

# ULTRASONIC FLAW DETECTOR UEE981 SERIES



## FUNCTIONS & FEATURES

- IP65, portable and ultra-thin design
- Square wave pulser, PRF up to 3 kHz for fast scanning / detecting
- High numbers of digital filters, suitable for nearly any application
- With standard DAC/ TCG /DGS / AVG function, Color B-Scan, C-Scan
- Reports can be automatically formed and viewed on the equipment, and export to USB directly
- Storage: 1000 groups of data (expandable); External USB for directly storage (unlimited memory)
- Language: English / German / Turkish / Italian (expandable)

## APPLICATION

Quickly and accurately detection, positioning, evaluation and diagnosis of various flaws in the work-piece, such as welding cracks, defects and etc. It Widely used in Steel Structure Industry, electric power, petrochemical, boiler and pressure vessel, railway transportation, automobiles, machinery, and other fields.

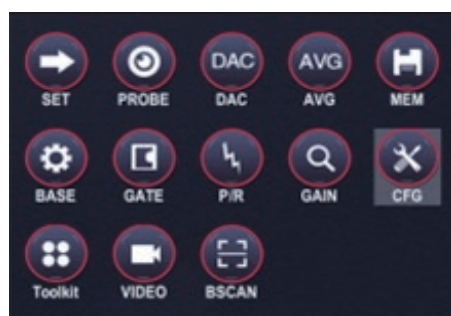
**SINCE 2006**

**ZHUOZHOU TIANPENG INSTRUMENT MANUFACTURING CO., LTD.**  
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## TECHNICAL SPECIFICATIONS

| Model                      | Uee981Smart  | Uee981Optimum       | Uee981Expert        |
|----------------------------|--|---------------------|---------------------|
| Scan Range(mm)             | 0~10000mm  | 0~12000mm           | 0~15000mm           |
| Velocity Range (m/s)       | 1000~15000   | 500~18000           | 100~20000           |
| Gain Range(dB)             | 110dB  | 120dB               | 120dB               |
| Operating Frequency        | 0.2~20MHz  | 0.2~25MHz           | 0.2~35MHz           |
| Pulse Repetition Frequency | 10~1500Hz  | 10~2500Hz           | 10~10000Hz          |
| Vertical linearity error   | ≤2.0%  | ≤2.0%               | ≤1.5%               |
| Horizontal linearity error | ≤0.2%  | ≤0.2%               | ≤0.2%               |
| Sampling Frequency         | 150Mhz   | 200Mhz              | 320Mhz              |
| Transducer Frequency Max.  | 15MHz  | 20MHz               | 30MHz               |
| Dynamic Range              | ≥38dB  | ≥38dB               | ≥38dB               |
| Resolution                 | ≥40dB  | ≥40dB               | ≥40dB               |
| Testing sensitivity        | ≥65dB  | ≥65dB               | ≥65dB               |
| Pulse amplitude            | 100V~500V  | 100V~500V           | 100V~500V           |
| Pulse Width                | 0.03~0.51μs  | 0.03~0.51μs         | 0.03~0.51μs         |
| Transducer Damping         | 50Ω~400Ω   | 50Ω~400Ω            | 50Ω~400Ω            |
| Interface for Probe cable  | BNC (Optional LEMO)  | BNC (Optional LEMO) | BNC (Optional LEMO) |
| Working mode               | 7 modes: Straight / Angle / Dual crystal probe, Penetrating detection and etc. |                     |                     |
| Power Supply               | 100-240V 50-60Hz; DC 9V Rechargeable Li-ion battery, 10+ hours life            |                     |                     |
| Dimension & Weight         | Dimension 240× 153×38mm; Net weight 0.98kg (with Li-ion battery)               |                     |                     |
| Environment                | Temperature -10~50 C , Humidity 20~ 95%RH                                      |                     |                     |

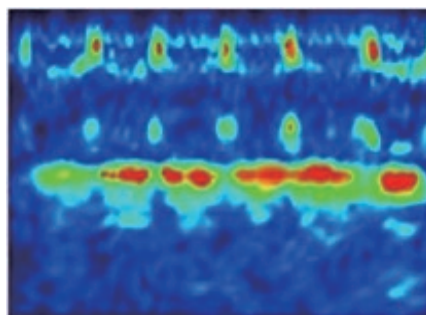
## PICTURES



Menu



Main Interface

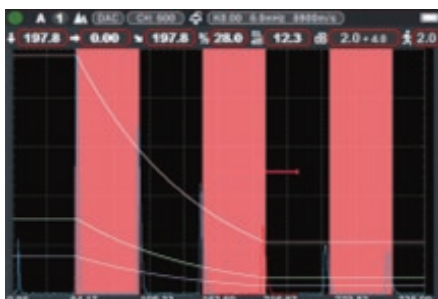


Color B scan

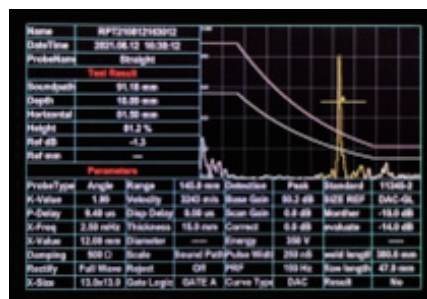
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AVG interface



DAC interface



Automatic Reports

## CONFIGURATION

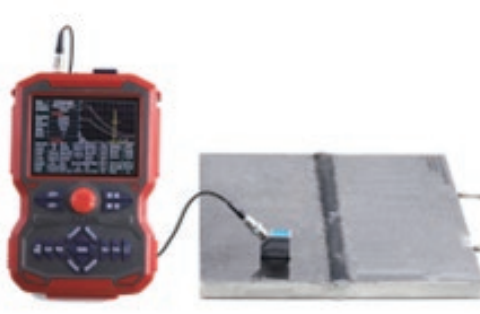
| Function                     | Uee981Smart | Uee981Optimum | Uee981Expert |
|------------------------------|-------------|---------------|--------------|
| Square wave pulser           | •           | •             | •            |
| DAC/ DGS / AVG diagram       | •           | •             | •            |
| AWS                          | •           | •             | •            |
| TCG / Color B-Scan           | ○           | •             | •            |
| expandable Function : C-Scan | ○           | ○             | •            |
| Automatic Calibration (V2)   | •           | •             | •            |
| Automatic Report             | •           | •             | •            |
| Bluetooth Connection         | ○           | •             | •            |
| External Storage (USB)       | •           | •             | •            |
| Detection Video              | ○           | •             | •            |

## STANDARD DELIVERY

| Name                            | Quantity | Name                    | Quantity |
|---------------------------------|----------|-------------------------|----------|
| Main unit                       | 1        | Carry Strap             | 1        |
| Probe and Cable                 | 2        | Power Adapter & Battery | 1        |
| USB                             | 1        | Manual                  | 1        |
| Mobile App (Uee981O/ 981E only) | 1        | Certificate & Documents | 1        |
| IIW V2 Block (Uee981E only)     | 1        | ABS Instrument Box      | 1        |



Ultra-thin and portable design



Automatic report display



Standard Delivery

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