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Oasis® Universal Cable & Adapter Kit Operator Manual

Part Number 70014

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					1GVT4																	
					TITLE		Oasis® Universal Cable & Adapter Kit															
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1. General Information

This **Oasis® Universal Cable & Adapter Kit** provides a convenient solution for most interconnection needs. A specially threaded adapter along with a selection of male and female BNC, TNC, N, SMA, RCA, F, UHF and Mini-UHF coaxial connector ends allows one to construct almost any adapter/cable required, both in-series and between-series. All the pieces are constructed of high quality materials including Teflon dielectrics and gold plated center contacts. Whether field or bench, this adapter kit provides an easy solution to unique coaxial adapter/cable requirements.

2. Kit Contents

2.1

Oasis® Universal Cable & Adapter Kit Includes	
10147-1	(2) 36 Inch Universal Cable Assemblies
10147-2	(2) 60 Inch Universal Cable Assemblies
10147-3	(2) 96 Inch Universal Cable Assemblies
PC818	(1) Universal Adapter Kit
PC819	(1) Rugged Case w/latch (Desert Sand)



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2.2 Kit Contents (cont'd)

Adapters	
Universal Adapter (pieces)	(4)
BNC (pieces)	(2) Male, (2) Female
F Type (pieces)	(2) Male, (2) Female
N Type (pieces)	(2) Male, (2) Female
RCA (pieces)	(2) Male, (2) Female
SMA (pieces)	(2) Male, (2) Female
TNC (pieces)	(2) Male, (2) Female
UHF (pieces)	(2) Male, (2) Female
Mini-UHF (pieces)	(2) Male, (2) Female
Double Banana Plug	1
Double Binding Post	1
Signal Sampler	1
Includes	Fitted Plastic Case



3. Electrical Specifications (Cables)

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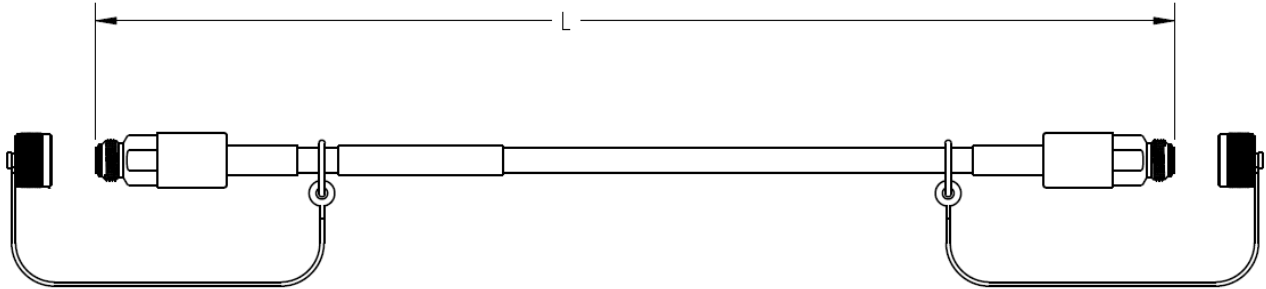
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Maximum Frequency : 4 GHz

Maximum VSWR @ 4 GHz when tested with two N Plug Adapters : 1.50:1

Maximum Insertion Loss @ 4 GHz: See Table I

3.1 Table I

Cable Part Number	Length "L"	Insertion Loss
10147-1	36 Inches	1.00 dB
10147-2	60 Inches	1.40 dB
10147-3	96 Inches	2.20 dB

Electrical Specifications (Adapters)

3.2

Max Frequency (GHz)	
Universal Adapter (pieces)	4.0
BNC (pieces)	4.0
F Type (pieces)	-
N Type (pieces)	4.0
RCA (pieces)	-
SMA (pieces)	4.0
TNC (pieces)	4.0
UHF (pieces)	.300
Mini-UHF (pieces)	2.0
Double Banana Plug	-
Double Binding Post	-
Signal Sampler	-

4. Mechanical Specifications

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MECHANICAL DATA	
Outer Diameter (Finished)	0.275 in nominal
Static (Dynamic) Bend Radius	0.50 in
Operating Temperature Range	-35 to +100 °C (-31 to 212 °F)

5. Visual Inspection

Visual inspection and, if necessary, cleaning should be done every time a connection is made. Metal particles from the connector threads may fall into the connector when it is disconnected. One connection made with a dirty or damaged connector can damage both connectors beyond repair. In some cases, magnification is necessary to see damage on a connector. Not all defects that are visible only under magnification will affect the electrical performance of the connector. Use the following guidelines when evaluating the integrity of a connector.

5.1 Look for Obvious Defects and Damage First

Examine the connectors first for obvious defects and damage: badly worn plating on the connector interface, deformed threads, or bent, broken, or misaligned center conductors.

CAUTION Adapters with damaged connectors should immediately be discarded or clearly marked and set aside for repair. A damaged adapter will in turn damage any good connector to which it is attached. Try to determine the cause of damage before connecting a new, undamaged connector in the same configuration.

5.2 Inspect the Mating Plane Surfaces

Flat contact between connectors at all points on their mating plane surfaces is required for a good connection. Look especially for deep scratches or dents, and for dirt and metal particles on the connector mating plane surfaces. Also look for signs of damage due to excessive or uneven wear or misalignment.

Light burnishing of the mating plane surfaces is normal, and is evident as light scratches or shallow circular marks distributed more or less uniformly over the mating plane surface. Other small defects and cosmetic imperfections are also normal. None of these affect electrical or mechanical performance.

If a connector shows deep scratches or dents, particles clinging to the mating plane surfaces, or uneven wear, clean and inspect it again.

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Adapters with damaged connectors should be discarded. Try to determine the cause of damage before connecting a new, undamaged connector in the same configuration.

5.3 What Causes Connector Wear

Connector wear eventually degrades performance. The more use a connector gets, the faster it wears and degrades. The wear is greatly accelerated when connectors are not kept clean, or are connected incorrectly. If a device's connectors show sign of wear, replace the device.

6. Maintenance and Care

6.1 Cleaning Connectors

Clean connectors are essential for ensuring the integrity of RF and microwave coaxial connections. Use the following procedure to clean the connectors in your kit:

6.1.1 Use Compressed Air

Use compressed air to loosen particles on the connector mating plane surfaces. Clean air cannot damage a connector, or leave particles or residues behind.

6.1.2 Clean the Connector Threads

Use a lint-free swab or cleaning cloth moistened with isopropyl alcohol to remove any dirt or stubborn contaminants on a connector that cannot be removed with compressed air .

- a. Apply a small amount of isopropyl alcohol to the lint-free cleaning swab.
- b. Clean the connector threads.
- c. Let the alcohol evaporate, then blow the threads dry with a gentle stream of clean, low-pressure compressed air.

6.1.3 Clean the Mating Plane Surfaces

Apply a small amount of isopropyl alcohol to a new swab and clean the center and outer conductor mating plane surfaces. When cleaning a female connector, avoid snagging the swab on the center conductor contact fingers by using short strokes.

6.1.4 Dry the Connector

After cleaning, blow the connector dry with a gentle stream of clean compressed air or nitrogen. Always completely dry a connector before you reassemble or use it.

6.1.5 Reinspect

Inspect the connector again to make sure that no particles or residue are present.

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7. Making Connections

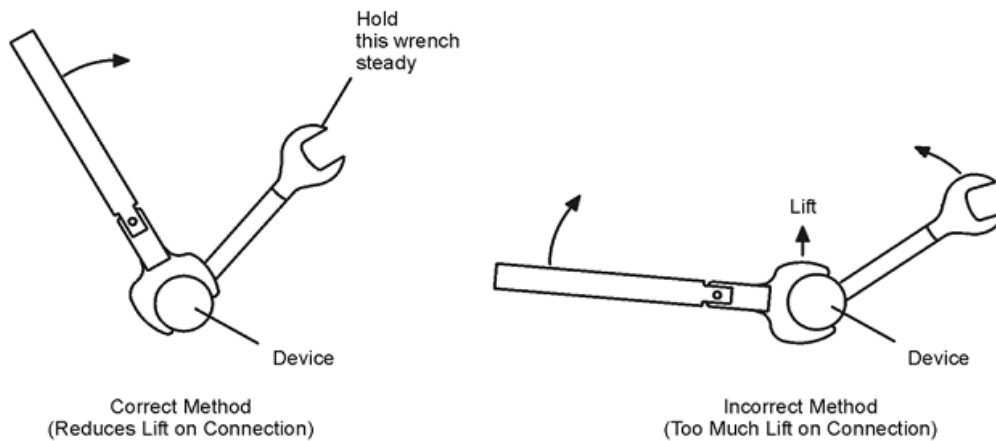
Carefully align the connectors. The male connector center pin must slip concentrically into the contact finger of the female connector. Push the connectors straight together and tighten finger-tight.

Prevent the rotation of anything other than the connector that you are tightening. It may be possible to do this by supporting the cable in your hand.

It is recommended that you use an open-end wrench to keep the body of the cable from turning so as to not torque the cable and cause damage. Place the other wrench on flats of device which you are assembling

Position both wrenches within 90 degrees of each other before applying force. See Figure below. Wrenches opposing each other (greater than 90 degrees apart) will cause a lifting action which can misalign and stress the connections of the devices involved. This is especially true when several devices are connected together.

Wrench Positions



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7.1 Final Connection Of Cable Assembly to Adapters Using a Torque Wrench

Use a torque wrench to make a final connection. The table below provides information about the torque wrench recommended for use with the kit.

Table

Torque Wrench Information	
Megaphase Part Number	Torque setting
BTW-12-562	12 in./lbs

7.2 How to Separate a Connection

To avoid lateral (bending) force on the connector mating plane surfaces, always support the devices and connections.

Use an open-end wrench to prevent the device body from turning

Complete the separation by hand, turning only the connecting nut.

Pull the connectors straight apart without twisting, rocking, or bending either of the connectors.

8. Handling and Storage

- Install the protective end caps and store the cables in the foam-lined storage case when not in use.
- Never store cables loose in a box, desk, or bench drawer. This is the most common cause of cable connector damage during storage.
- Keep cable connectors clean.
- Do not set cable connectors contact-end down on a hard surface. The plating and the mating plane surfaces can be damaged if the interface comes in contact with any hard surface.

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