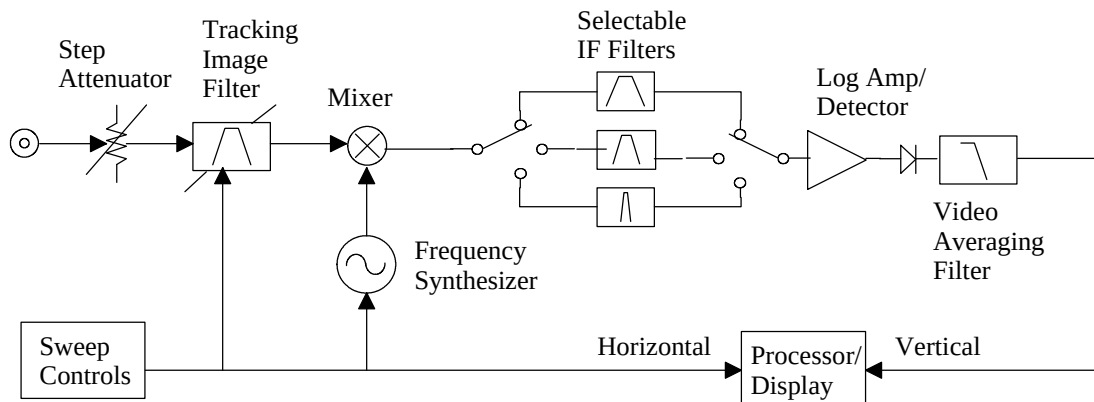


Spectrum Analyzer Basics

Simplified Block Diagram



Major Controls

Frequency Sweep	Set Start/Stop or Center/Span
Reference Level	Define what power level the top of the display corresponds to (in dBm)
Resolution Bandwidth	Selects IF filter, determining resolution of display in frequency Also affects sweep speed, noise floor, etc.
Video Bandwidth	Controls averaging of noise out of detector
Attenuator	Protects mixer from strong signals, improves compression point and intermodulation performance of analyzer.
Marker	Reads-out frequencies/amplitudes

Using the HP4195A Spectrum Analyzer

Setting the Mode and Connecting the Input

- { In the **MEASURE** button group, hit the **CONFIG** button
- { Choose **SPECTRUM** from the softkeys next to the screen
- { Connect your input signal to the **R1** connector in the **CHANNEL 1** group

Setting the Frequency Sweep

- { In the **SWEEP** group, hit **START**, and then **enter a start frequency**.
- { Hit **STOP** and then **enter a stop frequency**.
- { Alternatively, you can enter a **CENTER** frequency and a **SPAN**.

Setting the Amplitude Scale

- { In the **TRACE** group, hit **SCALE REF**.
- { Use the softkeys to enter new parameters. [Note: The Reference Level is the power level at the top of the graph (default is 0 dBm). The default scale is 10 dB/division.]

Using the Marker

- { Hit **MKR->** in the **MARKER/LINE CURSOR** group.
- { Use the softkeys to move the marker to the maximum, to recenter the screen around the maximum, etc.

Printing/Plotting

- { Hit **COPY**, then **HP_IBdefine**, and then **TALKonly** to put into the proper mode
- { Hit **COPY**, then **Start**
- { After printing stops, use the form-feed (FF) button on printer to advance paper and then tear off

Hints and Tips

- { If the sweep stops, hit **TRIG** and the **CONTmode** (it sometimes gets confused and stuck in a single-sweep mode)
- { If the analyzer complains about input signal too high, hit **REF ATTN** in the **CHANNEL 1** group at the bottom of the unit. Enter a new attenuation of 30 dB. **NEVER, EVER**, enter anything less than 10 dB unless you are **ABSOLUTELY, 100%, POSITIVELY SURE ABOUT WHAT YOU'RE DOING** (and can afford to pay for repairs!).