Additional Notes:
2 sheets, 1 fold, side stitched

Revision History

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>20156</td>
<td>062621</td>
</tr>
</tbody>
</table>

Material
White Paper

Notes
1. printed two sides
2. printed black
3. tolerance: ± .13
4. see sheet 2 for artwork
5. printed in country may vary
6. drawings not to scale

Revision Description:
F > Allegion Rebranding

Title
F-Series Hand Punch Modem Instruction

Created By
J. Ellis

Activity
Allegation

Copyright © 2015 Allegion

Software: Illustrator CS6
Periodically, enhancements to the HandKey or HandPunch are introduced that offer added functionality and performance. Should it be necessary to incorporate the enhancements into the F Series circuit board (HP-2000, HP-3000, HP-4000, HK-2 and HK-CR), use the following procedures.

⚠️ CAUTION: This procedure requires erasing the existing hand templates. Save the existing hand templates before proceeding.

1. Unlock the reader and rotate.
2. Disconnect the power supply from the board.
3. Remove and tag all external connections to make correct re-attachment.

⚠️ CAUTION: If the unit is equipped with an optional battery backup, remove the J7 jumper before proceeding. See figure 9.

4. Remove HandReader from wall by sliding it to the right, away from the wall mount. See figure 1 below.
5. Set the reader on a firm surface such as a table. Remove the four screws that secure the back plate to the HandReader. Remove the grounding screw and/or ground lug (if present). See figure 2 below.

⚠️ CAUTION: Before removing back plate of reader, wear a grounding wrist strap to help aid in protecting the circuit board from any ESD damage that might occur from improper handling.

6. Remove the back plate.
7. Locate the cable that runs from the top panel circuit board to the main circuit board. Disconnect this cable from J9 on the main circuit board. See "1" on figure 3. To remove the J9 connector on the main circuit board (lower board), depress the retaining clip on the connector and pull upwards. See figure 4 below.

![Figure 3](image1)

**Main Circuit Board**

**Figure 3**

![Figure 4](image2)

**Press to Release**

**Figure 4**
8. Carefully slide the main circuit board out until the ribbon cable between the camera assembly and J2 on the main circuit board is accessible. First, disconnect the J5 connector from the main board. To remove, depress the retaining clip on the J5 connector and pull upwards. See "2" on figure 5 below. Next, remove the ribbon cable from J2 by gently pulling up on this cable, being careful not to pull down as damage may occur to the camera assembly. See "3" on figure 5 below.

![Figure 5](image)

9. Carefully remove the main circuit board by sliding it free from the chassis.
10. Install the modem PCB onto the main PCB. See figures 6 and 7 below.
   
   a. Align P1 on the modem PCB with J10 on the underside of the main PCB.
   
   b. Insert the P1 pins into the J10 socket. If done correctly, the two standoffs on the modem PCB should insert through the mounting holes in the main PCB.
   
   c. Turn the PCB’s over so that the main circuit board is on top of the modem PCB. Secure the modem PCB to the main PCB by adding the provided flat washers, split washers, and nuts onto the standoff(s). Tighten the nuts using a \( \frac{3}{8}'' \) nut driver.

\[ \text{CAUTION: \ Torque the 4-40 nuts to 4.5 – 5.5 in. lbs. (.51 - .62 Nm). Excessive torque may damage the circuit boards. After installing the modem, inspect for warped modem PCB or main PCB.} \]
11. Carefully slide circuit board back into the chassis using the circuit board guides to locate the circuit board correctly. See figure 8 below.

12. Being careful to align all pins, attach the camera cable to J2 on the main circuit board.

13. Plug in the J5 connector.
14. Locate the cable that runs from the top panel circuit board to the main circuit board. Connect this cable to J9 on the main circuit board. See figure 10 for cable routing.

15. If not already removed, remove the J7 jumper from the main PCB. See figure 9 below.

**CAUTION:** If there is a ground strap on the main board, do not allow the ground strap to touch the J7 jumper. Failure to do so will cause permanent damage to the main circuit board and will not be considered a warranty repair.
16. Reinstall the back plate onto the chassis. Reinstall grounding screw and/or ground lug. If a ground lug is present, do not allow it to come into contact with J7.

17. Secure the back plate with the four screws removed in step 5.

18. Line up the slots at the bottom of the reader's back with the four hinge pins at the bottom of the wall mount. Slide the reader to the left so the pins go in the slots. This fastens the reader to the wall and wall mount and forms a hinge.


20. Power up the unit and reinstall the J7 jumper (if applicable).

21. Secure unit to wall mount with key. Upgrade is completed.