

## **COVID-19 Test Instruction**

### **1. Power and Basic Settings**

- 1.1 Power on/off and rebooting procedure
- 1.2 System volume adjustment

### **2. Running PCR Test**

- 2.1 PCR protocol for SARS-CoV-2 detection
- 2.2 Test information
- 2.3 PCR run

### **3. Reviewing Reaction Data**

### **4. File Management**

- 4.1 Locating test data
- 4.2 Connecting external storage device for data transfer
- 4.3 Deleting folders or files
- 4.4 Transferring data files

## **1. Power and Basic Settings**

### **1.1 Power on/off and rebooting procedure**

#### **1) Power on**



Gently press the red power button on the back side of the instrument. With the blue LED is turned on after a short beep sound, instrument will be turned on after a while. Press the power button only once and wait until the instrument is turned on.

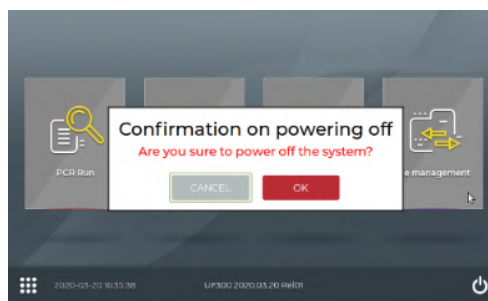
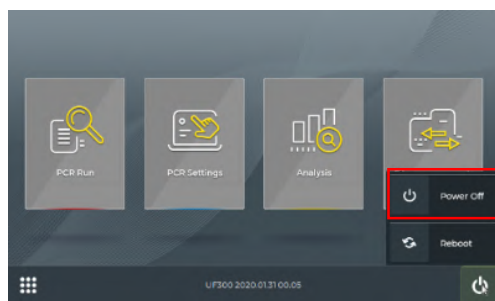
#### **2) Power off**


##### **◆ Use of power button**



Gently press the red power button on the back side of the instrument. With a beep sound, the instrument is turned on after about 10 seconds.

##### **◆ Use of the button on the instrument screen**



Touch  button on the right bottom corner of the main screen then touch "Power Off" button. Then, a window will be popped up for confirmation. Touch "OK" button to turn the power off or "CANCEL" to return to the main screen.

## 1.2 System volume adjustment




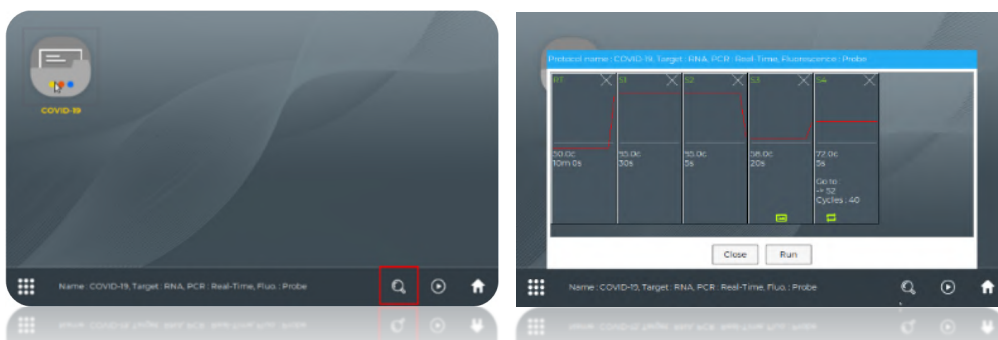
Touch "Volume" button from the popped-up menu on the left bottom section of the main screen. Adjust the volume from the popped-up window and touch "Close" button.


## 2. Running PCR Test

### 2.1 PCR protocol for SARS-CoV-2 detection



You can run the test by a few steps from the main screen. Touch the "PCR Run" button from the main screen. Then, currently saved reaction protocol for "SARS-CoV-2" named as "COVID-19" is displayed on the screen. Touch the reaction protocol and touch  button from the bottom section of the screen. Then, you can proceed to the step for entering test information.



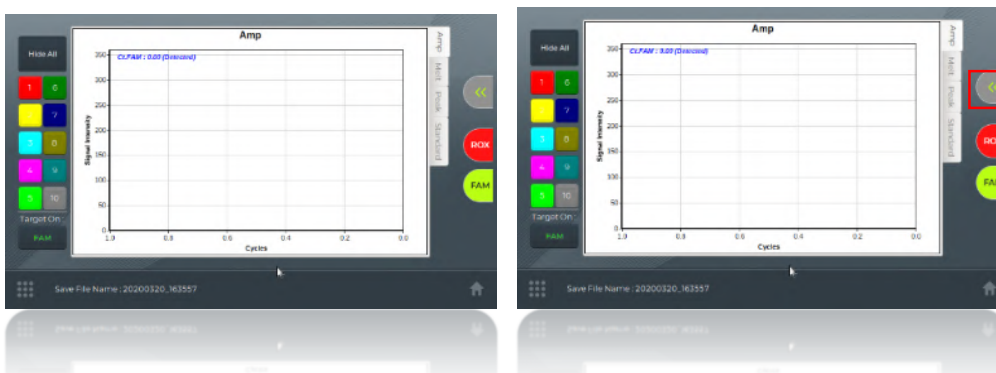
If you touch  button from the bottom section of the screen, you can review the reaction protocol and proceed to the step for entering test information by touching "Run" button. You can close the window by touching "Close" button.


## 2.2 Test information

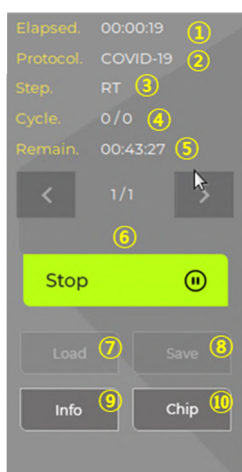


From next step, you can enter the information of the test such as inspector's name, patients' names, test code and the lot # of the kit. After entering relevant information, touch "OK" button to start PCR run.

## 2.3 PCR run

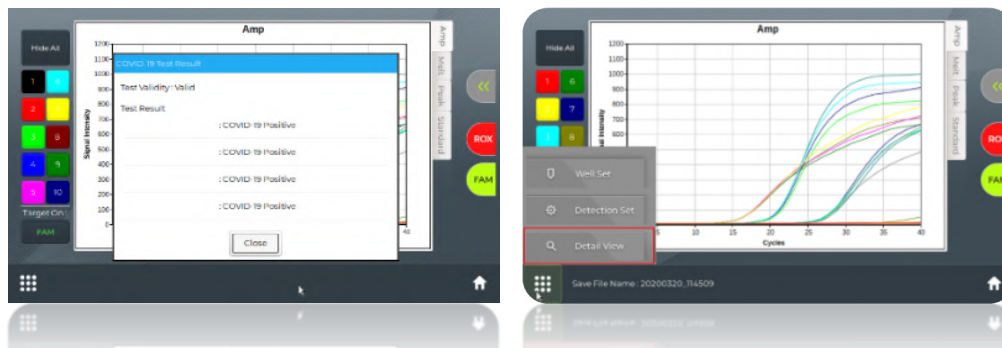


While PCR is running, the screen displays real-time reaction curves of the test. You can activate control panel of the test by touching  button. You can stop or start the test by touching "Stop" or "Start" button. The control panel is hidden by touching outer area of control panel section. The parameters shown on the screen are explained below.

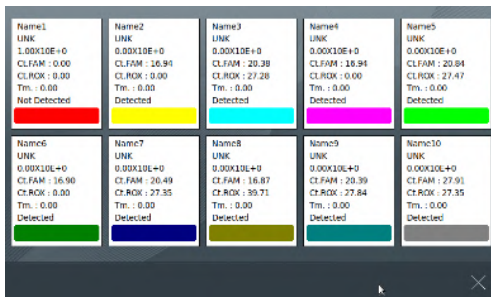


- ① Displays the time passed after starting the test.
- ② Displays the name of currently running reaction protocol.
- ③ Displays currently running step of the reaction protocol.
- ④ Currently completed number of cycles out of total cycles to go
- ⑤ Estimated remaining time to finish the test
- ⑥ Button to stop or start the test
- ⑦,⑧ These buttons are activated as the PCR test is not running. Using these buttons you can load a reaction protocol or save current protocol. However, you cannot run the reaction protocol loaded by this button. You have to return to main screen and choose the reaction protocol to run certain reaction protocol.
- ⑨ You can review current reaction protocol.
- ⑩ Not available and reserved for future use.

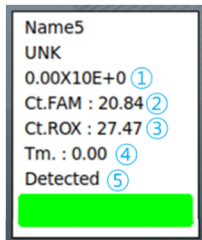
### 3. Reviewing Reaction Data



After the PCR is finished, the qualitative test result of each patient is displayed as one of "COVID-19 Positive", "COVID-19 Negative" and "Retest Required". Close the popped-up window to check the reaction curves of the test. You can review detailed information of the test on the screen which is popped-up when the "Detail View" button on the left bottom area of the screen is touched.



From this screen, you can see the properties of each sample such as Ct value and Tm value.

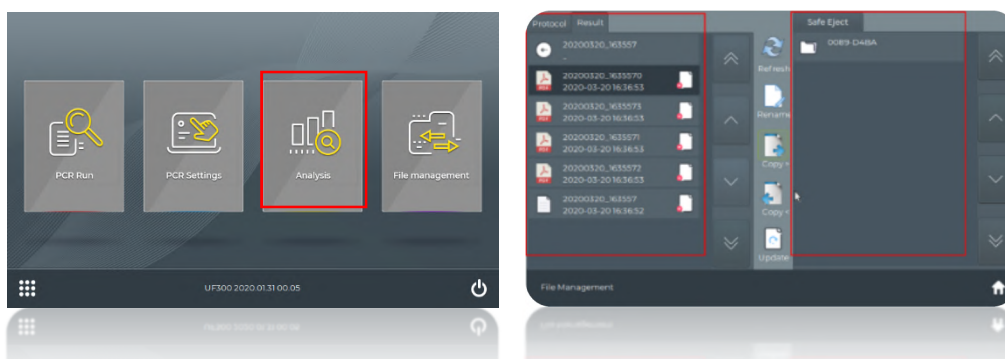


- ① Displays the copy numbers as the standard curve is generated.
- ② Ct value of FAM channel is displayed.
- ③ Ct value of ROX channel is displayed.
- ④ Tm value of FAM channel is displayed.
- ⑤ The result of "positive" or "negative" is displayed according to the detection standard of the kit.

### 4. File Management

#### 4.1 Locating test data

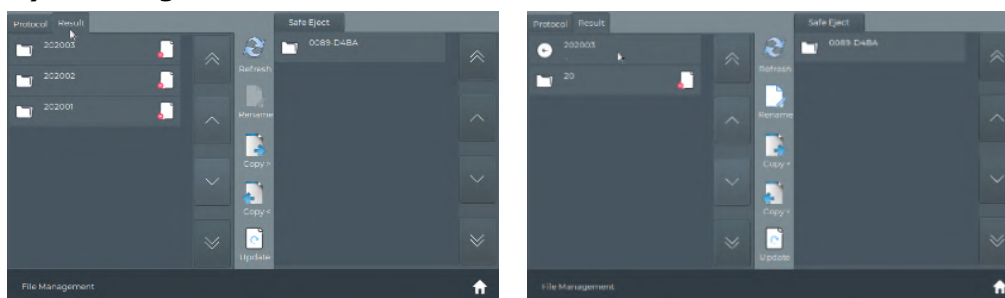
##### 1) Data file management



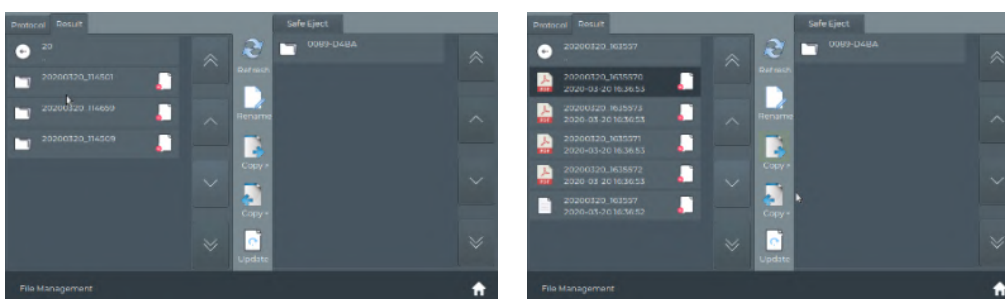


You can access the data files of the test from the main screen by touching "File management" area. Then you can see the data files existing in the memory of the instrument from left section of the screen. The right section of the screen is the area displaying the data files in the external storage device to be connected to the instrument.

## 2) Locating the data files



All the data files are automatically saved in the UF-300 system. To locate the data files, go to "Result" tap on the left section of the screen and navigate to find the data files you want to manage. The data folders are created in the manner of the route in "YYYYMM" – "DD" – "YYYYMMDD-HHMMSS". In the final destination folder, you can find 5 data files which are 4 test reports in PDF format and one raw data file of the reaction.



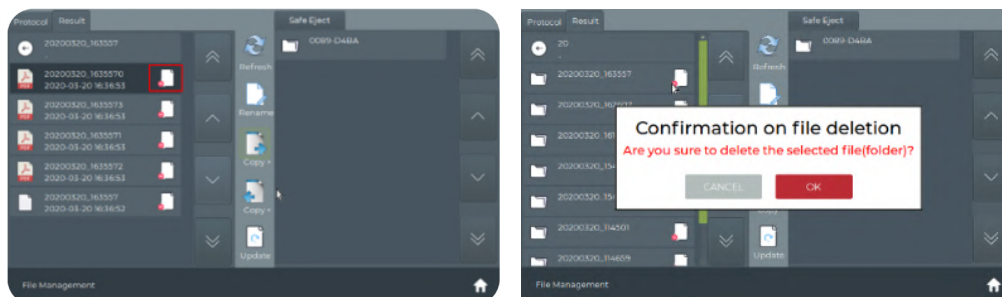
The reports in PDF format cannot be displayed on the instrument. These are intended for displaying on external computer for printing and record.


## 4.2 Connecting external storage device for data transfer



You can connect the external storage device to one of the USB ports located on the back of the instrument for transferring data files. Once storage device is connected, touch "Refresh" button to display up-to-date data file information.

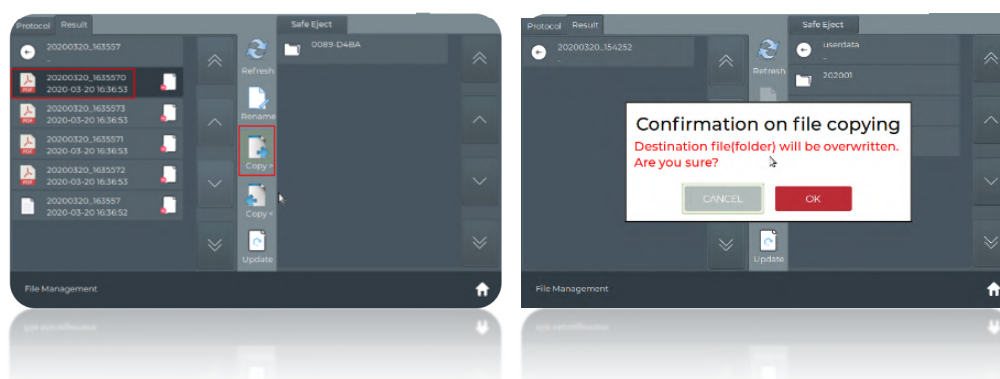
### 4.3 Deleting folders or files



In order to delete folders or files, select a folder or a file and the  button on the right of the file. Then, touch "OK" button.

### 4.4 Transferring data files

#### 1) Transferring test reports



In order to transfer data files from the instrument to the external storage device, touch the file you want to transfer then touch "Copy" button with right arrow located in the middle of the screen then, touch "OK" button from the popped-up window. In order to transfer data files from the external storage device to the instrument, you choose the file you want to transfer then touch "Copy" button with left arrow then, touch "OK" button from the popped-up window.

#### 2) Format of test report

**COVID-19 Test Report**

Patient Name : Kim  
 Date of Test : 2020-03-15:11:47:26  
 Inspector : Lee  
 Test Code : \*\*\*  
 Kit Lot No. : \*\*\*  
 Test Validity : Valid  
 Result : COVID-19 Positive  
 Reaction Details  
 - Protocol Name : COVID-19  
 - Ct of N gene of SARS-CoV-2 (IC) : 25.73 (14.24)  
 - Ct of RdRP gene of SARS-CoV-2 (IC) : 18.56 (15.25)  
 - Ct of Positive Control : 25.13(N gene) / 21.53(RdRP gene)  
 - Ct of Negative Control : N/A