

GEN 2 Universal AirSpeed / Multi-Function

ASI: Available in 2 1/4 (PN: RUASI-22-GEN2) or
3 1/8 cutout (PN: RI-2024-6)

MFI: Available in 2 1/4 (PN: UMFI-22-GEN2) or
3 1/8 cutout (PN: RI-2024-5)

Features: Indicated Airspeed / True Airspeed / Digital Altitude / Analog (Dial) Representation of Airspeed / Digital VSI / Settable Kollsman / Outside Air Temperature / System Voltage (8 points of data on one screen) / MFI also has Density Altitude

Technical Specifications / Operation

Last updated Jan 29, 2025

RADIANT Technology's GEN2 instrument lineup includes a Universal AirSpeed Indicator with rich airspeed and altimeter functions on ONE SCREEN. Eight Points of Data are provided on one screen.



Left: 2 1/4" bezel, Right: 3 1/8" bezel

GENERAL TECHNICAL SPECIFICATIONS:

- Sunlight readable, with extremely high contrast.
- **Multi-Function version adds a secondary altitude screen mode with Density Altitude; otherwise these products are identical.**
- User selectable for airspeed 100 or 200 range (airspeed units).
- User selectable for airspeed knots or MPH (airspeed units).
- User selectable for Celsius or Fahrenheit (outside air temperature, used for temperature and True Airspeed calculations).
- *Airspeed: Indicated Airspeed / True Airspeed / Digital Altitude / Analog (Dial) Representation of Airspeed / Digital VSI / Settable Kollsman / Outside Air Temperature / System Voltage (8 points of data on one screen).*
- Dimmable (uses external potentiometer, *included*).
- Designed to fit 2 1/4" instrument rectangular cutout with 2 bolts (included), or 3 1/8" standard panel cutout using included adapter ring. Will also fit into standard 2 1/4" round instrument cutout with very slight clipping of the left side of the screen.
- Power Source: +7.0 to +14 volts, approximately 0.125 ampere.
- Case is black nylon with chopped carbon fiber, 3D printed.
- Includes external temperature sensor for OAT with included 2 meter harness (~80 inch).



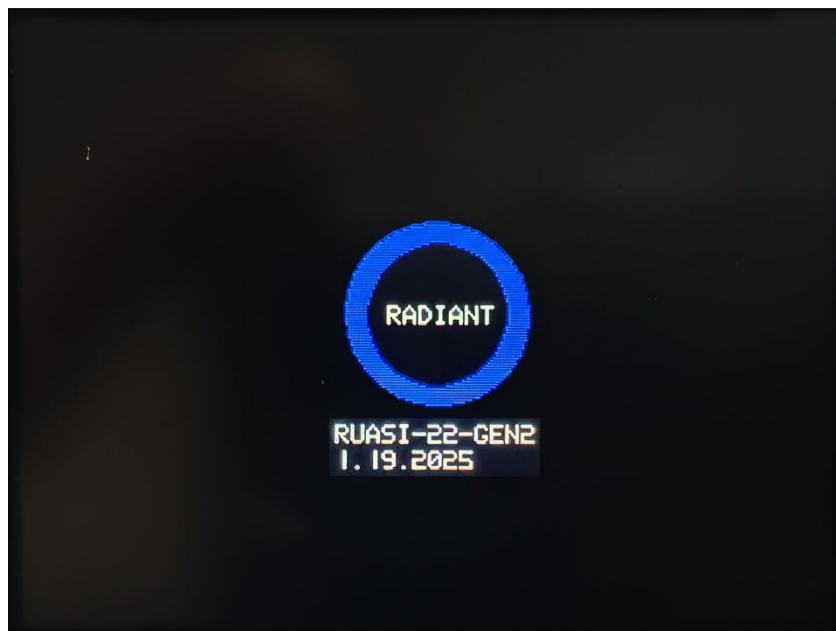
Airspeed Indicator in 2 1/4" cutout packaging showing digital / analog dial representation; OAT, system voltage; True airspeed; VSI; altitude; settable Kollsman window.

INSTALLATION:

- Install instrument in 2 1/4" panel left side rectangular cutout using two supplied nuts / bolts. 3 1/8" installation in standard panel cutout using four supplied nuts / bolts. If the 2 1/4" left side rectangular cutout is not made, a small portion of the dial indicator on the left side may be slightly clipped from viewing.
- Attach black wire (ground) to ship ground.
- Attach red wire (power) to ship power, +7.0 to +14 volts. Do not exceed 14 volts. Use appropriate fuse (1 amp) and avionics master switch for operation.
- For control of dimming, wire the yellow wire to the potentiometer. **Leave the yellow wire unconnected for continuous full bright operation.**
- The ASI dongle is attached via the 7 pin connector.
- The back of all units has a static port for the altimeter function. It may be attached to an adapter tube (included) into your aircraft's static pressure port, or left unconnected.
- The ASI dongle has a "P" (pitot) and a "S" (static) marking. Using the included adapter tubes, attach these to your pitot tube and your static pressure port.
- Attach the temperature probe using the included 2 meter cable to any shaded spot on your airplane, such as the underside of a wing.

SETUP:

- You only need to set up the instrument once in its lifetime. If you wish to skip setup, the factory settings are already set to Fahrenheit / 200 / Knots / 29.92 / 40 / 125 / 193 on airspeeds. **The unit will operate out of the box.**
- To enter Setup mode, ***before turning on power***, push either button in ***and hold it in***. Then turn on the power.
- This screen will appear after a few seconds, showing the part number and the firmware revision date:



- ***Keep the button pushed for a few more seconds!*** After 10 seconds, the SETUP dialogue screen will appear. You can now release the button.
- ***If you don't have a dongle attached, the unit will advise you.*** Install the dongle and power cycle the unit; do it again.
- The setup screen looks like the following:



- Briefly touch either button, and the Celsius / Fahrenheit indicator will switch back and forth. When you have made the appropriate selection, hold either button for five seconds, and the next data line will appear.
- You will set, in sequence:
 - Fahrenheit / Celsius
 - MPH / KTS
 - Range 100 / 200
 - Debug On/Off
 - Temperature Up / Down Adjust
 - Voltage Up / Down Adjust (Compare to a quality voltmeter connected to your power input)
 - Alt Error 29.92 (adjust slightly up or down to resolve errors at a rate of 10 feet per setting)
 - Green Arc Start
 - Yellow Arc Start
 - Red Arc Start

- When all is done, the setup screen will look like this:

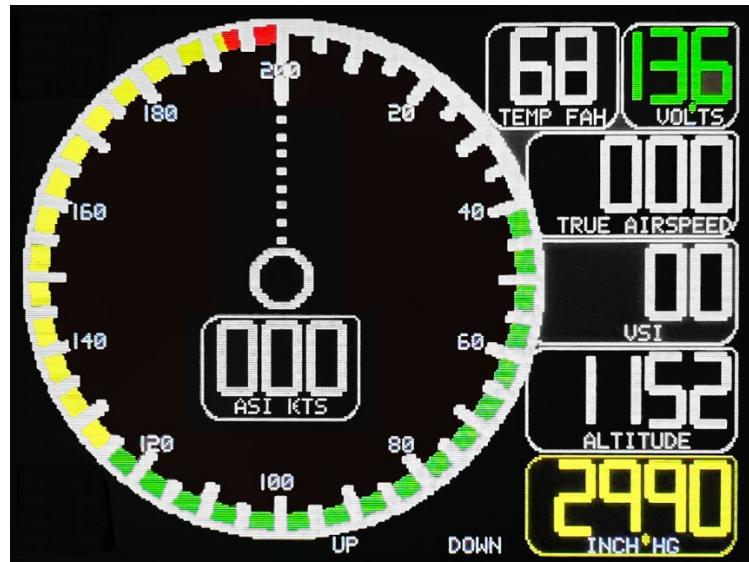


- After you've set all values, the unit will begin normal operation.

OPERATION:

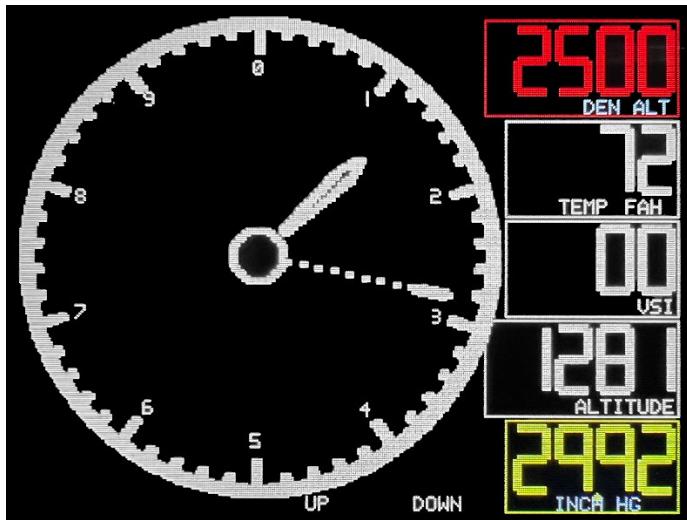
Turn the unit on using an external switch.

- The brightness may be adjusted using the external potentiometer.
- The following picture shows the main screen:



- ✓ The round dial shows current indicated airspeed in dial format.
- ✓ The boxed ASI within the round dial shows digital indicated airspeed in digital format.
- ✓ The temperature box shows OAT.
- ✓ The VOLTS box shows current system voltage.
- ✓ The true airspeed box shows the result of the air computer calculation, which incorporates altitude and temperature to produce TAS.
- ✓ The VSI shows current vertical speed.
- ✓ Altitude shows current digital altitude, as adjusted by the Kollsman window.
- ✓ You set the Kollsman window using the UP or DOWN buttons. This functionality is identical to any aircraft altimeter. Get the correct pressure value from your nearest weather reporting station. Set the Kollsman value by briefly pressing either button. If you press both UP and DOWN buttons simultaneously, the Kollsman value will reset to 29.92. The altitude will be calculated and shown as both a digital and a dial value.

- By pushing either button for more than five seconds, the MFI version of this product will advance to a secondary altitude display mode, replicating a standard dial altimeter. It also has Density Altitude.



DISCLAIMERS:

Products from Radiant Technology are not designed to be used in applications where their failure would endanger safe flight or human life in any way.

They are intended solely for use in VFR conditions. They are not certified to meet any Technical Standard Order and are not produced under a Parts Manufacturing Authority (TSO / PMA). As a result, if installed in the aircraft, they are suitable only for use in experimental and ultralight aircraft, and in Light Sport Aircraft, if meeting the requirements of the respective manufacturer.

WARRANTY:

Your new Radiant Technology instrument carries a three-year warranty, from the invoice date. Please contact us at support@radianstinstruments.com should your product need warranty service. There is an additional charge for international warranty service.

RETURN / REFUND INFORMATION:

Must be returned in new, uninstalled, resalable condition within 60 days after receipt. Ship to Radiant Technology, PO Box 20690, Wichita KS 67208.