The Falcon

CDMA PILOT SCANNER

The Falcon is an economical, flexible real-time scanner system for identifying pilot signals for all IS-95A base stations.

FEATURES:

- **Absolute base station identification**
- **A precision instrument priced for moderate budgets**
- **Fast updates of base stations**
- **Internal high stability time base**
- **Internal GPS receiver**
- **Data output via serial port connection to PC**
- **Falconeye™ software runs in Windows 95™**
- **CDMA correlated signal strength (Ec/Io) energy is measured and reported up to 30 times/second**
- **Compact 10¾" wide X 9¾" high X 5" deep rugged case**

The Falcon is just one of many exceptional design solutions from Berkeley Varitronics. Call us today for more information:

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BERKELEY VARITRONICS SYSTEMS

The Falcon CDMA PILOT SCANNER

SPECIFICATIONS

FALCON RF PERFORMANCE

Frequency Range (either)	1930-1990 MHz	PCS (bands A through F)
	868-897 MHz	EAMP's (Forward cellular)
Frequency Accuracy	±25 ppb (0° C to 50° C)	
IF Bandwidth	1.25 MHz	
Aging of TXCO	±1.0 ppm/year	

AMPLITUDE

Accuracy	±1.0 dB (20° to 30° C) ±2.0 dB (0° to 50° C)
LNA Noise Figure	< 1.5 dB
Receiver Noise Figure	<7.5 dB
1 dB Compression Point[1]	-10 dBm
Adjacent Channel Sensitization	-20 dBm

CONNECTORS

Antenna	Type-N female (50 OHMS)
Computer	RS-232 (DB 9) male
GPS	SMA female
Power	DC power jack 4 pin

SENSITIVITY

Antenna Input Sensitivity	> -90 dBm
Maximum Safe Input	+10 dBm

ENVIRONMENTAL

Operating Temperature Range	0° C to 50° C
Storage Temperature Range	-40° C to 70° C
Dimensions	10¾" x 9¾" x 5"
Weight	<5 lbs.
Power	11 to 4 VDC (1 amp, 10 Watts maximum)

FALCON CDMA PROCESSING

PN Generation	IS-95 I and Q sequences
Minimum Ec/Io	-20 dB
Correlation Length	1024 chips for I and Q PN
Minimum Pilot Power Detectable	-20 dB (Ec/Io)
Primary Base Station Measurement Updates	6 measurements per second
Single Base Station Update (64 chips) Rate	37.5 measurements per second
Simultaneous Normal and Single Update Rate	6 measurements per second
Absolute Measurement Timing Accuracy	Locked to GPS time
Base Station Identification	Absolute (not relative)
PN Resolution in Single Mode	1 chip (820 ns)

FALCONEYE™ SOFTWARE

GENERAL HIGHLIGHTS

- Windows 95 data capture application for extraction of Falcon scan information
- Display and logging of Pilot and Base station date in real-time
- Real-time GPS information updates for position, date/time and heading information
- Able to focus on specific measurements for trouble areas of coverage
- Flexible user control of processing and reporting

PILOT MEASUREMENTS

- Ec/Io and separate Ec measurements for all 512 base stations as well as all multipath components
- Identifies PN offset position ±1 chip to find "island PNs"
- Real-time display of measured data as well as playback of scanned data

RSSI MEASUREMENTS

- Measure channel power for any specified frequency range
- Spectrum analyzer function allows sweeping entire or part of PCS or Cellular band on forward channels

EXPORT DATA

- Output measured data in ASCII, Mapinfo, Excel or Maptitude formats for post processing
- Filter scanned data for sampling rates and averaging

OTHER

- Additional features include ability to set PN offset increments and base station scan list

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