

## Advanced Reader Head 2 – Technical Note 2

### “Base Riser” and the Klaus Roulette Wheel

**Applicable To:** ARH-2 Iss. 1.5 and software version 1.5.0 and above. The software version is indicated by the start up flash sequence of the three user LEDs after all three LEDs have flashed red and green together. For example, the left LED flashing once, followed by the middle four times, followed by the right hand LED flashing twice, would indicated v1.4.1.



Figure 1: Base Riser.

The ARH-2 “Base Riser” (part number ARH-2-RISER) pictured opposite in Figure 1, is used to raise up the reader head to provide a better view of the number ring and in particularly the ball, when in deep pockets, such as often is the case with French wheels, or with shallow wheel geometries where the back scattered light from the ball can affect the number ring reading.



Figure 2: Fitting the Base Riser.

The base riser is fitted as shown in Figure 2 opposite using the screws provided (M4 x 12mm with integral spring washer).

Note the Base Riser is fitted skewed slightly to the orientation of the Reader using just a single screw. This means the LED beams are unlikely to get a direct reflection from the wheel, which can sometimes cause problems with the Caro wheel.

This skew can be seen by the gap indicated by the arrow on one side, but no gap on the other.



Figure 3: Reader with Base Riser.

The Reader assembly fits to the wheel as before, locating itself on the three self-adhesive gold discs.

Note for the Klaus roulette wheel, Mode Switch 2 sub-switch 4 **MUST** be OFF.

Note also the functionality of Sub-switches 1 and 2: Both off (default) = new game when ball in rim detected;  
 1 on, 2 off = new game when wheel empty detected (NMBS ignored); 1 off, 2 on = new game when wheel empty AND ball detected in the rim; both on = new game after two empty revs.

## LED Beam Setup on the Klaus Wheel

The number ring LED beams should be focused towards the outside of the number ring, but still ensuring that all the light still falls onto number ring (and does not get cut off by the outer ring). This is the standard position for all wheels, but on the Klaus wheel it is more important that the beams are in this correct position. The roulette ball beam should be focused as usual, that is just above the middle of the ball.



Figure 4: Reader's eye view of the wheel.

Note that the Klaus wheel is very shallow and that if the number ring beams are too high (towards the centre), there may be reflection from the roulette ball that can confuse the readings.



Figure 5: Overall view of Reader on the wheel.

Note the placement of the reader head is half way in between the two canoes as usual. This ensures no back scattered infra-red to the ball-in-rim sensor.

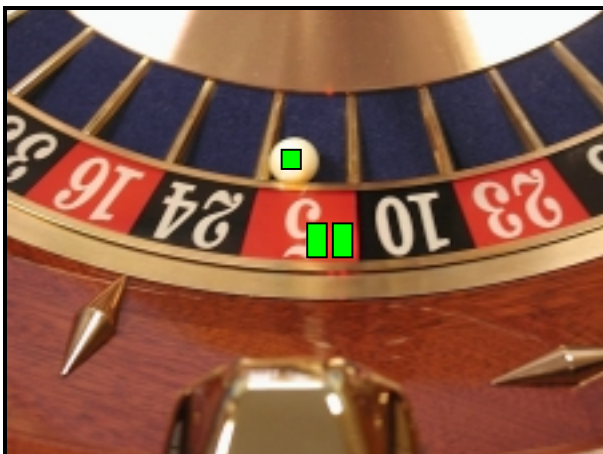


Figure 6: Position of sensor beams.

Position of the LED sensor beams, shown in green for clarity (or white if black and white printout).