

2.1 FREQUENCY SETUP

The Frequency can be set on the transmitter in one of two ways:

1. From internal direct reading decimal switches on the main board
2. From the front panel LCD display and front panel buttons.

Many radio regulatory bodies stipulate that the transmitters parameters including the frequency must not be easily changed from the front panel. To meet this requirement you will need to set the frequency internally with the dial switches.

The switches have a silkscreen diagram next to them on the board (see diagram below) clearly indicating what each switch represents.

The top dial switch represents the value selected $\times 10$ MHz with the exception of '0' which represents 10 so when selected would equal 100 MHz.

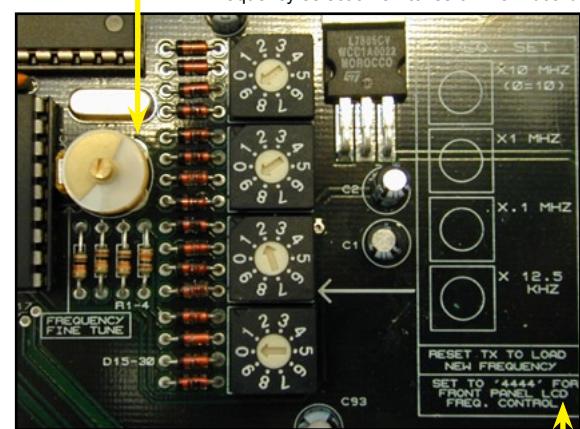
The second dial switch represents the value selected $\times 1$ MHz.

The third dial switch represents the value selected $\times .1$ MHz (100 kHz)

The bottom switch represents the value selected $\times .0125$ MHz (12.5 kHz)

Fine frequency control. Do not adjust unless you know what you are doing. Consult advanced setup section of manual for more information.

Frequency selection switches on main board



For example:

FREQ	SWITCHES (MHz)			
	X10	X1	X.1	X.0125
87.90	'8'	'7'	'9'	'0'
98.75	'9'	'8'	'7'	'4'
100.00	'0'	'0'	'0'	'0'
104.225	'0'	'4'	'2'	'2'
108.00	'0'	'8'	'0'	'0'

As you can see, the switches directly read the frequency with the exception of frequencies above 100 MHz, where the top switch being set at '0' represents '10'. The X0.125 'offset' switch is only used when you want to provide a shift to the carrier of between 12.5 kHz and 112.5 kHz. Note that setting the switch on 8 or 9 will have the same effect as setting the previous switch (100 kHz) 1 position higher, as 8 represents 100 kHz on the 12.5 kHz switch.
 $8 \times 0.125\text{MHz} = 0.1\text{MHz} = 100\text{kHz}$

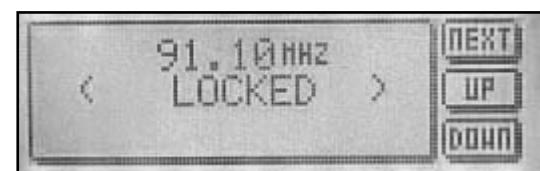
Note that some PCB's have "set to 4444 for front panel LCD control". This is an error that will cause a +50kHz offset to the frequency set on the LCD screen. Please set to 4440 unless you specifically want the offset.

The LCD display on the front panel will display the frequency that you have set on the internal switches. If you try to adjust the frequency with the front panel up / down buttons you will get a 'NOT ALLOWED' message appearing on the LCD display. This protects against unauthorized front panel frequency changes when the frequency has been set internally with the dial switches.

The TX will load the switch values at power up. You will need to remove the mains power to the transmitter and then reapply it if you want to change the frequency by using the direct reading switches

LCD front panel frequency selection.

If you want to control the frequency from the front panel LCD control system you will need to set the internal switches to 4440. The transmitter will pass frequency control to the LCD control system and the frequency can be moved up and down by pressing the NEXT button until the frequency menu is displayed. The other two buttons control the UP and DOWN frequency selection. PLL lock status is also displayed on this screen.



The LCD readout will only display frequencies in 100Khz steps. Any frequency offsets derived from the internal 12.5kHz offset switch will not show on the LCD. Consult a frequency counter if using offsets.