

KNOW BEFORE YOU GO™



Baringa 5.5 Ultraviolet Missile Warning System Test Set

Part Number: EU00018-03-FG

Specifications subject to change without notice.

Providing confidence and reliability through total spectrum test and training solutions.

With the success of the Baringa 4C and 5.2 confidence test sets, we have combined these capabilities into a universal ultraviolet (UV) missile warning system (MWS) tester.

The Baringa 5.5 is a common, basic test set for all UV missile warning systems including the AN/AAR-47, -54, -57 and -60. It combines the operational benefits of the Baringa 4C and 5.2 systems, offering increased irradiance for taxi-by testing. A set of neutral density (ND) filters provides irradiance matching to test missile warning systems with different sensitivities, while maintaining preferred standoff ranges of 5-50 meters (m) or 15-150 feet (ft.). Increased irradiance also allows users to test dynamic blink sensors on the AAR-47 A(v2) and legacy AAR-47. The sensitivity of warning sensor elements can be evaluated for degradation using the calibrated source and optional adapters.

Profile duration has been extended from 10 to 32 seconds, allowing programming of complex, multiple-missile engagement profiles or combinations of simulated missile engagements and flare burns.

Specifications

| | |
|--------------------------|---|
| Performance: | <ul style="list-style-type: none">■ Beam divergence ± 5 degrees (half power)■ Beam wavelength 250-400 nanometers (nm)■ Typical on-axis irradiances are 50 microwatts per steradian ($\mu\text{W}/\text{sr}$) with no ND filter, 12 $\mu\text{W}/\text{sr}$ from 250-280 nm with ND filter, and 2.5 $\mu\text{W}/\text{sr}$ with ND filter■ Effective range to MWS typically greater than 5-50 m (15-150 ft.) depending on MWS sensitivity and ND filter■ Test profile duration less than or equal to 32 seconds■ Standby time less than or equal to one second |
| Test profiles: | <ul style="list-style-type: none">■ Programmable using optional software■ 10-way switch to select threat/flare/test/calibrated profiles |
| Removable memory: | <ul style="list-style-type: none">■ Choice of eight test MWS declaration profiles■ Ninth position is an AAR-47 "test" waveform■ Tenth position is unused (Kits 1 and 2 have calibrated, fixed-amplitude 70,000 counts per second with MWS photon irradiance ratio, or PIR, equal to one) |
| Power supply: | <ul style="list-style-type: none">■ Rechargeable battery■ External 12 volts direct current (VDC) via utility port |
| Indicators: | <ul style="list-style-type: none">■ Battery status, ready and operational |
| Controls: | <ul style="list-style-type: none">■ On/off switch and trigger on the hand grip■ Profile selector switch |
| Utility port: | <ul style="list-style-type: none">■ Recommended Standard, or RS, 232 serial communication port for profile programming and remote control■ Remote external trigger (by contact closure)■ External battery charge■ External 12 VDC power input |
| Dimensions: | <ul style="list-style-type: none">■ 340 millimeters (mm) x 115 mm x 135 mm (1.1 ft. x 0.4 ft. x 0.4 ft)■ Mass less than 3.9 kilograms (8.6 pounds) including battery pack |
| Color: | <ul style="list-style-type: none">■ NATO green plus yellow removable strip |
| Environment: | <ul style="list-style-type: none">■ Operating temperature -20 to 55 degrees Celsius ($^{\circ}\text{C}$) excluding batteries■ Storage temperature -20 to 71$^{\circ}\text{C}$■ Meets CE standards■ Designed in accordance with MIL 28800 PRF and DEF STAN 66-31■ ATEX-compliant to EN60079-15 for Zone 2, Category 3 equipment (Temperature Class T3) |
| Transport case: | Containing ancillaries including the Baringa unit, one spare battery pack, socket driver, battery charger and cable, wrist strap and operation/maintenance manual |

Specifications *continued*

All three Baringa configurations are equipped to test AAR-47, -54, -57 and -60 missile warning systems. The basic kit is a common, handheld test set that can be user-programmed to include various confidence profiles or provided with generic profiles (including test profiles) to test all fielded missile warning systems. A calibrated profile can be provided for AAR-47 and other sensor sensitivity testing.

| Baringa 5.5 | Part Number | Options |
|-----------------------------------|---------------|--|
| Kit 1 | EU00075-01-FG | Includes isolation tubes |
| Kit 2 Data Acquisition Unit (DAU) | EU00075-02-FG | Includes AAR-47 sensitivity testing, DAU and isolation tubes |
| Kit 3 | EU00075-03-FG | Includes AAR-57-specific filter |
| Basic kit | EU00018-03-FG | N/A |

Ancillaries:

Baringa Ancillary Illumination (BAIL): This is a special-to-type test set that simulates background UV scatter required for legacy MWS testing. The BAIL has two irradiance settings matching the various aircraft sensor configurations, as well as the standoff range of the Baringa. It also utilizes the same, common battery type as the Baringa and DAU.

DAU: This is a special-to-type test box used to measure AAR-47 sensitivity (PIR). Used in conjunction with calibration tubes and ND filters, MWS sensitivity can be tested in and out of band. PIR calculation is automated and can be performed by one person. The DAU uses the same, common battery type as the Baringa and BAIL. Having its own power, it can test sensitivity without auxiliary power being supplied to the onboard sensors of the aircraft under test. This feature is particularly beneficial as MWS sensors can be bench tested off the aircraft, as well as the PIR confirmed before integration onto the aircraft. The PIR of the AAR-47 A(v)2 also can be independently performed to validate the PIR recorded in the cockpit. In addition, the DAU performs MWS, cable voltage and continuity testing.

ND filters: The basic Baringa is fitted with a nominal ND filter that sets the required irradiance for normal go/no-go aircraft MWS confidence testing. However, this filter can be removed to provide even higher irradiance. In this configuration, the Baringa can be used for extended standoff ranges such as taxi-by, and it provides the necessary irradiance to simulate a flare burn. Alternative ND filters are supplied to match the standoff ranges for those missile warning systems with high sensitivity.

Calibration, repair and maintenance: The Baringa 5.5 requires annual calibration when used for AAR-47 sensitivity testing. This can be performed in the U.S. at AAI's corporate headquarters or in the U.K. at ESL's headquarters. If required, a calibration rig can be purchased for local maintenance. The Baringa 5.5 does not require annual calibration when testing the AAR-54, -57 and -60.

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