

# Programming Commands

Controller Unlock Code = \_\_\_\_\_

DIP Switch Positions (circle settings)

	ON	OFF
1 Rcvr COS	Hi True	Lo True
2 Rptr Tx PTT	Hi True	Lo True
3 Ctrl Rcvr COS	Hi True	Lo True
4 R/C Mode	Exp/FC900	Direct/BCD
7 Rmt Base Select	FC900	BCD

## Message Preparation

Morse	Speech	Descrip	Max	Resp
*1000	*1100	Initial ID	20	II
*1001	—	Forced CW ID	12	FI
*1002	*1102	Anxious ID	12	AI
*1003	*1103	Pending ID 1	24	P1
*1004	*1104	Pending ID 2	24	P2
*1005	*1105	Pending ID 3	24	P3
*1006	*1106	Special ID	48	SI
*1007	*1107	Tail Msg 1	8	T1
*1008	*1108	Tail Msg 2	8	T2
*1009	*1109	Tail Msg 3	8	T3
*1010-9	*1110-9	Autodial Msgs	6	E0-E9
*1020	*1120	Phone Ans	16	PH
*1021	*1121	Phone Hangup	8	HG
*1022	*1122	Alarm	8	AL
*1023	*1123	Bulletin Bd 1	32	B1
*1024	*1124	Bulletin Bd 2	32	B2
—	*1125	Patch Dial Ptx	6	DX

## Message Editing Commands

- \*0 Store Completed Message in Memory
- \*1 Erase Last Character (Iterative)
- \*2 Read Back Message for Checking
- \*4 Return to UL State without Storing Msg

## Tone Parameters

*2000 (Morse code speed)	12-30 wpm
Setting = _____	
*2010 (Morse code pitch)	0-3000 Hz
Setting = _____	
*2020 (Cover tone pitch)	0-3000 Hz
Setting = _____	

## Timers

- \*4000(p) Long Repeater Timeout TL  
(p = -30-1799 sec)  
Setting = \_\_\_\_\_ sec
- \*4001(p) Short Repeater Timeout TS  
(p = -15-1799 sec)  
Setting = \_\_\_\_\_ sec
- \*4002(p) Phone Answer Delay PA  
(p = -10-60 sec)  
Setting = \_\_\_\_\_ sec
- \*4003(p) Autopatch Timer AP  
(p = 0, -60-1799 sec)  
Setting = \_\_\_\_\_ sec
- \*4004(p) User Autodial Timer AU  
(p = 0, -60-1799 sec)  
Setting = \_\_\_\_\_ sec
- \*4005(p) Emergency Autodial Timer AE  
(p = 0, -60-1799 sec)  
Setting = \_\_\_\_\_ sec
- \*4006(p) Patch Activity Timer AA  
(p = 0, -30-1799 sec)  
Setting = \_\_\_\_\_ sec
- \*4007(p) Patch Timer Extend Timer TX  
(p = 0, -30-1799 sec)  
Setting = \_\_\_\_\_ sec
- \*4008(p) Tail Message Timer TM  
(p = -60-1799 sec)  
Setting = \_\_\_\_\_ sec
- \*4009(p) Touch-Tone Access Timer TA  
(p = 0, -30-1799 sec)  
Setting = \_\_\_\_\_ sec
- \*4010(p) Hang Timer HT  
(p = -750-5000 ms)  
Setting = \_\_\_\_\_ milliseconds
- \*4011(p) Spare Audio Timer SP  
(p = 0, -30-1799 sec)  
Setting = \_\_\_\_\_ sec
- \*4012(p) ID Timer ID  
(p = 360 s [amateur]  
p = 540 or 1140 [commercial])  
Setting = \_\_\_\_\_ sec
- \*4013(p) Ringout Timer RO  
(p = -10 - 120 sec)  
Setting = \_\_\_\_\_ sec
- \*4014(p) Mode 3 Paging Talkout Timer TK  
(p = -10 - 60 sec)  
Setting = \_\_\_\_\_ sec
- \*4015(p) Alarm Timer AL  
(p = 0, -10 - 1799 sec)  
Setting = \_\_\_\_\_ sec

## Assign Prefixes (p) and Commands (c) CMD

Maximum 7 characters.  
Load empty prefix or command to disable it.

- \*5000(p) Control Op Command Prefix  
Setting = \_\_\_\_\_
- \*5001(p) User Function (UF) Logic Output  
Setting = \_\_\_\_\_
- \*5002(p) Emergency Autodial  
Setting = \_\_\_\_\_
- \*5003(p) User Autodial Call (Bank 0)  
Setting = \_\_\_\_\_
- \*5004(p) Autopatch  
Setting = \_\_\_\_\_
- \*5005(p) Link / Remote Base  
Setting = \_\_\_\_\_
- \*5006(p) User Autodial Load/Erase (B0)  
Setting = \_\_\_\_\_
- \*5007(p) Demo / Bulletin Board  
Setting = \_\_\_\_\_
- \*5008(c) Rev Patch (from phone only)  
Setting = \_\_\_\_\_
- \*5009(c) Spare Audio (user cancels with #)  
Setting = \_\_\_\_\_
- \*5010(p) Patch Utilities  
Setting = \_\_\_\_\_
- \*5011(c) Patch Hangup (empty sets to "#")  
Setting = \_\_\_\_\_
- \*5012(p) Two-Tone Paging  
Setting = \_\_\_\_\_
- \*5013(p) Touch-Tone Access Up/Down  
Setting = \_\_\_\_\_
- \*5014(c) S-Meter Readback  
Setting = \_\_\_\_\_
- \*5015(p) Ext User Autodial Call (Bank 1)  
Setting = \_\_\_\_\_
- \*5016(p) Ext User Autodial Load/Erase (B1)  
Setting = \_\_\_\_\_
- \*5017(c) Telephone Timer Extend  
Setting = \_\_\_\_\_
- \*5018(p) Memory Paging  
Setting = \_\_\_\_\_
- \*5019(p) Touch-Tone Pad Test  
Setting = \_\_\_\_\_

**Courtesy Tone Selection**

- \*3001(ct) CT Logic HI Tone ct = 0-9 CT  
Setting = \_\_\_\_\_
- \*3002(ct) Link Tone ct = 0-9 CT  
Setting = \_\_\_\_\_
- 0 No tone
  - 1 Bumblebee
  - 2 Yellow Jacket
  - 3 Shooting Star
  - 4 Comet
  - 5 Stardust
  - 6 Duncce Cap
  - 7 Piano Chord
  - 8 Boop
  - 9 Beep

**Tone Panel (if TNP Present) TONE**

Tones take effect only after Reset (Control Op command prefix 18).

- \*5100 0 Make Tone 1 Decode  
\*5100 1 Make Tone 1 Encodes  
Setting = E / D
- \*510 t ff Set Tone t to Frequency ff  
(Tones 2 to 8 are all decode)
- Tone 1 = \_\_\_\_\_ Tone 5 = \_\_\_\_\_  
Tone 2 = \_\_\_\_\_ Tone 6 = \_\_\_\_\_  
Tone 3 = \_\_\_\_\_ Tone 7 = \_\_\_\_\_  
Tone 4 = \_\_\_\_\_ Tone 8 = \_\_\_\_\_

**CTCSS Frequencies (ff)**

ff	Freq	Code	ff	Freq	Code
01	87.0	XZ (L1)	21	138.5	4Z (4)
02	71.9	XA (L2)	22	141.3	4A
03	74.4	WA	23	148.2	4B
04	77.0	XB (L3)	24	151.4	5Z (5)
05	79.7	WB	25	156.7	5A
06	82.5	YZ (L4)	26	162.2	5B
07	85.4	YA	27	167.9	6Z (6)
08	88.5	YB (L4A)	28	173.8	6A
09	91.5	ZZ	29	179.9	6B
10	94.8	ZA (L5)	30	186.2	7Z (7)
11	[97.4*]	[Z8*]	31	192.8	7A
12	100.0	1Z (1)	32	203.5	M1
13	103.5	1A	33	210.7	M2
14	107.2	1B	34	219.1	M3
15	110.9	2Z (2)	35	225.7	M4
16	114.8	2A	36	233.6	M5
17	118.8	2B	37	241.8	M6
18	123.0	3Z (3)	38	250.3	M7
19	127.3	3A			
20	131.8	3B			

\* Not supported internally

**Emergency Autodial Numbers**

- \*520x(telephone number) x = location 0 - 9
- 0 = \_\_\_\_\_
  - 1 = \_\_\_\_\_
  - 2 = \_\_\_\_\_
  - 3 = \_\_\_\_\_
  - 4 = \_\_\_\_\_
  - 5 = \_\_\_\_\_
  - 8 = \_\_\_\_\_
  - 7 = \_\_\_\_\_
  - 8 = \_\_\_\_\_
  - 9 = \_\_\_\_\_

**Miscellaneous Selections (circle settings)**

- \*5400 Touch-Tone Patch Signalling TT
- \*5401 Dial Pulse Patch Signalling DP
- \*5402 Enable Control over Rptr Rcvr EC
- \*5403 Disable Control over Rptr Rcvr DC
- \*5404 Phone Line Not Shared PLU
- \*5405 Phone Line Shared PLS
- \*5406 User Functions Low True FL
- \*5407 User Functions High True FH

**Store Macro Sets MACRO**

- \*5911 Store #1: \_\_\_\_\_
- \*5912 Store #2: \_\_\_\_\_
- \*5913 Store #3: \_\_\_\_\_
- \*5914 Store #4: \_\_\_\_\_
- \*5915 Store #5: \_\_\_\_\_

**Pager Memories PAGE**

- \*29 xxx f aaaa(aa)  
xxx = three digit memory number (000-999)  
f = pager format
- 0 = 1.0 sec / 3.0 second two-tone
  - 1 = 2.7 sec / 0.8 second two-tone
  - 2 = 0.4 sec / 0.8 second two-tone
  - 3 = 8.0 sec group call
  - 4 = DTMF
  - 5 = five-tone sequential
  - 6 = six-tone sequential
- aaaa(aa) = pager address (varies with format)
- 2-tone: A group, A tone, B group, B tone
  - 2-tone group call: A group, A tone, A group, A tone
  - DTMF: 4 or 8 digits (0-9, \*, A, B, C) (pad with trailing D keys)
  - 5/6 tone: wakeup tone (\* for none), tones 1-5 (6 digits)

**Two-Tone Sequential Motorola Frequencies**

Tone	Group 1		Group 2	
	Code	Freq	Code	Freq
1	111	348.0	121	800.9
2	112	368.5	122	634.5
3	113	389.0	123	669.9
4	114	410.8	124	707.3
5	115	433.7	125	748.8
6	116	457.9	126	788.5
7	117	483.5	127	832.5
8	118	510.5	128	879.0
9	119	539.0	129	928.1
0	110	330.5	120	569.1

  

Tone	Group 3		Group 4	
	Code	Freq	Code	Freq
1	138	288.5	141	339.6
2	108	296.5	142	358.6
3	139	304.7	143	378.6
4	109	313.0	144	399.8
5	160	953.7	145	422.1
6	130	979.9	148	445.7
7	161	1008.9	147	470.5
8	131	1034.7	148	498.8
9	182	1063.2	149	524.6
0	189	1092.4	140	321.7

  

Tone	Group 5		Group 8	
	Code	Freq	Code	Freq
1	151	584.8	191	1153.4
2	152	817.4	192	1185.2
3	153	651.9	193	1217.8
4	154	688.3	194	1251.4
5	155	726.8	195	1285.8
6	156	767.4	198	1321.2
7	157	810.2	197	1357.6
8	158	855.5	198	1395.0
9	159	903.2	199	1433.4
0	150	553.9	190	1122.5

**GE Tone 99 Tone Frequencies**

Tone	Group 7		Group 8		Group 9 Freq "C"
	Freq "A"	Freq "B"	Freq "A"	Freq "B"	
1	592.5	607.5			712.5
2	757.5	787.5			772.5
3	802.5	832.5			817.5
4	847.5	877.5			862.5
5	892.5	922.5			907.5
6	937.5	967.5			952.5
7	547.5	517.5			532.5
8	727.5	582.5			577.5
9	637.5	697.5			622.5
0	682.5	652.5			667.5

**5/6 Tone Sequential Frequencies**

Tone	Freq	Tone	Freq	Tone	Freq
0	600	4	1164	8	1728
1	741	5	1305	9	1869
2	882	6	1446	A	2010
3	1023	7	1587	R	459