

## Installation Overview

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### Overview

This chapter presents cable preparation and installation procedures for coaxial cables. Many connectors and special-purpose installation tools required for these cables are available from Modicon.

Modicon provides a common family of compatible connectors for RG-6 and RG-11 cables. A set of installation procedures has been established, with a common set-up procedure and separate finishing procedures for each type of connector used. Information is provided for semirigid cable preparation and installation and for fiber repeater installation.

### Related Documentation

See the *Modicon Fiber Optic Repeaters User's Guide*, part number GM-FIBR-OPT, for more detailed information.

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## RG-6 Cable Connections

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### Overview

Connectors available for RG-6 cable are:

Connector	Type	Cable Design	Crimp Size
MA-0329-001	F	Quad	.360
52-0487-000	BNC	Non-quad	.324
043509446	BNC	Quad	.360
52-0399-000	Self-terminating F	Non-quad	.324
52-0411-000	Self-terminating F	Quad	.360

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### Installation Tools

Tools required for RG-6 connectors are:

- Modicon 60-0558-000 Cable Cutters
- Modicon 490RIO00400 RG-6 Installation Tool with blade pack
- Modicon 60-0544-000 Crimp Tool for quad shield F connectors
- Modicon 043509432 Crimp Tool for BNC connectors
- A standard 7/16 in. open-end wrench

<p><b>Note:</b> If you purchase premade drop cables from Modicon, you may not need the Modicon RG-6 installation tool or the crimp tool for installation purposes, but we recommend that you have it for maintenance.</p>
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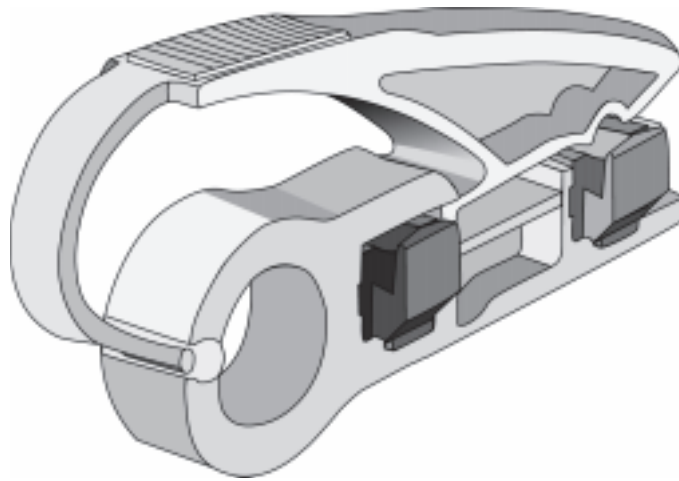
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## RG-6 Cable Installation Tool

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### RG-6 Cable Installation Tool

A Modicon 490RIO00400 RG-6 Installation Tool is used to strip RG-6 cable for installation of F connectors. There are two blades in an installation tool insert. The first is designed to cut through the cable to the center conductor, cutting away the jacket, the shields, and the dielectric. The second blade is designed to cut off only the jacket, leaving as much braid as possible under it.



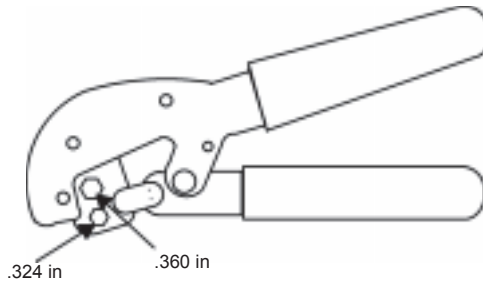
### Replacement Blade Packs

The blades on the RG-6 installation tool get dull after several hundred uses. A Modicon 490RIO00406 Replacement Blade Pack is available.

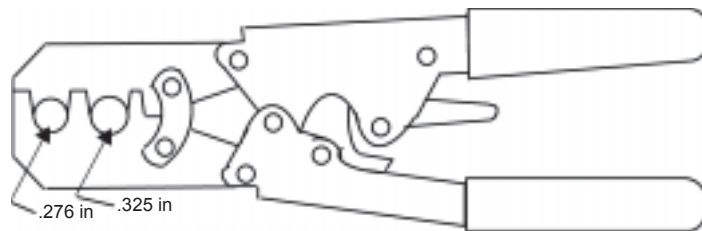
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**Crimp Tools**

The Modicon 60-0544-000 Crimp Tool is used to install the quad shield F connectors and self-terminating F adapters onto RG-6 cable. The tool makes two sizes of hex crimp: 0.324 in. and 0.360 in. Use 0.360 in. for the F Connector.



The Modicon 043509432 Crimp Tool is used to install BNC connectors onto RG-6 cable. The tool makes two sizes of hex crimp: 0.276 in. and 0.325 in. Consult Sales, available by special order only.

**Cable Cutters**

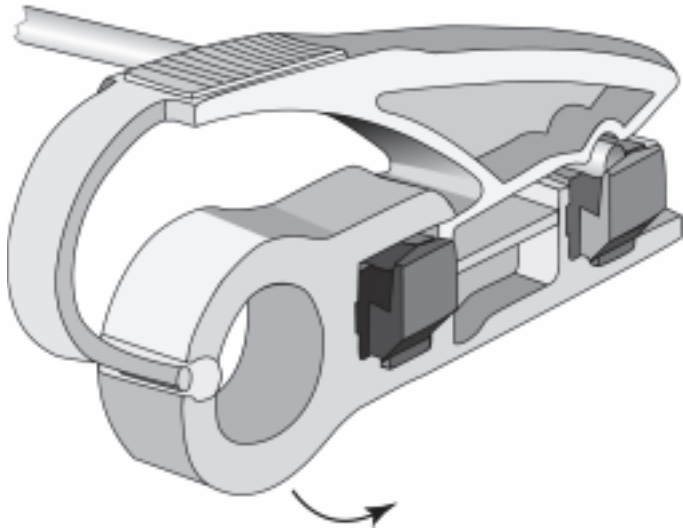
Modicon 60-0558-000 Cable Cutters are used to cut cable without compressing it. The cable cutters have a high leverage handle and rounded cutting edges. Cable cut with normal flat diagonal cutters will flatten, and this will alter the cable's impedance.





## Preparing RG-6 Cable for a Connector

### How to Prepare an RG-6 Cable for a Connector

The following procedure shows you how to prepare the RG-6 cable for a connector.

Step	Action
1	<p>Cut the cable squarely across the end with the 60-0558-000 Cable Cutters. Open the jaws of the 490RIO00A400 RG-6 Installation Tool and set the cable in the trough with the cable end placed against the stop.</p> 
2	<p>Release the handle and let the spring hold the tool on the cable. Rotate the stripper with your index finger on the handle until the tool turns freely. Let the spring provide the cutting pressure.</p> <p>Note: Adjust the number of rotations so that the second blade cuts as little of the braid as possible. When the crackling noise stops, the first blade has cut through the shields.</p>
3	<p>If the cable is not fully stripped, you may squeeze the jaws of the tool together with your thumb and forefinger. Using light pressure, make one or two revolutions of the tool around the cable until the tool cuts through the cable jacket.</p>

Step	Action
4	<p data-bbox="576 499 1347 618">Open the jaws and remove the cable. Twist off the cable dielectric and jacket by hand. Remove any long braid strands remaining around the prepared cable end. (Long braid strands may indicate that a new blade pack is needed.) Remove any dielectric on the exposed center conductor.</p>  <p data-bbox="592 629 1098 741">A technical drawing of a cable end. The cable is shown in a perspective view. The outer jacket has been removed, and the braided shield is twisted. A dimension line indicates a length of 1/4 inch for the twisted shield. Another dimension line indicates a length of 1/4 inch for the exposed center conductor.</p>
5	<p data-bbox="576 752 1347 786">Fold all of the braid over the jacket. Avoid tearing the inner cable foil.</p> <p data-bbox="770 792 986 815">Braid Folded Over Jacket</p>  <p data-bbox="576 936 1347 996">Once this cable preparation procedure is completed, you are ready to install RG-6 connectors and/or adapters on the cable.</p>

## Installing F Connectors on Quad Shield RG-6 Cable

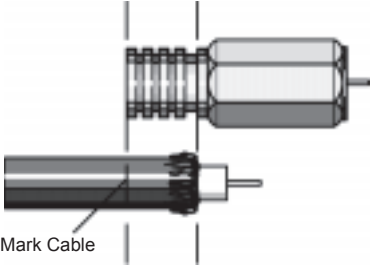
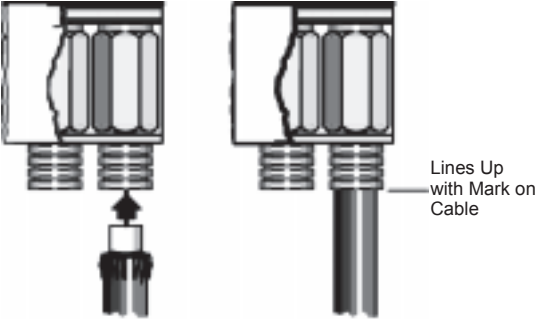
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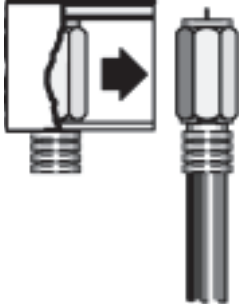
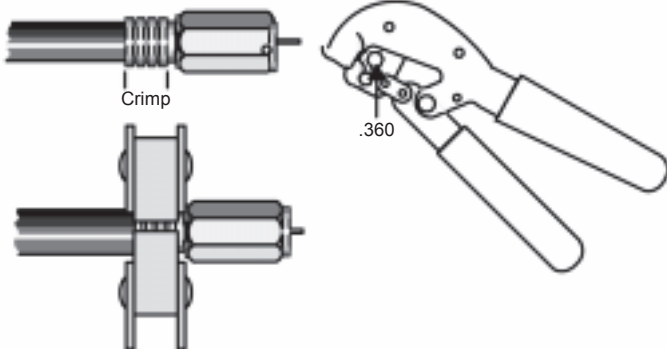
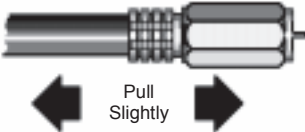
The following steps describe how to install F connectors on quad shield RG-6 cable.

**Note:** Use an F Connector from an MA-0329-001 Cassette on an RG-6 quad shield cable prepared according to the procedure described in *Preparing RG-6 Cable for a Connector*, p. 100.

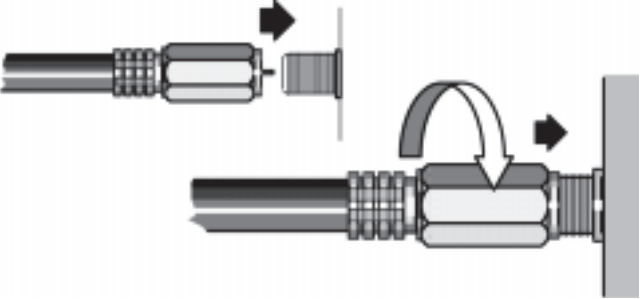
### Installing F Connectors

The following steps demonstrate how to install F connectors.

Step	Action
1	<p>Place the cable against the side of an F connector, aligning the end of the jacket with the bottom of the crimp ring. Mark the cable jacket at the top of the crimp ring.</p> 
2	<p>Using a twisting motion, push the cable firmly into the end of the F connector in the MA-0329-001 Cassette until the cable mark lines up with the end of the crimp ring.</p> 

Step	Action
3	<p data-bbox="576 499 1347 533">Remove the F connector by sliding it out the side of the cassette.</p> 
4	<p data-bbox="576 898 1347 931">Align the 60-0544-000 Crimp Tool on the F connector, and apply a .360 in crimp.</p> 
5	<p data-bbox="576 1305 1347 1361">Pull on the F connector to make sure that the crimp is snug—the connector should not fall off.</p> 



Step	Action
6	<p data-bbox="608 506 1361 562">Install the F connector onto the cable port of the RIO drop adapter, tap, or other cable hardware device using a 7/16 in. open-end wrench.</p>  <p data-bbox="608 891 986 916"><b>Note:</b> Finger tightening is not sufficient.</p>

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