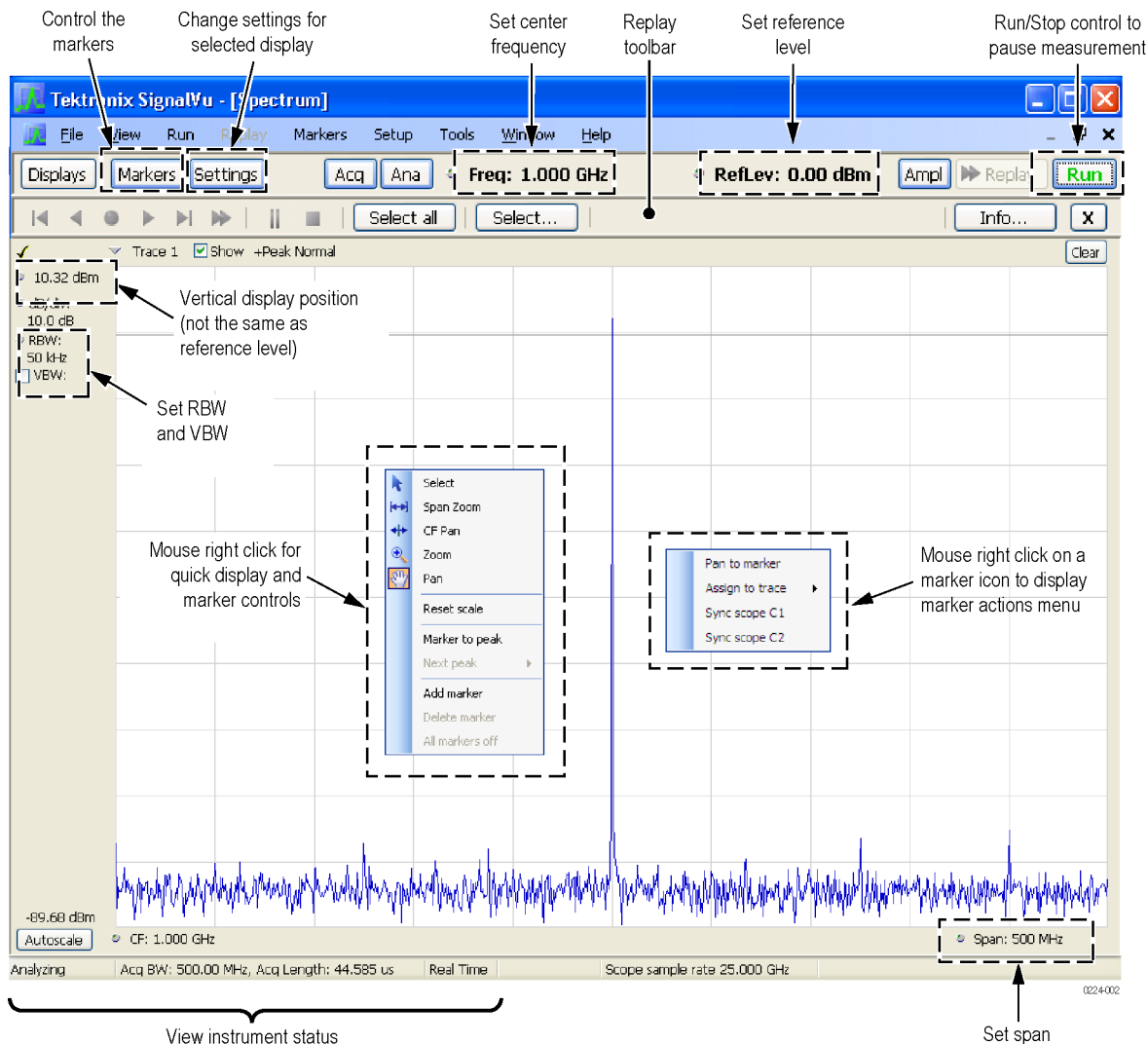# SignalVu Reference

Getting Started with SignalVu
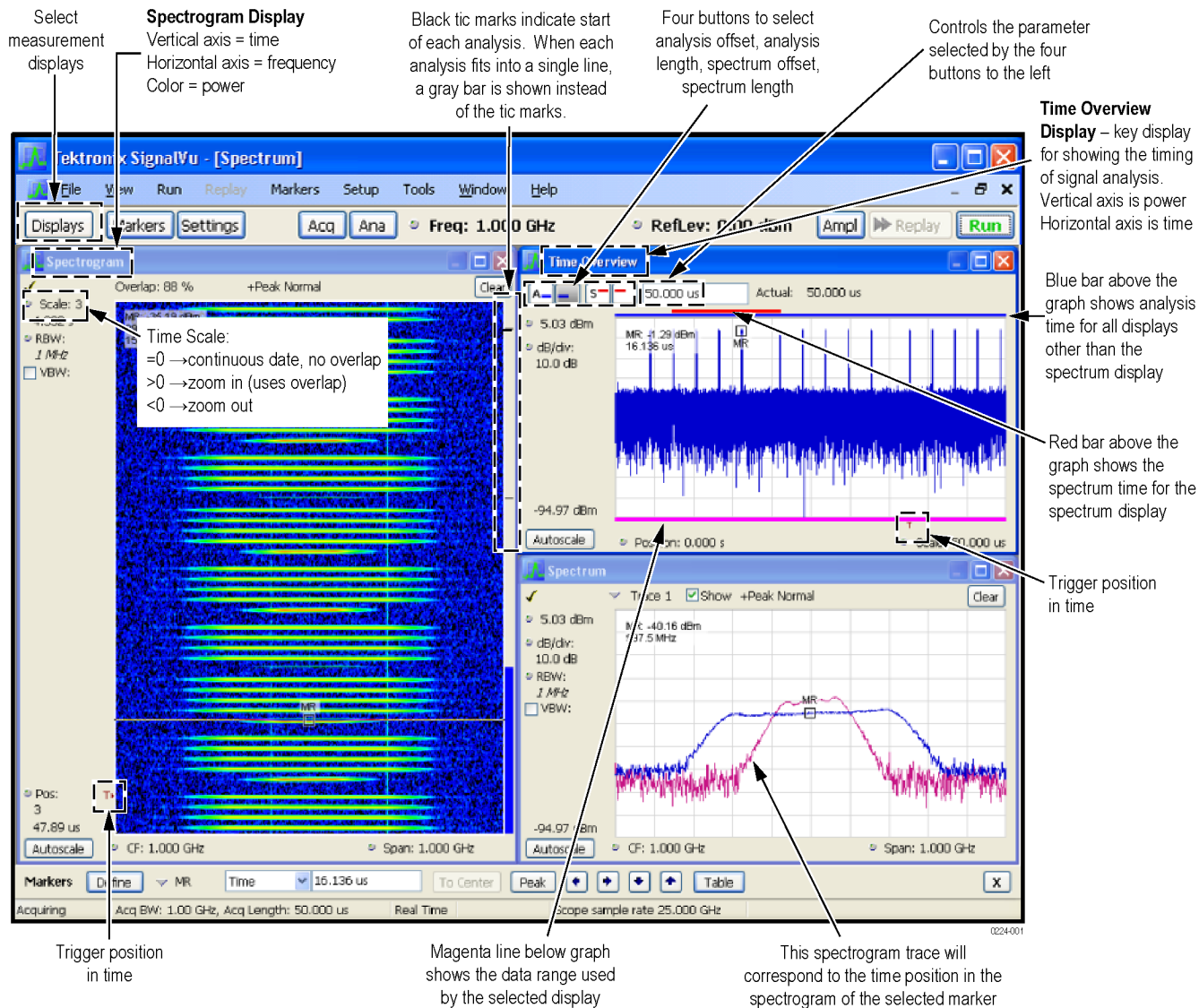
The SignalVu Vector Signal Analysis software transforms a digital oscilloscope into an analysis tool for measuring and analyzing RF signal behavior. The software is based on that used in the RSA6100A Series Real-Time Spectrum Analyzer.

NOTE. *For complete operating instructions, refer to the SignalVu online help.*

The following figure shows the spectrum display.

Tektronix

This figure shows the spectrogram, time overview, and spectrum displays.

Select measurement displays

Spectrogram Display
Vertical axis = time
Horizontal axis = frequency
Color = power

Black tic marks indicate start of each analysis. When each analysis fits into a single line, a gray bar is shown instead of the tic marks.

Four buttons to select analysis offset, analysis length, spectrum offset, spectrum length

Controls the parameter selected by the four buttons to the left

Time Overview Display – key display for showing the timing of signal analysis. Vertical axis is power Horizontal axis is time

Blue bar above the graph shows analysis time for all displays other than the spectrum display

Red bar above the graph shows the spectrum time for the spectrum display

Trigger position in time

Time Scale:
=0 →continuous date, no overlap
>0 →zoom in (uses overlap)
<0 →zoom out

Trigger position in time

Magenta line below graph shows the data range used by the selected display

This spectrogram trace will correspond to the time position in the spectrogram of the selected marker
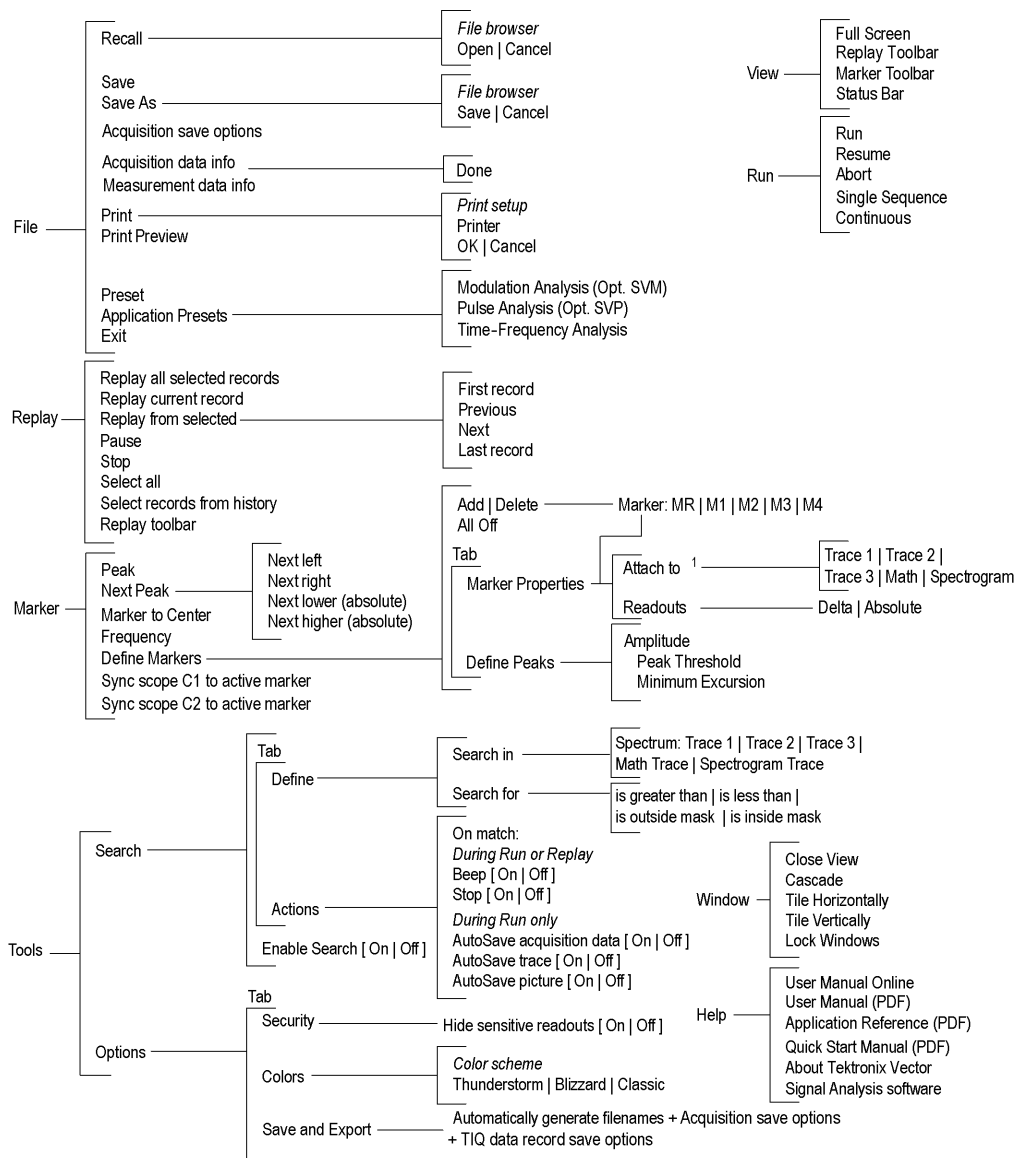
For up-to-date information on Tektronix oscilloscope solutions for SignalVu, access the www.tektronix.com/Measurement/scopes Web page.

SignalVu Ordering Information

This software runs on DPO7000, DPO/DSA70000, and MSO70000 Series oscilloscopes. Refer to the *Optional Applications Software on Windows-Based Oscilloscopes Installation Manual* for a complete list of supported models.

- Option SVE: SignalVu Essentials – Vector signal analysis software

- Option SVP: SignalVu Advanced Signal Analysis – Advanced signal analysis software (including pulse measurements); Requires Option SVE

- Option SVM: SignalVu General Purpose Modulation Analysis; Requires Option SVE

SignalVu Menu Tree – 1

File
- Recall — *File browser* — Open | Cancel
- Save
- Save As — *File browser* — Save | Cancel
- Acquisition save options
- Acquisition data info — Done
- Measurement data info
- Print — *Print setup* — Printer — OK | Cancel
- Print Preview
- Preset
- Application Presets — Modulation Analysis (Opt. SVM) | Pulse Analysis (Opt. SVP) | Time–Frequency Analysis
- Exit

View
- Full Screen
- Replay Toolbar
- Marker Toolbar
- Status Bar

Run
- Run
- Resume
- Abort
- Single Sequence
- Continuous

Replay
- Replay all selected records
- Replay current record
- Replay from selected — First record | Previous | Next | Last record
- Pause
- Stop
- Select all
- Select records from history
- Replay toolbar

Marker
- Peak
- Next Peak — Next left | Next right | Next lower (absolute) | Next higher (absolute)
- Marker to Center Frequency
- Define Markers
- Sync scope C1 to active marker
- Sync scope C2 to active marker

  - Add | Delete — Marker: MR | M1 | M2 | M3 | M4
  - All Off
  - Tab
    - Marker Properties
      - Attach to [1] — Trace 1 | Trace 2 | Trace 3 | Math | Spectrogram
      - Readouts — Delta | Absolute
    - Define Peaks — Amplitude / Peak Threshold / Minimum Excursion

Tools
- Search
  - Tab
    - Define
      - Search in — Spectrum: Trace 1 | Trace 2 | Trace 3 | Math Trace | Spectrogram Trace
      - Search for — is greater than | is less than | is outside mask | is inside mask
    - Actions
      - On match:
      - *During Run or Replay*
      - Beep [On | Off]
      - Stop [On | Off]
      - *During Run only*
      - AutoSave acquisition data [On | Off]
      - AutoSave trace [On | Off]
      - AutoSave picture [On | Off]
    - Enable Search [On | Off]
- Options
  - Tab
    - Security — Hide sensitive readouts [On | Off]
    - Colors — *Color scheme* — Thunderstorm | Blizzard | Classic
    - Save and Export — Automatically generate filenames + Acquisition save options + TIQ data record save options

Window
- Close View
- Cascade
- Tile Horizontally
- Tile Vertically
- Lock Windows

Help
- User Manual Online
- User Manual (PDF)
- Application Reference (PDF)
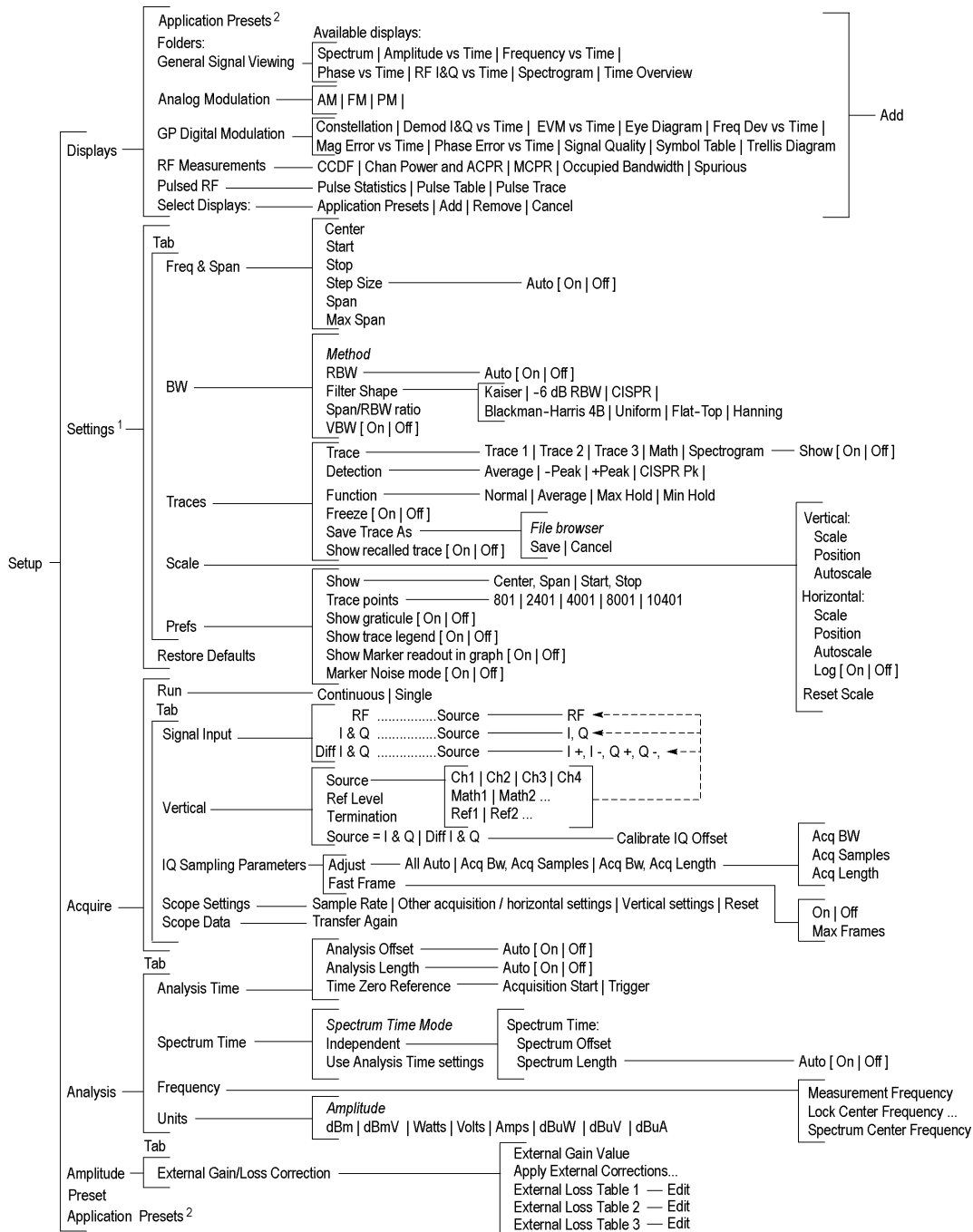- Quick Start Manual (PDF)
- About Tektronix Vector Signal Analysis software

[1] Varies according to measurement displays. Here is a typical example of the spectrum display. For details, refer to the online help. 0224-003

SignalVu Menu Tree – 2

Setup

Displays

Application Presets [2]
Folders:
General Signal Viewing

Available displays:
Spectrum | Amplitude vs Time | Frequency vs Time |
Phase vs Time | RF I&Q vs Time | Spectrogram | Time Overview

Analog Modulation —— AM | FM | PM |

GP Digital Modulation —— Constellation | Demod I&Q vs Time | EVM vs Time | Eye Diagram | Freq Dev vs Time |
Mag Error vs Time | Phase Error vs Time | Signal Quality | Symbol Table | Trellis Diagram

RF Measurements —— CCDF | Chan Power and ACPR | MCPR | Occupied Bandwidth | Spurious

Pulsed RF —— Pulse Statistics | Pulse Table | Pulse Trace

Select Displays: —— Application Presets | Add | Remove | Cancel

Add

Settings [1]

Tab
Freq & Span —— Center
Start
Stop
Step Size —— Auto [On | Off]
Span
Max Span

BW ——
Method
RBW —— Auto [On | Off]
Filter Shape —— Kaiser | –6 dB RBW | CISPR |
Span/RBW ratio —— Blackman–Harris 4B | Uniform | Flat–Top | Hanning
VBW [On | Off]

Traces ——
Trace —— Trace 1 | Trace 2 | Trace 3 | Math | Spectrogram —— Show [On | Off]
Detection —— Average | –Peak | +Peak | CISPR Pk |
Function —— Normal | Average | Max Hold | Min Hold
Freeze [On | Off]
Save Trace As —— *File browser* Save | Cancel
Show recalled trace [On | Off]

Scale ——

Vertical:
Scale
Position
Autoscale
Horizontal:
Scale
Position
Autoscale
Log [On | Off]
Reset Scale

Prefs ——
Show —— Center, Span | Start, Stop
Trace points —— 801 | 2401 | 4001 | 8001 | 10401
Show graticule [On | Off]
Show trace legend [On | Off]
Show Marker readout in graph [On | Off]
Marker Noise mode [On | Off]

Restore Defaults

Acquire

Run —— Continuous | Single
Tab
Signal Input ——
RF ....Source —— RF
I & Q ....Source —— I, Q
Diff I & Q ....Source —— I +, I -, Q +, Q -,

Vertical ——
Source —— Ch1 | Ch2 | Ch3 | Ch4
Ref Level —— Math1 | Math2 ...
Termination —— Ref1 | Ref2 ...
Source = I & Q | Diff I & Q —— Calibrate IQ Offset

IQ Sampling Parameters —— Adjust —— All Auto | Acq Bw, Acq Samples | Acq Bw, Acq Length
Fast Frame

Acq BW
Acq Samples
Acq Length

Scope Settings —— Sample Rate | Other acquisition / horizontal settings | Vertical settings | Reset
Scope Data —— Transfer Again

On | Off
Max Frames

Analysis

Tab
Analysis Time ——
Analysis Offset —— Auto [On | Off]
Analysis Length —— Auto [On | Off]
Time Zero Reference —— Acquisition Start | Trigger

Spectrum Time ——
Spectrum Time Mode
Independent
Use Analysis Time settings

Spectrum Time:
Spectrum Offset
Spectrum Length —— Auto [On | Off]

Frequency ——
Measurement Frequency
Lock Center Frequency ...
Spectrum Center Frequency

Units ——
Amplitude
dBm | dBmV | Watts | Volts | Amps | dBuW | dBuV | dBuA

Amplitude

Tab
External Gain/Loss Correction ——
External Gain Value
Apply External Corrections...
External Loss Table 1 —— Edit
External Loss Table 2 —— Edit
External Loss Table 3 —— Edit

Preset
Application Presets [2]

[1] Varies according to measurement displays. Here is a typical example of the spectrum display. For details, refer to the online help.
[2] Same as in the File menu.

0224-004