Changing the Frequency Band of a Trailblazer
Software version 1.49

1 Connecting to the Trailblazer

1.1 The GUI cable

To connect to the Trailblazer, you will need the DB9 to Molex 3-pin serial cable provided with the unit. If you do not have the cable, you can assemble your own, using the table and diagrams below. Trailblazer Tech Kits are also available for purchase.

Configuration Port Cable Construction Table			
A DB9 pin Female to be fit in the PC is wired with:		***A 3 pin, .100" spacing connector, female, connecting to the Trailblazer as shown:***	
Pin 1	*DCD (not used)*		
Pin 2	*TX Data (to Molex Pin 1)*	Pin 1	*TX Data*
Pin 3	*RX Data (to Molex Pin 3)*	Pin 3	*RX Data*
Pin 4	*DTR (not used)*		
Pin 5	*SG (signal ground) (to Molex Pin 2)*	Pin 2	*SG (signal ground)*
Pin 6	*DSR (not used)*		
Pin 7	*RTS (not used)*		
Pin 8	*CTS (not used)*		
Pin 9	*RI (not used)*		

Table 1: Configuration Port Cable Construction

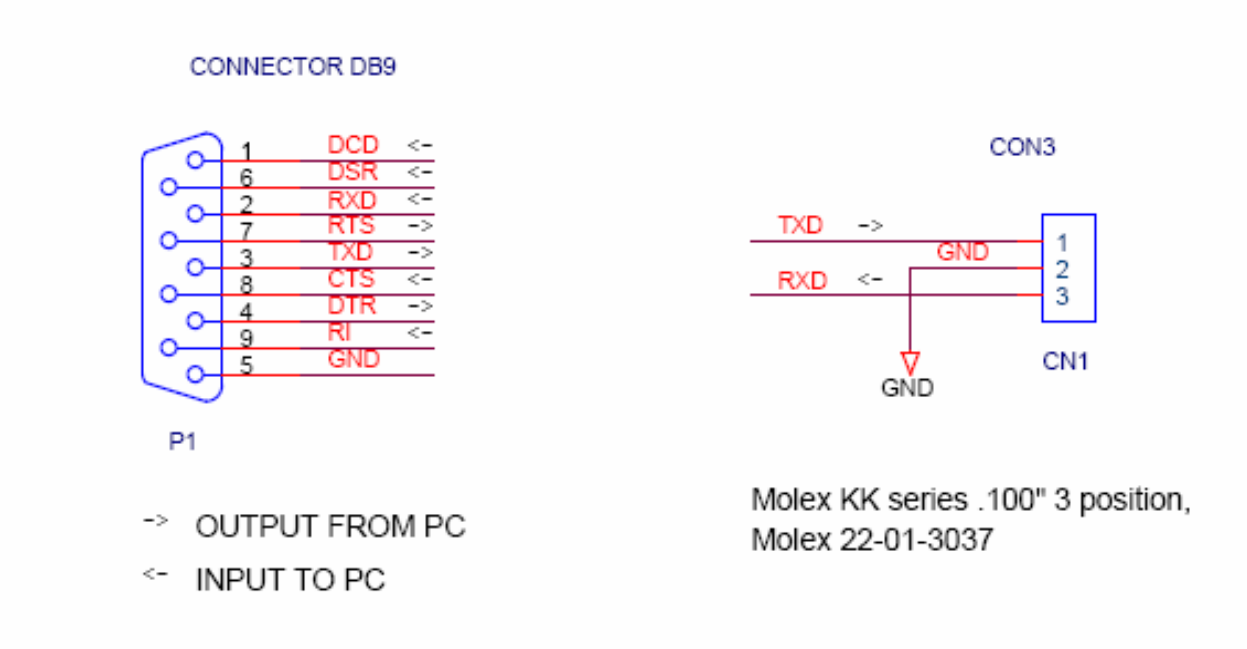

Figure 1: DB9 and 3-pin Molex Pin-out Diagrams

1.2 Connecting to the radio

The 3-pin connection is located between the LEDs and the FREQ/CODE switch on the radio interface card (bottom card).

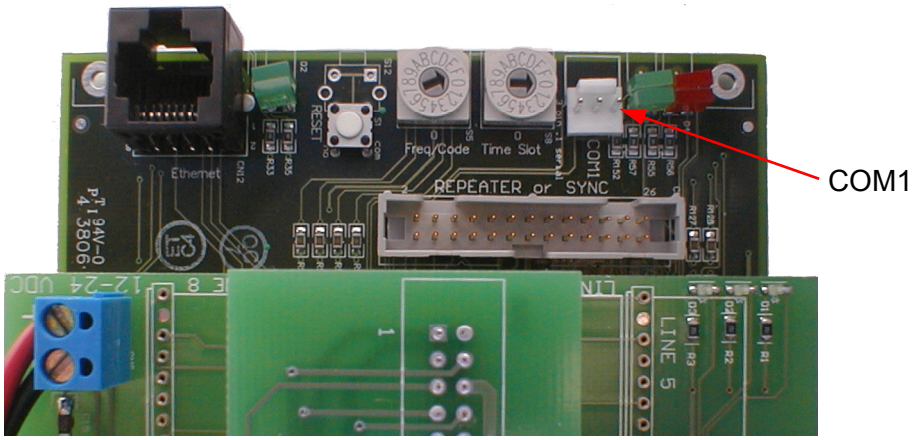

Figure 2: Location of 3-pin Molex Connection (your unit may differ)

2 Using the Graphical User Interface (GUI)

2.1 Selecting the COM port

After connecting to the Trailblazer, open the GUI and select the COM port attached to the unit. If you do not have the GUI, you can find it on the Trailblazer Quick Start CD. You may also contact Carlson Support for any software needs at +1 (707) 822-7000 or via email at support@carlsonwireless.com.

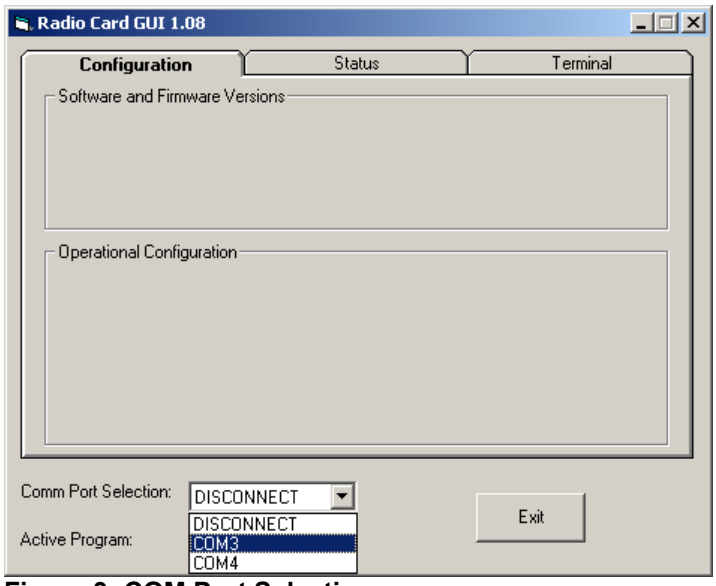

Figure 3: COM Port Selection

2.2 The Terminal Tab

Click on the Terminal Tab.

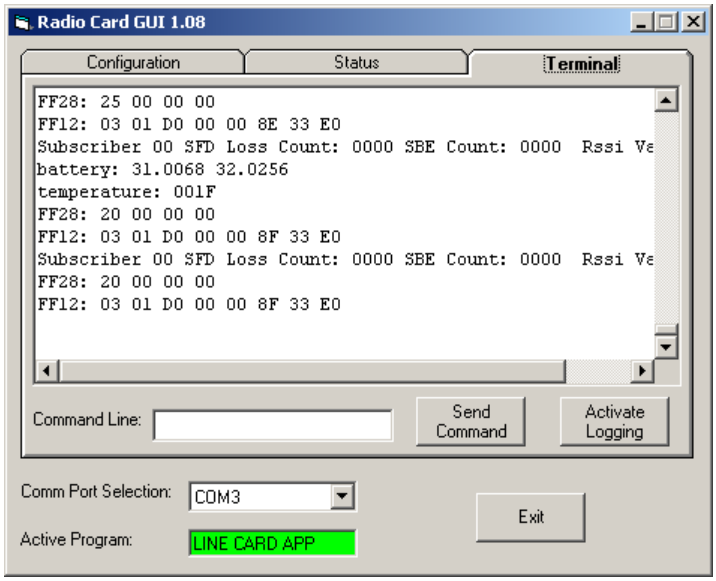

Figure 4 – Terminal Tab

2.3 Finding the Frequency Band

You will use the **Command Line** field to read and change EEPROM registers. Begin by typing *ree 03* in the command line and then you must click on the **Send Command** button. You cannot use the Enter key on your keyboard. The response to your command will show the corresponding parameter (highlighted text in figure below). This register setting correlates to a frequency band (see Table 2: Frequency Chart for Available Bands – TB Software v2.49).

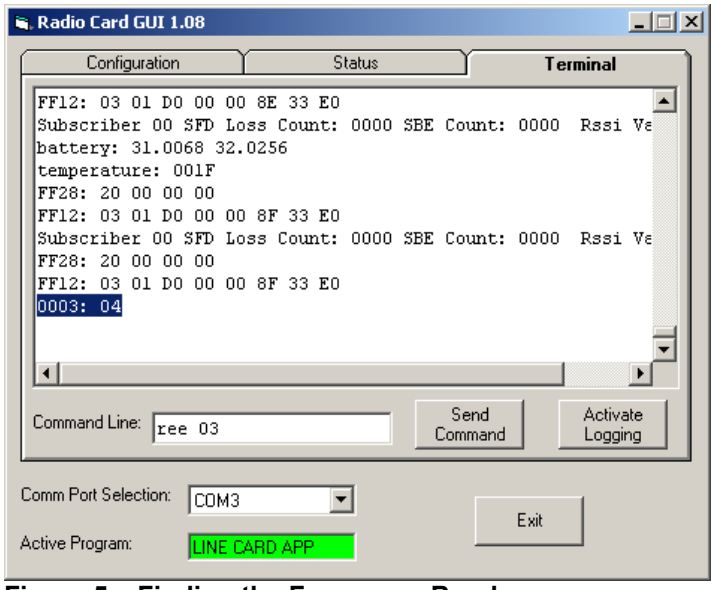

Figure 5 – Finding the Frequency Band

2.4 Changing the Frequency Band

Use the *wee* command to write the frequency band EEPROM register (03) with the frequency band you wish to use. Leave a space after the register number. After you use the **Send Command** button, you will get a response showing your new setting (highlighted text in figure below). Review Table 2: Frequency Chart for Available Bands – TB Software v2.49 for a list of frequencies and the corresponding EEPROM parameters for each band.

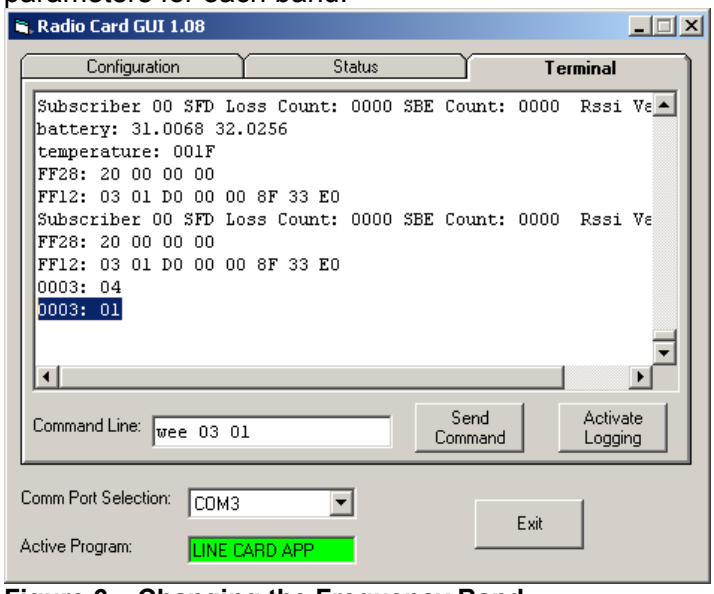

Figure 6 – Changing the Frequency Band

2.5 Resetting the unit

You can reset the unit by cycling the power, using the reboot button on the radio interface card or sending the “reboot” command, using the *Command Line*.

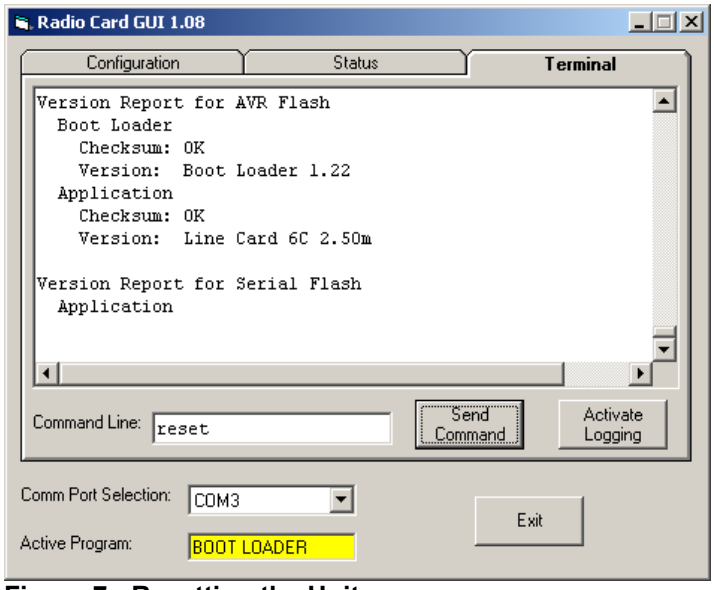

Figure 7 - Resetting the Unit

2.6 Final Testing

If your units link up after they reset, you are done. Repeat Step 2.3 to ensure the correct parameters are set. If the units are not on the same frequency band, they will not link up (see the figures below). This usually occurs if you set the units to different bands. If you run into this trouble, try resetting both units. If that does not solve the problem, return to Step 2.3. Remember, of course, your antennas must support the band you are using.

Without an active link, the Base unit will show “Data channel(s) started” (highlighted below). Note the active radio frequency and CDMA code is indicated in the terminal.

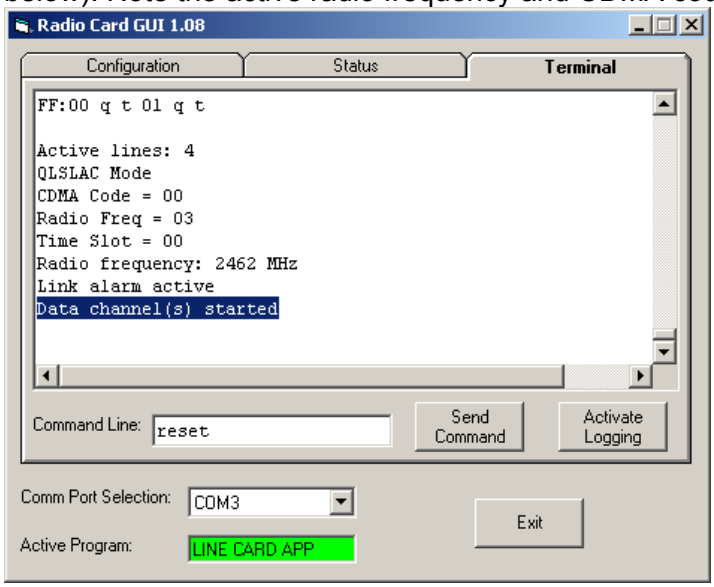

Figure 8 - Base Unit without an Established Connection

Without an active link, the Remote/CPE will show “Starting Acquisition.” The CPE will also reset every two minutes, until it acquires a signal.

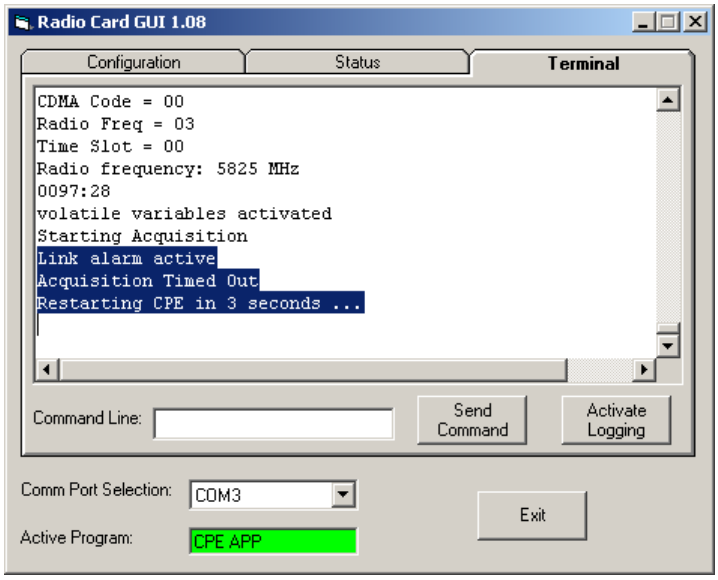

Figure 9 - Remote Unit without an Established Connection

3 Finding the Band for Your Application

3.1 Available Frequencies

The frequency chart below details the frequencies available in each band for Trailblazer software version 2.49. Previous versions only have bands 0 through 5 available. Newer software versions are subject to change. Note you can only use the highlighted frequencies with the Teletronics UDC900 up/down 2.4GHz to 900MHz converter.

BAND	FREQ 0	FREQ 1	FREQ 2	FREQ 3
00	2412	2432	2452	2472
01	2414	2430	2446	2462
02	4950	4960	4970	4980
03	4950	4960	4970	4980
04	5735	5765	5795	5825
05	5750	5780	5810	5840
06	2416	2431	2446	2461
07	2412	2432	2452	2472
08	5735	5750	5765	5780
09	5795	5810	5825	5840
0A	5490	5520	5550	5580
0B	5505	5535	5565	5595
0C	5600	5630	5660	5690
0D	5615	5645	5675	5705

Table 2: Frequency Chart for Available Bands – TB Software v2.49

3.2 Frequencies/CDMA Spreading Codes

The chart below shows the channel settings and their related CDMA spreading codes.

CDMA CODE	FREQ 0	FREQ 1	FREQ 2	FREQ 3
Code 0	0	1	2	3
Code 1	4	5	6	7
Code 2	8	9	A	B
Code 3	C	D	E	F

Table 3: Channel Chart for Frequency and CDMA Spreading Code Selection