

FREQUENCY PROGRAMMING

The transceiver has 2 (or 12) channels, both transmit and receive. The channel select switch selects one transmit and one receive channel in each.

The amount of frequency spread between any two receiving frequencies should not exceed 2.5MHz, and any two transmitting frequencies should not exceed 6MHz. Since the receiver and transmitter are independent of each other, you may have any practical amount of frequency separation you wish here. Only two or more widely spaced frequencies for the receiver alone or for the transmitter alone need be considered under the 2.5MHz or 6MHz limitation.

Desired operating frequency can be programmed by mounting certain diode(s) on the MATRIX board.

1. Calculate the "N" number of the desired operating frequency, using the programming formula for each version shown below. ("N" is divided number of the programmable divider in the Phase Locked Loop, and is determined by the BCD code.)

For 450MHz ~ 460MHz version:

$$\text{Transmit; } N = \frac{\text{Desired Frequency (MHz)} / 2 - 221.875}{0.0025^*}$$

$$\text{Receive; } N = \frac{(\text{Desired Frequency (MHz)} - 21.4) / 2 - 211.175}{0.0025^*}$$

For 460MHz ~ 470MHz version:

$$\text{Transmit; } N = \frac{\text{Desired Frequency (MHz)} / 2 - 226.875}{0.0025^*}$$

$$\text{Receive; } N = \frac{(\text{Desired Frequency (MHz)} - 21.4) / 2 - 216.175}{0.0025^*}$$

* For 12.5KHz channel spacing version, use "0.00625" instead of "0.0025".

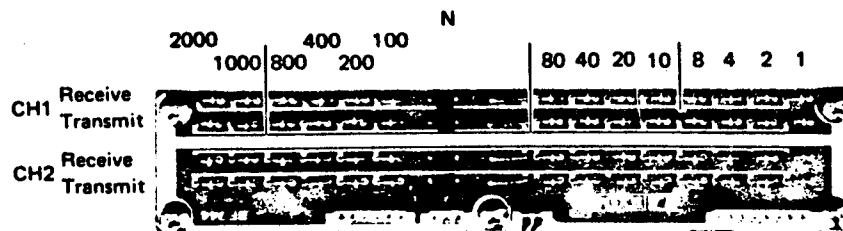
2. Convert each digit of the "N" number to BCD, using the conversion table shown below.

N	BCD	N	BCD
1	0001	6	0110
2	0010	7	0111
3	0011	8	1000
4	0100	9	1001
5	0101	0	0000

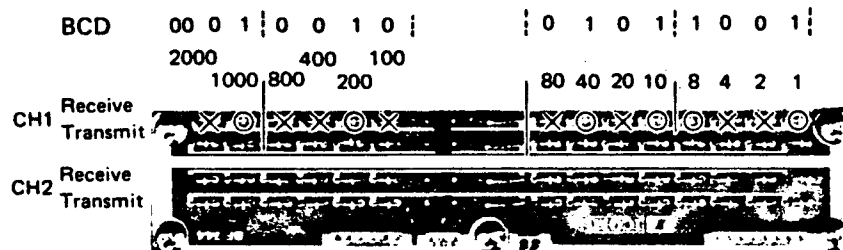
For example: If N = 1259, BCD = 0001 0010 0101 1001

3. Mount diodes corresponding to the chosen channel, using the BCD number, when "1" = diode mounted, and "0" = diode not mounted (cut the lead of the mounted diode).

The first digit of the BCD corresponds to the first row (N = 1), where is on the MATRIX board, the second digit to the second row (N = 2), the third digit to the third row (N = 4), the fourth digit to the fourth row (N = 8) and so on.



For example: When N = 1259, BCD = 0001 0010 0101 1001, so mount diodes as follows.



O : Diode is mounted.

X : Diode is not mounted. (Cut the lead of the mounted diode.)

4. Complete programming for additional desired channel(s) in the same manner. The receive and transmit frequencies must be programmed individually, even if the both frequencies are the same.