

INSTRUCTION SHEET

IS NO.

10515-6648A

DATE:

August 2012

APPLIES TO:

10372-1270-01

1. PURPOSE

The Dismount Antenna Adapter (10372-1270-01) allows the operator to use the OE-505 Whip Antenna Kit as a means to raise and deploy wire antennas, to improve Near Vertical Incidence Skywave (NVIS) communications. The adapter allows the setup of several wire antennas: Inverted Dipole, Inverted Vee or sloping wire configuration.

NOTE

Harris recommends to properly deploy the RF-1940 or RF-1941 antennas (or similar) whenever possible for optimum NVIS communication and use the dismount antenna adapter when the deployment of these antennas is not possible due to the lack of nearby trees and/or structures. If Automatic Link Establishment (ALE) communications is being used, Harris recommends deploying the RF-1940 or RF-1941 antennas (or similar) to the length required (or as close as possible) for the lowest frequency.

2. DESCRIPTION

The following procedures describe how to install the Dismount Antenna Adapter (10372-1270-01) for use with OE-505 Whip Antenna Kit (10372-0240-02) in a manpack radio configuration.

The Dismount Antenna Adapter can be used with RF-7800H-MP, RF-5800H-MP, AN/PRC-150(C), AN/PRC-138 or MPR-9600 Manpack radios. For additional information, refer to RF-5800H-MP Operation Manual (10515-0117-4200), RF-7800H-MP Operation Manual (10515-0413-4200), AN/PRC-150(C) Operation Manual (10515-0103-4100), AN/PRC-138 Operation Manual (10372-0004-01), or MPR-9600 Operation Manual (10515-0228-4200).

3. FIELD DEPLOYMENT

Antenna field deployment using the Dismount Antenna Adapter requires supplemental materials which can be obtained by three techniques as described below. Actual field installations are described in [Paragraph 6.2](#) and [Paragraph 6.3](#) for each antenna deployment configuration.

- Supplemental materials #1 - Use the wire elements, guy line cords, and stake from an existing antenna kit such as the RF-1940 or RF-1941 antenna series if available or,
- Supplemental materials #2 - Purchase a dipole kit and/or guy kit from Harris specifically designed for the Dipole Antenna Adapter or,
- Supplemental materials #3 - Using available materials: field wire (preferably insulated) for antenna elements, ropes or cords for guy lines, and rocks or trees for ground stakes.

4. TOOLS

No tools are required. Stripping wire or installation of ground stake will depend on what materials the operator has at his/her disposal.

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5. SUPPORTING ITEMS

The following items are needed to perform the installation.

- HF Manpack radio as described in [Paragraph 2](#)
- OE-505 Whip Antenna Kit
- Ground Stake Kit for radio grounding
- Antenna element wire
- Guy lines with ground stakes for mechanical support

6. INSTALLATION

Use the following procedures to install supporting items and the Dismount Antenna Adapter for NVIS configuration.

NOTE

The procedures apply to RF-7800H-MP, RF-5800H-MP, AN/PRC-150(C), AN/PRC-138, and MPR-9600 Manpack radios.



To prevent electrical shock, turn off all power before making electrical connections. Failure to remove power could lead to personal injury or death.

6.1 Ground Stake Kit/Whip Antenna Kit Installation

Perform the following procedure to install the Ground Stake Kit (10303-1008-01) and OE-505 Whip Antenna Kit (10372-0240-02). See [Figure 1](#).

- a. Ensure Receiver/Transmitter (R/T) power is off.
- b. Assemble Ground Stake Kit:
 1. Press in ground post on R/T and insert tinned end of ground wire.
 2. Attach ground wire clip to ground stake.
 3. Sink ground stake into ground at desired location when optimal (hard ground) conditions exist.
- c. Assemble OE-505 Whip Antenna Kit:
 1. Screw base whip adapter and antenna base together, and then screw base whip adapter into J7 antenna connector on R/T. Do not overtighten.

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NOTE

J7 antenna connector and ground post locations vary depending on R/T model.

2. Screw end of collapsible antenna whip sections into antenna base.

NOTE

To minimize the effect of RF shock, the transceiver should always be grounded by the use of the Ground Stake Kit.

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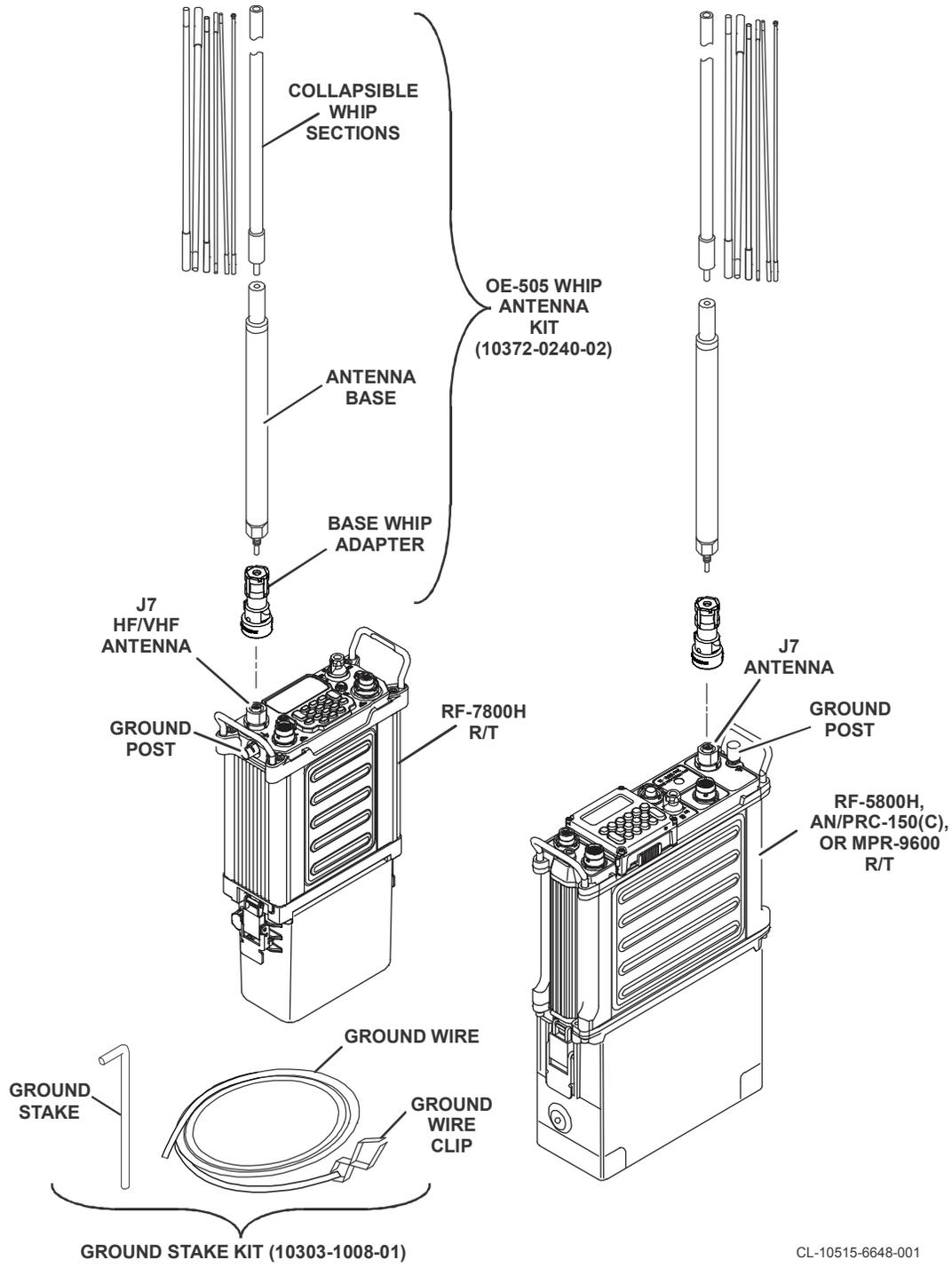


Figure 1. Ground Stake Kit/Whip Antenna Kit Installation

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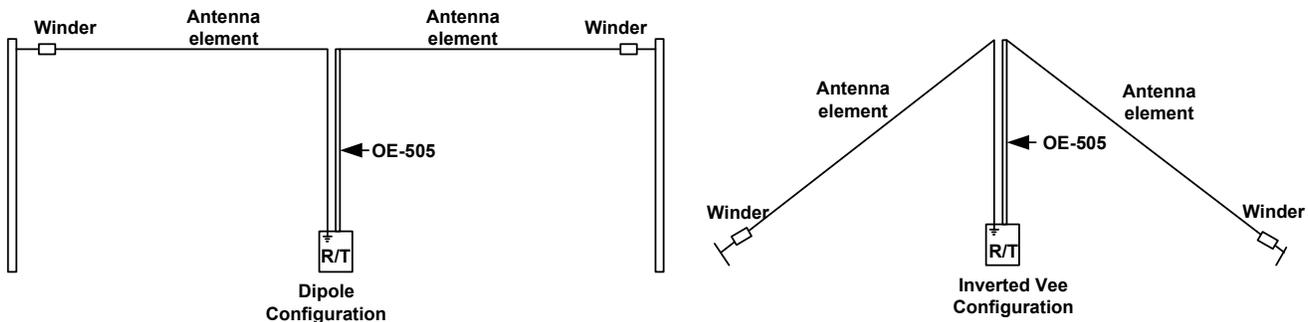
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6.2 Installation in a Dipole or Inverted Vee Configuration

Perform the following procedure to install the Dismount Dipole Adapter and wire elements in a Dipole or Inverted Vee antenna configuration. The installation instruction varies slightly as a function of the supplemental material.

Figure 2 depicts the installation for RF-7800H R/T model only.



6.2.1 Antenna Element Wire Installation

Perform the following (see Figure 2 for a close-up look at the Dismount Antenna Adapter connections):

- With the OE-505 whip antenna connected to the manpack radio, fully extend all seven (7) antenna whip sections and separate the top three (3) antenna whip sections from the bottom 4.
- Insert slotted end of antenna adapter (Item 1) into end of antenna whip section #4, aligning slot on adapter with internal cord in whip section. Note that top three (3) whip sections #1, #2, and #3 will now be hanging free.
- Position antenna wire retainers (Item 2) (bottom slotted plates) together and position antenna stabilizer (Item 3) (top plate) perpendicular to antenna wire retainers (Item 2).
- Unwind a wire element to approximately 30-ft. (10-m) for day time installation or 50-ft. (16-m) for night time, and insert the end with spade lug (or stripped wire) between two (2) flat washers (Item 4) at top of antenna adapter. Secure antenna element connection in place by tightening down wing nut (Item 6).
- Unwind approximately 10-ft (3-m) of the second wire element. Open the antenna wire retainers (Item 2) and run the wire element (Lug/carabiner if using parts of an RF-1940/1941 antenna) up through the retainer plates. Close retainer plates together to capture the antenna element. Secure the wire element (preferably with a carabiner) to the manpack handle closest to the ground port. Make sure there is some additional wire element left after the element is secured to connect the wire element to the R/T (Step g).
- To equalize both antenna element's length further, unwind another 30-ft (10-m) or 50-ft (16-m) as was done in Step d of this procedure.
- Insert the spade lug end of the second antenna element wire (or stripped wire) into the ground post on the R/T.

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- h. Secure the first wire element (preferably with a carabiner) to the antenna adapter through the non-slotted holes of the antenna wire retainer (Item 2).

NOTE

To minimize the effect of RF shock, the transceiver should always be grounded by the use of the Ground Stake Kit.

- i. For a dipole configuration, both antenna elements should be deployed in opposite directions and maintained in a horizontal configuration at the same height as the OE-505, by utilizing the throwing rope/weight in each of the RF-1940/1941 antenna winder and nearby trees or structures. If field material is being used, a rope or cord may be needed to extend the field wire to a nearby tree or structure.

NOTE

If a non-insulated wire element is being used, it is important that the element wire that runs along the OE-505 (the wire attached to the R/T ground post) is kept under tension to prevent touching or shorting out with the OE-505 whip antenna.

- j. For an inverted Vee configuration both antenna elements should be deployed in opposite directions while securing the winder at the end of each antenna element to an anchor at or near ground level. It is very important to keep as much tension as possible on the antenna elements as to prevent them from touching or drooping over the ground. The use of stakes is recommended for this configuration.
 - If a non insulated wire is being used it is important that the wire is anchored to a non conductive object or to a conductive object via a rope or cord.

NOTE

If a non insulated wire element is being used, it is important that the element wire that runs along the OE-505 (the wire attached to the R/T ground post) is kept under tension as to prevent touching or shorting out with the OE-505 whip antenna.

6.2.1.1 Antenna Guy Line Installation

This procedure is optional, but it is recommended to maintain antenna stability whenever antenna guy lines are available. Perform the following:

- a. Ensure antenna stabilizer (Item 3) is perpendicular to antenna wire retainers (Item 2).
- b. Take a length of guy line cord; approximately 20 ft. (6 m) and loop through back hole of antenna stabilizer (top plate) (Item 3) and secure the cord to stabilizer.
- c. Repeat Step b by looping guy line cord through front hole of antenna stabilizer (Item 3) and secure the cord to stabilizer.
- d. Both free ends of the installed antenna guy lines can now be anchored to any solid non-conductive object at or near ground level. Optional ground staking is recommended to secure guy lines.

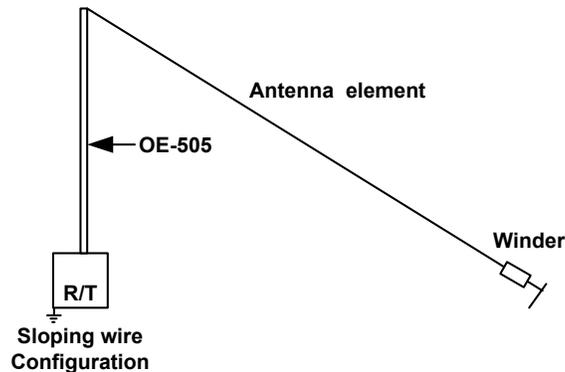
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6.3 Installation in a Sloping Wire Configuration

Perform the following procedure to install the antenna adapter and wire element in a sloping wire antenna configuration.



6.3.1 Antenna Element Wire Installation

Perform the following (See [Figure 2](#) for a close-up look at the Dismount Antenna Adapter connections):

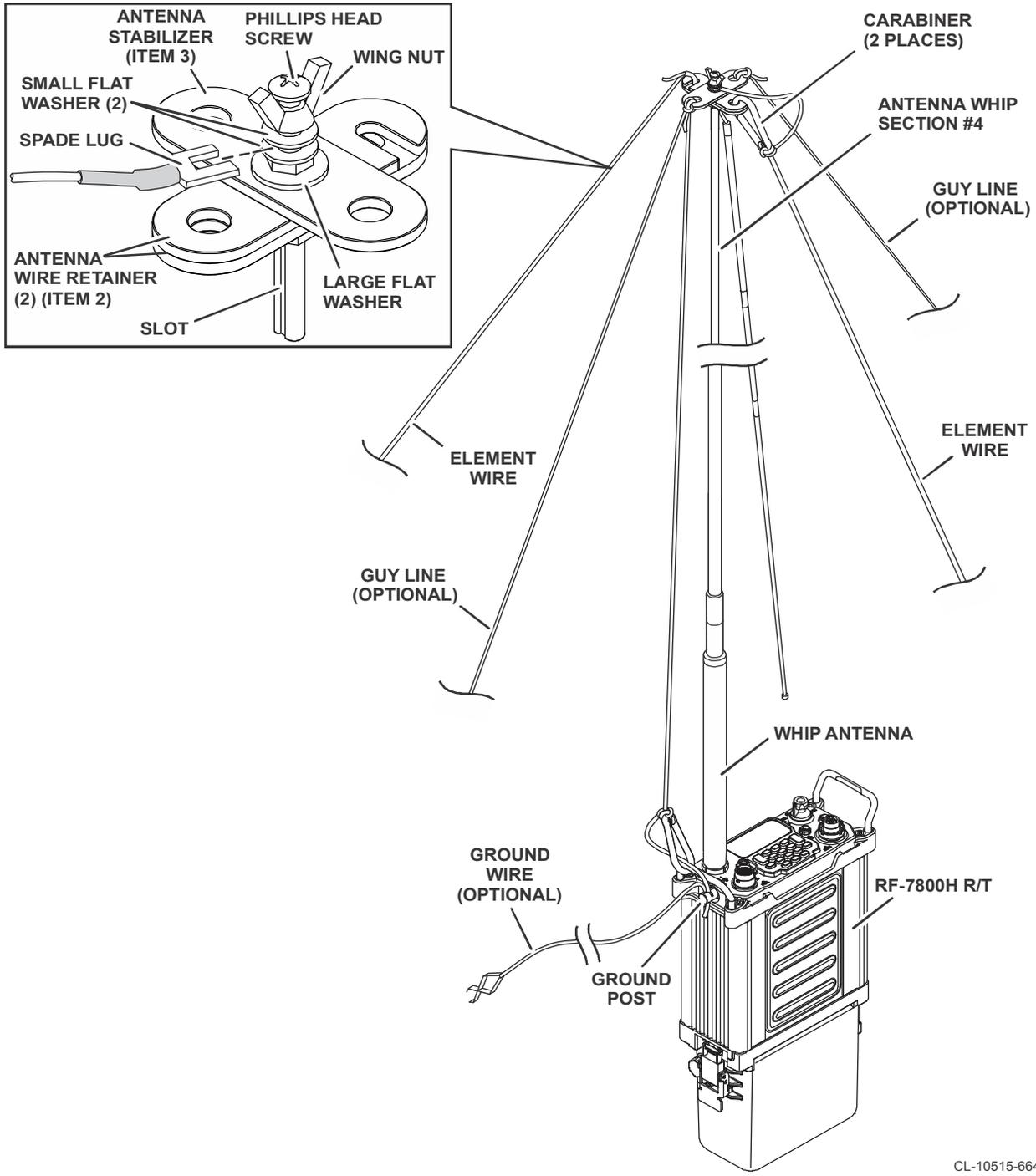
- With the OE-505 Whip antenna connected to the manpack radio, fully extend all seven (7) antenna whip sections and separate the top three (3) antenna whip sections from the bottom 4.
- Insert slotted end of antenna adapter ([Item 1](#)) into end of antenna whip section #4, aligning slot on adapter with internal cord in whip section. Note that top three (3) whip sections #1, #2, and #3 will now be hanging free.
- Position antenna wire retainers ([Item 2](#)) (bottom slotted plates) together and position antenna stabilizer ([Item 3](#)) (top plate) perpendicular to antenna wire retainers ([Item 2](#)).
- Unwind the wire element to approximately 30-ft. (10-m) for day time installation or 50-ft. (16-m) for night time, and insert the end with spade lug (or stripped wire) between two (2) flat washers ([Item 4](#)) at top of antenna adapter. Secure antenna element connection in place by tightening down wing nut ([Item 6](#)).
- Secure the wire element (preferably with a carabiner) to the antenna adapter through the non-slotted holes of the antenna wire retainer ([Item 2](#)).
- Attach a rope of a non-conductive guy line to the opposite end of the wire retainer and stake it or tie it down to keep the sloping wire antenna under tension.

NOTE

To minimize the effect of RF shock, the transceiver should always be grounded by the use of the ground stake kit.

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Figure 2. Dipole Adapter Installation

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7. PARTS LISTS

Table 1 lists the parts for the Dipole Antenna Adapter Assembly. The adapter comes fully assembled.

Table 1. Parts List, Dismount Dipole Adapter Assembly (10372-1270-01)

Item Number	Part Number	Item Name	Qty
1	10372-1271-01	Adapter, Antenna	1
2	10372-1273-01	Wire Retainer, Antenna	2
3	10372-1272-01	Stabilizer, Antenna	1
4	MS15795-842	Small Flat Washer, .219 x .500 x .049, Stainless Steel (SS)	2
5	H40-0006-018	Large Flat Washer, .203 ID x .750 OD x .03 -.05 Thick, SS	1
6	H34-0029-010	Nut, Wing, 10-32, SS	1
7	MS35650-304	Nut, Hex, 10-32, SS	1
8	MS51958-67	Phillips Head Screw, 10-32 x 1.00, SS	1

8. OPERATION

Perform the following to verify proper operation of the radio with the antenna.

NOTE

The internal coupler on the R/T must be enabled to allow the antenna to be used at any frequency.

- a. Power on the R/T.
- b. Enable the internal coupler:
 1. Choose [OPT] > RADIO > COUPLER menu choices. Current coupler setting is displayed.
 2. Use ▼ or ▲ to select the **Enable** setting and press [ENT].
 3. To exit, press [CLR] several times or press [OPT].

NOTE

Enabling the internal coupler on AN/PRC-138 will differ from what is shown above. If necessary, refer to AN/PRC-138 Operation Manual (10372-0004-01).

9. CONTACT

If additional replacement parts are required, contact Harris Product Service either by telephone at 866-264-8040/585-242-3561, or via e-mail at rfcsrv@harris.com.