

Dome Terminology

Below are pictures of the excellent R&J dome, as completed by Mike Marosy. Please see text below the pictures for detailed information on the part names and description.



1. Radar Eye Also called the 'main eye,' it's one of the more recognizable dome parts. This part is used on R1s, R2s, R3s, R4s, and R6s.

2. Radar Eye Lens Pretty much self-explanatory. These are available from a couple builders in acrylic or optical grade quality. They have been purely black in color, tinted bronze or grey. A low buck approach is to use 4 inch hemispherical Christmas decoration kits that are widely available during the holidays in craft stores.

3. Front Logic Display These were initially color wheels spinning in front of a light source for the glowing effect. Builders now use ultrabright LEDs soldered into PCBs and they're very bright.

4. Front PSI (Process State Indicator) The front PSI, for most droids, is a two-color fading light panel. The hole for the front PSI is smaller than the rear, and the cover is usually a milky white colored plastic. The fading light effect has recently been accomplished by PCBs which use two

ultrabright LEDs, and color shift is controlled by a potentiometer on the board. Another version is now available with pre-programmed PICs controlling multiple LEDs for different lighting effects. Other methods are available, including boards which abruptly switch between the two LEDs from Fiberoptic Products who also have a more advanced version. A standard R2 unit will use blue and red LEDs for this PSI.

5. Holoprojectors (HPs) There are three of these on a standard R2 Unit, one in the front, one in the back, and one in one of the top pie panels (see below). They are readily available in cast resin, either stationary or moveable, and on occasion done in an aluminum run. The original screen used HPs were reading lights from Vickers Viscount airplanes, used in Great Britain beginning in the early 1950s.



6. Pie Panels These are pie shaped pieces often cut from the dome. These can open to reveal extensions from the dome such as periscopes or lifeform scanners.

7. Dome Panels These parts of the dome, including the pie panels, may be painted, etched or cut from the dome, and may open by means of servos and hinges.

8. P5 Picture Panel P5 refers to the name of the panel in the R2 Builders Group blueprints. The panel has an open round-cornered center with shows the aluminum dome underneath. In a scene in the movie Return of the Jedi, the panel glows red.

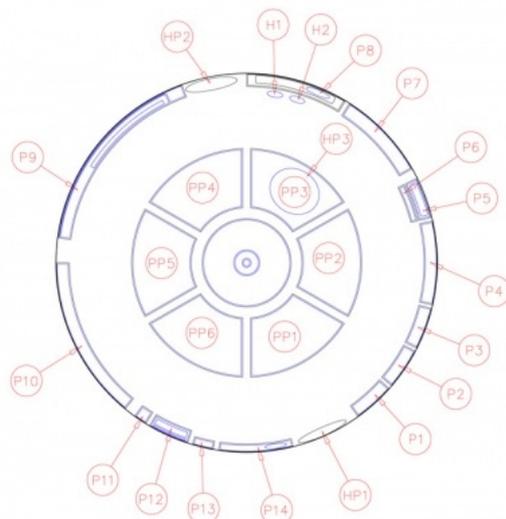
9. Rear PSI (Process State Indicator) The rear PSI, like the front, is a two-color fading light panel. The hole for this PSI is larger than the front, and recently has used the same PCB as the front, both powered by a single 9V power source. The standard colors for an R2 astromech is green and yellow.



10. Dome Bumps These are two small raised domes on the back of the dome, just above and to the right of the rear PSI on a standard R2 unit. They have been offered in aluminum in the past, and are regularly available in cast resin. Others have used rubber balls cut in half, or even plastic freshness covers from orange juice cartons. This part is also used by many builders as a convenient place to house switches for dome electronics, using round illuminated switches like these. Most available switches are of the momentary type, and require a circuit to hold the on/off action.

11. Rear Logic Display Like the front logics, these were initially actuated with a spinning color wheel, illuminated by fiberoptics. Recently, builders have used approximately 100 LEDs in the small area with inexpensive flashing circuits, controlled by a PIC microcontroller. The LEDs are generally green, yellow and red in color.

12. Dome Ring On the three part, laser cut R&J and 300mm domes, the lower ring is separate from the rest of the dome. An inner ring forms a lip which provides a surface for attaching to a Rockler lasy susan bearing, making it possible to rotate the dome. This inner lip has holes drilled which are lowered over bolts protruding up through the Rockler bearing. The bolts are kept long, so the dome won't accidentally fall off and precluding fasteners. On other domes, like the C&J and earlier one piece blank domes, the outer rings are etched into the dome.



ITEM	PART NUMBER	DESCRIPTION
HP1	HOLD PROJECTOR 1	HOLD PROJECTOR 1
HP2	HOLD PROJECTOR 2	HOLD PROJECTOR 2
HP3	HOLD PROJECTOR 3	HOLD PROJECTOR 3
H1	HOLE 1	
H2	HOLE 2	
PP1	PIE PANEL 1	SABER LAUNCHER / MIBED SLASHER
PP2	PIE PANEL 2	LIFE FORM SCANNER
PP3	PIE PANEL 3	HOLD PROJECTOR 3
PP4	PIE PANEL 4	POSSIBLY PERISCOPE LOCATION
PP5	PIE PANEL 5	PERISCOPE LOCATION ON TOY
PP6	PIE PANEL 6	POSSIBLY PERISCOPE LOCATION
P1	PANEL 1	
P2	PANEL 2	
P3	PANEL 3	
P4	PANEL 4	
P5	PANEL 5	
P6	PANEL 6	
P7	PANEL 7	
P8	PANEL 8	PSI REAR
P9	PANEL 9	LARGE LOGIC DISPLAY
P10	PANEL 10	
P11	PANEL 11	
P12	PANEL 12	SMALL LOGIC DISPLAY
P13	PANEL 13	
P14	PANEL 14	PSI FRONT