WST WS Technologies Inc.

BT200 Beacon Tester

The BT200 Beacon Tester is ranked #1 worldwide in performance, quality, reliability, and support.

BT200 FEATURES INCLUDE:

- Measure and decode all Cospas-Sarsat beacons, including:
  - First and Second Generation Beacons (FGB & SGB)
  - ELTs, EPIRBs, and PLBs
  - AIS-EPIRBs, MOBs, AIS-SARTs
  - AIS Transceivers (Class A & B)
  - 121.5, 243, 406, 162 (AIS1 & AIS2) MHz channels
  - ELT(DT) protocol
  - RLS protocol
- Real-time measurement results with Oscillograph
- PDF Test Report generator
- User friendly software included with free updates
- Dedicated customer support team

Certified System ISO 9001:2015

WS Technologies Inc. is an ISO9001 Certified company

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BT200 Technical Specification

Revision 5.10

Description	BT200	add ELT	add AIS (Rx)	add AIS (Rx&Tx)	add SGB	Uncertainty
406 MHz First Generation Beacon (FGB)						
Measure all Cospas-Sarsat Frequency Channels	•					-
15 HEX ID and Full HEX ID	•					-
Decode Message – EPIRB & PLB	•					-
Decode Message – ELT		•				-
Frequency Leaving Factory Long Term	•					 ± 50 Hz ± 1.0 ppm/yr
Power Output	•					± 0.25 dB*
Power Rise Time	•					± 0.5 ms
Pre-Burst Level	•					± 1 dB
Pulse Repetition Period	•					± 10 ms
Bit Rate	•					± 0.1 bps
CW Preamble Time	•					± 0.8 ms
Total Transmission Time	•					± 0.8 ms
Rise Time	•					± 10 µs
Fall Time	•					± 10 µs
Phase Deviation: Positive	•					± 0.02 rad
Phase Deviation: Negative	•					± 0.02 rad
Modulation Phase Symmetry	•					± 0.005
406 MHz Second Generation Beacon (SGB)						
Decode Message SGB EPIRB & PLB					•	-
Decode Message SGB ELT (**ELT Option Required**)					•	-
23 HEX ID and Full HEX ID					•	-
Power Output					•	± 0.25 dB*
Power Rise/Fall Time					•	± 0.1 ms
Pre-Burst and Post-Burst Level					•	± 1.0 dB
Total Transmission Time					•	± 0.25 ms
Nominal Frequency Leaving Factory Long Term					•	 ± 50 Hz ± 1.0 ppm/yr
Chip Rate Average					•	± 0.05 cps
Chip Rate Variation					•	± 0.05 cps²
I, Q Relative Offset					•	± 0.5 %
I, Q Peak to Peak Amplitude					•	± 0.5 %
Out-of-Band Emissions					•	± 0.1 %
Error Vector Magnitude (EVM)					•	± 1.0 %
Graphic Measurements						
-406 Spectrum Mask Graphics Data	•				•	-
-406 Output Power During Burst Graphic Data	•				•	-
-406 Phase Modulation Graphics Data	•					-
121.5 MHz Measurements						
Frequency Leaving Factory Long Term	•					 ± 60 Hz ± 1.0 ppm/yr
Peak Power	•					± 1.0 dB
Sweep Direction	•					-
Audio Frequency – Upper and Lower	•					± 30 Hz
Audio Sweep Range	•					± 60 Hz
Modulation Index	•					± 5%
Sweep Rep Rate	•					± 0.1 Hz
Duty Cycle	•					± 2%
243 MHz Measurements						
Frequency Leaving Factory Long Term	•					 ± 60 Hz ± 1.0 ppm/yr
Peak Power		•				± 1.0 dB
Sweep Direction		•				-
Audio Frequency – Upper and Lower		•				± 30 Hz
Sweep Range		•				± 60 Hz
Modulation Index		•				± 5%
Sweep Rep Rate		•				± 0.1 Hz
Duty Cycle		•				± 2%
AIS Measurements						
Frequency (AIS1 & AIS2) Leaving Factory Long Term			•	•		 ± 60 Hz ± 1.0 ppm/yr
Power			•	•		± 1.0 dB
AIS Messages Decode			•	•		-
Tx AIS Transceiver (Class A & B)				•		-

***Between 35-39 dBm**

Miscellaneous Parameters		
RF Range (Antenna mode)		
406 MHz 121.5 MHz/243 MHz AIS		>5 m >1 m >5 m
RF Input VSWR		1.20:1
Dynamic Range		
Direct Mode	121.5 MHz	-10 dBm to +36 dBm
	243 MHz	+5 dBm to +36 dBm
	406 MHz	+12 dBm to +43 dBm
	AIS	+10 dBm to +43 dBm
Screen Box Mode	121.5 MHz	-16 dBm to +20 dBm
	243 MHz	-17 dBm to +24 dBm
	406 MHz	-4 dBm to +30 dBm
	AIS	+10 dBm to +30 dBm
Maximum Input Power (One Burst/50 Seconds		+43 dBm
Maximum Input Power (Continuous RF)		+33 dBm
Operating Temperature Range		+5°C to +50°C
Storage Temperature Range		-20°C to +60°C
Ingress Rating		IP68
RF Input Cable Termination		BNC-female
Dimensions and Weight BT200: w x l x h mm (inches) Weight		 135 (5.31) x 70 (2.76) x 20.0 (0.79) 222 g (0.49 lbs)
Hard Case: w x l x h mm (inches) Weight		363 (14.29) x 284 (11.18) x 124 (4.88) 1.90 kg (4.2 lbs)

Ordering Options ...

Start with the base configuration ...

BT200 - the basic version will decode all 406 EPIRBs and PLBs, and measure all 406 MHz and 121.5 MHz signal parameters.

Then choose your options ...

add ELT:
Adds the capability to decode all ELTs and measure the 243 MHz channel.

add SGB:
Adds the capability to measure and decode Second Generation Beacons (ELT option required for SGB ELTs).

add AIS (Rx):
Adds the capability to decode and measure the AIS channel in AIS-EPIRBs (Rx only).

add AIS (Rx & Tx):
Adds the capability to test AIS Transceivers and AIS-EPIRBs

add LimitTester:
Adds the LimitTester function to see at a glance if the beacon has passed or failed.

Ordering Codes ...

BT200 - 2 0 0 0 B

FUNCTION	AIS	LIMIT TESTER
0 = EPIRB & PLB 1 = add ELT 2 = add SGB EPIRB & PLB 3 = add SGB ELT	0 = No AIS 1 = add AIS Rx 2 = add AIS Rx Tx	0 = No LT 1 = add LT

Developed and manufactured in Canada by:

WS Technologies Inc.

WS Technologies Inc.'s lines of advanced Beacon Testers are the de facto Beacon Testers worldwide. These testers were developed in Canada by engineers that have extensive experience in the development and manufacturing of 406 ELTs, EPIRBs and PLBs.
Not only does WST offer the most advanced and comprehensive testers available, we offer unprecedented support for beacon testing issues.