

# PSA-3000 3GHz SPECTRUM ANALYZER

PSA-3000 is digital synthesizer method Spectrum Analyzer of wide-band frequency and dynamic range. It is popular spectrum analyzer widely applicable to the mobile telecommunications(CDMA/WCDMA), RF system, broadcastings, EMI/EMC and so on.

It provides various state of the art functions like 6.4 inch Color TFT LCD, Centronics Printer, USB Host for data storage, CDMA measuring functions(ACP, Channel Power, Occupied Bandwidth) with its reasonable prices.

It can be used for education authorities for mobile telecommunications and RF, production lines for terminal and telecom equipment as well as for maintenance purposes.



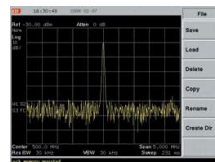
## FEATURES

- High-performance Digital Synthesizer Method
- Wide Frequency Coverage : 9kHz~3.0GHz
- Superior Resolution : Minimum 1 Hz
- Compact & Portable Size
- Pre Amp as Standard
- Wide Input Dynamic Range : -130~20dBm
- Ease-of-use Key Buttons
- CDMA Measurement : ACPR, ACLR, OCBW, Channel Power
- Various and Convenient Interfaces : USB, LAN
- 0.5 ppm High Precision Reference



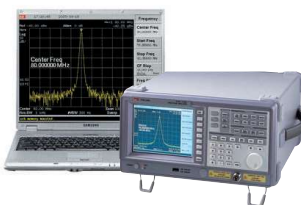
### Various and Convenient Interfaces

GPIB(Optional), LAN(Optional), RS-232C, Printer, EXT Trigger REF I/O(10 MHz)



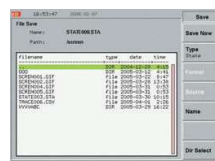
### Auto Set Function

Automatically displays and sets maximum signal trace



### Remote Control Function

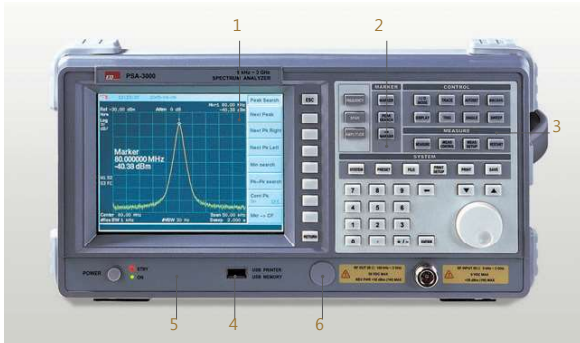
Remote Controls the Analyzer and manages data Thru PC or Internet



### Save/Recall Function

Saves and Manages Measurement trace and its State in the Internal Memory

# PSA-3000 3GHz SPECTRUM ANALYZER



## 1. High Definition 640 x 480 Color TFT LCD

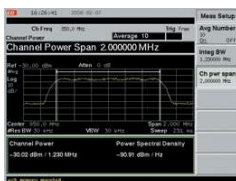
With its high definition color TFT LCD, users rarely feel fatigues on their eyes even after long-hours of use. It provides high precision measurement as well as natural data output

## 2. Simple and Easy to use KEY

Keys are allocated for user's convenience so that users can be easily familiar with them. And they provide various functions.

## 3. CDMA Measurement

- **Channel Power(CHP) Measurement** : It measures the power of mobile telecommunications channel. It screens out the output data automatically with its simple menu operation.
- **OBW Measurement** : It measures the Occupied bandwidth of modulation signal by %.



- **ACP Measurement** : It measures the effects on Adjacent Channel caused by transmitted power or the power rates with Adjacent Channel in Mobile Telecommunication Systems using multi channels. It checks all measured values and waveforms on one screen.

## 4. USB Interface

- Stores measured data in USB memory with USB Host supporting USB 1.1, 2.0(GIF Format)
- Converts measured data into MS Excel by supporting CSV file format
- Supports all types of printer not only Centronics printer but USB Interface printer
- Upgrade the Firmware of Analyzer through USB by downloading the upgraded firmware provided in ED company's Website.

## 5. Internal Memory of Large Storage Capacity

- **Storage Capacity for Waveforms** : Maximum 900 waveforms
- **Storage Capacity for States** : Maximum 3,000 states
- Easily stores waveforms and states of equipments according to the various application and use

## 6. CDMA Signal Generator(Optional)

CDMA Signal Generator(CDMA 2000; Pilot Channel, WCDMA; 1 CPICH) has not only built-in CW Signal but also digital internal modulation signal and IQ Modulator.

It can be used as a strong signal generator in Overall CDMA application such as module, element test, amplifier test and A/S field.

## SPECIFICATION

### • Frequency

- » Range : 9kHz to 3.0GHz
- » Resolution : Minimum 1Hz
- » Span Range
  - > 100Hz/div to 300MHz/div
  - > 1,2,5Steps Selection(Automatic), ZERO Span, FULL Span(9kHz to 3.0GHz)
- » Frequency Selection : Start, Stop, Center Span Setup
- » Span Accuracy :  $\pm 3\%$  within a designated Span range
- » Readout Accuracy :  $\leq \pm$  (Indicated frequency x Reference Frequency Accuracy + Span x Span Accuracy + 50% of RBW)
- » Phase Noise :  $\leq -90\text{dBc/Hz}$ (Based on 10kHz Offset)

### • Amplitude

- » Range : +20dBm~-105dBm, +20dBm~-130dBm(Pre Amp ON)
- » Average Noise Level(1kHz RBW, 10Hz VBW)
  - >  $\leq -105\text{dBm}$  : 150kHz~2.7GHz
  - >  $\leq -127\text{dBm}$ (Pre Amp On) : 20MHz~2.7GHz
  - >  $\leq -100\text{dBm}$ , -123dBm(Pre Amp On) : 2.7GHz~3GHz
  - >  $\leq -130\text{dBm}$ (Pre Amp On) : Typically
- » Amplitude Unit : dBm, dBmV, dBuV, V, mV,  $\mu\text{V}$ , W, mW,  $\mu\text{W}$
- » Display Scale Linearity
  - >  $\leq \pm 1.5\text{dB}/70\text{dB}(10\text{dB}/\text{div})$ ,  $\leq \pm 1.5\text{dB}/40\text{dB}(5\text{dB}/\text{div})$
  - >  $\leq \pm 0.5\text{dB}/8\text{dB}(1\text{dB}/\text{div})$ ,  $\leq \pm 0.5\text{dB}/16\text{dB}(2\text{dB}/\text{div})$
- » Frequency Response(Based on OdB Atten)
  - > -3.5~-1.5dB(100kHz~10MHz)
  - >  $\pm 1.5\text{dB}(10\text{MHz} \sim 3\text{GHz})$
- » Reference Level
  - > Range : 20dBm~-90dBm
  - > Resolution : 0.1dB
  - > Accuracy :  $\pm 1.5\text{dB}$
- » 2nd Harmonic Distortion :  $\leq -60\text{dBc}$ , -40dBm Input
- » Intermodulation Distortion :  $\leq -70\text{dBc}$ , -40dBm Input
- » Residual Spurious :  $\leq -85\text{dBm}$ (Input Terminated 0 dB Attenuate)
- » Other Input Spurious :  $\leq -60\text{dBc}$ , -30dBm Input

# PSA-3000 3GHz SPECTRUM ANALYZER

## SPECIFICATION

- » Resolution Bandwidth
  - › Selections : 1kHz, 3kHz, 10kHz, 30kHz, 100kHz, 300kHz, 1MHz, 3MHz, 9kHz, 120kHz
  - › Accuracy :  $\pm 20\%$
  - › Selectivity
    - 60dB/3dB ratio < 15:1
    - 60dB/6dB ratio < 12:1(9kHz, 120kHz)
  - › Switching Error :  $\leq \pm 1.0\text{dB}$ (1kHz Reference RBW)
- » Video Bandwidth : 10Hz to 3MHz in 1-3-10 step
- **Sweep**
  - » Rate : 100 ms to 1000 sec, 40 ms to 1000 sec (Zero Span)
  - » Accuracy :  $\leq \pm 20\%$
  - » Trigger Source : External(Rear), Video, Freerun, Line
  - » Trigger Modes : Continuous, Single
  - » Trigger Level : TTL Level
- **Memory**
  - » Trace-Setup Storage
    - › Trace Storage : Maximum 900 waveforms
    - › Setup Storage : Maximum 3000 states
- **Screen Display**
  - » Type : 6.4"Color TFT LCD
  - » Display Resolution : 640(H) x 480(V) active display area
  - » Marker Modes
    - › Peak search, Delta marker, Marker to Center
    - › Marker to Reference(8 Markers Maximum)
- **Input**
  - » RF Input Connector : N type Female, 50 ohm Nominal
  - » VSWR
    - › 150 kHz~3.0 GHz, VSWR<1.5:1(Based on 0 dBm Ref Level)
  - » Maximum Input Level : 0 VDC, +20dBm
- **Standard Frequency(10MHz, Ref.)**
  - » Temperature Stability :  $\pm 0.5$  ppm
  - » Aging :  $\pm 0.5$  ppm/Year
  - » Connector : BNC Female
  - » Input Level : -5dBm to +15dBm
  - » Output Level : 10MHz, +8dBm nominal
- **Interface**
  - » RS-232C
  - » Printer
    - › Driver : PCL Command, HP, EPSON, Laser-Jet, Desk-Jet
    - › Connector : Standard 25 Pin female D-Sub using Parallel Connector
  - » USB Host
    - › Printer Driver : PCL Command, HP, EPSON, Laser-Jet, Desk-Jet
    - › USB Storage Device : Supports 1.1 and 2.0, image file for storage, GIF format
  - » Ethernet(Optional)
  - › 10/100-Base-T Ethernet : Supports Internet Remote Control
  - » GPIB Interface(Optional) : IEEE 488 bus

## GENERAL CHARACTERISTICS

- » Dimensions : 350(W) x 195(H) x 375(D)mm
- » Weight : 10 kg
- » Warming up time : 20 minutes for the precision measurement
- » Power
  - › Source Voltage and Frequency : 100-240 VAC at 50/60Hz
  - › Power Consumption : 80 Watts maximum without option
- » Operating Temperature : 0°C to 40°C
- » Storage Temperature : -20°C to 70°C
- » RF Emissions, Immunity
  - › RF Emissions : EN 55011, FCC PART15 Section 15.101
  - › RF Immunity : EN 61326

---

## OPTION

---

- Tracking Generator
  - GPIB Interface(IEEE 488 Bus)
  - Ethernet Interface : for Internet Remote Control
  - Soft Carrying Case
  - General Kit Set
  - CATV Kit Set
-