

3D Creator Positioning System WU-0695-W-001

Uses

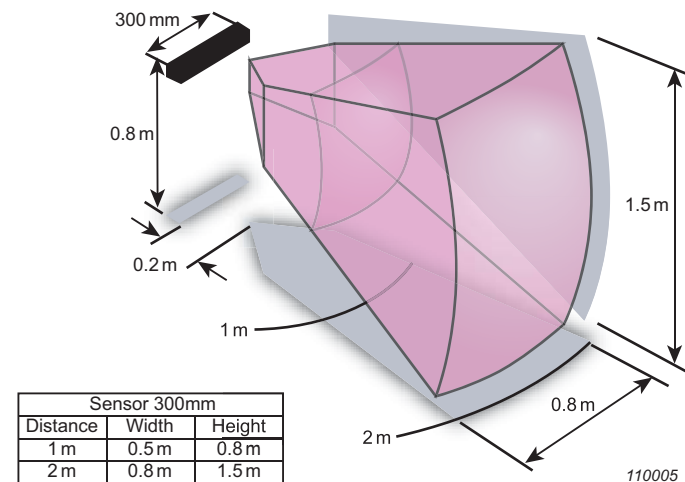
- Enables precise three-dimensional measurement of position
- Allows contour, seam and surface capture
- Works well with acoustical array systems

Features

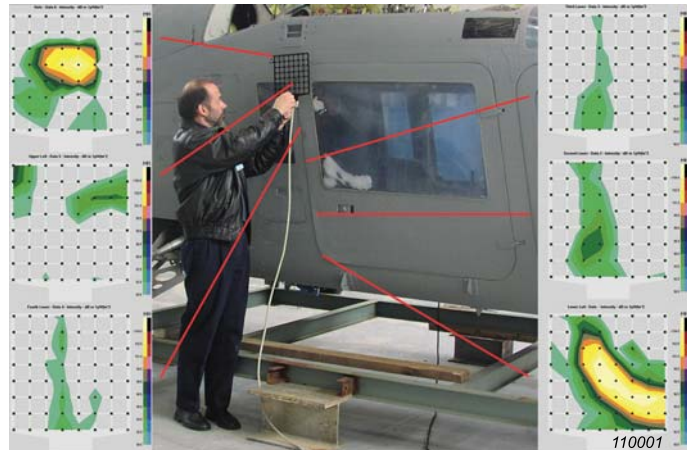
- Wireless operation of the probe means object details can be measured without mechanical restrictions
- A dynamic reference frame means that the object being digitised or the sensor unit can be moved during digitization, without losing the initial frame of reference
- Integrated sunlight filters means that the optical sensor can be used outside or inside
- Integrated into Acoustic Test Consultant Type 7761 with Positioning Detection Option BZ-5611

Description

The 3D Creator is a position measurement system ideally suited for industrial applications. With the 3D Creator you can accurately identify the real-time location and orientation of one or more probes, instruments, or other rigid objects in three-dimensional space. The standard components of the 3D Creator system are an optical sensor unit, a digitizer control unit, a wireless hand-held probe, and a wired dynamic reference frame.



The sensor unit tracks and measures the three-dimensional locations of small infrared emitters, also known as image guides, within the measurement volume. The controller uses the data supplied by the sensor unit to calculate the three-dimensional



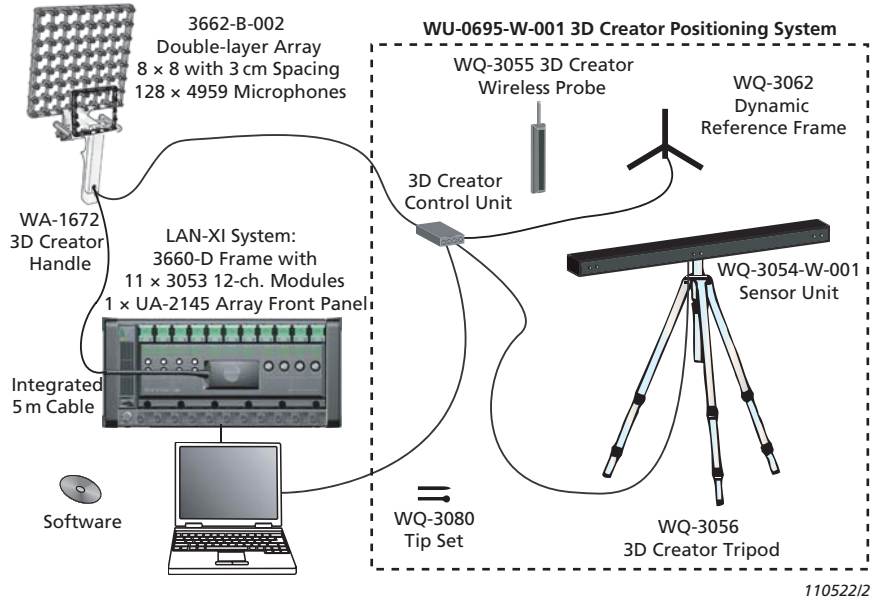
coordinate of each emitter relative to a user-defined coordinate system. The 3D Creator system can then calculate the spatial location of individual image guides and provide them to its host computer as XYZ coordinates. The units of measure and the coordinate axes may be chosen by the user.

The 3D Creator can also compute the real-time position (location and orientation) of whole rigid objects to which multiple infrared emitters are attached. Typically the object is a hand-held probe, tool, or instrument with some sort of pointer or tool tip. For acoustical applications, the image guides are integrated into the handle of the hand-held array. The relative locations of the emitters and the location of the tip relative to the emitters are stored in the 3D Creator Control Unit with the name of the instrument, information about buttons on it, and other data.

The 3D Creator Control Unit measures each emitter's current location and can compute the coordinates of the instrument's tip location and orientation using the tool's definition file. The location and orientation of the tool (probe or instrument) can be reported instead of the locations of its individual emitters, or in addition to them.

The 3D Creator usually operates under the direct control of application software running on the host computer such as Acoustic Test Consultant Type 7761 with Positioning Detection Option BZ-5611. However, a user with terminal emulator software running on the host computer may also manually interact with the 3D Creator.

Fig. 1 Typical hand-held double layer array system used for noise source conformal mapping employing the 3D Creator Positioning System



Specifications – 3D Creator Positioning System WU-0695-W-001

PERFORMANCE

Accuracy: Within the area depicted on page 1, the positional RMS error is ± 1 mm

ELECTRICAL

Power Requirements for Control Unit: 230 V

MECHANICAL

Mounting for Optical Sensor: $\frac{1}{4}$ " – 20 UNC (camera tripod), 10–32 UNF and M4 underneath the probe, and an M22–1 thread with flange on the front

Front Protection Glass: Acrylic with hard-coated and antireflective surface

Weight: WU-0695-W-001 in transport case 16 kg (35.3 lb.)

Dimensions: In transport case, 135 × 40 × 17 cm (53.1 × 15.7 × 6.7")

ENVIRONMENTAL

Enclosure: IP 64, dust tight and protected against splashing water

Temperature Range:

Operating: 0 to +30 °C (+32 to +86 °F)

Storage: –20 to +80 °C (–4 to +176 °F)

System Warm-up Time: 30 min.



The CE marking is the manufacturer's declaration that the product meets the requirements of the applicable EU directives
RCM mark indicates compliance with applicable ACMA technical standards – that is, for telecommunications, radio communications, EMC and EME



China RoHS mark indicates compliance with administrative measures on the control of pollution caused by electronic information products according to the Ministry of Information Industries of the People's Republic of China



WEEE mark indicates compliance with the EU WEEE Directive

Ordering Information

WU-0695-W-001 3D Creator Positioning System includes:

- WQ-3054-W-001: 3D Optical Sensor with sunlight filters, control unit and power supply, 300 mm (11.81")
- WQ-3055: 3D Creator Wireless Probe with battery charger
- WQ-3056: 3D Creator Tripod
- WQ-3062: 3D Creator Dynamic Reference Frame

- WE-0231: 3D Creator Transport Case
- WQ-3080: 3D Creator M3 Tip Set, length 50 mm (1.97") includes ball with 5 mm (0.20") tip and needle tip

REQUIRED SOFTWARE

- Type 7761-X* PULSE Acoustic Test Consultant
- Type 8607-X* PULSE Array Acoustics Acoustic Holography

BZ-5611-X*
BZ-5637-X*

PULSE Position Detection
PULSE Array Acoustics
Conformal Calculation

OPTIONAL HARDWARE

See PULSE Array-based Noise Source Identification Solutions product data [BP 2144](#)

* X = license model either N for node-locked or F for floating

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