Test Equipment Depot
1-800-517-8431

99 Washington Street
Melrose, MA 02176
Phone 781-665-1400
Toll Free 1-800-517-8431

Visit us at www.TestEquipmentDepot.com

SmartID™
Advanced Coax Probes

Applications

- Home coax network RF-transmission performance certification

- Coax physical-layer readiness evaluation for all services, including MoCA

- Theft detection such as finding splitters connecting neighbors

Key Benefits

- Cut repeat service calls by enabling quick and comprehensive coax home-network testing

- Verify readiness for advanced home-network technologies (MoCA®) with no customer-premises equipment (CPE) required

- Eliminate unproductive troubleshooting, guesswork, and unnecessary CPE replacement

- Speed home certification by testing the whole coax network at one time

Home-networked applications are evolving quickly, yet the home network itself often remains unchanged. Coax handles many new technologies well, but it is subject to faulty components, wear, poor craftsmanship, and amateurish modifications. Troubleshooting these problems can be especially difficult and time consuming when the installation or service tech can't adequately test and troubleshoot the network, and this typically leads to repeat truck rolls. Fortunately, SmartID advanced coax probes comprehensively test the home network and minimize installation and service times and equipment costs.

The SmartID test mode is a standard feature in DSAM Digital Service Activation Meter XT version firmware (v 4.0 and higher), enabling sophisticated measurement data analysis (with SmartID probes). The SmartID test quickly displays and certifies subscriber coax topology and identifies and locates physical-layer impairments that affect both triple-play and multiroom DVR (MoCA) services.

When services are disrupted, technicians spend most of their allocated time reworking coax elements. Until now, even experienced technicians spent hours trying to identify the root causes of video, voice, data, and multiroom DVR impairments and without practical, comprehensive testing, the technician often left the home without knowing that there were other issues. And, accessibility to much of a home coax network is limited, increasing the troubleshooting challenge. SmartID probes let technicians of any skill level determine which coax legs are connected and they show unexpected, hidden splitters and house amplifiers. The SmartID shows a technician every connected component, resulting in less guesswork and more-efficient problem solving.
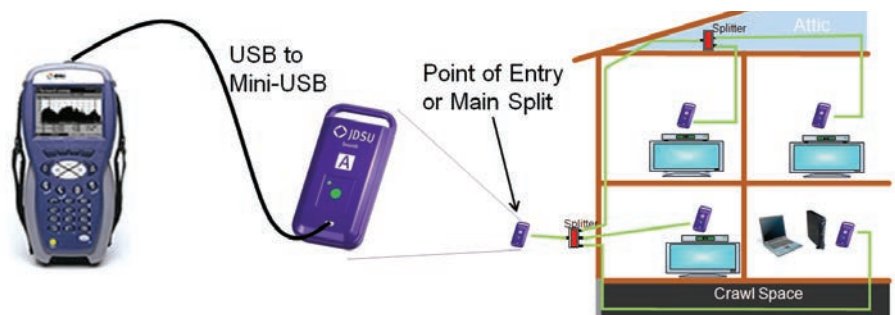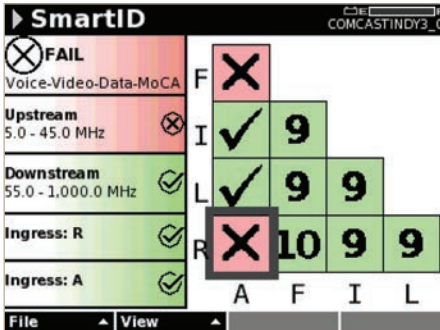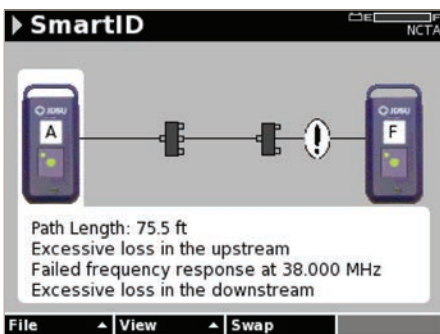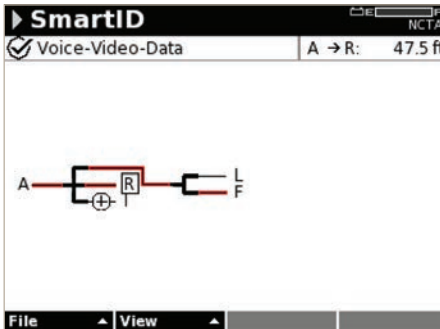
Testing with a SmartID probe at each outlet, set-top box (STB), embedded multimedia terminal adapter [eMTA], and cable modem lets a technician verify that each coax path can handle all planned services. The probes validate all connected locations from the point-of-entry to the subscriber's equipment location for triple-play services as well as STB-to-STB locations for multiroom DVR services.

The SmartID system saves troubleshooting time by showing technicians impairment locations immediately. Technicians don't have to repeatedly segment the network, make a change, and then retest. Often, when technicians determine that a drop cable is faulty, they simply replace it when it could be easily fixed. Time and money wasted to re-run, bury, or hang a new drop adds up quickly. SmartID lets technicians know whether they can quickly fix the drop or if they indeed need to replace it with a new one.

Subscriber services evolve, technologies such as DOCSIS® and MoCA change, and bit rates increase; however, the coax remains the same. Focusing on fixing service-impacting physical issues guarantees that the coax performs regardless of changing technology versions. For example, customer self-installation for new services can be deployed with greater confidence knowing that the home wiring has been tested with SmartID.

Each probe generates signals and measures within a 5 to 1,650 MHz frequency range. When technicians test the MoCA frequency range, a DSAM provides a JDSU-exclusive MoCA Quality Index (MQI) indicating 1 (low) to 10 (high) estimated throughput. The DSAM displays an easy-to-read quality matrix that lets a technician quickly find any outlet with impaired transmission performance. Drilling down, the technician can determine exactly how far the impairment is from the outlet, simplifying and speeding the process of locating and fixing the problem. Probes are available in kits that enable complete RF network transmission characterization in most home networks. The kit lets a technician test the whole home network in one test that typically takes less than 2 minutes.

3

Specifications

Max transmit level	50 dBmV
Min receive level	-10 dBmV
Max number of connected Smart IDs	16
Frequency range	5 - 1650 MHz
Minimum frequency step size	100 KHz
Upstream frequency steps	250 KHz
MoCA frequency steps	195 KHz
Downstream frequency steps	5 MHz
Length resolution	0.5 ft
Battery types supported	AA alkaline
	AA lithium (recommended)
Battery life (typical)	Alkaline: 500-700 Test Cycles
	Lithium: 1000-1500 Test Cycles
Connectors	1 Mini USB
	1 F-type coax

Test times (typical)	30 seconds with 2 SmartIDs
	45 seconds with 3 SmartIDs
	60 seconds with 4 SmartIDs
	75 seconds with 5 SmartIDs
	90 seconds with 6 SmartIDs
Discoverable coax elements	Faults
	House amplifiers
	Filters
	Splitters
Resolution of coax elements	~2 ft
Maximum length	300 ft
Max sweep attenuation	60 dB
Max FDR attenuation	25 dB
Coax cable types supported	RG59
	RG6
	Custom VOP
Sweep response error	< +/- 2.5 dB typical

MQI	Estimated throughput (Mbps)	MQI
	Less than 100	0
	100 to 120	1
	120 to 140	2
	140 to 160	3
	160 to 180	4
	180 to 192	5
	192 to 204	6
	204 to 216	7
	216 to 228	8
	228 to 240	9
	240 or higher	10