

## Upper Assembly (Wheel)

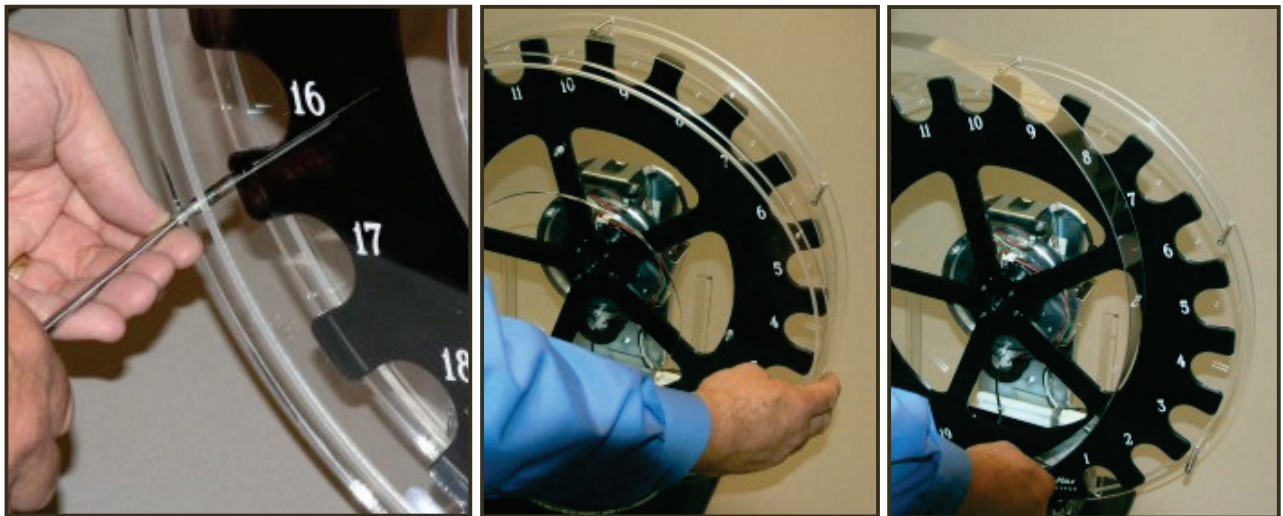
The AKV2100PC UPPER ASSEMBLY needs to be cleaned inside periodically by removing its front cover and blowing it out with compressed air to remove any dust buildup. Cleaning the inside of the upper assembly will be necessary when dirt accumulation is noticed inside the unit that cannot be removed with compressed air.

### Disassembly

1. Remove the Motor Cover (Dwg. 150-10478-01 PN 340-13313).
2. Unscrew the three thumb screws holding the Upper Assembly to the Glass Bowl.
3. Remove the Upper Assembly from the Glass Bowl by lifting straight up until the harness connector is disconnected.
4. Place the Upper Assembly onto the Service Stand. Remove the four acorn nuts and lift the Front Cover off of the unit as shown below.



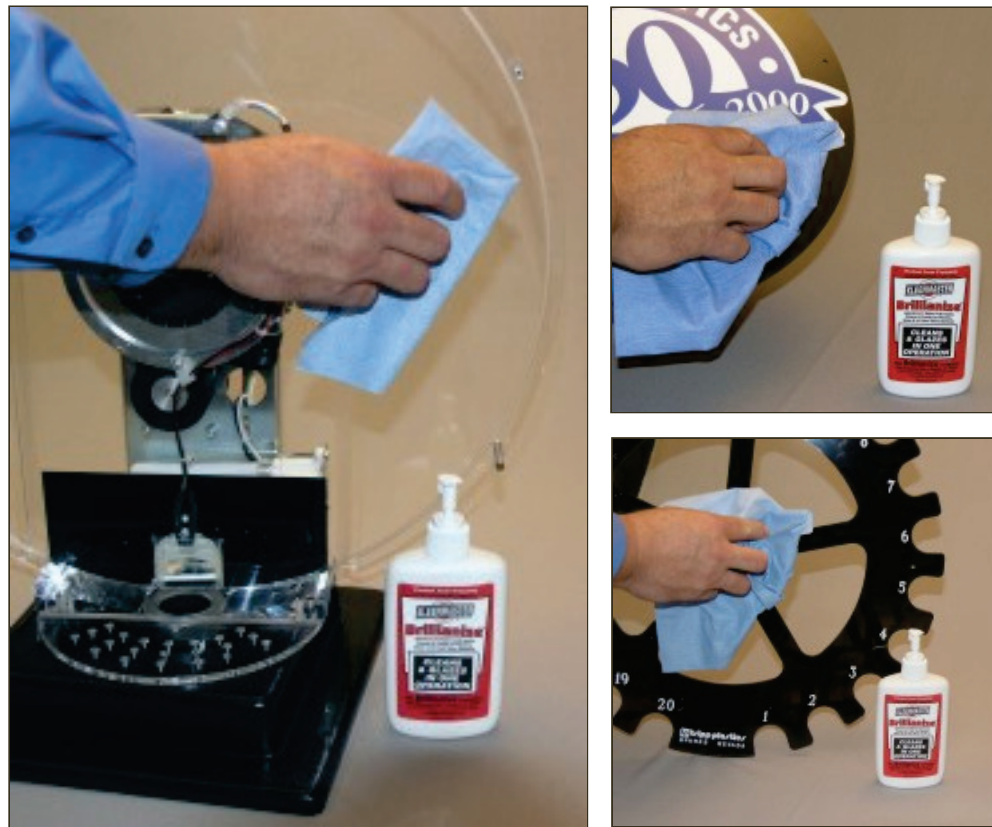
5. Remove the 7 screws securing the Front Panel. Remove the Front Panel and the Wheel Strip as shown below.



6. Remove the 4 screws securing the Wheel and remove it by lifting it off of the 3 locating pins protruding from the Wheel Spacer as shown below. NEVER remove or loosen the screw indicated by the yellow arrow.

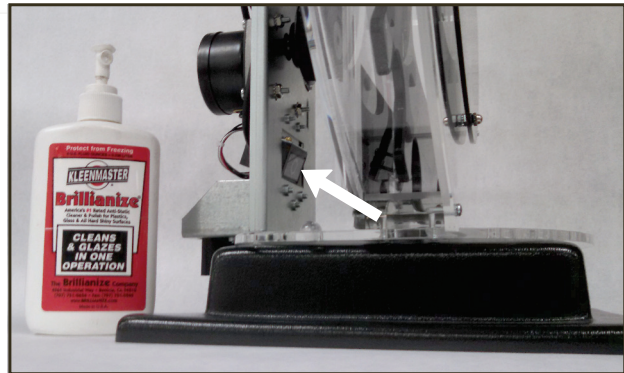
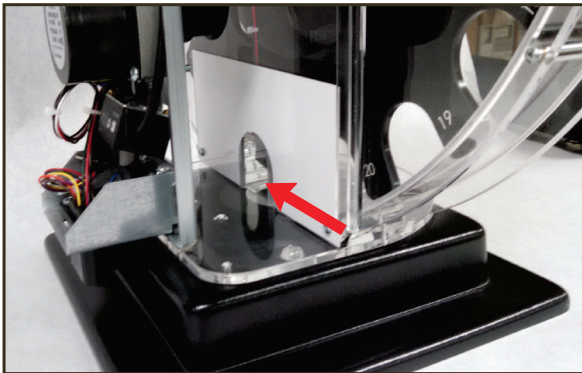


7. CAUTION: Use a very soft, lint free cloth for cleaning the plastic parts or scratching may occur. Clean all of the items removed using mild soap and water or "Brilliance" cleaner. Be sure to dry all parts completely before assembly using a soft cloth.

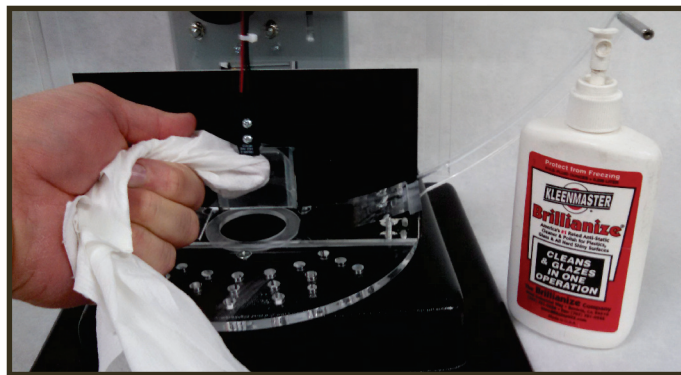




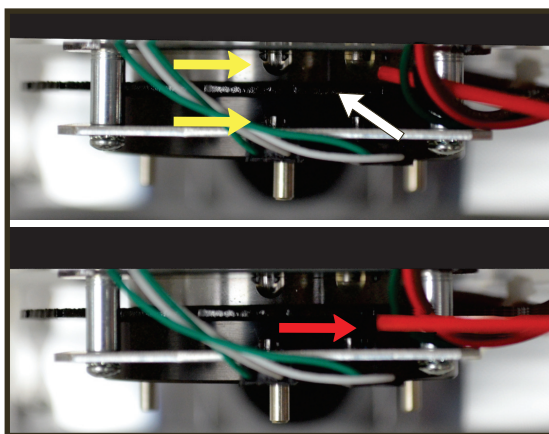
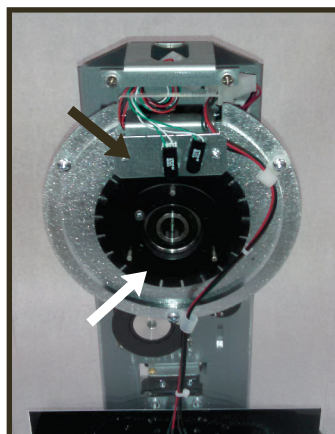
8. Clean the Reader Lens (white arrow below) using Brillianize on a soft cloth. Wrap the cloth around your index finger, then spray some Brillianize on the cloth. Gently clean the Reader lens with the moist part of the cloth, then dry it with a dry section of cloth.
9. Clean both sides of the glass window (red arrow below) with the same cloth using Brillianize.



10. Clean the lens on the Ball Optic using Brillianize on a rag wrapped around your fingertip.



11. Using compressed air, blow off the surfaces of the optic detectors (yellow arrows below) on the Optic Assembly (black arrow below). Be sure to blow air on both the front and back of the timing wheel (white arrows below) as shown by the red arrow below.



12. Reverse the disassembly order to put the unit back together. Special care must be taken while tightening the screws during assembly. Do not over tighten these screws or there will be risk of cracking the plastic. A snug fit is all that is required when tightening.

## Ball problems

**Symptom:** Balls break.

**Solution:** Your keno balls will eventually break under normal conditions. However, if you feel the balls are breaking too often, slow down the airspeed during game play (see Blower Speed Adjustment on page 6 and the picture on page 7). Make sure the inside of the wheel and both sides of the glass window are clean.

**Symptom:** Balls broken - jamming wheel.

**Solution:** Remove the broken pieces by first removing the front panel (see Upper Assembly (Wheel)).

**Symptom:** Balls don't rise high enough to get into pocket.

**Solution(s):**

1. The graphics panel stand-offs are missing, allowing the graphics panel to touch the front panel. Replace stand-off nuts to ensure there is a gap behind the graphics panel.
2. Replace or clean the air filters on the blower motor (see Blower Unit).

**Symptom:** The balls don't rise at all.

**Solution(s):**

1. The blower hose may have fallen off. Make sure it is securely attached at both ends.
2. The blower motor cable has become disconnected from the controller or has become faulty.
3. The blower motor may have failed. Replace it with your spare blower unit.

## Reading problems

**Symptom:** The game time is too long (always over 1 minute, 30 seconds).

**Solution(s):**

1. Make sure the graphic panel is not mounted so it is touching the front panel. This will make it very difficult for a ball to come into the pocket.
2. Replace old, worn out balls with new ones.
3. Clean the Upper Assembly (wheel).
4. Clean the glass window.
5. Clean the balls.
6. Replace the glass window if it is scratched or has a flaw on it.

**Symptom:** There are occasional long read times for a ball.

**Solution:** It is normal to have occasional long read times for a ball. If this happens more than once every game, see "The game time is too long", above.

**Symptom:** A ball number is being read more than once.

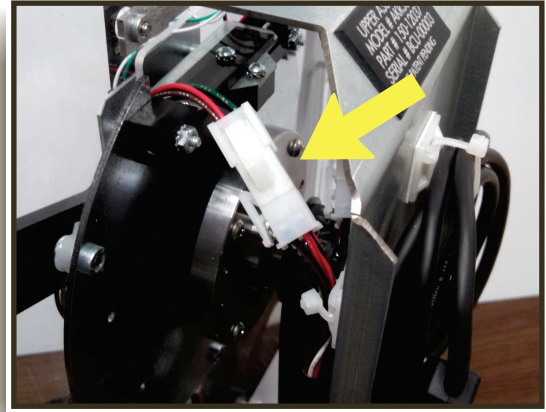
**Solution(s):**

1. The wheel is not turning properly. See Wheel Problems under Troubleshooting.
2. Make sure there are not two or more identical balls in the bowl.

**Symptom:** A ball goes into the wheel pocket but is not read. The Keno Console may time out.

**Solution(s):**

1. Check the ball detect optic. Make sure it is clean and the connector is plugged in properly (see yellow arrow at right).
2. See “The game time is too long”, above.
3. If the Keno System displays a no read or similar error, manually enter the ball number by following the instructions provided by your keno system supplier.



## Game problems

**Symptom:** “Duplicate Spot Error” or similar message displayed on Keno Console.

**Solution(s):**

1. Determine why the wheel is not turning properly.
2. Make sure there are not two or more identical balls in the bowl.

**Symptom:** The system stops working during a game.

**Solution(s):**

1. If the wheel position is incorrectly detected, this could cause the system to think a ball has not been captured. This happens when the wheel position is off so far that the next ball does not get captured. The wheel stops moving before the next ball can get captured. Determine why the wheel is not moving properly.
2. Replace the cable between the AKV2100PC controller and the Keno System.
3. Replace the fuse on the rear panel of the AKV2100PC controller.
4. Turn the AKV2100PC controller off, then back on. Be sure to put the Air Always On switch in the ON position before restarting the controller. Also, turn the controller on right away to prevent a ball from falling back into the bowl.

**Symptom:** The wheel does not always stop to pick up a ball. It is skipping pockets.

**Solution(s):**

1. Do not use cell phones or walkie talkies too close to the game. RF interference will cause a pocket to be skipped.
2. Clean the wheel detect optic assembly (see Upper Assembly (wheel)).
3. Make sure both optic connectors are plugged in properly.

**Symptom:** When the AKV2100PC controller is turned on, the Active lamp flashes indefinitely and will not stay off.

**Solution(s):**

1. Set the Upper Assembly Wheel onto the top of the glass bowl assembly.
2. Make sure the connector from the Base/Bowl assembly is plugged into the back of the AKV2100PC Controller. See page 5.

If this problem persists, contact our Repair Facility. (See Table of Contents).

**Symptom:** When the AKV2100PC controller is turned on, the Ready lamp flashes indefinitely and never stays on steady, without blinking.

**Solution(s):**

1. Turn the AKV2100PC Controller off, then back on again.
2. Make sure the Keno System is connected as shown on page 5.

If this problem persists, contact our Repair Facility. (See Table of Contents).

**Symptom:** When a game is started, air comes on full speed and the wheel does not turn to position 1.

**Solution:** The belt tension is too tight. Make sure the belt tension is properly set (see Wheel Motor Drive Assembly). If this problem persists, the wheel will have to be sent to our Repair Facility (See Table of Contents).

## Blower problems

**Symptom:** The blower unit does not turn on.

**Solution(s):**

1. Replace the blower unit cable.
2. Replace the fuse on the rear panel of the AKV2100PC controller.
3. Replace the blower unit with your spare.

**Symptom:** The air flow is erratic.

**Solution:** Replace the blower unit.

**Symptom:** The high speed air flow is not turning on.

**Solution(s):**

1. Clean or replace clogged air filters on the blower unit.
2. The air speed is set so high that high speed has no effect.

**Symptom:** The Air Speed knob is not changing air flow speed.

**Solution(s):**

1. Replace the blower unit with your spare.
2. Call our service number for assistance as a wire may have become disconnected.

**Symptom:** The air hose keeps becoming disconnected from the blower or bowl assembly.

**Solution:** Make sure the hose clamps are being used on each end of the blower hose and ensure they are tight.

**Symptom:** The blower is noisy or vibrates.

**Solution:** Replace the blower unit with your spare.

**Symptom:** The Air Always On switch is not responding or does not change air speed.

**Solution(s):**

1. The air speed may be set so high that switching to high speed has no effect.
2. Call our service number as a wire may have become disconnected.