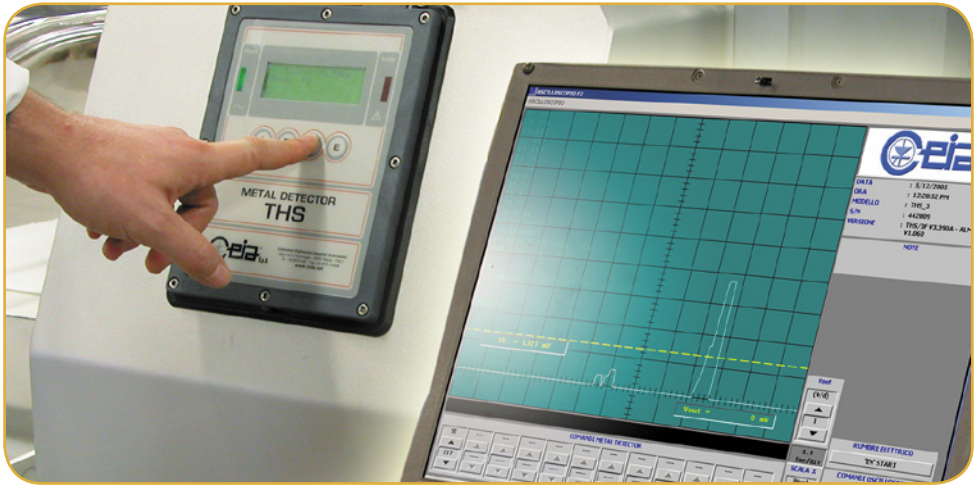
MD-SCOPE

OSCILLOSCOPE & TERMINAL FOR CEIA METAL DETECTORS



MINIMUM SYSTEM REQUIREMENTS

Before proceeding to install **MD-SCOPE**, it is necessary to verify that your computer complies with the following minimum system requirements:

- Pentium microprocessor 500 MHz or superior;
- RAM: 64 MB. Better performance will be obtained with more memory;
- 10 MB of free space on the hard disk;
- Video Card with minimum 4MB memory;
- Video resolution 800x600 minimum;
- CD-ROM unit;
- One unused serial or PCMCIA* port.
- Operating system: Microsoft Windows® 95/98/ME/ NT4/2000/XP.

* Requires an external PCMCIA /RS232 converter (some tested models: 2-Port ARGOSY SP320 PCMCIA Serial Cable; 4-Port QUATECH QSP100 RS-232 Serial PCMCIA Card).

PACKAGE CONTENTS

- Instruction manual (this document)
- RS-232 cable with embedded electronic key

INSTALLATION

- Download the program (a .zip file) at the address www.ceia.net/swdownload entering the following data:

program name: **mdscope**
password: **45TRX21G**

- Extract and run the installation file Setup.exe.
- Select the destination folder and follow the instructions provided.

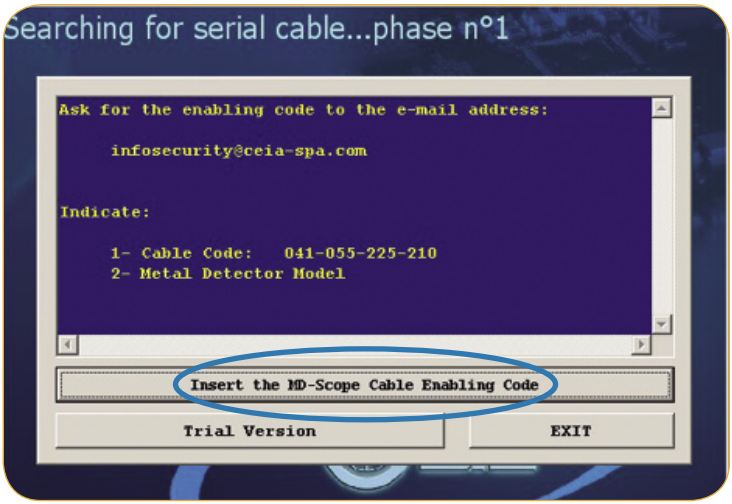
INITIALISING THE PROGRAM

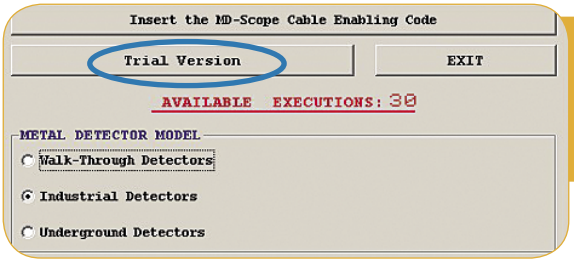
» Connect the MD-SCOPE cable to a serial port;

N.B.: connect the cable to the PC even if the Ethernet connection is used, leaving the other end of the cable open.

» **Select the MD-SCOPE icon** from your program menu;

» The first time it is launched, the program requires the MD-SCOPE cable Enabling Code to be entered. Request the enabling code via e-mail at the address: **infosecurity@ceia-spa.com** or via fax on +39- 0575 418298, specifying the 12 digit cable code (e.g. 123-123-123-123) and the Metal Detector model used.

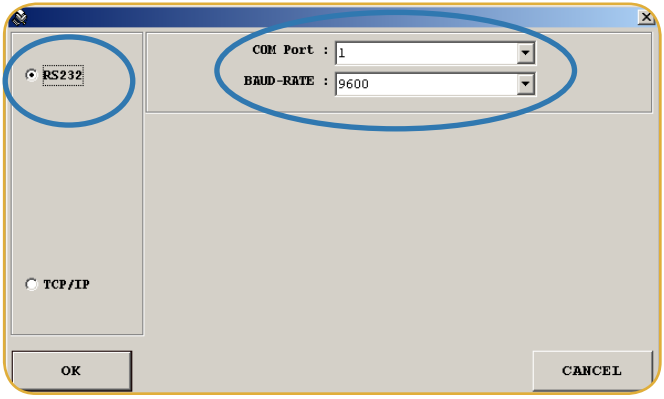




BY SELECTING INDUSTRIAL METAL DETECTOR AND CLICKING ON THE TRIAL VERSION OPTION, THE OPERATOR (USER) CAN RUN THE PROGRAM 30 TIMES

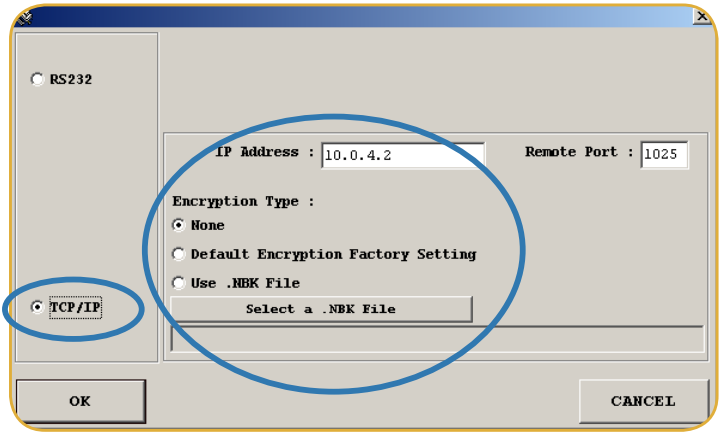
CONNECTING A METAL DETECTOR VIA A SERIAL PORT

1. Connect the MD-SCOPE cable to the serial port of the Metal Detector.
2. Run the MD-SCOPE program: a black window will appear (terminal environment).
3. Select the command SETTINGS from the COMMUNICATION menu.
4. Select RS-232 option
5. Set the PROPER COM PORT
6. Set BAUD-RATE 9600
7. Confirm by pressing OK



CONNECTING A METAL DETECTOR VIA ETHERNET

1. Leave the Metal Detector end of the MD-SCOPE serial cable disconnected (the cable operates as the electronic key of the program).
2. Run the MD-SCOPE program: a black window will appear (terminal environment).
3. Select the command SETTINGS from the COMMUNICATION menu and set the proper communication data.
4. Select TCP/IP
5. Set the proper IP ADDRESS of the Metal Detector.
6. Set the proper REMOTE PORT of the Metal Detector.
7. Set encryption type to NONE
8. Confirm pressing OK



THE DEFAULT REMOTE PORT IS:

1025 FOR ETHERNET EMBEDDED IN THE ALM CARD;

2101 FOR EXTERNAL RS-232 ETHERNET CONVERTER

NOTE: THE RS-232 CABLE MUST BE CONNECTED TO THE PC DURING ETHERNET CONNECTION

CONNECTION VERIFICATION

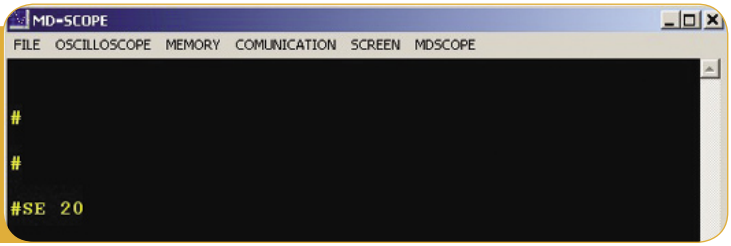
Press ENTER key and type the REMOTE PROGRAMMING password.

NO ECHO OF THE TYPED CHARACTERS IS PROVIDED.

A prompt character (#) will appear on the left, indicating that the Metal Detector is correctly connected and ready to accept commands.

METAL DETECTOR PROMPT
EXAMPLE OF PARAMETER READINGS:

SE



TERMINAL ENVIRONMENT

This environment allows the user to program the Metal Detector, configure the system, save and display files detailing the operations carried out, move into the oscilloscope environment and display previously-saved oscilloscope windows.

REFER TO THE METAL DETECTOR MANUAL FOR DETAILS.

FILE menu

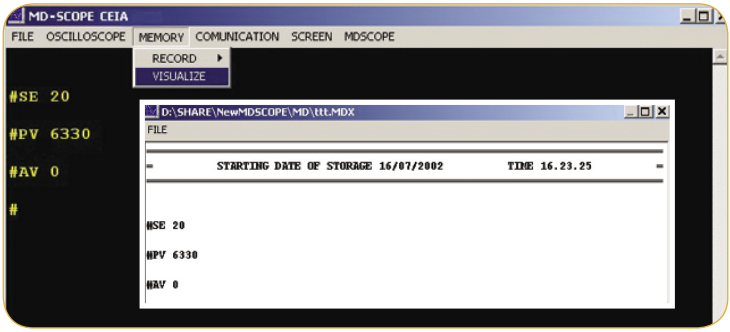
- Selection of the language.
- Display, save, modify and print selected text.
- Run installation validation utility.
  The utility obtains parameters from the Metal detector and creates an html file (see related chapter).
- Exit the program (press F10).

OSCILLOSCOPE menu

- OSCILLOSCOPE F1: Activates the F1 oscilloscope.
- OSCILLOSCOPE F2: Activates the F2 oscilloscope.
- OSCILLOSCOPE Shift+F3: Activates the Shift+F3 oscilloscope.

MEMORY menu

- RECORD ▸ **YES**: Saving to file of what is entered and stored at the terminal.
- RECORD ▸ **NO**: Interruption of previously-activated file recording.
- RECORD ▸ **VISUALIZE**: Displays previously-saved file.



COMMUNICATION menu

- COMMUNICATION ▸ **SETTINGS**: display the current communication settings.
- COMMUNICATION ▸ **CONNECT**: this function is not operative with Industrial Metal Detector.
- COMMUNICATION ▸ **ALWAYS ON**: if not checked, it stops communication when the focus moves into another application.

SCREEN menu

» SCREEN ▸ **FONT TYPE**: selection of the character type.

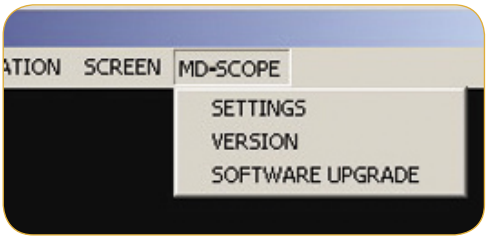
» SCREEN ▸ **BACKGROUND COLOR**: selection of the background colour.

» SCREEN ▸ **DELETE EMPTY LINES**.

» SCREEN ▸ **CHANGE TAB IN SPACES**: when saving to file, change TAB character into spaces.

» SCREEN ▸ **CLEAN**: clears the terminal window.

MD-SCOPE menu



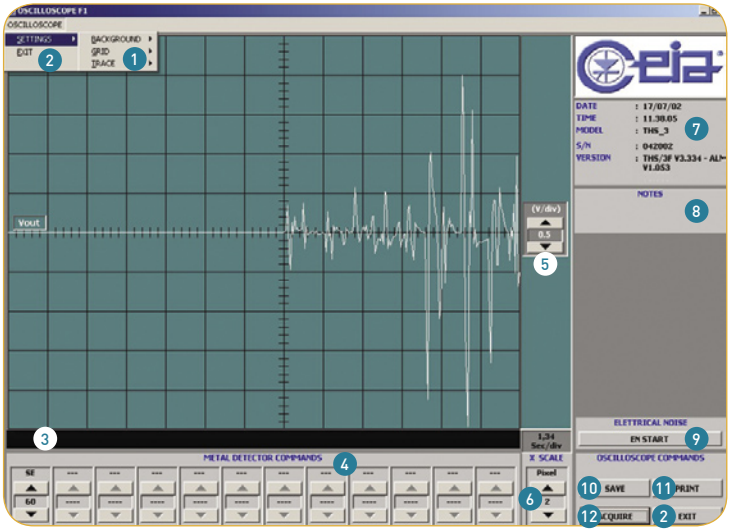
» MD-SCOPE ▸ **SETTINGS**: selection of the file with MD-SCOPE personalised settings (e.g. font dimension, font colour, background colour, etc.).

» MD-SCOPE ▸ **VERSION**: displays MD-SCOPE version and cable enabling code.

» MD-SCOPE ▸ **SOFTWARE UPGRADE**: used for entering a different enabling code.

OSCILLOSCOPE ENVIRONMENT F1

The oscilloscope screen displays the signal output from the Metal Detector (bipolar visualisation) without the alarm threshold indication.



❶ OSCILLOSCOPE ▸ SETTINGS:

1.1 **BACKGROUND**: Selection of the background colour.

1.2 **GRID**: Selection of the colour and thickness of the grid.

1.3 **TRACE**: Selection of the colour and thickness of the signal.

❷ OSCILLOSCOPE ▸ EXIT:
Exits the OSCILLOSCOPE environment.

❸ LINE COMMAND

❹ METAL DETECTOR COMMANDS

❺ Y SCALE: Attenuation adjustment .

❻ X SCALE: Increase/decrease horizontal scroll speed of the trace.

❼ Date, Time , Metal Detector identification data.

❽ NOTES: Insert any notes required.

❾ EN START: Displays the electrical noise received from the Metal Detector.
Warning! The EN command deactivates the Metal Detector. Before exiting the program, press EN STOP.

❿ SAVE: Saves the OSCILLOSCOPE image in a .BMP file.

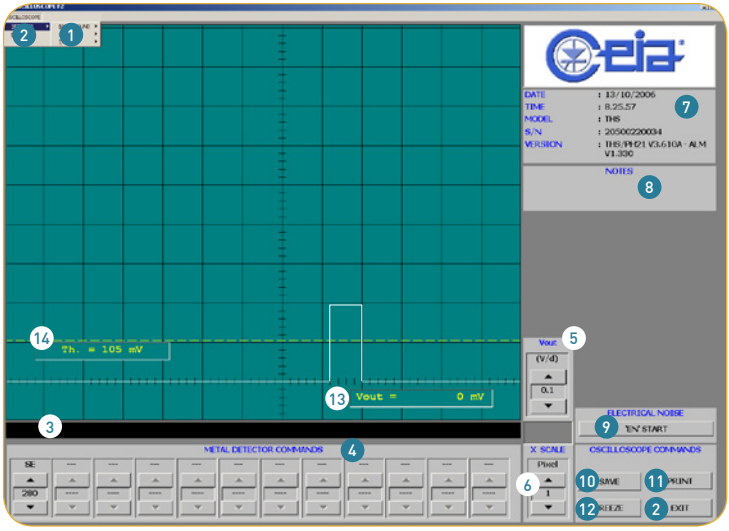
⓫ PRINT: Image printing.

⓬ ACQUIRE: Enables Metal Detector signal acquisition.

FREEZE: Disables Metal Detector signal acquisition.

OSCILLOSCOPE ENVIRONMENT F2

The oscilloscope screen displays the signal output from the Metal Detector and the alarm threshold.



1. OSCILLOSCOPE ▸ SETTINGS:

   1.1 **BACKGROUND**: Selection of the background colour.

   1.2 **GRID**: Selection of the colour and thickness of the grid.

   1.3 **THRESHOLD**: Selection of the colour of the alarm threshold.

   1.4 **TRACE**: Selection of the colour and thickness of the signal.

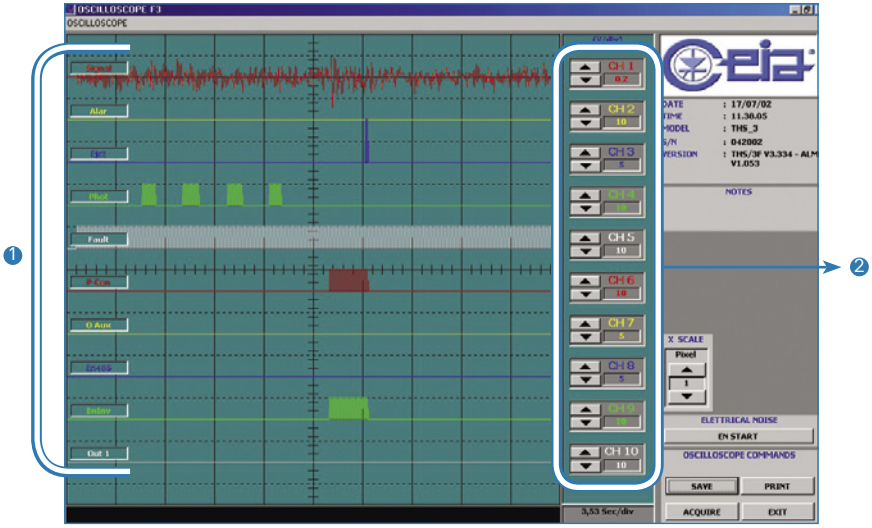
2. OSCILLOSCOPE ▸ EXIT:
   Exits the OSCILLOSCOPE environment.
3. LINE COMMAND
4. METAL DETECTOR COMMANDS
5. Y SCALE: Attenuation adjustment .
6. X SCALE: Increase/decrease horizontal scroll speed of the trace.
7. Date, Time , Metal Detector identification data.
8. NOTES: Insert any notes required.
9. EN START: Displays the electrical noise received from the Metal Detector.

   Warning! The EN START command deactivates the Metal Detector.
   Before exiting the program, press EN STOP.
10. SAVE: Saves the OSCILLOSCOPE image in a .BMP file.
11. PRINT: Image printing.
12. ACQUIRE: Enables Metal Detector signal acquisition.

    FREEZE: Disables Metal Detector signal acquisition.
13. Signal Amplitude (mV).
14. Alarm Threshold Value (mV).

OSCILLOSCOPE ENVIRONMENT SHIFT+F3

Visualises I/O status signals (i.e. ejector, photocells, fault relay).



This environment has the same functions as OSCILLOSCOPE F2, except for METAL DETECTOR COMMANDS.

1. Denomination of each signal.
2. Y SCALE: Attenuation adjustment for each signal.

Different pages with different signals are available by typing MS=S1 MS=S2 ...

The visualised signals depend on the Metal Detector model.

ATTENTION: SELECT MS=S1 BEFORE EXITING THE OSCILLOSCOPE ENVIRONMENT

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For local support please visit our web site:

www.ceia.net/industrial

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