DX Engineering
Heavy Duty Pivot Base for Three Inch Base Section Vertical Antennas

DXE-VA-PIVOT-3
US Patent No. 8,130,168
DXE-VA-PIVOT-3-INS Revision 0

Shown with optional DXE-RADP-3 Radial Plate and Customer Supplied Mounting Pipe

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P.O. Box 1491 • Akron, OH 44309-1491 USA
Phone: (800) 777-0703 • Tech Support and International: (330) 572-3200
Fax: (330) 572-3279 • E-mail: DXEngineering@DXEngineering.com
Introduction

Congratulations on obtaining your DX Engineering Three Inch Base Pivot Assembly DXE-VA-Pivot-3. Now you can have a high-performance pivot base for a vertical antenna with a three inch base section. This is the same rugged pivot base assembly used on the DXE-8040VA-1 fifty-five foot tall dual-band vertical antenna.

Features

**High Strength Pivoting Fixture - US Patent No. 8,130,168**
- Ultra-rugged construction for vertical antennas starting with a 3 inch OD heavy wall tubing
- Massive Extren® channel insulator
- Laser-cut high strength Stainless Steel brackets
- All Stainless Steel Hardware

The optional DXE-VRW-1 Manual Winch for easy one-person raising and lowering of your vertical antenna is available from DX Engineering. You can move the DXE-VRW-1 winch between similar antennas in a multi-antenna installation.

This heavy duty pivot base system requires a heavy duty mounting pipe. Recommended installation should provide up to 3” OD heavy wall galvanized steel pipe set in concrete. Schedule 80 pipe that is called 2-1/2” has an outside diameter of 2.875” is recommended. 36” of the mounting pipe should extend above ground level. Depth of the mounting hole and amount of concrete is dependent on your antenna design, local soil type and antenna guying.

**WARNING!**

**INSTALLATION OF ANY ANTENNA NEAR POWER LINES IS DANGEROUS**

**Warning:** Do not locate the antenna near overhead power lines or other electric light or power circuits, or where it can come into contact with such circuits. When installing the antenna, take extreme care not to come into contact with such circuits, because they may cause serious injury or death. Keep your distance! Remember the 10-foot rule: When carrying and using ladders and other long tools, keep them at least 10 feet away from all overhead lines - including any lines from the power pole to your home.
Tools Required

Two 9/16" wrenches, (one of them should be open-end)  
One 7/16" open end wrench  
Two 3/4" wrenches

Manual Updates and Information

Every effort is made to supply the latest manual revision with each product. Occasionally a manual will be updated between the time your DX Engineering product is shipped and when you receive it. Please check the DX Engineering web site (www.dxengineering.com) for the latest revision manual.

Please - Take the time to read the entire manual before you start assembly. There are plenty of pictures and drawings to see, and if you read the entire manual first, you'll get a better feel for the overall construction methods described. Assembly is not difficult, but there are a number of parts that must go together in a certain sequence to make assembly easier.

Installation Sequence

1. Site Selection  
2. Mounting Pipe  
3. Coaxial Cable to Mounting Pipe  
4. Radial System Suggestions  
5. Pivot Base Assembly (US Patent No. 8,130,168)  
6. Mounting Pivot Base to Mounting Pipe  
7. Optional DXE-VRW-1 Manual Winch installation and use

Site Selection

Select a mounting location clear from power lines, structures and other antennas by a minimum of your antenna height plus 10 feet (10 ft. safety rule). Consider overhead power lines, utility cables and wires. The further away your vertical antenna is mounted from local noise sources or other metallic objects, which can re-radiate noise and affect the tuning, radiation pattern and SWR, the better. Determine the direction you want the antenna to pivot and make sure there is adequate clearance.

Mounting Pipe

Use a customer supplied 2-1/2" schedule 80 galvanized steel thick-walled mounting pipe at least 7-1/2 feet long. The 2-1/2" schedule 80 galvanized steel pipe will have an outside diameter of 2.895". This will allow 4-1/2 feet below ground and 3 feet above ground.

Some manufacturers use the term DOM (drawn over mandrel) which will give you a true OD dimension. Other types of mounting pipe may be used but due to lateral strength needed ensure the mounting pipe is strong enough. The material most available is ASTM A513 Type 5 which is a
1020 material. Some pipe suppliers list the material as either 1020 or 1026. Type 1020 has the following properties:

ASTM A513 (1020): Up to 2-3/4" OD with maximum wall thickness of 0.25"
   Tensile: 80,000 PSI.  Yield: 70,000 PSI.  Elongation in 2": 15%.  Rockwell Hardness: B80

ASTM A513 (1020): Over 2-3/4" OD with wall thickness heavier than 0.25"
   Tensile: 70,000 PSI.  Yield: 60,000 PSI.  Elongation in 2": 20%.  Rockwell Hardness: B80

3.00" OD x 0.25" wall thickness (or more) of 65,000 PSI yield tubing may also be used.

Depending on your geographic location, various dealers should be able to supply the mounting post you specify. The following dealers can supply DOM tubing: (Other dealers in your area may be a better choice.)

Industrial Tube & Steel, Corp.: [www.industrialtube.com](http://www.industrialtube.com)
On Line Metal Store: [www.onlinemetals.com](http://www.onlinemetals.com)
Speedy Metals: [www.speedymetals.com](http://www.speedymetals.com)
Metals Depot: [www.metalsdepot.com](http://www.metalsdepot.com)

Note: DX Engineering does not recommend or endorse any specific vendor.

This mounting pipe must be permanently mounted in the ground, preferably in a concrete base 2 feet by 2 feet by 4 feet deep (with gravel below for drainage). The antenna system requires this type of mounting to help withstand the lateral forces present on the antenna during wind conditions and when operating the pivot function. Make the hole deep enough to accommodate at least 4 feet of pipe and 4 to 6 inches of gravel at the bottom for drainage. Set the mounting pipe on the gravel, use the concrete to fill around the pipe per the concrete instructions. Fill the hole until the concrete is level with the ground around it. Use a level on the mounting pipe as you fill the hole to be sure the mounting pipe is vertically straight.

Your location, landscape and ground conditions may require different mounting solutions in order to have the steel mounting pipe and the vertical antenna in a secure position.

Note: Galvanized steel, rather than aluminum, is much more suitable for mounting in concrete. Aluminum will quickly corrode due to incompatibility with the materials used to make concrete.
Coaxial Cable to Mounting Pipe

The coaxial cable should be routed to the base of the antenna system and be buried below the radial system. PVC Conduit pipe may be used to house the coaxial cable. Bury the cable 6” to 12” below ground level.

Radial System Suggestions

The use of a radial system is a key requirement for a high performance quarter wave vertical antenna systems. With a vertical antenna system, the radials are the second half of the antenna. The radials contribute to the radiation efficiency of the entire vertical antenna system.

At a minimum, 32 radials, each 65 feet long, should be used with most low band vertical antennas. DXE-RADW Radial Wire, a 14 gauge stranded copper with a black relaxed PVC insulation wire is suggested for the best results.

The wire radials should placed as symmetrically as possible straight from the feedpoint around the vertical antenna and spaced evenly, regardless of how many radials are used. Do not cross or bunch any radial wires as this nullifies their effectiveness. If you have limited space, put in as many straight radials as you can. The radials must be connected to the shield of your feedline. The DXE-RADP-3 Stainless Steel Radial Plate is an ideal optional item which provides an excellent system for attaching radial wires to your vertical antenna system feedpoint.

Radial wires can be laid on the roots of the grass using DXE-STPL Radial Wire Anchor Pins to hold them down. Using enough staples will ensure the wires will not be snagged by mowers, people, or animals. Grass will quickly overgrow the radials and it will be virtually impossible to see them. An article describing this process is available on the DX Engineering website. Radials can also be buried just under the surface by using a power edger to make a slit in the soil.

Note: UMI-81343 Never-Seez® or DXE-NSBT8 Anti-Seize should be used on all stainless steel threaded hardware to prevent galling and to ensure proper tightening.

Note: The following assembly instructions are based on using a customer supplied 2.895” OD Mounting Pipe (referred to as 3” OD), with the optional DXE-VRW-1 Manual Winch, optional DXE-RADP-3 Radial Plate with one optional DXE-SSVC-3P V Clamp and the optional DXE-363-SST - Bulkhead Fitting.
Radial Plate to Mounting Pipe

Place the optional **DXE-RADP-3** Radial Plate over the 2.895" OD mounting pipe. Connections to the antenna will be made via the optional **DXE-363-SST** bulkhead fitting SO-239 socket connector. The **DXE-RADP-3** Radial Plate comes with 20 sets of stainless steel hardware for mounting the radial wires. It is suggested that 32 radial each 65 feet long be used, therefore additional **DXE-RADP-1HWK** Radial Plate Wire Attachment Hardware Kits will be required.

Optional DXE-RADP-3 Radial Plate Mounted to a 3" OD Mounting Pipe

Attaching Ground Radial Wires to the Optional Radial Plate

Using the 20 sets of supplied 1/4" stainless steel hardware (Bolt, Star Washer, Flat Washer, Split Washer, Nut) connect the optional ground radial wires to the **DXE-RADP-3** Radial Plate as shown below. Additional hardware kits are available (**DXE-RADP-1HWK**) that contain 20 sets of Radial Plate Hardware.

There are optional DX Engineering Radial Wire Kits available. **DXE-RADW-500K/BD** contains a 500 foot spool of 14 gauge copper stranded wire with black PVC insulation, 20 Terminal Lugs and 100 Steel or Biodegradable Lawn Staples. The **DXE-RADW-1000K/BD** Radial Wire Kit contains a 1,000 foot spool of 14 gauge copper stranded wire with black PVC insulation, 40 Terminal Lugs and 200 Steel or Biodegradable Lawn Staples. **RADW-20RT, -32RT or -65RT** contain 20 each radial wires with 1/4" terminal attached. These kits come in 20 Ft, 32 Ft or 65 Ft lengths.

Depending on the number of radial wires used, space them out evenly around the Radial Plate. The Radial Plate will accommodate up to 60 radial wires (60 laser drilled holes), or up to 120 radials if doubled up.
The exploded view drawing is for reference and shows the overall Pivot Base Assembly.

The 3” Mounting Pipe and 3” Antenna Base Section are Customer Supplied.

Feedpoint hardware shown for reference
Pivot Base and Lower Antenna Assembly

1. Locate the heavy duty Extren® insulated channel. There are 12 holes drilled in the insulated channel. The top of the insulated channel is identified by two holes located very near the top side.

2. Locate the stainless steel bottom hinge plate, backing plate, four carriage bolts, four 3/8" flat washers, four 3/8" split lock washers and four 3/8" hex nuts. Assemble the bottom hinge to the bottom of the heavy duty insulated channel as shown below.

3. Locate the stainless steel pivot base locking plate, backing plate, four carriage bolts, four 3/8" flat washers, four 3/8" split lock washers and four 3/8" hex nuts. Assemble the pivot base locking plate to the top of the heavy duty insulated channel as shown below.
4. Locate the stainless steel base side bottom hinge, two 1/2-13 x 1-1/4" long stainless steel hex head bolts, two pivot bushings, four 1/2 x 1-1/4" stainless steel flat washers, two 1/2" stainless steel split lock washers, and two 1/2-13 stainless steel hex nuts. Assemble the base side hinge plate to the bottom hinge plate as shown below.

5. Locate two V-Saddle blocks, two stainless steel V-Bolts, four stainless steel 3/8" flat washers, four stainless steel 3/8" split lock washers and four stainless steel 3/8-16 hex head nuts. Loosely assemble (one or two threads beyond the end of the hex nuts) the two V-Bolts to the stainless steel base side bottom hinge as shown below. The V-Bolts will be tightened in a later assembly step.
6. Locate the stainless steel Pivot Base Winch Mount, two stainless steel Pivot Base Plate Brackets, four 3/8-16 x 1-1/4" long stainless steel hex bolts, eight stainless steel 3/8" flat washers, four stainless steel 3/8" split lock washers and four stainless steel 3/8-16 hex nuts. Assemble the Pivot Base Plate Brackets to the Pivot Base Winch Mount as shown below.


Note: These four bolts are removed when using the pivoting function as described later on in this manual.
8. Locate two V-Saddle blocks, two stainless steel V-Bolts, four stainless steel 3/8" flat washers, four stainless steel 3/8" split lock washers and four stainless steel 3/8-16 hex head nuts. Loosely assemble (one or two threads beyond the end of the hex nuts) the two V-Bolts to the stainless steel Pivot Base Winch Mount as shown below. The V-Bolts will be tightened in a later assembly step.

![Diagram of V-Bolt assembly](image1.png)


The two Thick Backing Plates (3/8") are located next to the U-Bolt Saddles on the inside of the insulated channel. The two Thin Backing Plates (1/4") are used on the rear side of the insulated channel.

![Diagram of Backing Plates and U-Bolts](image2.png)

Loosely assemble (one or two threads beyond the end of the hex nuts) the two U-Bolts and associated hardware to the insulated mounting channel as shown above. The U-Bolts will be tightened in a later assembly step.

![Top view of Insulated Channel](image3.png)

*Top of Insulated Channel*
*Showing U-Bolt installed*
*The Thick Spacer is on the front side*
*The Thin Spacer is on the rear side*

![Back and Front views](image4.png)

*Back and Front views showing the U-Bolt located at the Bottom of the Insulated Channel*
*The Thick Spacer is on the front side, the Thin Spacer is on the rear side*
10. Move the four V-Bolts out as far as they will go (these were put on loosely in earlier steps).

Slide the entire assembly onto your mounting pipe. You want approximately 1 inch clearance from the top of your mounting pipe to the bottom side of the winch mounting plate.

Position the base fixture in the position you pre-selected for the pivoting direction.

Tighten the V-Bolt clamp hardware evenly so the length of the exposed threads is approximately equal. Any clamp should be tightened evenly from side-to-side with an equal amount of thread above each nut.
11. Using your 3" OD antenna bottom element section. Loosen the previously installed U-Bolts. Insert your 3" OD antenna bottom element section into the antenna base section through the upper and lower U-Bolts.

The bottom of your 3" OD element tube should be even with the bottom of the insulated channel as shown below.

![Side View and Front View](image)

Tighten the lower and upper U-Bolt clamps hardware evenly so the length of the exposed threads is approximately equal. Any clamp should be tightened evenly from side-to-side with an equal amount of thread above each nut.


Loosely assemble (one or two threads beyond the end of the hex nuts) the two U-Bolts and associated hardware to the antenna hook mounting plate as shown below. The U-Bolts will be tightened in the next assembly step.
13. Loosen the U-Bolts enough to slide the Antenna Hook Mount assembly over your 3” OD antenna lower element on the base assembly. Position the antenna hook mount approximately 1/2” above the insulated channel as shown below.

![Image showing the position of the antenna hook mount](image1.jpg)

14. Tighten the two U-Bolt clamps hardware evenly so the length of the exposed threads is approximately equal. Any clamp should be tightened evenly from side-to-side with an equal amount of thread above each nut.

**Mounting and using the Optional DXE-VRW-1 Manual Winch**

1. Follow the instructions included with the optional **DXE-VRW-1 - Manual Winch Add-On Kit** to prepare the Manual Winch for installation on the antenna base assembly.

2. Included with optional **DXE-VRW-1 - Manual Winch Add-On Kit** is the stainless steel hardware for mounting the winch on the pivot base assembly. The hardware includes three 3/8-16 x 1” long stainless steel hex bolts, six stainless steel 3/8-16 flat washers and three 3/8-16 Stainless Steel Nyloc Nuts.

![Image showing stainless steel hardware](image2.jpg)

Loosely install the three sets of stainless steel hardware on the manual winch as shown below.

![Image showing the installation of stainless steel hardware](image3.jpg)
The hardware does not have to be removed from the manual winch to either install or remove the manual winch from the winch mounting plate.

There are three holes with slots in the mounting bracket. The flat washers will fit through the large holes. Once in place, push the winch inward (toward the antenna elements) allowing the three bolts to go into the three slots. Tighten the hardware to hold the winch in place.

Connect the Hook from the manual winch strap to the Antenna Hook Mount as shown below.

To remove the winch, simply reverse this sequence.

3. To lower your antenna, ensure the winch hook is in the Antenna Hook Mount. Remove the four bolts and hardware that hold the Pivot Lock Plate to the Pivot Base Winch Mount Plate. You can now use the winch to pivot the antenna downward.

Four Bolts to be removed to allow for pivoting
4. Turn the crank on the manual winch to lower, or raise the antenna. After raising the antenna completely, make sure you replace the four bolts that were removed in step 3. The manual winch should be removed when not in use to protect the gears and web strap from weather and environmental effects.

**Locking the Pivot Base**

To help prevent accidental pivoting, ensure the four pivot locking bolts are in place and properly secured. Additionally, you may replace one of the bolts with a padlock to further prevent tampering or accidental pivoting as shown below.

*Ensure all four Pivot Locking Bolts are in place*

*Padlock used in place of one Pivot Locking Bolt*
## Pivot Base Assembly - US Patent No. 8,130,168

<table>
<thead>
<tr>
<th>QTY</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Base Side Bottom Hinge</td>
</tr>
<tr>
<td>1</td>
<td>Antenna Side Bottom Hinge</td>
</tr>
<tr>
<td>2</td>
<td>Bottom Hinge Bushing</td>
</tr>
<tr>
<td>1</td>
<td>Heavy Duty Antenna Insulator Channel</td>
</tr>
<tr>
<td>2</td>
<td>Saddle Backing Plate 1/4”</td>
</tr>
<tr>
<td>1</td>
<td>Antenna Pivot Hook Mount</td>
</tr>
<tr>
<td>1</td>
<td>Pivot Base Winch Mount</td>
</tr>
<tr>
<td>2</td>
<td>Pivot Base Plate Bracket</td>
</tr>
<tr>
<td>1</td>
<td>Pivot Base Lock Plate</td>
</tr>
<tr>
<td>2</td>
<td>Backing Plate, Square</td>
</tr>
<tr>
<td>2</td>
<td>Saddle Spacer Plate 3/8”</td>
</tr>
<tr>
<td>4</td>
<td>3” Stainless U-Bolt</td>
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<tr>
<td>4</td>
<td>3” Cast Saddle Clamp</td>
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<tr>
<td>40</td>
<td>3/8” Flat Washer</td>
</tr>
<tr>
<td>32</td>
<td>3/8” Split Lock Washer</td>
</tr>
<tr>
<td>32</td>
<td>3/8”-16 Nut</td>
</tr>
<tr>
<td>8</td>
<td>3/8”-16 x 1.25” Long, Hex Head Cap Screw</td>
</tr>
<tr>
<td>4</td>
<td>2”-3” Cast V-Saddle</td>
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<tr>
<td>4</td>
<td>2”-3” 3/8”-16 V-Bolt</td>
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<tr>
<td>8</td>
<td>3/8”-16 x 1-1/2” Long Stainless Steel Carriage Bolt</td>
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<tr>
<td>2</td>
<td>1/2”-13 x 1-1/4” Long Stainless Steel Hex Head Cap Screw</td>
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<tr>
<td>4</td>
<td>1/2” x 1-1/4” Stainless Steel Washer</td>
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<tr>
<td>2</td>
<td>1/2” Stainless Steel Lock Washer</td>
</tr>
<tr>
<td>2</td>
<td>1/2”-13 Stainless Steel Nut</td>
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</table>

## Optional DXE-VRW-1 Manual Winch Assembly

<table>
<thead>
<tr>
<th>QTY</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1500 Pound Exposed Gear Hand Winch with Brake</td>
</tr>
<tr>
<td>1</td>
<td>Custom Polyester web strap with Hook, 2” x 15 Ft</td>
</tr>
<tr>
<td>1</td>
<td>3/8-16 x 3-1/2” long Grade 8 Hex Head Bolt</td>
</tr>
<tr>
<td>4</td>
<td>3/8-16 Stainless Steel Nyloc Nut</td>
</tr>
<tr>
<td>3</td>
<td>3/8-16 x 1” long Stainless Steel Hex Bolt</td>
</tr>
<tr>
<td>8</td>
<td>3/8”-16 Stainless Steel Flat Washer</td>
</tr>
</tbody>
</table>

## Suggested Parts Not Included

**DXE-VRW-1 - Manual Winch Add-on Raising Kit**

Manual winch add-on kit for the High Performance DX Engineering vertical antennas **DXE-8040VA-1** and **DXE-7580VA-1**. The tilt fixtures for these antennas are equipped to accept the winch directly. Allows easy raising and lowering of tall antennas - may be easily moved from one antenna to another in multi-antenna arrays.
DXE-RADP-3 - Radial Plate (patented):
Made from Laser Cut Stainless Steel with 20 Sets of Stainless Steel Radial Attachment Hardware. The DX Engineering Radial Plate is meant for those of you having a vertical antenna and want an easy, neat and effective way to connect those essential radial wires to your antenna system for the highest efficiency and strongest signals.

DXE-SSVC-3P - Stainless Steel V-Clamp for 2 to 3 inch steel pipe
This V-Clamp is made in one size that fits Steel tubing or pipe from 2 to 3” OD as used in antenna construction. The supplied V-bolt is long enough to attach tubing to thick plates and is made with anti-corrosive properties. The special Stainless Steel saddle has serrated teeth will clamp to the pipe securely by biting into the surface. For this reason, it is not recommended for softer aluminum tubing or pipe. U-Bolt thread dimensions: 3/8”-16 x 1.75”. V-bolt and saddle made from high-strength 18-8 stainless steel

DXE-RADP-1HWK - Radial Plate Wire Attachment Hardware Kit
Additional 20 Sets of ALL Stainless Steel Radial Hardware for use with the DX Engineering Stainless Steel Radial Plate.
(20) 1/4” Bolts - (20) 1/4” Nuts - (20) 1/4” Flat Washers
(20) 1/4” Split Washers - (20) 1/4” Star Washers

UMI-81343, DXE-NSBT8 - Anti-Seize & Never-Seez®
An Anti-seize compound MUST be used on any Stainless Steel nuts, bolts, clamps or other hardware to prevent galling and thread seizure. Any of these products can be used for this purpose.

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>UMI-81343</td>
<td>Anti-Seize, 1 oz. Squeeze Tube</td>
</tr>
<tr>
<td>UMI-81464</td>
<td>Anti-Seize, 8.5 oz. Aerosol Can</td>
</tr>
<tr>
<td>DXE-NSBT8</td>
<td>Never-Seez®, 8 oz. Brush Top</td>
</tr>
<tr>
<td>DXE-NMBT8</td>
<td>Never-Seez®, 8 oz. Brush Top, Marine Grade</td>
</tr>
</tbody>
</table>

* These products are limited to domestic UPS Ground shipping only

DXE-RADW - 500K or 1000K Radial Wire Kits and Components
To achieve optimal performance with a ground-mounted vertical, install as many radials as possible. These bulk radial wire kits use insulated wire that is UV resistant, hard to see and lays down easily, unlike the wire that is commonly available at the big box stores. It will last much longer in contact with soil than bare wire. The DXE-RADW- 500K or 1000K kit provide everything you will need to build the perfect radial system!
- 500/1000 ft. spool of 14 AWG, stranded copper wire with vinyl insulation
- 20/40 lugs
- 100/200 radial wire anchor pins - eliminating the need to bury your radials!
- Build up to 20/40 radials, 25 feet long

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DXE-RADW-500K</td>
<td>Bulk Radial Wire Kit, 500 ft Spool of Wire, 20 Lugs, 100 Staples</td>
</tr>
<tr>
<td>DXE-RADW-1000K</td>
<td>Bulk Radial Wire Kit, 1000 ft Spool of Wire, 40 Lugs, 200 Staples</td>
</tr>
</tbody>
</table>

DXE-225RT-20 - Ring terminal 16-14 Wire Gauge, 1/4" hole/20 Pack
This is a set of 20 ring terminals for AWG #14 to #16 wire with a clearance hole for a 1/4” bolt. These are the same crimp terminals supplied with the DXE Radial Wire Kits for #14 Radial and Antenna Wire.
DXE-RADW-20RT/-32RT/-65RT Pre-Assembled, Radial Wire, w/ 1/4" ring Terminals, 20 Pack
The DXE-RADW Radial Wire Kits include the highest quality 14 gauge stranded copper wire with a relaxed black PVC insulation for easy installation of your radial system. They allow fast and easy installation of your radial ground system, and permit you to mix and match different length to fit the available space. The stranded wire and relaxed insulation mean that the wire will lay flat as you place it on the ground - easy to install! The twenty pre-cut radial wires include 1/4" ring terminals professionally crimped on one end for quick and easy attachment to the radial plate. These Radial Wire Kits are designed for users of vertical antenna systems which have the need for a high quality radial system for optimum antenna performance. The 1/4" ring terminals are machine crimped for maximum grip. Soldering is not required for strength, but is recommended if installed in corrosive environments such as salt spray.
- Packed 20 Radial Wires per package
- 14 gage, stranded copper wire
- Black relaxed PVC insulation
- 1/4" Ring Terminal professionally crimped on each Radial Wire
- 3 lengths to choose from: 20 Ft (-20RT), 32 Ft (-32RT), 65 Ft (-65RT)

| DXE-RADW-20RT | Package of 20 each 20 Ft Radials with 1/4" Ring Terminals |
| DXE-RADW-32RT | Package of 20 each 32 Ft Radials with 1/4" Ring Terminals |
| DXE-RADW-65RT | Package of 20 each 65 Ft Radials with 1/4" Ring Terminals |

DXE-STPL - Radial Wire Anchor Pins, 100/pack - No need to bury your radials!
DX Engineering Radial Wire Anchor Pins are perfect for fastening radials below the grass line to eliminate the risk of damaging your radials during lawn maintenance.
- 100 count - 6" Pins
- 11-Gauge

| DXE-STPL-100P | Radial Wire Anchor Pins, 100/pack |
| DXE-STPL-300P | Radial Wire Anchor Pins, 300/pack |

DXE-STPL-100BD - Radial Wire Staple, Biodegradable, 3", 100 pack
DX Engineering DXE-STPL-100BD is a 100-pack of 3” biodegradable anchors that are produced from recycled PLA (Polylactide Resin). Depending on the weather conditions, they will degrade in about a year. They are easily installed and will hold radial wires in place until lawn roots overtake them - and then disappear. Ecologically friendly!

DXE-3M2155 - 3M Temflex™ 2155 Rubber Splicing Tape.
Conformable self-fusing rubber electrical insulating tape. It is designed for low voltage electrical insulating and moisture sealing applications. For outdoor use, it should be protected from UV deterioration with an overwrap of TRM-06132.

TRM-06132 - Scotch® Super 33+.
Highly conformable super stretchy tape for all weather applications. This tape provides flexibility and easy handling for all around performance. It also combines PVC backing with excellent electrical insulating properties to provide primary electrical insulation for splices up to 600V and protective jacketing.

DXE-363-SST - Bulkhead Fitting, SO-239 Socket, Silver Plating, Teflon® Insulation
This hi-quality bulkhead connector uses silver plated outer and inner conductors and a Teflon® insulator. The connector has very low loss and high electrical break down. It comes with two nuts to secure the connector to our radial plate or other flat surface. Perfect for use with the DX Engineering Radial Plate, (DXE-RADP-3) it ensures the radial ground system, the antenna ground and the feedline shield are common. It can also be used in other coaxial applications where the male ends (PL-259) of 2 coax cables need to be connected, such as when joining two pieces of coax together. Don't forget to waterproof coaxial connections.
- Silver plated, Teflon® insulated, Very low loss, High electrical break down
- 2 in. long
Technical Support

If you have questions about this product, or if you experience difficulties during the installation, contact DX Engineering at (330) 572-3200. You can also e-mail us at:

DXEngineering@DXEngineering.com

For best service, please take a few minutes to review this manual before you call.

Warranty

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