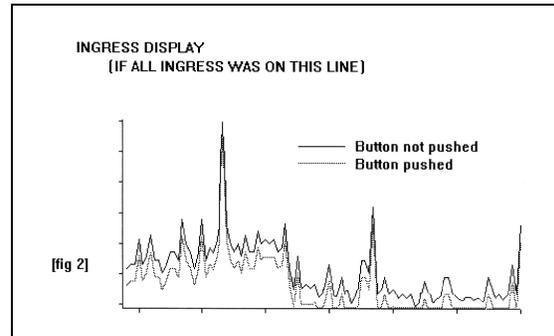
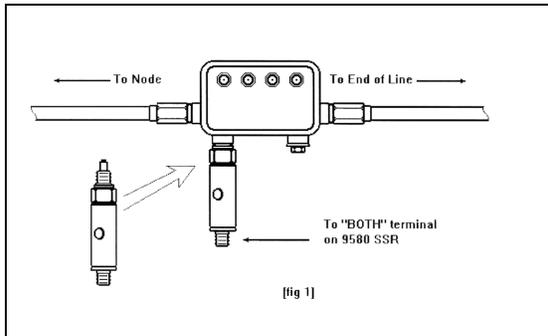


Using the Guardian I-Stop Reverse Test Probe to Locate the Source of Ingress



The I-Stop Reverse Test Probe is an accessory for the 860 DSPi Multifunction Cable Analyzer, which simplifies the location of reverse ingress sources. Just screw the probe into a KS port on a distribution tap, connect your 860 DSP to the handy -20 dB test port, and press the button on the I-Stop Probe: The DSP's display shows you the ingress sources down to the tap without removing reverse modules or diplexers and without disrupting forward or reverse service. To prevent overloading caused by the forward signal levels present, it is recommended that you use a Return Measurement Lowpass Filter (TLB-6).

How it works:

The I-Stop probe is used with the 860 DSP. The DSP is a field instrument that works with a 9581 SST Headend Unit mounted in the Hub; together, the SST and DSP are a system used to balance return amplifiers and hunt for sources of ingress. The ingress spectra displayed by the DSP are transmitted to it by the SST and show the amount of ingress arriving from a given node's service area. If an outbreak occurs, the operator uses the I-Stop probe and the 860 DSP Field Unit to find where in that node's service area the ingress is entering the system.

The I-Stop contains two assemblies, a -20 dB "SPD-20" type test point adapter usable from 5-870 MHz: and a frequency-limited termination that is impressed across the CATV line when the I-Stop's button is depressed. The termination is preceded by a "half-diplexer" so that the effect of the termination is limited to return band frequencies.

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When the I-Stop probe and 860 DSP are connected to the tap as shown in Fig 1, the display of the DSP might look like the example in Fig 2. When the button on the I-Stop probe is then pressed, the terminator loads down the return path and decreases the gain in that path by 4-6 dB. (This range of values was chosen to allow a clearly visible response on the DSP's display while not attenuating the return path enough to interrupt service.) Whether a change occurs in the DSP's ingress display when the button is depressed depends on whether the ingress source is closer to, or farther from the node, than the tap that it is connected to:

- If the source is farther from the node, and on this distribution line, the ingress signal will be flowing through the tap to which the probe is connected. When the button is pressed, the ingress will decrease by 4-6 dB, as measured by the 9581 SST connected in the Hub, which transmits the ingress display to the DSP. The operator would observe that the ingress decreases when the I-Stop's button is pushed and knows that its source is farther out on this distribution line.
- If the ingress is entering the distribution system through another line, or is closer to the node on this line, the ingress will not be flowing through the tap, so pressing the button will have no effect on the ingress spectra measured by the 9581 SST in the Hub and transmitted to the Operator's 860 DSP. Because the DSP's display does not change when the probe's button is pressed, the operator knows the ingress source is either closer to the node or on another line.

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