YAESU
The radio

PCC-450D

REFERENCE BOOK

IMPORTANT NOTE

PCC-450D REFERENCE BOOK

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PCC-450D Reference Book

PCC-450D System Components

❒ IBM® PC / compatible Computer with Microsoft® Windows® 2000, XP, Vista, or 7

❒ 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)

FT-450D and Computer Interconnections

COM

CAT

RS-232C "Straight" Cable
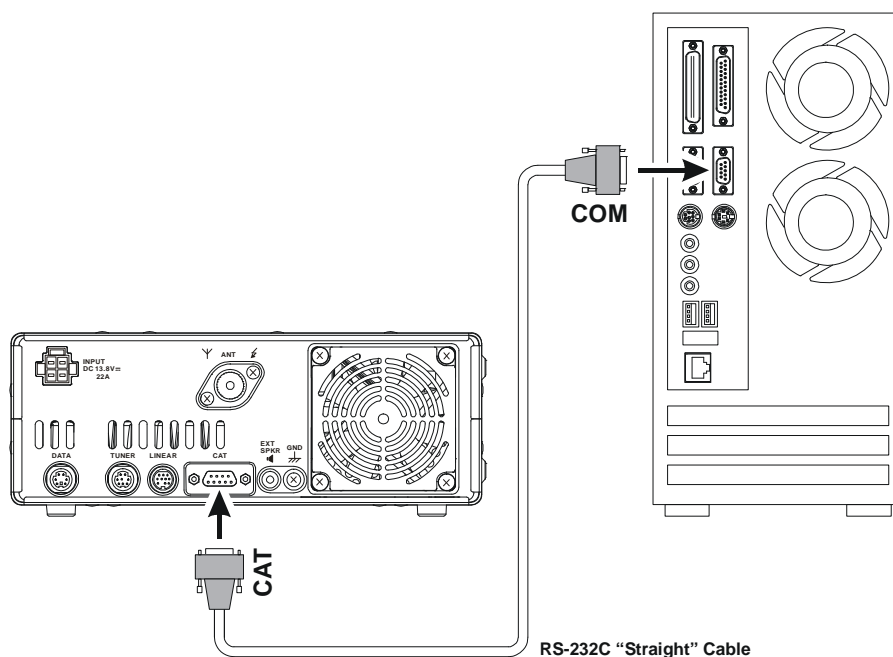
"PCC-450D" Personal Computer Controller Window

PCC-450D REFERENCE BOOK

OPENING/CLOSING THE PCC-450D CONTROLLER PROGRAM

OPENING THE PCC-450D PROGRAM

Double click the left mouse button on the "PCC-450D" icon or file. The logo will appear for three seconds; afterwards the "PCC-450D" Personal Computer Controller Window will open.
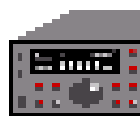
CLOSING THE PCC-450D PROGRAM

To close the "PCC-450D" Personal Computer Controller:
❒ Click the Close Button "☒" on the "PCC-450D" Personal Computer Controller Window.
❒ Alternately, click the "Exit" item in the "File" menu on the "PCC-450D" Personal Computer Controller Window.

"PCC-450D" icon
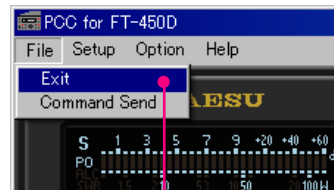
Close button

"EXIT" parameter

DATA CONNECTION

❒ To enable computer control, click the left mouse button on the [**COM**] button in the "PCC-450D" Personal Computer Controller Window. The white indicator will glow.
❒ To disable computer control, click the left mouse button on the [**COM**] button in the "PCC-450D" Personal Computer Controller Window again. The yellow indicator will go out.

[**COM**] button

SWITCHING POWER ON/OFF OF THE FT-450D

To turn the transceiver "On" or "Off": click the left mouse button in the [**ON/OFF**] button of the "PCC-450D" Personal Computer Controller Window.

[**ON/OFF**] button

AF GAIN CONTROL

To adjust the audio for a comfortable listening level, click the left mouse button on the [**AF GAIN**] knob (the indication color of "AF GAIN" will turn yellow), then turn the mouse scroll wheel or press the left/right mouse buttons to adjust AF gain.
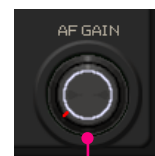
[**AF GAIN**] knob

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BAND SELECTION

❏ To select the desired operating band, click the left mouse button on the [**BAND**(▲)] or [**BAND**(▼)] button.

❏ Alternatively, click the right mouse button on a [**BAND**] button to open the "Operating Band" pop-up window, then press the left mouse button to select the desired operating band.

[**BAND**(▼)] button   [**BAND**(▲)] button

"Operating Band" window
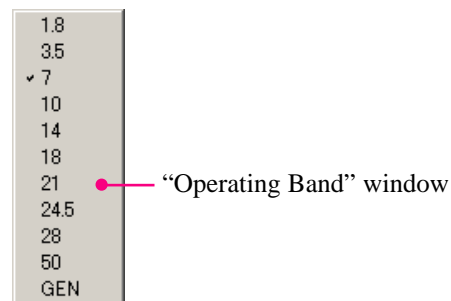
MODE SELECTION

❏ To select the desired operating mode, click the left mouse button on the [**MODE**(▲)] or [**MODE**(▼)] button.

❏ Alternatively, click the right mouse button on a [**MODE**] button to open the "Operating Mode" pop-up window, then press the left mouse button the desired operating mode.

Or, click the left mouse button on the desired operating mode icon in the graphic display window.

[**MODE**] button   "Operating Mode" window
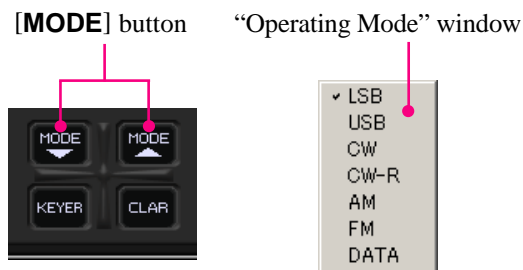
Operating Mode Icon

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FREQUENCY NAVIGATION

MAIN DIAL KNOB

❐ To tune the VFO frequency, move the mouse cursor to the Main Dial knob, then rotate the mouse scroll wheel to adjust the frequency.

❐ Alternatively, press and hold in the left mouse button on the edge of the Main Tuning Dial knob, then move the cursor while holding in the left mouse button, to tune the VFO frequency.

　※1: The tuning step of the Main Tuning Dial knob is different depending on the operating mode. You may change the tuning step via menu item "DIALSTP".

　※2: Pressing the left mouse button on the [**FAST**] button will increase or decrease the tuning rate of the Main Tuning Dial knob by a factor of ten.

[**FAST**] button　　Main Dial knob

[DSP/SEL] KNOB

Fine Tuning

❐ Move the mouse cursor to the [**DSP/SEL**] knob, then rotate the mouse scroll wheel to tune the VFO frequency.

❐ Alternatively, press and hold in the left mouse button on the edge of the [**DSP/SEL**] knob, then move the cursor while holding in the left mouse button, to tune the VFO frequency.

　※1: The tuning step of the [**DSP/SEL**] knob is different depending on the operating mode. You may change each tuning step using the [**SPLIT/STEP**] button.
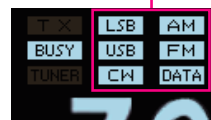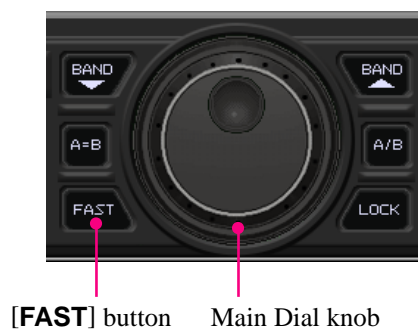
　※2: Pressing the left mouse button on the [**FAST**] button will increase or decrease the tuning rate of the [**DSP/SEL**] knob by a factor of two.

[**DSP/SEL**] knob

Coarse Tuning

❐ First click the left mouse button on the [**SEL**] button, an orange ring will appear on the [**DSP/SEL**] knob. Then move the mouse cursor to the [**DSP/SEL**] knob and turn the mouse scroll wheel to tune the VFO frequency by 100 kHz/steps.

❐ Alternatively, click the left mouse button on the [**SEL**] button. An orange ring will appear on the [**DSP/SEL**] knob. Then press and hold in the left mouse button on the edge of the [**DSP/SEL**] knob, and move the cursor to tune the VFO frequency by 100 kHz/steps.

[**SEL**] button

[**DSP/SEL**] 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 you wish to change. The frequency digit color will change to Orange.

2. Rotate the mouse scroll wheel to tune the VFO frequency digit.

Frequency Digit

DIRECT KEYPAD FREQUENCY ENTRY

1. Press the [**ENTER**] key on your computer's keyboard. The "VFO SET" pop-up window will open.

2. Enter a frequency directly using the BAND keys or computer keyboard. Available entry values are 30000 - 56000000 (300 Hz - 56 MHz).

3. Click the left mouse button on the [**OK**] button of the "VFO SET" window or press the computer's [**ENTER**] key to terminate the frequency entry.

[**OK**] button　　"VFO SET" window
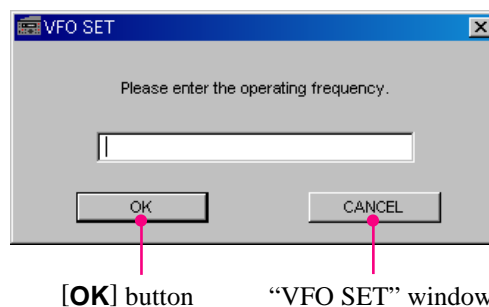
PCC-450D REFERENCE BOOK

CLARIFIER OPERATION

1. To turn the Clarifier on and off, click the left mouse button on the [**CLAR**] button .
2. Move the cursor to the Main Dial knob, then rotate the mouse scroll wheel to tune the Clarifier offset frequency.
   Or, press and hold in the left mouse button on the edge of the Main Tuning Dial knob, then move the cursor while holding in the left mouse button, to tune the Clarifier offset frequency.
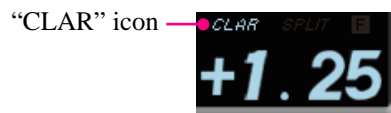3. Click the right mouse button on the [**CLAR**] button to clear the Clarifier offset frequency (thereby setting the offset to "Zero") when the Clarifier is activated.

※ You may also turn the Clarifier on and off by clicking the left mouse button on the "CLAR" icon in the graphic display window.

[**CLAR**] button

"CLAR" icon

DIGITAL VOICE ANNOUNCEMENT

To announce the current operating frequency and operating mode from the transceiver's speaker, click the left mouse button on the top half of the [**C.S/VOICE**] button.

[**C.S/VOICE**] button

AUDIO PLAYBACK FEATURE

RECORDING

1. Click "Playback" in the "Option" menu on the menu bar, to open the "Playback" pop-up window.
2. Click the [**REC**] button in the "Playback" pop-up window to initiate recording.
3. Click the [**STOP**] button in the "Playback" pop-up window, to stop recording.

PLAYBACK

1. Click "Playback" in the "Option" menu on the menu bar, to open the "Playback" pop-up window.
2. Click the left mouse button on the [**PLAY**] button in the "Playback" pop-up window, to begin playback of the recorded audio.
3. Click the left mouse button on the [**STOP**] button of the Audio Playback feature to stop the playback.
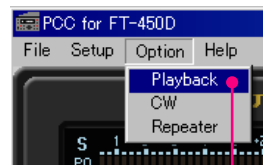
"Playback" parameter
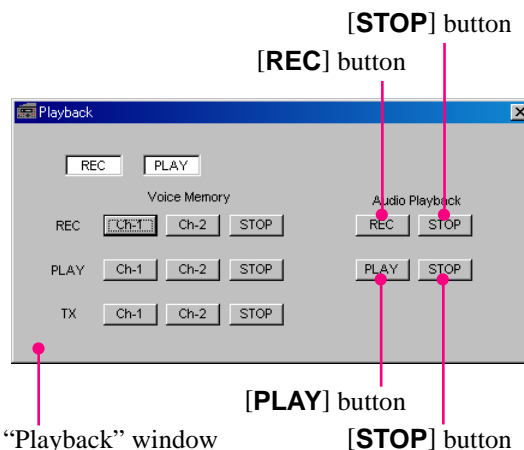
[**STOP**] button
[**REC**] button

[**PLAY**] button
"Playback" window
[**STOP**] button

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VOICE MEMORY FEATURE

RECORDING

1. Click "Playback" in the "Option" menu on the menu bar, to open the "Playback" pop-up window.
2. Click the left mouse button on the desired Memory Channel button (REC [**Ch-1**] or REC [**Ch-2**]) for the Voice Memory feature to initiate recording.
3. Click the left mouse button on the [**STOP**] button for the Voice Memory feature to stop recording.

PLAYBACK

1. Click "Playback" in the "Option" menu on the menu bar, to open the "Playback" pop-up window.
2. Click the left mouse button on the desired Memory Channel button (PLAY [**Ch-1**] or PLAY [**Ch-2**]) of the Voice Memory feature to begin playback of the recorded audio.
3. Click the left mouse button on the [**STOP**] button of the Voice Memory feature to stop the playback.

TRANSMIT
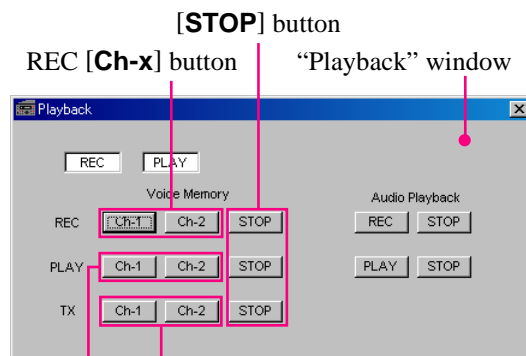
1. Click "Playback" in the "Option" menu on the menu bar, to open the "Playback" pop-up window.
2. Click the left mouse button on the desired Memory Channel button (TX [**Ch-1**] or TX [**Ch-2**]) of the Voice Memory feature to begin transmission of the recorded audio.
3. Click the left mouse button on the [**STOP**] button of the Voice Memory feature to stop the transmission.

"Playback" parameter

[**STOP**] button

REC [**Ch-x**] button   "Playback" window

TX [**Ch-x**] button
PLAY [**Ch-x**] button

ATT (ATTENUATOR) & IPO (INTERCEPT POINT OPTIMIZATION)

❑ Click the left mouse button on the [**IPO/ATT**] button to open the "ATT/IPO" pop-up window, then select the front-end system you wish to use.

ATT OFF IPO OFF: Attenuator is OFF, and the incoming signal is amplified by the RF preamplifier.

ATT OFF IPO ON: Attenuator is OFF, and the incoming signal bypasses the RF preamplifier, yielding direct feed to the first mixer.

ATT ON IPO OFF: Attenuator is ON, (the incoming signal is reduced by 20 dB) and the incoming signal is amplified by the RF preamplifier.

ATT ON IPO ON: Attenuator is ON, (the incoming signal power is reduced by 20 dB) and the incoming signal bypasses the RF preamplifier, yielding direct feed to the first mixer.

※ You may also select the front-end system you wish to use by clicking the left mouse button on the desired icon in the Block Diagram Display in the graphic display window.
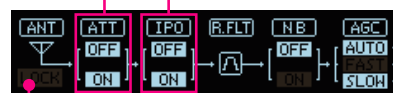
[**IPO/ATT**] button
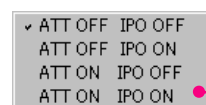
"ATT/IPO" window

ATT icon
IPO icon

Block Diagram Display

RF GAIN CONTROL

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

[**SQL/RF GAIN**] knob

NOISE BLANKER OPERATION

Click the left mouse button on the [**NB**] button to turn the Noise Blanker "On" and "Off".

※ You may also turn the Noise Blanker "On" or "Off" by clicking the left mouse button on the "NB" icon of the Block Diagram Display of the display in the graphic display window.

[**NB**] button

NB icon

Block Diagram Display

AGC

❒ Click the left mouse button on the [**AGC**] button to open the "AGC" pop-up window, then select the receiver-recovery time you wish to use.

AGC OFF:	Disable the receiver AGC.
AGC AUTO:	Sets the receiver-recovery time automatically depending on the operating mode.
AGC FAST:	Sets the receiver-recovery time to fast. This mode is suitable for CW/DATA reception.
AGC SLOW:	Sets the receiver-recovery time to slow. This mode is suitable for SSB/AM reception.

※ You may also select the receiver-recovery time you wish to use by clicking the left mouse button on the "AGC" icon in the Block Diagram Display in the graphic display window.

[**AGC**] button
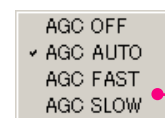
"AGC" window

AGC icon

Block Diagram Display

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CONTOUR FILTER OPERATION

1. Left click on the [**DSP**] button to open the "DSP Select" pop-up window, then left click "CONTOUR", to open the "CONTOUR" pop-up window.
2. Left click the [**ON/OFF**] button in the "CONTOUR" window to turn the Contour filter on/off.
3. Adjust the center frequency of the Contour filter using one of the following methods:
   1) Move the mouse cursor to the [**FREQUENCY**] knob on the "CONTOUR" window, then rotate the mouse scroll wheel.
   2) Press and hold in the left mouse button on the edge of the [**FREQUENCY**] knob, then move the cursor while holding in the left mouse button, to rotate the knob.
   3) Click the left mouse button on the "FREQUENCY" label in the "CONTOUR" window (the color of the "FREQUENCY" label will turn yellow), then press the left or right mouse button.
4. Adjust the Contour filter level using one of the following methods:
   1) Move the mouse cursor to the [**GAIN**] knob in the "CONTOUR" window, then rotate the mouse scroll wheel.
   2) Press and hold in the left mouse button on the edge of the [**GAIN**] knob, then move the cursor while holding in the left mouse button, to rotate the knob.
   3) Click the left mouse button on the "GAIN" label in the "CONTOUR" window (the color of the "GAIN" label will turn yellow), then press the left or right mouse button.
5. Click the left mouse button on the Close Button "🗙" in the "CONTOUR" window to save the new setting and close the "CONTOUR" window.

※ You may also open the "CONTOUR" pop-up window by clicking the left mouse button on the "CONTOUR" icon of the DSP Graphic Display if the grahic display window.

[DSP] button

"DSP Select" window

Contour [**ON/OFF**] knob   Close button

"Contour" window   Contour [**GAIN**] knob

Contour [**FREQUENCY**] knob

"CONTOUR" icon

DSP Graphic Display

IF SHIFT OPERATION

Click the left mouse button on the edge of the [**SHIFT**] knob (the color of the "SHIFT" label will turn yellow), then rotate the mouse scroll wheel, or press the left/right buttons to move the filter passband.

[**SHIFT**] knob

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WIDTH OPERATION

1. Click the left mouse button on the [**DSP**] button to open the "DSP Select" pop-up window, then left click on "WIDTH" in the "DSP Select" window to open the "WIDTH" pop-up window.
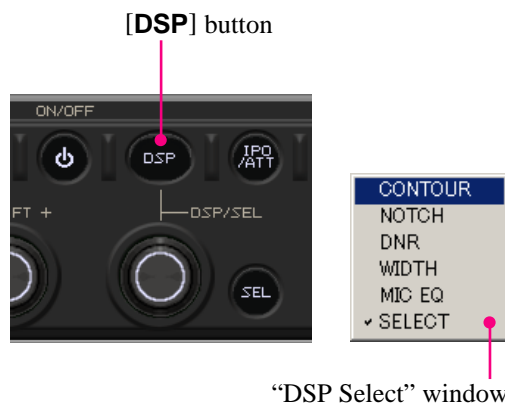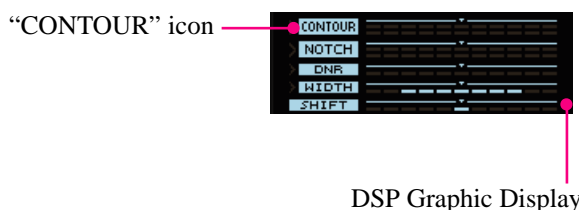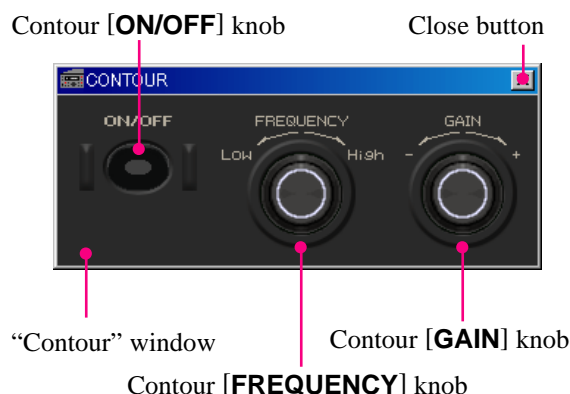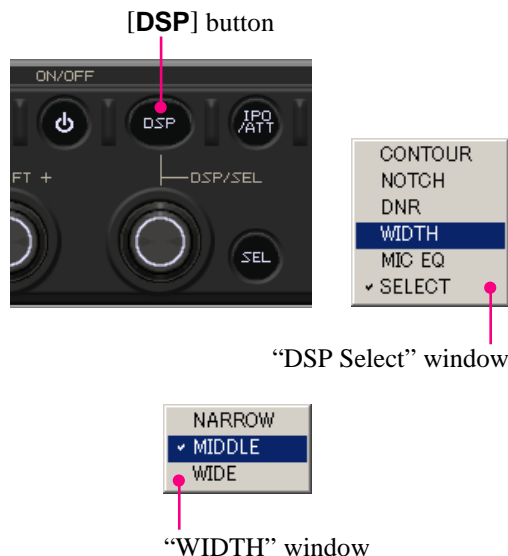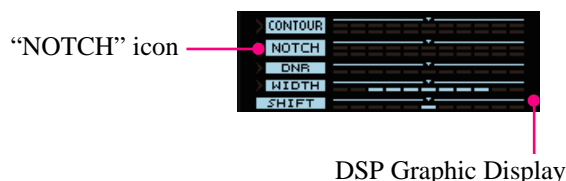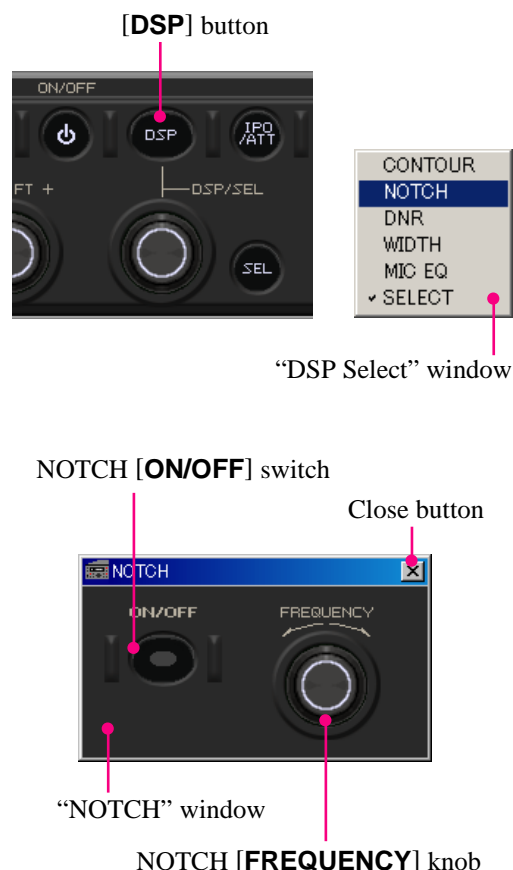2. Click the left mouse button on the desired bandwidth from among the "NARROW", "MIDDLE", and "WIDE" selections.
※ You may also open the "WIDTH" pop-up window by clicking the left mouse button on the "WIDTH" icon of the DSP Graphic Display in the graphic display window.

[**DSP**] button

"DSP Select" window

"WIDTH" icon
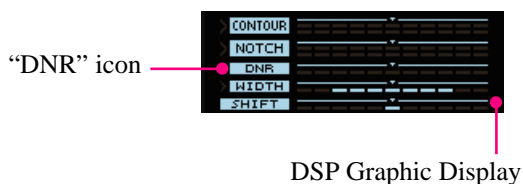
DSP Graphic Display

"WIDTH" window

NOTCH OPERATION

1. Click the left mouse button on the [**DSP**] button to open the "DSP Select" pop-up window, then left click on "NOTCH"in the "DSP Select" window to open the "NOTCH" pop-up window.
2. Click the left mouse button on the [**ON/OFF**] button in the "NOTCH" window to turn the Notch filter on or off.
3. Press and hold in the left mouse button on the edge of the [**FREQUENCY**] knob, then move the cursor to make coarse adjustments to the center frequency of the Notch filter.
4. Alternativery, move the mouse cursor to the [**FREQUENCY**] knob on the "NOTCH" pop-up window, then rotate the mouse scroll to make fine adjustments to the center frequency of the Notch filter.
   Or, click the left mouse button on the "FREQUENCY" label of the "NOTCH" window (the color of the "FREQUENCY" label will turn yellow), then press the left/right mouse buttons to make fine adjustments to the center frequency of the Notch filter.
5. To save the new setting and close the "NOTCH" window, click the left mouse button on the Close Button "⊠" of the "NOTCH" window.

※ You may also open the "NOTCH" pop-up window by clicking the left mouse button on the "NOTCH" icon in the DSP Graphic Display in the graphic display window.
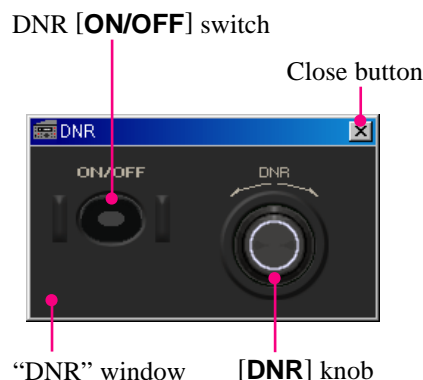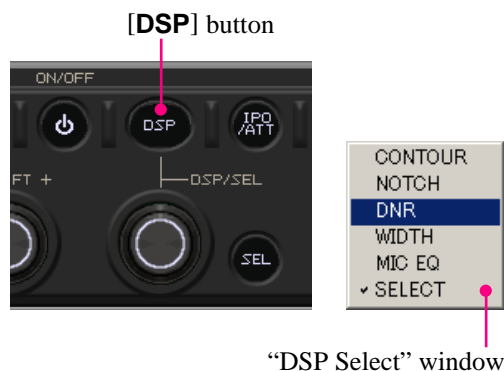
[**DSP**] button

"DSP Select" window

NOTCH [**ON/OFF**] switch

Close button

"NOTCH" window

NOTCH [**FREQUENCY**] knob

"NOTCH" icon

DSP Graphic Display
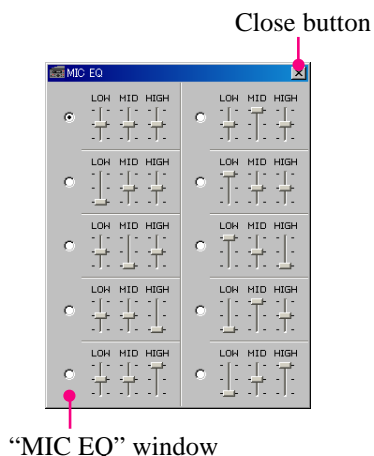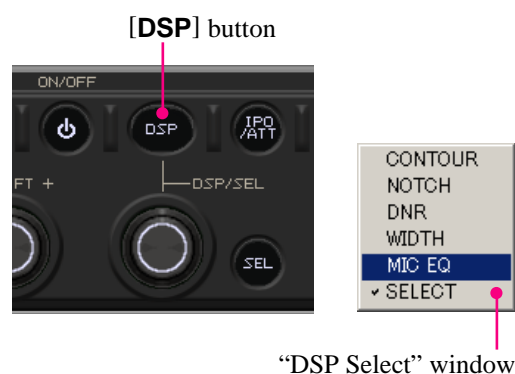
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DNR (DIGITAL NOISE REDUCTION) OPERATION

1. Click the left mouse button on the [**DSP**] button to open the "DSP Select" pop-up window, then click on "DNR", to open the "DNR" pop-up window.
2. Click the left mouse button on the [**ON/OFF**] button in the "DNR" window to turn the Digital Noise Reduction System on or off.
3. Select the setting that most effectively reduces the noise level using any of the following methods:
   1) Bring the mouse cursor to the [**DNR**] knob on the "DNR" window, then rotate the mouse scroll wheel.
   2) Press and hold in the left mouse button on the edge of the [**DNR**] knob, then move the cursor while holding in the left mouse button.
   3) Click the left mouse button on the "DNR" label in the "DNR" window (the indication color of the "DNR" label will turn yellow), then press the left or right mouse button.
4. To save the new setting and close the "DNR" window, click the left mouse button on the Close Button "⊠" on the "DNR" window.

※ You may also open the "DNR" pop-up window by clicking the left mouse button on the "DNR" icon of the DSP Graphic Display in the graphic display window.

[**DSP**] button

"DSP Select" window

DNR [**ON/OFF**] switch

Close button

"DNR" window   [**DNR**] knob

"DNR" icon

DSP Graphic Display

DSP MICROPHONE EQUALIZER

1. To open the "MIC EQ" pop-up window, click the left mouse button on the [**DSP**] button to open the "DSP Select" pop-up window, then click the left mouse button on the "MIC EQ" item.
2. Click on the button next to the desired equalizer pattern.
   Note: You can not move the individual slide bar symbols.
3. To save the new setting and close the "MIC EQ" window, click the left mouse button on the Close Button "⊠" on the "MIC EQ" window.

[**DSP**] button

"DSP Select" window

Close button

"MIC EQ" window

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LOCK FEATURE

To turn the Main Tuning Dial knob Lock "on"or "off", left click on the [**LOCK**] button .

※ You may also turn the Main Tuning Dial knob Lock "on" or "off" by clicking the left mouse button on the "LOCK" icon in the graphic display window.

"LOCK" icon

[**LOCK**] button

REPEATER OPERATION

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

※ You may also select the desired CTCSS mode by clicking the left mouse button on the "ENC" / "DEC" icon in the graphics display window, and then select the desired Repeater Shift Direction by clicking on the "–" / "+" icon in the graphics display window.

Note: You may select the CTCSS mode and Repeater Shift Direction only in FM mode.

"ENC" "DEC" icon

"–" / "+" icon

"CW" parameter

"Repeater" window   Close button
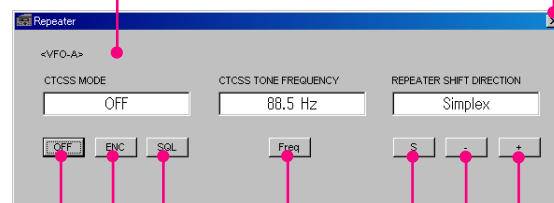
[**Freq**] button

[**SQL**] button

[**ENC**] button

[**OFF**] button

[**+**] button

[**−**] button

[**S**] button

"CTCSS Tone Frequency" window
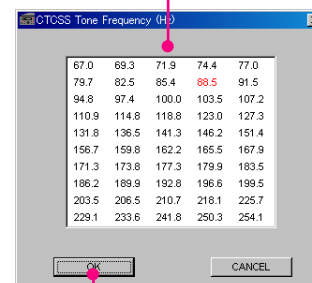
[**OK**] button
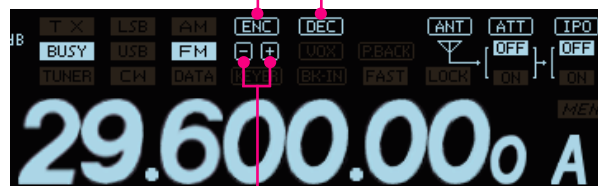
BEACON FEATURE

BEACON TEXT STORAGE

1. To open the "CW" pop-up window, click "Option" in the menu bar on the "PCC-450D" Personal Computer Controller, then left click on the "CW" parameter in the drop-down list.
2. Click the left mouse button on the desired Beacon Text Memory Channel (Text Play [**Ch-1**], Text Play [**Ch-2**], or Text Play [**Ch-3**]), then enter the message from the computer's keyboard. If the Beacon Text is more than 40 characters long, set the last (40th) character to "**{**", then continue entering the message into the next Beacon Text Memory Channel.
3. To save the message, click the left mouse button on the [**CH-x WR**] button.
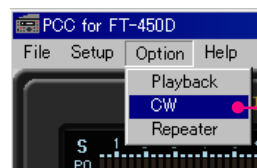
TRANSMIT (ON THE AIR)

1. Click the left mouse button on the top half of the [**STO/VOX**] button, to turn the VOX (voice-actuated transmitter switching) feature "on".
2. To open the "CW" pop-up window, click the left mouse button on "Option" in the menu bar, the click "Playback" in the drop-down list.
3. Click the left mouse button on the desired Memory Channel button (Text Play [**Ch-1**], Text Play [**Ch-2**], or Text Play [**Ch-3**]) to begin playback of the stored message.

"CW" parameter

"STOP" button
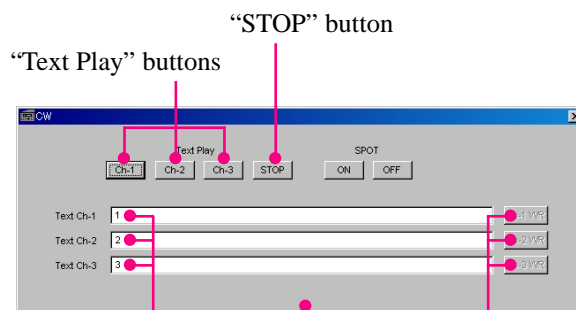
"Text Play" buttons

Text Memory Channel   [**CH-x WR**] button

"CW" window

PCC-450D REFERENCE BOOK

CW SPOTTING

1. To open the "CW" pop-up window, click on "Option" in the menu bar on the "PCC-450D" Personal Computer Controller, then click "CW" in the drop-down list.
2. Click SPOT [**ON**] button in the "CW" pop-up window, to generate the CW Spot Tone.
3. Click the SPOT [**OFF**] button in the "CW" pop-up window, to stop the CW Spot Tone.

Note: You may activate the CW Spot Tone only in CW mode

"CW" parameter

"SPOT" buttons
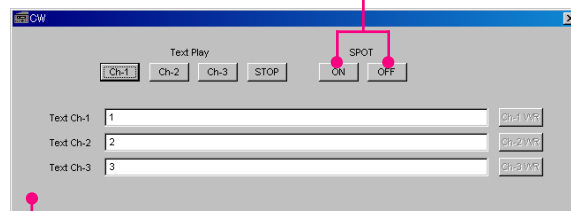
"CW" window

TX/RX

❐ Click the left mouse button on the "TX" icon in the graphic display window to activate the transmitter.
❐ Click the left mouse button on the "TX" icon again to return to the receive mode.

"TX" icon

PCC-450D REFERENCE BOOK

OPERATION OF MISCELLANEOUS KNOBS AND BUTTONS

[KEYER] BUTTON

To turn the Built-in Electronic Keyer "on" or "off", left click on the [**KEYER**] button .

※ You may also turn the Built-in Electronic Keyer "on" and "off" by left clicking on the "KEYER" icon in the graphics display window.

[**KEYER**] button

"KEYER" icon

[A=B] BUTTON

Left click on the [**A=B**] button to copy the currently displayed VFO frequency (or a recalled memory channel) to the hidden VFO; thus setting both VFO-A and VFO-B to the same frequency and mode.

[A/B] BUTTON

Left click on the [**A/B**] button to toggle the frequency control between VFO-A and VFO-B.

[**A=B**] button   [**A/B**] button

[TUNE] BUTTON

Left click on the [**TUNE**] button to open the "TUNER" pop-up window, then select the configuration you wish to use.

TUNER OFF: Disables the Automatic Antenna Tuner.
TUNER ON: Activates the Automatic Antenna Tuner.
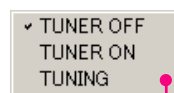**TUNING**:   Begin automatic tuning.

※ You may also open the "TUNER" pop-up window by clicking the left mouse button on the "TUNER" icon of the DSP Graphic Display in the graphics display window.

[F] BUTTON

Click the left mouse button on the [**F**] button to engage the "Menu" mode.See page 20 for details.

[**F**] button

[**TUNE**] button

"TUNER" window

"TUNER" icon

PCC-450D REFERENCE BOOK

OPERATION OF MISCELLANEOUS KNOBS AND BUTTONS

[METER] BUTTON

Left click on the [**METER**] button, to open the "METER" pop-up window, and then select the meter function desired during transmit.

> **POWER**: Indicates the average power output level.
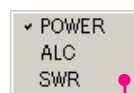> **ALC**: Indicates the relative ALC voltage.
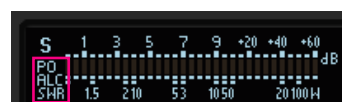> **SWR**: Indicates the Standing Wave Ratio (Forward/Reflected).

※ You may also select the function of the meter by clicking the left mouse button on the "METER" icon in the graphic display window.

[**METER**] button

"METER" window

"METER" icon

[C.S/VOICE] BUTTON

❐ To announce the current mode and operating frequency (with resolution to the displayed 100 Hz digit) from the transceiver's speaker, click the left mouse button on the top half of the [**C.S/VOICE**] button .

❐ Click the left mouse button on the bottom half of the [**C.S/VOICE**] button to open the "CUSTOM FUNCTION" pop-up window, then select the function you wish to use.

> **MONITOR ON**: Activates the Monitor feature to listen to your transmitted voice signal.
> **MONITOR OFF**: Disables the Monitor feature.
> **SPOT ON**: Generates the CW Spot Tone when using CW mode.
> **SPOT OFF**: Disables the CW Spot Tone.
> **TXW ON**: Activates the TXW feature which permits monitoring the transmit frequency when Split Frequency operation is engaged.
> **TXW OFF**: Disables the TXW feature.
> **VCC**: Opens the "VCC" pop-up window to display the DC supply voltage.
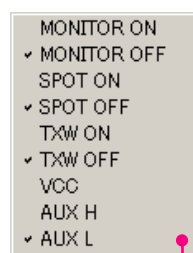> **AUX H**: This function is for future expansion of the transceiver's capabilities.
> **AUX L**: This function is for future expansion of the transceiver's capabilities.

Note: The functions of the "CUSTOM FUNCTION" window are fixed. You can not arrange the window.

[**C.S/VOICE**] button
[**V/M/MW**] button

"CUSTOM FUNCTION" window

PCC-450D REFERENCE BOOK

OPERATION OF MISCELLANEOUS KNOBS AND BUTTONS

[V/M/MW] BUTTON

❑ To store the current frequency into a memory channel, click the left mouse button on the top half of the [**V/M/MW**] button to open the "MEMORY WRITE" pop-up window. Type the desired memory channel number into the "MEMORY WRITE" pop-up window text box.

❑ Click the left mouse button on the bottom half of the [**V/M/MW**] button to toggle the frequency control between the VFO and the Memory System.

※ Memory channels "P1L", "P1U", "P2L", and "P2U" represent "501", "502", "503", and "504" respectively.
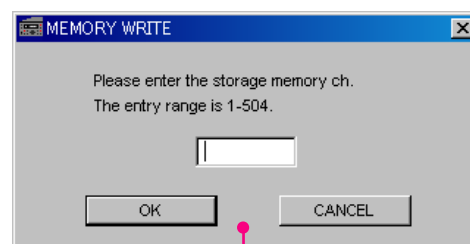
[RCL/HOME] BUTTON

❑ Click the left mouse button on the top half of the [**RCL/HOME**] button to recall the Home Channel on the band group where you are currently operating (HF or 50 MHz).
Click the top of the [**RCL/HOME**] button again to return to the previously-used frequency (either a VFO or a memory channel).

❑ Click the left mouse button on the bottom half of the [**RCL/HOME**] button to recall the QMB memory channel.
Click the left mouse button again to return to the previously-used frequency (either a VFO or a memory channel).

[STO/VOX] BUTTON

❑ *In the SSB, AM, and FM modes*, click the left mouse button on the top half of the [**STO/VOX**] button to turn the VOX (voice-actuated transmitter switching) feature "on" or "off".
In the CW mode, click the left mouse button on the top half of the [**STO/VOX**] button to turn the CW Break-in (automatic activation of the transmitter when you close the CW key) feature "on" or "off".

  ※ You may also turn the VOX (voice-actuated transmitter switching) feature "on" and "off" by clicking the left mouse button on the "VOX" icon in the graphic display window (in the SSB, AM, and FM modes). Turn the CW Break-in (automatic activation of the transmitter when you close the CW key) feature "on" or "off" by clicking the left mouse button on the "BK-IN" icon in the graphic display window (in the CW mode).

❑ Click the left mouse button on the bottom half of the [**STO/VOX**] button to copy the operating information (frequency, mode, bandwidth, and also repeater direction/shift frequency and CTCSS functions in FM mode) into the Quick Memory Bank.

"MEMORY WRITE" window

[**STO/VOX**] button
[**RCL/HOME**] button

"VOX" icon

"BK-IN" icon

PCC-450D REFERENCE BOOK

OPERATION OF MISCELLANEOUS KNOBS AND BUTTONS

[SPLIT/STEP] BUTTON

❒ Click the left mouse button on the top half of the [**SPLIT/
STEP**] button to open the "CHANNEL STEP" pop-up win-
dow, tehn select the desired frequency step of the [**DSP/SEL**]
knob in the "CHANNEL STEP" window.

❒ Click the left mouse button on the bottom half of the [**SPLIT/
STEP**] button to open the "SPLIT" pop-up window, then se-
lect the configuration you wish to use.

**SPLIT OFF**:   Disables Split Frequency operation.

SPLIT ON: Activates Split Frequency operation between
VFO-A, used for reception and VFO-B, used
for transmission (or vice versa).

QUICK SPLIT: Activates the Quick Split operation which
sets a one-touch offset of +5 kHz to be ap-
plied to the transmit frequency compared to
the receive frequency. Click the left mouse
button on this item in increment the trans-
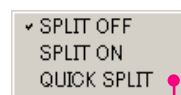mit frequency + 5 kHz.

[**SCAN/PMS**] button

[**SPLIT/STEP**] button
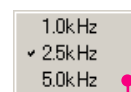
"STEP" window

"SPLIT" icon

"SPLIT" window

[SCAN/PMS] BUTTON

❒ Click the left mouse button on the top half of the [**SCAN/
PMS**] button to open the "PMS" pop-up window, then select
the desired PMS (Programmable Memory Scan) pair to be
used.

PMS OFF: Disable the PMS feature.

PMS 1:   The scanner will be limited within the frequency
range programmed in the memory pair "MEM-
P1L/MEM-P1U".

PMS 2:   The scanner will be limited within the frequency
range programmed in the memory pair "MEM-
P2L/MEM-P2U".

PMS 1+2: The scanner will be limited within the frequency
ranges programmed by both memory pairs
("MEM-P1L/MEM-P1U" and "MEM-P2L/
MEM-P2U").

❒ Click the left mouse button on the bottom half of the [**SCAN/
PMS**] button to initiate the upward scanning of VFO frequen-
cies or memory channels.
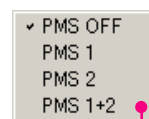
"PMS" window

MENU OPERATION

1. Click the left mouse button on the [**F**] button to open the "MENU" window.
2. Rotate the mouse scroll wheel to select the Menu item you wish to work on, 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.
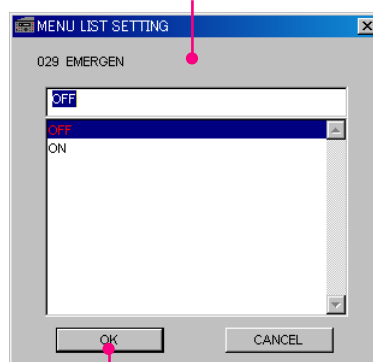4. Click the [**OK**] button to save the new setting and close the "MENU" window.

[**F**] button
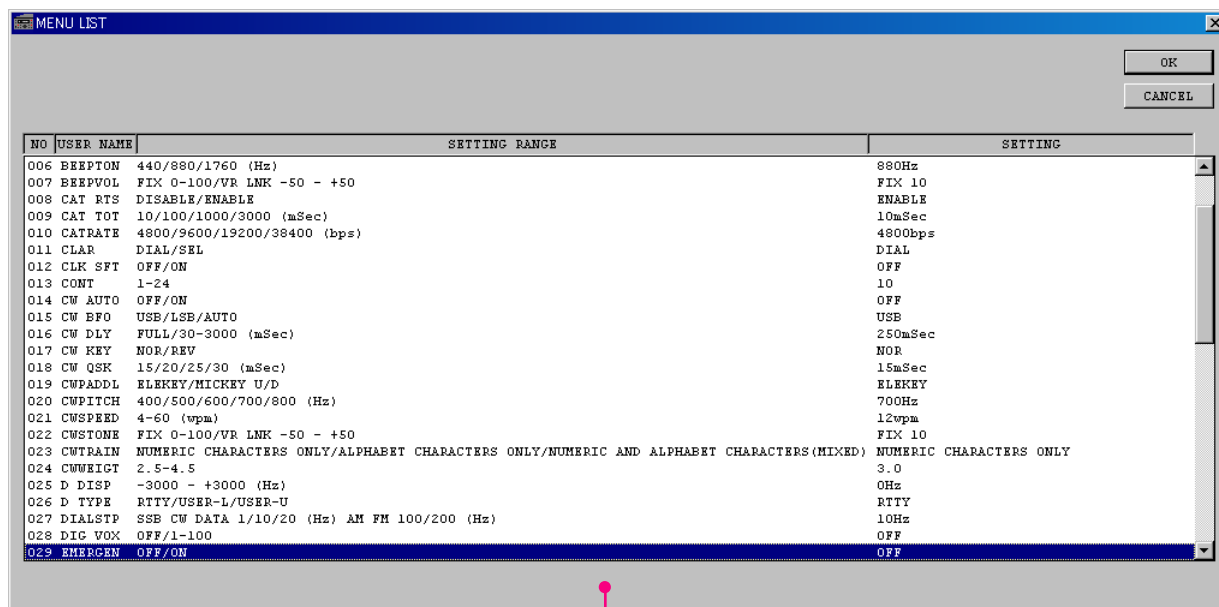
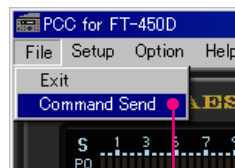

"MENU LIST" window

"MENU LIST SETTING" window

[**OK**] button

COMMAND SEND

1. Click the left mouse button on the "Command Send" parameter in the "File" menu on the "PCC-450D" Personal Computer Controller to open the "Command Send" pop-up window.

2. Enter the CAT command you wish send to the FT-450D with the PC keyboard.
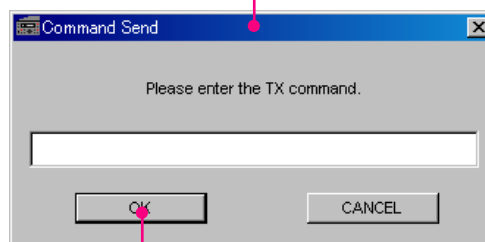   *For example*: Set the VFO-A frequency to 14.250000 MHz.
   FA14250000;
   Refer to a "FT-450D CAT Operation Reference Book" for the CAT command.

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

"Command Send" parameter

"Command Send" window

[**OK**] button

PCC-450D REFERENCE BOOK

FUNCTION KEY OPERATION

You can program and assign the CAT commands into your computer's Function keys using the Yaesu **KSE4PCC** Keyboard Shortcut Editor, then you may control the transceiver by pressing your computer's Function keys while activating the "PCC450D" Personal Computer Controller.

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

[**F2**] key ~ [**F9**] key, [**F11**] key, [**F12**] key,

[**Shift**] + [**F1**] key ~ [**Shift**] + [**F9**] key, [**Shift**] + [**F11**] key, [**Shift**] + [**F12**] key,

[**Cntl**] + [**F1**] key ~ [**Cntl**] + [**F9**] key, [**Cntl**] + [**F11**] key, [**Cntl**] + [**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-450D.exe" file.
2. Double click the left mouse button on "KSE4PCC.exe" to open the "Keyboard Shortcut Editor" pop-up window.
3. Enter the CAT command you wish to assin to a specific Function key.

   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 frequecy 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-450D CAT Operation Reference Book" for the CAT command.

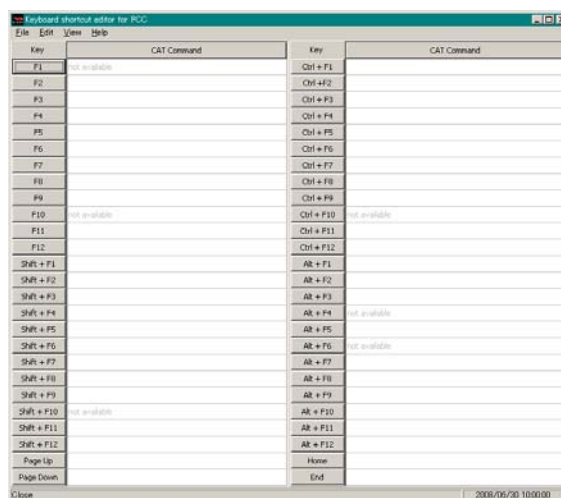   *Note*: You can not enter CAT commands into the following function keys.

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

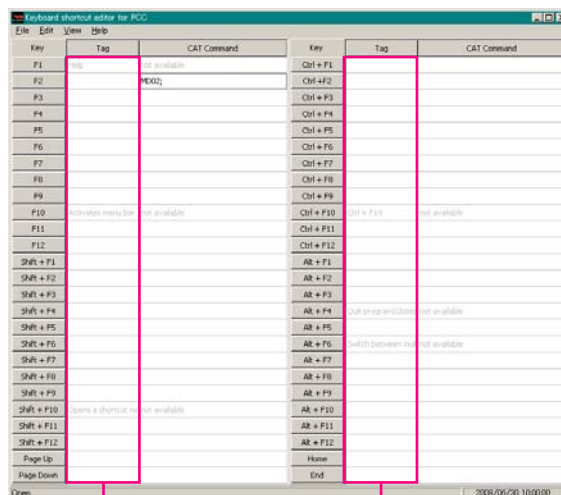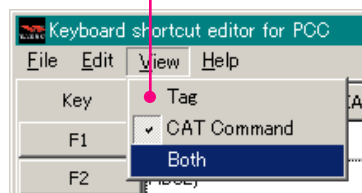   [**Cntl**] + [**F10**] key, [**Alt**] + [**F4**] key, and [**Alt**] + [**F6**] key

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-450D" 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

NOTE

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NOTE

YAESU
The radio