



PCC-950

REFERENCE BOOK

The PCC-950 allows you to quickly and easily operate the Yaesu FT-950 HF/50 MHz Transceiver from your personal computer.

IMPORTANT NOTE

By using this software, you acknowledge that the Software is not intended for use in connection with any high risk of personal injury or strict liability activity (including, without limitation to, air travel, space travel, fire fighting, police operations, power plant operation, military operations, rescue operations, hospital and medical operations) and that Vertex Standard makes no warranty and shall have no liability in connection with any use of the Software in such situations.

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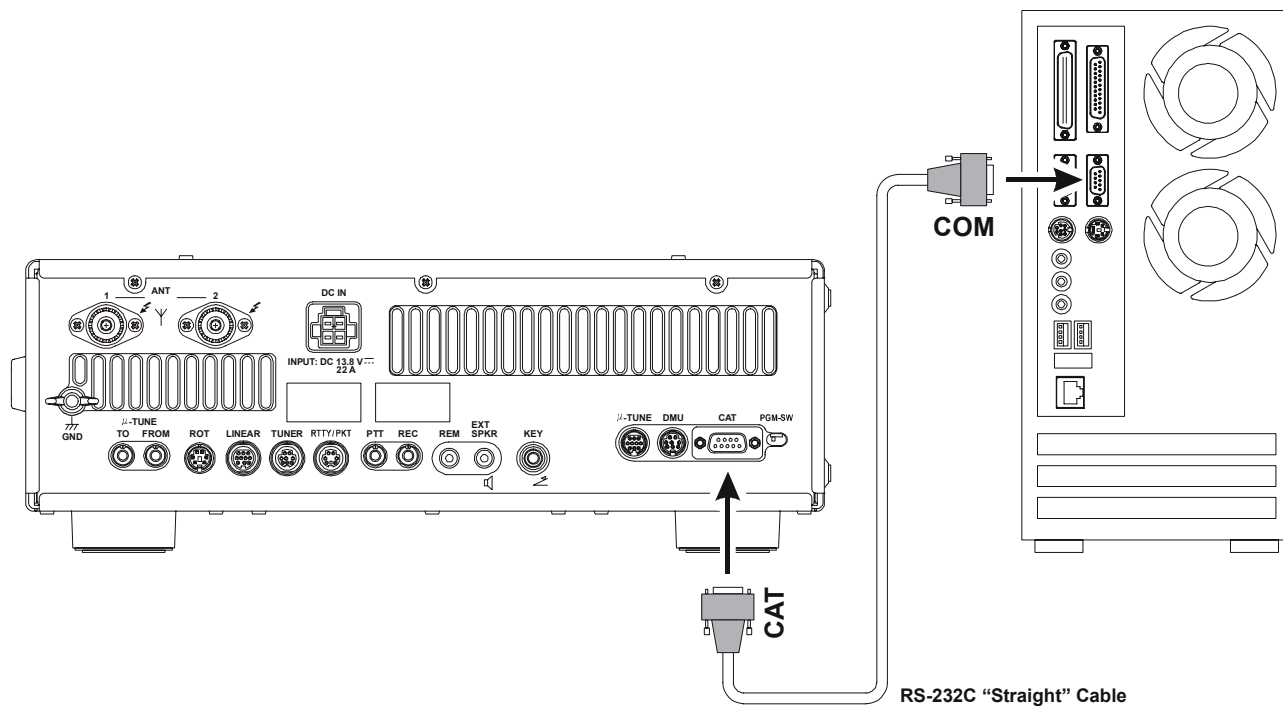
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PCC-950 SYSTEM COMPONENTS

- ❑ IBM® PC / compatible Computer with Microsoft® Windows® 2000, XP, or Vista
- ❑ 30 MB of available Hard Disk space
- ❑ 256 MB or more RAM
- ❑ RS-232C port
- ❑ 1024 x 768 color display with 256-bit color support on the video card
- ❑ RS-232C “Straight” Cable, DB9-pin Female to DB9-pin Female (Or, USB to RS-232C Adapter Cable*).

※: Some USB to RS-232C Adapter Cable does not function normally.

FT-950 AND COMPUTER INTERCONNECTIONS



“PCC-950” PERSONAL COMPUTER CONTROLLER WINDOW

If you double-click the left mouse button on each knob or switch of the following illustration, jump to the detailed page of the selected knob or switch.



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OPENING/CLOSING THE PCC-950 CONTROLLER PROGRAM

OPENING THE PCC-950 PROGRAM

Double click the left mouse button on the “PCC-950” icon or file. The “Vertex Standard” logo will appear for three seconds; afterwards the “PCC-950” Personal Computer Controller Window will be opened.



“PCC-950” icon

CLOSING THE PCC-950 PROGRAM

To close the “PCC-950” Personal Computer Controller:

- ❑ Click the Close Button “X” on the “PCC-950” Personal Computer Controller Window.
- ❑ Alternately, click the “Exit” item in the “File” menu on the “PCC-950” Personal Computer Controller Window.

Or, press the [ESC] button on the keyboard.



“EXIT” parameter



Close button

DATA CONNECTION

- ❑ To enable computer control, click on the [COM] button in the “PCC-950” Controller Window. The yellow indicator will glow.
- ❑ To disable computer control, click on the [COM] button in the “PCC-950” Controller Window again. The yellow indicator will go out.

[COM] button



SWITCHING POWER ON/OFF OF THE FT-950

To turn the transceiver “On” or “Off”, click on the [ON/OFF] button in the “PCC-950” Controller Window.



[ON/OFF] button

AF GAIN CONTROL

To adjust the audio for a comfortable listening level, click on the [AF GAIN] knob (this turns the color of the “AF GAIN” image yellow), then rotate the mouse scroll wheel or press the left/right buttons to adjust AF gain.



[AF GAIN] knob

SQL LEVEL CONTROL

To adjust the squelch threshold level, click on the [SQL] knob (this turns the color of the “SQL” image yellow). Then rotate the mouse scroll wheel, or press the left/right buttons to adjust SQL level.



[SQL] knob

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FREQUENCY NAVIGATION ON THE VFO-A

MAIN TUNING DIAL KNOB

- ❑ To tune the VFO-A frequency, move the mouse cursor to the Main Tuning Dial knob, then rotate the mouse scroll wheel to adjust the VFO-A frequency.
- ❑ Alternatively, move the cursor onto the edge of the Main Tuning Dial knob, then move the cursor while holding in the left mouse button.



Main Tuning Dial knob

DIRECT FREQUENCY DIGIT SET

1. To change the VFO frequency displayed in the graphic display window, click the left mouse button on the frequency digit that you wish to change. The frequency digit will change to Orange.
2. Rotate the mouse scroll wheel to tune the VFO frequency digit.



Frequency Digit

BAND CHANGE

To select the desired operating band, click the **[BAND]** button corresponding to the Amateur band you wish to operate.



[BAND] buttons

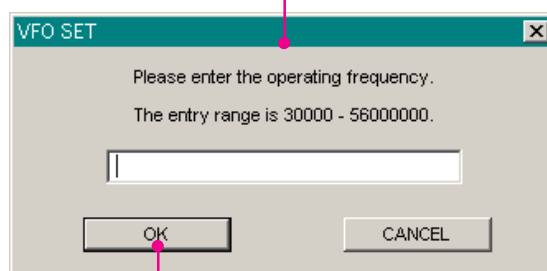
DIRECT KEYPAD FREQUENCY ENTRY

1. Click on the **[ENT]** button of the BAND keys. The “VFO SET” window will open.
2. Enter a frequency directly from the BAND keys or from the computer keyboard. Available entry values are 30000 - 56000000 (30 kHz - 56 MHz).
3. Click on the **[OK]** button of the “VFO SET” window or press the computer’s **[ENTER]** key to terminate the frequency entry.



[ENT] button

“VFO SET” window



[OK] button

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FREQUENCY NAVIGATION ON THE VFO-B

[CLAR/VFO-B] KNOB

- ❑ Click on the [VFO-B(RX)] indicator button to switch the receiving frequency to VFO-B (this turns the color of the button image green) and enables adjusting the VFO-B frequency with the [SUB VFO-B] knob. Move the mouse cursor to the [SUB VFO-B] knob, then rotate the mouse scroll wheel to adjust the VFO-B frequency.
- ❑ Alternatively, click the left mouse button on the [VFO-B(RX)] indicator button to switch the receiving frequency to VFO-B (this turns the color of the button image green) and enables adjusting the VFO-B frequency with the [SUB VFO-B] knob. Place the cursor on the edge of [SUB VFO-B] knob, and then move the mouse while holding in the left mouse button to adjust the VFO-B frequency.

[VFO-B(RX)] button



[CLAR/VFO-B] knob

DIRECT FREQUENCY DIGIT SET

1. Click on the [VFO-B(RX)] indicator button to switch the receiving frequency to VFO-B (the color of the button image turns green).
2. Click on the frequency digit that you wish to change on the VFO-B frequency display. The frequency digit will change to Orange.
2. Rotate the mouse scroll wheel to tune the frequency digit of the VFO-B frequency.



Frequency Digit

BAND CHANGE

1. Click on the [VFO-B(RX)] indicator button to switch the receiving frequency to VFO-B (this turns the color of the button image green).
2. Click on the [BAND] button corresponding to the Amateur band that you wish to operate.



[BAND] buttons

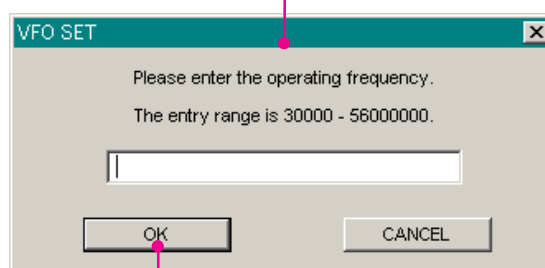
DIRECT KEYPAD FREQUENCY ENTRY

1. Click on the [VFO-B(RX)] indicator button to switch the receiving frequency to VFO-B (the color of the button image turns green).
2. Click on the [ENT] button of the BAND keys. The “VFO SET” window will open.
3. Enter a frequency directly with the BAND keys or with the computer keyboard. Available entry values are 30000 - 56000000 (30 kHz - 56 MHz).
4. Click on the [OK] button of the “VFO SET” window or press the computer [ENTER] key to terminate the frequency entry.



[ENT] button

“VFO SET” window



[OK] button

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MODE SWITCH

- ❑ Click on the **[MODE]** button to select the VFO-A operating mode.
- ❑ To select the operating mode of VFO-B, click on the **[VFO-B(RX)]** indicator button to switch the receiving frequency to VFO-B (this turns the color of the button image green). Then click on the desired **[MODE]** button.

Note:

- Click the **[SSB]** button to toggle the operating mode between “LSB” and “USB”.
- Click the **[CW]** button repeatedly to toggle the operating mode between the “CW-U” and “CW-L” selections (CW with Upper Sideband or Lower Sideband BFO injection).
- Click the **[AM/FM]** button to toggle the operating mode between “AM” and “FM”.
- Click the top half of the **[RTTY/PKT]** button to toggle the operating mode between “RTTY-USB” and “RTTY-LSB”.
- Click the bottom half of the **[RTTY/PKT]** button to toggle the operating mode between “PKT-USB,” “PKT-LSB,” and “PKT-FM.”



[MODE] button's

[VFO-B(RX)] button



CLARIFIER OPERATION

[RX CLAR] BUTTON

Click on the **[RX CLAR]** button to turn the RX Clarifier on/off.

[TX CLAR] BUTTON

Click on the **[TX CLAR]** button to turn the TX Clarifier on/off.

[CLEAR] BUTTON

Click on the **[CLEAR]** button, to set the Clarifier offset frequency to “Zero”.

[CLAR/VFO-B] KNOB

- ❑ Click on the **[CLAR/VFO-B]** knob, then rotate the mouse scroll wheel to tune the Clarifier offset frequency.
- ❑ Alternatively, place the cursor on the edge of the **[CLAR/VFO-B]** knob, and then move the cursor while holding in the left mouse button, to tune the Clarifier offset frequency.

[TX CLAR] button

[RX CLAR] button

[CLEAR] button



[CLAR/VFO-B] knob

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VOICE MEMORY FEATURE

RECORDING

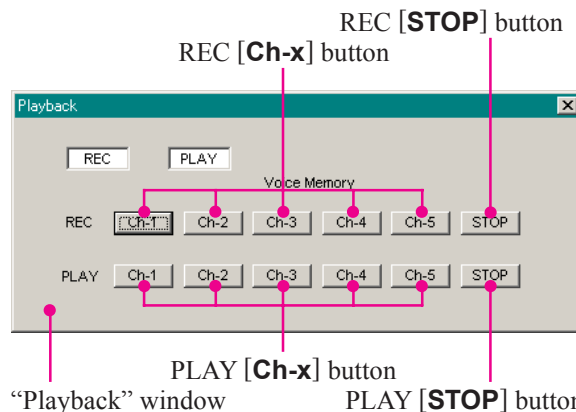
1. Click “Option” on the “PCC-950” window menu bar. Then click “Playback” in the drop-down-list, to open the “Playback” pop-up window.
2. Click on the desired Recording Channel button (REC [Ch-1] ~ REC [Ch-5]), to initiate Voice Memory recording.
3. Click on the REC [STOP] button, to stop the Voice Memory recording.



“Playback” parameter

PLAYBACK

1. Click “Option” on the “PCC-950” window menu bar. Then click “Playback” in the drop-down-list, to open the “Playback” pop-up window.
2. Click on the desired Playback Memory Channel button (PLAY [Ch-1] ~ PLAY [Ch-5]) to begin playback of the recorded audio.
3. Click on the PLAY [STOP] button to stop playback.



“Playback” window

ANTENNA SELECTION

Click on the [ANT 1-2] button to open the “ANTENNA” pop-up window, then select the antenna you wish to operate with.

[ANT 1-2] button



IPO (INTERCEPT POINT OPTIMIZATION)

Click on the [IPO] button to open the “IPO” pop-up window, then select the front-end system you wish to use:

AMP1: low-distortion amplifier.

AMP2: 2-stage low-distortion amplifier.

IPO: bypasses the front end RF amplifier.



“IPO” window

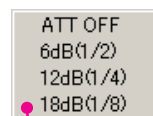
[IPO] button



ATT (ATTENUATOR)

Click on the [ATT] button to open the “ATT” pop-up window, then select the attenuation level you wish to utilize.

[ATT] button



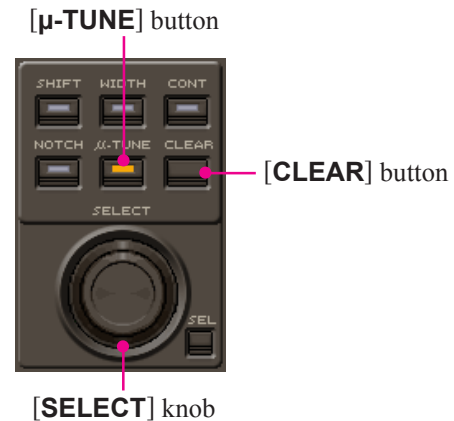
“ATT” window



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μ-TUNE FILTER OPERATION (REQUIRES THE OPTIONAL RF μ-TUNING KIT)

1. Click on the [μ-TUNE] button to turn the μ-Tune filter on and off. When the μ-Tune filter is set to on, the “μ-Tune” icon will appear in the FLT column of the Block Diagram Display window.
2. Click the left mouse button on the [SELECT] knob, then rotate the mouse scroll wheel to adjust the “peak” position of the μ-Tune filter.
Alternatively, place the cursor on the edge of the [SELECT] knob. Then move the cursor while holding in the left mouse button, to adjust the “peak” position of the μ-Tune filter.
3. Click the [CLEAR] button to center the filter response on your current operating frequency.



RF GAIN CONTROL

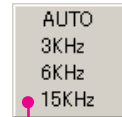
Click on the [RF GAIN] knob (the indication color of “RF GAIN” will turn yellow), then rotate the mouse scroll wheel or press the left/right buttons to adjust the RF gain.



ROOFING FILTER SELECTION

Click on the [R.FLT] button to open the “Roofing Filter” pop-up window, then select the bandwidth you wish to utilize.

- ※ The “AUTO” mode selections are:
 - AM/FM/FM-PKT: 15 kHz
 - LSB/USB/PKT: 6 kHz
 - CW/RTTY: 3 kHz



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CONTOUR FILTER / APF (AUDIO PEAK FILTER) OPERATION

1. Click the left mouse button on the **[CONT]** button to open the “Contour/APF” pop-up window, then select the configuration you wish to use.

CONTOUR ON/OFF:

Toggle the Contour filter on and off. When the Contour filter is set to on, the Contour filter characteristic will appear in the display.

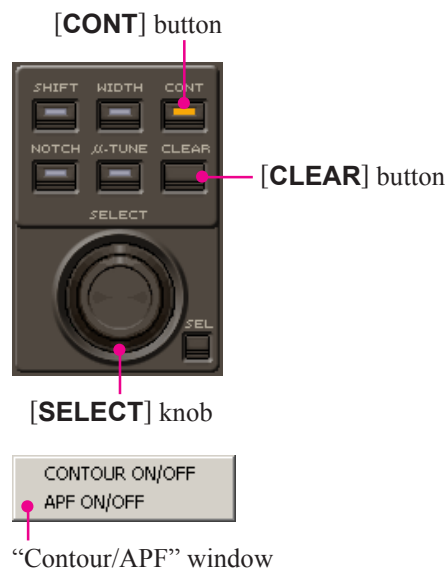
APF ON/OFF:

Toggle the APF (Audio Peak Filter) on and off. The APF is activated only with a CW mode. When the APF is set to on, the “CONTOUR” indication on the display will change to “APF”.

2. When the Contour filter is set to on, click on the **[SELECT]** knob, then rotate the mouse scroll wheel to adjust the “null” (or “peak”) position of the Contour filter.
Alternatively, place the cursor on the edge of the **[SELECT]** knob, then move the cursor while holding in the left mouse button, to adjust the “null” (or “peak”) position of the Contour filter.
3. Click on the **[CLEAR]** button to move the “null” (or “peak”) position of the Contour filter to center.

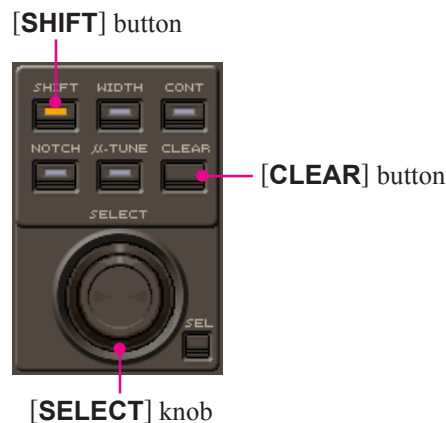
※1: There is no adjustmet knob associated with the APF.

※2: Adjust the Contour filter level and bandwidth via Menu items “069 RGEN CNTR LV” and “070 RGEN CNTR WI”.



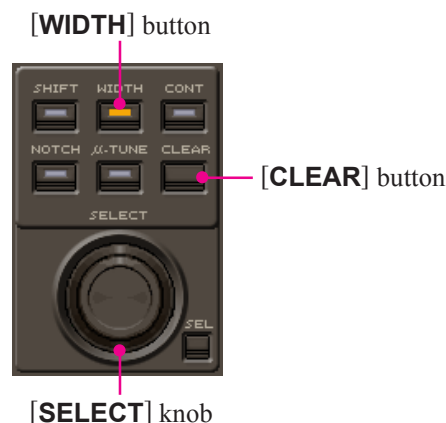
IF SHIFT OPERATION

1. Click on the **[SHIFT]** button to enable moving the filter passband with the **[SELECT]** knob. The inside of the **[SHIFT]** button glows yellow.
2. Click the left mouse button on the the **[SELECT]** knob, then rotate the mouse scroll wheel to move the filter passband.
Alternatively, place the cursor on the edge of the **[SELECT]** knob, then move the cursor while holding in the left mouse button, to move the filter passband.
3. Click on the **[CLEAR]** button to move the filter passband to center.



WIDTH OPERATION

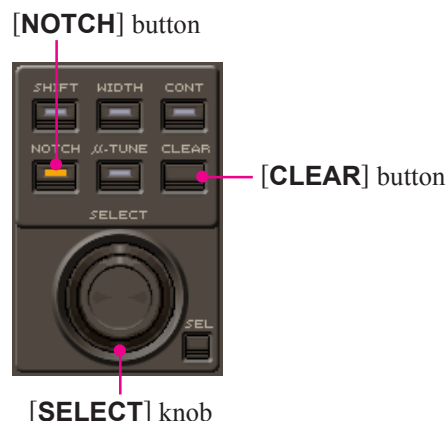
1. Click on the **[WIDTH]** button to enable moving the center frequency of the IF passband with the **[SELECT]** knob. The inside of the **[WIDTH]** button glows yellow.
2. Click on the **[SELECT]** knob, then rotate the mouse scroll wheel to adjust the filter bandwidth.
Alternatively, place the cursor on the edge of the **[SELECT]** knob. Then move the cursor while holding in the left mouse button, to adjust the filter bandwidth.
3. Click on the **[CLEAR]** button to set the bandwidth to default.



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NOTCH OPERATION

1. Click on the **[NOTCH]** button to turn the IF NOTCH filter on and off. When the IF NOTCH filter is set to on, the IF NOTCH filter characteristic will appear in the Block Diagram Display.
2. Click on the **[SELECT]** knob, then rotate the mouse scroll wheel to adjust the center frequency of the IF NOTCH filter. Or, place the cursor on the edge of the **[SELECT]** knob. Then move the mouse while holding in the left mouse button, to adjust the center frequency of the IF NOTCH filter.
3. Click on the **[CLEAR]** button to move the “null” position to center.



NAR (ONE-TOUCH NARROW IF FILTER SELECTION)

1. Click on the **[NAR]** button to engage the preset “Narrow” IF filter selection. When the narrow bandwidth is engaged, the “NAR” indication will appear in the display.
2. Click on the **[NAR]** button again; the bandwidth will revert to the **[WIDTH]** knob setting

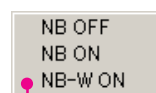


NOISE BLANKER OPERATION

Click on the **[NB]** button to open the “NB” pop-up window, then select the configuration you wish to use:

- NB OFF:** Turns the Noise Blanker off.
- NB ON:** Turns the Noise Blanker on (for short-duration pulses).
- NB-W ON:** Turns the Noise Blanker on (for longer-duration pulses).

- ※ Adjust the Noise Blanker for short-duration and long duration pulses via Menu items “067 RGEN NB 1 LVL” and “068 RGEN NB 2 LVL”.

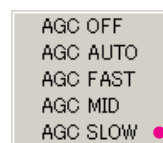


AGC

Click on the **[AGC]** button to open the “AGC” pop-up window, then select the desired receiver-recovery time.

- ※ The “AUTO” mode selections are:

OPERATING MODE	AUTO AGC SELECTION
LSB	SLOW
USB	SLOW
CW	FAST
AM	SLOW
FM	FAST
RTTY	SLOW
PKT (FM)	FAST
PKT (LSB)	SLOW



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LOCK FEATURE

Click on the **[LOCK]** button to turn the Main Tuning Dial knob Lock “on” or “off”. When the Main Tuning Dial knob is set to lock, the “LOCK” icon will appear in the display.



VOX OPERATION

Click on the **[VOX]** button to turn the VOX circuit “on” or “off”. When the VOX circuit is set to on, the inside of the button glows red.

- ※ Adjust the VOX Gain and VOX Delay time (“Hang-Time”) via Menu item “115 TGEN V GAIN” and “116 TGEN VOX DLY”.



[VOX] button

USING THE MICROPHONE EQUALIZER / SPEECH PROCESSOR

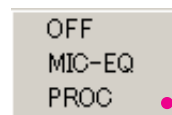
Click on the **[PROC]** button to open the “PROCESSOR” pop-up window, then select the configuration you wish to use:

- OFF:** Turns both the Microphone Equalizer / Speech Processor off.
- MIC-EQ:** Turns the Microphone Equalizer on.
- PROC:** Turns the Speech Processor on with the Microphone Equalizer.

- ※ Adjust the characteristic of the Speech Processor and Parametric Microphone Equalizer via Menu items “091 TAUD EQ1 FRQ” ~ “099 TAUD EQ3 BW”(for Microphone Equalizer) and “100 TAUD PE1 FRQ” ~ “108 TAUD PE3 BW”(for Speech Processor).



[PROC] button



“PROCESSOR” window

USING THE MONITOR

1. Click on the **[MONI]** button to turn the Monitor circuit “on” and “off”. When the Monitor is set to on, the “MONI” icon will appear in the display.
2. Click on the **[MONI]** knob (the indication color of “MONI” will turn yellow), then rotate the mouse scroll wheel or press the left/right buttons to adjust the Monitor level.



[MONI] button



[MONI] knob

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ANTENNA TUNER OPERATION

Click on the **[TUNE]** button to open the “TUNER” pop-up window, then select the configuration you wish to use:

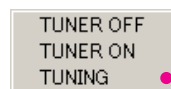
TUNER OFF: Turns the Automatic Antenna Tuner off.

TUNER ON: Turns the Automatic Antenna Tuner on.

TUNING: Turns the Automatic Antenna Tuner on, and begins the automatic tuning process.



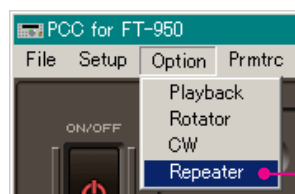
[TUNE] button



“TUNER” window

REPEATER OPERATION

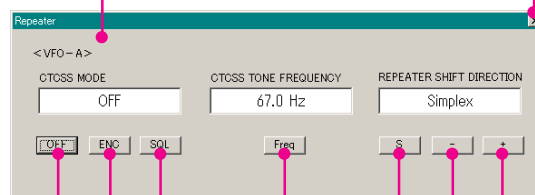
1. Click “Option” on the “PCC-950” Controller menu bar, and then click on “Repeater” in the drop-down list, to open the “Repeater” pop-up window.
2. Click on the **[ENC]**, **[SQL]**, or **[OFF]** button in the pop-up window, to select the desired CTCSS mode.
3. Click on the “Freq” button in the “Repeater” pop-up window to open the “CTCSS Tone Frequency” pop-up window, and then select the desired tone frequency.
4. Click the **[OK]** button to close the “CTCSS Tone Frequency” pop-up window.
5. Click on the **[S]**, **[–]**, or **[+]** button to select the desired Repeater Shift Direction.
6. Click the Close Button “**[X]**” on the “Repeater” pop-up window to save the new setting and close the “Repeater” pop-up window.



“Repeater” parameter

“Repeater” window

Close button



[Freq] button

[SQL] button

[ENC] button

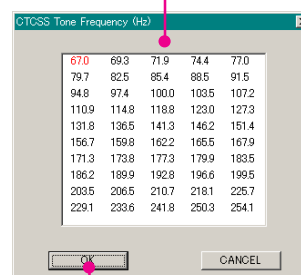
[OFF] button

[+] button

[–] button

[S] button

“CTCSS Tone Frequency” window



[OK] button

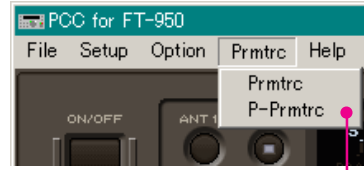
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PARAMETRIC MICROPHONE EQUALIZER ADJUSTMENT

- Click on "Prmtrc" on the menu bar of the "PCC-950" Controller, and then choose a configuration from the drop down list:

Prmtrc: Adjusts the characteristics of the Parametric Microphone Equalizer when the Speech Processor is disabled.

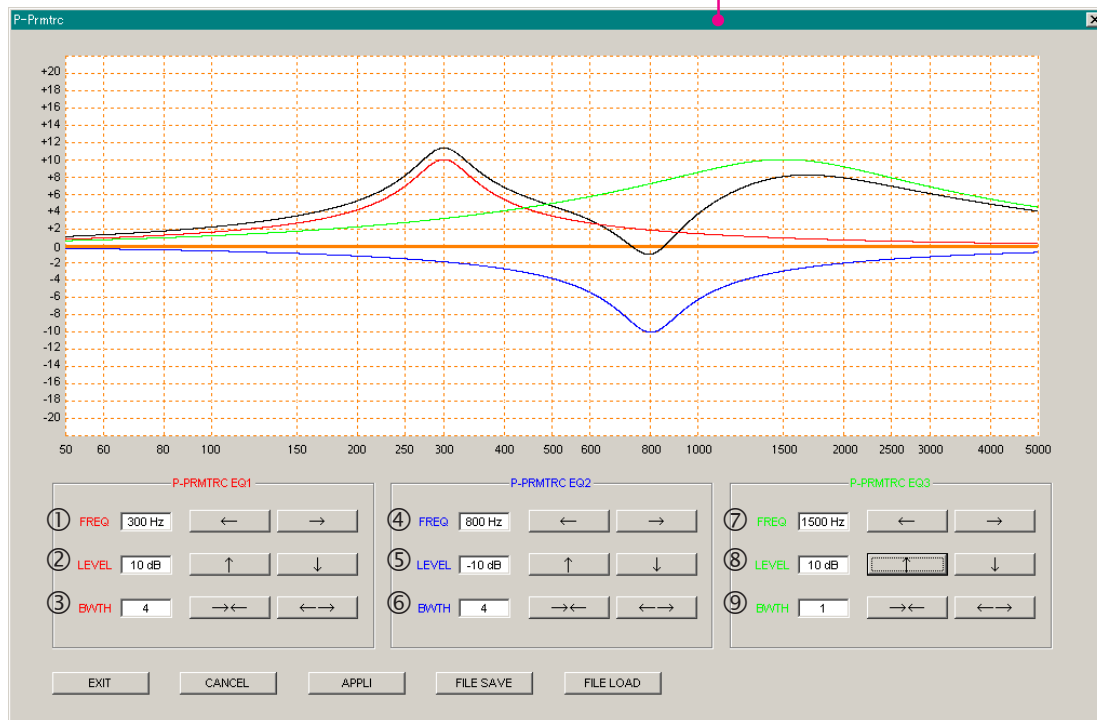
P-Prmtrc: Adjusts the characteristics of the Parametric Microphone Equalizer when the Speech Processor is enabled.



"Parametric" window

- When you click on "Prmtrc" or "P-Prmtrc" in the menu drop down list, the "Parametric Microphone Equalizer Graph" window will open on the PC monitor.
- Click on the arrow switches to adjust the characteristics of the Parametric Microphone Equalizer. You may observe the effect of the changes in the Graph window:
 Red Curve: depicts the characteristic of the lower range for the parametric microphone equalizer.
 Blue Curve: depicts the characteristic of the middle range.
 Green Curve: depicts the characteristic of the high range.
 Black Curve: depicts the characteristic of the overall range for the parametric microphone equalizer.
- Click on the **[APPLI]** button to save the new settings. Then click **[EXIT]** to close the "Parametric Microphone Equalizer Graph" window.

"Parametric Microphone Equalizer Graph" window



① PRMTRC EQ1 (P-PRMTRC EQ1) FREQ

To change the lower frequency range of the parametric microphone equalizer, left click on the [←] or [→] button.

Available selections are 100 ~ 700 Hz (100 Hz/step) or OFF.

② PRMTRC EQ1 (P-PRMTRC EQ1) LEVEL

To change the gain of the low range of the parametric microphone equalizer, left click on the [↑] or [↓] button.

Available selections are -20 dB ~ +10 dB.

③ PRMTRC EQ1 (P-PRMTRC EQ1) BWTH

To adjust the Q-factor of the low range of the parametric microphone equalizer, click on the [→←] or [←→] button.

Available selections are 1 ~ 10.

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PARAMETRIC MICROPHONE EQUALIZER ADJUSTMENT

④ PRMTRC EQ2 (P-PRMTRC EQ2) FREQ

To change the middle frequency range of the parametric microphone equalizer, left click on the [←] or [→] button.

Available selections are 700 ~ 1500 Hz (100 Hz/step) or OFF.

⑤ PRMTRC EQ2 (P-PRMTRC EQ2) LEVEL

To change the gain of the middle range of the parametric microphone equalizer, left click on the [↑] or [↓] button.

Available selections are -20 dB ~ +10 dB.

⑥ PRMTRC EQ2 (P-PRMTRC EQ2) BWTH

To adjust the Q-factor of the middle range of the parametric microphone equalizer, click on the [→←] or [←→] button.

Available selections are 1 ~ 10.

⑦ PRMTRC EQ3 (P-PRMTRC EQ3) FREQ

To change the high frequency range of the parametric microphone equalizer, left click on the [←] or [→] button.

Available selections are 1500 ~ 3200 Hz (100 Hz/step) or OFF.

⑧ PRMTRC EQ3 (P-PRMTRC EQ3) LEVEL

To change the gain of the high range of the parametric microphone equalizer, left click on the [↑] or [↓] button.

Available selections are -20 dB ~ +10 dB.

⑨ PRMTRC EQ3 (P-PRMTRC EQ3) BWTH

To adjust the Q-factor of the high range of the parametric microphone equalizer, click on the [→←] or [←→] button.

Available selections are 1 ~ 10.

[EXIT] Button

Click on this button to close the “Parametric Microphone Equalizer Graph” window.

[CANCEL] Button

Click on this button to cancel the changes.

[APPLI] Button

Click on this button to save the new settings.

[FILE SAVE] Button

Click on this button to open the “File Save” pop-up window and save the new settings to your computer (pef file).

[FILE LOAD] Button

Click on this button to open the “File Load” pop-up window and load previously stored settings.

KEYER OPERATION

1. Left click on the [KEYER] button to turn the CW Keyer on and off. When the CW Keyer is set to on, the “KEYER” icon will appear in the graphic display.
2. Click on the [SPEED] knob (the indication color of “SPEED” will turn yellow), then rotate the mouse scroll wheel, or press the left/right buttons to set the desired keying speed.
3. Click on the [BK-IN] button to turn the CW Break-in circuit on and off. When the CW Break-in circuit is set to on, the “BK-IN” icon will appear in the graphic display.



[KEYER] button
[BK-IN] button



[SPEED] knob

PCC-950 REFERENCE BOOK

CONTEST MEMORY KEYS

TEXT MEMORY STORAGE

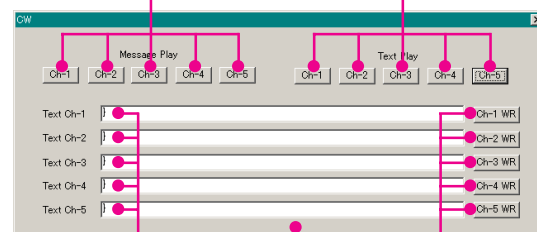
1. To open the “CW” pop-up window, click “Option” on the “PCC-950” menu bar. Then choose “CW” in the drop-down list.
2. In the “CW” pop-up window, click on the desired Text Memory Channel (“Text Ch-1” ~ “Text Ch-5”), then enter the message from the computer’s keyboard. Remember to add the “}” character at the end to signify the termination of the message.
3. Click on the **[CH-x WR]** button to save the message.



“CW” parameter

“Message Play” button’s

“Text Play” button’s



Text Memory Channel

[CH-x WR] button

“CW” window

PLAYBACK

1. To open the “CW” pop-up window, click “Option” on the “PCC-950” menu bar. Then choose “CW” in the drop-down list.
2. In the “CW” pop-up window, click on the desired Playback Memory Channel (Message Play **[Ch-1]** ~ Message Play **[Ch-5]** or Text Play **[Ch-1]** ~ Text Play **[Ch-5]**) to begin playback of the recorded audio.

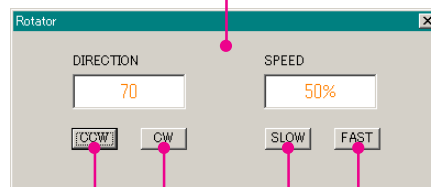
ROTATOR CONTROL

1. To open the “Rotator” pop-up window, click “Option” on the “PCC-950” menu bar. Then click on “Rotator” in the drop-down list.
2. Click on the **[CCW]** or **[CW]** button, to rotate the antenna.
3. Click on the **[SLOW]** or **[FAST]** button, to adjust the rotation speed.



“Rotator” parameter

“Rotator” window



[CW] button

[FAST] button

[CCW] button

[SLOW] button

QMB MEMORY

- ❑ Click on the **[STO]** button to write the current VFO-A data to the QMB memory.
- ❑ Click on the **[RCL]** button to recall the QMB memory.

[STO] button

[RCL] button

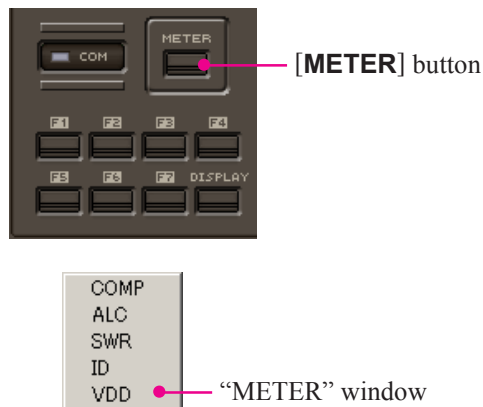


PCC-950 REFERENCE BOOK

OPERATION OF MISCELLANEOUS KNOBS AND BUTTONS

[METER] BUTTON

Click on the [METER] button to open the “METER” pop-up window, then select the desired function of the meter during transmission.



[MIC GAIN] KNOB

Click on the [MIC GAIN] knob (the indication color of “MIC GAIN” will turn yellow), then rotate the mouse scroll wheel or press the left/right buttons to select the Microphone gain level.

[MIC GAIN] knob



[MOX] BUTTON

To begin transmission, click on the [MOX] button. When the MOX circuit is set to on, the inside of the button glows red.

[MOX] button



[SPOT] BUTTON

Click on the [SPOT] button to turn on the CW receiver spotting tone.



[SPOT] button

[SPLIT] BUTTON

Click on the [SPLIT] button to open the “SPLIT” pop-up window, then select the configuration you wish to use.

SPLIT: Toggle the Split Frequency operation on and off. The VFO-A will be used for reception, and VFO-B will be used for transmission.

QUICK SPLIT: Activates the Quick Split feature. (Sub (VFO-B) register will automatically be set to a frequency 5 kHz higher than the Main (VFO-A) register with same operating mode.)

[SPLIT] button

[TXW] button



[TXW] BUTTON

Place the cursor on the [TXW] button. Then press and hold the left mouse button to monitor the transmit frequency when split frequency operation is engaged. Release the mouse button to return to normal operation.

PCC-950 REFERENCE BOOK

OPERATION OF MISCELLANEOUS KNOBS AND BUTTONS

[(VFO-A)RX] BUTTON

- ❑ Click on the [(VFO-A)RX] button to toggle the Main Band receiver (VFO-A) “on” and “off”. When the Main Band (VFO-A) receiver is set to “on”, the button glows green.
- ❑ While receiving the VFO-A frequency, click the [(VFO-A)RX] button again to silence the receiver audio (audio muting). This button blinks green.
To restore reception, just click the left mouse button on this button once more.

[(VFO-A)TX] BUTTON

Click on the [(VFO-A)TX] button to toggle transmitter control between the VFO-A and VFO-B. When the transmitter control is set to VFO-A, this button glows red.

[(VFO-B)RX] BUTTON

- ❑ Click on the [(VFO-B)RX] button to toggle the VFO-B receiver “on” and “off”. When the VFO-B receiver is set to “on”, the button glows green.
- ❑ While receiving the VFO-B frequency, click the [(VFO-B)RX] button again to silence the receiver audio (audio muting). The button blinks green.
To restore reception, just click on this button once more.

[(VFO-B)TX] BUTTON

Click the left mouse button on the [(VFO-A)TX] button to toggle transmitter control between VFO-A and VFO-B. When the transmitter control is set to VFO-B, this button glows red.

[VFO-A(RX)] button [VFO-A(TX)] button



[VFO-B(RX)] button



[VFO-B(TX)] button

PCC-950 REFERENCE BOOK

OPERATION OF MISCELLANEOUS KNOBS AND BUTTONS

[FAST] BUTTON

Click on the **[FAST]** button to toggle the tuning rate of the Main Tuning Dial knob between “Fast” and “Slow.” When the tuning rate is set to “Fast,” the “FAST” icon will appear in the display.

[A►B] BUTTON

Click on the **[A►B]** button to transfer frequency data from the VFO-A (or a recalled memory channel) to VFO-B.

[A◄B] BUTTON

Click on the **[A◄B]** button to exchange the contents of VFO-A (or a recalled memory channel) and VFO-B.

[V/M] BUTTON

Click on the **[V/M]** button to toggle the VFO-A receiver operation between the memory system and the VFO.

[M►A] BUTTON

Click on the **[M►A]** button to copy the data from the currently-selected memory to the Main VFO (VFO-A).

[A►M] BUTTON

Click on the **[A►M]** button to copy the current operating data from the VFO-A into the currently selected memory channel, overwriting any previous data stored there.

[BAND] BUTTON

Clicking on the **[BAND]** button (the inside of the button will glow yellow) allows you to select the VFO-A operating band (Amateur bands) using the **[CLAR/VFO-B]** knob.

[MHz] BUTTON

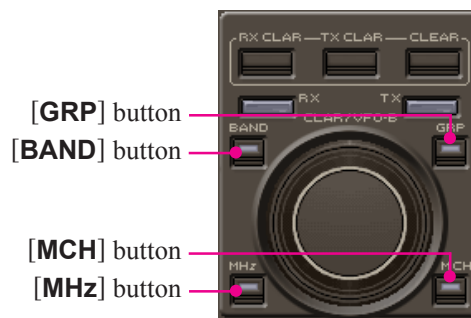
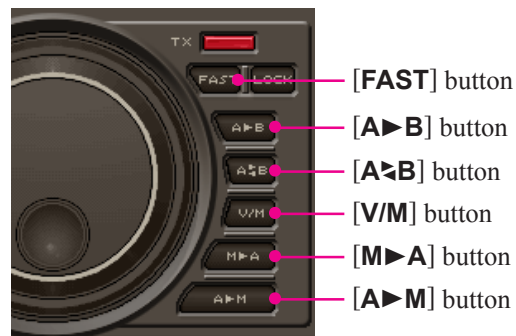
Clicking on the **[MHz]** button (the inside of the button will glow yellow) allows you to tune the VFO-A frequency down or up in 1 MHz increments, using the **[CLAR/VFO-B]** knob.

[GRP] BUTTON

Clicking on the **[GRP]** button (the inside of the button will glow yellow) allows you to select the memory group using the **[CLAR/VFO-B]** knob.

[MCH] BUTTON

Clicking the left mouse button on the **[MCH]** button (the inside of the button will glow yellow) allows you to select the memory channel using the **[CLAR/VFO-B]** knob.



PCC-950 REFERENCE BOOK

OPERATION OF MISCELLANEOUS KNOBS AND BUTTONS

[F1] ~ [F7] BUTTONS

Clicking on these buttons to activates/selects the various function of the optional **DMU-2000** Data Management Unit.

[DISPLAY] BUTTON

Click on the **[DISPLAY]** button to open the “Display Page” pop-up window, and then select the display page which you wish to engage for operation of the optional **DMU-2000** Data Management Unit.

WORLD CLOCK DISPLAY:

SPECTRUM SCOPE DISPLAY:

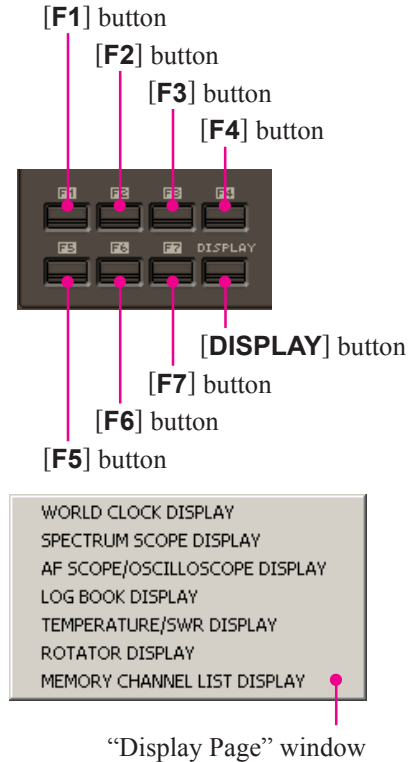
AF SCOPE/OSCILLOSCOPE DISPLAY:

LOG BOOK DISPLAY:

TEMPERATURE/SWR DISPLAY:

ROTATOR DISPLAY:

MEMORY CHANNEL DISPLAY:



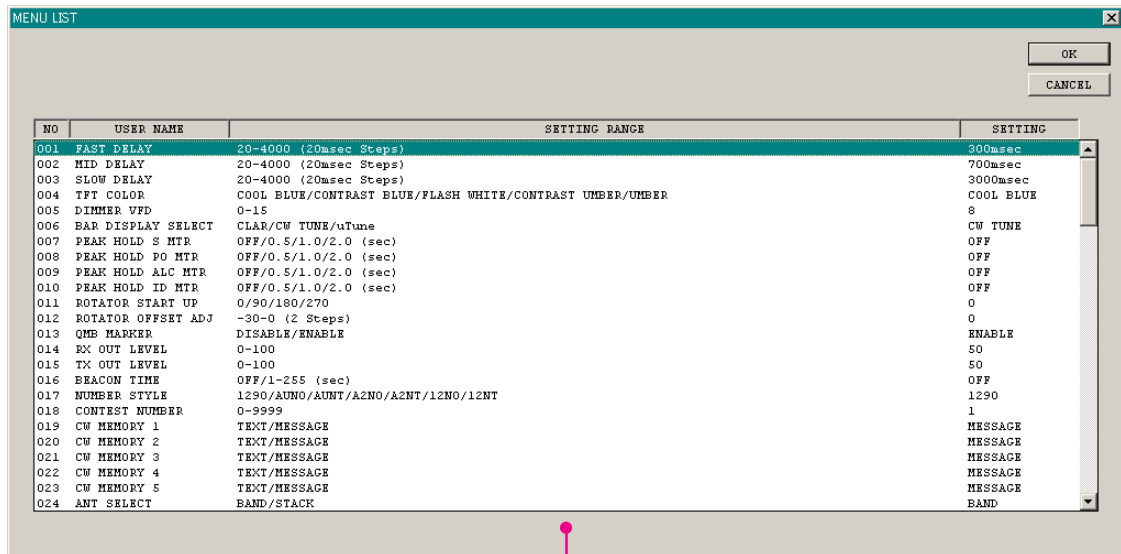
PCC-950 REFERENCE BOOK

MENU OPERATION

1. Click on the **[MENU]** button to open the “MENU” window.
2. Rotate the mouse scroll wheel to select the Menu item you wish to change, then double click the left mouse button on the Menu item to open the pop-up window.
3. Change the current setting of the selected Menu item, then click the **[OK]** button to close the pop-up window.
4. Click the **[OK]** button on the “MENU” window to save the new setting and close the “MENU” window.

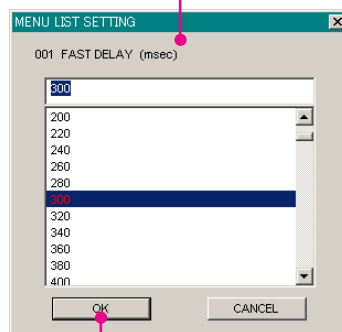


[MENU] button



“MENU LIST” window

“MENU LIST SETTING” window



[OK] button

PCC-950 REFERENCE BOOK

COMMAND SEND

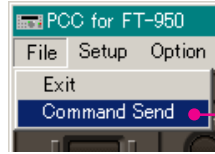
1. Click “File” on the “PCC-950” menu bar. On the menu drop-down list, click “Command Send” to open the “Command Send” pop-up window.
2. Enter the CAT command you wish to send to the FT-950 with the PC keyboard.

For example: Set the VFO-A frequency to 14.250000 MHz.

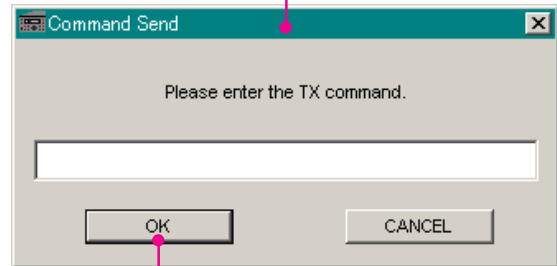
FA14250000;

Refer to a “FT-950 CAT Operation Reference Book” for a list of the CAT commands.

3. Click the [OK] button to send the CAT command to the transceiver and close the pop-up window.



“Command Send” window



[OK] button

PCC-950 REFERENCE BOOK

FUNCTION KEY OPERATION

You can program and assign the CAT commands to your computer's Function keys using the Vertex Standard **KSE4PCC** Keyboard Shortcut Editor. Then you may control the transceiver by pressing your computer's Function keys.

Each of the following 46 Function keys may be programmed with a CAT command sequence. There are a total of 52 commands to choose from:

[F2] key ~ [F9] key, [F11] key, [F12] key,
[Shift] + [F1] key ~ [Shift] + [F9] key, [Shift] + [F11] key, [Shift] + [F12] key,
[Cntrl] + [F1] key ~ [Cntrl] + [F9] key, [Cntrl] + [F11] key, [Cntrl] + [F12] key,
[Alt] + [F1] key ~ [Alt] + [F3] key, [Alt] + [F5] key, [Alt] + [F7] key ~ [Alt] + [F12] key,
[Page Up] key, [Page Down] key, [Home] key, and [End] key

Following is an example of programming a CAT command shortcut into one of the Function keys:

1. Copy the "KSE4PCC.exe" file into the folder where you installed the "PCC-950.exe" file.
2. Double click on "KSE4PCC.exe" to open the "Keyboard Shortcut Editor" pop-up window.
3. Enter the desired CAT commands to each of the Function keys.

Example 1: Set the VFO-A frequency to 14.250000 MHz.

FA14250000;

Example 2: Set the Operating Mode to "USB".

MD02;

Example 3: Set the VFO-A frequency to 14.250000 MHz, USB mode.

FA14250000; MD02;

(Notice in Example 3 that you may assign more than one CAT command to a single function key. Simply add a semi-colon after each command, and end the command line with a semi-colon).

Refer to the "FT-950 CAT Operation Reference Book" for a list of the CAT commands.

Note: You can not enter CAT commands into the following function keys.

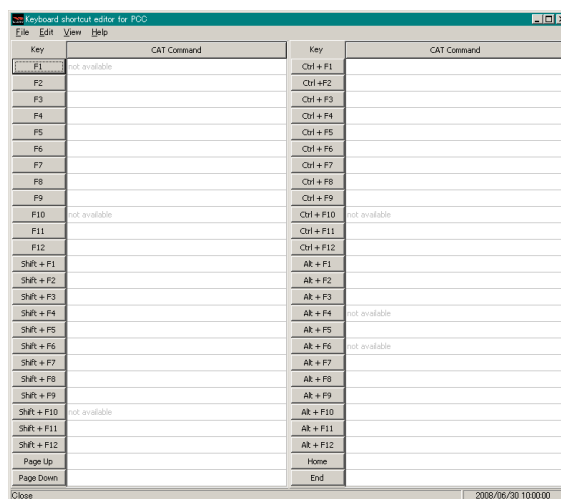
[F1] key, [F10] key, [Shift] + [F10] key,

[Cntrl] + [F10] key, [Alt] + [F4] key, and [Alt] + [F6] key

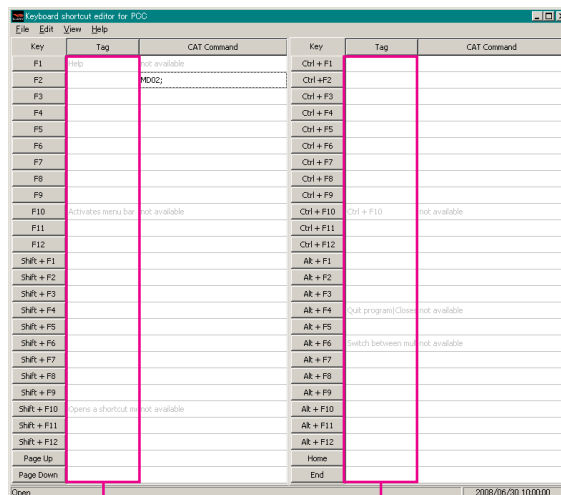
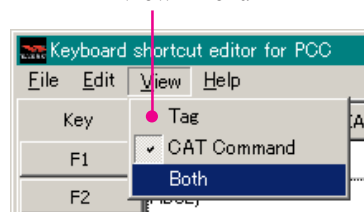
4. You may append an Alpha-numeric "Tag" to a CAT Command for your reference (This is for reference only. The Alpha-numeric "Tag" is not displayed on the "PCC-950" Personal Computer Controller).

To append a "Tag" to your CAT shortcut key, click the left mouse button on the "Tag" or the "Both" parameter in the "View" menu on the "Keyboard Shortcut Editor". Your new reference "Tag" appears in the "Tag" column on the "Keyboard Short-cut Editor".

5. To close the "Keyboard Shortcut Editor" and save the CAT commands, click "File" in the menu bar, and then click "Save" in the drop-down list. In the Confirmation pop-up window, click the [Yes] button to save the new setting.



"View" menu



"Tag" column

"Tag" column



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