



# TIME2190 Introduction

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# TIME2190 Features



- **A-scan waveform can be displayed for echo analysis and measurement of complex material;**
- **Compatible with many types of transducers, single and dual element transducers are suitable;**
- **With a variety of measurement methods, users can set blanks to shield aftershocks or clutter;**
- **Echo-echo measures the true metal thickness with ignoring the thickness of coating layer.**
- **Thru-coat technology measures metal and nonmetallic coating thickness.**
- **Signal auto-amplification function (centered display of the detected echo);**
- **The resolution is 0.001, 0.01, 0.1 mm optional in any mode (or 0.0001, 0.001, 0.01 inch optional)**
- **Gain adjustment range 0-99dB**



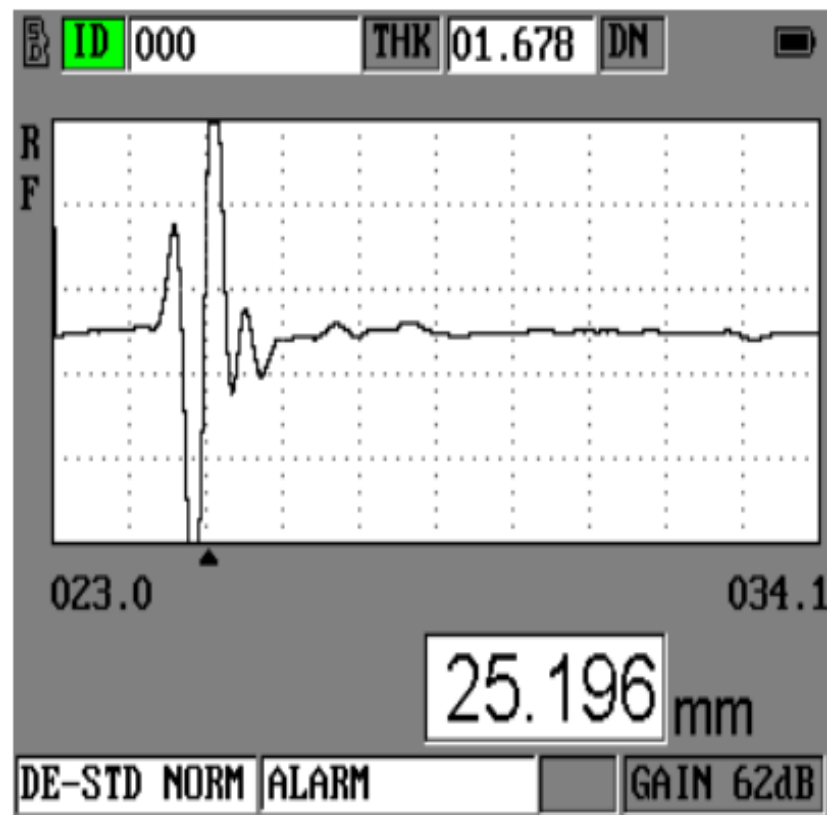
# TIME2190 Specification



- Resolution: 0.001mm or 0.01mm or 0.1mm optional
- Velocity adjustment range: 508 m/s to 18699 m/s
- Display: color TFT LCD, 320x240 pixels
- Pulse generator: adjustable square wave pulse generator
- Transmitting voltage: 60V, 110V, 150V, 200V optional
- Emission pulse width: varies with probe frequency
- Gain range: 0-99dB, 1dB step
- Frequency range: 0.5 Mhz ~ 20Mhz
- Measurement rate: standard (4Hz), fast (20Hz)
- Probe settings: 10 sets of fixed probe settings and 22 sets of custom probe settings
- Data storage: 500 data files, each storing 1000 measurements and waveforms
- Ambient temperature: 0 °C ~ 40 °C
- Power: three AA or NiMH batteries

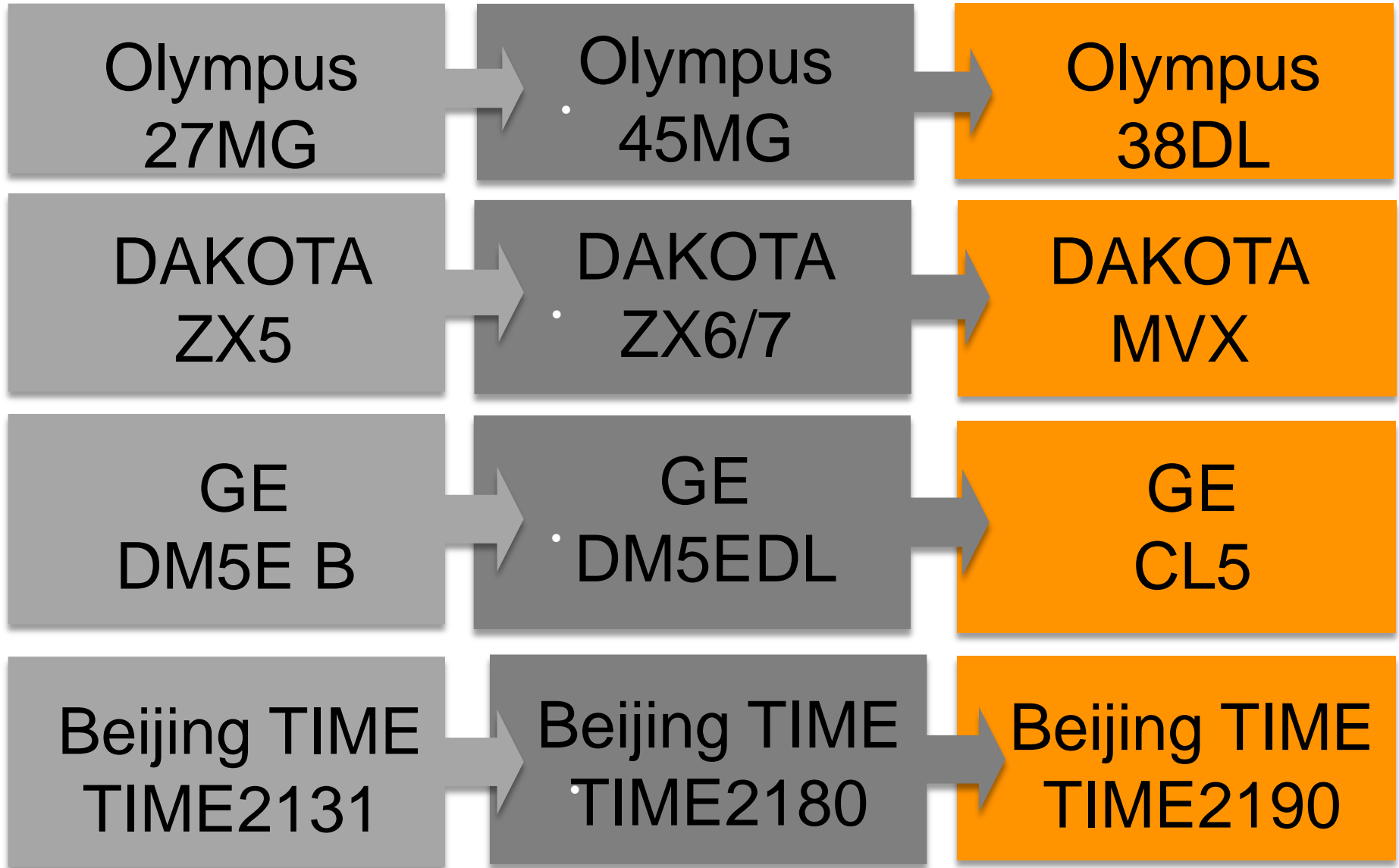
# TIME2190 Mode Selection

- Mode : 1、 Direct reading mode  
 2、 Simultaneous display mode of thickness and waveform





# Competitors Model





# Ultrasonic Thickness Gauge Application Field

## Steel & Metallurgy

The material is relatively dense, with good signal penetration and stable waveform. TIME2110, TIME2130 series will be applicable.

## Petroleum & petrochemical

The materials are involved in a wide range, including ordinary steel, fiber glass, stainless steel and castings, so the selection may from TIME2110 to TIME2190 .

## Special inspection industry

This is a typical thickness measurement industry, through paint thickness & high-temperature thickness measurement are commonly used. With high quality requirements so TIME2190 & TIME2180 will be applicable.



# Ultrasonic Thickness Gauge Application Field

## Power industry

It mainly focus on ordinary thickness measurement, and detect iron towers and fasteners, so TIME2110, 2130 will be applicable.

## Aviation & shipyard

The material mainly involve in fiber glass and special fiber composite materials, so TIME2190 with scanning waveform will be applicable.

## Automobile industry

Body sheet, sheet metal stamping parts, R-angle thinning thickness measurement , spheroidization rate detection of engine, gearbox and wheel hub, thickness detection of tire, etc. This is widely used industry.

# Operation Steps for TIME2190

## Case 1: Fiberglass Measurement with 1Mhz DC110 Probe (ref. Video Fiberglass )

1, Use delivery Key to open the battery cover, install 3 pcs AA batteries, make sure the battery cover well mounted then lock the cover by Key.

2, Plug the probe to the correct socket  
( for DC110 probe *the left socket* ).

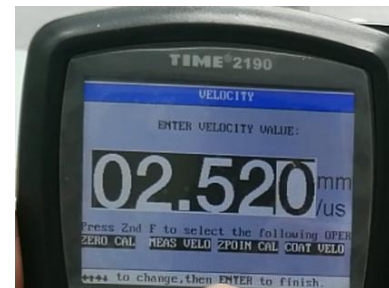


3, Turn on TIME2190 instrument, then press (PROBE) to select probe to the correct frequency 1MHz, press(ENTER) to confirm.

4, Press( 2<sup>nd</sup> F) to adjust the measuring range to 89 which is normally higher than the testing workpiece.



5, Press( CAL) to adjust sound velocity, for fiber glass is 2520 setting well.







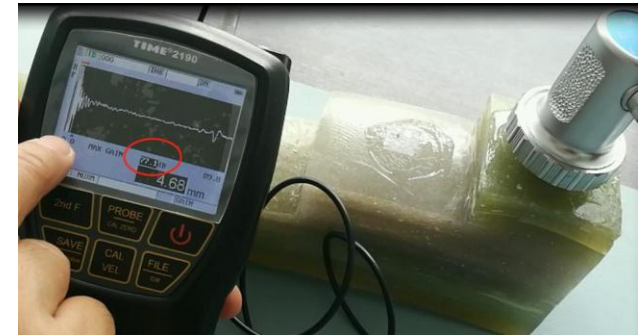
# Operation Steps for TIME2190

## Case 1: Fiberglass Measurement with 1Mhz DC110 Probe (ref. Video Fiberglass )

6, Start to test, make some coupling to the workpiece and make sure DC110 probe well coupling on it.

7, Press ( GAIN + ^ ) adjust showing **INIT Gain** showing 44dB, at this time through your eyes to find the Signal, which the signal from bottom reflected.

8, Still adjust showing **MaxGain** 77dB which is enlarging the signal to be more clear seeing by your eyes.



9, Still adjust showing the **MB BLANK**, this function is moving the Gate( small blue triangle) to the signal, while the Gate arrive at the signal, then the thickness value will be calculated and shown by the instrument.





# Operation Steps for TIME2190

## Case 2: THRU Coat Measurement with 5Mhz DK537EE Probe (ref. Video THRU Coat)

- 1, Use delivery Key to open the battery cover, install 3 pcs AA batteries, make sure the battery cover well mounted then lock the cover by Key.
- 2, Plug the standard 5Mhz DK537EE probe to the two sockets.
- 3, Turn on TIME2190 instrument, showing 5Mhz probe, choose “Yes”.
- 4, Press( 2<sup>nd</sup> F) to confirm the action of Self Calibration the probe.
- 5, Press( PROBE) showing “ Enable THRU COAT ?” Choose “Yes”.





## Operation Steps for TIME2190

### Case 2: THRU Coat Measurement with 5Mhz DK537EE Probe (ref. Video THRU Coat)

6, Start to test, make some coupling to the workpiece and put the Coating film coupling on it.

7, Press ( GAIN + ^ ) to adjust the appropriate dB value, so both the Coating Thickness and Base Thickness will be shown.

