
- Dipole elements
- Termination resistors
- 33-ft. (~10-m) coaxial cable
- Halyard
- Canvas bag
- Instruction manual

Deployed size: 164 ft. (~49.9 m)
Transport size: 12 L x 20 W x 3 H in. (~30 x 50 x 8 cm)
Weight: 13 lbs. (~5.9 kg)
Color: Green

Accessories

TECHNICAL MANUAL

Product Number	Product Name
10515-0177-4200	Instruction Manual

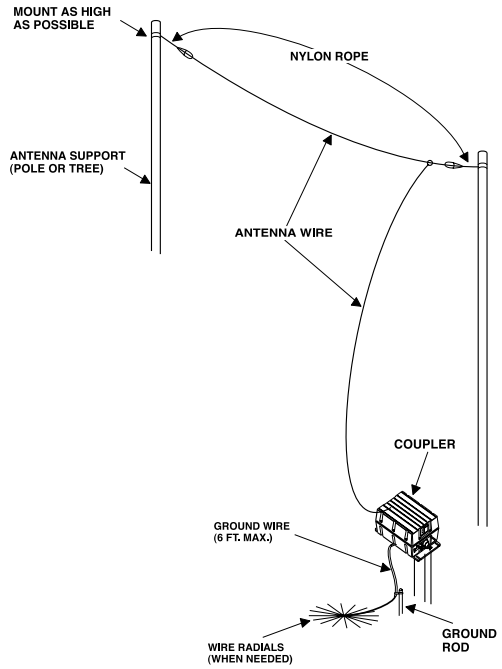
HF LONG-WIRE ANTENNA KIT

SB-A150

The SB-A150 includes all materials required to construct a 150-foot (~46-meter) long-wire antenna. The antenna is capable of 1 kW maximum operation from 1.6 to 30 MHz. The antenna is intended to be used for groundwave or long-distance skywave communications and can be cut to a specific frequency for single channel operation or used with an antenna coupler for broadband operation.

The SB-A150 kit includes:

- Ground rod
- Insulators
- Wire
- Nylon braided support rope
- Instruction sheet



Deployed size: Up to 150 ft. (~46 m)
Transport size: 6 ft. (~2 m) ground rod with wire spool
Weight: 5 lbs. (~2 kg)
Color: Copper

Accessories

TECHNICAL MANUAL

Product Number	Product Name
PM-0070	Instruction Sheet

HF FIXED INSTALLATION ANTENNAS

FIXED HF FAN DIPOLE ANTENNA



RF-1912B-AT001

The RF-1912B-AT001 is a fixed-installation fan dipole antenna that includes all the components needed to transport and permanently install the antenna. The antenna is capable of 1 kW maximum operation from1.6 to 30 MHz and has been optimized for both NVIS communications between 1.6 and 10 MHz and medium-range skywave out to 746 miles (~1200 km) for 10 to 30 MHz. The element length and height above ground has been designed to optimize take-off-angle for HF skywave propagation. It can also be configured as a top-loaded monopole for short-range groundwave and long-range skywave. The antenna achieves near 100% radiation efficiency because it does not contain any resistive loads. Broadband operation requires an antenna coupler.

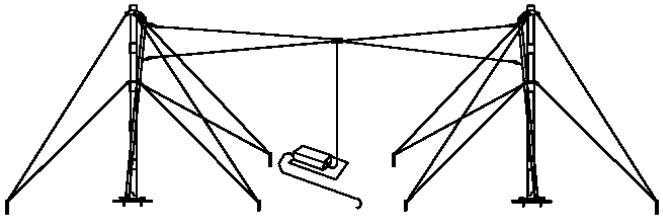
The RF-1912B-AT002 includes:

- Masts (2)
- Guy assemblies
- Halyards
- Guy anchors
- Pre-constructed radiating element assembly
- Vertical feedline
- Antenna coupler base plate
- Installation kit
- Spare parts kit

Accessories

SPARES KIT

Product Number	Product Name
6906-3120-01	Spare Parts Kit



Deployed size: 105 L x 26 W x 30 H ft. (~32 x 7.9 x 9.1 m)
Weight: 428 lbs. (~194 kg)
Color: Black

ROOF-MOUNTED INVERTED VEE HF DIPOLE ANTENNA

RF-1950-AT001

The RF-1950-AT001 is a roof-mounted inverted vee dipole antenna designed to be installed without penetrating the roof. The antenna is capable of 1 kW maximum operation from 2 to 30 MHz. The RF-1950-AT001 has been optimized for both NVIS communications from 1.6 to 10 MHz and medium-range skywave out to 746 miles (~1200 km) for 10 to 30 MHz. It incorporates galvanized steel bases and a fiberglass mast to support the antenna elements. One platform holds the fiberglass mast and four small platforms support the guys and elements. The large platform allows direct bolting of the required RF-382A-15 or RF-2601 antenna couplers.

The RF-1950-AT001 includes:

- Mast sections
- Guy assembly
- Roof mount
- Mast support frame with guy
- Instruction manual

Deployed size: 50 L x 33 W x 26 H ft. (~15 x 10 x 7.9 m)
Transport size: 83.5 L x 21.5 W x 17.25 H in. (~212 x 55 x 44 cm)

Weight: 580 lbs. (~260 kg) with shipping crate
Color: Green

Accessories

TECHNICAL MANUAL

Product Number	Product Name
12006-1050-01	Instruction Manual









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