

## VP101F VP to Cable Adapter



Figure 1. VP101F Adapter

### 1. Tools and Materials

These tools and materials are needed to attach an Anritsu V085 semi-rigid coaxial cable to the VP101F adapter. The V085 cable diameter is 2.16 mm, or 0.085 inches.

Name	Vendor and Model/Part Number
Resistance Soldering Unit, with tweezers	American Beauty Model 10501
Solder, 62% tin, 0.64 mm dia., rosin core	SN62 Kester Co.
Cleaning Fluid	Isopropyl Alcohol
Stereo Microscope .07-30X	Bausch & Lomb Stereo Zoom 4
Rosin Flux	#1544 Kester Co.
Cable Cutting Fixture	Anritsu 01-309

### 2. Fabrication Instructions

- Cut the cable to the length desired and deburr the ends. Refer to Figure 2 while performing the following steps.
- Using a 2.26 mm (0.089 in.) drill bit or gauge pin, wrap with solder to form two rings.
- Using an X-ACTO<sup>®</sup>-type knife or razor blade, initially score the cable back 3.81 mm (0.15 in.) from the end. Make the scoring deep enough to break the metal jacket

cleanly, without distortion or jagged edges.

- Remove the cable outer conductor.
- Deburr the outer conductor end using care to avoid damaging or distorting the Teflon<sup>®</sup> dielectric.
- Insert the cable into position 1 of the 01-309 fixture until the outer conductor bottoms in the hole and the Teflon dielectric is protruding from the back of the fixture. Using X-ACTO-type knife or razor blade, cut the Teflon dielectric flush with the fixture. Do not score the center conductor. After cutting, the Teflon dielectric should protrude 0.13 mm from the outer conductor.
- Insert the cable into position 2 of the 01-309 fixture until the outer conductor bottoms in the hole and the center conductor is protruding from the back of the fixture. Using the cutting tool, cut the center conductor flush with the fixture. After cutting, the center conductor should protrude 1.40 mm from the outer conductor as shown in Figure 2.
- Tin the cable center conductor with SN62 solder and flux the end of the coax outer conductor. Set the resistance soldering iron to #1 and, with the soldering tweezers, grasp the center pin and heat the center pin. Slip the VP101F center pin onto the center conductor and position it adjacent to the Teflon face.

Do not grasp onto the fingers of the center pin.

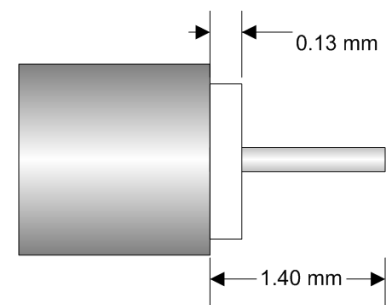


Figure 2. Cable Preparation

- Using an X-ACTO-type knife or razor blade, carefully remove the Teflon dielectric behind the center pin flush with the outer conductor (Figure 3). Do not score the center conductor.

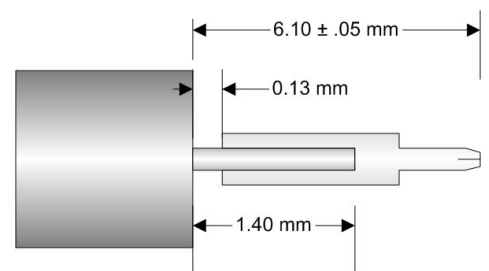


Figure 3. Cable End with Center Conductor

- Slide the two previously prepared solder rings onto the cable.

### **CAUTION**

- k. Place the connector outer conductor onto the cable and slide the solder rings against the back side of the connector.
  - l. Set the soldering unit to 4.
  - m. With the soldering tweezers, grasp the smallest O.D. of the outer conductor.
  - n. Heat the assembly and, at same time, apply pressure to the outer conductor to ensure a snug fit with the cable.
  - o. Avoid getting solder on the outer face of connector.
- Excessive heat can cause the Teflon dielectric to shrink below acceptable levels. Use care to heat the solder only until it starts flowing.
- p. Clean the end of the cable with a solvent-dampened swab to remove any flux residue and oils due to handling.
  - q. Place the cable assembly in a 55°C oven for 30 minutes to ensure complete evaporation of the solvent.