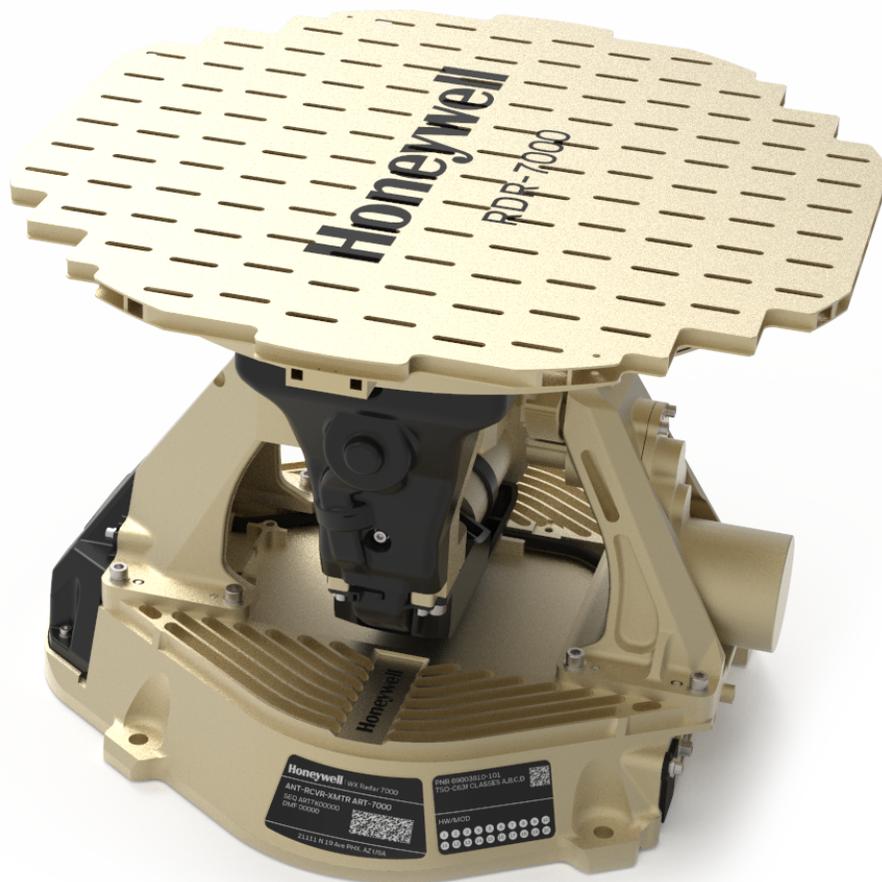# INTUVUE RDR-7000 WEATHER RADAR SYSTEM
QUICK START GUIDE

Honeywell

SAFETY INSTRUCTIONS

• Ensure that there is sufficient space on all sides while working.

• Protect the device from direct sunlight.

⚠ WARNING

Advisory circular 20.68B defines minimum safe levels of RF energy radiation. The RF energy radiated by the RDR-7000 weather radar system is low level.

• Operation in test mode does not emit harmful radiation.

• No tests should be made in the vicinity of fueling operations.

• Do not operate the radar in any other mode unless all personnel are at a safe distance.

SAFE DISTANCE (for 10 miliwatts/centimeter^2)	RDR-7000 with 18" Antenna	RDR-7000 with 12" Antenna
Maximum Permissible Exposure Level (MPEL) distance	10.1 ft (3.1 m)	7.0 ft (2.1 m)
Safe fuel distance	1.9 ft (0.6 m)	1.3 ft (0.4 m)
Test Mode distance	0.67 in (1.7 cm)	0.46 in (1.2 cm)

❓ FAQ

Where can I find the RDR-7000 installation manual and other documentation?
Access Honeywell technical publications at
aerospace2.honeywell.com/wps/myportal/tech-pubs

Where can I purchase upgraded software features for the RDR-7000?
Visit our RDR-7000 product page for more information purchasing additional features at
aerospace.honeywell.com/en/learn/products/weather-radar/rdr-7000.

Where can I find information on the Primus 8X0/P6XO Series Trade-In Program?
Access Honeywell Sales Bulletins at
aerospace.honeywell.com/en/secure/downloads/sales-bulletins

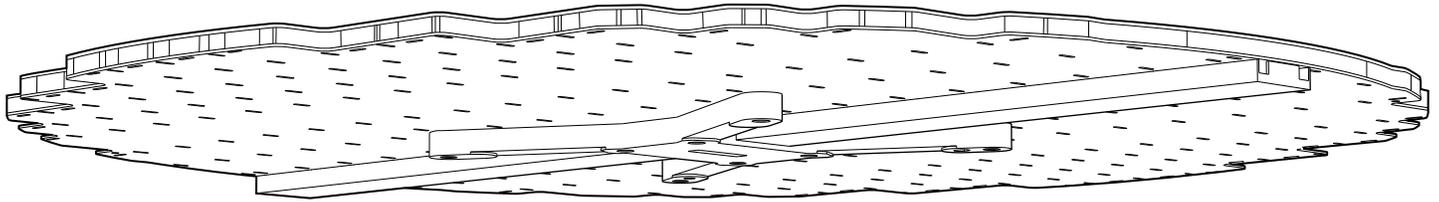# TECHNICAL SUPPORT

US / Canada (toll-free): 1-855-808-6500
International Direct: 1- 602-365-6500

• Select option 1 for BUSINESS AND GENERAL AVIATION
    - Select option 1 for AVIONICS
• Select option 3 for COMMERCIAL HELICOPTER
    - Select option 1 for AVIONICS

Email: AeroTechSupport@honeywell.com

OVERVIEW

FP 7000 (Antenna)

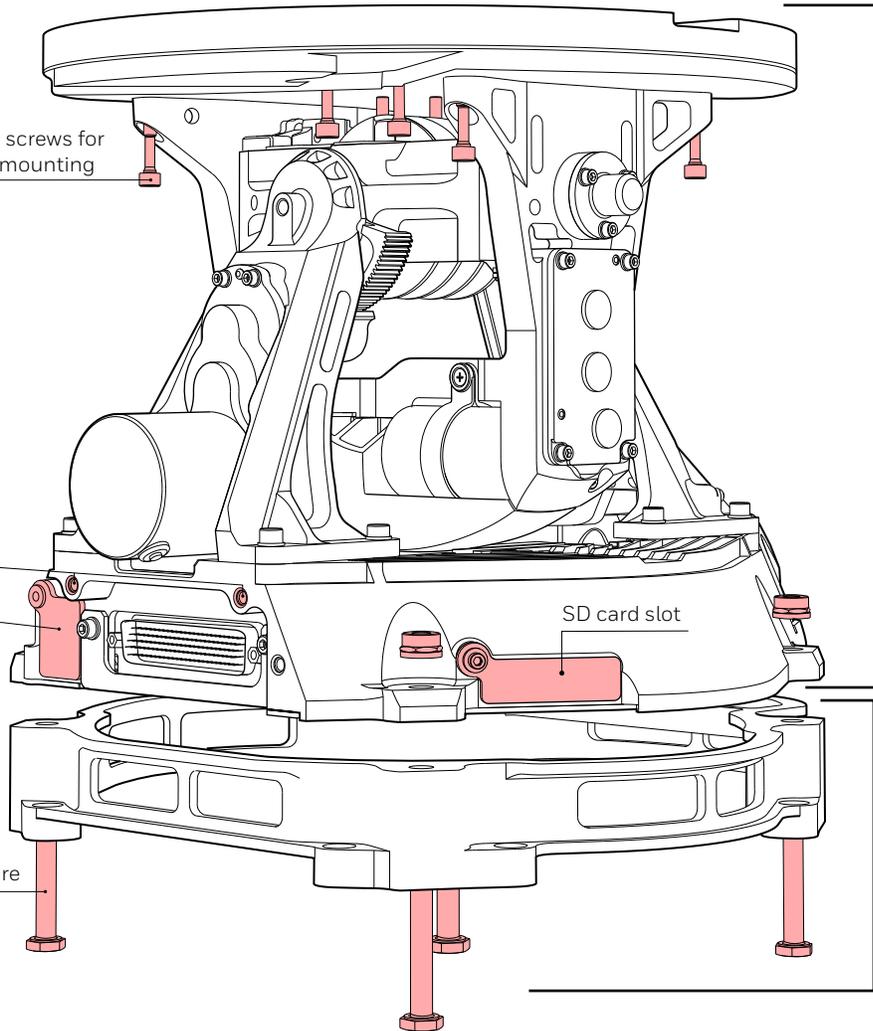8 captive screws for antenna mounting

ART 7000

Guide pin receivers for backshell

RJ45 connector

SD card slot

Bulkhead Spacer

Bulkhead spacer hardware

1 WIRING

The RDR-7000 is designed to be a drop-in replacement for existing Primus radar systems; no wiring changes should be required in this scenario. Updated installations using Real-Beam Maritime and/or 3D Volumetric Buffer may require additional wiring.

> ⓘ **NOTE**
>
> Refer to the full RDR-7000 installation manual and/or the appropriate STC for instructions on how to complete the wiring.

2 FLAT PLATE INSTALLATION

a. Remove the FP-7000 and/or ART-7000 from their storage containers (if applicable).

b. Remove the sticker from the back of the Flat Plate.

c. Visually inspect and remove any debris.

d. Carefully position the FP-7000 on the ART-7000.

e. Engage the four captive screws (outer screws) to attach the FP-7000 to the ART-7000.

f. Engage the four captive screws (inner screws).

g. Torque the screws to 23 to 25 in-lb (2.6 to 2.8 Nm), starting with the inner screws.

> ⓘ **NOTE**
>
> There will be approximately an eighth-inch gap between the antenna and the ART-7000.

h. It is highly recommended to use a 9/64 ball-end hex driver (included), that allows off angle driving of hardware.
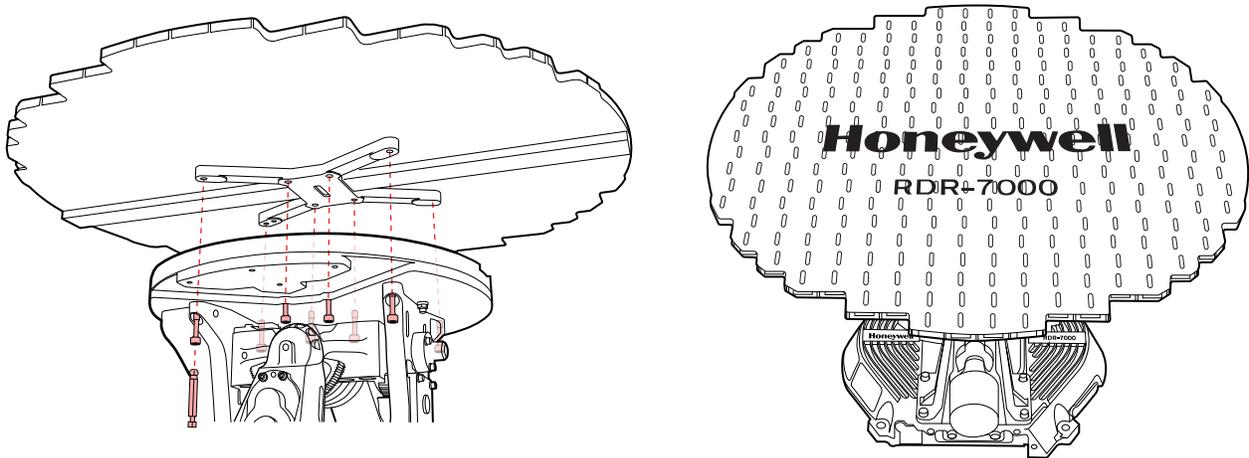

Fig. 1. Flat Plate Installation

3 RADAR INSTALLATION

a. Move the ART-7000 to the open radome.

b. For 18" antenna systems, align the 1-inch spacer behind the ART-7000, if necessary.

c. Hold the assembled unit along with the 1-inch spacer firmly in position on the nose bulkhead mounting plate and attach with four through bolts.
   • Attach the top bolts first.
   • Torque the screws to 30 to 35 in-lb.

d. **Electrical grounding** is required. If not attached to a bonding surface, add a ground strap.

e. Attach the aircraft electrical connector to the ART-7000 and tighten the captive screws.

   ⚠ *Do not touch the electrical pins of the connectors. Damage can occur to the ESDS components.*

f. Visually inspect the installation. Remove any debris from the area.

g. Ensure that there is no constraint on the full range of motion of the antenna (cables, other equipment, etc.)
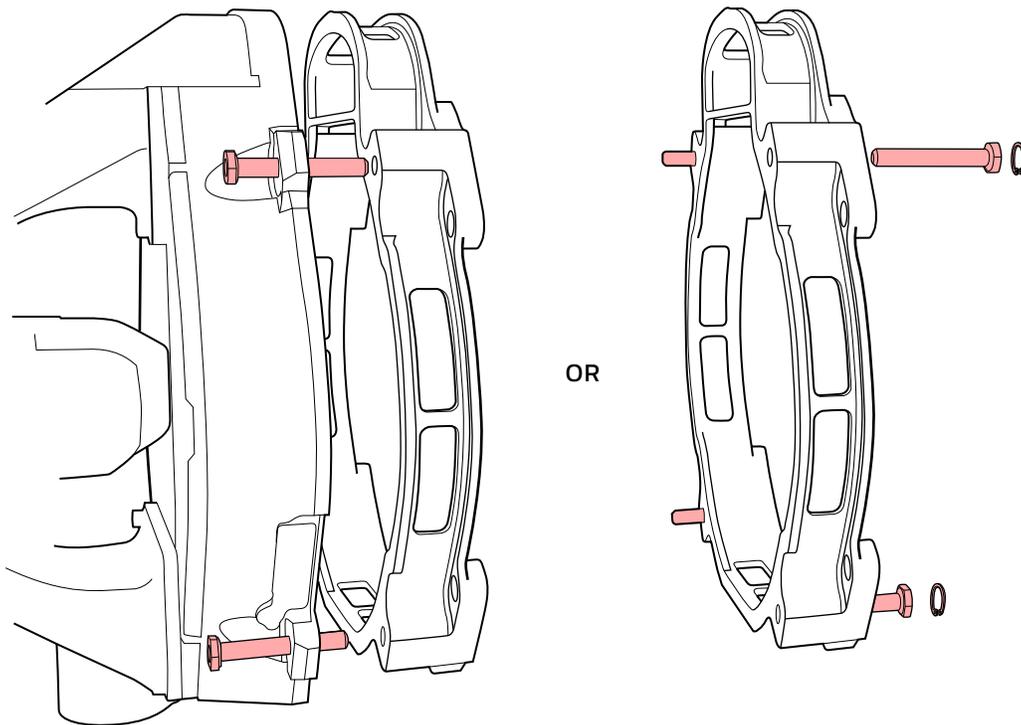

OR

Fig. 2. Radar Installation

4 SOFTWARE CONFIGURATION

A software configuration file must be uploaded to the RDR-7000 to operate the radar successfully.

🖥 Create SW configuration file

   a. Visit Honeywell Aerospace Software & Data Services at <u>ads.honeywell.com</u>.

   b. Select "Custom Software and EMS" and then "RDR-7000".

   c. Follow the instructions to create and download a SW configuration file.

💾 Install SW configuration file

Proceed to step 5 of this guide for instructions on how to install the SW configuration file.

5 SOFTWARE LOADING

Application software and/or software configuration files can be loaded using either a Secure Digital (SD) card or via the ARINC 615-A (Ethernet) protocol.

> ⓘ **NOTE**
>
> If both are used at the same time, the SD card will take precedence.

Using an SD Card

> ⓘ **NOTE**
>
> You must provide your own SD card. No special equipment or precautions are needed when using an SD card.

   a. Power down the radar.

   b. Locate the SD card slot on the base of the ART-7000.

   c. Swing the rubber cover away from the SD card slot.

   d. Insert the SD card into the slot. The SD card will only fit one way; if it seems difficult to insert, turn it over. The slot is spring loaded, so the SD card will click into place when properly installed.

e. Power up the radar.

f. If the SD card contains valid files, uploading will commence.

g. Observe the LED to determine the success of the uploading operation.

- Flashing Green = In progress
- Green = Data fully loaded
- Yellow = Invalid SD card or contents
- Red = Failed, try again

h. Once the data loading operation has successfully completed, remove the SD card by pushing it in (it will then pop out) and replace the rubber cover.

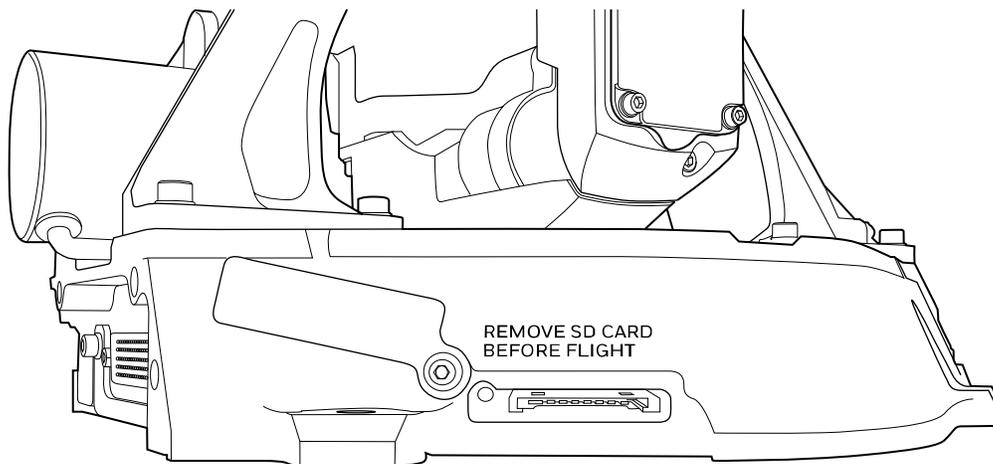i. Re-start the radar (power down and then power up again).

Fig. 3. SD Card Slot

Using AIRINC 615A (Ethernet)

a. Power up the radar.

b. At power-up, the radar software will look for the presence of an ARINC 615A data loading device.

c. If this data loading device is detected, the radar system will perform the appropriate data loading function.

d. Re-start the radar (power down and then power up again).

6 TESTING

a. Ensure that all personnel are a safe distance from the radar.

b. Power up the radar.

c. Select TEST from the Controller or the Aircraft Maintenance System.

d. Confirm that the color test pattern is displayed on the radar display.

e. Allow approximately 60 seconds for TEST to finish.

f. Verify that no errors are reported by the technician at the Controller or the Aircraft Maintenance System; any faults are displayed after the completion of the TEST sequence.

g. Confirm that the correct equipment and software part numbers are displayed. If any software part number is incorrect, refer to the installation manual for complete loading instructions.

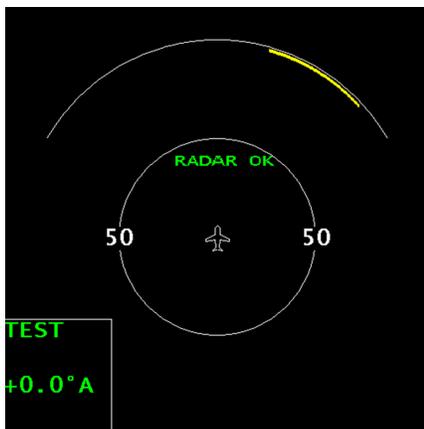h. Close the radome and secure it.

i. Power down the radar.

Fig. 4. No Fault

Fig. 5. Fault Number

Fig. 6. Test Pattern

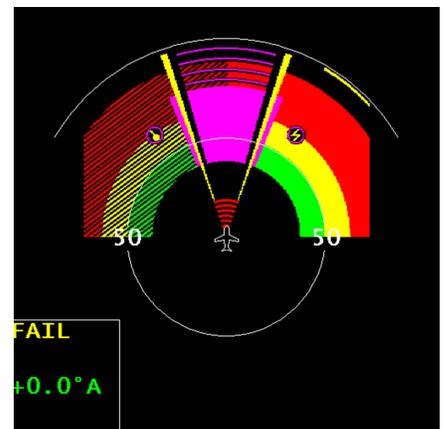*Fig. 7. Part Number*

Fig. 8. Part Number

Fig. 9. Fault Number