Gaotiejian

GTJ-F800 Wireless Crack Gauge

Operation Manual

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Contents

This manual stipulates:

1. A box with gray shading and a boxed text indicates a button or indicator status on the screen.

Such as

Width detection

2. Text with a gray shading indicates the actual button or indication status on the device, as determined.

3. In addition to the contents described in this manual, the instrument will automatically display some prompt information during the user's use. Please follow the prompt information.

Chapter 1 Instrument Functions and Introduction

1.1 Instrument introduction

The wireless crack comprehensive detector integrates crack width measurement and crack sounding, and is used for measuring crack width and crack depth of bridges, tunnels, towers, buildings, concrete members, pavements, and non-metallic components. The instrument is mainly composed of a tablet computer, a slit width measuring device and a crack depth measuring device. When measuring the crack width, the tablet is connected to the slit width measuring device via wifi, and the software can automatically interpret the slit width value when the tablet is imaged; when the crack depth is measured, the tablet computer can connect the depth measuring device through the Bluetooth connection, which can be quickly measured or standardized. The crack depth value was measured.

The product meets the following specifications:

GJ125-99 "House Safety Appraisal Standard"

CECS 21:2000 "Technical Regulations for Ultrasonic Testing of Concrete Defects"

The instrument has the following features:

(1) New upgraded wireless cloud transmission function;

(2) The original wireless camera probe, the snap button is easy to operate; the host adopts the Android system tablet computer, and the Chinese full touch operation;

(3) Intelligent interpretation of oblique cracks, no vertical; image can be zoomed in and out, interface display scale can be manually interpreted;

(4) The sounding bracket does not need to be crossed, saving time and effort; the flat plate and the TF card storage, the large capacity has no limit, and the copying data is convenient and fast;

(5) The data analysis and report form that comes with the host can be owned without transferring to the host computer.

1.2 Instrument composition and accessories description

Instrument accessories and function descriptions are shown in the table below

Number	Name	Description
1	tablet	The main body of the wireless crack detector
2	Crack width measuring device	Collecting crack width images in crack width test
3	Crack depth measuring equipment	Measuring the acoustic time of a component in a crack depth test
4	Two short signal lines	The input and output ends of the crack depth measuring device are respectively connected to two transducers
5	Two long signal lines	The input and output ends of the crack depth measuring device are respectively connected to two transducers
6	Charger (two)	1. Charge the probe or tablet 2.Charging the crack depth measuring device
7	U disk / OTG adapter	Import data from the tablet into the USB flash drive and import it from the USB flash drive into the computer

8	Instruction manual	
9	Certificate	
10	Calibration standard scale	Calibration slit width measuring device

The main components of the wireless crack detector are shown in Figure 1-1.

tablet

Probe

Check board

USB cable

charger

Measuring equipment

charger

Figure 1-1 Wireless crack detector

1.3 Technical indicators

Name		Technical indicators
Specification model		GTJ-F800
Wireless crack width unit	Test range and accuracy	0~10mm;0.01mm
	gain	Digital 60 times
	Operation method	Touch screen + shortcut
	Connection method	Wifi connection
Wireless crack depth unit	Test Range	5~500mm
	measurement accuracy	≤5mm or 2%~10% of actual depth
	Operation method	Touch screen + probe automatically trigger
	Connection method	Bluetooth connection

Data transmission method	Wireless cloud transmission (optional)
Power supply	Built-in lithium battery
operating hours	More than 10 hours
working environment	-10℃~40℃ <90%RH

1.4Precautions

1.Avoid water ingress.

2. Avoid high temperatures (>40 ° C).

3. Please clean the camera in time, use a rubber bag to blow or clean with a soft brush.

4. Avoid violent impact on the transducer.

5. It should be charged in time after use, and it should not be charged once a month for a long time.

6. After use, it should be placed in the instrument box in time to prevent dust from entering the inside of the instrument.

7. The instrument should be regularly maintained. After using it for a period of time, it should be cleaned, but the assembly relationship between the parts of the instrument and the whole machine should not be changed.

8.The instrument must not be disassembled at will, so as not to affect the service life.

Chapter 2 Crack Width Measurement Operation

2.1 Crack width measuring equipment introduction

The slit width measuring device operation mainly includes an on/off button, a photographing button, and two status indicators.

On/Off button

power status indicator

photo button

WiFi status indicator

Press the On/Off button to turn on the probe power. The six white LEDs on the front of the probe will light, indicating that the probe is powered normally. Wait for about 15s, the probe WiFi indicator will light up, then you can use the tablet to connect the probe through Wifi.

The power status indicator is used to specify the state of the built-in lithium battery in the probe, and the indicator does not light when in normal use. When the probe battery is low, the indicator turns red and the probe needs to be charged. When the probe is fully charged, the indicator light turns green. At this time, the charging cable can be unplugged and continue to be used.

The photo button is a shortcut key for storing the crack image when measuring. When the button is pressed, the current crack image will be confirmed, and after pressing the button, the current crack image will be stored.。

The WiFi status indicator is used to indicate whether the probe's WiFi connection is turned on. After the camera is turned on, the standby indicator lights up, indicating that the probe can be connected with the tablet.

During the test, the center line of the probe casing is aligned with the crack, so that the crack appears in the middle of the screen field of view. The side of the probe with the film panel corresponds to the upper part of the software interface display, and the side of the wristband ring corresponds to the software interface. Below, as shown in Figure 2-1.

Figure 2-1 crack width measuring device

2.2 Establish crack width measuring device connection

Connect for the first time, turn on the camera, wait for the WiFi light to illuminate.

Figure 2-2 Operation Center Panel

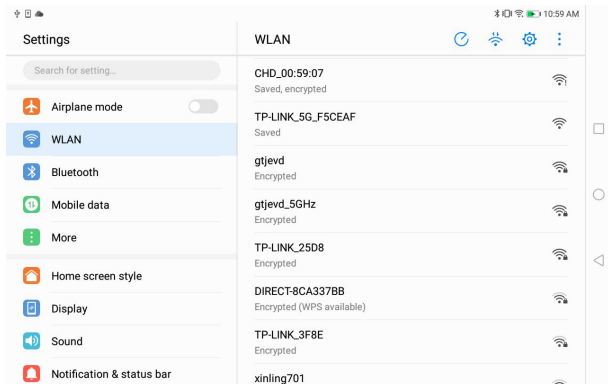


Figure 2-3 Operation center panel

Click the “Settings” option to pop up the “Settings Tab”. The tab lists the searched wifi devices and waits for the tablet to search for a signal such as CHD-00:xx:xx, which is the WiFi signal of the probe, as shown in Figure 2-4. Shown. Click the "Connect" button to connect, the first connection will prompt for a password, then enter "12345678" to confirm.

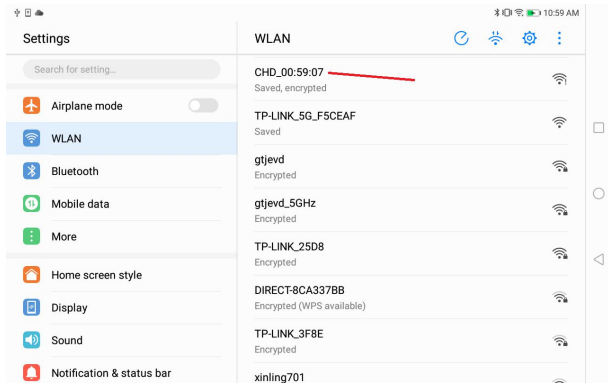


Figure 2-4 Searching the probe signal

The tablet automatically searches for and connects the probe each time the probe is turned on, eliminating the need to repeat the above steps.

Double-click the crack detection software icon to open the main interface of the software. At this time, the status bar should prompt “The crack width measuring device is connected”, as shown in Figure 2-5 and 2-6.

Figure 2-5 Software icon

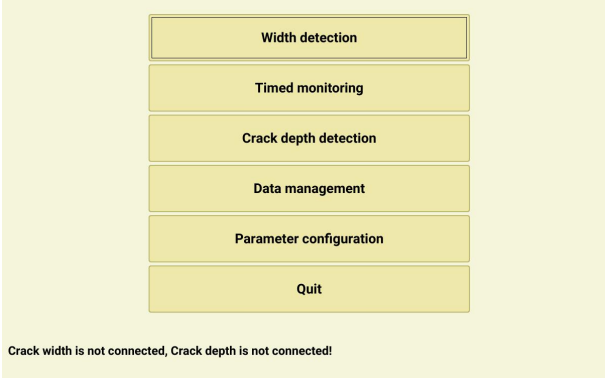


Figure 2-6 Software main interface

When the above conditions are all ready, the crack width can be detected by the slit width measuring device.

2.3 Width detection

Click the width detection button in the main interface to enter the width detection interface. When the detection component is stored in the tablet, the last detection component name and the last measurement point number of the component are displayed, otherwise the display is empty information, as shown in Figure 2-7.

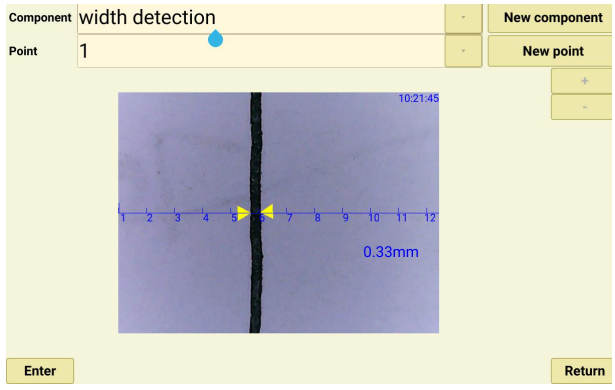


Figure 2-7 Width Detection Interface

2.3.1New components and measuring points

Click the edit box of the component and the measuring point respectively to pop up the Windows soft keyboard (if there is no automatic pop-up soft keyboard, you can click the keyboard button in the lower right corner), input the component name (both Chinese and English) and the name of the measuring

point. After the input is completed, click the New Component and New Measurement button respectively, and the corresponding component name and measurement point name are created, as shown in Figure 2-8.

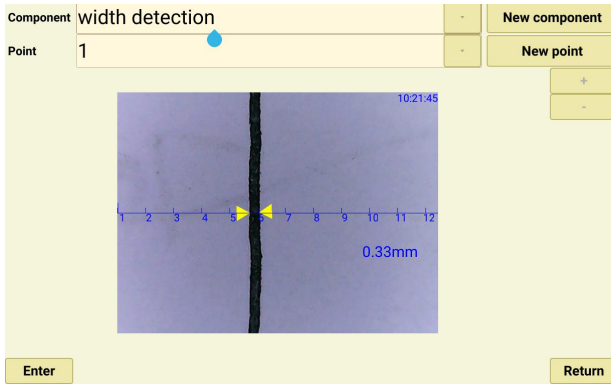


Figure 2-8 Creating a new component

Note: If you want to continue testing the last component of the width detection, you can directly perform the following steps without creating a new component.

2.3.2Start testing

After the new component is completed, the probe is aligned with the crack under the interface. The software can automatically determine the position of the crack and collect and refresh in real time, and automatically calculate the slit width value. The interface dynamically displays the crack image collected by the probe, the slit width determination position, and the slit width value. When no crack is detected, the interface displays “no crack”, as shown in Figure 2-9.

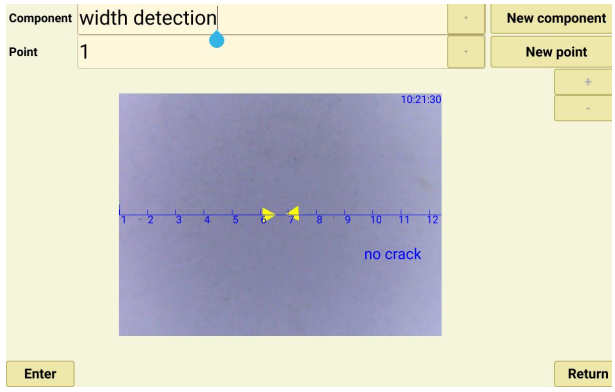


Figure 2-9 Crack-free display

Press the OK button to get a crack image, as shown in Figure 2-10. The image can be analyzed and determined to be saved.

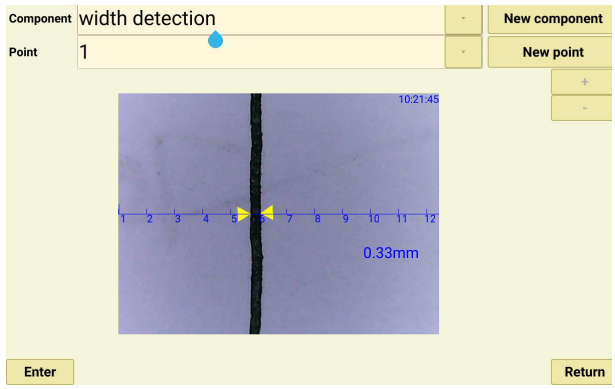


Figure 2-10 Crack image display

2.3.3Analysis processing

◆ Image Zoom Click + to enlarge the image, click - to reduce the image, the zoom ratio is between 1/4 and 60 times.

◆ Drag the image Zoom in on the image in the point and drag it, the image can move according to the movement of the finger.

◆Manually interpret the point and drag the crack mark arrow ▷ or ◁ to modify the position of the slit width mark, and the crack width value changes accordingly.

Press the storage button to store the current crack image and crack width value. The system automatically enters the detection of the next measurement point; press the return key to return to the dynamic detection interface.

2.4 Timing monitoring

Timing monitoring is mainly for special occasions where long-term width detection is required for the same location. This is also a major feature of the instrument, which broadens the application of the slit width meter in the field of detecting slit width.

Click the timing monitoring button on the main interface to enter the timing detection interface, as shown in Figure 2-11.

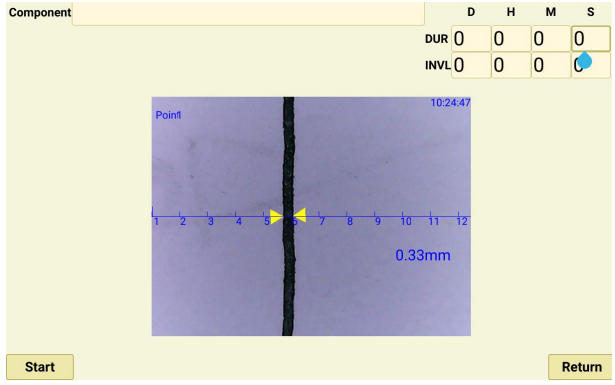


Figure 2-11 Timing monitoring interface

2.4.1Monitoring settings

◆ New component Click the edit box of the component, pop up the soft keyboard, enter the component name.

◆ Set the duration and interval Click the duration and interval edit boxes respectively to pop up the soft keyboard and set it up.

2.4.2Start monitoring

After the setting is completed, press the start button and the instrument enters the timing monitoring state. In this state, the instrument is timed in the background and automatically samples and saves and refreshes at each timing interval.

Status information is displayed on the left side of the interface image area, including monitoring duration, interval time, measured time, and monitoring status. When the timing does not exceed the total duration, the monitoring status is displayed as “Monitoring”. When the timing exceeds the total duration, the monitoring process is automatically ended and “View results to the management interface” is displayed. At this time, all the measuring points are saved to the component, as shown in Figure 2. -12, 2-13

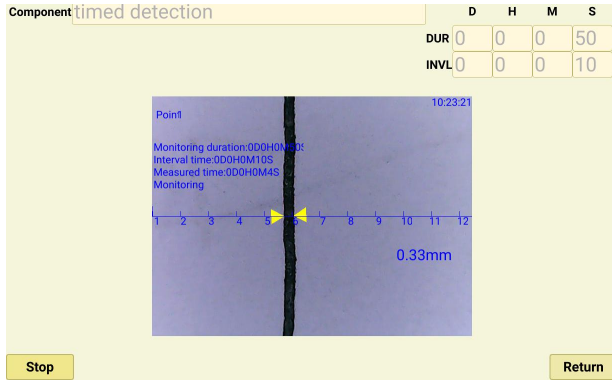


Figure 2-12 Monitoring status interface

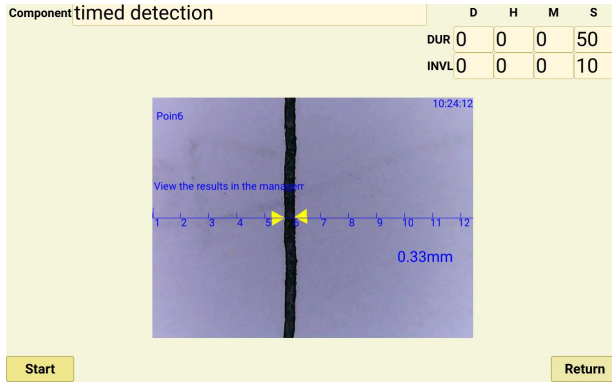


Figure 2-13 Monitoring end interface

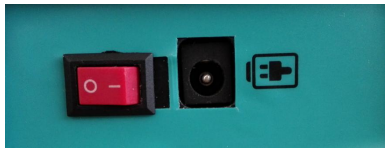
Chapter III Crack Depth Measurement Operation

3.1 Crack depth measuring equipment introduction

The crack depth measuring device consists of a crack depth measuring host, two transducers, two short signal lines and two long signal lines.

The crack depth measurement has a ship type switch and a charging port on the left side of the main unit, as shown in Figure 3-1. The middle screen prompts related operation information (Fig. 3-2). The battery power mark is in the upper right corner of the screen. When the battery power is empty, it should be charged in time.

The transducer connects the input and output ends of the main unit through the signal line. When the transducer is on the measuring stand, it can be connected by two short signal lines. When the transducer is not on the measuring stand, it can pass two long signals. Line connection.



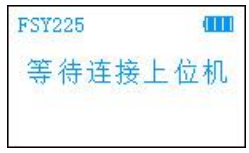


Figure 3-1 Switch and charging port Figure 3-2 Screen

3.2 Establish crack depth measurement equipment connection

Note: To establish a crack depth measurement device connection, you must ensure that Bluetooth is turned on on your tablet.

First double-click the crack detection software icon on the tablet (Figure 2-2) to enter the main interface, as shown in Figure 2-5.

Next, open the crack depth measuring device, and the device screen displays the words “Waiting to connect to the host computer”. Click the “Settings” option to pop up the “Settings Tab”. The tab lists the searched Bluetooth devices and waits for the tablet to search for theFSYXXX signal, which is the Bluetooth signal of the device. The first connection will prompt for a password. At this time, enter “1234” and press the OK button.

The software will automatically connect to this signal, and the “crack depth measurement device is connected” will be displayed at the bottom left of the software, and the Bluetooth icon will be displayed on the screen of the crack depth measurement device, and “The host computer is connected successfully” is displayed.

When the above conditions are all ready, the depth of the crack can be detected by the crack depth measuring device.

3.3 Crack depth detection

Click the crack depth detection button in the main interface to enter the crack depth detection interface. When the detecting component is stored in the tablet, the last detecting component name and the last measuring point serial number of the component are displayed, otherwise the display is as follows, as shown in Figure 3-3.

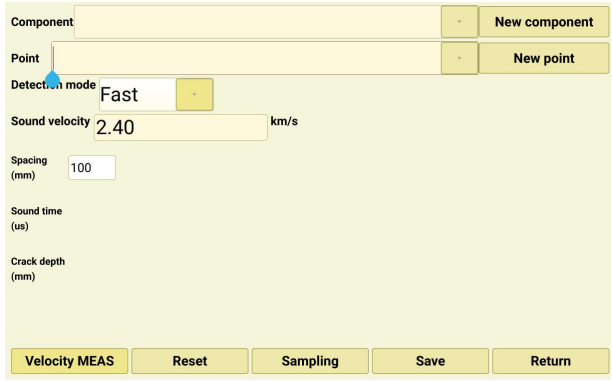


图 3-3

3.3.1New components and measuring points

Click the edit box of the component and the measuring point respectively to pop up the Windows soft keyboard, input the component name (both Chinese and English) and the name of the measuring point. After the input is completed, click the New Component and New Point button respectively, and the corresponding component name and point name are created.

Note: If you want to continue testing the last component of the width detection, you can directly perform the following steps without creating a new component.

3.3.2Quick check

Detection methods are divided into fast detection and standard detection.

In the fast detection, the sound velocity value is first determined. The sound speed value defaults to the speed of the last fast detection. If there is no data before, the default is 0.

1. Test or retrieve sound velocity values

There are three ways to obtain the sound speed value, and choose one of them according to the specific situation：

（1）According to experience, you can directly input the sound velocity value.

Click the sound speed edit box to pop up the Windows soft keyboard and enter the sound speed value. Note: The sound velocity value here is generally the flat sound velocity value, which is usually lower than the standard measured sound velocity value.

（2）Test sound velocity

- (a) Move a pair of transducers to the bracket and mark them as 200. The number of the brackets represents the inner spacing of the transducer's sound radiating surface (mm)；
- (b) Apply a small amount of couplant on the sound radiating surface of the transducer, hold the transducer bracket in the crackless area near the crack to be tested, apply pressure, and make the transducer close to the concrete surface. The gap between the two is coupled. The paste of the agent is filled, the air is removed, and the purpose of good acoustic coupling is achieved；
- (c) Click the measurement sound speed button in the lower left corner of the screen to pop up the sound speed test box, as shown in Figure 3-4. Click on the sample to obtain the sound velocity value of the cracked part to be tested;
- (d) If the purpose of the test is simply to obtain the speed of sound of the member under test without

testing the crack depth, press the store button to save the speed of sound.

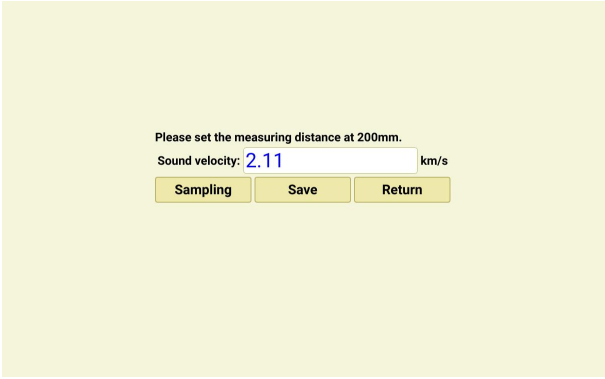


Figure 3-4 Sound speed test box

（3）Pick up the speed of sound

After entering the crack depth detection interface, the memory sound velocity is automatically retrieved and displayed, that is, the most recent sound velocity test value. If the component test condition has no significant change, the sound velocity value can be used. The memory sound velocity value is updated once a new sound velocity test is performed or the sound velocity is manually placed and the sound velocity is stored.

2. Crack depth test

Rapid inspection of crack depth testing process：

（1）Determine the crack depth test point on the detected crack, and make the measurement point number mark.

（2）Move a pair of transducers to the bracket and mark them as 100. Perform the crack depth test according to the first spacing (100mm). The center of the bracket is aligned with the precise position of the measured crack point to ensure the coupling of the transducer to the concrete surface. Good, after the sampling key, the sound time and crack depth of the first spacing are displayed, and the measurement of the first spacing is completed.

（3）After the test of the first pitch is completed, the screen automatically prompts the indication of the second spacing (50 or 150), and according to the indicated spacing of the prompts, the transducers are respectively moved to the corresponding positions on the bracket, and the second spacing test is completed according to the above method.

（4）In a few cases, the screen prompts that a third pitch (150 or 200) test is required.

3. Crack depth determination and storage

（1）After completing the test of 2 times (in a few cases, 3 times), the depth of the measuring point is automatically displayed at the bottom of the screen.

（2）Press the store button to store the speed of sound and the depth of the crack. Or press the clear key to re-measure.

(3) The number is automatically increased by 1 after storage, and the test of the next measurement point is performed.

3.3.3Standard test

Select the standard in the detection mode and enter the standard test interface as shown in Figure 3-5. The standard test consists of two parts: first, no cross-slit measurement; second, cross-slit measurement. The cross-slit measurement is to measure the sound velocity of the component propagation; the cross-slit measurement is to measure the depth of the crack by the sound velocity measured without the cross-slit measurement.

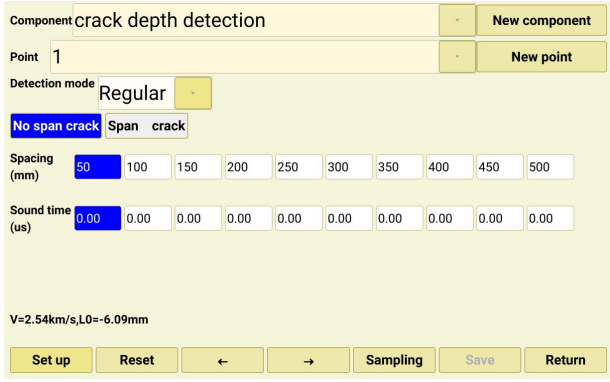


Figure 3-5 Standard test interface

1.No cross-slit measurement

Click the Settings button to bring up the measurement spacing setting, as shown in Figure 3-6. Click the edit box of the starting distance and increment separately, pop up the Windows soft keyboard, and enter the starting distance and the increment. Click the OK button to save the settings.

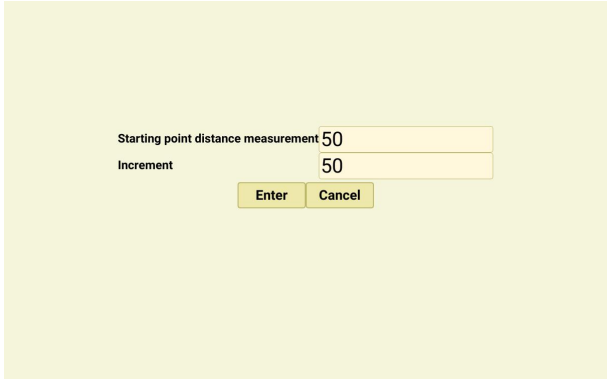


Figure 3-6 Measurement spacing setting

The memory sound velocity and L0 are automatically retrieved and displayed without crossing the V and L0 in the slot, that is, the last measured value. If the component test condition has no significant change, the sound velocity value can be used. The memory sound velocity value is updated once a new sound velocity test is performed and the sound velocity is stored.

No cross-slit measurement step：

a. Place the two transducers on the same side near the crack. Adjust the position of the transducer on the bracket so that the spacing of the transducers is the first spacing. Ensure that the transducer is well coupled to the concrete surface. When the sound of the first pitch is displayed after pressing the sampling button, the measurement of the first pitch is completed.

b. The measurements were sequentially performed as described above. After measuring 2 measuring points, the values of V and L0 are displayed at the bottom of the screen. It is recommended to measure at least 3 measuring points.

c. After the V and LO values appear, the storage key can be stored to store the corresponding value.

When an acoustic time value measurement is not accurate, you can press the clear key to clear the sound, and when the sound is re-measured.

2.Cross-slit measurement

Click the Settings button to bring up the measurement spacing setting, as shown in Figure 3-6. Enter the starting distance and the measuring point increment respectively. Click the OK button to save the settings.

Cross crack measurement step：

a. Determine the crack depth test point on the detected crack, and make the measurement point number mark.

b. Move a pair of transducers to the bracket and mark them as the first spacing. The center of the bracket is aligned with the precise position of the measured crack point to ensure good coupling between the transducer and the concrete surface. The first spacing is displayed after pressing the sampling button. Sound time and crack depth, complete the measurement of the first spacing.

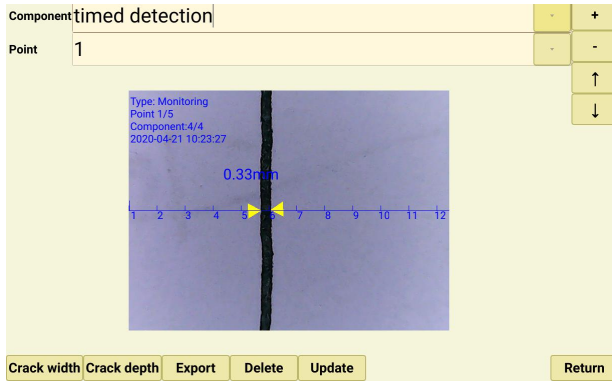
c. According to the above method, the position of the measured crack is not changed. Measure multiple points and do not have to measure all points.

d. Press the store button to store the data. The system automatically jumps to the measurement of the next measuring point. If the test component has not changed, it is not necessary to perform the measurement without the cross-slit, and the cross-slit measurement can be directly performed.

When an acoustic time value measurement is not accurate, you can press the clear key to clear the sound, and when the sound is re-measured.

Chapter IV Data Management Operations

Click the data management button in the main interface to enter the data management interface, as shown in Figure 4-1.



4-1

The last component and the last measurement point are displayed when the detection component is stored in the host, otherwise it is displayed as empty information.

The image and data for width detection and timing monitoring can be viewed and analyzed under the slit width view, and the crack depth detection data can be viewed under the crack depth view. In addition, this section also provides functions such as deleting and updating data.

4.1 Crack width view

1.crack wide image view

Click ▼ at the back of the component edit box to pop up the component list, select the component to view, click ▼ at the back of the component edit box, and hide the component list.

Click ▼ at the back of the measurement point edit box to pop up the measurement point list, select the measurement point to be viewed, click ▼ at the back of the measurement point edit box again, and the measurement point list is hidden.

After the component and measuring point selection is completed, click the slit width view button, and the image measured on the screen is the image measured by the measuring point of the component, as shown in Figure 4-1. At the same time, the upper left side of the interface displays the status information of the measuring point of the component, "detection" is the data of the width detection, and "monitoring" is the data of the timing monitoring. If the measuring point has crack depth data, the crack depth value is also displayed.

2.crack width image processing

◆ Image Zoom Click + to enlarge the image, click - to reduce the image, the zoom ratio is between 1/4 and 30 times.

◆ Flip the measurement points Click ↑ and ↓ to scroll up or down the images of different measurement points under the current component.

◆ Drag the image to enlarge the image in the point and drag it, the image can move according to the movement.

◆ Manually interpret the point and drag the crack mark arrow ▷ or ◁ to modify the position of the slit width mark, and the crack width value also changes. Press the Update Data button to update and save the slit width value of the current crack.

4.2 Crack depth view

1.crack depth data view

Click ▼ at the back of the component edit box to pop up the component list, select the component to view, click ▼ at the back of the component edit box, and hide the component list.

Click ▼ at the back of the measurement point edit box to pop up the measurement point list, select the measurement point to be viewed, click ▼ at the back of the measurement point edit box again, and the measurement point list is hidden.

After the component and measuring point selection is completed, click the crack depth view button, and the crack depth data of the measuring point of the component appears on the screen, as shown in Figures 4-2 and 4-3. Figure 4-2 shows the test type as fast test, and Figure 4-3 shows the test type as standard test.

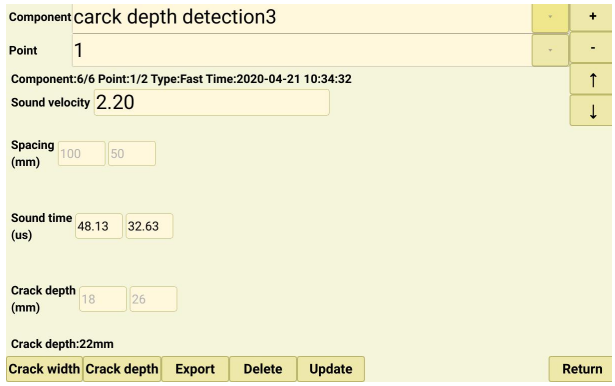


Figure 4-2 Quick test crack depth data view

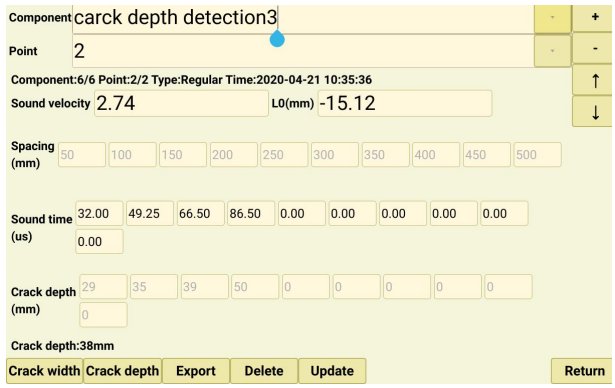


Figure 4-3 Standard test crack depth data view

2.crack depth data processing

When the detection type is fast detection, the user can modify the sound speed and sound time value. After clicking the update, the software will recalculate the crack depth value according to the modified sound speed and sound time value.

When the detection mode is standard detection, the sound speed, L0 and sound time values can be

modified. After clicking the update, the software will recalculate the crack depth value according to the modified value.

4.3delete

To delete the data that you do not need to save, you can click the delete button to pop up the delete option box, as shown in Figure 4-4.

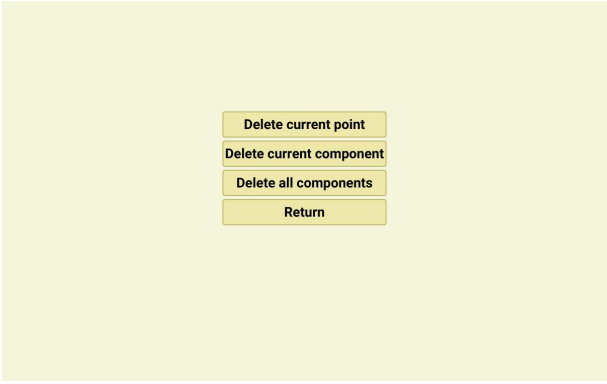


Figure 4-4 Delete option

The delete option box includes deleting the current measurement point, deleting the current component and deleting all components, and clicking the button to be operated can delete the corresponding data. **Note: After deleting the data, it is not recoverable. It is recommended to upload the data to the computer before deleting.**

4.4Export

Method of uploading data to a computer：

（1）Connect the USB flash drive to the tablet via the OTG adapter；

（2）In the tablet software point data management export, select the content to be exported, determine and then open the file management on the tablet, select the local high-speed rail to build crack data, copy the data to be exported to the U disk；

（3）Copy to a computer via a USB flash drive.

Chapter 5 Analysis Software

The GTJ-F800 wireless crack comprehensive detector PC software is used to analyze and process the measured crack width image and crack depth data:

1. Multiple display formats in single image, thumbnail and table format;
2. You can manually modify the slit width value;
3. Data can be cut, copied, pasted, inserted, added, etc;
4. The point image can be saved as a separate image file (*.bmp) stored in the computer.

The interface is mainly composed of seven parts: a title bar, a menu bar, a toolbar, a status bar, a control panel, a measuring point information area, and a component information area, as shown in Figure 5-1.

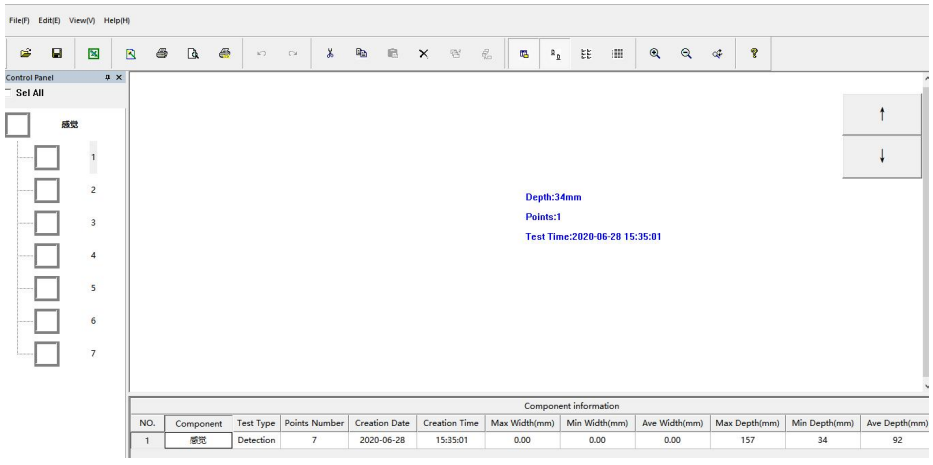


Figure 5-1 Report Analysis Interface

The menu bar consists of four drop-down menu items, which are File, Edit, View, and Help, as shown in Figure 5-2. Clicking on each menu item will bring up a drop-down menu, each corresponding to a set of functions. The submenu items of these four menu items contain all the functions of the software. When some menu items are grayed out, this function is invalid in the current state.

Figure 5-2 Menu bar

The toolbar consists of a series of buttons, as shown in Figure 5-3. Each button implements a common function that has exactly the same functionality as the menu. If you mouse over a button, the function of the button is automatically displayed on the screen. When the button color is grayed out, it means that this function is invalid in the current state.

Figure 5-3 Toolbar

The control panel mainly displays all the components and the corresponding measuring points under the components.

Point image displayed in the measurement information area.

The component information area displays information about all components that are open.

5.1File menu

1. Open: Open the crack width image data to be viewed and processed.

Click File - Open or Toolbar to bring up the Open dialog box, as shown in Figure 5-4.

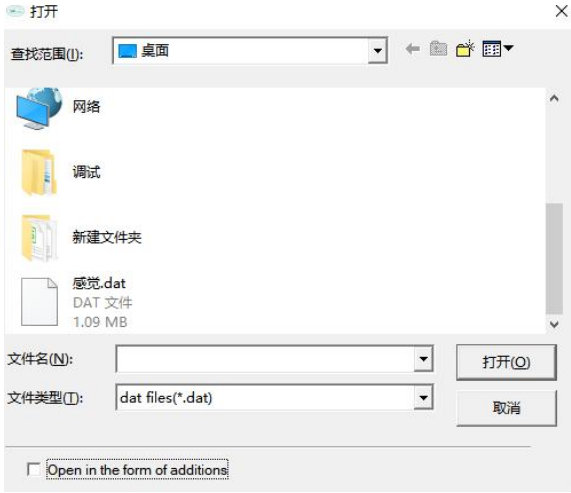


Figure 5-4 Open

a. When you open a single component, you can double-click the component; or click the component and click the Open button.

b. When selected to open in append mode, the open widget is displayed behind the previously opened widget.

2. Save: save the changes in the component.

Click File - Save or Toolbar.

3. Save as: save all open components under a component name.

4. Generate report: you can generate excel report by checking the selected components and measuring points.

First, check the measurement point in the control panel to generate the report, and then click File - Generate Report or Toolbar. Wait a moment, the software can automatically open excel, and import the selected components and measurement information into it.

5.Save the graphic: Save the selected measurement point image as a separate image file (*.bmp) stored in the computer. This function is mainly set by the crack width detection.

First select the point to save the graph in the control panel, and then click File - Save Graph or Toolbar to pop up the Image Save Settings dialog box, as shown in Figure 5-5.

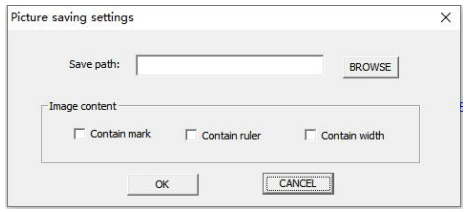


Figure 5-5 Image save settings

Select the save path: Click the Browse button and select the path you want to save.

The image content includes: including the card label, including the ruler and the inclusion width. After checking the corresponding option, there will be corresponding information in the saved image.

6. Print Settings: Set the print effect.

7. Print Preview: Preview the print results.

First select the point to preview in the Control Panel, then click File - Print Preview or Toolbar to bring up the print preview option, which includes the crack width and crack depth, as shown in Figure 5-6. Select the option you want to preview.

8. Print: Print the selected components and measuring points.

9. Exit: Exit GTJ-F800 crack width tester analysis software.

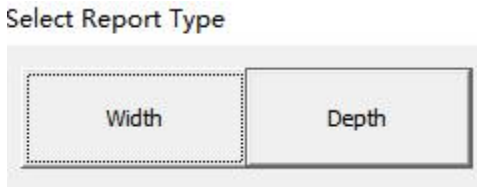


Figure 5-6

5.2Edit menu

The editing menu is mainly for the operation of the measuring point information area.

1. Restore: Restore data that was modified without saving.

2. Undo: Undo the last action.

3. Redo: Restore the last undo operation.

4. Cut: Cut the selection and place it on the clipboard.

5. Copy: Copy the selection and place it on the clipboard.

6. Paste: Paste the contents of the clipboard behind the selected image.

7. Delete: Delete the currently selected component or point.

8. Insert: Paste the contents of the clipboard in front of the selected image.

9. Add: Paste the contents of the clipboard behind the selected image.

10. Check all: Select all components and measuring points in the control panel.

11. Do not select all: Deselect any components and measuring points in the control panel.

12. Check the detection component: Check the component in the control panel whose test type is detection.

13. Check the monitoring component: Check the component in the control panel whose test type is monitoring.

5.3View menu

1. Toolbar: Check the toolbar to display, otherwise the toolbar will not be displayed.

2. Status bar: Check the status bar after displaying it, otherwise the status bar will not be displayed.

3. Control panel: Click View - Control Panel or Toolbar, do not display the Control Panel, click the button again to display the Control Panel.

4. Single picture: The measurement point information is displayed in a single image in the measurement

point information area.

5. Thumbnail: The measuring point information is displayed as a thumbnail in the measuring point information area.

6. Table: The measuring point information is displayed in tabular form in the measuring point information area.

7. Zoom in: Increase the image display size in the measurement point information area.

8. Zoom out: Reduce the image display size in the measurement point information area.

9.Default zoom: The image size in the measurement information area is scaled to the default size.

5.4control panel

The control panel mainly displays all the components that are open, as shown in Figure 5-6.

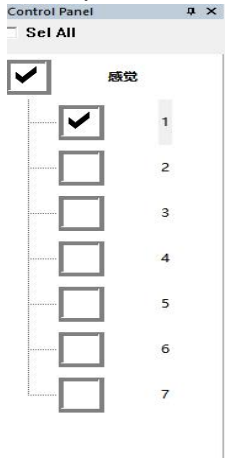


Figure 5-6 Control panel

Click the Auto Hide button in the Control Panel , Then the auto hide button changes to , At this point, the control panel is hidden at the button on the left side of the screen with the words "Control Panel". When the mouse is placed at the button, the control panel automatically appears. When the mouse leaves the control panel, the control panel automatically hides.

Click the auto hide button , Then the auto hide button changes to , The control panel is now fixed to the left of the screen.

toolbar The button can be used to operate the display of the control panel.Click this button, the control panel will not display, click the button again, the control panel will redisplay.

Check all selections in the control panel, You can select all the components and measuring points in the control panel.; Deselect all, cancel the selection of any component and measuring point.

Double-click the component name to hide the measurement point of the component; click the component name to display the measurement point of the component.

After selecting the component name (the component name turns blue), click the toolbar button to delete the components in the control panel.

5.5Measuring point information area

The measuring point information area mainly displays the measuring point image in the component.

The image display can be displayed in three forms: single image display, thumbnail display, and table display. The default display mode is a single image display. The toolbars represent single image

display, thumbnail display and table display. Clicking the corresponding button will display the corresponding way.

5.6Single image display

The effect of a single image is shown in Figure 5-7.

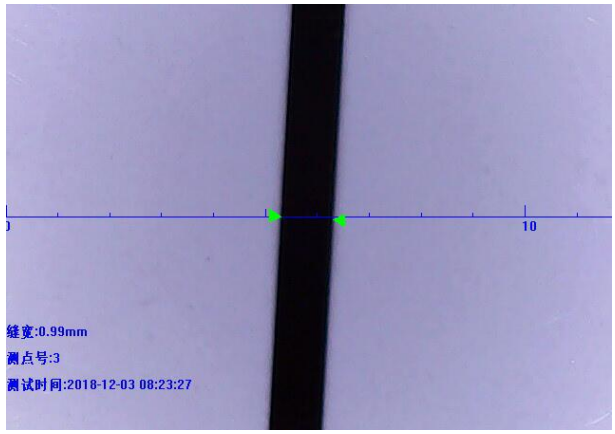


Figure 5-7 Single image display

When the single image is displayed, click on the toolbar Buttons (representing zoom in, zoom out, and default zoom, respectively) to modify the display size of the image.

When a single image is displayed, the displayed information includes the measurement point image, the measurement point number, the test time, the scale and the card mark (ie, the interpretation triangle)

In the single image display, the up and down arrow buttons at the top right of the image represent the previous or next page of the current image. Or use the up and down keys on the keyboard to display the previous or next image of the current image.

You can modify the slit width value by dragging the triangle.

Long press the pop-up selection box, as shown in Figure 5-8

图 5-8

Cut: Cut the selection and place it on the clipboard.

Copy: Copy the selection and place it on the clipboard.

Paste: Paste the contents of the clipboard behind the current point image.

Delete: Delete the current measurement point.

Insert: Paste the contents of the clipboard to the front of the current point image.

Add: Paste the contents of the clipboard to the back of the current measurement image.

You can also process the graphic by clicking the button in the toolbar (the icon represents the same meaning as above).

5.7Thumbnail display

The thumbnail display effect is shown in Figure 5-9.

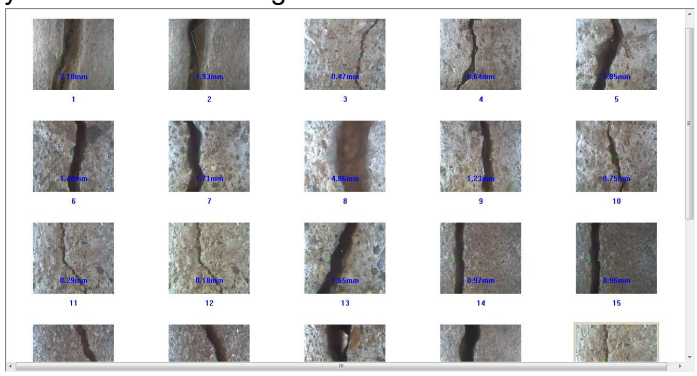


Figure 5-9 Thumbnail display

When the thumbnail is displayed, click on the toolbar.  (respectively zoom in, zoom out, default zoom), you can change the display size of the image.

When the thumbnail is displayed, the displayed information includes the point image, the point number, and the card mark (ie, the interpretation triangle). When the mouse clicks on a certain point image, the gray image of the point image appears (as shown in Figure 2-24), indicating that the image is selected.

Figure 2-24 Selected point image

Press and hold on a certain point image to pop up the selection box, as shown in Figure 5-10.

Figure 5-10

Cut: Cut the selection and place it on the clipboard.

Copy: Copy the selection and place it on the clipboard.

Paste: Paste the contents of the clipboard behind the current point image.

Delete: Delete the current measurement point.

Insert: Paste the contents of the clipboard to the front of the current point image.

Add: Paste the contents of the clipboard to the back of the current measurement image.

Click the button in the toolbar  (The icon represents the same meaning as above) can also process the graphics.

5.8Table display

The table display effect is shown in Figure 5-11.

Test point information								
NO.	Points	Width(mm)	Date	Time	Depth(mm)	Date	Time	Remarks
1	1	0.00			34	2020-06-28	15:35:01	
2	2	0.00			53	2020-06-28	15:35:16	
3	3	0.00			70	2020-06-28	15:35:41	
4	4	0.00			101	2020-06-28	15:35:55	
5	5	0.00			153	2020-06-28	15:36:16	
6	6	0.00			74	2020-06-28	15:37:07	
7	7	0.00			157	2020-06-28	15:37:27	

Figure 5-11 Table display

The serial number, measuring point number, slit width value, width measurement date, width measurement time, crack depth value, sounding date, sounding time and remarks are displayed in the table. The parameters that can be edited include the measuring point number and the measuring date. , width measurement time, crack depth value, sounding date, sounding time, and remarks. Edit method: Double-click the cell where the data to be edited is located, and the Windows soft keyboard pops up (if the soft keyboard does not pop up automatically, you can click the keyboard button in the lower right corner) and input the content to be edited. The comment information of the measuring point is displayed in the print preview.

5.9Component information area

The component information area displays information about all components that are open, as shown in Figure 5-12.

Component information											
NO.	Component	Test Type	Points Number	Creation Date	Creation Time	Max Width(mm)	Min Width(mm)	Ave Width(mm)	Max Depth(mm)	Min Depth(mm)	Ave Depth(mm)
1	感觉	Detection	7	2020-06-28	15:35:01	0.00	0.00	0.00	157	34	92

Figure 5-12 Component information

The component information includes serial number, component number, test type, number of measurement points, creation date, setup time, maximum slit width, minimum slit width, average slit width, and remarks. Among the parameters that can be edited are the component number, test type, creation date, setup time, and remarks. Edit method: Double-click the cell where the data to be edited is located, and input the content to be edited. The comment information for the component is displayed in the print preview.

Note: When modifying the component number or test type, after inputting the modified content, click on other cells so that the software considers the input complete. After modifying the component number and saving it, the software will automatically create a component named after the new component number in the folder where the component is located. The original component still exists.