

ATTENTION HAMS:

Here is an inexpensive way to get on 10 meter amateur radio. These inexpensive modification may be performed by licensed amateurs only.

CONVERSION OF AM/ SSB UNITS TO 10 METER AMATEUR RADIO SERVICE

CENTURION PLL, PLL 40 & 40D, GLADIATOR PLL, PLL 40

The mixing crystal, X3 (11.2855 MHz), in the PLL section must be changed to a crystal on the operating frequency one third of the frequency increment over what the original frequency was for channel 1.

FORMULA:

1. Desired Channel 1 Frequency minus Present Channel 1 frequency = Frequency increment
2.
$$\frac{\text{Frequency increment} + \text{Present Mixer Crystal frequency}}{3} = \text{New Mixer Crystal frequency}$$

For example: Channel 1 is now on 26.965 MHz. If we want Channel 1 to operate on 28.50 MHz, we subtract 26.965 from 28.50. This will give us 1.535 MHz, and since the oscillator frequency is triple, we have to divide this number by 3. In this case, 0.511666 MHz. Adding this last figure to the present mixer crystal frequency brings the new mixer crystal frequency to 11.7971 MHz. This is the Upper Side Band.

For AM and lower Side Band, the same formula is used with crystal X2 (11.2845 MHz). Since the mixer crystal is 11.2845 MHz and since one third of the frequency difference is 0.511666, the new mixer crystal for operation on 28.50 MHz for AM and LSB will be 11.7961 MHz.

The PLL section, the transmitter section and receiver front end must be tuned to the new frequencies following the indications found in the service manual with the only difference being that we must change the receiver input frequency and transmitter output from the CB frequencies that appear in the service manual.

In order to broad band the transmitter, change the connection on the transformer between the mixer FET6 and the buffer from a center tap configuration to full winding. This can be done by cutting the pc board copper pattern with a sharp knife and putting an extra jumper. This is L24 primary.