

# Reference for MURS-V1 Menus

## by Jim Unroe - KC9HI

### 29-April-2018

(send comments, suggestions or corrections to [MURS-V1@KC9HI.net](mailto:MURS-V1@KC9HI.net))

Menu Number / Short Name	Long Name / Description / Settings / Notes	Global	MR/ Channel Mode	VFO/ Frequency Mode	Separate VFO A & B Settings	Stored on a Per Channel Basis
0 SQL	Carrier <b>SQ</b> ueLch	✓				
	Mutes the speaker of the transceiver in the absence of a strong signal. Squelch is either OFF or one of 9 levels. The higher the level, the stronger the signal must be to un-mute the speaker.					
	Settings: 0 - 9					
	Default: 5					
	Note: The CALL button (FM or ALARM) is not functional when menu 0 = 0					
1 STEP	Frequency <b>STEP</b> (Khz)					
	SFT-D is not supported by MURS-V1					
	Settings: 2.5K[0]   5.0K[1]   6.25K[2]   10.0K[3]   12.5K[4]   20.0K[5]   25.0K[6]   50.0K[7]					
	Default: 5.0K					
2 TXP	Transmit ( <b>TX</b> ) Power		✓			✓
	Selects between HIGH and LOW transmitter power when in VFO/Frequency mode. Use the minimum transmitter power necessary to carry out the desired communications.					
	Settings: HIGH[0]   LOW[1]					
	Default: HIGH					
	HIGH: ≈ 2 watts					
	LOW: ≈ 500 milliwatts					
	Note: When TXP is set to LOW, an 'L' is indicated in the status display					
	Note: The power level can be toggled in MR/Channel mode by tapping the [#][O] key					
3 SAVE	Battery <b>SAVE</b>	✓				
	Selects the ratio of sleep cycles to awake cycles (1:1, 2:1, 3:1, 4:1). The higher the number the longer the battery lasts. When enabled, a word or two might be missed when the frequency being monitored becomes active.					
	Settings: OFF[0]   1   2   3   4					
	Default: 3					
	Note: When SAVE is not set to OFF and 'ABR' is ≥ 9, pulsing may be heard when the radio returns to FM broadcast reception after being interrupted					
4 VOX	Voice Operated Transmission ( <b>TX</b> )	✓				
	When enabled it is not necessary to push the [PTT] button on the transceiver. Adjust the gain level to an appropriate sensitivity to allow smooth transmission.					
	Settings: OFF[0]   1   2   3   4   5   6   7   8   9   10					
	Default: OFF					
	Note: When VOX is not set to OFF, 'VOX' is indicated in the status display					
5 WN	Wideband / Narrowband		✓			✓
	Wideband (25 kHz bandwidth) or narrowband (12.5 kHz bandwidth).					
	Settings: WIDE[0]   NARR[1]					
	Default: NARR					
	Emission: 16K0F3E / 11K0F3E (W/N)					
	Deviation: ≤ ±5 kHz / ≤ ±2.5 kHz (W/N)					
	Note: When WN is set to NARR, an 'N' is indicated in the status display					
	Note: Channels 1, 2, 3, 6, 7, 8, 11, 12 and 13 are factory set to NARR to comply with FCC rules and cannot be changed					
6 ABR	Automatic Back Light Shutoff Time <b>R</b> (seconds)	✓				
	Length of time the display is illuminated					
	Settings: OFF[0]   1   2   3   4   5   6   7   8   9   10					
	Default: 5					
	Note: The ABR setting also sets the delay before the radio returns to FM broadcast reception after being interrupted					
	Note: When 'ABR' is ≥ 9 and SAVE is not set to OFF, pulsing may be heard when the radio returns to FM broadcast reception after being interrupted					
	Note: ABR can be set to 24 using CHIRP					
7 TDR	Dual Watch/Transceiver <b>Dual Reception</b>	✓				
	Monitor [A] and [B] at the same time by scanning between them. The display with the most recent activity ([A] or [B]) becomes the selected display.					
	Settings: OFF[0]   ON[1]					
	Default: OFF					
	Note: When TDR is set to ON, an 'S' is indicated in the status display					
	Note: TDR is inhibited while scanning is in operation					

# Reference for MURS-V1 Menus

## by Jim Unroe - KC9HI

### 29-April-2018

(send comments, suggestions or corrections to MURS-V1@KC9HI.net)

Menu Number / Short Name	Long Name / Description / Settings / Notes	Global	MR/ Channel Mode	VFO/ Frequency Mode	Separate VFO A & B Settings	Stored on a Per Channel Basis
8 BEEP	<b>Keypad BEEP</b>	✓				
	Allows audible confirmation of a key press					
	Settings: OFF[0]   ON[1]      Default: ON					
9 TOT	<b>Transmission Time-Out Timer (seconds)</b>	✓				
	This feature provides a safety switch which limits transmission time to a programmed value. This will promote battery conservation by not allowing you to make excessively-long transmissions, and in the event of a stuck PTT switch (perhaps if the radio or a Speaker/Mic is wedged between car seats) it can prevent interference to other users as well as battery depletion.					
	Settings: 15[0] - 600[39] in 15 second steps (see TOT Table)      Default: 60					
	Note: (TIMEOUT-15)/15=[n]					
	Note: The red TX LED begins to flash 10 seconds before the timeout limit is reached					
10 R-DCS	<b>Receive - Digital Coded Squelch (DCS)</b>		✓			✓
	Mutes the speaker of the transceiver in the absence of a specific low level digital signal. If the station you are listening to does not transmit this specific signal, you will not hear anything.					
	Settings: OFF[0]   see DCS Table      Default: OFF					
	Note: When R-DCS is not set to OFF, 'DCS' is indicated to the left of the upper channel display					
	Note: Setting R-DCS sets menu 11 to OFF					
	Note: Recommended setting is OFF					
11 R-CTCS	<b>Receive - Continuous Tone Coded Squelch System (CTCSS)</b>		✓			✓
	Mutes the speaker of the transceiver in the absence of a specific and continuous sub-audible signal. If the station you are listening to does not transmit this specific and continuous signal, you will not hear anything.					
	Settings: OFF[0]   see CTCSS Table      Default: 67.0 HZ					
	Note: When R-CTCS is not set to OFF, 'CT' is indicated to the left of the upper channel display					
	Note: Setting R-CTCS sets menu 10 to OFF					
	Note: Recommended setting is OFF					
12 T-DCS	<b>Transmit - Digital Coded Squelch (DCS)</b>		✓			✓
	Transmits a specific low level digital signal to unlock the squelch of a distant receiver (usually a repeater).					
	Settings: OFF[0]   see DCS Table      Default: OFF					
	Note: Setting T-DCS sets menu 13 to OFF					
	Note: When T-DCS is not set to OFF, 'DCS' is indicated to the left of the upper channel display (requires TX or 'reverse' mode)					
13 T-CTCS	<b>Transmit - Continuous Tone Coded Squelch System (CTCSS)</b>		✓			✓
	Transmits a specific and continuous sub-audible signal to unlock the squelch of a distant receiver (usually a repeater).					
	Settings: OFF[0]   see CTCSS Table      Default: 67.0 HZ					
	Note: Setting T-CTCS sets menu 12 to OFF					
	Note: When T-CTCS is not set to OFF, 'CT' is indicated to the left of the upper channel display (requires TX or 'reverse' mode)					
14 VOICE	<b>VOICE Prompt</b>	✓				
	Allows audible voice confirmation of a key press					
	Settings: OFF[0]   ENG[1]   CHI[2]      Default: ENG					
	Note: Not all voice prompts are easily understandable. Not all key presses have a voice prompt.					
15 ANI-ID	<b>Automatic Number Identification – ID</b>	RO				
	Displays the ANI code that has been set by software. This menu can not be used to change it. The ANI-ID is sent when the alarm is activated and menu 32 = CODE					

# Reference for MURS-V1 Menus

## by Jim Unroe - KC9HI

### 29-April-2018

(send comments, suggestions or corrections to MURS-V1@KC9HI.net)

Menu Number / Short Name	Long Name / Description / Settings / Notes	Global	MR/ Channel Mode	VFO/ Frequency Mode	Separate VFO A & B Settings	Stored on a Per Channel Basis
16 DTMFST	<b>DTMF Side Tones</b>	✓				
	Determines when DTMF Side Tones can be heard from the transceiver speaker.					
	Settings: OFF[0]   DT-ST[1]   ANI-ST[2]   DT+ANI[3]      Default: DT+ANI					
	OFF: No DTMF Side Tones are heard					
	DT-ST: Side Tones are heard only from manually keyed DTMF codes					
	ANI-ST: Side Tones are heard only from automatically keyed DTMF codes					
	DT+ANI: All DTMF Side Tones are heard					
	Note: Requires the transceiver to be in transmit mode.					
	Note: The mic can pick up the sidetone and if the volume loud enough, it will overdrive and/or distort the transmitted DTMF tones.					
	Note: [MENU]=A, [▲]=B, [▼]=C, [EXIT/AB]=D					
17 S-CODE	<b>PTT-ID (Signal-CODE) Selection</b>		✓			✓
	Selects 1 of 15 signal codes. The signal codes are programmed with software and are up to 5 DTMF signals each.					
	Settings: 1[0]   2[1]   3[2]   4[3]   5[4]   6[5]   7[6]   8[9]   9[8]   10[9]   11[10]   12[11]   13[12]   14[13]   15[14]      Default: 1					
	Note: Menu 19 must be enabled for an S-CODE to be transmitted.					
18 SC-REV	<b>SCan-REVive/Resume Method</b>	✓				
	Settings: TO[0]   CO[1]   SE[2]      Default: TO					
	TO: Time Operation - scanning will resume after a fixed time has passed					
	CO: Carrier Operation - scanning will resume after the active signal disappears					
19 PTT-ID	SE: Search Operation - scanning will not resume		✓			✓
	<b>When to Send PTT-ID</b>					
	Settings: OFF[0]   BOT[1]   EOT[2]   BOTH[3]      Default: OFF					
	OFF: No ID is sent					
	BOT: The selected S-CODE is sent at the Beginning of Transmission					
	EOT: The selected S-CODE is sent at the End of Transmission					
	BOTH: The selected S-CODE is sent at the BOT and the EOT					
20 PTT-LT	Note: Select S-CODE using menu 17	✓				
	Note: Recommended setting is OFF					
	<b>PTT-ID (Lagged) Transmission (milliseconds)</b>					
	Length of time after [PTT] is pressed until PTT-ID is transmitted					
21 MDF-A	Settings: 0 - 50      Default: 5	✓				
	Note: Requires menu 19 to be enabled					
	<b>Memory Display Format – [A]</b>					
	Settings: CH[0]   NAME[1]   FREQ[2]      Default: FREQ					
	CH: Displays the channel number					
22 MDF-B	NAME: Displays the channel name. Names must be entered using software. A channel without an assigned name will have the channel number displayed	✓				
	FREQ: Displays programmed Frequency					
	<b>Memory Display Format – [B]</b>					
	Settings: CH[0]   NAME[1]   FREQ[2]      Default: FREQ					
23 BCL	CH: Displays the channel number	✓				✓
	NAME: Displays the channel name. Names must be entered using software. A channel without an assigned name will have the channel number displayed					
	FREQ: Displays programmed Frequency					
	<b>Busy Channel Lock-Out</b>					
	Disables the [PTT] button on a channel that is already in use. The transceiver will sound a beep tone and will not transmit if the [PTT] button is pressed when a channel is already in use.		✓			
	Settings: OFF[0]   ON[1]      Default: OFF					

# Reference for MURS-V1 Menus

## by Jim Unroe - KC9HI

### 29-April-2018

(send comments, suggestions or corrections to [MURS-V1@KC9HI.net](mailto:MURS-V1@KC9HI.net))

Menu Number / Short Name	Long Name / Description / Settings / Notes	Global	MR/ Channel Mode	VFO/ Frequency Mode	Separate VFO A & B Settings	Stored on a Per Channel Basis
24 SYNC	Display Line <b>SYN</b> Cronize		✓			
	In MR/Channel Mode, automatically keeps the [A] and [B] display lines synchronized to the same channel number.					
	Settings: OFF[0]   ON[1]      Default: OFF					
	Note: Used with menu 21 and menu 22 to allow viewing a channel by Name+Frequency, Channel #+Frequency or Name+Channel # at the same time.					
25 SFT-D	Frequency <b>Shi</b> FT – Direction					
	SFT-D is not supported by MURS-V1					
	Settings: OFF[0]   +[1]   -[2]      Default: OFF					
	OFF: TX = RX (simplex)					
	+: TX will be shifted higher in frequency than RX					
26 OFFSET	Frequency Shift/ <b>OFF</b> SET (MHz)					
	OFFSET is not supported by MURS-V1					
	Settings: 000.000 - 999.990 in 1 kHz steps      Default: 000.000					
27 MEM-CH	<b>MEM</b> ory - <b>CH</b> annel Programming					
	MEM-CH is not supported by MURS-V1					
	Settings: 000 - 127      Default: 000					
28 DEL-CH	<b>DEL</b> ete/Erase Memory - <b>CH</b> annel					
	DEL-CH is not supported by MURS-V1					
	Settings: 000 - 127      Default: 000					
29 WT-LED	Standby ( <b>Wai</b> T) - Back Light <b>LED</b> Color	✓				
	Display Illumination Color					
	Settings: OFF[0]   BLUE[1]   ORANGE[2]   PURPLE[3]      Default: PURPLE					
30 RX-LED	Receive ( <b>RX</b> ) - Back Light <b>LED</b> Color	✓				
	Display Illumination Color					
	Settings: OFF[0]   BLUE[1]   ORANGE[2]   PURPLE[3]      Default: BLUE					
31 TX-LED	Transmit ( <b>TX</b> ) - Back Light <b>LED</b> Color	✓				
	Display Illumination Color					
	Settings: OFF[0]   BLUE[1]   ORANGE[2]   PURPLE[3]      Default: ORANGE					
32 AL-MOD	<b>AL</b> arm - <b>MOD</b> e	✓				
	Settings: OFF[0]   SITE[1]   TONE[2]   CODE[3]      Default: TONE					
	SITE: Sounds alarm through your radio speaker only					
	TONE: Transmits a cycling tone over-the-air					
	CODE: Transmits '119' (911 in reverse?) followed by the ANI code over-the-air					
	Note: Recommended setting is OFF					
33 DB-PTT	<b>Dou</b> ble- <b>PTT</b> Selection		✓			
	Controls the behavior of the dual PTT buttons.					
	Settings: OFF[0]   ON[1]      Default: ON					
	OFF: Pressing either PTT button will TX based on channel selected in the selected display line					
34 TDR-AB	ON: Pressing the upper PTT button will select the upper (A) display line and TX based on the selected channel. Pressing the lower PTT button will select the lower (B) display line and TX based on the selected channel.					
	Transceiver <b>Dual</b> Reception - <b>[A]/[B]</b> Display Priority					
	TDR-AB is not supported by MURS-V1					
	Settings: OFF[0]   A[1]   B[2]      Default: OFF					
	Note: Requires menu 7 to be enabled					
	Note: This menu still functions but it is overridden by the dual PTT.					
	Note: An external speaker/microphone with a single PTT button will always select [B].					
	Note: Recommended setting is OFF					

# Reference for MURS-V1 Menus by Jim Unroe - KC9HI 29-April-2018

(send comments, suggestions or corrections to MURS-V1@KC9HI.net)

Menu Number / Short Name	Long Name / Description / Settings / Notes	Global	MR/ Channel Mode	VFO/ Frequency Mode	Separate VFO A & B Settings	Stored on a Per Channel Basis
35 STE	<b>Transceiver - Squelch Tail Elimination</b>	✓				
	This function is used eliminate squelch tail noise between MURS-V1s that are communicating directly (no repeater). Reception of a 55 Hz or 134.4 Hz tone burst mutes the audio long enough to prevent hearing any squelch tail noise.					
	Settings: OFF[0]   ON[1] Default: ON					
	Note: When enabled and T-DCS is set to OFF the radio sends a 55 Hz tone for about 1/4 second when the PTT key is released.					
	Note: When enabled and T-DCS is not set to OFF the radio sends a 134.4 Hz tone for about 1/4 second when the PTT key is released.					
	Note: Recommended setting is OFF					
36 RP-STE	<b>RePeater - Squelch Tail Elimination</b>					
	RP-STE is not supported by MURS-V1					
	Settings: OFF[0]   1 - 10 Default: 5					
	Note: Requires use of a repeater utilizing this feature.					
	Note: Used with menu 37					
	Note: Recommended setting is OFF					
37 RPT-RL	<b>RePeaTer - Retard Squelch Tail ELimination Tail Tone (X100 milliseconds)</b>					
	RPT-RL is not supported by MURS-V1					
	Settings: OFF[0]   1 - 10 Default: OFF					
	Note: Used with menu 36					
	Note: Recommended setting is OFF					
38 PONMSG	<b>Power ON MeSsaGe</b>	✓				
	Controls the behavior of the display when the transceiver is turned on.					
	Settings: FULL[0]   MSG[1] Default: MSG					
	FULL: Performs an LCD screen test at power-on					
	MSG: Displays a 2-line power-on message					
	Note: The power-on message must be edited with software					
39 ROGER	<b>ROGER Beep</b>	✓				
	Sends an end-of-transmission tone to indicate to other stations that the transmission has ended.					
	Settings: OFF[0]   ON[1] Default: OFF					
	Note: Recommended setting is OFF					
40 R-TONE	<b>Repeater - TONE</b>	✓				
	Selects the European tone burst frequency.					
	Settings: 1000 HZ[0]   1450 HZ[1]   1750 HZ[2]   2100 HZ[3] Default: 1750 HZ					
	Note: The R-TONE frequency is transmitted by pressing the [F] side key while the [PTT] button is also pressed.					
41 SC-ADD	<b>Scan-ADD/Skip</b>	✓	✓			✓
	In MR/Channel mode, sets the selected memory to be scanned (ON) or skipped (OFF) when scanning.					
	Settings: OFF[0]   ON[1] Default: ON					
	Note: The currently selected memory will have a small "dot" under the channel number when menu 33 is set to ON.					
42 A/B-BP	<b>[A]/[B] - Roger BeeP at End of Reception</b>	✓				
	Emits an end-of-reception tone in the speaker when squelch closes on the selected display.					
	Settings: OFF[0]   A[1]   B[2] Default: A					
	Note: Useful when menu 7 is set to ON					
43 RESET	<b>RESET to Firmware Default Settings</b>	✓				
	Settings: ALL[0] Default: ALL					
	VFO: Resets all menus to firmware default.					
	ALL: Resets all menus to firmware default, resets MURS channels to firmware default.					

# Reference for MURS-V1 Menus

## by Jim Unroe - KC9HI

### 29-April-2018

(send comments, suggestions or corrections to [MURS-V1@KC9HI.net](mailto:MURS-V1@KC9HI.net))

Menu Number / Short Name	Long Name / Description / Settings / Notes	Global	MR/ Channel Mode	VFO/ Frequency Mode	Separate VFO A & B Settings	Stored on a Per Channel Basis
-----------------------------	--	--------	------------------------	---------------------------	--------------------------------------	--

#### Legend & Definitions

[A] The top/upper VFO/Channel Display

[B] The bottom/lower VFO/Channel Display

RX Receive

TX Transmit

PTT Push-to-talk

RO Read Only

✓ Valid

⊗ Inhibited

[n] Numbers in brackets are shortcuts

YMMV Your Mileage May Vary

DEFAULT Firmware default following a RESET->ALL

Time Out Timer Table (Menu 9)

N°	Seconds	N°	Seconds	N°	Seconds	N°	Seconds
0	15	10	165	20	315	30	465
1	30	11	180	21	330	31	480
2	45	12	195	22	345	32	495
3	60	13	210	23	360	33	510
4	75	14	225	24	375	34	525
5	90	15	240	25	390	35	540
6	105	16	255	26	405	36	555
7	120	17	270	27	420	37	570
8	135	18	285	28	435	38	585
9	150	19	300	29	450	39	600

Note: digits in the 'N°' column are shortcuts

CTCSS Table (Menu 11 & Menu 13)

N°	Tone(Hz)	N°	Tone(Hz)	N°	Tone(Hz)	N°	Tone(Hz)	N°	Tone(Hz)
	67.0		94.8		131.8		171.3		203.5
	69.3		97.4		136.5		173.8		206.5
	71.9		100.0		141.3		177.3		210.7
	74.4		103.5		146.2		179.9		218.1
	77.0		107.2		151.4		183.5		225.7
	79.7		110.9		156.7		186.2		229.1
	82.5		114.8		159.8		189.9		233.6
	85.4		118.8		162.2		192.8		241.8
	88.5		123.0		165.5		196.6		250.3
	91.5		127.3		167.9		199.5		254.1

DCS Table (Menu 10 &amp; Menu 12)

Nº	Code	Nº	Code	Nº	Code	Nº	Code	Nº	Code
1	D023N	22	D131N	43	D251N	64	D371N	85	D532N
2	D025N	23	D132N	44	D252N	65	D411N	86	D546N
3	D026N	24	D134N	45	D255N	66	D412N	87	D565N
4	D031N	25	D143N	46	D261N	67	D413N	88	D606N
5	D032N	26	D145N	47	D263N	68	D423N	89	D612N
6	D036N	27	D152N	48	D265N	69	D431N	90	D624N
7	D043N	28	D155N	49	D266N	70	D432N	91	D627N
8	D047N	29	D156N	50	D271N	71	D445N	92	D631N
9	D051N	30	D162N	51	D274N	72	D446N	93	D632N
10	D053N	31	D165N	52	D306N	73	D452N	94	D645N
11	D054N	32	D172N	53	D311N	74	D454N	95	D654N
12	D065N	33	D174N	54	D315N	75	D455N	96	D662N
13	D071N	34	D205N	55	D325N	76	D462N	97	D664N
14	D072N	35	D212N	56	D331N	77	D464N	98	D703N
15	D073N	36	D223N	57	D332N	78	D465N	99	D712N
16	D074N	37	D225N	58	D343N	79	D466N	100	D723N
17	D114N	38	D226N	59	D346N	80	D503N	101	D731N
18	D115N	39	D243N	60	D351N	81	D506N	102	D732N
19	D116N	40	D244N	61	D356N	82	D516N	103	D734N
20	D122N	41	D245N	62	D364N	83	D523N	104	D743N
21	D125N	42	D246N	63	D365N	84	D526N	105	D754N

Nº	Code	Nº	Code	Nº	Code	Nº	Code	Nº	Code
106	D023I	127	D131I		D251I		D371I		D532I
107	D025I	128	D132I		D252I		D411I		D546I
108	D026I	129	D134I		D255I		D412I		D565I
109	D031I	130	D143I		D261I		D413I		D606I
110	D032I	131	D145I		D263I		D423I		D612I
111	D036I	132	D152I		D265I		D431I		D624I
112	D043I	133	D155I		D266I		D432I		D627I
113	D047I	134	D156I		D271I		D445I		D631I
114	D051I	135	D162I		D274I		D446I		D632I
115	D053I	136	D165I		D306I		D452I		D645I
116	D054I	137	D172I		D311I		D454I		D654I
117	D065I		D174I		D315I		D455I		D662I
118	D071I		D205I		D325I		D462I		D664I
119	D072I		D212I		D331I		D464I		D703I
120	D073I		D223I		D332I		D465I		D712I
121	D074I		D225I		D343I		D466I		D723I
122	D114I		D226I		D346I		D503I		D731I
123	D115I		D243I		D351I		D506I		D732I
124	D116I		D244I		D356I		D516I		D734I
125	D122I		D245I		D364I		D523I		D743I
126	D125I		D246I		D365I		D526I		D754I

Note: digits in the 'Nº' column are shortcuts