

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 | | | | | | | | | | | | | | | | | |
|--------------|----------------------|-----------------------|-------------------------------|---------------------|-------------------|----------------------|------|------------------------|--------------------|--------------------|-------|-----------------|----------------|--------------------|-----------------|------------------|-------------------|-------------------|---|--------|-----|-------|
| D 🖆 | F 🔚 🕺 🗉 | b 🛍 🍯 | û 🔱 🛤 | <u></u> ≩↓ 🦓 | | | | | | | | | | | | | | | | | | |
| 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 | | 3: Australia | | | _ |
| 5 | 444.82500 | 449.82500 5.00 MHz | +DUP | V | | Banff Nationa | | (| left to rig | ht) | | 115°34'22'W | -07:00 | 4: Canada | | | |
| 6 | 444.95000 | 449.95000 5.00 MHz | +DUP | V | | Calgary | | _ | - | | . | 114°09'49''W | -07:00 | 4: Canada | | | |
| 7 | 444.96250 | 449.96250 5.00 MHz | +DUP | V | | 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 | V | | Calgary | - | | - | | | 114°12'40'W | -07:00 | 4: Canada | | | |
| 9 | 440.75000 | 445.75000 5.00 MHz | +DUP | V | | 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 | V | | Edmonton | 0.00 | - | | | | 113*20'46'W | -07:00 | 4: Canada | | | |
| 11 | 444.30000 | 449.30000 5.00 MHz | +DUP | V | | Sherwood Pa | Offset F | requer | ю | LatLng | | 113°11'49'W | -07:00 | 4: Canada | | | |
| 12 | 444.62500 | 449.62500 5.00 MHz | +DUP | V | | Chilliwack | | St | | 1 | | 121*54'24''W | -08:00 | 4: Canada | | | |
| 13 | 445.77500 | 450.77500 5.00 MHz | +DUP | V | | 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 | V | | 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 | V | | 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 | | | |
| | M Dariu A | | | | 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 | |
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| 4 | | | | | | | |

GPS Memory

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





303-586-6510 | www.rtsystemsinc.com

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 | | | T |
| | Use | | | Text Message |
| 1 | V | 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: /

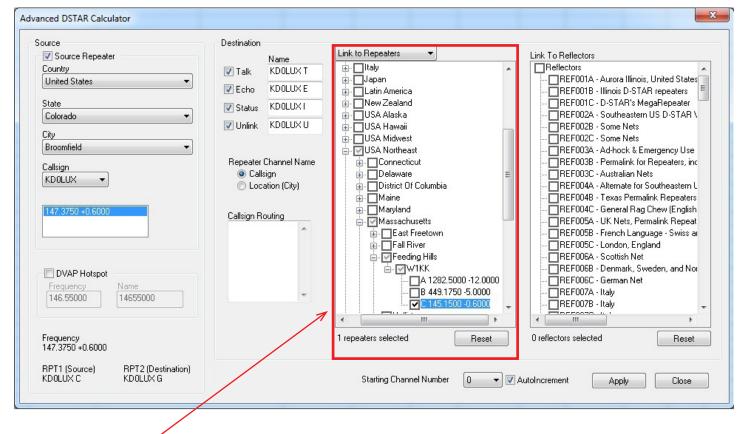
The D-STAR Calculator automatically sets up the Talk, Echo, Info and Unlink channels for your "Source" repeater. The "Source" is the repeater you access to begin your adventures. Just like with analog repeaters, you must be able to hit the "Source" repeater.

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.



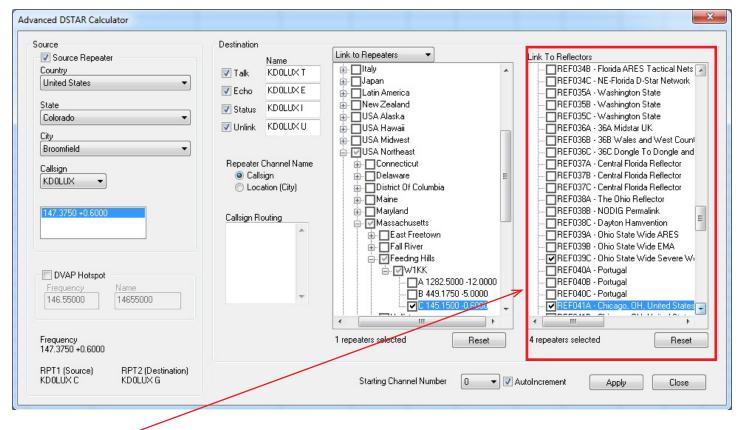


Route/Link to Repeaters: -

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 🗜 🏘 | \$. ₹ ↓ 🤶 | | | | | | | | | | | | | |
|----|------------------------|------------------------|------------------------|------------------|----------|--------|------------------------------|-----------------|-----------------------|----------------------|---------------------|--------------------------|--------------------|---------------|--------------------------------|-------------|-----|
| ~ | 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 | v | | 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 | Autoincrer | 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 | V | | Winnipeg | | | VE4WDR G | Exact | iItaly | | | a the group. | _ | |
| | 443.40000 | | 5.00 MHz | +DUP | V | | St.Johns | NL | VO1TZ B | V01TZ G | Exact | ian Japan | | | | | |
| | 444.10000 | | 5.00 MHz | +DUP | V | | Almonte | | VA3AAR B | VA3AAR G | Exact | E- Latin America | | Set. | for Repeater Use | | |
| | 444.45000 | | 5.00 MHz | +DUP | V | | Cornwall | Ontario | VA3SDG B | VA3SDG G | Exact | New Zealand | | set | tor Repeater use | | L |
| | 444.85000 | 449.85000 | | +DUP | V | | Cumberland | Ontario | VA30DH B | VA30DH G | Approximal | | | | | | |
| | 443.63750 | 448.63750 | | +DUP | V | | 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.

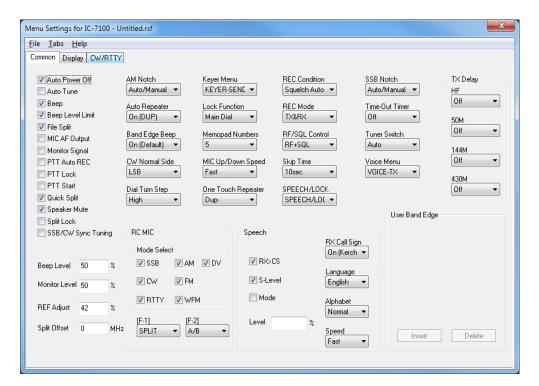
No searching for data, it's all right in the RT Systems Programmer.

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.



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| 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. | | | | |
| See Separate life for Intend settings. Keep menu settings and frequencies in a single file. | | | | |
| 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.