ALAT UJI
Products, Solution, Services

Digital Concrete Test Hammer

HT-225V Instruction Manual

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One Summary

1 Introduction

Model HT-225V test hammer, with digital display and voice function, is invented by our company. Submit to the standards < Technical Specification of Inspecting Concrete Compressive Strength by Rebound Method > (JGJ/T23-2001) of the People's Republic of China, is a high-tech product especially designed for the needs of in place test for concrete compressive strength, applied to non-destructive testing (NDT) for all kinds of concrete compressive strength component in construct projects..

HT-225V Test Hammers for the quick and easy determination of the strength of concrete, and hardness of construction materials. Digital and voice functions allow greater number of test, leading to better quality tests. It's a good and useful instrument for quality control and inspection organizations.

2 Technical features

1) Submit to < Technical Specification of Inspecting Concrete Compressive Strength by Rebound Method > (JGJ/T23-2001).

2) Innovative integrated structure of the test hammer host and the displayer part. Easy to carry and make work efficient.

3) Taking the lead in using color LCD, 176x220 resolutions, English interface and friendly operation.

4) Friendly voice report service, don't have to watch the screen and improve test work efficiency

5) Adopting non-contact reflection grating sensor, maximum avoid machine attrition and poor contact in traditional technologies such as contact way or potentiometer way, and born with high precision, long service life, and keep the traditional rider scale.

6) High capacity rechargeable lithium battery, environmental protection, economical. Better than one time use alkaline cell.

7) The ability of connection with wireless portable printer, we can print test report in site immediately.

8) Big data storage capacity, more than 200 standard components, a standard component

including almost 99 test areas, one test areas including 16 test points, completely meet the request of long time in site test.

9) Planted with unified national standard curve (China) as out of factory, and you can add more curve as per your region character if necessary. Max up to 20 measuring curves.

10) Testing parameters can be typed in as per characters in site, and test values will be calculated automatically.

11) Abnormal value auto-delete functions in case mistake operation. User can set limits.

12) Adopting USB interface, as U flash disk, no need special driver; able to upload and download test data and update test curves. (it's different from【Communication】).

13) Have real-time clock calendar function, can automatically record test date.

14) Advanced low power consumption function, can set display backlight level, voice volume, auto dormancy, and automatic turn off.

3 Technical specifications

1) Data processing standard: Submit to < Technical Specification of Inspecting Concrete Compressive Strength by Rebound Method > (JGJ/T23-2001).

2) Standard impact energy: 2.207J

3) Tension spring stiffness: 785 N/m

4) Stroke of impact hammer: 75 mm

5) Test value when calibrated on steel anvil (qualified anvil like type JW225): 80 ± 2

6) Bounds on error: ≤± 0.5 (the differences between displayer and rider)

7) Display screen: 16bit True colors, 176 x 220 resolution, 5 levels of backlighting adjustable.

8) Data storage capacity: 200 standard components (99 test areas per component), can be planted in 20 special measuring curves

9) Power: 3.6 V / 1300mAH lithium batteries, matching charging adapter 5V / 2A.

10) Power consumption: about 100mA (with maximum back lighting level and no voice function)

11) Communication port with PC: USB2.0

12). Net Weight: ≈1.1 Kg

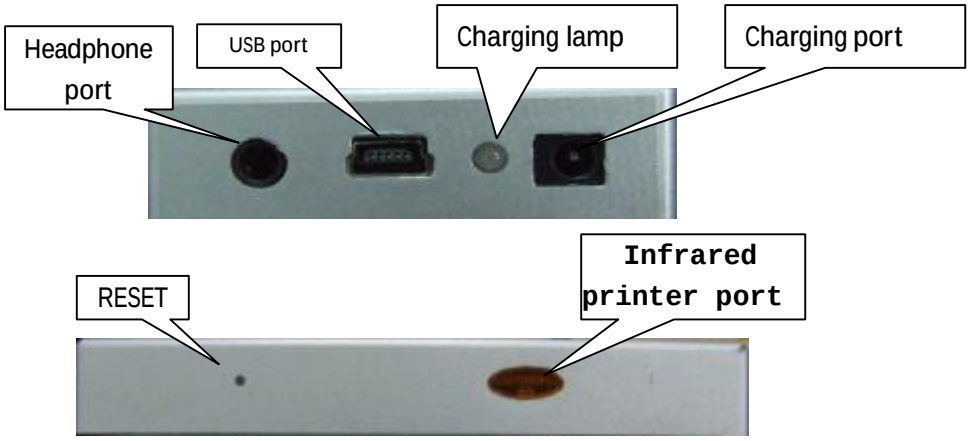
4 Packing list

Model HT-225V

No.	Name	units	Qty	Remarks
1	HT-225V test hammer special carrying case	pc	1	
2	HT-225V test hammer	unit	1	
3	USB communication cable	pc	1	
4	Charger of test hammer	pc	1	
5	Manual	booklet	1	
6	Software disc	pc	1	with box
7	*Wireless portable printer*	*Pc*	*1*	*selectable*
8	*Charger of printer*	*Pc*	*1*	*selectable*

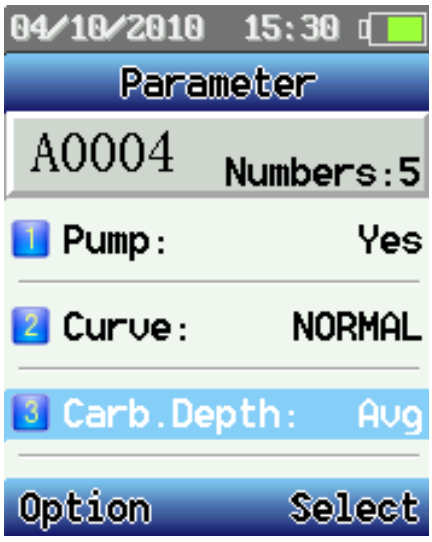
Two Operation Instructions

1. Appearance



2. Open

Keeping press the POW key (red color) will get into welcome interface. (If the battery was exhausted completely before, internal clock needs to be reset, a dialog window will appear automatically for time setting.



3. Directions

During operation, if no any indication in the screen, the POW key defaults as return or cancel, OK key defaults as confirm key.

Menu and functions as followings:

【Sampling】: Enter parameter settings interface, setting parameters for new component and start testing operation.

【View data】: Review or delete the tested component data.

【Setting】: Function and system setting

【Communication】: Only by choosing this button we can connect test hammer with manage system. **Remark: this function can download the test data from the machine. And the file is editable. files by U flash disk mode can not be edited.**

【Shut down】: Turn off the instrument by software against manually shutdown by keeping pressing the POW key.

1).【Sampling】

Choosing【Sampling】from the main menu, press the OK key to enter【Parameter】setting interface for new test component, such as the pumping markers, measuring curve and input way of carbonation depth.

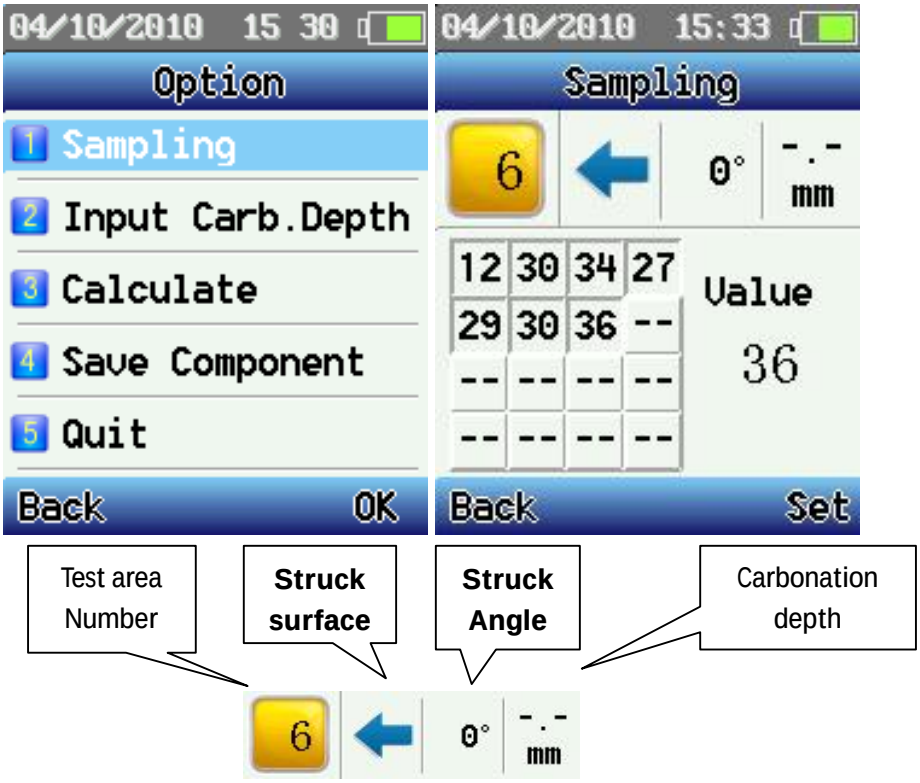
Component number is auto-generated by the instrument.

●Pumping marker: use left and right key to choose. Pumped concrete choose “YES”

●Measuring curve: set and choose a suitable curve.

●Carbonation depth: set carbonation depth input mode.

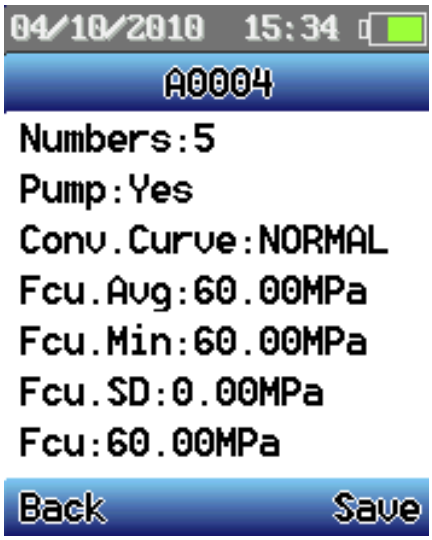
●【Sampling】: click it and press OK key into 【Sampling】 interface.



Enter【Sampling】interface to begin measuring, if need set impact surface and impact angle and carbonation depth of the test area, choose Set and the parameter interface will appear. We can set test area parameter, change parameter or delete test values in it.

● 【Carb.Depth】: press OK key into the carbonation depth interface, press up and down key to choose testing area, then press OK for confirmation, the screen will auto turn to the carbonation depth input interface, press left and right key to choose carbonation depth value, press OK for confirmation. Under average data model (incomplete carb-depth values allowed but should cover no less than 30% test area), if the difference between carbonation depth values more than 2mm, the instrument will warn and ask user choose Carbonation depth type-in mode by all (each test area needs depth value). But operator can neglect this by press exit key and modify carbonation depth value timely, or the instrument will continue to warn and require choose mode.

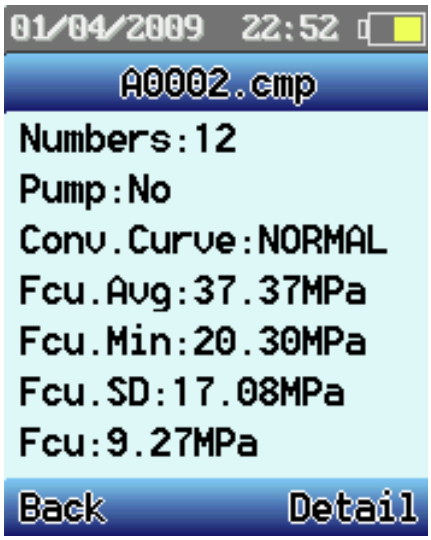
● 【Calculate】: After a component sampling, press OK key for test data calculation. By press Save key to save sampling data and calculated results (extension index of the file is cmp), and automatically enter into next component test interface. Press Back key will not save and continue test the current component.



- 【Save Component】: Save a temp file without calculation, extension name is (.tmp).
- 【Quit】: Turn to the main menu.

2).【View Data】

Reviewing the existing component data in instrument, by press up and down key to



choose one component, OK key to show component data, Detail key to check details.

In the interface, press Option key can perform some operation.

- Add Data: press OK key to enter【Parameter】interface, add testing area data or change parameters for the test component.

● Del Component: delete the current test component.

● Delete all the components: delete all data of test components saved in the instrument.

● Print: print the component data by portable printer. Aim the instrument infrared LPT at the infrared interface of printer, which must within a distance of less than 0.8 meters, beyond the distance printing will be failure.

● Quit: back to the main menu.

3).【Setting】

● Lower Limit: set lower limit of abnormal values.

● Upper Limit: set upper limit of abnormal values.

● Backlight: set displayer backlighting brightness, 5 levels total, turn down the backlighting level can increase instrument using time.

● Volume: set up volumes of voice service and pressing keys.4 level volumes total, reducing the volume of the instrument can increase using time.

● Auto Off: can set instrument automatic turn off time, if keep instrument out of operation, this set will begin works, and the displayer will auto shut down once it reach the time we set. So that avoid power consumption. **(don't worry, when displayer screen is on test interface during sampling, this set will out of work)**

●Sensor Adjust: if there is deviation between the displayer and mechanical pointer, or after changing any mechanical part of rebound hammer, calibration of the sensor's zero

point is strong proposed. When calibrating on the steel anvil, we can adjust the display value as per the pointer by left and right keys, till they are always same. Then press Save to save the adjustment, or press Back key return to 【Setting】 interface without save.

●Setting Time: adjusting internal real-time clock.

●Product Info: can review relating information for the instrument; item NO, serial number, inspecting number, memory capacity and total test amounts information etc.

4).【Communication】

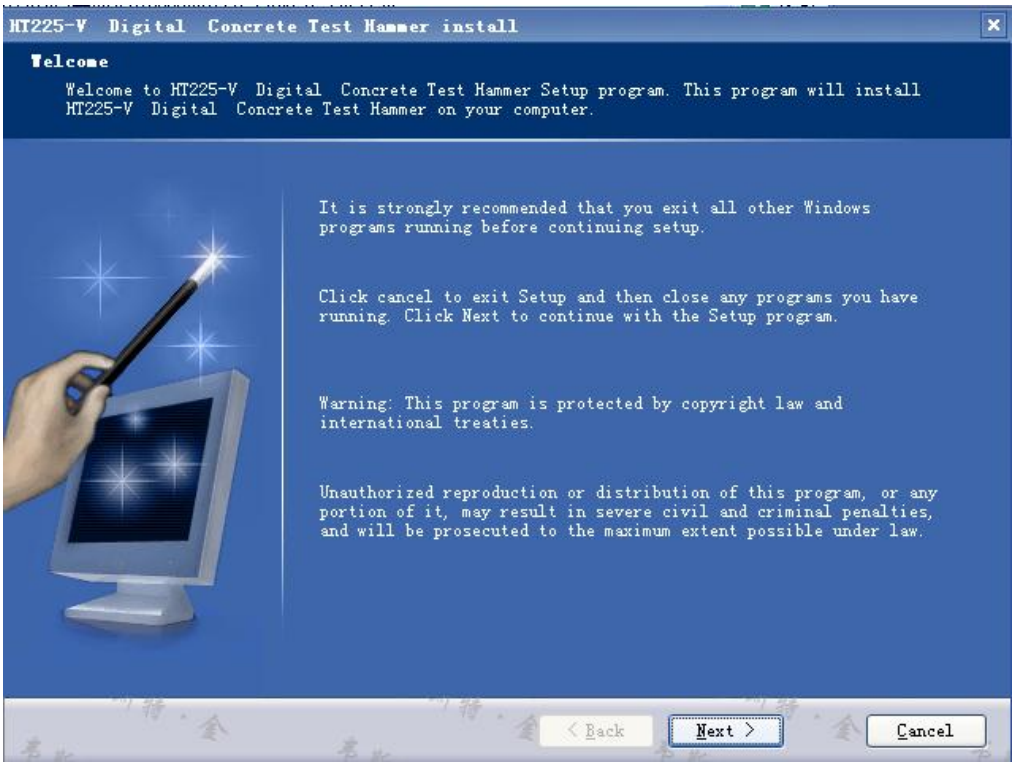
This function is that take the instrument memory as a virtual USB disk, computer can upload or download components data and measuring curve data, do not have to install driver.

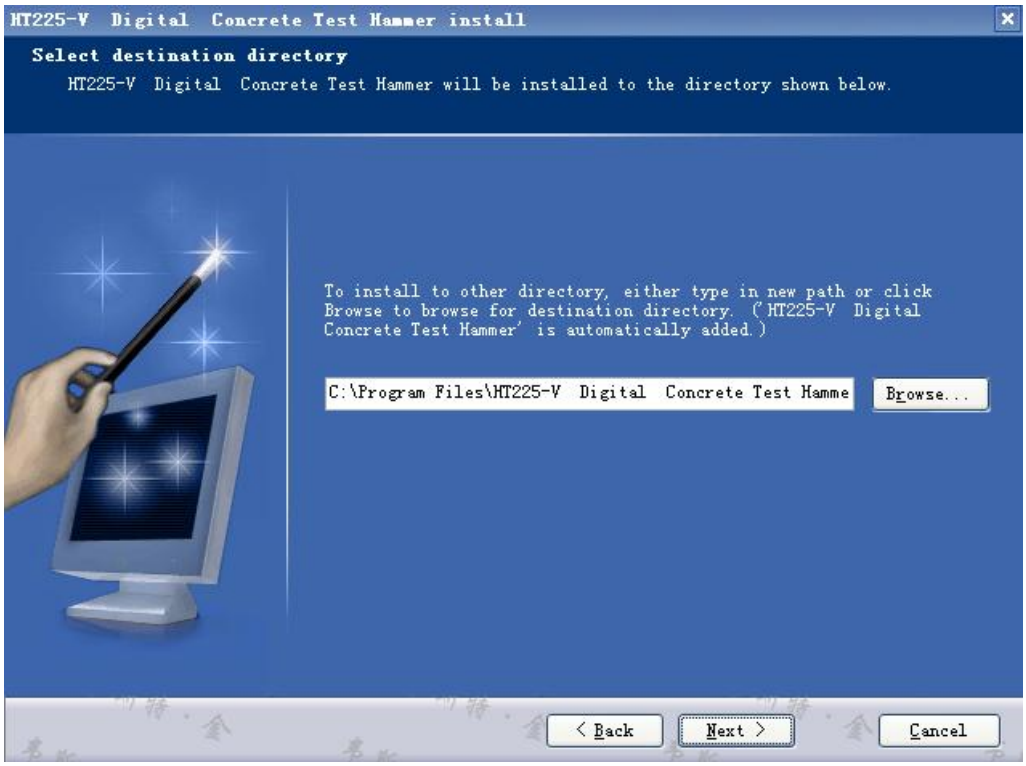
5)【Shut Down】Instrument soft power-off against press constantly on/off key (red)to hard turn off.

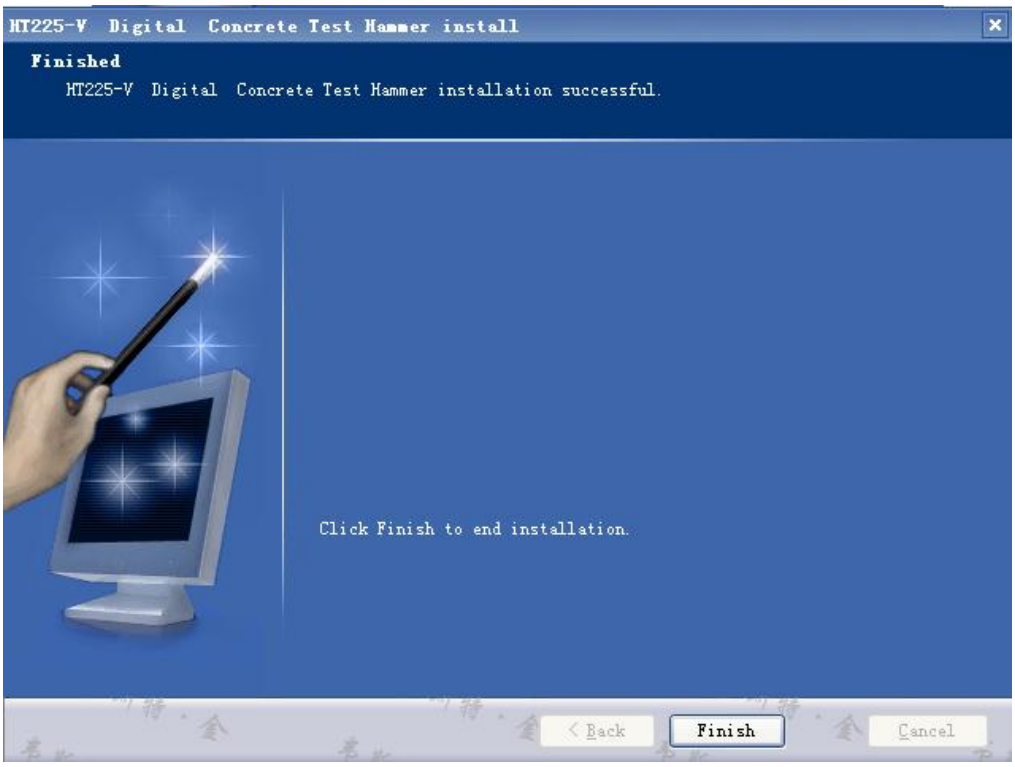
Three The software

1. Installation software

Insert into software disk and install follow instruction.

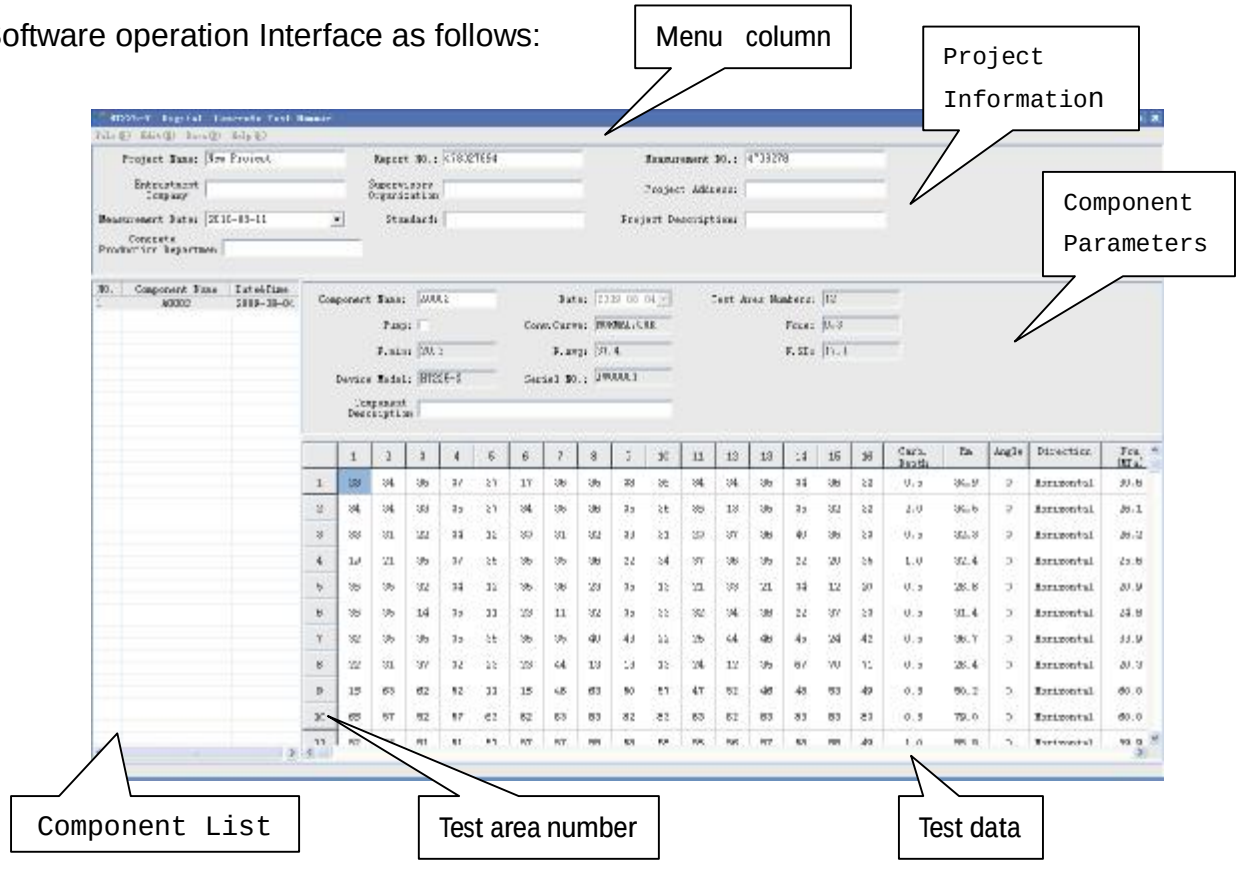

HT225-V Digital Concrete Test Hammer install
Welcome
Welcome to HT225-V Digital Concrete Test Hammer Setup program. This program will install HT225-V Digital Concrete Test Hammer on your computer.
It is strongly recommended that you exit all other Windows programs running before continuing setup.
Click cancel to exit Setup and then close any programs you have running. Click Next to continue with the Setup program.
Warning: This program is protected by copyright law and international treaties.
Unauthorized reproduction or distribution of this program, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent possible under law.
< Back
Next >
Cancel


HT225-V Digital Concrete Test Hammer install
Select destination directory
HT225-V Digital Concrete Test Hammer will be installed to the directory shown below.
To install to other directory, either type in new path or click Browse to browse for destination directory. ('HT225-V Digital Concrete Test Hammer' is automatically added.)
C:\Program Files\HT225-V Digital Concrete Test Hamme
Browse...
< Back
Next >
Cancel



2. Software Operation

Software operation Interface as follows:



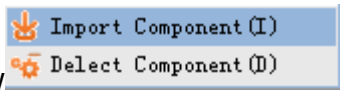
1). New project files

By clicking [new] in [file] menu, we can create a new file.

2) Open engineering documents

By clicking [open] in [file] menu, we can open a existing file.

3) Import components data

Right click the component list, appear dialog window 

, choose import component, we can upload component date in computer or test hammer (test hammer has been connected with computer). Component data will be shown in component parameters column, and we can edit component information here.

4) Delete component data

Right click on a component data which need to be deleted in component list, appear the same dialog window as above, and choose delete component, the component data will be removed from project files.

5) Print

After editing and modification, we can print data by clicking [print] in [file] menu.

Four Notice

When processing the test values by instrument and software, as data accuracy limitations and the algorithm rounding, results may has deviation from that by hand, if the deviation affects the inspecting conclusion, then the calculation results by hand shall be the first choose.

This instrument belongs to the precision electronic instrument; it should be used and stored carefully. It should be protected from impact, fall, high temperature, or immersed in water, and avoid being used in a strong magnetic environment. Any of above situation unfortunately occurred and caused any damage or out of work, please turn off immediately and contact with distributor or manufacturer.

Please use the original matched adapter for battery charger, others may be dangerous.

Battery life may be reduced by overcharging. When battery charging complete, indicating light will turn to green from red, and should stop charging immediately. It is proposed that some one should supervise the charging process.

When it shows lower battery capacity, we can extend use time by shut down voice report and turn down backlight class.

During practical test, should keep appropriate operation frequency, test interval shouldn't less than 1 second, so that keep good accuracy of test values.

Customer Services

1. Product warranty

Product warranty period is for one year, but following situations are excepted:

1) Instruments and accessories got severe damage because of irregular operation, such as impact, fall, water or high temperature scorching etc.

2) The circuit board was detached, changed by user.

3) Battery or inside circuit get damaged because of unqualified charger.

4) Other exception cases.

2. Product maintenance

Our company promises perpetually maintain service for HT-225V and its component. Mechanical part and its accessories can get paid maintain service. Following cost need to be taken by customer.

1) Transportation charge for the instrument.

2) And travel expense and accommodation fee if customer need our engineers go to any appointed place. This cost only charge for one day.

3) Direct costs for component changed; extra service costs for these parts without free repair service.

3. Products and software upgrades

If necessary our company will upgrade software for HT-225V test hammer, details please