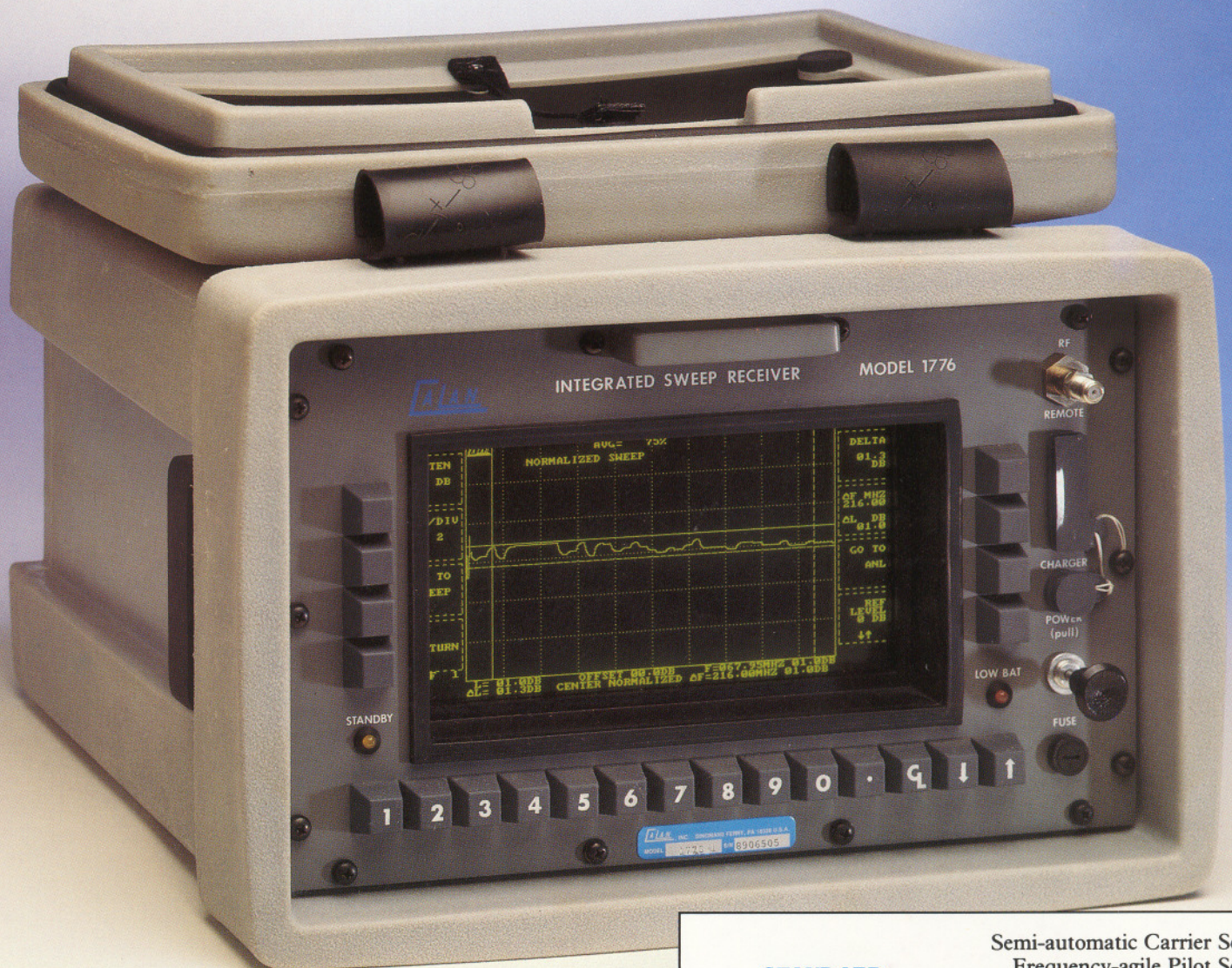


Today's
Solution
for
CATV

CALAN's 1776/1777 Integrated Sweep/Spectrum Analyzer Systems

- The *only* synchronized receiver/transmitter with built-in spectrum analysis.
- True sweep response and distortion measurement.
- With *no* interference on the home receiver or the data carriers!

Today's
Solution
for
LAN



**STANDARD
FUNCTIONS
MODEL 1776/1777**

Semi-automatic Carrier Selection
Frequency-agile Pilot Selection
2nd/3rd Order/Composite Triple Beat
Internal 20 dB Pre-Amplifier
Independent Carrier Analysis
Internal Calibration

CALAN: The Company of Choice for CATV and LAN Systems

Proven Reliability

Only one company has specialized in sweep systems for CATV and LAN operations. Pioneers in sweep technology, we know what you need to do the job right. And, CALAN systems are built to last!

Customer Responsiveness

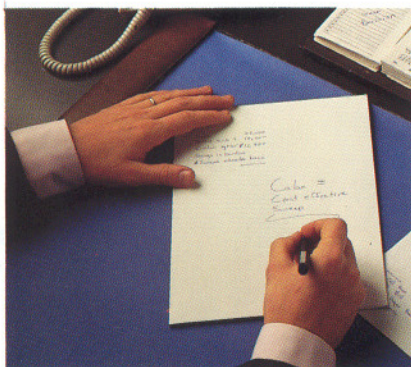
As an integral part of your industry, CALAN never leaves you out there

hanging. If you've got a problem, we help you solve it. If our equipment goes down, we fix it. . .fast!

Continuous Upgrades

One thing you can count on: We'll never rest on our laurels. The CALAN product line is in a never-ending state of improvement. . .and all upgrades are available to you—sometimes at no cost, others at a nominal charge.

One such upgrade enables users to significantly increase productivity and flexibility. The FS-80 File Server memory enhancement provides for up to 80 trace files, 18 reference files, and 4 setup tables to be stored in memory. FS-80 also allows 2-way RS-232C communications with a DOS-compatible PC and permits downloading of stored material to a PC for analysis or printing.



For the Management Person in You:

In CATV operations, picture problems mean lots of things; all of them bad. Unhappy subscribers; phone lines jammed with complaints. Service cancellations and vindictive late-payers; lost revenues. Pass-bys instead of hook-ups. Trouble-shooting and repair; lost time and money. You know the drill.

And in LAN operations, when the Local Area Network goes down, everyone suffers. With network communications severed, the company loses valuable time and money until it's back up.

In either case, signal delivery problems mean higher costs and increased frustration for you!

The solution is tomorrow's technology built into today's CALAN 1776/1777 Sweep/Spectrum Analyzer System. . . integrated into a rugged, super-reliable and interference-free system that helps you provide superior service and hold the line on costs!



For the Technical Person in You:

The quality and quantity of technical information you receive is critical. One integrated sweep/spectrum analyzer system provides the true sweep response and distortion measurements you need . . .without interference to video and data. Its name is CALAN.

All the inherent operational and technical problems of separate sweep and spectrum analysis units are eliminated. The calibrated frequency response testing in CALAN's integrated system provides total operating flexibility. Resolution is significantly higher than the traditional 'high-level' sweep, and measurement is interference-free to all carriers on the system.

CALAN's approach provides programmable control of the inserted sweep, enabling the operator to protect vulnerable areas of the spectrum from interference. The system compares field levels with a stored reference trace, and measurements are integrated by combining portions of the inserted sweep with the cable or LAN system's carriers. This assures highest possible resolution, zero broadband LAN interference, and no discernable interference on the home television set.



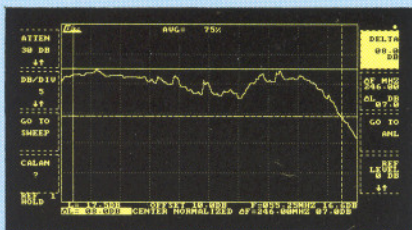
For the Operations Person in You:

If anyone in your organization knows how costly it is to have the wrong equipment for the job, it's you. At CALAN, we know it too, because we're engineers who have been part of this industry for over 20 years.

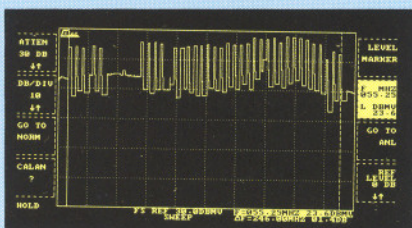
Simply stated, there isn't another system available that's built for your job the way CALAN's is—with a totally weather-sealed case, ruggedized overall construction, and moisture-sealed key covers. Inside, there's RF shielding, surface-mount technology and high-reliability components.

The result is a Sweep/Analyzer system you can use any time, any place. . .hot or cold weather; rainy or dry. You can be out there in the dead of winter, complete with work gloves, and still punch the buttons to get the readings. It's designed for where you work. And it's designed to make it easy for you to achieve the signal quality our industry demands.

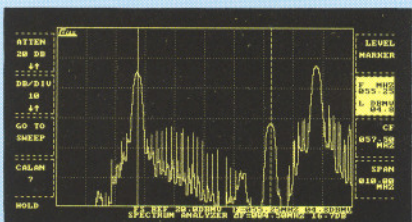
Hum Modulation
Cross Modulation
FM Deviation
Carrier-to-Noise
File Server Memory
Carrier Level



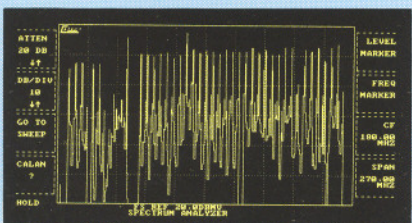
Typical normalized sweep display, with 1% smoothing.



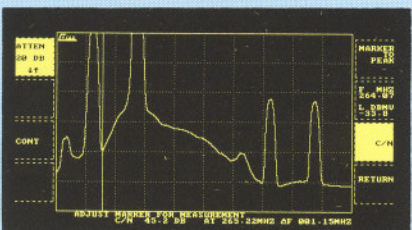
Typical raw sweep.



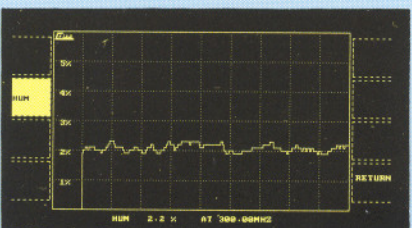
Single Channel Spectrum.



270 MHz Span Spectrum.



Auto Carrier to Noise.



Hum Modulation.

Menu-Driven Functions

All basic control functions on the Model 1776-1 are accessed through 'softkey' controls especially designed for field use, even when work gloves are worn.

For simplicity of operation and interpretation, all necessary controls appear on the screen next to the function. Frequencies are directly entered through a keypad, and additional controls consist only of 'up' and 'down' arrows.

File Server Memory-FS-10

The CALAN FS-10 File Server dramatically increases productivity and flexibility. Stored traces can be recalled and printed at the end of the day, eliminating the need to carry cameras or printers into the field. Using the stored references and tables also provides greater test flexibility.

The FS-10 stores 10 response traces, 4 reference traces, 1 sweep setup table, and provides a 40-character label capability for each stored record.

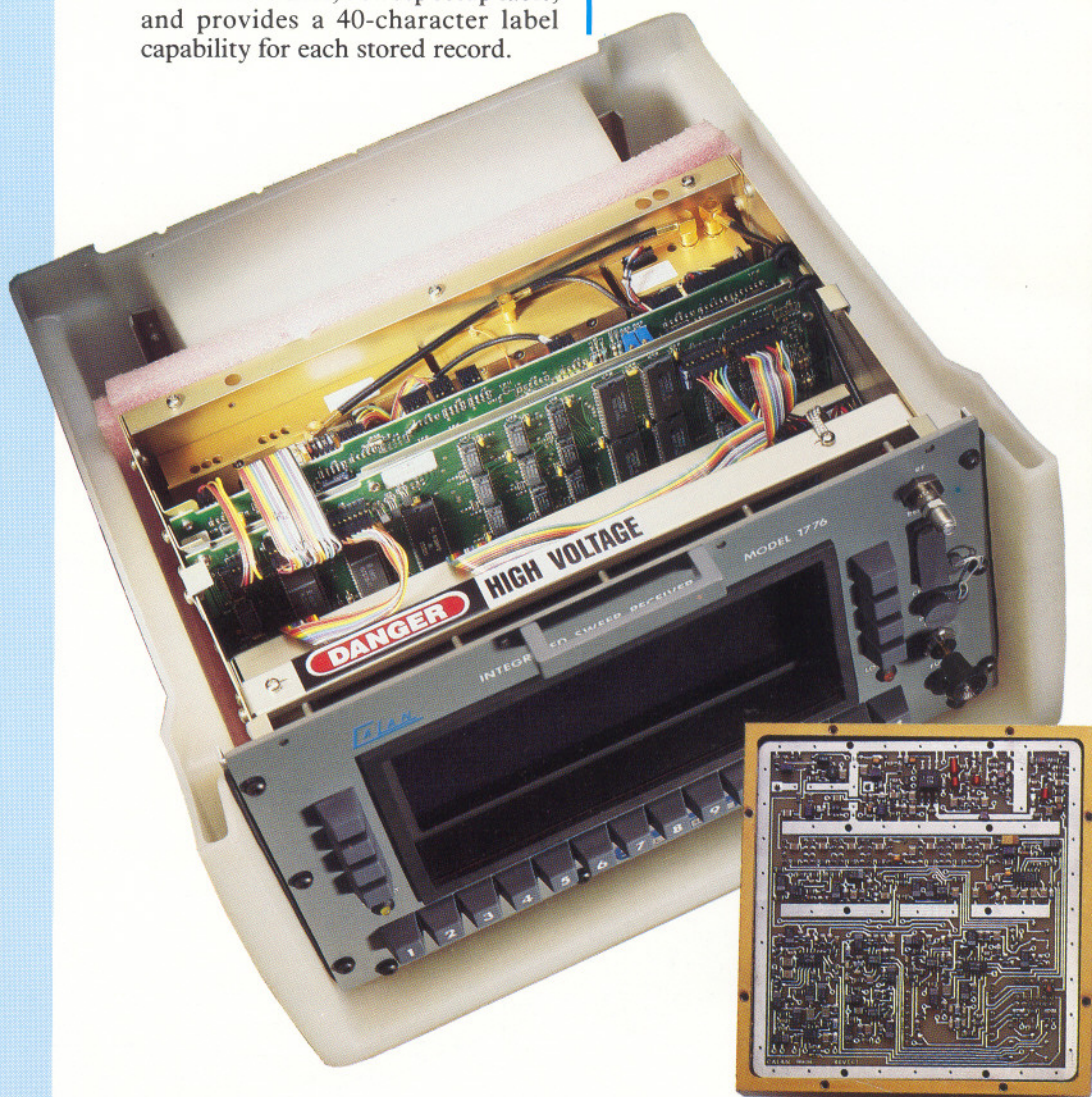
File Server Memory-FS-80

Optional FS-80 provides the same productivity and flexibility as the FS-10, with the addition of bidirectional RS-232C communications capability. By enabling interactive communications between the 1776/1777 and a PC, the user can download any stored data for subsequent review, analysis and printing.

The FS-80 stores 80 response traces, 18 reference traces, 4 sweep setup tables, and 40-character labels for each stored record.

Internal Calibration

CALAN's integrated system also incorporates an internal reference source for instantaneous system calibration. This assures level accuracy and provides full-screen log scale linearity across the display range.



CALAN INTEGRATED SWEEP/SPECTRUM ANALYZER SYSTEMS

Performance Specifications

MODEL 1776 INTEGRATED SWEEP RECEIVER/SPECTRUM ANALYZER

FREQUENCY—Range/Accuracy	5-600 MHz/ ± 25 kHz ¹
PILOT FREQUENCY—Range	5-600 MHz
FLATNESS—10 dB Attenuation	± 0.5 dB
LEVEL—Accuracy/Resolution	± 0.5 dB/0.1 dB
LOG ACCURACY	± 1.0 dB
ATTENUATOR ACCURACY	± 0.5 dB
SENSITIVITY	-60 to +60 dBmV
INTERNAL CALIBRATOR	
Frequency	97.5 MHz
Level	+20 dBmV
DISPLAY RANGE	60 dB
IMPEDANCE	75 Ohms
Input return loss	16 dB (min.)
NOISE FLOOR—RBW 30 kHz, VBW 10 Hz	-65 dBmV
SPURIOUS FREE DYNAMIC RANGE	-50 to +55 dBmV
IF BANDWIDTH	300 kHz/30 kHz
VERTICAL SCALE—Per Division	10, 5, 2, 1 dB
POWER	+12 to +15 VDC @ 1.3A
BATTERY	Rechargeable sealed, . . . lead/acid (6.5 AH)
	8 hrs. typical operation, 10 hrs. recharge
SWEEP WIDTHS	Continuously variable
ATTENUATION	70 dB max. in 10 dB steps (software controlled)
DISPLAY—Type/Color	Electro-luminescent/Yellow
Area	3.75" x 7.50"
Resolution	512 x 256
Faceplate	Anti-glare safety glass
SCREEN PRINT	Epson/IBM Compatible format
ENVIRONMENTAL—Non-operating	-20°C to +60°C
Operating (w/o degradation)	0°C to +50°C
SIZE	15" x 9.5" x 15"
WEIGHT (w/battery)	27.5 lbs.

CALAN FILE SERVER

FILE SERVER

FILE SERVER

	FS-10	FS-80
Number of Response Traces	10	80
Number of Reference Traces	4	18
Number of Sweep Setup Tables	1	4
Record Label Characters	40	40
RS-232C Communications	N/A	Yes