

Installation Instructions

OBA-2 BILL ACCEPTORS
KIT #27065101 KIT-OBA UPGRADE - NEW \$5 SINGLE BOARD
KIT #27065102 KIT-OBA UPGRADE - NEW \$5 DOUBLE BOARD,
CONTROL UNITS 45057501, 45057505
KIT #27065104 KIT-OBA UPGRADE - NEW \$5 DOUBLE BOARD,
CONTROL UNITS 45057502, 03, 12

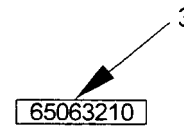
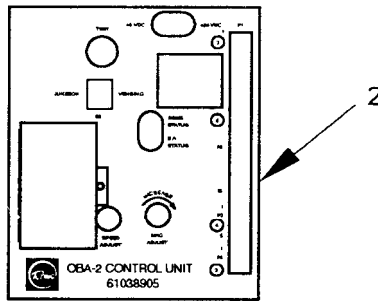
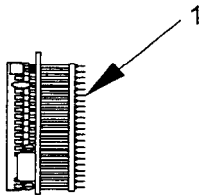
Purpose:

To upgrade the software in the control unit to allow the bill acceptor to accept the new \$5 Bill.

Tools Required:

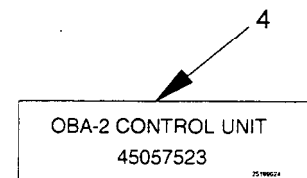
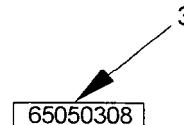
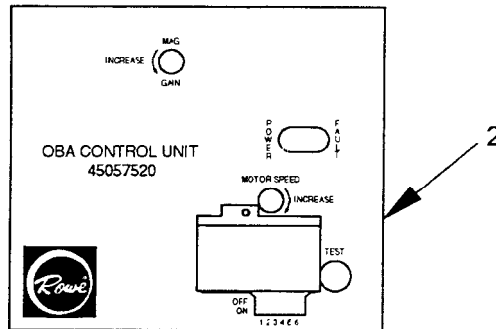
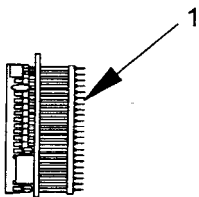
1/4" Driver

Desoldering and soldering equipment.



Parts Included in Kit #27065101:

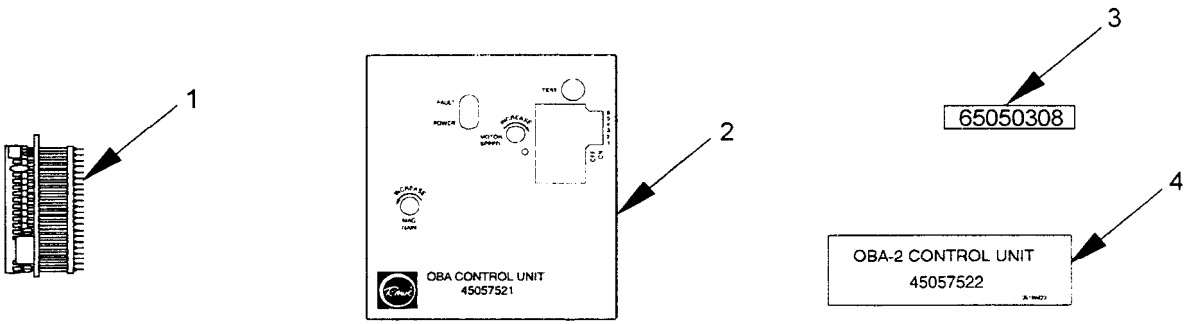
Item	Part Number	Description	Qty
1	35145202	Circuit Board Assembly - OBA-2 adaptor, Single Board	1
2	35147601	Cover Assy OBA-2 Single Board	1
3	27065604	Part Number Label (65063210)	1
	27065401	Instruction Sheet - OBA adaptor	1



Parts Included in Kit #27065102:

Item	Part Number	Description	Qty
1	35145203	Circuit Board Assembly - OBA-2 Adaptor Double Board	1
2	35147501	Cover Assy OBA-2 Double Board	1
3	27065603	Part Number Label (65050308)	1
4	25199624	Part Number Label (45057523)	1
	27065401	Instruction Sheet - OBA adaptor	1





Parts Included in Kit #27065104:

Item	Part Number	Description	Qty
1	35145203	Circuit Board Assembly - OBA-2 Adaptor Double Board	1
2	35147502	Cover Assy OBA-2 Double Board	1
3	27065603	Part Number Label (65050308)	1
4	25199623	Part Number Label (45057522)	1
	27065401	Instruction Sheet - OBA adaptor	1

INSTALLATION INSTRUCTIONS: KIT #27065101 FOR SINGLE BOARD CONTROL UNIT.

CAUTION! CAUTION!
USE PROPER ELECTROSTATIC PROTECTION WHEN HANDLING THE CIRCUIT BOARD AND COMPONENTS.

1. Remove cover from control unit. This old cover will not be reused.
2. Remove the circuit board assembly from the base.
3. Locate, unsolder, and remove the 40-pin microcomputer from the board. See *Figure 1*.
4. Install the new #35145202 OBA-2 adaptor board onto the circuit board where the microcomputer was removed. Be sure that the locating notch on the end of the new microcomputer lines up with the locating notch on the printing on the circuit board. See *Figure 1*. Solder the adaptor in place.
5. Apply the Part Number Label over the old part number on the circuit board. Install the circuit board in the base. Install the new cover assembly on the control unit.
6. Connect the control unit to the OBA-2 transport and test.

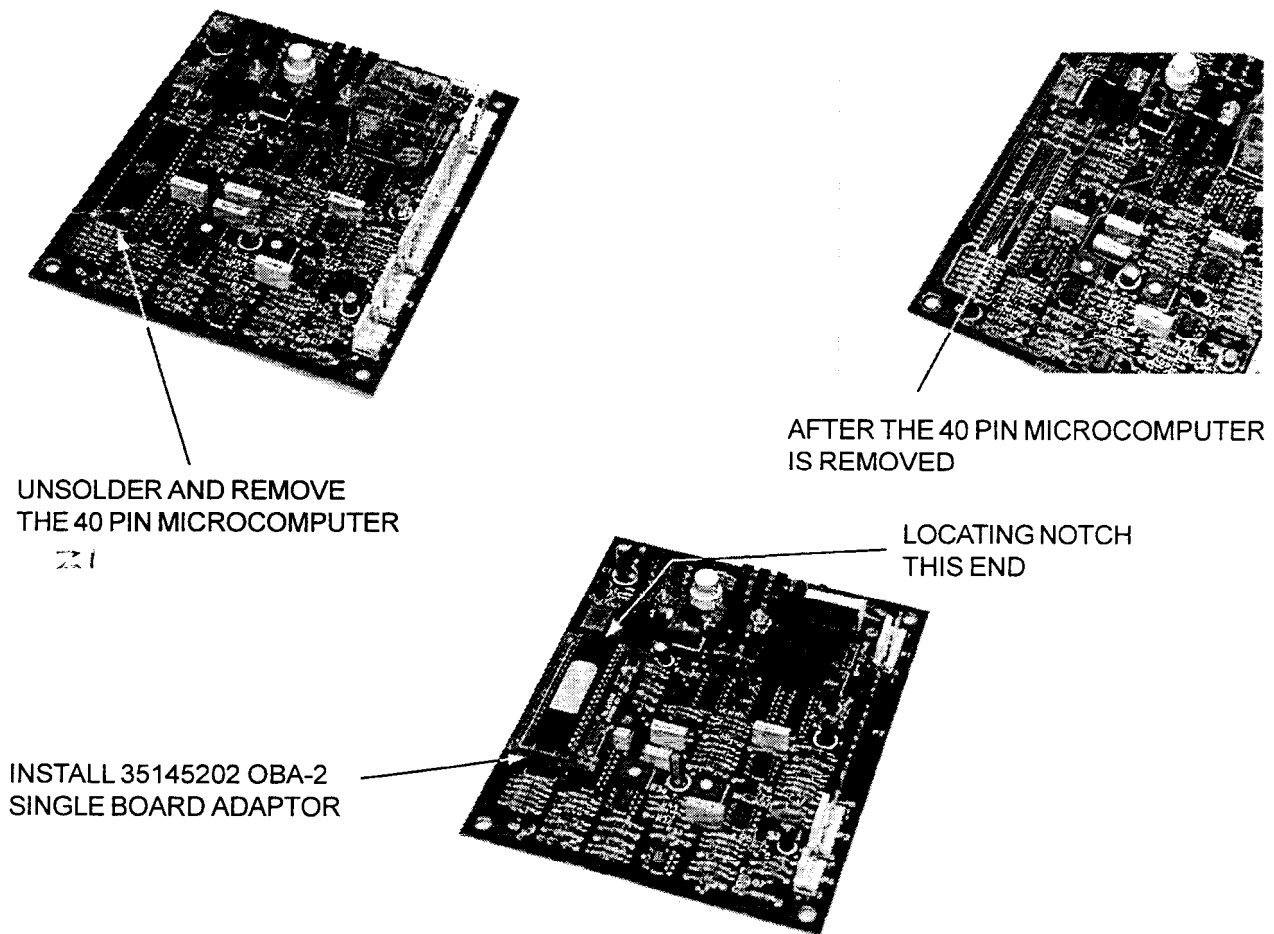


FIGURE 1

CAUTION! **USE PROPER ELECTROSTATIC PROTECTION WHEN HANDLING THE CIRCUIT BOARD AND COMPONENTS.** **CAUTION!**

1. Remove cover from control unit. This cover will not be reused.
2. Unplug connectors and remove circuit boards from base.
3. Separate the upper Logic Board from the lower Power Supply Board.
4. Locate, unsolder, and remove the 40-pin microcomputer from the Logic Board. *See Figure 2.*
5. Install the new 35145203 OBA-2 adaptor board onto the Logic Board where the microcomputer was removed. Be sure that the locating notch on the end of the new microcomputer lines up with the locating notch on the printing on the circuit board. *See Figure 2.* Solder the adaptor in place.
6. Apply the Part Number Label over the old part number on the circuit board. Reconnect the logic board to the Power Supply Board using the same spacers in the corners. Install the board assembly into the base and plug in the connectors. Install the new cover assembly onto the control unit.

If you are updating a 45057503 or 45057512, apply the part number label that reads "45057522" over the part number on the cover.

If you are updating a 45057505, apply the part number label that reads "45057523" over the part number on the cover.

7. Connect the control unit to the OBA transport and test.

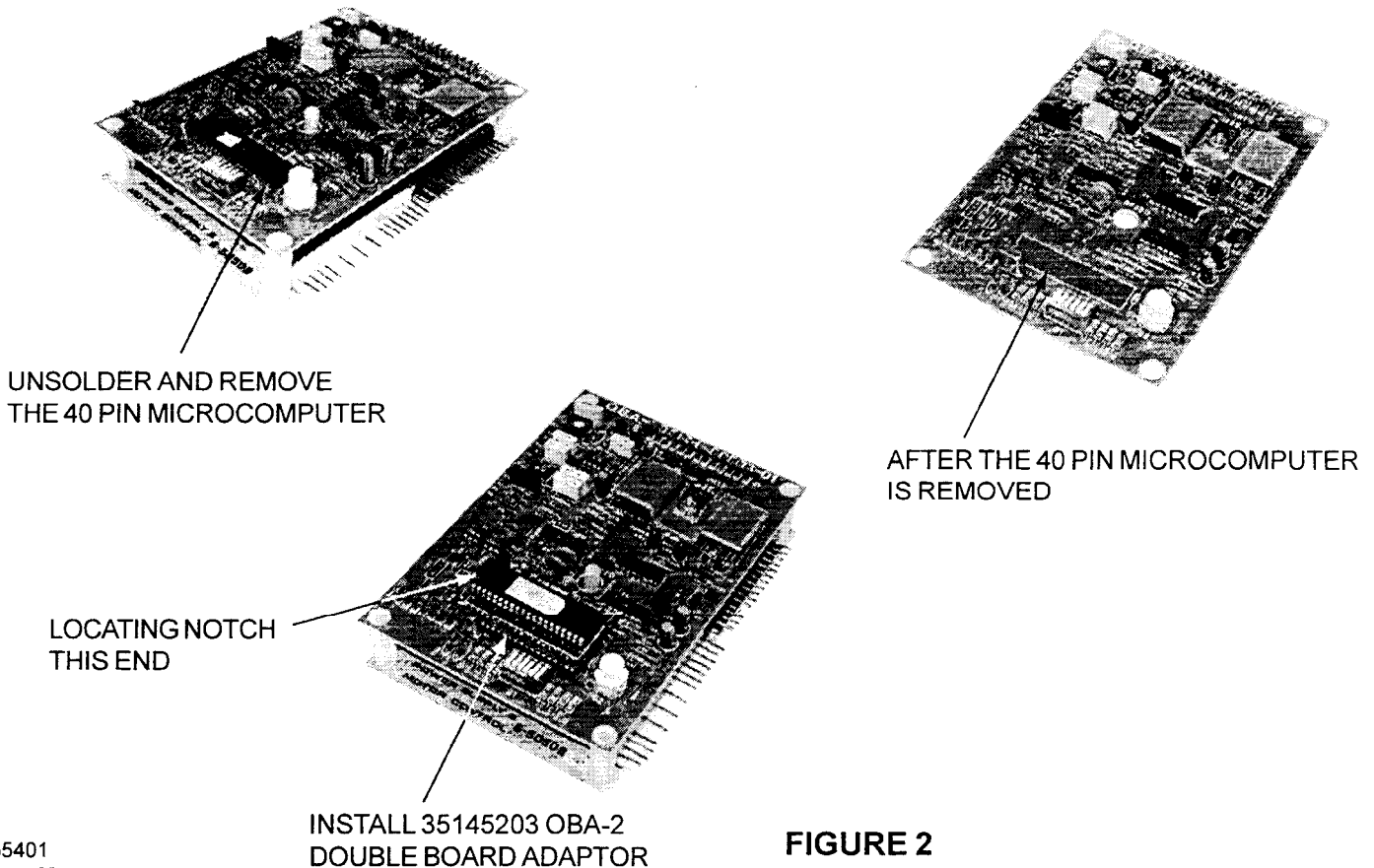


FIGURE 2

NEW MAG AMP ADJUSTMENT PROCEDURE FOR THE SINGLE BOARD CONTROL UNIT USING V1.00 SOFTWARE

1. Perform motor speed adjustment per original service manual procedure.
2. Obtain 10 crisp new 1999 series \$5.00 notes.
3. Rotate the MAG adjustment pot to the middle of its range.
4. Power off the OBA-2, then press and hold the TEST switch down while turning power back on.
5. Insert each of the 10 \$5.00 notes one at a time, each will be rejected.
6. Just before the 10th note is rejected, note the number of times the STATUS LED blinks.
7. If the STATUS LED blinks two times, the adjustment is correct.
8. If the STATUS LED blinks one time, rotate the MAG pot a small amount to increase gain, then repeat step 4.
9. If the STATUS LED blinks three times, rotate the MAG pot a small amount to decrease gain, then repeat step 4.

NOTE: The ADJUST MODE will time-out after 12 seconds of idle time. If the OBA-2 times out and is no longer in the ADJUST MODE, restart the ADJUST MODE from step 4.

NEW MAG AMP ADJUSTMENT PROCEDURE FOR THE DOUBLE BOARD CONTROL UNIT USING V1.10 SOFTWARE

1. Perform motor speed adjustment per original service manual procedure.
2. Obtain 10 crisp new 1999 series \$5.00 notes.
3. Rotate the MAG adjustment pot to the middle of its range.
4. Power off the OBA-2, then press and hold the TEST switch down while turning power back on.
5. Insert each of the 10 \$5.00 notes one at a time, each will be rejected.
6. Just before the 10th note is rejected, note the number of times the FAULT LED blinks.
7. If the FAULT LED blinks two times, the adjustment is correct.
8. If the FAULT LED blinks three times, rotate the MAG pot a small amount to increase gain, then repeat step 4.
9. If the FAULT LED blinks one time, rotate the MAG pot a small amount to decrease gain, then repeat step 4.

NOTE: The ADJUST MODE will time-out after 12 seconds of idle time. If the OBA-2 times out and is no longer in the ADJUST MODE, restart the ADJUST MODE from step 4.

NEW MAG ADJUSTMENT PROCEDURE FOR SINGLE BOARD OBA-2'S WITH VERSION 1.1 SOFTWARE

1. Perform the motor speed adjustment procedure per original OBA-2 Service Manual Procedure.
2. While holding the TEST Button, turn power ON. This puts the Computer in Mag Adjust Mode. To indicate that the computer is in the mag adjust mode, the B.A. Status LED will blink rapidly during periods of inactivity.
3. Rotate the MAG adjustment pot to the middle of its range.
4. Insert 10 very new condition 1999 \$5's. Under normal circumstances, each bill will be scanned and then returned with no activity on the B.A. Status LED until the 10th bill has been scanned. Then, on that 10th bill, the B.A. Status LED will blink a code:

1 Blink - The Mag Gain is too low. Adjust for more gain and repeat the test.

2 Blinks - The Mag setting is correct.

3 Blinks - The Mag Gain is too high. Adjust for less gain and repeat the test.

(These "blinks" will be very slow; 1 second ON and 0.3 seconds OFF.)

If the RS485 Status LED is too distracting during this process, disconnect the harness at P4 of the OBA Control Board Assembly. Reconnect this harness after you've finished to resume normal operation.

5. If you have to repeat the test, you may begin immediately as long as the LED is still blinking. **The Adjust Mode will expire after approximately 15 seconds of inactivity – the LED will stop flashing and the OBA will return to NORMAL mode.**
6. If a bill is inserted during the Adjustment Procedure and there is a problem with any of the sensor signals that will make the information collected from the bill unusable for the purpose of adjusting the mag gain, there will be a series of LED blinks to indicate that the bill just inserted was not counted. (There must be 10 sets of USABLE bill data before the 1-, 2-, or 3-blink mag gain indication is presented.)

In the adjustment procedure the following codes indicate other problems:

4 Blinks - Check the Flipper Cell or the V1 cell. Timings are off.

5 Blinks - There is little or no mag information at all. Increase the gain or check for a major mag circuit failure.

Note: These blinks are much faster than the mag adjust indicators - 0.5 seconds ON and 0.3 seconds OFF.

NEW MAG ADJUSTMENT PROCEDURE FOR DOUBLE BOARD OBA'S WITH VERSION 1.2 SOFTWARE

1. Perform the motor speed adjustment procedure per original Service Manual Procedure.
2. While holding the TEST Button, turn power ON. This puts the Computer in Mag Adjust Mode. To indicate that the computer is in the mag adjust mode, the Status LED will blink rapidly during periods of inactivity.
3. Insert 10 very new condition 1999 \$5's. Under normal circumstances, each bill will be scanned and then returned with no activity on the Status LED until the 10th bill has been scanned. Then, on that 10th bill, the Status LED will blink a code:
 - 1 Blink - The Mag Gain is too low. Adjust for more gain and repeat the test.
 - 2 Blinks - The Mag setting is correct.
 - 3 Blinks - The Mag Gain is too high. Adjust for less gain and repeat the test.

(These "blinks" will be very slow; 1 second ON and 0.3 seconds OFF.)
4. If you have to repeat the test, you may begin immediately as long as the LED is still blinking. **The Adjust Mode will expire after approximately 15 seconds of inactivity - the LED will stop flashing and OBA operation will return to NORMAL mode.**
5. If a bill is inserted during the Adjustment Procedure and there is a problem with any of the sensor signals that will make the information collected from the bill unusable for the purpose of adjusting the mag gain, there will be a series of LED blinks to indicate that the bill just inserted was not counted. (There must be 10 sets of USABLE bill data before the 1-, 2-, or 3-blink mag gain indication is presented.)

Codes that indicate other problems are:

- 4 Blinks - Check the Flipper Cell or the V1 cell. Timings are off.
- 5 Blinks - There is little or no mag information at all. Increase the gain or check for a major mag circuit failure.
- 6 Blinks - The motor speed is very much too slow or fast. Readjust motor speed as directed in the Manual. If this does not stop the problem, check the transport carefully to be sure that both belts are adjusted properly and also that the gear backlash is correct. Again, refer to your Service Manual and follow the procedures carefully as Speed Control is somewhat more critical than in the past.

Note: These blinks are much faster than the mag adjust indicators - 0.5 seconds ON and 0.3 seconds OFF.