

The Ultimate in 406 Beacon Testers!

**Beacon
Tester**

Tomorrow's technology today!

- Entire receiver is housed in a CompactFlash™ card!
- Intuitive and easy to use software
- Receives all Cospas-Sarsat frequency channels and decodes all Cospas-Sarsat protocols
- Exceeds IMO MSC/Circ.1039 and MSC/Circ.1040 requirements
- External coax connection accepts output of screen box or direct 5W input (no external attenuator required)
- Internal antenna receives 406 MHz burst from up to 10 metres
- Graphic displays of 406 MHz phase modulation, in-band frequency spectrum, and power during the burst
- Can be used to measure non-406 MHz beacons (including C91 & C91A ELTs)
- Store over 200 measurements
- Software updates and upgrades via internet
- New applications (as they become available) easily added via internet
- Available in three models:
BT100S (measures Frequency Stability),
BT100A, or BT100D (basic model)
- Interactive demo available at www.wst-inc.ca





Three Models to choose from ...

Model BT100S

A complete measurement solution including Frequency Stability measurements as required by Cospas-Sarsat C/S T.007 Annex J *Beacon Quality Assurance Plan*. The user provides a stable 10 MHz Frequency Reference and the Beacon Tester does the rest. The Frequency Stability portion produces a delimited text file so you can import data into your favourite spreadsheet or database and graph or document the results to your individual needs. Decodes all Cospas-Sarsat protocols on all past, present and future Cospas-Sarsat frequency channels allocations. Measures detailed 406 MHz parameters, detailed 121.5 MHz parameters, along with graphic displays of the 406 MHz power during the burst, the 406 MHz phase modulation, and the in-band 406 MHz frequency spectrum. Connect an external 10 MHz reference for a very accurate frequency measurement. Let the internal antenna receive the transmitting beacon signal from very close to a distance greater than 10 metres, or use the direct coax input connection to measure directly from the output of a screen box or 5W directly from the beacon (no attenuator required!). User can suppress the display and printing of the detailed measurements, and recall them later if desired. Automatically saves all measurements in an easy-to-use file system. Creates an html file for printing a Test Report via desktop/network using Activesync™ cable, IR port, wireless, or memory card. The user can add text notes or audio comments to the measurement. Software updates and upgrades are easily downloaded and installed from the internet as they become available.

Model BT100A

All the same features of the BT100S without the Frequency Stability measurement capabilities. Our most popular model!

Model BT100D

A more economical solution that provides a decoder for all available Cospas-Sarsat protocols on all available channels. This model also measures the 406 MHz frequency and power level. The BT100D has the same powerful file system, printing features, and other features as the BT100A. As your requirements change, the BT100D is upgradeable to the BT100A.

The Handheld PDA is included!

The PDA features include the Pocket PC operating system loaded with popular software including Pocket Word™, Pocket Excel™, Pocket Outlook™, Pocket Internet Explorer™, Windows Media Player™, Messenger™ and many others. Thousands of intriguing applications available on the internet. View your measurement results with the sunlight readable, backlit, colour, touchscreen display – use your finger!

Decode all Cospas-Sarsat protocols – fast and accurate.

Easily select input options.

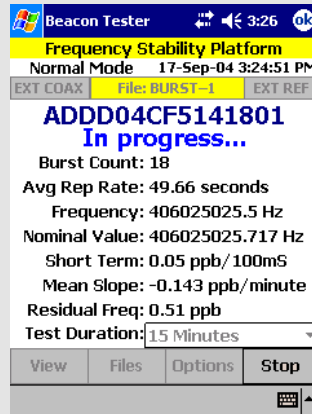
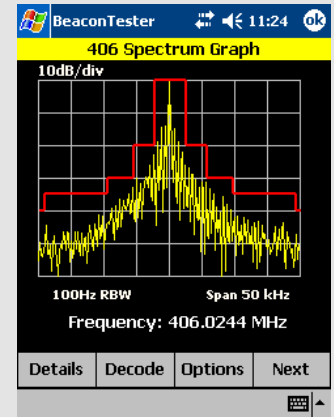
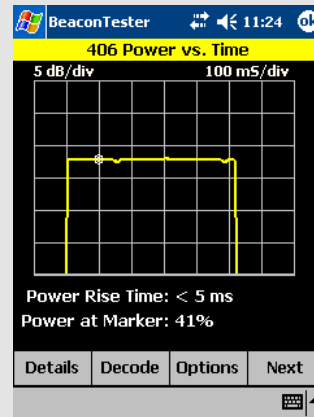
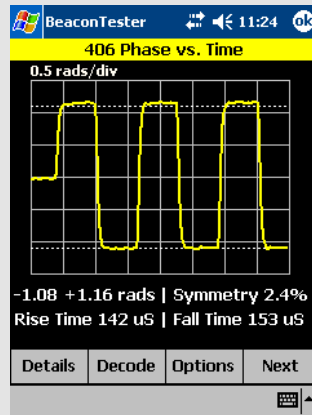
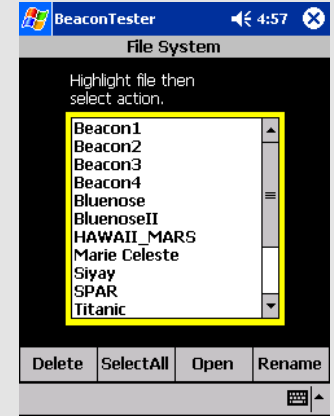
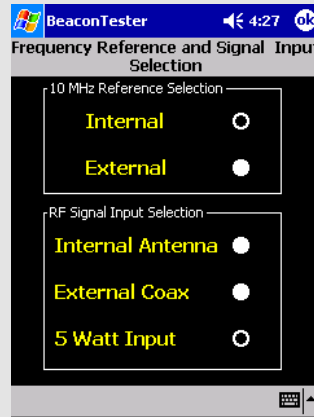
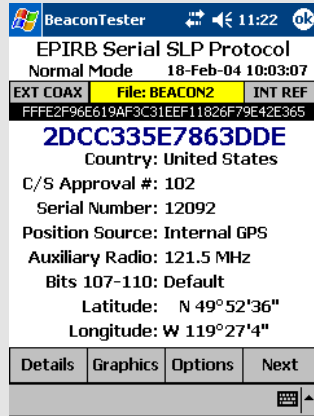
All measurements are automatically saved. Easy file manipulation.

Graphic display of 406 Phase Modulation.

Graphic display of 406 power during the burst - a good check for battery problems.

Graphic display of 406 in-band spectrum. Check for spectral mask violations. A virtual spectrum analyzer ... but much faster!

Frequency Stability measurements.



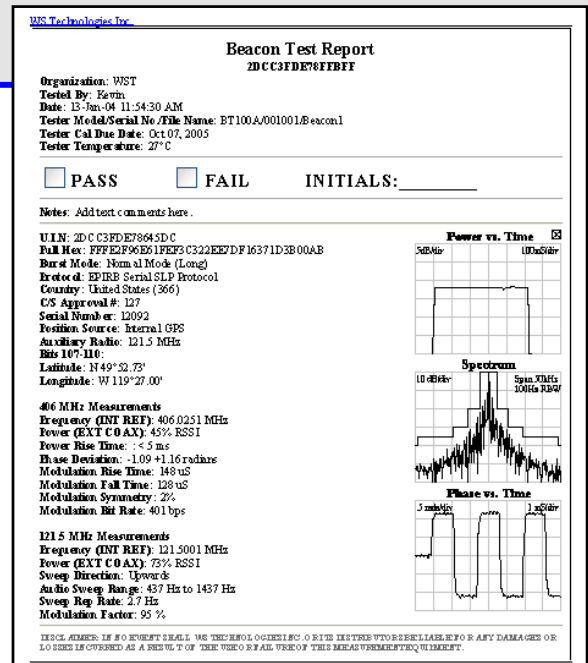
Try the Beacon Tester for yourself! See the interactive demo at www.wst-inc.ca

What's in the BT100A box?



Printed Test Report

The user can select the level of detail to be included in the printed Test Report. Each printed report includes Beacon Tester details such as serial number, calibration due date, and the internal temperature of the tester itself. Graphic results can be printed as part of the report. The user checks the appropriate pass or fail box and initials the form.



BT100 Series - 406 Beacon Testers

Parameter		BT100S	BT100A	BT100D	Accuracy
406 MHz Measurements					
Measure all Cospas-Sarsat Frequency Channels		•	•	•	
Decode all Cospas-Sarsat Protocols		•	•	•	
UIN & Full HEX		•	•	•	
Frequency (using INT REF) (resolution = 100 Hz) Leaving Factory Long Term		•	•	•	± 100 Hz ± 0.4 ppm/year
Frequency (using EXT REF) (resolution = 1 Hz)		•	•	O	± 1 Hz
Frequency * Stability	Nominal Frequency	•			± 2.5 x 10 ⁻¹¹
	Short Term	•			
	Medium Term - Mean Slope	•			
	Medium Term - Residual	•			
Power		•	•	•	± 1 dB
Power Rise Time		•	•		± 0.5 ms
Phase Modulation		•	•		± 0.04 rad
Modulation Rise and Fall Times		•	•		± 10 µs
Modulation Symmetry		•	•		± 0.005
Modulation Bit Rate		•	•		± 0.2 bps
121.5 MHz Measurements					
Frequency (using INT REF) (resolution = 100 Hz) Leaving Factory Long Term		•	•		± 100 Hz ± 0.4 ppm/year
Frequency (using EXT REF) (resolution = 1 Hz)		•	•		± 11 Hz
Peak Power		•	•		± 1.5 dB
Sweep Direction		•	•		-
Audio Frequency		•	•		± 30 Hz
Sweep Range		•	•		± 60 Hz
Duty Cycle		•	•		± 2%
Modulation Factor		•	•		± 5%
Sweep Repetition Rate		•	•		± 0.1 Hz
Graphic 406 Power screen		•	•		
Graphic 406 Phase Modulation screen		•	•		
Graphic 406 In-Band Spectrum screen		•	•		
RF Input Cable		•	•	•	
Reference Input Cable		•	•	O	
Zipper Pouch		•	•	•	
Operator's Manual		•	•	•	
Calibration Certificate		•	•	•	
Hard Case		•	•	O	
Personal Data Assistant (PDA)		•	•	•	
AC Adapter		•	•	•	
Activesync Cable		•	•	•	
PDA User's Guide		•	•	•	
O = Optional					
* User must supply a stable 10 MHz Reference Signal					

Hard Case - A handy waterproof carry case and everything-in-one-place storage box! Included with the BT100S and BT100A.



Rugged handheld cases are available from third party vendors. Use these if you want added protection from water or shock.



Developed and manufactured by:

 **WS Technologies Inc.**

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 Canada



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Miscellaneous			
Range (using Internal Antenna): 406 MHz 121.5 MHz		>10 m >3 m	
RF Input VSWR		1.10:1	
RF Input Level:	406 MHz Burst 121.5 MHz	-16 dBm Min -30 dBm Min	+40 dBm Max +27 dBm Max
10 MHz REF Input VSWR		1.15:1	
10 MHz REF Input Level		-10 dBm Min	+20 dBm Max
Operating Temperature Range		0°C to +50°C	
Storage Temperature Range		-20°C to +60°C	
Internal Temperature Sensor Accuracy		± 0.5°C	
RF Input Cable Termination		BNC-female	
10 MHz REF Cable Termination		SMA-female	
Dimensions:	BT100 w x l x h mm (inches)	43.5 (1.71) x 58.5 (2.30) x 12.7 (0.50)	
	BT100 in PDA w x l x h mm (inches)	82.2 (3.24) x 147.3 (5.80) x 19.0 (0.75)	
	Hard Case w x l x h mm (inches)	324 (12.75) x 273 (10.75) x 114 (4.50)	

Specifications subject to change without notice.

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PATENT PENDING

La version française de cette brochure sera prochainement.