

303-586-6510 | www.rtsystemsinc.com

## WCS-7100 Programming Software for the Icom IC-7100

<u>F</u> ile	Edit Comm	nunications	<u>S</u> ettings <u>D</u> Sta	ar <u>W</u> ind	ow <u>H</u> elp																	
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1	IC-7100 Unt	itled1 * ×																				
4	Receive Frequency	Transmit Frequency	Offset Frequency	Offset Direction	Operating Mode	Filter	Name	Tone Mode	CTCSS	Rx CTCSS	DCS	DCS Polarity	Select Scan	Digital Squelch	Digital Code	Your Callsign	Rpt-1 CallSign	Rpt-2 CallSign			Cor	mment
A-10	10.1208	10.12000		implex	CW	Filter 1		None	88.5 Hz	88.5 Hz	023	Roth N									~	
A-11	10.13000	10.13000		mplex	CW	Filter 1		None	88.5 Hz	88.5 Hz					-					$\sim$	-	
A-12	10.14000	10.14000		implex	LW	Eilter 1		None	88.5 Hz	88.5 Hz	M	emor	'y Ch	nannel	Fun	ction	S			-		
A-13	14.10000	14.10000			USB	Filter 1		None	88.5 Hz	88.5 Hz			(le	ft to righ	t)				-			
A-14	14.20000	14.20000		implex	USB	Filter 1		None	88.5 Hz	98.5 Hz	_			0			F-					
A-15 A-16	14.05000 18.10000	14.05000 18.10000		implex implex	CW USB	Filter 1 Filter 1		None None	88.5 Hz 88.5 Hz	88.5 Hz 88.5 Hz	Rec	eive Fr	equer	псу	DCS		_					
A-16 A-17	18.13000	18.13000	31	implex	USB	Filler 1		None	88.5 Hz	88.5 Hz	Turn				DOC	Delevit						
A-18	18,15000	18.15000	Mam	NO MU	Types	er 1		None	88.5 Hz	88.5 Hz	Irar	nsmit F	reque	ency	DCS	Polarity	/					
A-19	21.20000	21.20000			Types	er 1		None	88.5 Hz	88.5 Hz	Offs	et Fred	nuenc	v	Selec	t Scan						
A-20	21.30000	21.30000	(le	eft to ri	ght)	er 1		None	88.5 Hz	88.5 Hz				y	OCICC	i ocun						
A-21	21.05000	21.05000	Pand /		lemorie	er 1		None	88.5 Hz	88.5 Hz	Offs	et Dire	ction		Digita	al Sque	lch					
A-22	24.95000	24.95000	Dallu F		lemone	Ser1		None	88.5 Hz	88.5 Hz					D' ''							
A-23	24.98000	24.98000	Limit N	/lemor	ies	er 1		None	88.5 Hz	88.5 Hz	Ope	rating	Node		Digita	al Code						
A-24	24.90000	24.90000	_			er 1		None	88.5 Hz	88.5 Hz	Filte	r			Vour	Callsig	n –					
A-25 A-26	28.50000 29.50000	28.50000 29.50000	DR Me	emorie	S	er 1		None	88.5 Hz	88.5 Hz 88.5 Hz	inte	1			Tour	Calisig						
A-26 A-27	29.50000	29.50000				er 1		None None	88.5 Hz 88.5 Hz	88.5 Hz 88.5 Hz	Nan	ne			Rpt-1							
A-27 A-28	50.10000	28.10000	Call Ch	ianne		er 1		None	88.5 Hz	88.5 Hz												
A-20	50.20000	50.20000	VFO			er 1		None	88.5 Hz	88.5 Hz	lion	e Mode	e		Rpt-2	-						
A-30	51.00000	51.00000				er 1		None	88.5 Hz	88.5 Hz	СТС	00			Comr	mont						
A-31	145.00000	145.00000	GPS M	lemori	es	er 1		None	88.5 Hz	88.5 Hz		.33			Com	nent						
A-32	145.10000	145.10000				er 1		None	88.5 Hz	88.5 Hz	RX	CTCSS										
A-33	145.20000	145.20000			FM	Filter 1		None	88.5 Hz	88.5 Hz												
A-34	433.0000	433.00000 Band B	Si Band C 🖌 Band		FM	Filter 1		None ries / Call Ch	88.5 Hz	BB.5H-		Both N				_						

The WCS-7100 Programmer is designed to give you the ease and convenience of programming the memories and set menu options of your radio from your PC including settings for D-STAR operations. The D-STAR calculator built into the program gives you D-STAR information from all around the world to use. You can easily set up your D-STAR channels with just a few mouse clicks.

#### Memory Channels Include:

- 99 Each Band A E Memories with D-STAR Options
- 6 Limit Memories (3 pair)
- 900 DR Memories
- 4 Call Channel Memories
- 4 VFO Settings
- 100 GPS Memories

#### Other Menu Item Categories Include:

- Common
- Display
- CW/RTTY

#### **D-STAR**

- Your Callsign List
- My Callsign List
- Text Message List

With the WCS-7100 Programmer you can begin a new "factory fresh" file into which frequencies and option settings are entered. Or, you can read from the radio, store these details on your computer and make changes. Then, with minimal button pushing, send the new configuration back to the radio.

The Programmer allows you to create and save as many files as you want for your radio. Files can even be shared between users via email or the Internet. Any RT Systems Version 4.50 program can open a file from any other RT Systems Version 4.50 programmer... even from a different radio.

Managing all the options of this great little radio becomes easy with the Programmer. The cut, copy, paste and insert features of the Programmer make channel management easier than ever.

Open more than one file at a time. Memory channel information can be copied from one file to another within the Programmer making it really easy to set up a new file.

#### The Programmer Is for so Much More than Just Memory Management.



#### Hardware Requirements:

A PC running Windows XP, Vista, Windows 7 (32 or 64 bit) or Windows 8 (desktop version). A CD drive (local or network) for installation. A free USB port. The RT Systems USB-RTS01 interface cable or the USB cable that came with the radio. The USB-RTS01 cable connects the radio to the computer from the USB port on the computer to the remote jack on the radio. The USB cable that comes with the radio connects to the mini B USB jack. Do NOT connect both cables at the same time.





# WCS-7100 Programming Software **Memory Types**

IC-7100 Programmer - IC-7100 Untitled1					
File Edit Communications Settings DStar Window Help					
					¥
IC-7100 Untitled1         ×           Frequency         Frequency         Offset         Operating         Filter           1A         0.55506         0.50000         Simplex         LSB         Filter         Simplex           18         233999         233937         Simplex         Edl         Filter         Simplex         Filter         Simplex         Filter         Simplex         Filter         Simplex         Simplex         Simplex         Simplex         Simplex         Simplex         Simplex         Simplex         Simplex <t< th=""><th></th><th>Functions</th><th>Digital Code Callsign</th><th>Rpt-1 CatiSign</th><th>Comment A</th></t<>		Functions	Digital Code Callsign	Rpt-1 CatiSign	Comment A
H 4 > > > Band A Band B Band C Band D Band E Limit Memories DR	Memories Call Channel VFD GPS M	emories			

#### **Limit Memories**

Limit Memories are used by the radio for Program Scan. Program the same details for Limit Memories as for regular memory channels. The Limit Memories are preprogrammed in the radio and while the frequency can be changed, they cannot be left blank.

IC-7	100 Program	mer - IC-7100 Untitled1															X
<u>F</u> ile	<u>E</u> dit <u>C</u> omm	unications <u>S</u> ettings <u>E</u>	Star <u>W</u> ind	ow <u>H</u> elp													
	÷ 🖬 🖌 🛛	6 6 6 A A	₩a ĝ↓ 🤶														
/ 🗞	IC-7100 Unt	itled1 ×															
	Receive Frequency	Transmit Offset Frequency Frequency	Offset Direction	Repeater Use	Filter	Name	Sub Name	Rpt-1 CallSign	Rpt-2 CallSign	LatLng	Latitude	Longitude	UTC Offset	Bank		Cc	omm
1	145		•DUP 👻		-	Windhoek	Namibia	V53W C	V53W G	Approximate	22°39'02''S	017*10'46''E	+01:00	1: Africa	•	>	
2	145.71250	145.11250 600 kHz	-DUP			Pretoria						028*14'32''E	+02:00	1: Africa			
3	434.20000	430.20000 4.00 MHz	DUP			Jakarta		DP	Mem	orios		106°50'24''E		2: Asia			
4	438.12500	432.72500 5.40 MHz	-DUP			Melbourne						145°19'37''E		<del>3: Australia</del>			_
5	444.82500	449.82500 5.00 MHz	+DUP	<b>V</b>		Banff Nationa		(	left to rig	ht)		115°34'22'W	-07:00	4: Canada			
6	444.95000	449.95000 5.00 MHz	+DUP	<b>V</b>		Calgary		_	-		<b>.</b>	114°09'49''W	-07:00	4: Canada			
7	444.96250	449.96250 5.00 MHz	+DUP	<b>V</b>		Calgary	Receive	e⊦requ	ency	Rpt-1 (	Callsign [	114°04'23'W	-07:00	4: Canada			
8	444.92500	449.92500 5.00 MHz	+DUP	<b>V</b>		Calgary	-		-			114°12'40'W	-07:00	4: Canada			
9	440.75000	445.75000 5.00 MHz	+DUP	<b>V</b>		Edmonton	Transm	it Freqi	lency	Rpt-2 (	Callsign	113°25'00'W	-07:00	4: Canada			
10	444.90000	449.90000 5.00 MHz	+DUP	<b>V</b>		Edmonton	0.00	-				113*20'46'W	-07:00	4: Canada			
11	444.30000	449.30000 5.00 MHz	+DUP	<b>V</b>		Sherwood Pa	Offset F	requer	ю	LatLng		113°11'49'W	-07:00	4: Canada			
12	444.62500	449.62500 5.00 MHz	+DUP	<b>V</b>		Chilliwack		St		1		121*54'24''W	-08:00	4: Canada			
13	445.77500	450.77500 5.00 MHz	+DUP	<b>V</b>		Delta	Offset [	JIrectio	n	Latitud	e L	123°01'14'W	-08:00	4: Canada			
14	440.72500	445.72500 5.00 MHz	+DUP			Delta	Demest			L a la arite		122*54'26' W	-08:00	4: Canada			
15	440.95000	445.95000 5.00 MHz	+DUP			Kelowna	Repeat	er Use		Longitu	ide	119°27'37''W	-08:00	4: Canada			
16	440.95000	445.95000 5.00 MHz	+DUP			Salt Spring Isl	Eller				ffe et	123°30'39'W	-08:00	4: Canada			
17	442.00000	447.00000 5.00 MHz	+DUP			Vancouver	Filter			UTC O	iiset	122°50'06''W	-08:00	4: Canada			
18	443.40000	448.40000 5.00 MHz	+DUP	<b>V</b>		Vancouver	Nome			Bank		122°57'08''W	-08:00	4: Canada			
19	444.57500	449.57500 5.00 MHz	+DUP	<i>V</i>		Winnipeg	Name			Dank		097*08'31''W	-06:00	4: Canada			
20	443.40000	448.40000 5.00 MHz	+DUP +DUP	<i>V</i>		St.Johns	Sub Na	mo		Comm	ont	052°50'43'W	-04:00	4: Canada			
21	444.10000	449.10000 5.00 MHz				Almonte	Sub Na	me		Comm	ent	076°17'34''W	-05:00	4: Canada			
22	444.45000 444.85000	449.45000 5.00 MHz 449.85000 5.00 MHz	+DUP +DUP	<b>V</b>		Cornwall	0.1.1	VA30DH B	VA30DH G	4 1 1	45°30'21''N	074*44'25''W 075*24'30''W	-05:00	4: Canada 4: Canada			
23		449.85000 5.00 MHz 448.63750 5.00 MHz		V V						Approximate	45'30'21''N 43°22'19''N		-05:00	4: Lanada 4: Canada			
24	443.63750		+DUP +DUP	V.		Hamilton		VE3WIK B	VE3WIK G	Exact	43°22'19'N 45°16'12''N	079°58'26''W	-05:00	4: Lanada 4: Canada			
25	442.00000 ► ► Band A	447.00000 5.00 MHz Band B Band C Ba		IE LimitMo		Lanark DR Memories		VE3ENH B	VE3ENH G	Approximate	45'16'12'N	075*55'12'W	-05:00	4: Lanada			
	<ul> <li>M Dariu A</li> </ul>				mones	Drimelliones	Can criarine		3 membries								1

#### **DR Memories**

The DR Channels are special memories of the radio used for quick manual D-STAR setup from the radio's face. D-STAR channels do not have to be programmed here before being saved to memory. Use the information of the special D-STAR Calculator in the Programmer to change the list to include those repeaters you use. It's all built right into the Programmer. Use the Sort function of the Programmer (Edit/Sort) to arrange the list into a more easily used order.



IC-7100 Programmer - IC-7100 Untitled1					
Eile Edit Communications Settings DStar Window Help D ☞ ■ 3 ♥ ■ ● ● ④ ● ● ● ●					
□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □					
Receive Frequency         Transmit Frequency         Offset Frequency         Offset Direction         Operating Mode         Filter         Name           C1         146 52000         ▲ Stopper 146 52000         ▲ Simplex ← M         Filter 1         CALL Ch           C2         146 52000         145 52090         ▲ Simplex ← FM         Filter 1         CALL Ch           3         446 00000         Simplex ← FM         Filter 1         CALL Ch           4         446.00000         Simplex ← FM         Filter 1         CALL Ch	Tone Mode CTCSS Pix CTCSS DC3 None ■ 885H:1 ■ 85H:1 ■ 235H:1 ■ 235 Call Cha (left to ri	nnel	Your Rpt-1 Callsign CallSign	Rpt-2 CallSign	Comment 2
	Receive Frequency	Fix CTCSS			
	Transmit Frequency	DCS			
	Offset Frequency	DCS Polarity			
	Offset Direction	Digital Squelch			
	Operating Mode	Digital Code			
	Filter	Your Callsign			
	Name	Rpt-1 Callsign			
	Tone Mode	Rpt-2 Callsign			
	CTCSS	Comment			
H + + H Band A Band B Band C Band D Band E Limit Memories DR Memorie	S Call Channel VFD GPS Memories				

#### Call Channel

Home/Call channels are special memories accessed through one button recall on the radio. These channels are preprogrammed in the radio and while the frequency can be changed to another in the 2M (C1 & C2) or 440MHz (C3 & C4) bands, they cannot be left blank.

IC-7	100 Program	ner - IC-7100	) Untitled1											- • ×
<u>F</u> ile	<u>E</u> dit <u>C</u> omm	unications	<u>Settings</u> <u>D</u> Star <u>W</u> in	dow <u>H</u> elp										
D 🖬	2 🔲   X 🖻		🔂 🖓 🗛 🏭 😵											
			D 0   14 20   0											_
~	IC-7100 Unti													•
	Receive Frequency	Transmit Frequency	Offset Offset Frequency Direction	Operating Mode	Filter	Tone Mode	CTCSS	Rx CTCSS	DCS	DCS Polarity		Comment		<u></u>
1-01	1.50869	1.90000	Simplex		التحمظ آ	Mana	100 E U-L			Pollo M		7	-	
1-02	1.91000	1.91890	Simplex	CW	1									
1-03	1.91500	1.91500	Simplex	CW	F	V	FO Fi	inctio	ons		/		-	
2-01	3.55000	3.55000	Simplex	LSB	F		(loft t	o right)						
2-02	3.56000	3.56000	Simplex	LSB	F		(ieit ti	5 fight)						
2-03	3.58000	3.58000	Simplex	LSB	FR	eceive Fre	allenc	٠v	Tone	Mode				
3-01	7.05000	7.05000	Simplex	LSB	F			,						
3-02	7.06000	7.06000	Simplex	LSB	F Tr	ansmit Fr	equen	су	CTCS	S				
3-03	7.02000	7.02000	Simplex	CW	F			-	-					
4-01	10.12000	10.12000	Simplex	CW	F O1	fset Freq	uency		Rx C	TCSS				
4-02	10.13000	10.13000	Simplex	CW	F								_	
4-03	10.14000	10.14000	Simplex	CW	F UI	fset Direc	ction		DCS				_	
5-01	14.10000	14.10000	Simplex	USB	-1	perating N	/odo			Polarity			_	
5-02	14.20000	14.20000	Simplex	USB	F U		Noue		DUS	гоанцу			_	
5-03	14.05000	14.05000	Simplex	CW	- Ei	lter			Comr	ments			-	
6-01	18.10000	18.10000	Simplex	USB	-1 ''				001111	nonto			-	
6-02 6-03	18.13000 18.15000	18.13000 18.15000	Simplex Simplex	USB USB	Filter 2	None	88.5 Hz	88.5 Hz	023	Both N			-	
7-01	21.20000	21.20000	Simplex	USB	Filter 2	None	88.5 Hz	88.5 Hz	023	Both N			-	
7-01	21.20000	21.20000	Simplex	USB	Filter 2	None	88.5 Hz	88.5 Hz	023	Both N				
7-02	21.05000	21.05000	Simplex	CW	Filter 2	None	88.5 Hz	88.5 Hz	023	Both N				
8-01	24,95000	24.95000	Simplex	USB	Filter 2	None	88.5 Hz	88.5 Hz	023	Both N				
8-02	24.98000	24.98000	Simplex	USB	Filter 2	None	88.5 Hz	88.5 Hz	023	Both N				
8-03	24.90000	24.90000	Simplex	CW	Filter 2	None	88.5 Hz	88.5 Hz	023	Both N				
9-01	28.50000	28.50000	Simplex	USB	Filter 2	None	88.5 Hz	88.5 Hz	023	Both N				
14 4	H Band A	Band B	Band C Band D Bar	nd E 📈 Limit M	lemories /	DR Memories	Call Chan	nel VFO	GPS M	lemories /	4			•
_				Anna,	-		-		_					1.1

#### VFO

The program makes available the Band Stacking Registers providing 3 VFO memories for each band. Remember these are not real memory channels since the details are lost as soon as you tune the radio manually. There is no one button recall for these. You do not need to program into VFO before programming details into a memory channel. These channels are preprogrammed in the radio and while the frequency can be changed to another within the band and other characteristics set, they cannot be left blank.



	Edit Communicati	C-7100 Untitled1	Star <u>W</u> indow <u>H</u> e	In			
	<u>, (</u> , , , , , , , , , , , , , , , , , ,			P			
_			MUZ# 8				
2	IC-7100 Untitled1	×					
	Name	Date	Time	Latitude	Longitude	Bank	
1	Osaka Road Offic	11\01\2012	00:00:00	34°37'34''N	135°34'09''E		-
	Icom America	11\01\2012	00:00:00	47°37'50''N	122°11'05''W	AHCOM	
	Tokyo Bigsite 🔪	11\01\2012	00:00:00	35°37'47''N	139°47'40''E	B: HAM festa	
	Dayton Hamventio	11\01\2012	00-00-00	29*49'27''N	084°16'49'W	B: HAM festa	
	Tokyo Station	11\81\2012	6 P. C. L.		139*4556°E	C: Railroad	
	Shinagawa Statio	11\01\2812	GPS M	lemories	135'44'24''E	C: Railroad	
	Shin Osaka Stati	11\01\2012		to right)	135*30'01''E	C: Railroad	
	Hakata Station	11\01\2012	(ieit i	to right)	130°25'16''E	C: Railroad	
	Tsurugigamine	11\01\2012	Name	Laitude	138°43'39''E	D: Mt.Fuji	
	Kawaguchiko guch	11\01\2012	Indiffe	Lanuale	138°43'57"E	D: Mt.Fuji	
	Fujimiya guchi	11\01\2012	Date	Longetude	138°43'59''E	D: Mt.Fuji	
	Subashiri guchi	11\01\2012	Date	Longetude	138°46'43"E	D: Mt.Fuji	
	Gotenba guchi	11\01\2012	Time	Bank	138°47'41''E	D: Mt.Fuji	
	Fuji Yoshida	11\01\2012	linic	Durin	138*47'46''E	D: Mt.Fuji	
5							
5							
7							
}							
3							
)							
1							
2							
3							
4							

#### **GPS Memory**

Once stored in the radio during GPS operations, these channels are read from the radio with the other details.





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### WCS-7100 Programming Software **D-STAR Settings**

RTS	Programmer								
<u>F</u> ile	<u>E</u> dit <u>C</u> omr	nunications	<u>S</u> ettings	<u>D</u> Star	Wind	low	<u>H</u> elp		
1	Untitled	×		s	how DS	tar Co	lumns		
	Receive	Offset	Offset	D	igital (C	)-Star)	Settings 🥿	Digital	Your
	Frequency	Frequency	Direction	D	Star Ca	lc		Code	Callsign
0	146.01000		Simplex	UV	_		UII		CQCQCQ
1	440.00000		Simplex	FM				-	1.
2							Dialog		

#### **D-STAR Settings**

Set "My Callsign" to your FCC issued callsign.

The list of Your Callsigns is just storage. The callsigns used during a transmission are programmed in the memory channel. This list is available to make a selection from; however, the callsign does not need to be entered here first.

Tx messages, name/location/ equipment details, etc., scroll on the radio receiving your call.

	Automatically inser	t callsigns entered in m	nem
	Name	Your Callsigns	
U01	Use Repeater	CACACA	
U02	Unlink Repeater	U	
U03	Repeater Status	I	
U04	Echo Test	E	
U05	link to REF001A	REF001AL	
U06	link to REF001B	REF001BL	
U07	link to REF001C	REF001CL	
U08	link to REF002A	REF002AL	
U09	link to REF002B	REF002BL	
U10	link to REF002C	REF002CL	
U11	link to REF003A	REF003AL	
U12	link to REF003B	REF003BL	-

	My Calls	sign	Note	Selected My Callsign
M01	KORTX			· · · ·
M02				Tu Maaaaa On
M03				Tx Message On
M04				Selected TX Message
M05				· · · ·
M06				
	11			<b>T</b>
	Use			Text Message
1	<b>V</b>	Kari	n/Broomfield	CO
2				
3				
4				
5				

X



### **D-STAR Calculator Advanced**

Advanced DSTAR Calculator  Source  Source  Country United States  Colorado  City Boulder  Callsign  W0DK  Callsign  W0DK  DVAP Hotspot  Frequency 144.0000  Name 1440000  Frequency Name 1440000	Destination ✓ Talk ✓ Talk ✓ Callsign ✓ Unlink ✓ Unlink ✓ Unlink ✓ Callsign ✓ Location (City) Callsign Routing	Route to Repeaters       Inik To Reflectors         Basia       Inik To Reflectors         Asia       REF001A - Aurora Illinois, United States         Canada       REF001B - Illinois D-STAR repeaters         Canada       REF002A - Southeastern US D-STAR \         Europe Central       REF002A - Southeastern US D-STAR \         Europe Noth-West       REF002A - Southeastern US D-STAR \         Europe Noth-West       REF002A - Southeastern US D-STAR \         Europe Noth-West       REF003A - Ad-hock & Emergency Use         Europe Noth-West       REF003A - Ad-hock & Emergency Use         Europe Southern       REF003A - Ad-hock & Emergency Use         Europe Western       REF003A - Ad-hock & Emergency Use         Europe Western       REF003A - Mets         Europe Western       REF003A - Mets, Permalink Repeaters, inc         REF003A - Mets       REF005A - UK Nets, Permalink Repeaters         Italy       REF005A - UK Nets, Permalink Repeaters         USA Northeast       REF005C - London, England         USA Northeast       REF007A - Italy         USA Northeast       REF007B - Italy         USA Southeast       REF007B - Italy         USA Southeast       REF007B - Italy
145.3875 -0.6000 RPT1 (Source) RPT2 (Destination) WODK C WODK G		Starting Channel Number A-1 V AutoIncrement Apply Close

#### Source and Destination: /

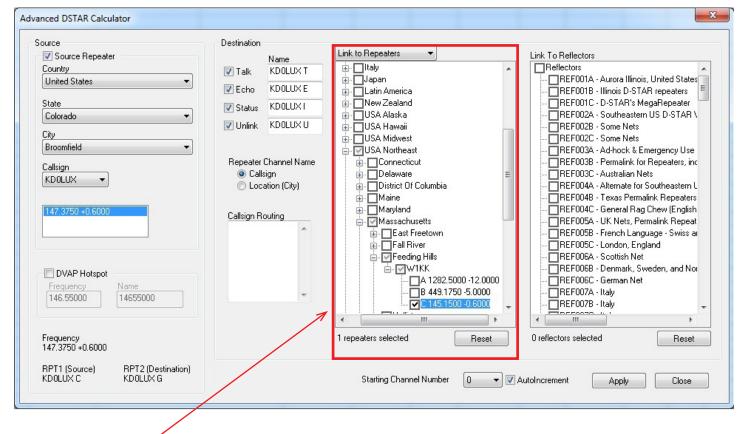
The D-STAR Calculator automatically sets up the Talk, Echo, Info and Unlink channels for your "Source" repeater. The "Source" is the repeater you access to begin your adventures. Just like with analog repeaters, you must be able to hit the "Source" repeater.

Talk - the CQ channel for talking with others.

- Echo a test function that repeats your transmission back to you. Good for letting you know that you are, or are not, hitting the repeater.
- Info The function that triggers a status response from the repeater (i.e. linked to "where"... not linked)
- Unlink Disconnects the current link of the repeater (where allowed). More widely used to disconnect a link you establish. Remember... if you link, it's always polite to unlink (hang up the phone) when you're done unless someone has joined you locally. Then you might leave it to them to unlink.

The calculator sets up the same channels for a DVAP hotspot. You enter your frequency only once.



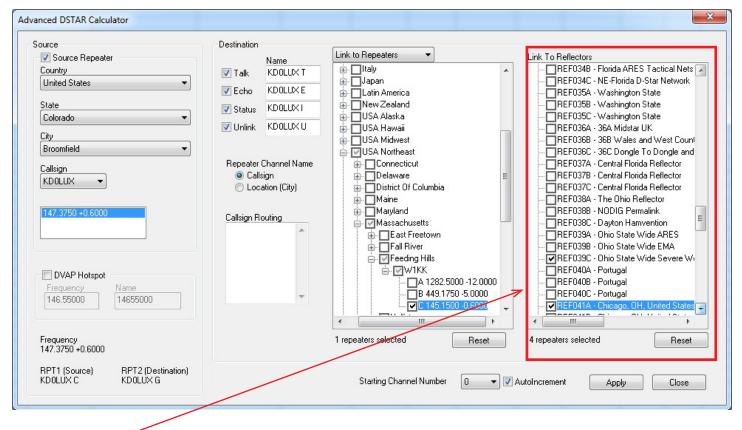


#### Route/Link to Repeaters: -

Now that you identified your "Source", let's set up your Destination. In D-STAR you can Link to Repeaters or Route to Repeaters. To set up channels that link or route, use the drop down at the top of the first tree to select your function, then select your repeaters by checking a country, region, state, city or individual repeater. A counter below the list keeps track of how many you have selected.







#### Link to Reflectors:

For even more fun, and a great way for a beginner to get started, Link to Reflectors. D-STAR reflectors are a special type of Internet connected gateway that rebroadcasts each signal to all the other linked nodes or repeaters. Remember... EVERYBODY is listening... but that's what makes it fun. You have a whole world to talk to through your local repeater, "Source", linked to a reflector. To set up a channel that links your repeater to a reflector, check the box for that reflector in the Link to Reflector tree.

Click **Apply** once to set up all these channels for the radio.



	DSTAR ×																			
	Receive Frequency	Transmit Frequency	Offset Frequency	Offset Direction	Operating Mode	Name	Tone Mode	CTCSS	Px CTCSS	DCS	DCS Polarity	Skip	Step	Digital Squelch	Digital Code	Your Callsign	Rpt-1 CellSign	Rpt-2 CallSign	Bank	Bank Chann Number
0	146.01000	146.01000	-	Simplex -	FM .		None	88.5 Hz	🕶 88.5 Hz 🔹	023	Both N	• Off	• 5 kHz						-	
1	440.00000	440.00000		Simplex	FM		None	88.5 Hz	88.5 Hz	023	Both N	Off	25 kHz							
2																				
3																				
4																				
5	147.37500	147.97500		+DUP	DV	KDOLUX T	None	94.8 Hz	94.8 Hz	023	Both N	Off	5 kHz	Off		cacaca	KD0LUX C	KD0LUX G		
6	147.37500	147.97500		+DUP	DV	KD0LUX E	None	94.8 Hz	94.8 Hz	023	Both N	Off	5 kHz	Off	0	E	KD0LUX C	KD0LUX G		
7	147.37500	147.97500		+DUP	DV	KDOLUXI	None	94.8 Hz	94.8 Hz	023	Both N	Off	5 kHz	Off	0	1	KD0LUX C	KD0LUX G		
8	147.37500	147.97500		+DUP	DV	KDOLUX U	None	94.8 Hz	94.8 Hz	023	Both N	Off	5 kHz	Off	0	U	KD0LUX C	KD0LUX G		
9	147.37500	147.97500		+DUP	DV	W1KK CL	None	94.8 Hz	94.8 Hz	023	Both N	Off	5 kHz	Off		W1KK CL	KD0LUX C	KD0LUX G		
10	147.37500	147.97500		+DUP	DV	REF001CL	None	94.8 Hz	94.8 Hz	023	Both N	Off	5 kHz	Off		REF001CL	KD0LUX C	KD0LUX G		
11	147.37500	147.97500		+DUP	DV	REF005CL	None	94.8 Hz	94.8 Hz	023	Both N	Off	5 kHz	Off		REF005CL	KD0LUX C	KD0LUX G		
12	147.37500	147.97500		+DUP	DV	REF039CL	None	94.8 Hz	94.8 Hz	023	Both N	Off	5 kHz	Off		REF039CL	KD0LUX C	KD0LUX G		
13	147.37500	147.97500	600 kHz	+DUP	DV	REF041AL	None	94.8 Hz	94.8 Hz	023	Both N	Off	5 kHz	Off	0	REF041AL	KD0LUX C	KD0LUX G		
14										_				_						
15										_										
16										-				-						
17 18						-			10				-							
18										-				-						
20										-		-		-						
20 21											-	-								
22					-						-	-		-	-					
23					-				-			-	-	-						
24					-					-	-	-	-	-						
25								-		-		-	-	-	-		-	-		
		12 244	. /00			GPS Memories								1	-					

The resulting channels are set up and ready to go.

Your callsign, Rpt 1 Callsign and Rpt 2 Callsign are set automatically... No wondering which suffix goes where, or if it is positioned correctly. That is all done for you.

Name can be edited here to better identify the station. Name is what you see on the radio. It is not part of the D-STAR commands for use by the system. It may be all you have to identify the function of a channel. (Notice the frequency is the same for ALL these channels although they each do something different on the D-STAR network.) Make the Name something you understand.

Names are displayed on the radio automatically beneath the frequency.

#### To Use these Settings for D-STAR Fun:

- Save and send the file to the radio.
- Listen on the talk channel.
- Be sure your call sign is registered on the system.
- Check repeater status on info channel.
- Check your connection to repeater on Echo channel.
- Link repeater to a connection of your choice.
- Talk on Talk channel.

Have Fun!



	1		1 C 🗜 🏘	\$. <b>₹</b> ↓ 🤶													
~	IC-7100 Unt	Transmit	Offset	Offset	Repeater	Filter	Name	Sub	Rpt-1	Rpt-2	LatLng	Latitude	Lonaitude	UTC Offset	Bank		Cor
4	Frequency 145.70000	Frequency	Frequency 600 kHz 🖵	Direction	Use		Windhoek	Name Namibia	CallSign V53W C	CallSign V53W/G	-	✓ 22"39'02"S	017°10'46''E		1: Africa	•	
4	145.70000	145.11250		-DUP			Pretoria		ZS6PTA C	ZS6PTA G	Approximate		028°14'32''E	+01:00	1: Africa	•	
	434.20000	430.20000		DUP			Jakarta		YD0ZRD B	YD0ZRD G	Approximate		100°E0'34 UZ	+02.00			
	434.20000		4.00 MHz 5.40 MHz	-DUP -DUP			Jakarta Melhourne	Victoria	VK3RMC B	VK3BMC G		DSTAR Calculator for DR				×	A
	438.12500		5.40 MHz 5.00 MHz	+DUP	<b>v</b>		Banff National P	Alberta			Endor	Donan calculator for Div	inclusiones.				l
	444.82500		5.00 MHz 5.00 MHz	+DUP +DUP	V		Calgary	Alberta	VE6GHZ B	VE6WRU G VE6GHZ G	Exact						
	444.95000	449.95000		+DUP +DUP	V		Calgary	Alberta	VE6IPG B	VE6GPG G	Exact	Select repeater to add t	o the DR memories.				
	444.96250		5.00 MHz 5.00 MHz	+DUP +DUP	V		Calgary	Alberta	VE6WRN B		Exact	Repeaters		1			
-	444.32300	445.52000		+DUP +DUP	V		Edmonton	Alberta	VE6BHX B	VE6BHX G	Approximal	Africa		Starting	Channel		
-	440.75000	440.70000		+DUP +DUP	V		Edmonton	Alberta	VE6KM B	VE6KM G	Exact			1	<ul> <li>Autoincrer</li> </ul>	ment	
	444.90000		5.00 MHz 5.00 MHz	+DUP +DUP	V		Sherwood Park	Alberta	VE6DXH B	VE6KM G VE6DXH G	Approximal	Australia					
	444.30000		5.00 MHz	+DUP +DUP	V		Chilliwack	BC	VE7RCK B	VE7RCK G	Approximat	E Canada					
	444.62500		5.00 MHz 5.00 MHz	+DUP +DUP	V		Delta	BC	VA7GO B	VE/HUK G VA7GO G	Approximat	Europe Central		Use Use	Callsign for channel r	name	
	445.77500	450.77500 445.72500		+DUP +DUP	V		Delta	BC	VA7GU B VE7SUN B	VA7GQ G VE7SUN G	Approximat	Europe Eastern					
	440.72500		5.00 MHz 5.00 MHz	+DUP +DUP	V		Kelowna		VE7SUIN B VA7DIG B	VE7SUN G VA7DIG G	Approxima Exact	Europe North-We	est	🗸 App	ly as Group shown		
				+DUP +DUP	V			BC				Europe Northern					
	440.95000 442.00000	445.95000	5.00 MHz	+DUP +DUP	V V		Salt Spring Isl Vancouver	BC BC	VE7MDN B VA7ICM B	VE7MDN G VA7ICM G	Approximal Exact	Europe Southern		-	eplace all existing gro		l
					V V					VA/ILM G VE7RAG G		Europe Western		A (2)	ppend groups if space	e available	l
	443.40000	448.40000		+DUP			Vancouver	BC	VE7RAG B		Exact	Germany	=	Apply F	o this group;		l
	444.57500		5.00 MHz	+DUP	<b>V</b>		Winnipeg			VE4WDR G	Exact	iItaly			a the group.	_	
	443.40000		5.00 MHz	+DUP	<b>V</b>		St.Johns	NL	VO1TZ B	V01TZ G	Exact	ian Japan					
	444.10000		5.00 MHz	+DUP	<b>V</b>		Almonte		VA3AAR B	VA3AAR G	Exact	E- Latin America		Set.	for Repeater Use		
	444.45000		5.00 MHz	+DUP	<b>V</b>		Cornwall	Ontario	VA3SDG B	VA3SDG G	Exact	New Zealand		set	tor Repeater use		L
	444.85000	449.85000		+DUP	<b>V</b>		Cumberland	Ontario	VA30DH B	VA30DH G	Approximal						
	443.63750	448.63750		+DUP	<b>V</b>		Hamilton		VE3WIK B	VE3WIK G	Exact						
	442.00000		5.00 MHz	+DUP			Lanark	Ontario			Approximal						
٩.	Band A	Band B	(Band C / Ba	no v 🖉 Band		mories	DR Memories	laii Unannel	VFU GF	5 Memories		USA Northeast					
_												USA Northwest			0 repeaters selecte	ed	1

#### **D-STAR Calculator for DR Memories:**

D-STAR Calculator for DR Memories lists repeaters worldwide for you to update or customize the list in the radio. Easily customize this list for places you plan to travel or places you want to work using a DR memory as your RPT2 repeater.

All repeater nodes are listed. Those the radio can use to transmit will be set automatically for "Repeater Use".

Latitude and Longitude are included where that info is available from the source and the repeater is marked for use.

Click a country, region, state, city or individual repeater.

Use starting channel to replace or carefully add to your list.

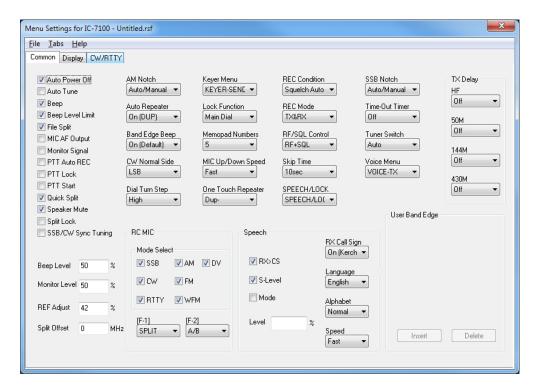
No searching for data, it's all right in the RT Systems Programmer.

The D-STAR calculator is updated automatically with the program. Just "Check for Updates" periodically to be sure you have the latest list.



# WCS-7100 Programming Software **Radio Option Setting Screens**

303-586-6510 | www.rtsystemsinc.com



#### Common

Use these screens to customize other set menu features of the radio. Check boxes toggle features on or off, drop down menus list all selections and blank boxes for personalized entry add to the ease of setting up your radio exactly like you want it.

The entries on the Settings screens are made for you to "Set and Forget". Once settings are customized, you are prompted to save before exiting. The saved settings will be there every time you create a new frequency file.

Menu Settings for IC-7100	- Untitled.rsf				×
<u>F</u> ile <u>T</u> abs <u>H</u> elp					
Common Display CW/RT	TY				
BW Popup (PBT)     BW Popup (FIL)     Keyer Memory     Meter Peak Hold     Opening Message     Power ON Check     Reply Position	Auto Power Off Off   Display Language English  RX Call  Auto	Tone Settings RX SSB HPF/LPf Bass 0 Treble	RX FM HPF/LPf Bass 0 Treble	TX SSB Bass 0 • Treble 0 •	TX AM Bass 0 • Treble 0 •
Voice TX Name	RX Auto ▼ % Scroll Speed Fast ▼	RX AM HPF/LPf	RX DV HPF/LPF	TBW 100-2900 -	TX FM
LCD 50 Key Backlight 50	× System Language English ▼ TX Call	Bass 0	Bass 0 V	TBW (MID) 300-2700 ▼	Bass 0 Treble 0
Time Set	Your Call Sign  Clock	Treble	Treble	TBW 500-2500 -	
Date -1	GPS Time Auto	RX WFM Bass	RX RTTY	RX CW	TX DV Bass 0
Time -1	UTC Offset -14:00 V	Treble	······	▼	-5 V

#### Display

Customize options for these functions of the radio.



# WCS-7100 Programming Software **Radio Option Setting Screens**

Menu Settings for IC-710	0 - Untitled.rsf			
<u>File Tabs Help</u> Common Display CW/F	RITY			
9600bps Mode		50 %	AF 👻	QS0/RX Log
USB Audio SQ		50 %	CI-V Baud Rate	🔲 QSO Log 👘 RX History Log
External Keypad	DATA MOD Level	50 % 88 h	MICACC -	CSV Format Separator/Decimal Date
RTTY	USB MOD Level	50 %	ACC -	Sep [,] De 🔻 mm/dd/yy 💌
			VSEND VHF/UHF -	
DV Mode Break-In V Digital Repea DV Auto Detr EMR	Digital Moni	tor	Rx Record (RPT) All • Rx Repeater Write Off • Standby Beep Off •	USB2/DATA1 USB2 Function GPS Out Off DATA1 Function RTTY Decode Baud GPS
EMR AF Level	50 % Rx Call Sign Off	n Write ▼		DV Data/GPS Out Baud 4800 V

#### CW/RTTY

Use these settings to adjust the CW and RTTY menu items of the radio.

Use File/Save to record your configuration. You can make changes any time... even set up an entirely new configuration. But, you don't have to. Once saved these settings are sent to the radio with every frequency file you use.



# WCS-7100 Programming Software **Preferences – Version 4.50**

Grid Display Memory Defaults	Font Other
	Mark the columns to hide.
Freeze 1	Column Hide 🔼
	Transmit Frequency
Alternate row	Offset Frequency
1 Row 1	Offset Direction
2 Row 2	Name 🔲
2 Row 2	Tone Mode
4 Row 4	CTCSS
4 1.084	Rx CTCSS
Fore Back	DCS
	Tx Power
	Busy Channel Lockout
Use Combo for Check box	Skip
	Clock Shift
Language:	Battery Save
English -	Comment
	OK Cancel App

#### Grid Display

- RT Systems now available in English, French, German, Italian, Spanish, Portuguese and Japanese.
- Set colors for text (Fore) or background (Back) of alternate rows for easier viewing across the columns.
- Freeze columns to keep information on the screen as you scroll to the right of the page.
- Hide columns you don't use. Customize your printout: hidden columns do not print.
- Use Combo for Check boxes changes the grid to eliminate check box selections that are disabled on some systems.

#### Memory Defaults

• Set options to control auto fill information for memory channel entries.



303-586-6510 | www.rtsystemsinc.com

Preferences
Grid Display Memory Defaults Font Other
Eont     Size:       MS Sans Serif     8       MS Serif     10       MS Serif     10       MS UGothic     10       The TExtra     10       MV Boli     12       MV Moli     14       Minad Pro     18       Minad Pro Cond     12       Minad Pro Cond     14       Minad Pro Linht     14       Minad Pro Linht     14       Minadara Solid     14
АаВbYyZz 0123456789
OK Cancel Apply

#### Font

• Set options to control the font in the column headers of the channel entry screens. Select any font and font size available on your computer.

#### Other

- Set options to control how the programmer handles the global Radio Menu Settings file.
  - Separate (default) handles the global settings of the radio in a "set and forget" fashion. Once you set these up and save the file you won't have to reset them for a new frequency file.
  - Together as one gives you the ability to create files that are complete with frequencies and customized global settings. In this mode, each file begins with factory defaults for every option of the radio.
- Check "Get data from Radio" new file option to prevent data loss when you read from your radio into the programmer.
- Check "different window" option to make the programmer for a different radio run in completely separate window rather than in a separate tab of the same window.

Preferences				
Grid Display Memory Defaults Font Other				
Radio Menu Settings © Use Separate file for menu settings.				
<ul> <li>See Separate life for Intend settings.</li> <li>Keep menu settings and frequencies in a single file.</li> </ul>				
Open new file when needed for "Get Data From Radio".				
Use different windows for each radio programmer.				
OK Cancel Apply				



<u>Click here</u> to learn more about using Preferences to customize your radio programming experience.