

# TECO Pile Integrity Test System

## Hardware and Software Specification

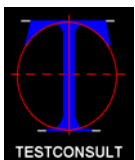
### THE SYSTEM

The echo or seismic method of assessing the integrity of piles has been used since the 1970's to check the integrity of piled foundations. The system measures the velocity response of a pile to a force input generated by a small hammer. The system is rapid in operation and can be used to check the depth of both pre-cast and cast-in-situ piles. The possible causes of intermediate responses can also be assessed.

The TECO system comprises two main elements, the data acquisition hardware and a sophisticated windows based software package, purpose designed for ease of interpretation and reporting. The software, known as TEAC (Testconsult Echo Analysis Programme) is used to transfer data from the TECO to a pc, carry out analysis of results and produce reports. A simulation module is also included for more detailed further analysis of more complex results and is a useful aid for data interpretation.

The main advantages of the system are :

- ◆ Rapid operation
- ◆ Low cost
- ◆ Reporting and interpretation software for quick analysis.



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### HARDWARE

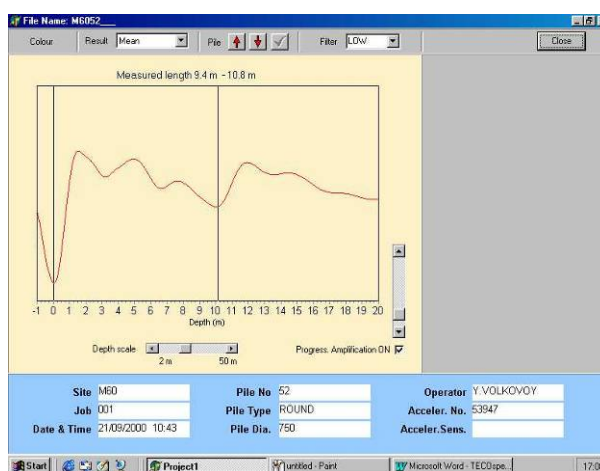
- Enclosure** : Simulated ABS, waterproof, dimensions 218mm x 187mm x 55mm, weight 1.35 Kg.
- Display** : Transflective LCD for easy daylight viewing with back light.
- Keypad** : Tactile response, wipe clean waterproof surface, full alpha-numeric functions.
- Acquisition** : 16 bit acquisition at 25khz sample rate with pre-trigger on both channels.
- Connectors** : Waterproof Lemo connectors with interchangeable configuration.
- Battery** : 8 hours continual use, 12vdc emergency boost charge, 110/240vac trickle charge.
- Storage** : Up to 700 results can be stored.
- Navigation** : Menu system which prompts the operator.
- Processing** : Functions include :
  - Viewing of time domain velocity plot, length measurement.
  - Scale changing to suit, automatic best blow selection
- Data transfer** : Transfer of data from TECO is via the computer serial port, controlled by software.
- Calibration** : The TECO unit and accelerometer come with a calibration certificate.
- Accelerometer** : Range 1-10,000Hz, with military type IP65 connector and cable
- Hammer** : Supplied with readily available replaceable tips.
- Carry case** : The kit is supplied in a rugged, orange, waterproof hand luggage size plastic case.
- Upgrades** : The TECO system is upgradable to a full TDR-2 frequency response system. Contact your supplier for details.
- Overview** : The TECO has been purposely designed and built by a company having over 20 years experience in all aspects of pile integrity assessment. It has also been designed with great care to be user friendly to the operator. Only top quality components have been used throughout and the equipment represents very good value for money.

### TEAP SOFTWARE

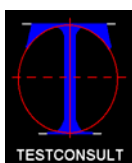
The software supplied with the TECO system is windows based and allows management and transfer of files in the TECO and rapid interpretation of data. The software is very user friendly and allows the user to produce and configure report outputs to suit their requirements. The final output is a table of results and response curves, on which the clients logo can be incorporated. Also included is a signal simulation module to aid interpretation of results. A demonstration disk is available on request.

File No.	Length @ 3500 m/sec (m)	Length @ 4000 m/sec (m)	Given Length (m)	Comments
5	9.4	10.7	11.0	Sound Pile
52	9.4	10.9	11.0	Sound Pile
53	9.3	10.7	11.0	Sound Pile
60	10.1	11.5	11.5	Sound Pile
61	10.1	11.6	11.5	Sound Pile
62	10.0	11.4	11.5	Sound Pile
63	10.1	11.6	11.5	Sound Pile
70	9.0	10.2	10.0	Sound Pile
71	8.6	9.8	10.0	Sound Pile
72	8.6	9.8	10.0	Sound Pile
73	8.8	10.0	10.0	Sound Pile
74	8.7	9.9	10.0	Sound Pile

Table of Results



Response Curves



## Civil Engineering Instrumentation