

8300 FST

Forward Speed Sweep Transmitter

- Forward SpeedSweep Transmitter
- Fast Sweep Update, Even with High Concentration of Digital Channels
- Measures Active System Carriers Plus Injected Sweep to Obtain High Sweep Frequency Resolution, Especially Digital Carriers
- Complete Plant Maintenance Solution for 860 Field Analyzers
- Comprehensive Best-in-Class Measurement Functionality in a Sweep-Capable Meter



The 8300 FST™ Forward SpeedSweep Transmitter is an essential part of the system for comprehensive sweep capability in the 860 DSPi™ field analyzer family.

The instrument is rack-mounted in the head-end, and generates a sweep that steps around system carriers to avoid interference, filling in vacant spectrum areas for a complete view of the network frequency response. The 860 DSPi (with FS-1 option) receives the sweep, and based on the measured sweep and system carrier levels, plots the frequency response. The response is compared to a stored reference to provide a difference display. With the goal of the network design being unity gain from amplifier output to amplifier output, the ideal response will be as flat as possible. The sweep test provides a measure of the RF transmission characteristics of the network between the transmitter and the receiver, and is used as a day-to-day maintenance tool for the RF portion of the HFC network.

Trilithic's SpeedSweep solution includes:

- The 8300 FST that generates a sweep stimulus for the downstream measurement.
- The 860 DSPi with a sweep option (FS-1) that receives the forward sweep and transmits reverse sweep signals for upstream measurements.
- The 8310 RSA™ receives a high resolution sweep generated by the 860 DSPi in the field and relays the information back to the analyzer for a return band frequency response display.

The 8300 FST generates a sweep that is received by an 860 DSPi (with FS-1 option). This option enables the technician to test both forward and return frequency response. The transmitter is considered an essential tool for plant maintenance.

The transmitter is located in the headend, and combined with other network signals. The technician establishes a test normalization reference response at the node or at a sweep test point in the head-end after the combining network, designed to match levels at amplifier/node output test points.

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SPECIFICATIONS

RF Specifications

Frequency Range	47 to 1,000 MHz; 250 kHz resolution
RF Output Level	Rear panel adjustment, 46 dBmV to 58 dBmV (typical)
Accuracy/Stability	±5 kHz
Spurious Output	>60 dB (typical)
Out-of-Band C/N Ratio	>80 dB

External Features

Front Panel Controls	Reset button
Front Panel LEDs	RF on, power/error
Rear Panel Connectors, Controls	F-type connectors for RF output / RF test point Serial data connector for setup RJ-45 Ethernet connector RF output level control

General

Power Supply	Universal 90 VAC to 240 VAC, 50 to 60 Hz with IEC 320 power connector
Power Consumption	<30 Watts
Physical Size (H x W x D)	1.75" x 19" x 12" (44mm x 483mm x 305mm) 1U rack mount
Weight	10 lbs (4536 g)

US UNITS INCLUDE THE FOLLOWING:

Rack-mounted 6 MHz Forward SpeedSweep Transmitter
P/N 2011072001

User's manual

90 to 240 VAC US power cable with internal power supply

EUROPEAN UNITS INCLUDE THE FOLLOWING:

Rack-mounted 8 Mhz Forward SpeedSweep Transmitter
P/N 2011072102

User's manual

90 to 240 VAC US and Euro power cables with external AC to DC power adapter