

# The 448 and CBA (1), CBA-2 and UCBA-2 acceptors

Early 448s used a CBA(1) acceptor with the CBA-1B control unit on the door. Later 448s used the CBA-2 and then used the UCBA-2 acceptors. Generally failures occur when the acceptor is not cleaned and lubricated [Check out the Magic Wand notes]. The LEDs and photo cells get dirty and have to be cleaned.

When swapping CBA(1) acceptors sometimes the latch plate on the top of the acceptor has to be swapped. The screws holding the plate in place are also the belt tension adjustment and when the screws are loosened, the assembly drops down and the belts become very loose. The belt adjustment has to be made when you touch these screws. Pulling the assembly up tightens the front belts. Do not adjust them to tight.

Some of the CBA(1), CBA-2 and UCBA-2 acceptors end up with one or both of the drive pulleys at the top of the acceptor broken. I think this happens because the acceptors are not cleaned and lubricated on a preventive maintenance schedule. The type of material used for the drive pulleys may have been too brittle but Rowe now has newer versions of the pulleys made with a different material. Lack of lubrication of the acceptor creates many problems.

The CBA-1B control unit has a speed and mag adjustment so check out the speed and mag adjust note on page # 2.

The CBA-1B control unit has a BA status LED on it and it will blink an error code when there is an acceptor problem. The U/CBA-2s have the status led on the back of the logic module. It blink when there is a problem or when a bill is rejected. When a bill is rejected, leave the bill in the acceptor. Pulling the bill out before counting the blinks will simply give you a V1 (input) error because the bill is not in the acceptor and this will not be the reason the bill was rejected. You have to rely on the blinking or steady on codes given on the BA status LED of the CBA-1B unit or the status LED indicator on the back of the CBA-2 or UCBA-2 acceptor.

I cannot over stress the importance of the error codes. Never reset anything without first looking at the status indicators. A stacker may have a problem once in a while. If you do a reset the system it may be ok for a while, but you will be back again and again. Look first the status first.

When the acceptor will not start and not take a bill into it, the status indicator may be lit. This indicates the acceptor is not ready to accept any bills. Maybe the computer does not know there is enough money in computer escrow and the exact change light will be lit. You just cannot load coins into the coin tubes. Load the money escrow count by putting money into the machine and buy something so the computer knows there is enough money to give change. In another case, the UCBA-2 or CBA-2 the switches must be set to ALL OFF Set the switches and re-power the system. If everything is normal and there is enough change in the computer escrow the acceptor BA status indicator will be off indicating the acceptor is ready to accept bills.

A few cases of bad connections have been found on the small acceptor interface board mounted on the door. These bad connections have been on the parts like transistors, resistors, etc, and the connector strip. A small soldering iron can fix the bad connections you find. Clean the connector pins with an erasser or fiber glass brush.

If you use the pre-soaked cleaning cards remember they can harm the acceptor. Let the cards dry out and then use only denatured alcohol, NOT isopropyl or rubbing at any percentage. Go to a haware, or a paint store to get denatured alcohol. After you run the wet card into the acceptor always run a dry one into the acceptor. Never leave the belts or mag head pressure roller wet. You cannot clean all of the belt area unless you hold the card back for a little bit of time so all the belt area gets cleaned. After holding it, let it fly into the acceptor, follow the procedure with the dry card.

With all electronic system connector can be a problem so check out Connectors -Fixing and Testing located on this site.

There are several Bear notes on this site where you can find related material.



Bruno

## SPEED ADJUST ON OBA 4-50575-xx UNITS

Speed adjust is a must ! There is only a 3 % acceptance range. The speed must be adjusted BEFORE using my mag adjust procedure,

With a good lubricated acceptor, control unit, good cable and clean connectors start with the FAULT indicator OFF. Turn switch #6 ON as marked on the cover and press the TEST switch. Slowly adjust the speed until the FAULT indicator stays OFF. If you can not keep it off, keep it off as much as possible. Blinking on and off may mean you need another acceptor or you have a problem in the system. You can leave #6 on if you are going to use the [ Bruno ] Mag adjust system.

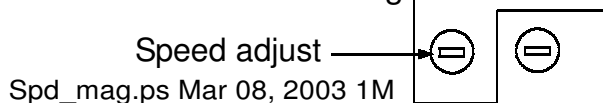
Where they exist, Speed and/or Mag adjustments is a must. Many acceptors do not have a speed and/or mag adjustment.

## SPEED ADJUSTMENTS OTHER THAN 4-50575-xx Units

Before doing a Mag adjust, you must make the speed adjustment first. No amount of speed and/or Mag adjusting will fix an acceptor which has stickation problem and it needs lubrication. After you adjust the speed, it may accept bills for a short period but if the acceptor has stickation, and you take no action, you will be back.

Most control units use a status or fault indicator for adjusting the speed. Press the TEST button or the reset button. Adjust the speed until the status ( or fault ) indicator stays on all the time. If it blinks perhaps there is an acceptor or a control unit problem.

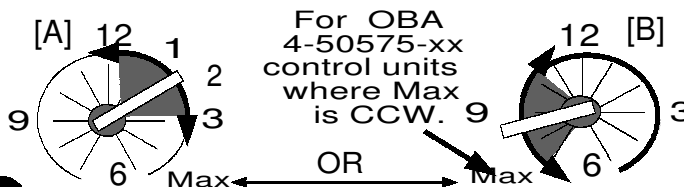
Older CBA/UCBA-2's (switches inside) have a speed adjustment pot. New upside down modules (switches on bottom) do not. Make sure you adjust the "speed " pot and not one of the other pots. Sometimes the pot is hidden behind the metal leg.



## Adjusting Rowe Mag Gains

There are many reasons to adjust the mag gain pot as listed below. If a speed adjust exists, adjust the speed FIRST. With an average bill, start at one end and insert the bill. Move one clock position and re-insert the bill and repeat the process until it is accepted. Note this position, say 12 noon. Go to the other end of the pot and repeat the process again going back one clock position till the bill is accepted. Say 3 pm. Set the mag gain between the 2 accept points (shaded area) at 1:30 or 2. See [A]. With OBA 4-50575-xx [B] units Max is CCW. You may find the range is between 7:30 and 10 so you would set the gain at 9 or 8:30. If it does not work when tested, repeat the process with another bill. In checking, you may find you get some rejections and the adjustment wants to be closer to the Max position or Min position. If the unit gives an error code when the bill is rejected use them and the manual as an aid.

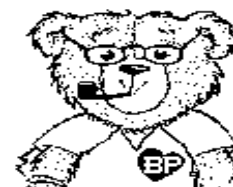
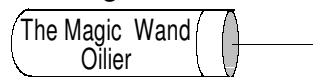
New \$5 bill updated units may have a very narrow acceptance range so a careful adjustment of mag gain will be required. With too little or too much mag gain you will end up with no or poor acceptance.



## Bruno's "STICKATION"

STICKATION describes is a condition which occurs when an acceptor can not come up acceptance speed. Generally this occurs because the acceptor needs lubrication. If it has been at rest for a while, it can not make speed. With repeated inserts of the bill or adjusting the speed, the acceptor works but after a period of idle time, it slows down AGAIN..... Preventive lubrication is required and this will also cut down on wear and tear which leads to expensive repairs and exchanges costs. This is what Magic Wanding is all about ! \$\$\$\$\$\$\$\$\$\$

The Magic Wand Club !



Every \$30,000 or a least once a year which ever comes first !

Bruno

CBA-1 Control Unit to CBA-1 connector June 3,1993  
448-44502 / 6-50633-0x CTRL Unit CBA-1

P1

1 >-- +28 vdc + \_\_\_.\_\_\_ vdc .\_\_\_\_\_ ac  
2 >-- + 8 vdc + \_\_\_.\_\_\_ vdc .\_\_\_\_\_ ac  
3 key  
4 >-- Logic ground  
5 >-- Hi Current ground

P2 Harness 4-50704-01

P306

|                               |                  |
|-------------------------------|------------------|
| 1 >--( Red )--[ Motor +       | ]-< 8            |
| 2 >--( Black )--[ Motor-      | ]-< 9            |
| 3 >--( Shield )--[ Mtr shield | ]- Stubbed       |
| 4 >--( Green )--[ Frame       | ]-O Lug to Frame |
| 5 >--( Brown )--[ Tach        | ]-< 7            |
| 6 >--( Key                    |                  |
| 7 >--( White )--[ Head +      | ]-< 2            |
| 8 >--( Black )--[ Head -      | ]-< 3            |
| 9 >--( Shield )--[ Shield     | ]-< 1            |
| 10 >--( Blue )--[ + 5vdc      | ]-< 15           |
| 11 >--( Violet )--[ V 3       | ]-< 10           |
| 12 >--( Slate )--[ V 1 input  | ]-< 11           |
| 13 >--( Orange )--[           | ]-< 14           |
| 14 >--( Black )--[ V2         | ]-< 13           |
| 15 >--( Shield )--[ Shield    | ]-< 12           |

P3

1 >--( Green )--[ Stacker + ]-< 5  
2 >--( White )--[ Stacker - ]-< 6  
3 >--( Yellow )--[ STacker Sw ]-< 4  
4 >

P4

1 >-- Ground  
2 >-- Credit  
3 >-- Enable

At some point in time you may want to check out my other Bear notebook articles because they contain a great deal of related material. You will find them on Bruno's Page in <http://www.eastcoastamusements.com/> then: left click on: **Visit his page for service notes and tips.** **OR:** <http://www.eastcoastamusements.com/services.htm> and then click on the BEAR with the flower!!

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You will want to check the East Coast Amusements site for revised or new articles. I do have more titles in the works. Here are some the posted articles.

**ROWE 4900 ACCEPTOR ISSUES**  
**ROWE BC-1 BILL CHANGER**  
**THE MAGIC WAND (Dick's - my favorite)!**  
**CONNECTORS - FIXING AND TESTING (another good one)**  
**ROWE BILL CHANGER HOPPER REPAIR**  
**MEASURING VOLTAGES**  
**BUCKET POWER ON ERRORS**  
**ROWE STACKERS**  
**MAG HEAD LOOP SECRETS**  
**DREMEL & ROWE STUFF**  
**FEK MOTOR TEST UNIT**  
**OBA ACCEPTORS**  
**JACKPOTTING, FS, BUCKET POWER ON & CRASHES**  
**BC-8 to BC-35 Bill Changers**  
**CBA\_UCBA**  
**Basics\_101**  
**BCxx00\_bill\_changers**

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To East Coast Amusements  
> THANKS ! Bruno

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