



# OPERATION AND SAFETY MANUAL

## Mini Duct Hunter™



### Trace Small Conduit or Pipes

- Locate Fiber Optic Cables In Plastic Pipe Without Tracer Wire
- Fiber To The Home Applications - Locate Fiber Optic Micro-Duct
- Plumbing Applications - Fiberglass Will Not Rust
- Trace Sewer Laterals (Up To 4" In Diameter) To Avoid Cross Bores
- Includes Accessory Kit

Mini Duct Hunter	Rod Diameter	Length	Recommended Conduit Size
15-18-100	1/8"	100'	1/2" - 1"
15-18-150	1/8"	150'	1/2" - 1"
15-18-200	1/8"	200'	1/2" - 1"
15-18-250	1/8"	250'	1/2" - 1"
15-18-300	1/8"	300'	1/2" - 1"
15-316-100	3/16"	100'	1/2" - 1-1/2"
15-316-150	3/16"	150'	1/2" - 1-1/2"
15-316-200	3/16"	200'	1/2" - 1-1/2"
15-316-250	3/16"	250'	1/2" - 1-1/2"
15-316-300	3/16"	300'	1/2" - 1-1/2"

## WARNING

- Wear safety glasses and gloves.
- Keep rod inside reel when not in use. Out-of-control rod can harm personnel or property.
- Keep rod clean. Some contaminants (including water) can conduct electricity.
- Keep secure footing. Protect yourself from falling should pulling eye move suddenly or separate from rod.
- Check for rod damage prior to use. Cracks, gouges, nicks, or white stress marks on jacket or sharp bends will weaken rod. Injury could result if rod breaks while pulling.
- Do not use slip joint pliers, locking pliers or powered pulling equipment on rod.
- Do not force a pull that is stuck. Check for kinks or obstructions.
- Avoid pulling rod over sharp edges.
- Do not bend rod beyond 6" radius.



Do not use on live circuits. Electric shock may result. The Duct Hunter is equipped with a metal tip and continuous internal copper wire. Do not use on or near live circuits. Electric shock may occur.



### WARNING - ADHESIVE

Read manufacturer's instructions before using adhesive. In case of eye contact, flush with water and seek medical attention. If skin contact occurs, apply solvent (such as nail polish remover) to area and gently remove adhesive. Wash solvent off with water. Solvents should not be used in case of contact with eyes or open wounds. Always wear safety goggles (ANSI Std. Z87.1) and gloves when working with adhesive and/or unprotected fiberglass rod. See adhesive product label for Safety Data Sheet (SDS).

### Warranty

Jameson products carry a warranty against any defect in material and workmanship for a period of one year from date of shipment unless failure is due to misuse or improper application. Jameson shall in no event be responsible or liable for modifications, alterations, misapplications or repairs made to its products by purchaser or others. This warranty is limited to repair or replacement of the product and does not include reimbursement for shipping or other expenses incurred. Jameson disclaims any other express or implied warranty.

## Accessories

(Sold Separately)	
15-163	<b>Flexible Leader with Ball Tip</b> - Guides rod around bends, sweeps, misalignments and wires. Fits 1/8" and 3/16" Rod
15-146	<b>3/16" End Ferrule Repair Kit</b> - End Ferrule, Adhesive, Emery Cloth
15-140	<b>3/16" Splice Repair Kit</b> - Splice Ferrule, Adhesive, Shrink Tube, Emery Cloth
15-160	<b>Pulling Eye</b> - Attaches to end fitting of rod so pull line can be attached to rod. Fits 1/8" and 3/16" Rod
15-18-146	<b>1/8" End Ferrule Repair Kit</b> - End Ferrule, Adhesive, Emery Cloth
15-18-140	<b>1/8" Splice Repair Kit</b> - Splice Ferrule, Adhesive, Shrink Tube, Emery Cloth
15-316-AK	<b>3/16" Accessory Kit:</b> Flexible Spring Leader Tip, End Ferrule, Splice Ferrule, Pulling Eye, Adhesive, Emery Cloth, Canvas Pouch
15-18-AK	<b>1/8" Accessory Kit:</b> Flexible Spring Leader Tip, End Ferrule, Splice Ferrule, Pulling Eye, Adhesive, Emery Cloth, Canvas Pouch
15-168	<b>Sonde Adapter</b>
14-169	<b>Sonde</b>



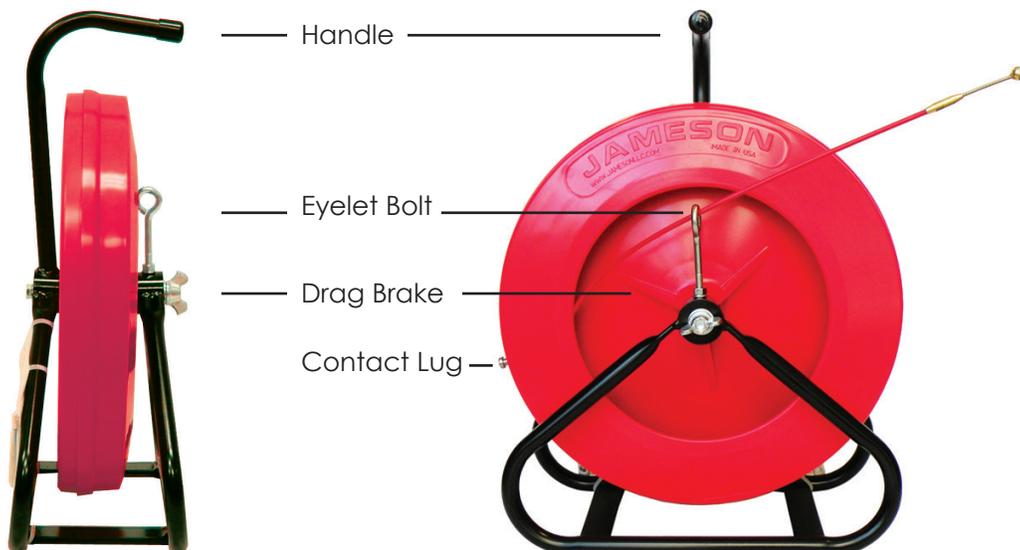
### Accessory Kit (Included)

<u>Qty</u>	
1	Flexible Leader with Ball Tip
1	End Ferrule
1	Splice Ferrule
2	Adhesive
2	Emery Cloth
1	Shrink Tube
1	Canvas Storage Pouch (Mounts On Reel)

## Mini Duct Hunter Operation

1. Operates in upright or horizontal position. If used in horizontal position, safety roller guides and brake control handle should be on top side.
2. Set drag brake to highest amount of drag.
3. Insert end of fiberglass rod through eyelet bolt to safely contain rod while working with it.
4. Release pressure on drag brake handle so rod will slowly payout from canister.
5. Brake may be set for constant drag on payout of rod. The constant drag makes one-man operation possible. Fully tightening brake handle stops payout of rod. For constant drag and controlled payout, set brake handle where canister turns only as you pull out rod.
6. Ensure end of duct rod is tightly attached to canister.
7. Pay out rod into underground facility. Lock brake handle.
8. Attach signal output lead from your transmitter to contact lug on outside of canister. Attach ground lead to desired ground mechanism.
9. Follow your transmitter's operating instructions to apply the desired signal frequency to the rod.\*
10. Use your receiver to trace the path of the rod following the instructions of your receiver.
11. If further rod payout is required, detach transmitter output lead, loosen drag brake and pay out more rod. Lock brake handle and re-attach transmitter output lead.
12. When recoiling rod, detach transmitter lead, loosen drag brake and push rod back onto canister.

\* Always follow manufacturer's instructions and precautions when using transmitter and receiver. Jameson is not responsible for damage or injury as a result of improper use of transmitter or receiver.



## Splicing Rod Or Attaching New End Ferrule

1. Cut away damaged section(s) of rod with a fine-tooth hacksaw, cable cutter or sharp knife. With pipe cutter and/or sharp knife, strip red protective jacket back from fiberglass core (see table below).

**Do not cut fiberglass core when stripping jacket. Do not crush fiberglass core.**

2. Once jacket is removed, use knife or hacksaw again to score a mark around fiberglass core to expose wire (see table below). Use sharp knife to carefully strip away fiberglass core closest to rod end to expose copper wire. Be careful not to damage wire. A portion of rod closest to jacket will remain intact (Fig.1)

Rod Diameter	Strip Jacket	Core Exposed	Wire Exposed
1/8" Mini Duct Hunter	1.5"	.75"	.75"
3/16" Mini Duct Hunter	1.25"	.625"	.625"

3. Using sharp knife, strip away flat spot on remaining exposed fiberglass core approximately as deep as wire diameter. Cut exposed wire length according to above chart and lightly strip away thin coating on copper wire. Fold wire back along flat spot in fiberglass core (Fig. 2).

4. Attempt a test fit of replacement ferrule over exposed fiberglass core with wire folded back. It should be firm and snug with little or no play to assure wire contacts inside of ferrule. If too loose, cut away rod end and repeat Steps 1-4.

5. Once proper fit is established, install end ferrule without adhesive and check for continuity of internal copper wire using digital multimeter. Touch probe to end ferrule at each end of coiled rod. Any resistance reading (generally between 2-12 ohms) indicates proper continuity.

6. Remove end ferrule. Clean rod end and ferrule with cleaning solvent or alcohol to remove debris and glass fibers. Allow solvent to completely evaporate. Step 6 is extremely important.

7. Mix and apply adhesive to entire surface of fiberglass core. Insert rod into ferrule as far as possible, enclosing end of red jacket in counterbore of ferrule. Wipe away excess adhesive.

8. Check rod again for continuity using digital multimeter. Adhesive will not set for 20 minutes. If no continuity, remove ferrule, clean off adhesive and repeat steps 1-7.

**Splicing:** Follow steps 1-8 for both ends of rod being spliced. Use splice ferrule. Before inserting prepared rod ends into splice ferrule, slide piece of heat shrink tubing over one rod end and move it along rod out of way.

Once a proper splice is obtained, wait at least 20 minutes for adhesive to set. Move heat shrink tubing over splice ferrule so it is completely covered. Use heat gun or blow torch to carefully shrink tubing, starting in center and working toward each end. Wipe away any adhesive that oozes from the heat shrink tubing.

**Repaired or spliced rod should be allowed to cure 24 hours prior to use.**

### ⚠ WARNING

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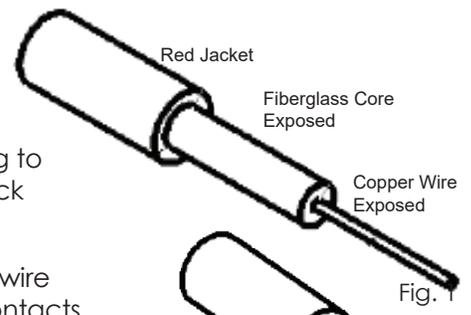



Fig. 1

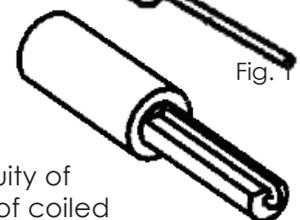


Fig. 2



End Ferrule Repair



Splice Repair

