# SDR-OMNI
## ALL-IN-ONE Avionics Test Set

# SDR-OMNI Avionics Test Set

**SDR** stands for **S**oftware **D**efined **R**adio – and **OMNI** means **ALL**.

Now you can test ALL your avionics with ONE SINGLE tester – not two or three!

This is the first RF avionics test set that is completely software defined. The hardware can test nearly any avionics function from 200 kHz to 2 GHz -- you simply specify the avionics test App, ***or combination of Apps***, you need.

**Tailor the tester to your needs and your budget.**

Choose from the following Apps:

### TRANSPONDER/1090 ADS-B App

- ATCRBS / Mode S Transponder
- 1090 MHz ADS-B OUT and IN
- DME

### 978 MHz UAT OUT and IN App

### NAV/COMM App

- VOR
- ILS (LOC+GS+MB)
- 406 MHz ELT (w/ 121.5, 243 MHz)
- LF/HF/VHF/UHF COMM (AM/FM/SSB)
- SELCAL

### TCAS I and II / ACAS App

### TACAN App

### GPS App

- Dynamic Position Simulation


### *INNOVATIVE NEW FEATURES*

- Color Touchscreen
- Intuitive, Smartphone-style user interface
- Self-Guided Calibration Verification
- Distance-to-Fault (DTF) and VSWR for cable and antenna testing
- 50% smaller and lighter than current testers – less than 4.5 lb. (2 kg)
- Wi-Fi link to smart tablet or phone – allows complete control utilizing our apps.

The SDR-OMNI surpasses all current flight line avionics test sets by using the latest in RF cellphone technology to generate and receive RF signals over a broad frequency range – 200 kHz to 2 GHz.

Test functions are implemented using software-defined signal processes that generate, receive, and measure complex avionics signals covering narrow band analog or digital communications, complex navigation, and wide-band pulse or data protocols. Users simply purchase the base SDR-OMNI hardware unit and the avionics test Apps that they need. Additional Apps can be purchased and added at any time.

Other Apps include useful, menu-guided RF cable and antenna troubleshooting tools, including Distance-to-Fault and VSWR, as well as a self-guided Calibration Verification App that relies on two basic pieces of RF calibration equipment; a precision RF signal generator and an RF power meter. This makes calibration simple, inexpensive, and often possible in your own shop.

Test capability will be released in phases.

## RELEASE 1

- ***TRANSPONDER / 1090 MHz ADS-B / DME App***: Automated FAR Part 43 Appendix F transponder test for ATCRBS and Mode S Transponders; individual tests (power, freq., % reply, SLS, etc.)
  ADS-B OUT Testing: Decoded display of BDS registers and FAR 91.227 / AC60-165B required data
  ADS-B IN Testing: Up to 4 simulated ADS-B or TIS-B Targets
  DME Testing
- ***978 MHz UAT ADS-B App***: UAT ADS-B OUT: Decoded display of all required ADS-B data
  UAT ADS-B IN: Up to 4 simulated ADS-B or TIS-B Targets; FIS weather data
- ***RF COAX/ANTENNA App*:** VSWR and DTF (Distance-to-Fault) for on-aircraft troubleshooting
- ***CALIBRATION VERIFICATION App*:** Guided calibration verification program

## RELEASE 2

- ***NAV/COMM App***: Graphical display for simplified testing of:
  VOR receivers, ILS receivers (GS, LOC, & Marker Beacon)
  ELT Transmitters: 406 MHz power, frequency, data; 121.5 / 243 MHz swept tone
  HF/VHF/UHF COMM Transceivers: Transmit and receive testing – RF power, sensitivity, modulation; SELCAL selective calling; Voice test of TX/RX using smartphone compatible headset
- ***TCAS I & II, ACAS App***: Up to 4 simulated targets
- ***TACAN App*:** Test TACAN navigation radios

## RELEASE 3

- ***GPS App***: Multi-satellite L1 GPS signal for position and aircraft movement simulation

## Physical

- Packaging – MIL-PRF-28800
- Size – 9.5 x 7.2 x 2.2 in (24 x 18 x 5.4 cm)
- Weight: 4.5 lbs. (2.0 kg.)
- Operating Temperature: -20 to +55 C
- Li-Ion Battery Operation: 6 hours
- AC Operation/Charging: 100-240 VAC, 47-63 Hz

### ACCESSORIES

- AC Recharging Cord
- L-Band Directional Antenna
- Telescoping Antenna
- Rugged Carrying Case
- VSWR Calibration Kit (optional)

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