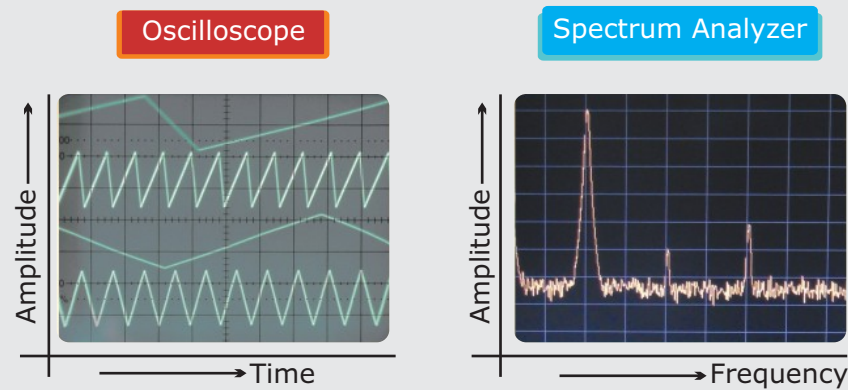


What is a Spectrum Analyzer ?

As you know that Oscilloscope is a Time Domain Signal Analyzer similarly Spectrum Analyzer is a Frequency Domain Analyzer.

The Spectrum Analyzer utilizes a swept Tuned Hetrodyne Receiver which has frequency conversion property and displays the Frequency Vs Amplitude plot.



Thus a Spectrum Analyzer examines the frequency Spectrum Composition of the Waveform.

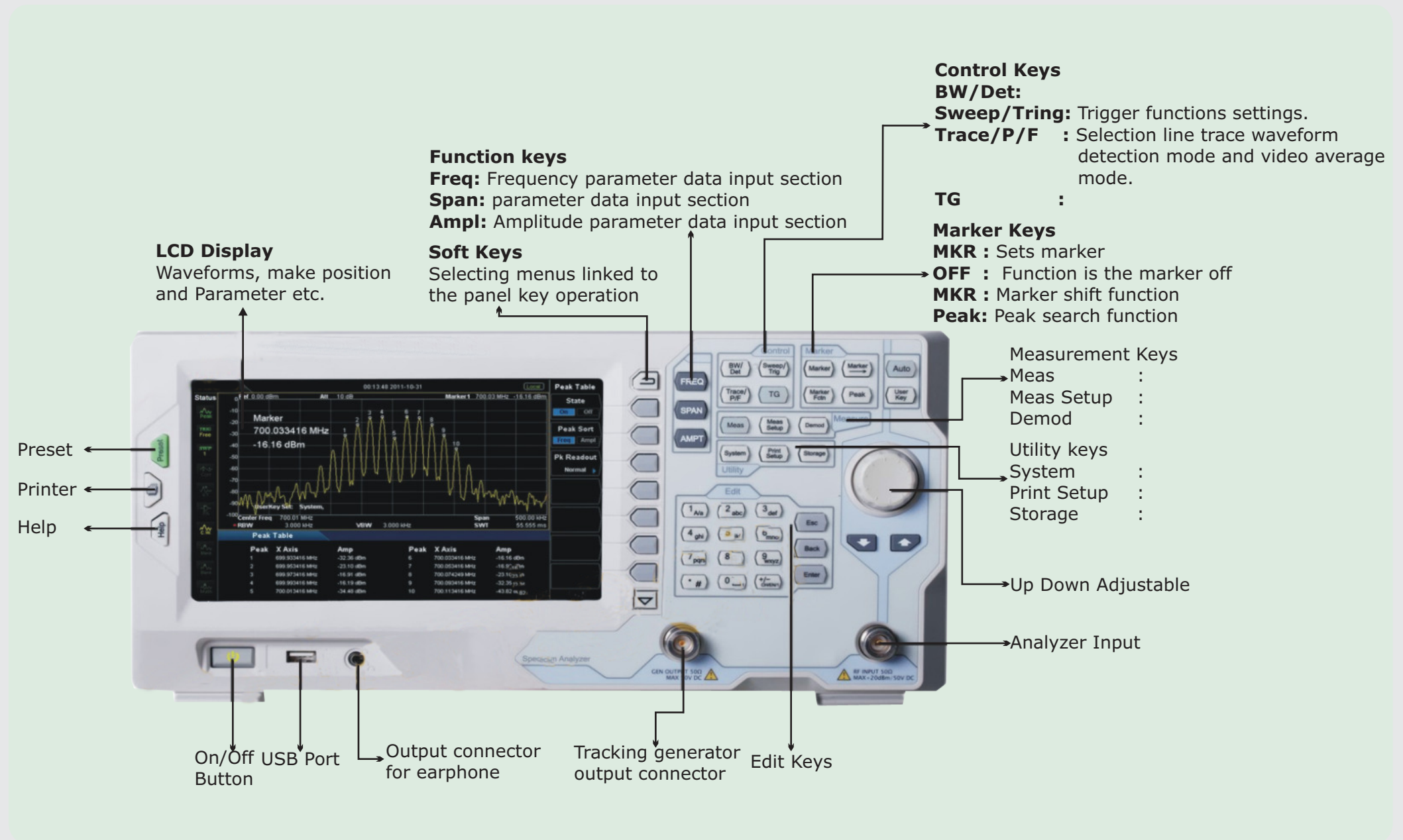
Measurements with Spectrum Analyzer

- ! Absolute and Relative Frequency
- ! Absolute and Relative Amplitude
- ! Spurious and Phase Noise
- ! EM/EMC Testing
- ! Frequency Responses and Spectrum Monitoring
- ! Fault locations
- ! Modulation Analysis
- ! Measurement of RF Spectrum (Channel Power, etc)
- ! Mobile, Radio & Wireless Communication applications

Types of Spectrum Analyzers

There are Analog and Digital Spectrum Analyzers:

- ! A analog Spectrum Analyzer either a variable band pass filter whose mid-frequency is automatically tuned through the range of frequencies of which the spectrum is to be measured, or a superheterodyne receiver where the local oscillator is swept through a range of frequencies.
- ! A digital Spectrum Analyzer computes the Discrete Fourier Transform (DFT), a mathematical process that transforms waveform into the components of its frequency spectrum.



Control Keys
BW/Det:
Sweep/Tring: Trigger functions settings.
Trace/P/F : Selection line trace waveform detection mode and video average mode.
TG :
Marker Keys
MKR : Sets marker
OFF : Function is the marker off
MKR : Marker shift function
Peak: Peak search function

Function keys
Freq: Frequency parameter data input section
Span: parameter data input section
Ampl: Amplitude parameter data input section

Soft Keys
 Selecting menus linked to the panel key operation

LCD Display
 Waveforms, make position and Parameter etc.

Measurement Keys
 Meas :
 Meas Setup :
 Demod :
 Utility keys
 System :
 Print Setup :
 Storage :

Up Down Adjustable
Analyzer Input

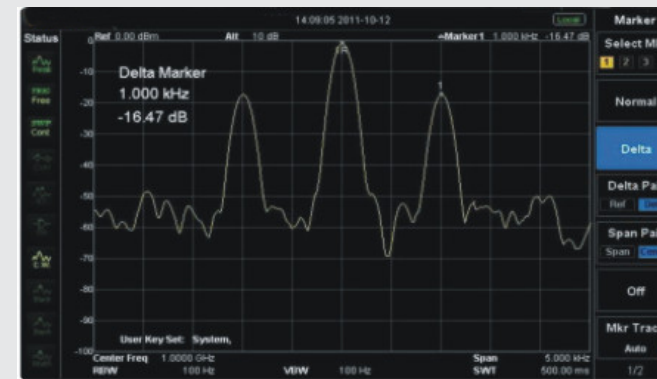
Edit Keys
Tracking generator output connector
Output connector for earphone
On/Off USB Port Button

Printer
Help
Preset

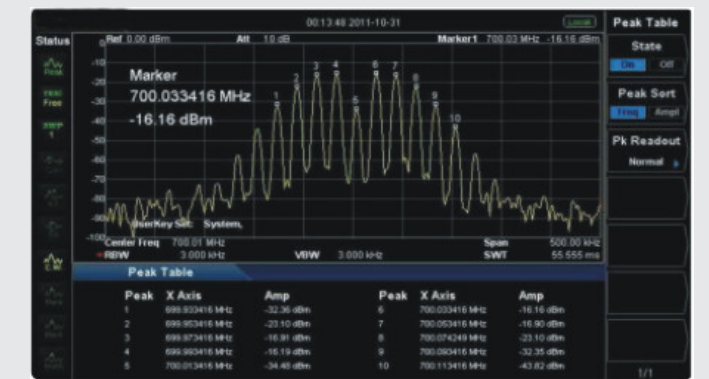
Peak	X Axis	Amp	Peak	X Axis	Amp
1	699.932416 MHz	-22.35 dBm	6	700.033416 MHz	-16.16 dBm
2	699.932416 MHz	-23.10 dBm	7	700.033416 MHz	-16.90 dBm
3	699.972416 MHz	-16.91 dBm	8	700.072416 MHz	-23.10 dBm
4	699.952416 MHz	-16.16 dBm	9	700.052416 MHz	-23.35 dBm
5	700.013416 MHz	-34.40 dBm	10	700.113416 MHz	-43.82 dBm



Compare the spectrums when change the RBW settings with different color trace



Distinguish the two nearby signals clearly with the 100Hz RBW



Readout the Spectrum Peak values with the Peak table function