

## DATA SHEET

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OPEN FIELD RADIATION MEASUREMENT FCC CLASS "B" LIMITS

REPORT #: 10081-2  
 MANUFACTURE: TEN-TEC  
 MODEL #: 526  
 DATE: 2/2/01  
 SUPPORT EQUIPMENT:

DELTA REFERS TO THE dB DIFFERENCE BETWEEN THE HORIZONTAL OR VERTICAL READING AND THE dB LIMIT AT THAT FREQUENCY.

THE FOLLOWING ARE PEAK READINGS WITH CABLE AND ANTENNA FACTORS INCLUDED EXCEPT AS NOTED BY "QP".

"QP" = QUASI PEAK READING AT THAT FREQUENCY

SPECTRUM ANALYZER SETTINGS:

RBW: 100KHz

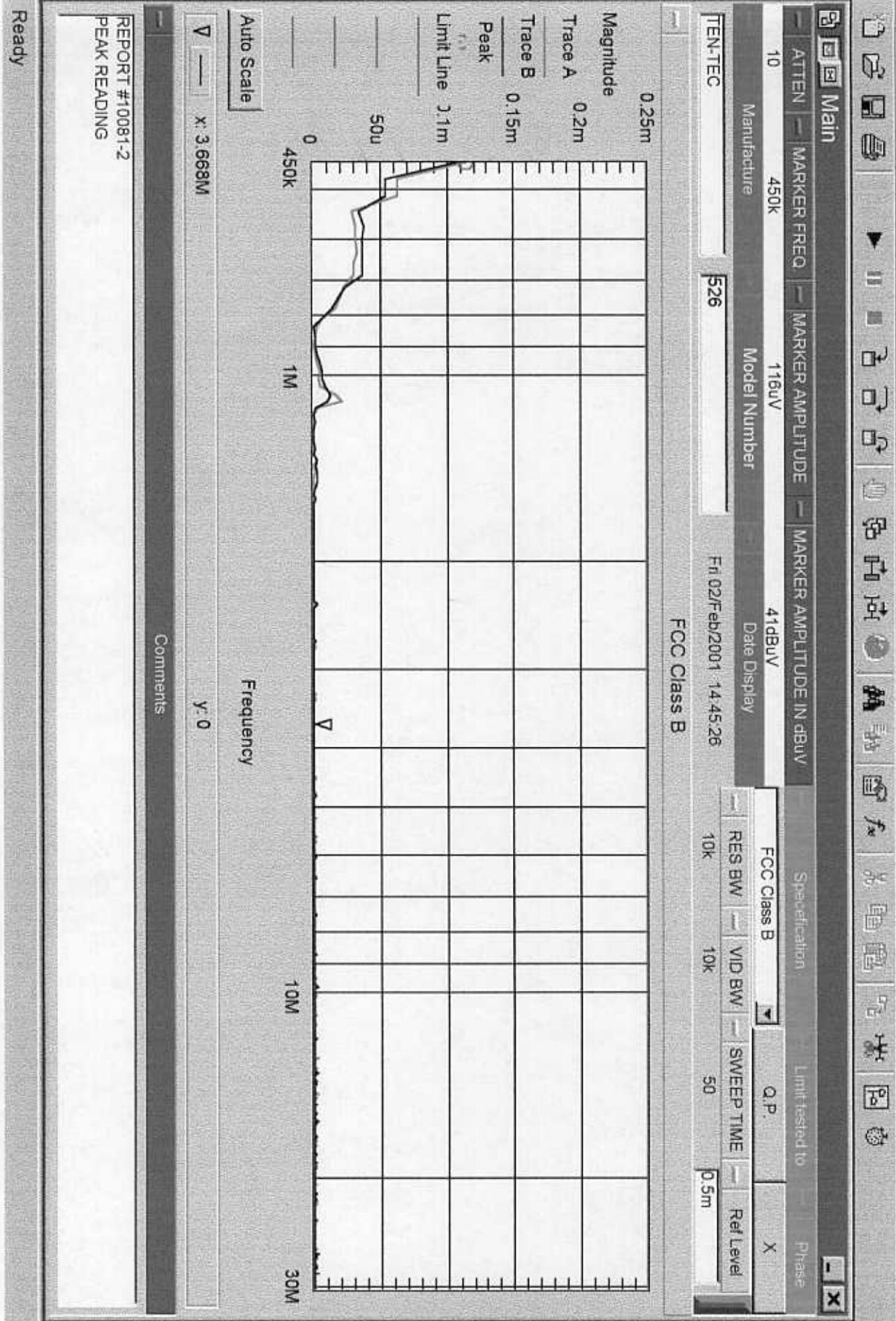
VBW: 100KHz

TEST DISTANCE BETWEEN DEVICE UNDER TEST AND RECEIVING ANTENNA WAS

3-METER

NOTE!! "FAILURE" INDICATES THAT THE DEVICE EXCEEDS THE FCC CLASS "B" LIMIT AT THAT FREQUENCY

FREQ. (MHz)	RAW H	RAW V	ANTENNA FACTOR	HORZ. dBuV/m	VERT. dBuV/m	H DELTA (dBuV)	V DELTA (dBuV)	LIMIT CLASS "B"	FREQ. STATUS
33.3	4.3	8	17.4	21.7	25.4	-18.3	-14.6	40	
200	20.3	14.7	18.1	38.4	32.8	-5.1	-10.7	43.5	
266.7	23.3	23.5	15.5	38.8	39	-7.2	-7	46	
283.4	11.6	8.7	16.9	28.5	25.6	-17.5	-20.4	46	
300	12.4	11.9	18.5	30.9	30.4	-15.1	-15.6	46	
304.4	13.8	11.8	18.5	32.3	30.3	-13.7	-15.7	46	
399.9	13.95	8.3	20.6	34.55	28.9	-11.45	-17.1	46	
469.6	8.7	4.7	21.9	30.6	26.6	-15.4	-19.4	46	
533.3	7.3	13.5	22.9	30.2	36.4	-15.8	-9.6	46	
566.6	8.6	8.2	23.3	31.9	31.5	-14.1	-14.5	46	
608.8	10.9	14.65	23.9	34.8	38.55	-11.2	-7.45	46	
633.3	7.4	15.3	24.3	31.7	39.6	-14.3	-6.4	46	
658.85	5.4	9.2	24.7	30.1	33.9	-15.9	-12.1	46	
666.45	7.9	9.85	24.8	32.7	34.65	-13.3	-11.35	46	
811.6	7.7	9.9	27.6	35.3	37.5	-10.7	-8.5	46	



Ready

February 27, 2001

Re: Modifications to Model 526 to meet part 15 compliance.

- 1) Added ferrite bead between power connector and logic board to eliminate conducted interference.
- 2) Moved 4.7uH inductor feeding first local oscillator inside shield.
- 3) Added cover to first local oscillator shield.
- 4) Added ground clip between bottom shield of first local oscillator and chassis.
- 5) Added ground clip between bottom shield of time base circuit and chassis.
- 6) Added screw to connect the bottom cover to the heat sink.

Ten-Tec, Inc.  
1185 Dolly Parton Pky  
Sevierville, TN 37862

## Preventing unauthorized modifications of Ten-Tec Model 526

The architecture and circuit design of the Ten-Tec model 526 deters modifications of the receiver that would allow it to operate outside its design range. The hardware is limited, by design, to coverage of the Amateur 6-meter band and Amateur 2-meter band with extended coverage for Space Communications and coverage of NOAA weather transmissions. All signal processing, tuning control and user interaction are controlled by a (DSP) Digital Signal Processing Integrated Circuit running proprietary firmware developed by Ten-Tec.

The receiver has been designed such that the 2-meter and 6-meter receivers are compliments of each other. The receiver uses a fixed I.F. with a single VCO. The two distinct bands are managed by taking either the sum or difference frequencies from the mixer. An image frequency on the 2-meter band would appear in the 6-meter band. Likewise an image frequency in the 6 meter band would appear in the 2-meter band.

All VCO components are enclosed in a metal shield with a lid. The VCO has a control range limited to the receiver requirements. Tuning is performed by proprietary tuning algorithms located in DSP firmware. The results of the tuning algorithms are used internally by the DSP and may be externally applied to a PLL circuit. The internal DSP functions must be matched to receiver characteristics for proper operations of the receiver.