Installation Instructions - Supplemental

REPLACING THE EOS BTCII USER INTERFACE on CONQUEST Water Heaters
For model prefixes 20 through 40

![Conquest Models 20 through 30](image1)
![Conquest Model 40](image2)

The following instructions are included to assist in the proper replacement of the EOS BTCII User Interface. Refer to the Installation & Maintenance Manual for proper adjustments, settings, startup procedures and safety precautions. Installation and service must be performed by a qualified installer or service agency.

Part Number 138397 KIT, HMI BTCII REPLACEMENT FOR AGC, PVX WH is required. Kit includes:

<table>
<thead>
<tr>
<th>PART NBR</th>
<th>DESCRIPTION</th>
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</thead>
<tbody>
<tr>
<td>126070</td>
<td>HMI,BTCII #106502 TEKMAR REV102915</td>
</tr>
<tr>
<td>138403</td>
<td>SHEET,INSTRUCTION HMI BTCII REPLACEMENT FOR CONQUEST 20 thru 40</td>
</tr>
</tbody>
</table>
I. REPLACING THE BTCII DISPLAY BOARD

1. Turn water heater power switch to the OFF position.
2. Shut OFF electrical service to the unit.
3. Remove the panel screws and open the hinged upper enclosure panel (Conquest Model 40).
   Remove the panel screws securing the enclosure faceplate (Models 20 thru 30).
4. Unplug the RJ45 patch cable from the back of the BTCII display board.
5. There are three spring action metal standoffs that hold the PC board to the panel:
   a. Use a needle-nose plier to pinch each standoff to loosen the PC board.
   b. Lightly press the display face from the front of the panel and separate the BTCII User Interface from the panel. (The edges of the display face may stick slightly to the window in the front panel overlay.)
6. Position the replacement BTCII display board over standoffs and lightly press into place. To prevent bending damage to the board, use a nut driver or similar hand tool to isolate the force around the standoffs.
7. Plug in the RJ45 patch cable. Verify the dipswitch settings on the new board are set the same as the existing board.
8. Turn ON electrical service to the unit.
9. Turn water heater power switch to ON position. Note, you may have to cycle power off and on again to fully initialize with the PIM control.

II. BTCII CONTROL PARAMETERS

Replacement controls must be programmed prior to operating the water heater. The parameters and values for each Conquest model are listed below.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Menu</th>
<th>Conquest Model</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>20</td>
</tr>
<tr>
<td>SETPOINT</td>
<td>SETUP</td>
<td>120</td>
</tr>
<tr>
<td>HTR DIFF</td>
<td>SETUP</td>
<td>4</td>
</tr>
<tr>
<td>HTR OFFSET</td>
<td>SETUP</td>
<td>5</td>
</tr>
<tr>
<td>HTR RANGE</td>
<td>SETUP</td>
<td>6</td>
</tr>
<tr>
<td>START MOD</td>
<td>SOURCE</td>
<td>N/A</td>
</tr>
<tr>
<td>MIN MOD</td>
<td>SOURCE</td>
<td>N/A</td>
</tr>
<tr>
<td>MAX MOD</td>
<td>SOURCE</td>
<td>N/A</td>
</tr>
<tr>
<td>OPERATOR</td>
<td>SOURCE</td>
<td>120</td>
</tr>
</tbody>
</table>
III. ADJUSTING THE CONTROL PARAMETERS

1. To Change The Water Heater SET POINT value:
   a. From the normal View Menu, press and hold the Home Button for 3 seconds to enter
      the Control System Menu.
   b. The first menu displayed is the SETUP Menu. Press ENTER to enter the SETUP Menu.
   c. The first parameter is the SETPOINT. Use the arrow buttons to adjust the set point value
      as per the parameter table shown.
   d. To exit and return to normal View Menu, press the Home Button 2 times or wait 60
      seconds.

2. The remaining parameters require ACCESS to be set to ADV before you can edit them:
   a. Enter Control System Menu (press and hold the Home Button for 3 seconds).
   b. Press NEXT ITEM or ITEM BACK buttons to navigate to the TOOL BOX menu.
   c. Press the ENTER button.
   d. The first parameter in the TOOL BOX menu is the ACCESS level screen.
   e. Adjust the ACCESS level using the arrow buttons to select the ADVanced value. If the
      highest value is INST, then press and hold the #4 button for 3 seconds.
   f. To exit and return to normal View Menu, press the Home Button 2 times or wait 60
      seconds.

3. To change the DIFF, OFFSET or RANGE values while in ADV ACCESS:
   a. Enter Control System Menu (press and hold the Home Button for 3 seconds).
   b. Press the NEXT ITEM until you see the SETUP menu.
   c. Press the ENTER to enter the SETUP Menu.
   d. Once in the SETUP menu, use the NEXT ITEM button to move to the DIFF, OFFSET, and
      RANGE menus. Using the arrow buttons in each parameter, enter the value as per the
      corresponding parameter for the model heater as per the table shown.
   e. To exit and return to normal View Menu, press the Home Button 2 times or wait 60
      seconds.

4. To Change the OPERATOR, MIN MOD, START MOD, and MAX MOD values:
   a. Enter Control System Menu (press and hold the Home Button for 3 seconds).
   b. Press NEXT ITEM or ITEM BACK buttons to navigate to the SOURCE MENU.
   c. Press ENTER to enter the SOURCE MENU.
   d. Once in the SOURCE MENU, use the NEXT ITEM button to move to OPERATOR.

(a) This is adjusted with a small flat head screwdriver on the FENWAL PIM ignition module labeled “OPERATOR SET POINT”. Adjust with screwdriver and note the setting in the display. Do not reference the index printed on the PIM module.
e. Press **NEXT ITEM** to the **MIN MOD**, **START MOD**, and **MAX MOD** parameters. Using the arrow buttons, enter the values as per the parameter table shown.

Note: If the arrow buttons are not be visible, push and hold the **#4 button** at the bottom right of the screen until the **UP** and **DOWN** arrows appear.

f. To exit and return to normal View Menu, press the **Home Button** 2 times or wait 60 seconds.

5. Return BTCII control to the **USER** access level (refer previous instructions for setting **ACCESS** to **ADV**, but change to **USER**).