

Frequently Asked Questions (FAQ)

Q: What is the difference between an RTD and a conventional LCD screen?

A: Whereas a conventional LCD display is a small screen fixed in the center-stack of a dashboard, the RTD, in effect, *is* the entire center-stack area of the instrument panel. The center stack and display within it become one and the same, whose texture, shape and appearance can be easily modified in software. Click [here](#) for more information.

Q: The RTD uses a projection display. Can it fit in my instrument panel?

A: While the answer is dependent on the size of the vehicles' center stack the unit can be six-seven inches deep for most center stacks, and probably less in the near future. A typical car stereo requires six inches of room behind the instrument panel. Recent technological advances have resulted in projection displays requiring less depth. For example, RCA will soon market a 61 inch diagonal projection television with a depth of only seven inches. The surface on a vehicular center stack is much smaller than this. Click [here](#) for more information.

Q: What kind of light source is used? How do you replace it?

A: Eventually we believe solid state sources (LEDs or lasers) will be used, having effectively infinite lifetimes in this application. In the short run, we are studying several different lamps, each of which has a substantial lifespan. The RTD has built-in light measurement so that when high intensity is not needed (e.g. when driving at night), the lamp can run at reduced levels. Click [here](#) for more information.

Q: What kind of material can the screen/control surface be made of?

A: Any surface which is sufficiently transparent can be used. A diffusing film, such as **3M Vikuiti™**, is applied to the side of this material facing the projector. This diffusing film also improves the display contrast.

Q: What about vibration? Won't the image bounce around if you hit a bump?

A: The projection unit and camera sensor are locked together. This unit in turn can be attached to the control surface or a member rigidly connected to the surface. The whole assembly then moves as a rigid body.

Q: What interconnects are required to the screen/control surface?

A: None. All sensing and display is non-contact. This enables easy interchange of the display and control surface depending on vehicle, option package or individual user.

Q. How are controls attached to the Display and Control Surface?

A: Controls can be attached to the screen using standard fasteners or adhesives.

Q: How much does the RTD cost when compared to a conventional instrument panel?

A: The RTD drastically reduces the number of parts compared with a conventional instrument panel. Furthermore, its projector and camera core hardware can be reused over many product lines. These factors result in a competitively priced instrument panel solution.