

Testing without limits

Cellular & cordless phones

Base stations

Production & service



Digital Systems For GSM/PCN/PCS

GSW/PCIVPCS CDMA/IS-95 DECT IS-54/IS-136 TETRA TERAPOL

U nique Radio Test Flexibility in a Small Package

The STABILOCK 4032 Series meets the needs of service organizations and mobile radio manufacturers worldwide. With over 7 major digital systems and over 30 analog formats available, universal coverage of radio systems is provided.

Fast Speed

PDC

Automatic and complete GSM mobile test in under 60 seconds. Switching between most systems is easy including GSM and PCN/PCS.

High Accuracy

Accurate measurements ensure repeatable, confident test results. RF Cellular Power measurement is typically 5%.

Extending Capability

New systems capability includes DECT for fixed and portable parts, CDMA base station testing, TETRAPOL, as well as TETRA, the new trunking standards.

Fast Spectrum Analyzer

Powerful Spectrum Analyzer option from 0.4 MHz to 1 GHz and up to 2.3 GHz with the Frequency Extention option. Functions include Autotuning, Zoom and GSM trigger mode.

Simple Automation

Creating IEEE-488 or AUTORUN programs is easy using a PC editor package, including syntax checks, library, memory and program handling.



STABILOCK 4032, the universal communication platform

Flexible Modular Structure

Using plug-in modules and memory cards, the 4032's modular design ensures easy upgrading.

Modularity preserves the investment value and allows new systems to be tested as radio technologies mature or requirements are modified. With the 4032's consistent screen layout, GPIB commands, and simple memory card software installation, most technicians will require little training to use new modules and features.

Service Tool Kit

The compact design provides major benefits in productivity, saving both space and weight over competing solutions. The large easy to read screen is invaluable for manual operation and the on-screen meters give clear indi cation when adjusting equipment remotely. Clear layout, softkeys and cursor keys provide an intuitive user interface.

Manufacturing Mobile Test

Fast measurement combined with accuracy provides an ideal solution for manufacturers of digital radio terminals. GPIB programming or connection to a LAN server allow flexibility in automated testing. Programming measurements is easy using the AUT ORUN feature. Editing on a PC with the ARE software package allows programs to be rapidly created or modified from the extensive Wavetek library.



Flexibility for automated testing

Modularity provides universal test capability

Convenient and Complete Base Station Testing

The 4032 provides base station testing for IS-54, NAMPS, D-AMPS, IS-136, CDMA or ETACS. In many cases base station testing can be automated using custom AUTORUN programs.

The compact, lightweight design makes life easier for installation and maintenance crews in confined base stations.

Network Maintenance

With a sector or channel down, lost revenue increasing and customers becoming frustrated – there is no time to loose. The fast set up of the 4032 speeds up troubleshooting.

The accurate and clear display allows fast and consistent measurements. Alignment of I and Q is simplified using the constellation display. Min./max. average statistics make tuning more convenient.

The fast Spectrum Analyzer (up to 2.3 GHz) provides in- and out-ofband measurements for identifying spurious signals or intermodulation products.Optional tracking generator provides cable fault indication.



easy to read analog feel

CDMA Testing Simplified

Special troubleshooting tools are available for CDMA base stations at 800 MHz or 1900 MHz. The constellation display allows the symmetry of the symbols to be viewed, whilst the Channel Versus Power screen displays the pilot and any traffic channels. For many measurements including PN search funktions only an RF input is required, rather than the additional connection of Even Second Clock.

Measurements include channel power, frequency tolerance, waveform quality rho, carrier feedthrough, vector magnitude and pilot time offset. In the code domain the timing, power and phase of each code channel can all be measured.

Fast Constellation Display

Viewing the phase error, magnitude, RMS vector error, power and DP/Symbol helps identify NADC/ IS-54/IS-136 base station errors.

Clear Display

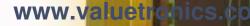
Bring an analog feel to digital measurements. Measurements are graphic and numeric for fast analysis.

Adjacent Channel Power

Numeric display provides simple analysis of channel, adjacent and alternate adjacent channel power levels.



Convenient handling at less than 20 kg (36 lbs) weight



Comprehensive Capability from Hardware and Software Options

GSM Measurements (MS)

- Transmitter power
- Phase and frequency error
- Burst shape (power vs time) and burst length
- Modulation spectrum
- TX tests on mobiles in test mode
- Bit error ratio (BER)
- Paging sensitivity
- Measurement report of MS
- Min./max./average statistics
- Audio RMS

CDMA Measurements (BS)

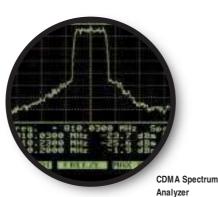
- Channel power
- Code domain power
- Code domain timing
- Code domain phase
- PN offset search
- Waveform quality (rho)
- Error vector magnitude (constellation display)
- Phase error
- Pilot time offset
- Carrier feedthrough
- reverse channel signaling

TETRA Measurements (MS)

- Power vs time
- Constellation display
- Modulation Spectrum
- Freqency error
- Vector error
- Residual carrier power

TETRAPOL (MS)

• Go/NoGo test



IS-136 Measurements (MS)

- Constellation display (graphic/numeric)
- Modulation spectrum
- Burst power with time alignment
- ACPM
- Bit error ratio (BER) 800 and 1900 MHz systems
- Analog/Digital Control CH to Analog/Digital TCH
- Cross-band handover checked
- MAHO functionality
- ACELP or VSELP
 Audio loopback

IS-54/NAMPS (BS)

- Power measurement
- Digital and analog operation (IS-54)
- Spectrum analyzer
- Constellation display (IS-54)
- Adjacent and alternate adjacent channel power

DECT Measurements (FP, PP)

- Power level (NTP)
- Frequency error
- Frequency deviation
- Frequency drift
- Power/time template with zoom mode
- Adjacent Channel Power Measurements (ACPM)
- Packet timing jitter
- Reference stability
- BER Bit Error Ratio
- Audio measurements



DECT: Portable part test screen

IS-136 measurement





Logical Ease of Use

High contrast, high intensity display shows measurements in all light conditions.

High sensitivity in range –130 dBm to + 13 dBm depending on use of RF or RF DIRECT Socket.

WAVETEK 4032 STABILOCK

Synthesizer provides low noise

(4 Hz rms at 500 MHz) for accurate mobile testing, and allows use of optional Adjacent Channel Power Meter. Memory cards provide easy AUTORUN loading and storage of results.

Precise power measurement accuracy typically 4% 20 to 500 MHz, 5% up to 1 GHz.

RF output level accuracy typically 0.3 dB below –7 dBm. **Standard Oscilloscope** up to 20 kHz with trigger modes plus auto, norm, one shot, freeze and time measurements. **Integrated Spectrum Analyzer** provides 0.4 MHz to 1 GHz or 2.3 GHz, with optimized sweep widths 200 kHz, 2 MHz or 10 MHz.

www.valuetronics.com



Major Options

Available Data Sheets

STABILOCK 4032 Technical Data

GSM+PCN+PCS The universal software option

CDMA Base Station Test in one convenience package

STABILOCK 4032 DECT

IS-136 Mobile Station Test in the 800 MHz and 1.9 GHz Bands

TETRA Mobile Station Testing

NADC BS and MS Testing

High Speed Spectrum Analyzer 2 MHz to 2.3 GHz

ARE AUTORUN Editor

PDC MS-Test

Accessory Catalogue

Or dering Information for major options

See Data Sheets for full range of modules for analog and digital systems.

Stabilock 4032108	802
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RF Frequency Extension 2.3 GHz...248 295

GSM 900/1800/1900 MS Test Package......248 296 incl. STABILOCK 4032 RF Frequency Extension 2.3 GHz GSM hardware option Spectrum Analyzer GSM 900/1800/1900 test software

DECT Package.....248 255 incl. STABILOCK 4032 RF Frequency Extension 2.3 GHz DECT module DECT FP/PP test software CDMA BS Test Package248 302 incl. STABILOCK 4032 Hight Speed Spectrum Analyzer CDMA module CDMA 800/1900MHz test software IS-136 MS Test Package......248 304

Incl. STABILOCK 4032 RF Frequency Extension 2.3 GHz D-AMPS module + Data module IS-136 MS test software

BATE AMPS BS Test Package248 198

BATE ETACS BS Test Package248 144

New Packages for STABILOCK 4032:

TETRA-380 MS Package248 307 incl. TETRA module Duplex + IQ-380 TETRA MS test software

TETRA/FEX MS Package248 307 incl. TETRA module RF Frequency Extension 2.3GHz TETRA MS test software

TETRAPOL MS Package......190 115 incl STABILOCK 4032 TETRAPOL module RF Frequency Extension 2.3GHz TETRAPOL PC Software TETRAPOL test software GPIB cable, Interface box, Cable set

General Data

Weight:18.5 kgPower Supply94 to 132 V or 187 to 264 V ACOperating temperature:0° C to 45° CStorage temperature:-40 to +70°CRelative humidity:90%Size:230375486 mm



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