

FreeWave Technologies Inc. 138-144 MHz User Manual Addendum

The FreeWave Technologies DGVRxxx 138-144 MHz transceivers operate in substantially the same manner as the 900 MHz and 2.4 GHz transceivers. They can be used in point to point, multipoint, and repeater modes, with essentially the same parameter options.

The one difference is in the operation of the Frequency Key, and consequently setting of the frequencies used. The DGVRxxx may be set up to be used in single frequency mode as a narrow band transceiver or as a frequency hopping transceiver, utilizing part or all of the 138-144 MHz band.

Note: It is imperative that all transceivers used in a network are set to identical frequency parameters.

To set the frequency or frequencies to be used enter the Radio Parameters section of the transceiver setup from the Main Menu, as shown below (how to get into this menu is described in more detail in the User Manual):

MAIN MENU

138 MHz Version 1.10 10-10-98

Modem Serial Number 138-0154

- (0) Set Operation Mode
- (1) Set Baud Rate

- (2) Edit Call Book
- (3) Edit Radio Transmission Characteristics
- (4) Show Radio Statistics
- (5) Edit MultiPoint Parameters
- (6) TDMA Menu
- (Esc) Exit Setup

Enter Choice

RADIO PARAMETERS

WARNING: Do not change parameters without reading manual

- (0) Frequency Chan HopTable
- (1) Max Packet Size 8
- (2) Min Packet Size 9
- (3) Xmit Rate 1
- (4) RF Data Rate 3
- (5) RF Xmit Power 9
- (6) Slave Security 0
- (7) RTS to CTS 0
- (8) Retry Time Out 255
- (Esc) Exit to Main Menu

Enter Choice

Operation in Frequency Hopping Mode

To operate the transceiver in frequency hopping mode enter a 0 in the Radio Parameters section of the menu, corresponding to Frequency Channel.

You will then go through the following series of choices:

1. Enter a 0 to program the transceiver to operate in frequency hopping mode.
2. You will then be prompted to program which frequencies should be used and in what order. For example, to use operate at 138.050 MHz in the initial slot enter a 0 for slot number 0 (the first slot) and a 2 for the frequency. A table of frequencies used and their corresponding slot numbers is presented below.
3. You will then be prompted to enter the number of hops to be used. An entry of 0 uses only the initial frequency, 15 uses all 15 frequencies entered in the order shown on the Frequency Channel menu.
4. This process is followed until the entire frequency channel table is programmed to the frequencies desired in the desired sequence.

138-144 MHz Frequency Table

Slot	Frequency	Slot	Frequency	Slot	Frequency	Slot	Frequency
0	138.000	60	139.500	120	141.000	180	142.500
1	138.025	61	139.525	121	141.025	181	142.525
2	138.050	62	139.550	122	141.050	182	142.550
3	138.075	63	139.575	123	141.075	183	142.575
4	138.100	64	139.600	124	141.100	184	142.600
5	138.125	65	139.625	125	141.125	185	142.625
6	138.150	66	139.650	126	141.150	186	142.650
7	138.175	67	139.675	127	141.175	187	142.675
8	138.200	68	139.700	128	141.200	188	142.700
9	138.225	69	139.725	129	141.225	189	142.725
10	138.250	70	139.750	130	141.250	190	142.750
11	138.275	71	139.775	131	141.275	191	142.775
12	138.300	72	139.800	132	141.300	192	142.800
13	138.325	73	139.825	133	141.325	193	142.825
14	138.350	74	139.850	134	141.350	194	142.850
15	138.375	75	139.875	135	141.375	195	142.875
16	138.400	76	139.900	136	141.400	196	142.900
17	138.425	77	139.925	137	141.425	197	142.925
18	138.450	78	139.950	138	141.450	198	142.950
19	138.475	79	139.975	139	141.475	199	142.975
20	138.500	80	140.000	140	141.500	200	143.000
21	138.525	81	140.025	141	141.525	201	143.025
22	138.550	82	140.050	142	141.550	202	143.050
23	138.575	83	140.075	143	141.575	203	143.075

24	138.600	84	140.100	144	141.600	204	143.100
25	138.625	85	140.125	145	141.625	205	143.125
26	138.650	86	140.150	146	141.650	206	143.150
27	138.675	87	140.175	147	141.675	207	143.175
28	138.700	88	140.200	148	141.700	208	143.200
29	138.725	89	140.225	149	141.725	209	143.225
30	138.750	90	140.250	150	141.750	210	143.250
31	138.775	91	140.275	151	141.775	211	143.275
32	138.800	92	140.300	152	141.800	212	143.300
33	138.825	93	140.325	153	141.825	213	143.325
34	138.850	94	140.350	154	141.850	214	143.350
35	138.875	95	140.375	155	141.875	215	143.375
36	138.900	96	140.400	156	141.900	216	143.400
37	138.925	97	140.425	157	141.925	217	143.425
38	138.950	98	140.450	158	141.950	218	143.450
39	138.975	99	140.475	159	141.975	219	143.475
40	139.000	100	140.500	160	142.000	220	143.500
41	139.025	101	140.525	161	142.025	221	143.525
42	139.050	102	140.550	162	142.050	222	143.550
43	139.075	103	140.575	163	142.075	223	143.575
44	139.100	104	140.600	164	142.100	224	143.600
45	139.125	105	140.625	165	142.125	225	143.625
46	139.150	106	140.650	166	142.150	226	143.650
47	139.175	107	140.675	167	142.175	227	143.675
48	139.200	108	140.700	168	142.200	228	143.700
49	139.225	109	140.725	169	142.225	229	143.725
50	139.250	110	140.750	170	142.250	230	143.750
51	139.275	111	140.775	171	142.275	231	143.775
52	139.300	112	140.800	172	142.300	232	143.800
53	139.325	113	140.825	173	142.325	233	143.825
54	139.350	114	140.850	174	142.350	234	143.850
55	139.375	115	140.875	175	142.375	235	143.875
56	139.400	116	140.900	176	142.400	236	143.900
57	139.425	117	140.925	177	142.425	237	143.925
58	139.450	118	140.950	178	142.450	238	143.950
59	139.475	119	140.975	179	142.475	239	143.975
						240	144.000

Operation in Single Frequency Mode

To operate the transceiver in frequency hopping mode enter a 0 in the Radio Parameters section of the menu, corresponding to Frequency Channel.

You will then go through the following series of choices:

1. Enter a 1 to program the transceiver to operate in single frequency mode.
2. You will then be prompted to enter the frequency to be used with the prompt: Enter New Frequency Channel (0-240)
3. Once the single frequency has been entered it will appear at the bottom of the table as the Channel Number. In addition, the Radio Parameters menu will now appear as shown below:

