

# [ A1214 EXPERT ]



## APPLICATION

- Weld joints inspection.
- Locating corrosion, cracks, internal stratifications and other flaws.
- Locating and sizing up flaws (discontinuities and inhomogeneities) in metal and plastic objects.

## A1214 EXPERT SPECIAL FEATURES

- Classic version of an ultrasonic flaw detector offering all up-to-date functions.
- Large high-contrast color TFT display with high resolution (640 x 480) enables you to work for a long time without straining your eyes.
- User-friendly interface with shortcut keys.
- Voice comments can be added to saved images with the help of freehand Bluetooth set.
- Operating temperature range from -30 to +55°C.
- Maximum operating time – 8 hours.
- Weight of the flaw detector with the battery – 1,9 kg.
- Quick-detachable frost-resistant accumulator.

## GENERAL FEATURES

A1212 MASTER and A1214 EXPERT flaw detectors offer a range of unique features thanks to entirely digital paths:



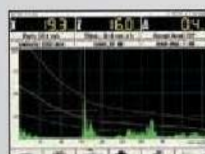
The signal can be represented in undetected form – **RF type signals** (radio signal) in real time, making it possible to examine signal phases in details, to perform testing with a lot of structural noises and to distinguish signals from nearby reflectors.



**Digital TCG** allows to modify the signal, basing on an arbitrary function set up by 32 node points. Mode points are set up, modified and deleted at a special TCG editing mode. Setup of TCG is performed to get pulses of equal height from equal reflectors providing correct sizing of flaws through the whole thickness of the object of inspection.



**DGS-diagrams** for single-crystal transducers show three curves on the screen, representing the acceptance, reporting and examination levels. The equivalent area of discontinuity is evaluated automatically. With feature you avoid manual evaluations of flaw area to increase the testing efficiency significantly.



**DAC-curves** show three curves on the screen, representing the acceptance, reporting and examination levels. This allows you correctly estimate the validity of the detected defects, according to the current normative and methods of ultrasonic testing.

## INTUITIVE USER INTERFACE OF SETTING UP AND OPERATING THE DEVICE

• **Quick access to control functions.**



At any operation mode the lower part of the screen



features an icon menu to access set up and functions quickly.

• **Large library of configurations (100 variants).**

The device can be customized for various situations and objects in a lab, and on-site the operator can just select the right configuration from the menu. All settings are saved in the nonvolatile memory.

• **Energy - independent memory for 2000 display images (A-Scans with settings of inspection).**

At the MENU mode the signal and its description is shown at the upper part of the display allowing to adjust settings of inspection on-the-fly.

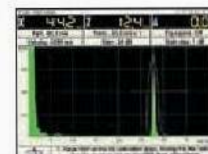


• **Voice comments can be added to saved imaged with the help of freehand Bluetooth set (2000 options).**

Within 20 seconds the user is able to record the necessary information about the test object with a reference to a frame of saved A-Scan.



• **Semiautomatic procedure of angle correction and delay time in the wedge in case of transducer wearing.**



## PROCESSING RESULTS

- Results can be transferred to an external PC to be processed, documented as A-Scans with settings of inspection and archiving.
- Data are received and saved with special software – ADM 4, included in the Delivery set.
- The device can be connected to a PC through a high speed USB-port.





## SPECIFICATION

Rated operating frequencies	0.5 – 10.0 MHz
Operating frequencies deviation from rated	± 10%
Material ultrasound velocity setting range	1 000 – 14 999 m/s
Gain regulation range	from 0 to 100 dB
Flaw coordinate measuring range (on steel) with a normal transducers:	
transducer S3568 2.5A0D10CL	from 5 to 5 000 mm
transducer D1771 4.0A0D12CL	from 3 to 2 500 mm
Permissible basic flaw coordinate measuring accuracy with an normal transducers	±(0,01H+0,2) mm
Flaw coordinate measuring range (on steel) with an angled transducers:	
transducer S5182 2.5A65D12CS:	
• depth	from 3 to 1 300 mm
• distance on surface	from 5 to 2 800 mm
transducer S5096 5.0A70D6CS:	
• depth	from 3 to 500 mm
• distance on surface	from 7 to 1 400 mm
Permissible basic flaw coordinate measuring accuracy with an angled transducers:	
• depth H	±(0,03H+1) mm
• distance on surface L	±(0,03L+1) mm
Dynamic TGS range, not less than	20 dB
Rated battery voltage	11,2 V
Operating time at normal weather conditions, not less than	8 h
Operating temperature range	from -30 to +55°C
Display type	color TFT
Display resolution	640 x 480 pixels
Electronic unit size	
• A1212 MASTER	260 x 156 x 43 mm
• A1214 EXPERT	260 x 165 x 85 mm
Weight with batteries	
• A1212 MASTER	800 g
• A1214 EXPERT	1,9 kg

## DELIVERY SET

### A1212 MASTER

- A1212 MASTER - flaw detector electronic unit
- D1771 4.0A0D12CL transducer
- S3568 2.5A0D10CL transducer
- S5182 2.5A65D12CS transducer
- S5096 5.0A70D6CS transducer
- LEMO 00 - LEMO 00 double cable,1,2 m
- LEMO 00 - LEMO 00 single cable,1,2 m
- Power adapter, cable
- USB cable
- Freehand Bluetooth
- Calibrating sample V2/25
- Soft cover
- Pad
- Travel bag
- CD with documentation and software

### A1214 EXPERT

- A1214 EXPERT – flaw detector electronic unit
- Detachable frost proof Li battery
- D1771 4.0A0D12CL transducer
- S3568 2.5A0D10CL transducer
- S5182 2.5A65D12CS transducer
- S5096 5.0A70D6CS transducer
- LEMO 00 - LEMO 00 double cable,1,2 m
- LEMO 00 - LEMO 00 single cable,1,2 m
- Power adapter, cable
- USB cable
- Freehand Bluetooth
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