626X

transformer tester

7721

Impulse winding tester

7605

Hi-pot tester

User Manual

V1.03

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Chapter 1 Notes

This instrument is not suitable for outdoor use, especially in humid or highly dusty locations. Improper use of this instrument may result in electric shocks. Please read the safety descriptions carefully before using this tester in order to avoid improper or wrongful use and causing accidents.

1.1 Safety Signs

 Caution:	Please read the content of this Manual carefully.
 High-voltage hazard symbol:	The output terminal may release lethal voltage. Please read the safety instructions described in this chapter.
 Grounding：	Before working with this tester, be sure to connect this terminal with the ground to prevent from touching the housing as to cause electrocution accident due to current leakage.
 Warning sign：	If the product is improperly used, it may cause adverse results to the instrument or the Test Piece. If the product is improperly used, it may cause injury or even death.

1.2 Electrification and Electric Shock

In order to prevent electric shocks, the wearing of insulating plastic gloves is recommended before using this tester to perform testing related tasks.

1.3 Grounding

The back panel of the instrument is fitted with a safe ground terminal. Be sure to connect this ground terminal to the ground to prevent the operator from touching the housing as to cause the electrocution.

1.4 Power

6265/ 6266/ 6267:

Power cables that comply with the local country specifications must be used, and connectors applicable to IEC320 connectors must be used for the connection of this instrument. Users must ensure that the ground cable is properly grounded. If a fuse is included in the power plug, use fuses that comply with 0.8 ampere safety regulations. Ensure that AC power is used before use and adjust the 115V/230V power selection switch on the rear panel so that the machine matches the local power voltage.

7721, 7605:

The scope of power used by this instrument is 98Vac ~ 132Vac or 192Vac ~ 264Vac. To insert the power source, please check if the power to be connected is identical to the power-shifting sign indicated on the back panel. When changing the fuse, it is required to use a specific type of fuse designed in the same ampere to prevent the electrical wire from burning. Before making any replacement, please remove the plug to prevent danger.

1.5 Warm Up

The tester can operate normally once the power is turned on; however, in order to achieve the accuracy within specification, please turn on the machine in advance and let it warm up for 30 minutes or more before use.

1.6 External control unit

This unit is able to execute external control. For this purpose, please ensure that the operator is not touching the signal output end and the Test Piece to avoid causing a hazard.

1.7 Machine Malfunction

If the tester malfunctions, such as the voltage displayed on the voltmeter differs greatly from the voltage set, or that the high voltage output warning light remains on though there is no high voltage output, etc., please stop using this machine immediately and contact our company or your dealer for repairs.1.7 Test End
Please turn off the power switch when this tester is not in use.

1.8 Ending the test

When not using the instrument, please shut off the Power Switch. To restart the Power Switch after being disconnected, please wait for a few seconds; however, do not execute consecutive on/off action of the power.

1.9 Placement and Storage

The normal operating temperature and humidity range of this machine is 5 ºC ~ 40 ºC, 80% RH; the machine might malfunction if exceeded this range. The storage temperature and humidity range of this machine is -20 ºC ~ 70 ºC, 80% RH. In order to achieve accurate testing and for safety considerations, do not place this machine in environments with direct sunlight exposure, high temperature, high humidity, frequent vibrations, or excessive dust.

1.10 Emergency Handling

When there is electric shock or if the DUT or machine goes on fire, please switch off the power and unplug the power cable.

1.11 General instructions

- Do not place any combustible or heavy object on the instrument.
- Avoid heavy impact that may damage the machine.
- When cleaning the instrument, remove the power plug first and then wipe with the soft cloth soaked with mild cleanser and fresh water.

- If the instrument presents any Tolerance sign, do not attempt to dismantle it for making repairs; instead, send the instrument to our professional maintenance personnel for solving the problem.

1.12 Static

This instrument uses components that are very sensitive to static.

- The desktop of the work table must be conductive material that is grounded.
- When the soldering iron and tools are not in use, their contact end must be in contact with grounded conductors.
- The maintenance staff must wear static bracelets with leakage resistance less than 1MΩ.
- The components or assembly base board must be placed in cases with protection against static.

Chapter 2 General Descriptions

2.1 Features

✧ – 0ne-stop test solution (6265/6266/6267 transformer tester + 7721 Impulse winding tester + 7605 Hipot tester)

✧ – The 7721 Impulse winding tester is the main control instrument, which controls the measurement sequence.

- 6265/ 6266/ 6267 Transformer Tester:
  - Frequency:
    - 6265 10Hz~200kHz
    - 6266 10Hz~500kHz
    - 6267 10Hz~1MHz
  - Basic measurement accuracy: 0.1%.
  - 20 Channels.

- 7721 Impulse winding Tester

  - 21 channels.
  - Programmable impulse voltage, low-energy detection without damaging the DUT.
  - Built-in storage 200 sets testing waveform.
  - Storage golden sample (DUT) standard waveform in the instrument, and compare with the other sample waveform.
  - Provides 5 waveform comparison.

- Hipot Tester

  - Test voltage:

    AC 100V~ 5000V/ Leakage current 31m A.
    DC 10V~ 6000V/ Leakage current 11m A.
    IR 10V~1000V/ Insulation resistance 12G ohm.

  - Single channel
  - Arcing detection.
  - Adjustable ramp time (0.1s-10s).

2.2 Package and Accessories

Standard accessories included:

- Power Cord * 3
- User Manual (CD) * 1
- Scan Box (F7721) * 1
- HV Test Cable * 21
- 25Pin-25Pin Cable * 1
- Remote Control Cable * 1
- 24V Switch Power Supplier * 1

2.3 Front panel

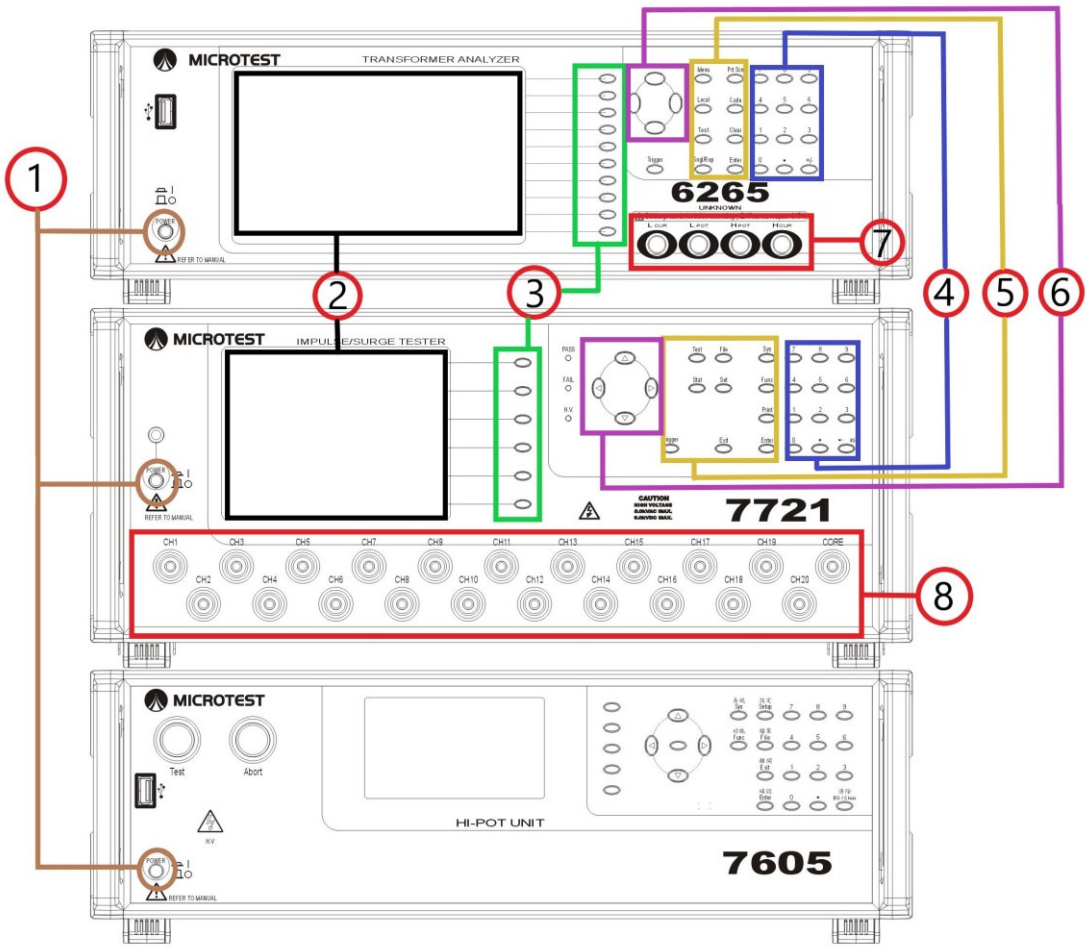


Figure 2-3-1 in 1 Test System Front panel

1. **Power**: Power switch.

2. **Monitor**: This is where the test results are displayed.
3. **Soft keys**: These keys will be used when you select the functions on the right side of the display.
4. **Number keys**: Entering numbers when editing.
5. **Function keys**: There are Sys, Func, Set, File, Stat, Enter, Exit and Test keys.
6. **Arrow keys**: To move up, down, left and right in the screen.
7. **626X BNC connector**: This is a BNC output connector, used to connect the BNC test line of the fixture F7721.
8. **7721 output connector**: CH1~ CH20 and COM are the output channels, used to connect to the CH1~ CH20 and COM of the fixture F7721.

2.4 Rear panel

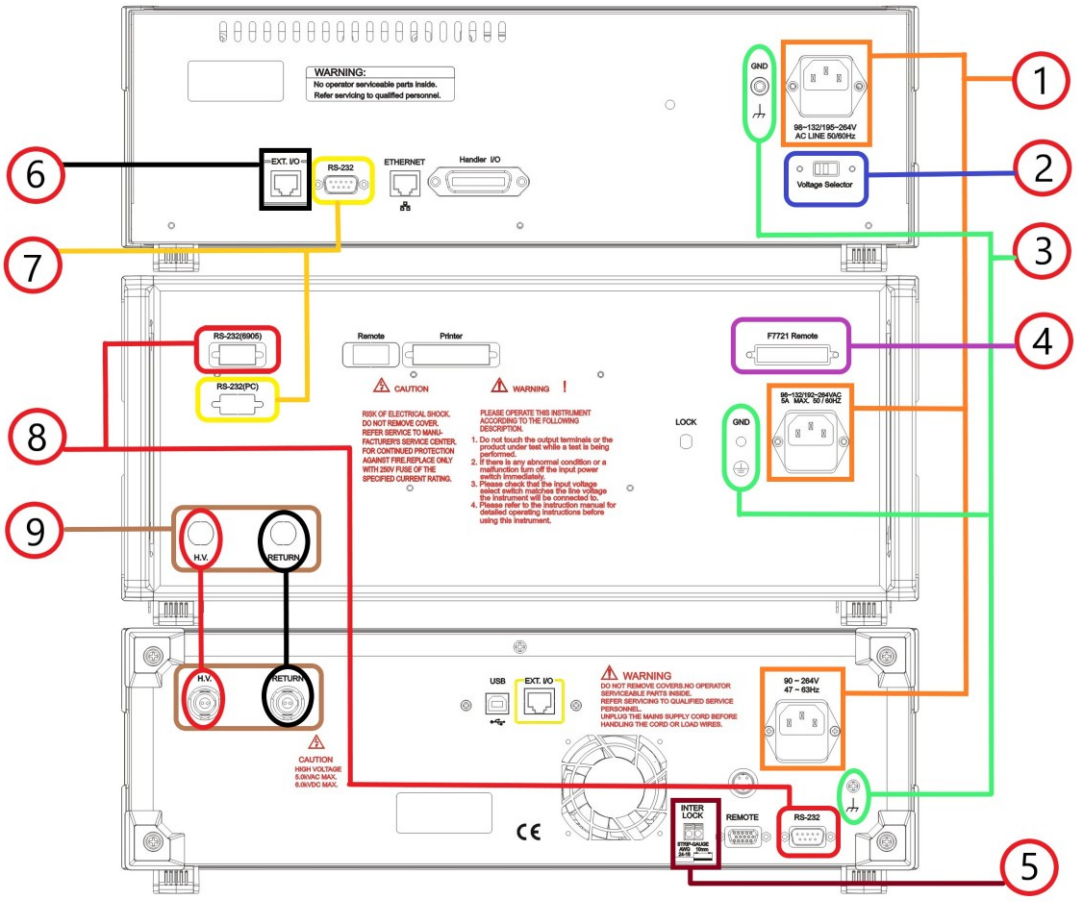
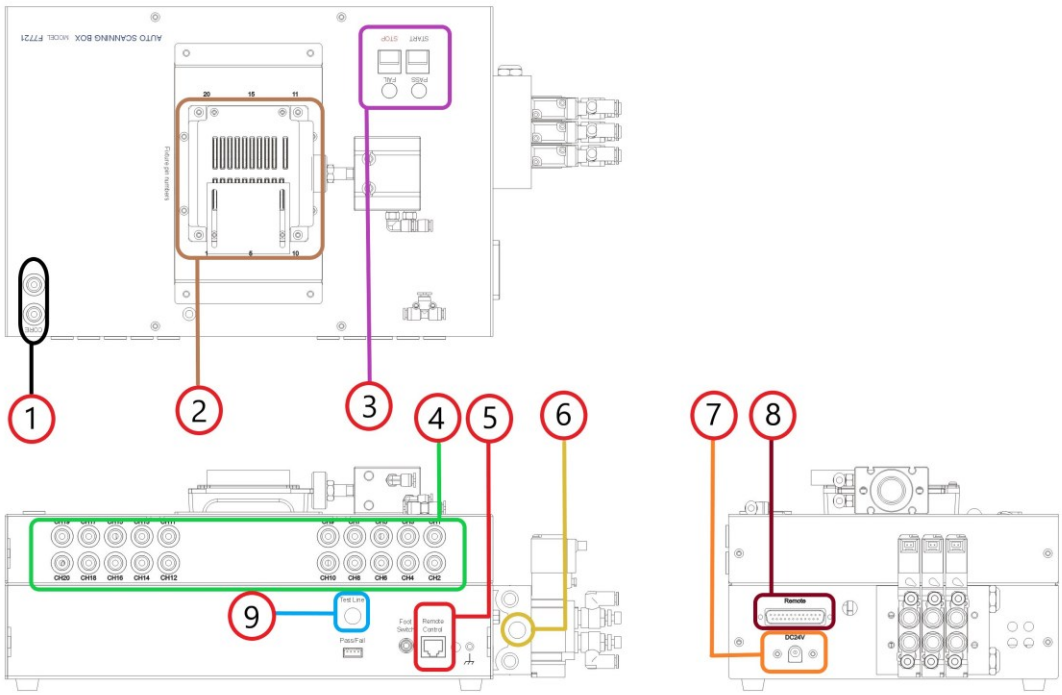


Figure 2-3-2 3 in 1 Test System Rear panel

1. **AC INPUT:** Input power jack.

2. **Voltage Selector**: Please confirm whether the input voltage is 110V or 220V before connecting the plug, and switch the **Voltage Selector** to the proper voltage position (110V/220V).
3. **GND:** Grounding terminal.
4. **F7721 Remote**: Use 25P-25P cable to connect between 7721 and fixture F7721.
5. **Interlock:** High voltage current output safety switch. Short circuit both ends of this port during testing for the test voltage output. Opening the circuit of this port during testing will stop the test and prompt the message.
6. **EXT.I/O**: Use RJ-45 cable to connect with the connect Remote control of the fixture F7721.
7. **RS-232(PC)/RS-232**: When using the 3-in-1 PC software, please use the RS-232 cable to connect from the RS-232 (PC)/RS-232 connector to the PC.
8. **RS-232(6905)/RS-232**: Use RS-232 cable to connect with connector RS-232(6905) and RS-232 between 7721 and 7605.
9. **H.V./Return**: Use the high voltage cable to connect between 7721 and 7605.

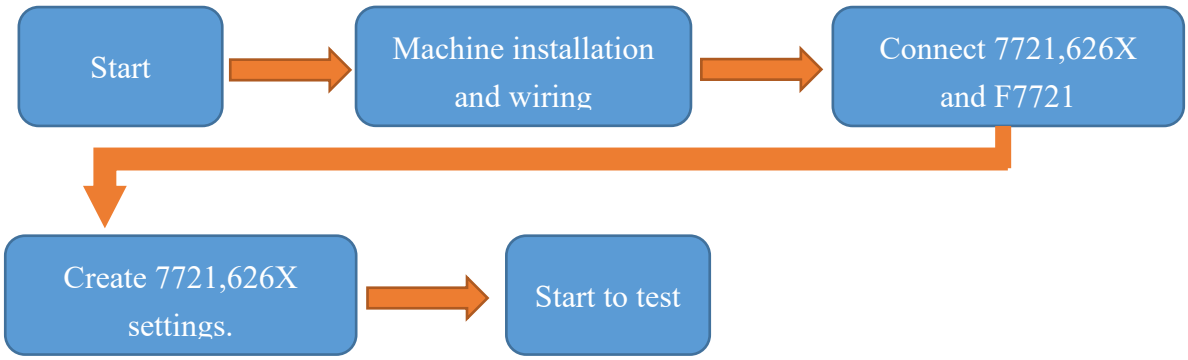
2.5 Fixture F7721



1. **Core**: To connect with the **Core** channel on 7721.
2. **Fixture head**: The test fixture head.

3. **Control key**: Press start and stop key to control the system and the result will show by Green (For pass) and Red (For Fail) LED.
4. **Channels**: CH1~CH20 to connect with **CH1~CH20** channels on 7721.
5. **Remote control**: To connect with **EXT.I/O** on 626X.
6. **Air hose Socket**: The socket is for Air hose.
7. **DC 24V**: To connect with DC 24V adapter
8. **Remote**: To connect with **F7721 Remote** on 7721.
9. **Test Line**: To connect to the **626X/623X BNC output connector**.

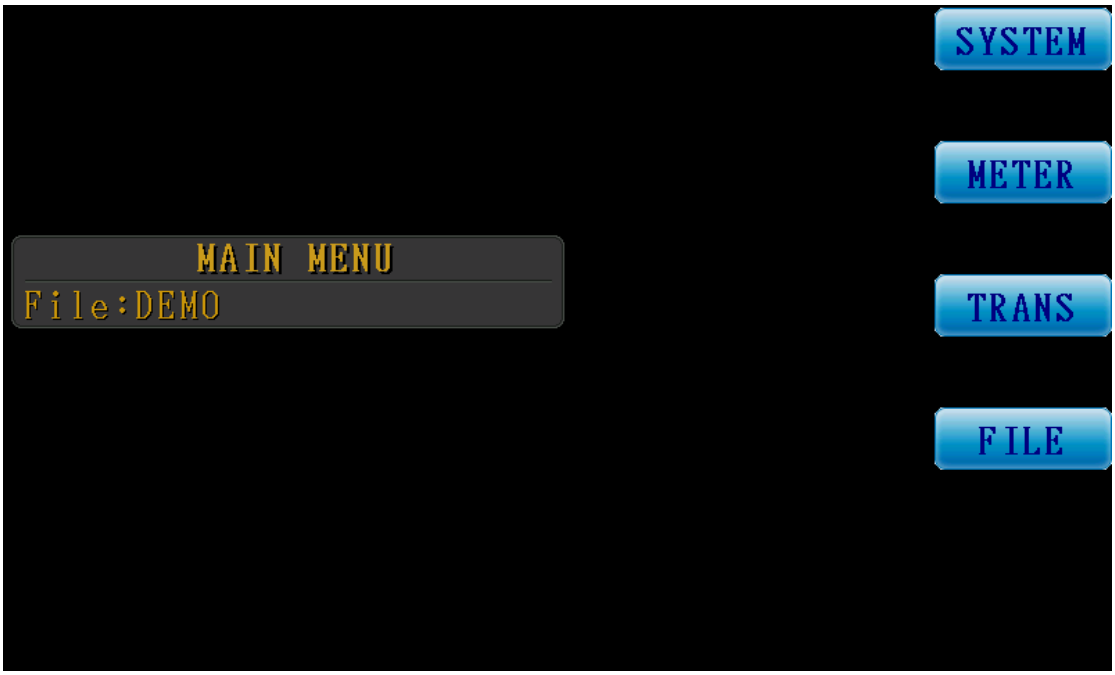
2.6 Setting process



Chapter 3 6265/ 6266/ 6267 Function Setting

3.1 Main Menu

Press the **Menu** control key and the screen will enter the Main Menu screen.



- SYSTEM: Enters the system setting screen (System Setup).
- METER: Enters the meter measurement mode (Meter Mode).
- TRANS: Enters the transformer test setting function screen (Transformer Setting Menu).
- FILE: Enters the file management screen (File Management).

3.2 System Setup (SYSTEM)

Press the **Menu** control key to enter the Main Menu screen, and then select **SYSTEM** to enter the system setting screen.

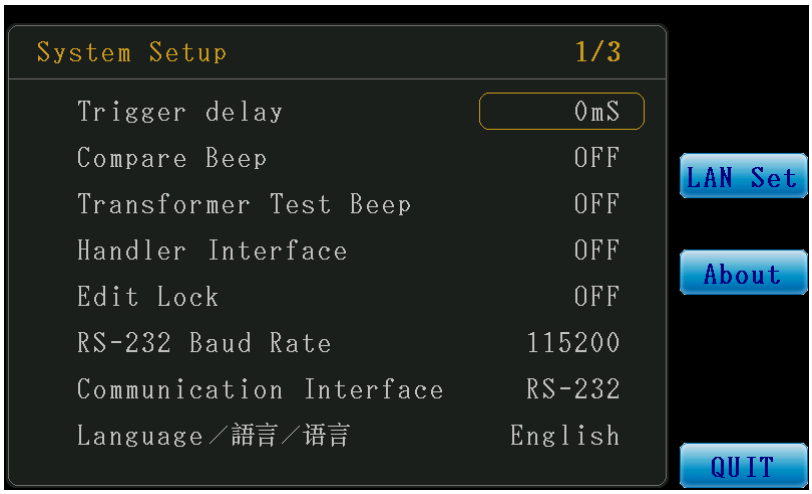


Figure 3-2-1 System Setup (1/3) screen

1. **Trigger delay (mS):** Sets the trigger delay time; the setting range is 0~5000 and the unit is mS. (This function is applicable for Meter Mode and transformer test mode.)

2. **Compare Beep:** Sets the time for the buzzer to prompt when the compare function is enabled in Meter Mode. The Select function key can be used to make selections.
   - **OFF:** Disable prompt.
   - NG: Prompt when any one item exceeded setting range (FAIL).
   - OK: Prompt only when all items with compare enabled are within the setting range (PASS).

3. **Transformer Test Beep**: Test result prompt setting when in transformer test mode; the Select function key can be used to make selections.
   - **ALL:** Prompt is enabled whether the test result is PASS/FAIL.
   - **OK:** Enable prompt only when the test result is PASS.
   - **NG:** Enable prompt only when the test result is FAIL.
   - **OFF:** Disable prompt.

4. **Handler Interface**: Sets Handler Interface function ON/OFF; the Select function key can be used to make selections.
   - **ON:** Enables the Handler Interface function.
   - **OFF:** Disables the Handler Interface function.
5. **Edit Lock**：Edit lock function, if there is a password, it will prompt to enter the password, and the setting value can be changed after confirming the old password.
   - **ON** ：Open the Edit Lock function.
   - **OFF**：Close the Edit Lock function.

   ※**If you want to set/change password, you can set it on right side function key[Set P/W].**

6. **RS-232 Baud Rate**: Sets the baud rate of the serial communication port; the Select function key can be used to make selections. The following baud rates can be selected: 115200/56000/384000/19200/9600 bps.

   Transmission format: 8/N/1 (8 Data Bit/ No Parity Bit/ 1 Stop Bit)

7. **Communication Interface**: Communication interface setting; select the communication interface to use RS-232/LAN.

8. **Language:** Language setting; the Select function key can be used to make selections. Three options are available for selection, including English, Traditional Chinese and Simplified Chinese.

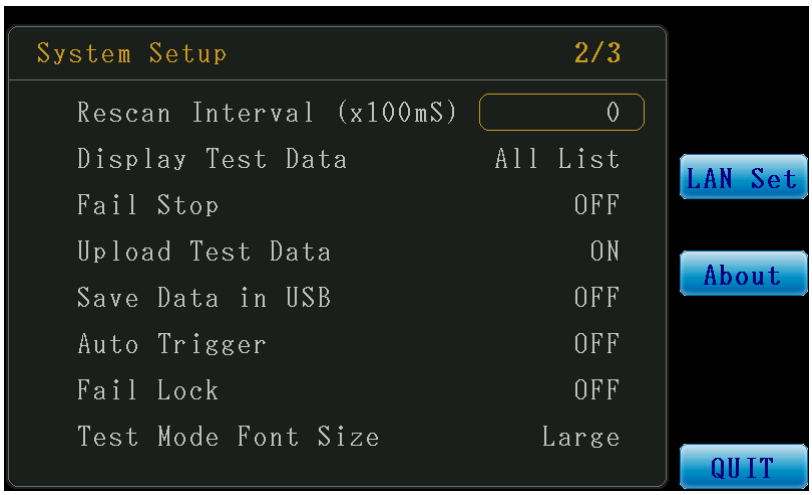


Figure 3-2-2 System Setup (2/3) screen

9. **Rescan Interval (x100mS)**: Sets the time for continual test and continual test intervals in transformer test mode; the setting range is between 0~100.

- When the value is set as 0, the continual test function is disabled.
- When the value is set between 1~100, the continual test function is enabled and the time for continual test intervals is the value set x100mS.

Example:

When the value is set as 5, the time for the continual test interval is 500mS. (5x100mS=500mS)

10. **Display Test Data:** Sets the display method of the transformer test data.

- **ALL List:** Display on the screen whether the test data is PASS/FAIL.
- **NG List:** Only display FAIL data on the screen.

11. **Fail Stop:** Sets whether to turn the test fail stop function ON/OFF under transformer test mode.

- **ON:** Enables test stop function. (When an item is tested as FAIL, the test stops)
- **OFF:** Disables test top function.

12. **Upload Test Data:** Sets whether to turn the data upload function ON/OFF under transformer test mode.
    - **ON:** Enables the test data upload function. When the test is complete, the test data will be automatically uploaded through the communication port (RS-232/LAN) set.
    - **OFF:** Disables the test data upload function.

13. **Save Data in USB:** Sets whether to turn the save test data to USB flash drive function ON/OFF under transformer test mode.
    - **ON:** Enables the save test data to USB flash drive function; once test is completed, the test data will be saved into the USB flash drive.
    - **OFF:** Disables the save test data to USB flash drive function.

      ※When this function is enabled, please ensure that a USB flash drive is connected to the machine.

14. **Auto Trigger：In the Trans test mode, turn on/off to set the auto trigger function.**
    - **ON**：Open the auto trigger function.
    - **OFF**：Close the auto trigger function.

＊WARNING：To avoid cut your hands, please do not using when the fixture is working by cylinder.

15. **Fail Lock**：If you need to lock the device when the test result is “fail”.
    - **ON**：Open the fail lock function.
    - **OFF**：Close the fail lock function.

16. **Test Mode Font Size**：To set the font display large/small in the test mode.
    - **Large**：Test mode font display Large(Default).
    - **Small**：Test mode font display small.

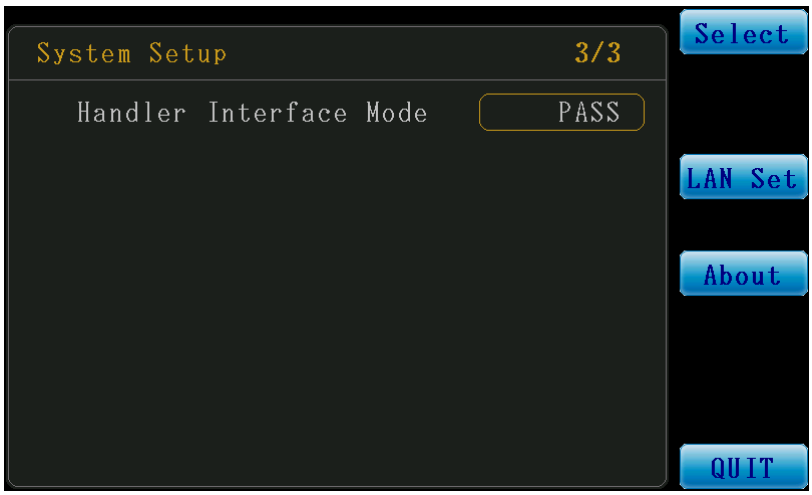


Figure 3-2-3 System Setup (3/3) screen

17. **Handler Interface Mode**：Use the select function key to set the output signal of Handler Interface are “Pass” or “Fail” in the both of test mode and multi-DUT mode.
    - **PASS**：Will output when each DUT test result is "Pass".
    - **FAIL**：Will output when each DUT test result is "Fail".

    (The HANDLER INTERFACE pin define can refer the 3.9 Handler Interface)

18. **About**: Displays the version information and serial number of the machine.

19. **LAN Set**: Local area network (LAN) communication interface setting.
    - To allow the instrument to communicate through the local area network (LAN), the network cable must be connected and its IP address must be configured.

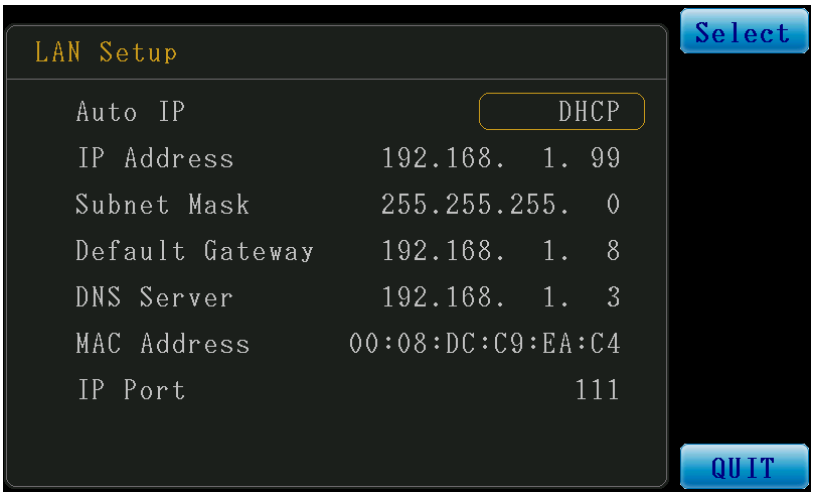


Figure 3-2-4 LAN Setup screen

- Auto IP: Sets whether to acquire IP automatically or configure manually.
  - DHCP: Acquire available IP address automatically though the DHCP server.
    - ※ When this setting is used, no other fields need to be set, and therefore the cursor cannot move down.
  - OFF: Configure the IP address, subnet mask and default gateway etc. manually.
- IP Address: IP address setting field.
- Subnet Mask: Subnet mask setting field.
- Default Gateway: Default gateway setting field.
- DNS Server: DNS server setting field.
- MAC Address: MAC address display.
- IP Port: Communication port; currently it is fixed at 111.

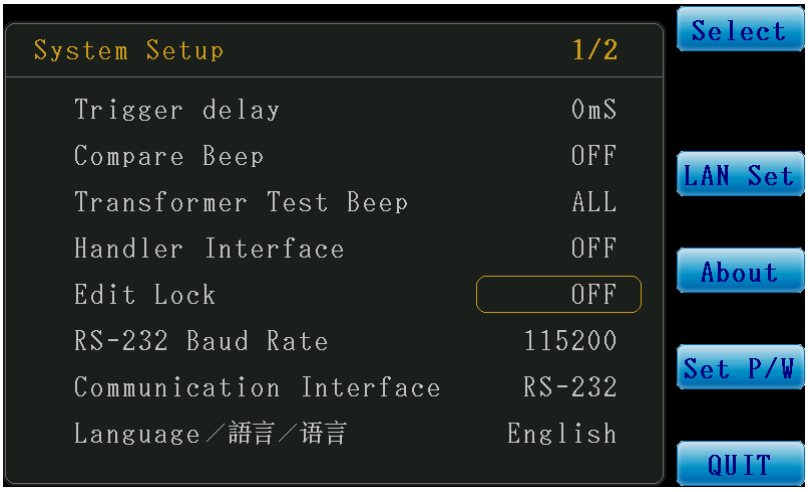


Figure 3-2-5 Set P/W

20. **Set P/W**：Set password function to avoid the Edit Lock function can be modifying arbitrarily.

    The following sets the password according to different situations:

    - **Set new password:** This state is that you never set the password, if you want to select the password, please follow the steps as below,

      Enter new password >> Confirm password >> Enter the same password twice to complete.

    - **Change password** ：This state is you have done set the password and you want to change the password, please follow the steps as below,

      Enter the current password >> Enter the new password >> Confirm password >> Enter the same password twice to complete.

    - **Clean password**： This state is you have done set the password and you want to clean the password, please follow the steps as below,

      Enter the current password >> Enter the new password (Enter nothing)>> Confirm password (Enter nothing again) >> Enter the same password (Enter nothing) twice to complete.

3.3 Transformer Setting Menu

Press the **Menu** control key, the screen will display the Main Menu; then press **Trans** to enter the transformer setting menu. This is where the various transformer test items can be edited.

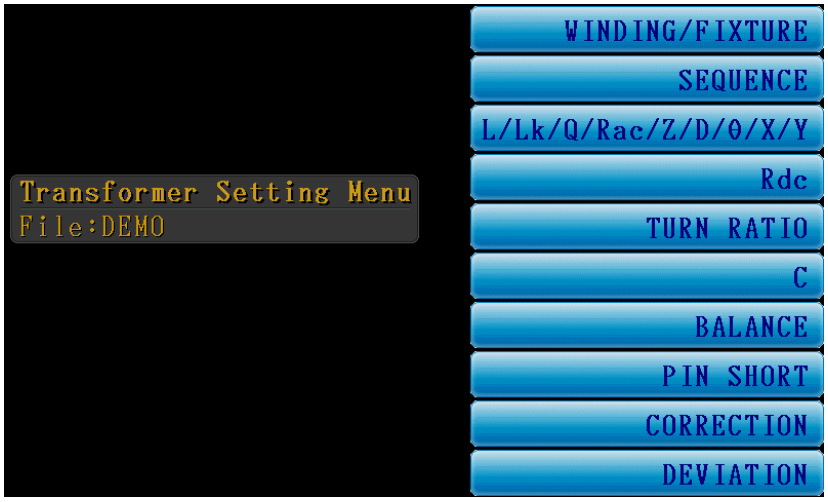


Figure 3.3.1 Transformer Setting Menu screen

3.3.1 WINDING/FIXTURE Setting

WINDING/FIXTURE: Transformer winding setting/Transformer and fixture pin allocation.

- Transformer pin allocation (Allocate Pin to Fixture) setting description:

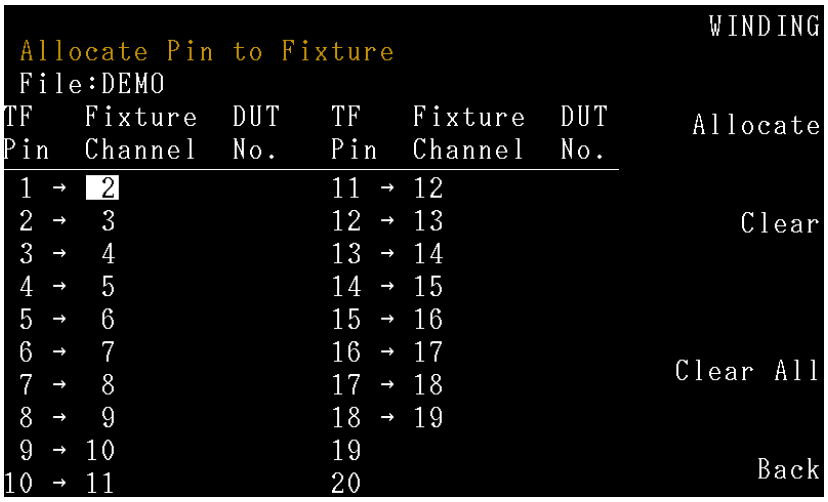


Figure 3.3.2 **Allocate Pin to Fixture** screen

1. **TF Pin:** Transformer pin, no need for setting and maximum pin 20.

2. **Fixture Channel:** Configures the position where each transformer pin is inserted on the fixture terminal; set using the number keys.
3. **DUT No.**：Multi DUT can be set by 1~12 with number keys. When the test DUT more than one then you can use different number to distinguish the DUT.
4. **Allocate:** Automatic transformer pin allocation; after entering the two parameters below and pressing the ENTER key**,** the corresponding pins of the transformer and fixture will be set automatically.
   Transformer total pins: Enter the total number of PINs of the transformer.
   Fixture start channel: Enter the position where PIN1 of the transformer will be inserted on the fixture.
5. **WINDING:** Enters the transformer winding setting screen.
6. **Clear:** Clears a single setting.
7. **Clear All:** Clears all settings previously made for the corresponding transformer pins to the fixture.
8. **Back:** Exits and returns to the function setting menu.

- **Transformer Winding Setting Description:**

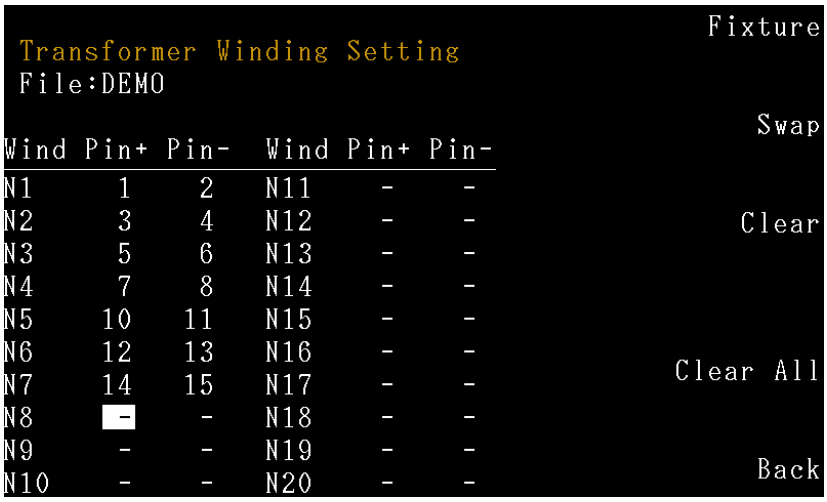


Figure 3.3.3 **Transformer Winding Setting** screen

1. **Wind** Transformer coil winding name (N1~N20); does not need to be set.
   Pin+: Sets the positive pin of the transformer winding.
   Pin-: Sets the negative pin of the transformer winding.
   Swap: Swaps the Pin+ and Pin- pins.
2. **Clear:** Clears a single setting.
3. **Clear All:** Clears all settings previously made for the corresponding transformer pins to the fixture.
4. **Back:** Exits and returns to the function setting menu.

3.3.2 Test Sequence Setting

Test Sequence Setting: Sets the test order of each item / whether to test each item.

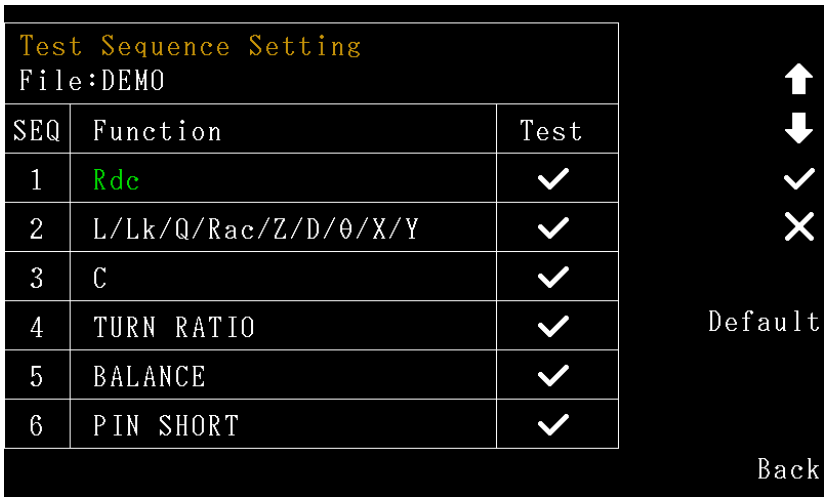


Figure 3.3.4 **Allocate Pin to Fixture** screen

Test Sequence Setting：

1. : Changes test order, it moves the currently selected test item up/down by one slot.
2. : Sets whether to enable/disable test for the currently selected test item.
3. **Default:** Restore default values.
4. **Back:** Exits and returns to the function setting menu.

3.3.3 L/Lk/Q/Rac/Z/D/θ/X/Y Setting

L/Lk/Q/Rac/Z/D/θ/X/Y Setting: Ls (serial inductance), Lp (parallel inductance), Lk (leaking inductance), Q (quality factor), Rs (serial resistance), Rp (parallel resistance), Z (impedance), D (dissipation factor), θ (phase angle), X (reactance), Y (admittance) test item settings; the screen is as shown below.

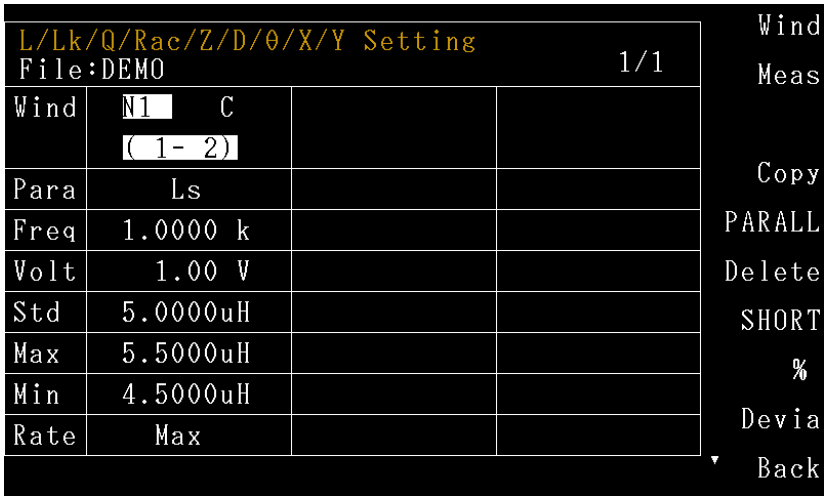


Figure 3.3.5 Ac test item setting

L/Lk/Q/Rac/Z/D/*θ*/X/Y setting description:

1. **Wind:** Transformer coil winding setting field; select the Wind function key to the right to enter settings.

   Right function keys descriptions:

   - **Wind:** Press this function key to select previously edited coil winding.
   - **Meas:** Measurement key; fixtures can be used to measure the value of the DUT for this item, and you can choose whether to carry over this measured value to be used as the standard value for this test item. (Put the DUT in place before measuring.)
   - **Copy:** Copy this set of test item to the next set.
   - **PARALL:** Sets the parallel pins of the transformer; press the PARALL key to enter the setting screen.
   - **Delete:** Deletes this set of test item.
   - **SHORT:** Sets the short-circuit pins of the transformer; press the SHORT key to enter the setting screen.
   - **%**: Sets the upper and lower limit values using percentage (%); its value is calculated using the standard value.
   - **Devia:** Compensation function; fixtures can be used to measure the value of the DUT for this item, the system will calculate the deviation between this measured value and the standard value of this item automatically. When the

use of this compensation value is confirmed, this error value will be compensated automatically during testing. (Put the DUT in place before measuring.)

- **Back:** Exits this function screen.

2. **Para:** Test item field; test items displayed by the function keys to the right of the screen can be selected, as shown in the figure below:

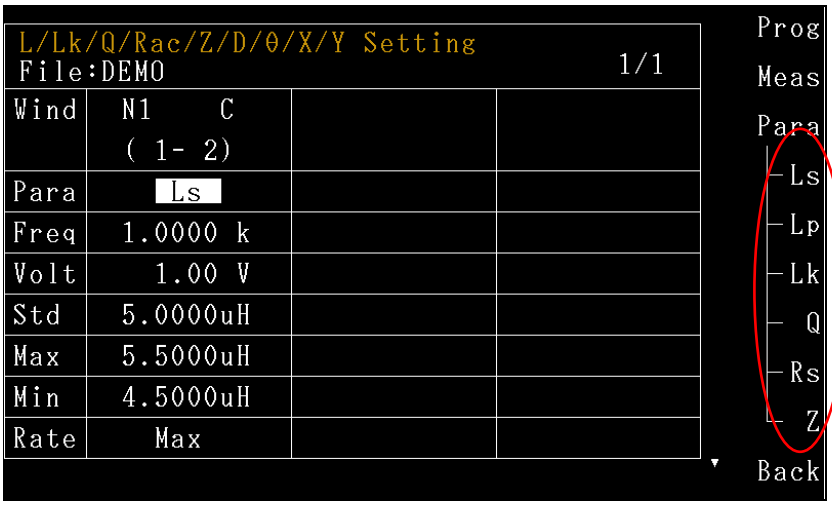


Figure 3.3.6 Ac test parameter

The software key (Para) to the right of the screen can be used to switch between test items, which include the Ls, Lp, Lk, Q, Rs, Z, D, θ, Rp, X and Y test parameters.

3. **Freq:** Sets the test frequency field.
4. **Volt:** Sets the test voltage field.
5. **Std:** Sets the standard value; the following three input methods can be used:
   - Enter the value using the number keys directly.
   - Press the **Meas** function key to the right to acquire the measurement value to use as the standard value directly, as shown in the figure below:

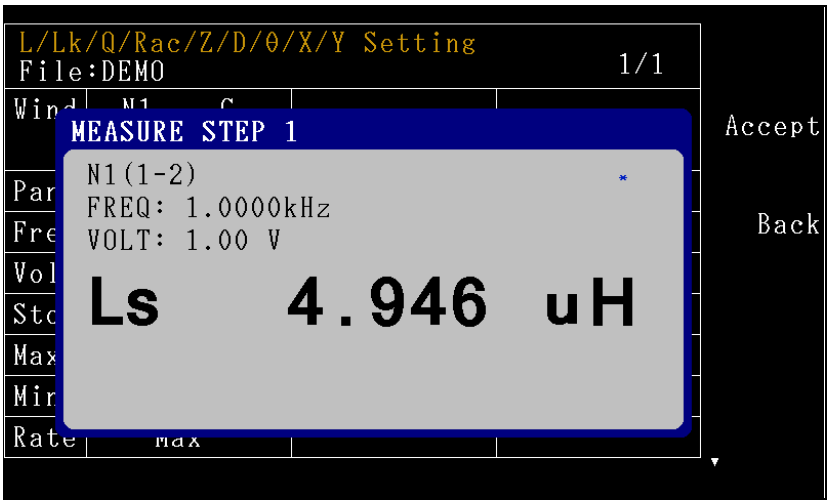


Figure 3.3.7 Ac test item Measure

Meas function software key description:

- **Accept:** Confirm the use of this measured value as the standard value and return to the edit screen.
- **Back:** Do not use the current measured value and return to the edit screen.

- First enter the standard value in the standard value field, then press the Devia function key to the right to use compensation to automatically compensate the measured value to the standard value entered. After confirming, the system will automatically record this compensation value entry and automatically add the compensation value when testing this item. The screen is as shown below:

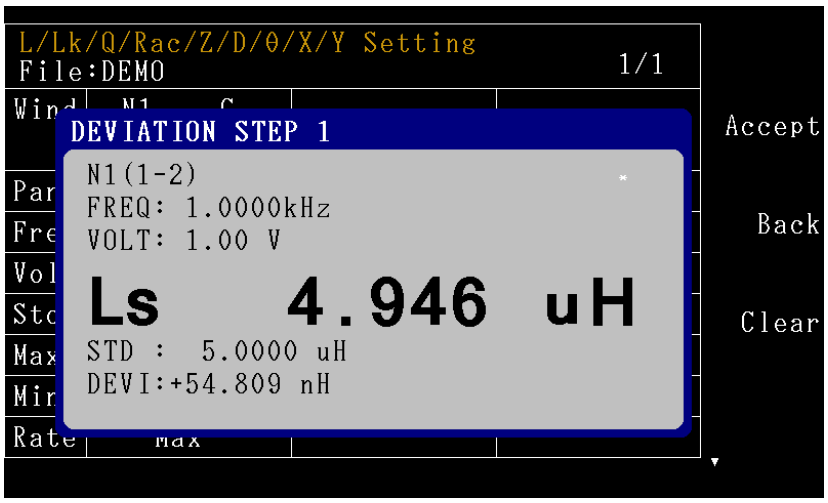


Figure 3.3.8 Deviation

Devia function description:

- **Ls:** Test parameter and measured value display field; this value is the actual measured value.
- **STD:** Standard value display field; this is the standard value set for this test item.
- **DEVI:** Deviation value display field; it is the difference between the standard value (STD) set and the current measured value. If the use is confirmed, this value will be saved as the compensation value.
- **Accept:** Confirm the use of the compensation value and return to the edit screen.
- **Back:** Do not use the compensation value and return to the edit screen.
- **Clear:** Clear the saved compensation value and return to the edit screen.

※Please perform fixture calibration reset before using methods b and c.

6. **Max, Min:** Sets the upper and lower limit field; the value can be entered directly or use the % key to perform settings. In the Limit Setting window, enter the percentage values for the upper and lower limit respectively; after pressing the Enter key, the system will automatically carry of the value to the Max and Min fields. The screen is as shown below:

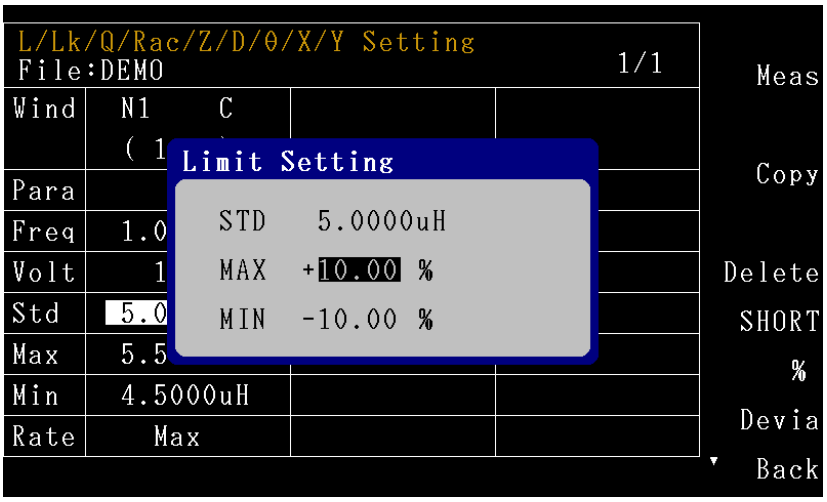


Figure 3.3.9 Limit setting

7. **Rate:** Measurement speed setting field; four measurement speeds are available for selection: MAX/FAST/MED/SLOW.

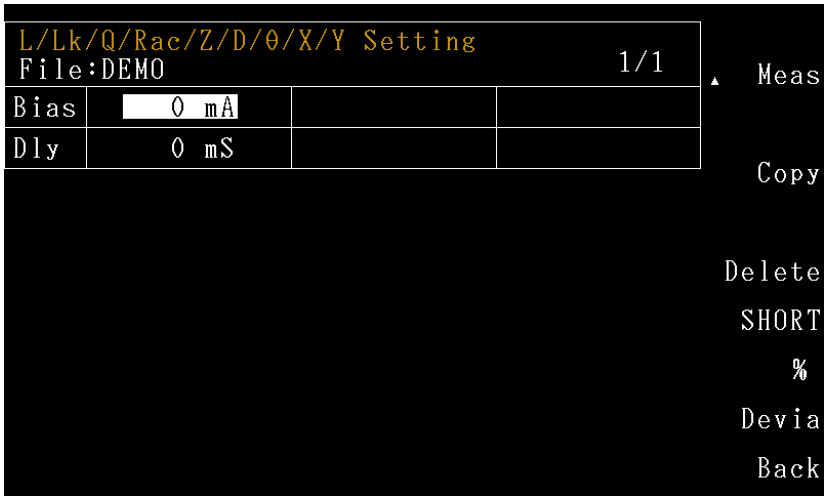


Figure 3.3.10 Bias & Dly

8. **Bias:** DC Bias Current function; the setting range is between 0~100mA. This function must be used with fixtures equipped with the DC Bias Current function (optional purchase).

9. **Dly:** Delay time setting field; the setting range is between 0~9999mS.

3.3.4 Rdc Setting

Rdc Test Setting: Direct current resistance test item setting; the screen is as follows.



Figure 3.3.11 Rdc setting

Rdc setting description：

1. **Wind:** Transformer coil winding setting field; select the Wind function key to the right to enter settings.
   Right function keys descriptions:
   - **Wind:** Press this function key to select previously edited coil winding.
   - **Meas:** Measurement key; fixtures can be used to measure the value of the DUT for this item, and you can choose whether to carry over this measured value to be used as the standard value for this test item. (Put the DUT in place before measuring.)
   - **Copy:** Copy this set of test item to the next set.
   - **PARALL:** Sets the parallel pins of the transformer; press the PARALL key to enter the setting screen.
   - **Delete:** Deletes this set of test item.
   - **SHORT:** Sets the short-circuit pins of the transformer; press the SHORT key to enter the setting screen.
   - **%**: Sets the upper and lower limit values using percentage (%); its value is calculated using the standard value.
   - **Devia:** Compensation function; fixtures can be used to measure the value of the DUT for this item, the system will calculate the deviation between this measured value and the standard value of this item automatically. When the use of this compensation value is confirmed, this error value will be compensated automatically during testing. (Put the DUT in place before measuring.)
   - **Back:** Exits this function screen.

2. **Std:** Sets the standard value; the following three input methods can be used:
   a. Enter the value using the number keys directly.
   b. Press the Meas function key to the right to acquire the measurement value to use as the standard value directly, as shown in the figure below:

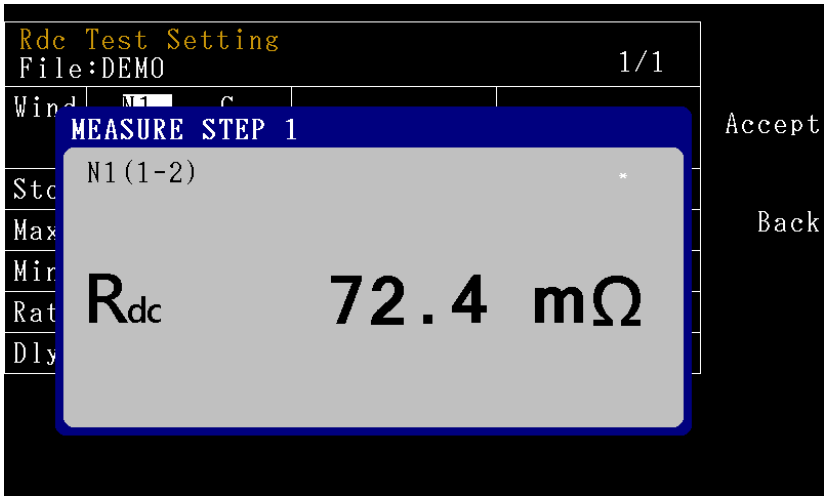


Figure 3.3.12 Rdc measure

Meas function software key description:

- **Accept:** Confirm the use of this measured value as the standard value and return to the edit screen.
- **Back:** Do not use the current measured value and return to the edit screen.

c. First enter the standard value in the standard value field, then press the Devia function key to the right to use compensation to automatically compensate the measured value to the standard value entered. After confirming, the system will automatically record this compensation value entry and automatically add the compensation value when testing this item. The screen is as shown below:

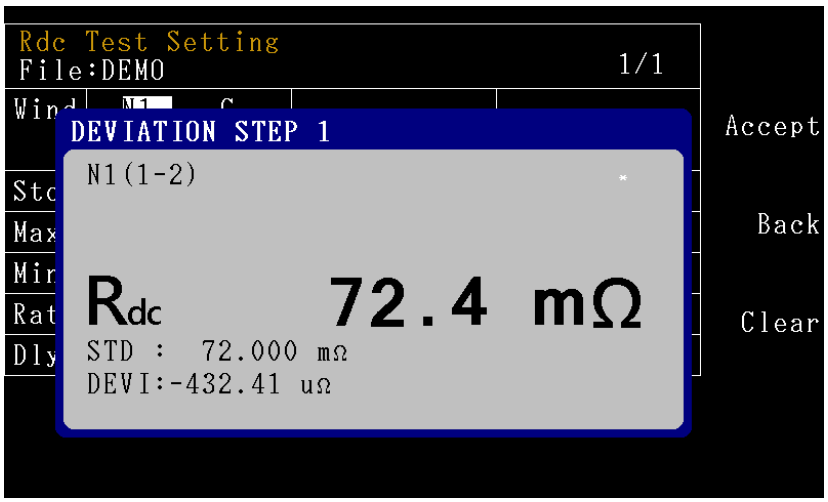


Figure 3.3.13 Rdc deviation

Devia function description:

- **Rdc:** Test parameter and measured value display field; this value is the actual measured value.
- **STD:** Standard value display field; this is the standard value set for this test item.
- **DEVI:** Deviation value display field; it is the difference between the standard value (STD) set and the current measured value. If the use is confirmed, this value will be saved as the compensation value.
- **Accept:** Confirm the use of the compensation value and return to the edit screen.
- **Back:** Do not use the compensation value and return to the edit screen.
- **Clear:** Clear the saved compensation value and return to the edit screen.

※Please perform fixture calibration reset before using methods b and c.

3. **Max, Min:** Sets the upper and lower limit field; the value can be entered directly or use the % key to perform settings. In the Limit Setting window, enter the percentage values for the upper and lower limit respectively; after pressing the Enter key, the system will automatically carry of the value to the Max and Min fields. The screen is as shown below:

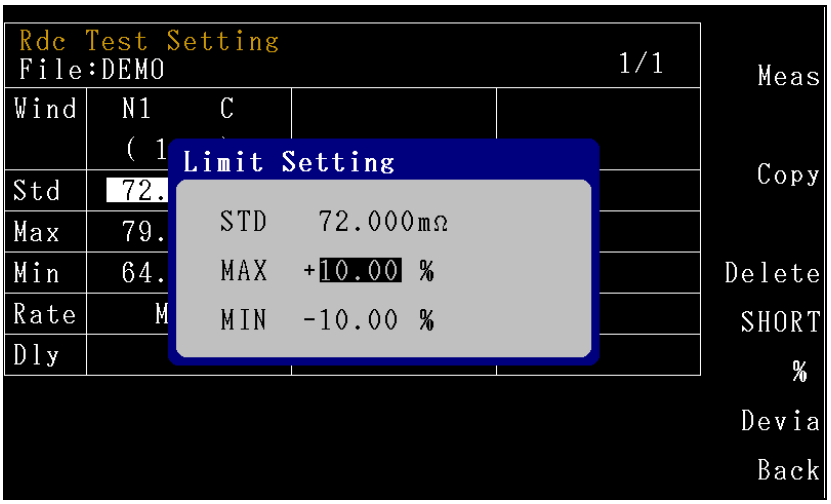


Figure 3.3.14 Rdc limit setting

4. **Rate:** Measurement speed setting field; four measurement speeds are available for selection: MAX/FAST/MED/SLOW.

5. **Dly:** Delay time setting field; the setting range is between 0~9999mS.

3.3.5 Turn Ratio Test Setting

Turn Ratio Test Setting：

※ It is strongly recommended that when editing this step, place windings with more coils at the initial end and the windings with fewer coils at the secondary end in order to prevent forced amplification of the signal and generating a voltage that is too high, exceeding the measurement range acceptable to the instrument.

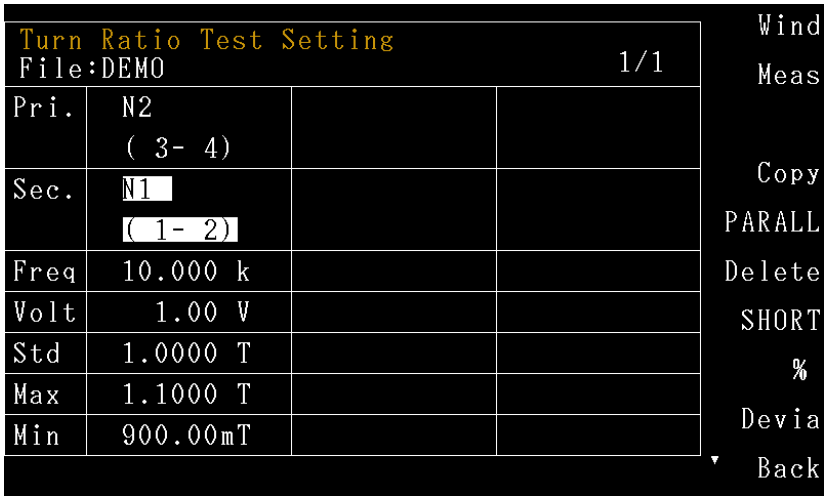


Figure 3.3.15 Turn ratio setting

Turn ratio setting description:

1. **Pri., Sec.:** Primary winding and secondary winding setting fields of the transformer cable; select the Wind function key to the right to enter settings.

   Right function keys descriptions:

   - **Wind:** Press this function key to select previously edited coil winding.
   - **Meas:** Measurement key; fixtures can be used to measure the value of the DUT for this item, and you can choose whether to carry over this measured value to be used as the standard value for this test item. (Put the DUT in place before measuring.)
   - **Copy:** Copy this set of test item to the next set.
   - **PARALL:** Sets the parallel pins of the transformer; press the PARALL key to enter the setting screen.
   - **Delete:** Deletes this set of test item.
   - **SHORT:** Sets the short-circuit pins of the transformer; press the SHORT key to enter the setting screen.
   - **%**: Sets the upper and lower limit values using percentage (%); its value is calculated using the standard value.

- **Devia:** Compensation function; fixtures can be used to measure the value of the DUT for this item, the system will calculate the deviation between this measured value and the standard value of this item automatically. When the use of this compensation value is confirmed, this error value will be compensated automatically during testing. (Put the DUT in place before measuring.)
- **Back:** Exits this function screen.

2. **Std:** Sets the standard value; the following three input methods can be used:
   - **a.** Enter the value using the number keys directly.
   - **b.** Press the Meas function key to the right to acquire the measurement value to use as the standard value directly, as shown in the figure below:

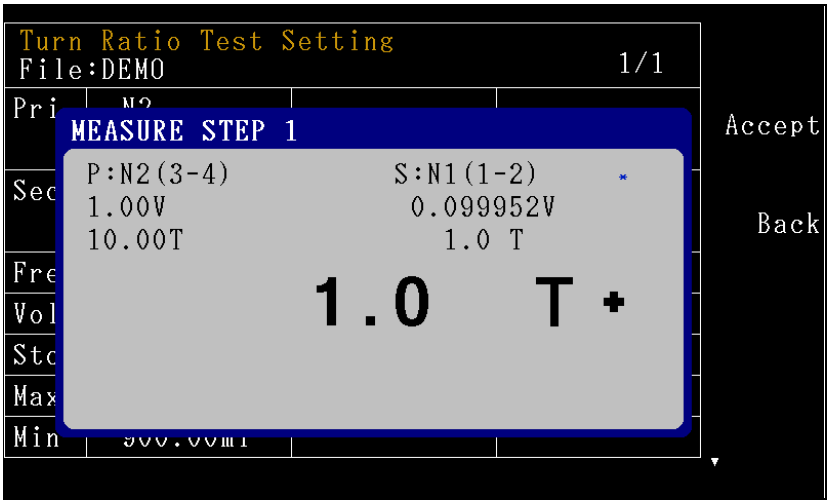


Figure 3.3.16 Turn ratio measure

Meas function software key description:

- **Accept:** Confirm the use of this measured value as the standard value and return to the edit screen.
- **Back:** Do not use the current measured value and return to the edit screen.
  (The "+" sign displayed to the right of the measured value is the polarity; the polarity might be "+" or "-" according to different test conditions.)

   - **c.** First enter the standard value in the standard value field, then press the Devia function key to the right to use compensation to automatically compensate the measured value to the standard value entered. After confirming, the system will automatically record this compensation value

entry and automatically add the compensation value when testing this item. The screen is as shown below:

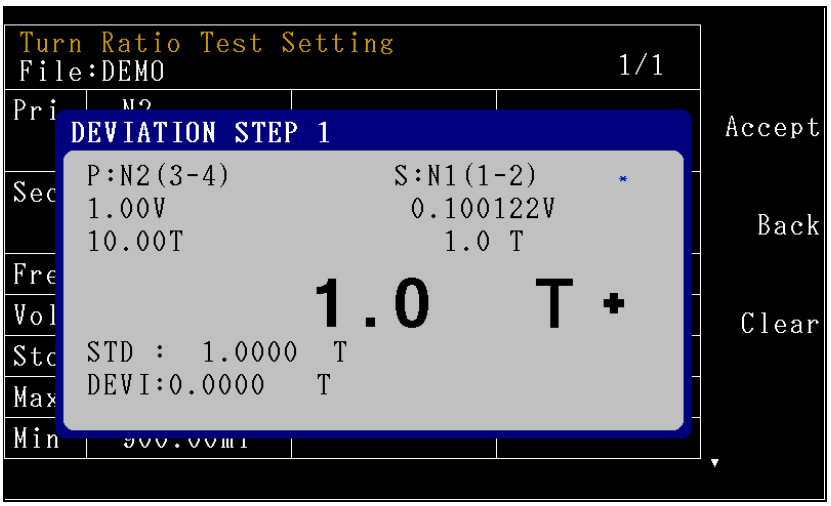


Figure 3.3.17 Turn ratio deviation

Devia function description:

- **Rdc:** Test parameter and measured value display field; this value is the actual measured value.
- **STD:** Standard value display field; this is the standard value set for this test item.
- **DEVI:** Deviation value display field; it is the difference between the standard value (STD) set and the current measured value. If the use is confirmed, this value will be saved as the compensation value.
- **Accept:** Confirm the use of the compensation value and return to the edit screen.
- **Back:** Do not use the compensation value and return to the edit screen.
- **Clear:** Clear the saved compensation value and return to the edit screen.

(The “+” sign displayed to the right of the measured value is the polarity; the polarity might be “+” or “-” according to different test conditions.)

3. **Max, Min:** Sets the upper and lower limit field; the value can be entered directly or use the % key to perform settings. In the Limit Setting window, enter the percentage values for the upper and lower limit respectively; after pressing the Enter key, the system will automatically carry of the value to the Max and Min fields. The screen is as shown below:

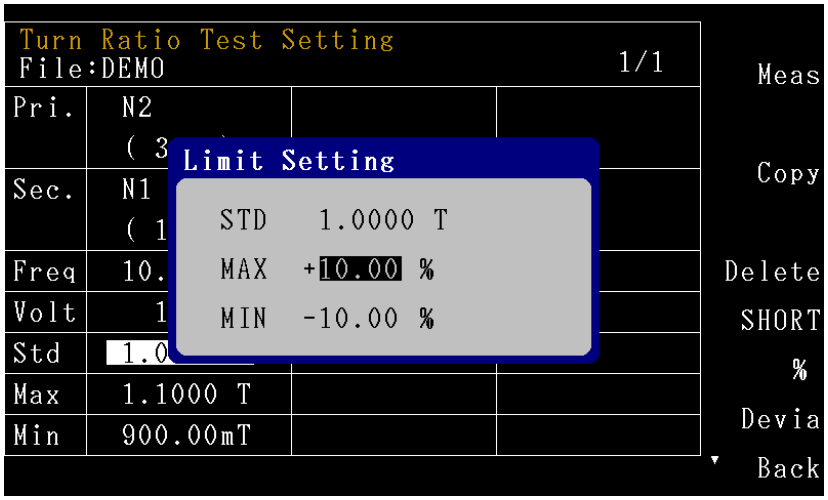


Figure 3.3.18 Turn ratio limit setting

4. **Mode:** Measurement mode setting field; two measurement modes Turn and Volt are available for selection.
   - **Turn:** The test value is displayed using the number of turns.
   - **Volt:** The test value is displayed using voltage value.
5. **PriT:** Number of preliminary winding turns setting field.
6. **Pol:** Polarity setting field; “+”, “-” or “OFF” are available for selection.
7. **Rate:** Measurement speed setting field; four measurement speeds are available for selection: MAX/FAST/MED/SLOW.
8. **Dly:** Delay time setting field; the setting range is between 0~9999mS.

3.4.6 Capacitance Testing Setting

Capacitance Test Setting screen as below:

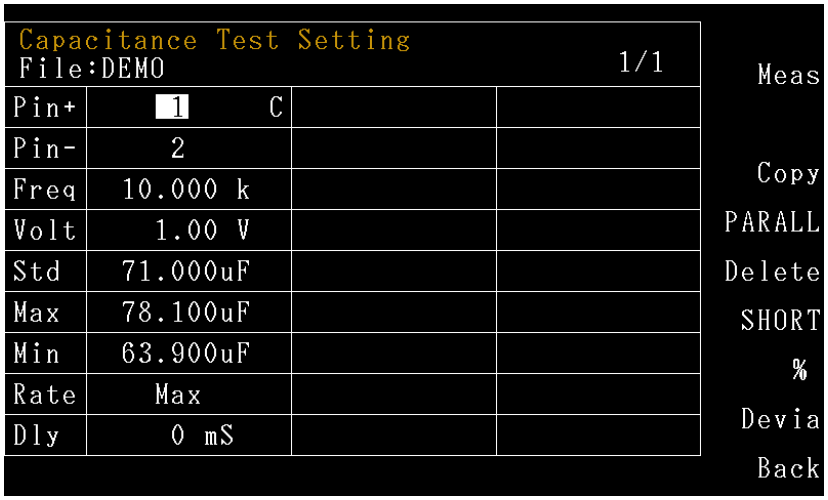


Figure 3.3.19 Capacitance setting

Capacitance test setting description:

1. **Pin+, Pin-:** Sets the pin of the transformer to measure the capacitance value.

   Right function keys descriptions:

   - **Meas:** Measurement key; fixtures can be used to measure the value of the DUT for this item, and you can choose whether to carry over this measured value to be used as the standard value for this test item. (Put the DUT in place before measuring.)
   - **Copy:** Copy this set of test item to the next set.
   - **PARALL:** Sets the parallel pins of the transformer; press the PARALL key to enter the setting screen.
   - **Delete:** Deletes this set of test item.
   - **SHORT:** Sets the short-circuit pins of the transformer; press the SHORT key to enter the setting screen.
   - **%**: Sets the upper and lower limit values using percentage (%); its value is calculated using the standard value.
   - **Devia:** Compensation function; fixtures can be used to measure the value of the DUT for this item, the system will calculate the deviation between this measured value and the standard value of this item automatically. When the use of this compensation value is confirmed, this error value will be compensated automatically during testing. (Put the DUT in place before measuring.)
   - **Back:** Exits this function screen.

2. **Std:** Sets the standard value; the following three input methods can be used:
   - **a.** Enter the value using the number keys directly.
   - **b.** Press the Meas function key to the right to acquire the measurement value to use as the standard value directly, as shown in the figure below:

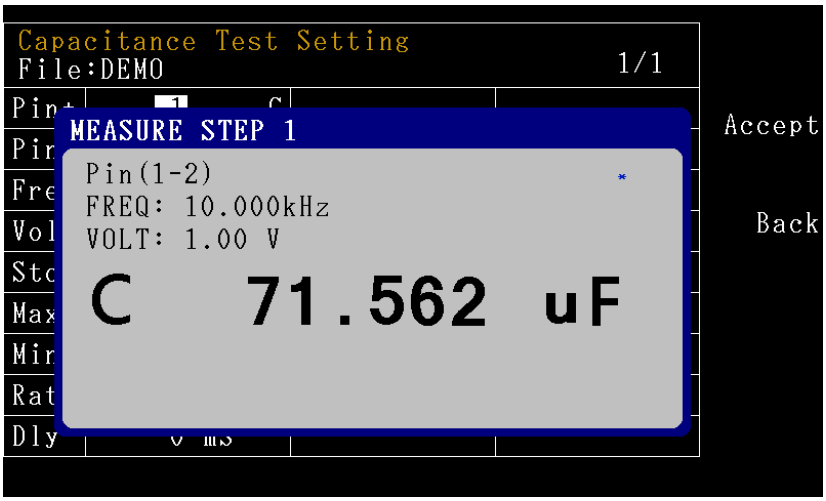


Figure 3.3.20 Capacitance measure

Meas function software key description:

- **Accept:** Confirm the use of this measured value as the standard value and return to the edit screen.
- **Back:** Do not use the current measured value and return to the edit screen.

   - **c.** First enter the standard value in the standard value field, then press the Devia function key to the right to use compensation to automatically compensate the measured value to the standard value entered. After confirming, the system will automatically record this compensation value entry and automatically add the compensation value when testing this item. The screen is as shown below:

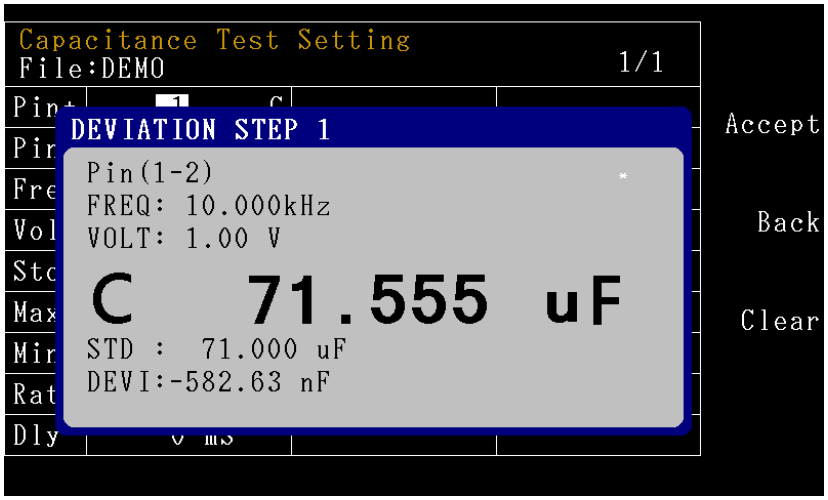


Figure 3.3.21 Capacitance deviation

Devia function description:

- **C:** Test parameter and measured value display field; this value is the actual measured value.
- **STD:** Standard value display field; this is the standard value set for this test item.
- **DEVI:** Deviation value display field; it is the difference between the standard value (STD) set and the current measured value. If the use is confirmed, this value will be saved as the compensation value.
- **Accept:** Confirm the use of the compensation value and return to the edit screen.
- **Back:** Do not use the compensation value and return to the edit screen.
- **Clear:** Clear the saved compensation value and return to the edit screen.

3. **Max, Min:** Sets the upper and lower limit field; the value can be entered directly or use the % key to perform settings. In the Limit Setting window, enter the percentage values for the upper and lower limit respectively; after pressing the Enter key, the system will automatically carry of the value to the Max and Min fields. The screen is as shown below:

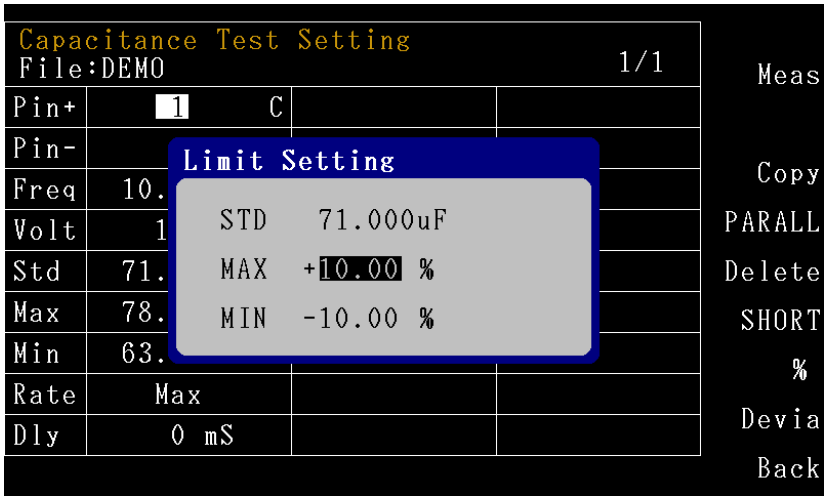


Figure 3.3.22 Capacitance limit setting

4. **Rate:** Measurement speed setting field; four measurement speeds are available for selection: MAX/FAST/MED/SLOW.

5. **Dly:** Delay time setting field; the setting range is between 0~9999mS.

3.3.7 Balance Test Setting

Balance Test Setting: Coil balance test item settings; it can compare the measured values of two sets of windings under the same conditions (test item/test frequency/test voltage). Please note that the winding that you are editing the coil balance for must be a coil winding with actual test items that have been created; otherwise, the correct results cannot be calculated.

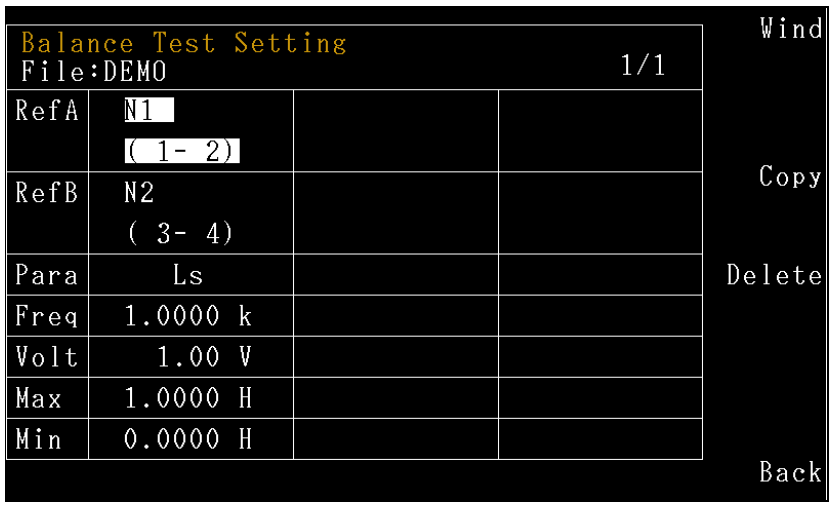


Figure 3.3.23 balance setting

Coil balance test setting description:

1. **RefA, RefB:** Sets the windings for coil balance to compare.

   Right function keys descriptions:

- **Wind:** Press this function key to select previously edited coil winding.
- **Copy:** Copy this set of test item to the next set.
- **Delete:** Deletes this set of test item.
- **Back:** Exits this function screen.

2. **Para:** Test item field; the software key (Para) to the right of the screen can be used to switch between test items, which include the Ls, Lp, Lk, Rs, Z, and DCR etc. test parameters.
3. **Freq:** Sets the test frequency field.
4. **Volt:** Sets the test voltage field.
5. **Max, Min:** Sets the upper and lower limit fields.

3.3.8 Pin Short Test Setting

Pin Short Test Setting: Transformer short-circuit test item.

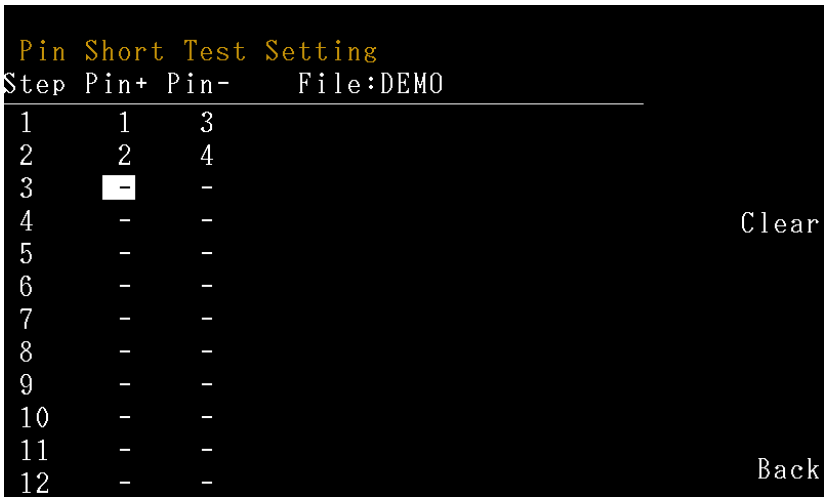


Figure 3.3.24 Pin short setting

Coil balance test setting description:

1. **Step:** Test step; a maximum of 12 short-circuit test items can be edited.
2. **Pin+, Pin-:** Sets the transformer pin combinations for the short-circuit test.

   Right function keys descriptions:

   - **Clear:** Clear key.
   - **Back:** Exits this function screen.

3.3.9 Correction Setting

Correction: Fixture error correction test; the goal for the correction is to eliminate the errors caused by parasitic capacitance or serial impedance of the fixture or test cable. The corrected and reset data will be saved in the flash memory inside the instrument; the data will not disappear even if powered off. However, frequent correction and reset is necessary because only by doing so can the most accurate measured value be acquired. Corrections usually must be performed when the test frequency or drive voltage changes.

(Before preparing for correction, please first remove the transformer on the fixture from the fixture)

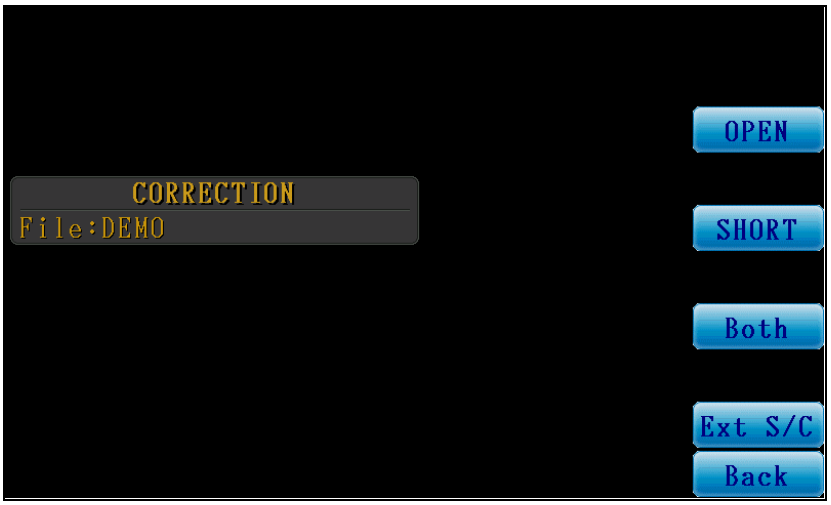


Figure 3.3.25 correction screen

Correction setting description:

1. **OPEN:** Only correct the error value of the fixture for open circuits.
2. **SHORT:** Only correct the error value of the fixture for short circuits.
3. **Both:** First correct the error value of the fixture for open circuits then correct the error value for short circuits.
4. **Ext S/C**：Perform external short correction。User should short the pins which you need to test before perform, to actually zeroing to the end of the test object.
5. **Back:** Exits this function screen.

3.3.10 Complete Deviation Setting

Complete Deviation: Uses GOLDEN SAMPLE as the standard to perform error compensation setting; it compensates the measured value to the value acknowledged by you.

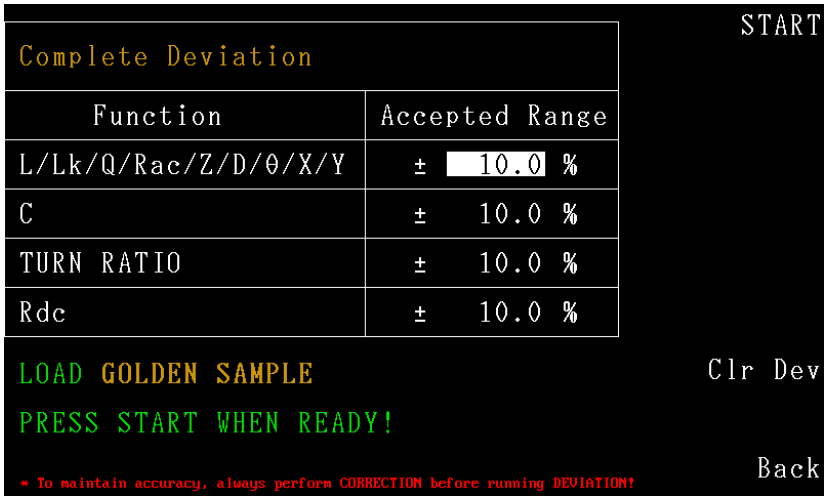


Figure 3.3.26 Complete deviation setting screen

Complete deviation setting description:

※This compensation setting requires placing the GOLDEN SAMPLE in the F5220 test fixture.

1. **Function:** Displays test items that you can perform compensation for.
2. **Accepted Range:** Upper and lower limit for compensation; use this to set the maximum range for compensation.
3. **Clr Dev:** Clear all compensation value.
4. **Back:** Exits this function screen.
5. **START:** Enters the compensation value test screen.
   - **Compensation value test description:**

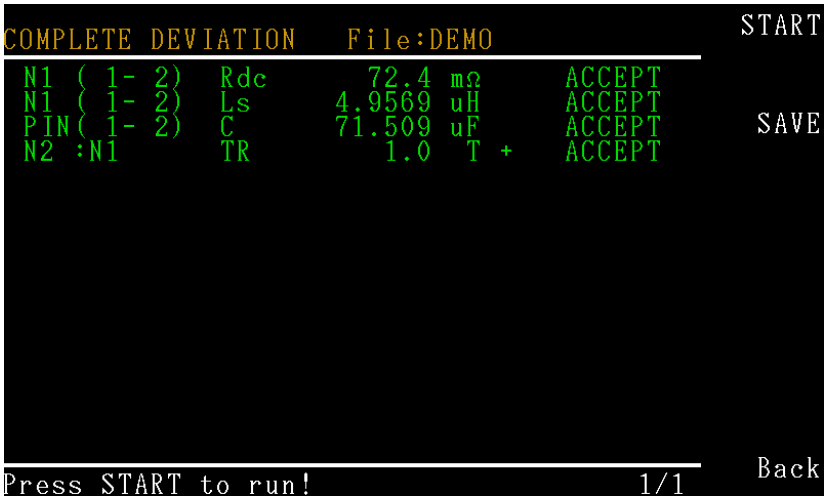


Figure 3.3.27 deviation setting screen

START: Starts performing test and calculate the compensation value; tests will be performed individually based on the test items you created. This test value will use standard value of the test item you created as the basis to perform compensation to the standard value. If the text REJECT appeared for the compensation value, it means that it exceeded the upper and lower limit for compensation and cannot be used. ACCEPT means that it is within range and is an acceptable compensation value.

SAVE: Saves the compensation value for this test.

Back: Exists this function screen.

3.4 Test Mode

When you have finished editing the step, the **Test** key on the front panel can be pressed to enter test mode, and use the **Trigger** key to perform transformer test; its test screen functions and definitions are as shown in the figure below:

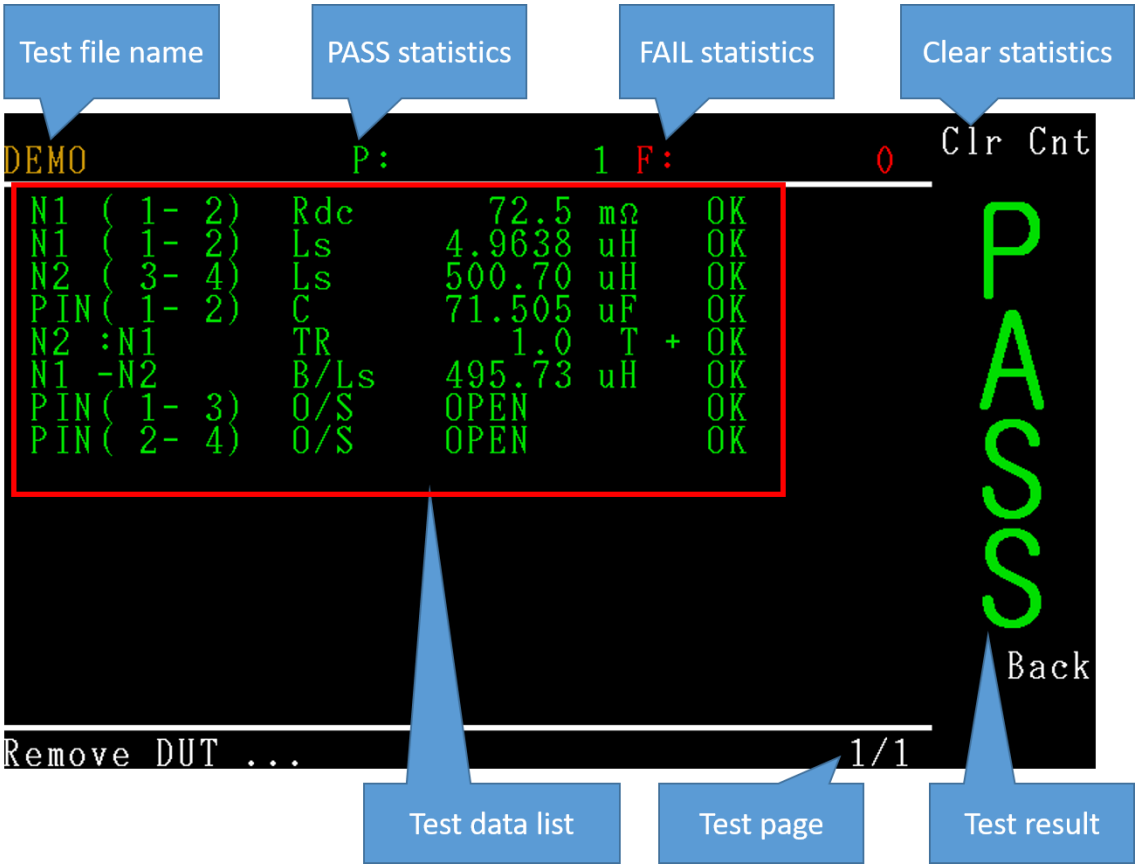


Figure 3-4-1 Multi Step Mode screen

※The maximum value of the PASS/FAIL statistics is 999,999,999 each. If this value is exceeded, it will be reset to 1 and continue to accumulate.

3.5 File Management

Under the Main Menu screen, press the **FILE** function key to enter the file management main menu.

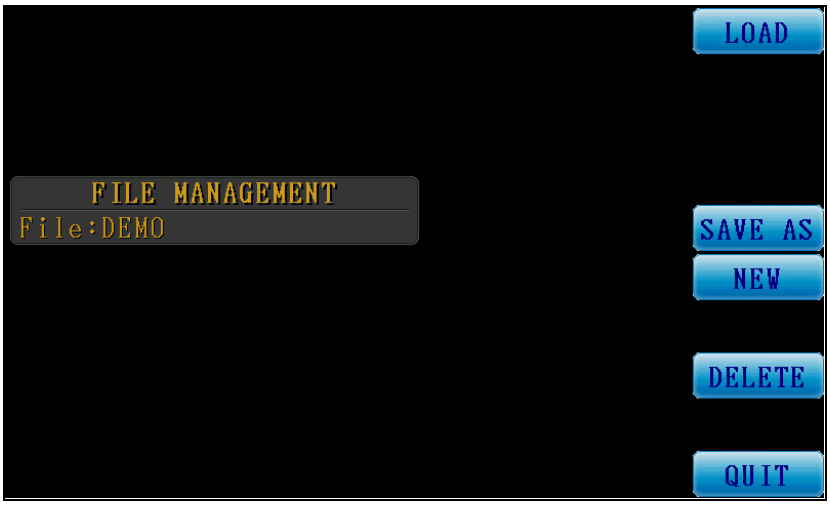


Figure 3-5-1 FILE MANAGEMENT screen

3.5.1 Loading File

The figure below is the RAM FILE (internal file list) screen; the directional keys can be used to select the file to load. For example file {001} is displayed in green, this means that it is the currently selected file. The function key {LOAD} to the right can be pressed to load the file. The file with an {@} symbol in front of the file name means it is the file that is currently being used.



Figure 3.5.2 RAM FILE screen

- **LOAD:** Loads the currently selected file.
- **USB File:** Switches to the USB flash drive file list screen; the screen is as shown below.



Figure 3.5.3 USB FILE screen

- **RAM File:** Returns to the internal file list screen.
- **Copy to RAM:** Copies the currently selected file from the USB flash drive to the internal storage of the machine.
- **All to RAM**：Copy all the file to the internal storage of the machine.

※ **Note**：If there have the same file name between USB and internal storage of the machine the file will be covered by the file in the USB.

- **PgDn:** Jump to next page.
- **PgUp:** Jump to the previous page.
- **QUIT:** Returns to the file management page.

- **Copy to USB:** Copies the currently selected file to the USB flash drive.Its saving path is (USB:\TF_6265\SetFile).
- **All to USB**：Copy all the file to the USB.
- **PgDn:** Jump to next page.
- **PgUp:** Jump to the previous page.
- **QUIT:** Returns to the file management page.

3.5.2 Saving As

The figure below is the SAVE AS (save as new file) operation interface. The directional keys can be used to select the English letters and numbers on the screen to form the file name. For example {A} is displayed in green, which means it is the currently selected letter. The function key {Select} to the right can be pressed to enter the character {A}. Once input is completed, select {OK} to complete the SAVE AS function.

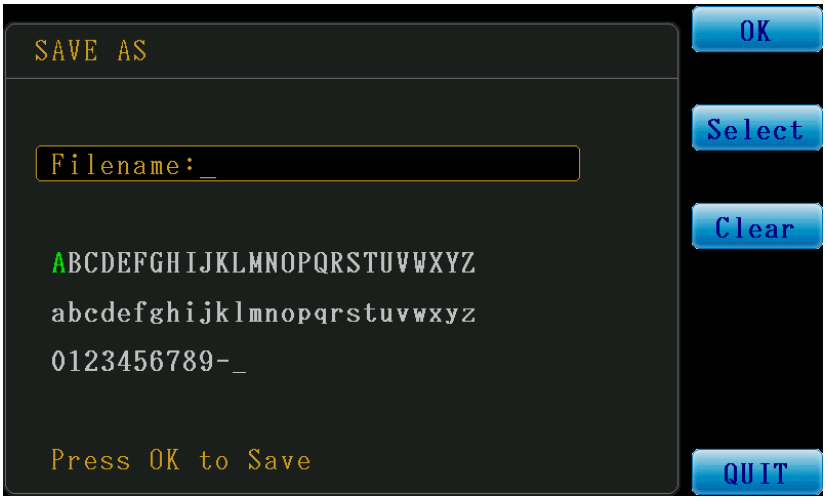


Figure 3.5.4 SAVE AS screen

- **Filename:** File name input area.
- **OK:** Save file confirm key.
- **Select:** File name text selection confirm key.
- **Clear:** File name deletion key; the letter at the end will be cleared each time it is pressed.
- **QUIT:** Returns to the file management page.

3.5.3 Creating New File

The figure below is the NEW FILE (create new file) operation interface. The directional keys can be used to select English letters and numbers on the screen to form the file name. For example {A} is displayed in green, which means it is the currently selected letter. The function key {Select} to the right can be pressed to enter the character {A}. Once input is completed, select {OK} to complete the NEW FILE function.

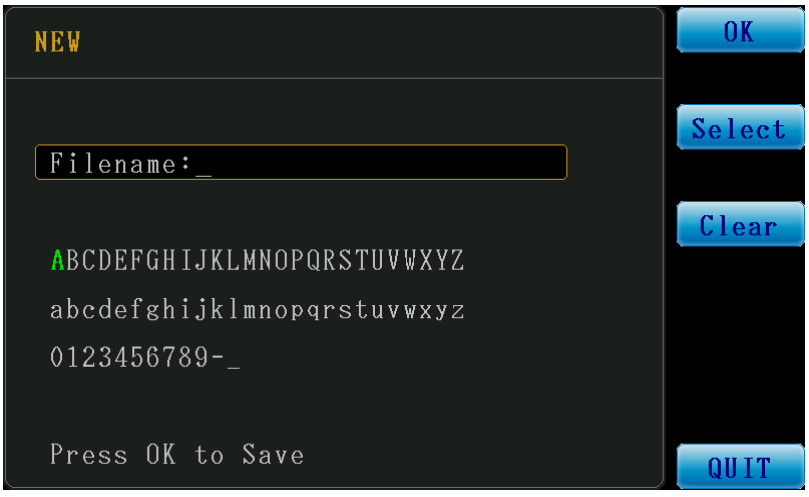


Figure 3.5.5 NEW FILE screen

- **Filename:** File name input area.
- **OK:** Save file confirm key.
- **Select:** File name text selection confirm key.
- **Clear:** File name deletion key; the letter at the end will be cleared each time it is pressed.
- **QUIT:** Returns to the file management page.

3.5.4 Deleting File

The figure below is the DELETE FILE (delete file) operation interface. The directional keys can be used to select the file to delete. For example {011} is displayed in green, which means it is the currently selected file. The function key {DELETE} to the right can be pressed to delete this file. The file name with the {@} symbol in front means it is the file currently being used and cannot be deleted. Another file must be loaded first in order to delete this file.

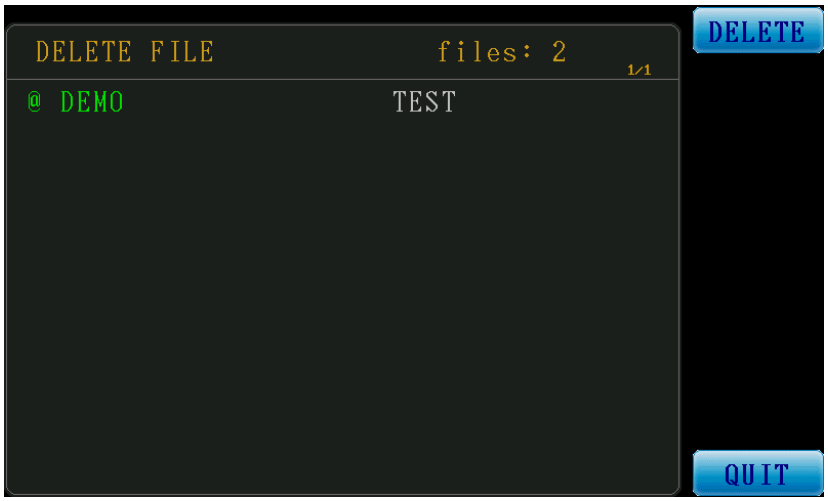


Figure 3.5.6 DELETE FILE Screen

- **DELETE:** Deletes the currently selected file.
- **PgDn:** Jump to next page.
- **PgUp:** Jump to the previous page.
- **QUIT:** Returns to the file management page.

Chapter 4 7721 Function Setting

Note: 7721 settings include settings of 7605.

4.1 System Setup Menu (Sys)

Press the **Sys** control key and the screen will enter the System Setup Menu screen.

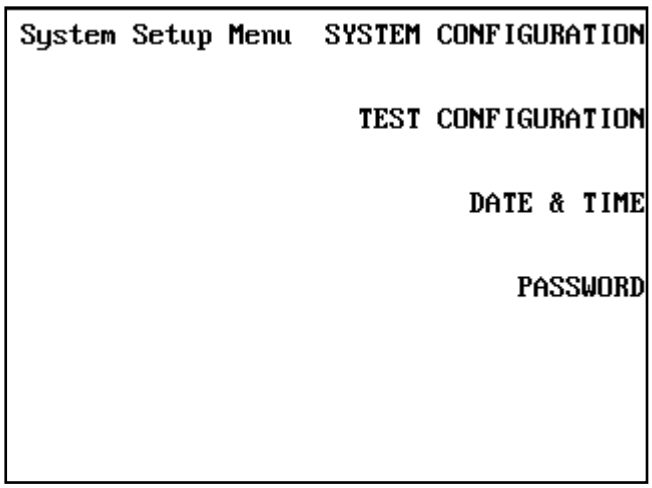
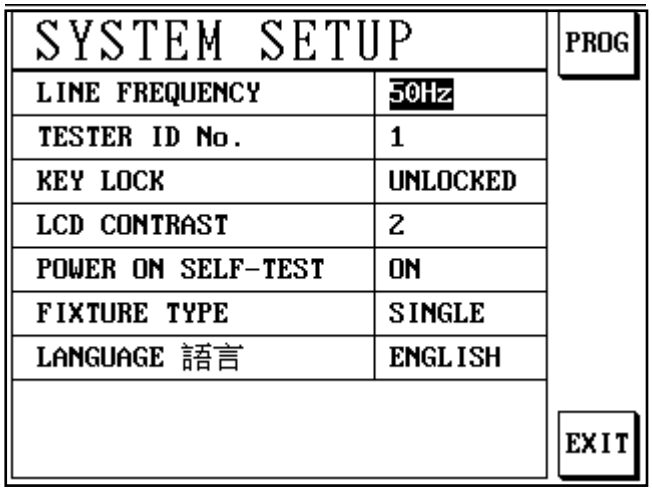


Figure 4.1 System Setup Menu screen

4.1.1 System Setup



- **Line frequency**: To sets the frequency of power 50 Hz / 60 Hz.

- **Tester ID No.**: To sets the ID number of machine 0 ~ 999.
- **Key Lock**: To sets the key lock function, if there is a password, it will prompt to enter the password, and the setting value can be changed after

confirming the old password.

Locked: Enable the Key Lock function.
Unlocked: Disable the Key Lock function.

※If you want to set/change password, you can set it on "4.1.4 Password".

- **LCD contrast**: To sets the LCD contrast 1 ~ 8.

- **Power on Self-Test**: To sets the Self-test function on/off.

  On: Enable the Self-Test function.
  Off: Disable the Self- Test function.

- **Fixture Type**: To sets the fixture type Single/ Dual.

  Single: Single scan box fixture (F7721).
  Dual: Dual scan box fixture (F7721-D).

- **Language 語言**: To sets the language of machine (English/中文(Chinese)).

4.1.2 Test Configuration

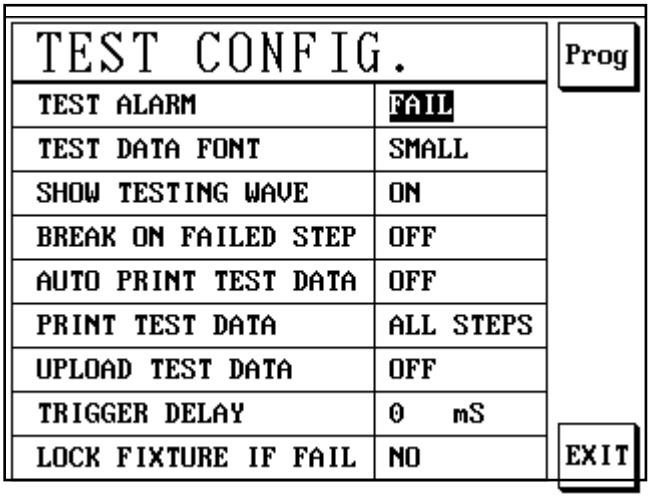


Figure 4.1.2 Test configuration screen

- Test alarm: Test result prompt setting when in test mode; the Select function

key can be used to make selections.

ALL: Prompt is enabled whether the test result is PASS/FAIL.
OK: Enable prompt only when the test result is PASS.
NG: Enable prompt only when the test result is FAIL.
OFF: Disable prompt.

- Test data font: To sets the font display large/small.

Large: Test mode font display Large.
Small: Test mode font display Small.

- Show testing wave: To sets the show testing wave on/off when it is testing.

On: Enable show testing wave.
Off: Disable show testing wave.

※ **Graphic(On the right side of screen)**: To sets the display of the Surge(Impulse) test result.

- Break on failed step: To sets the Break on failed step function on/off.

On: Enable the Break on failed step function. (When a test item fails, the system will stop the test and display the test result "FAIL".
Off: Disable the Break on failed step function.

- Auto print test data: To sets Auto print test data function on/off.

On: Enable the Auto print test data function.
Off: Disable the Auto print test data function.

- Print test data: To sets the print test data All Steps/ Fail step.

All steps: Print all steps.
Fail step: Only print out fail steps.

- Upload test data: To sets the upload test data function on/off.

On: Enable upload test data function.

Off: Disable upload test data function.

- Trigger delay: To sets the Trigger delay time 0~2500mS.

- Lock fixture if fail: To sets the Lock fixture if fail function Yes/No.

Yes: Enable the function.
No: Disable the function.

4.1.3 Date & Time

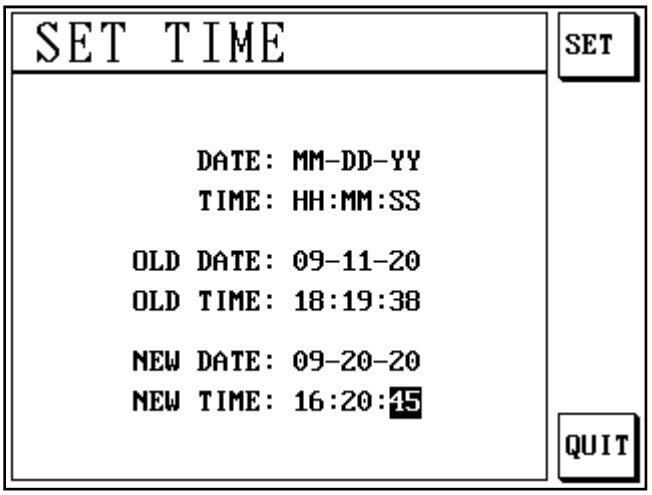


Figure 4.1.3 Set Time screen

- **New Date**: To sets the date.
- **New Time**: To sets the Time.

4.1.4 Password

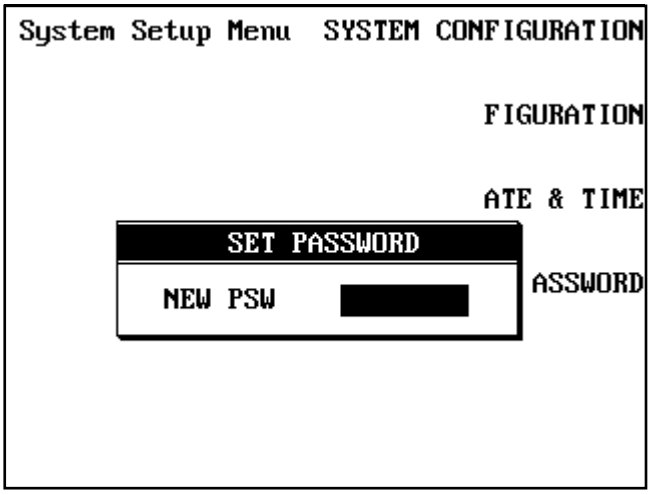


Figure 4.1.4-1 Set new password screen

- **Set password(New PSW)**: Sets the New password

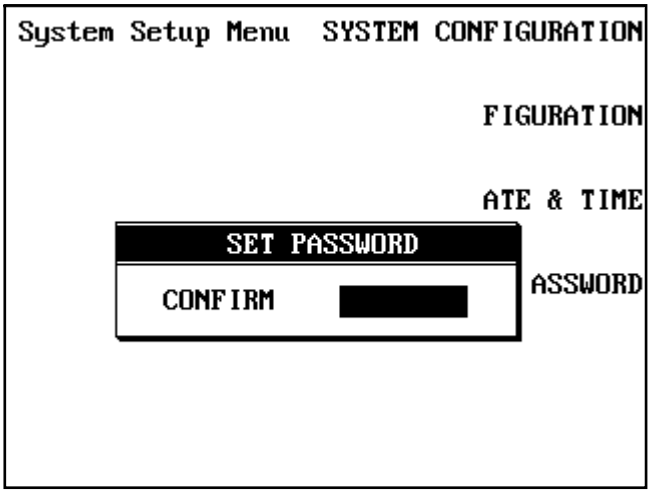


Figure 4.1.4-2 Confirm password screen

- **Set password(Confirm)**: Enter the new password again.

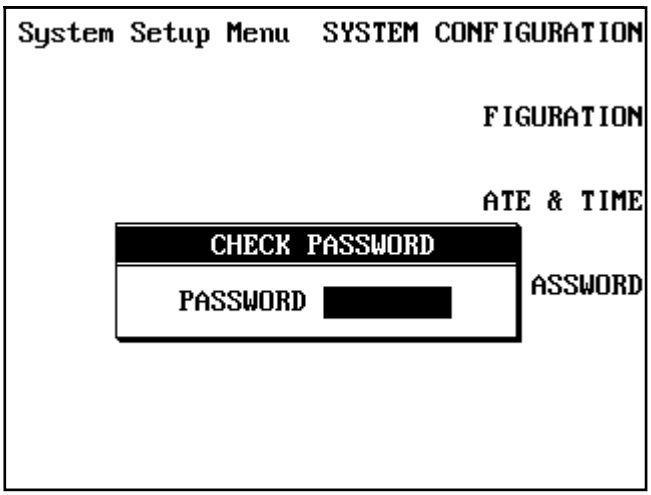


Figure 4.1.4-3 Check password screen

- **Check Password**: Enter the Password.

4.2 Function Menu (Func)

Press the **Func** control key and the screen will enter the Function Menu screen.

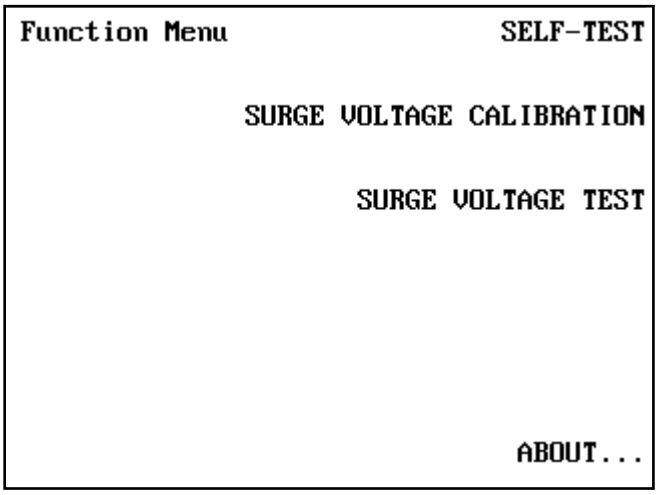


Figure 4.2 Function Menu screen

4.2.1 Self-test

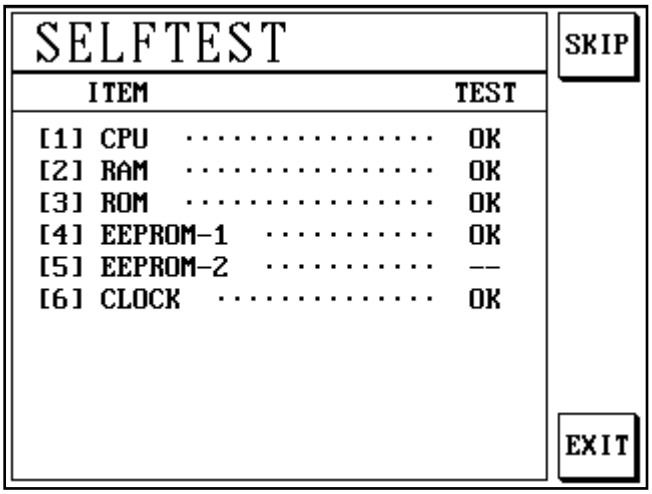


Figure 4.2.1 Self-test screen

- **CPU**: To check the CPU is connected.
- **RAM**: To check the RAM is connected.
- **ROM**: To check the ROM is connected.
- **EEPROM**: To check the EEPROM is connected.
- **CLOCK**: To check the CLOCK is connected.

4.2.2 Surge voltage calibration

This function requires a high-voltage meter to calibration the voltage.

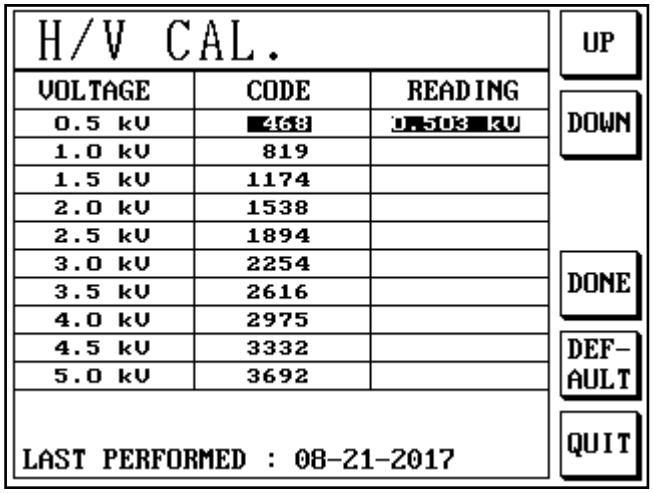


Figure 4.2.2 Surge voltage calibration screen

- **Up**: To increase code value.
- **Down**: To reduce the code value.
- **Done**: To save the setting values.
- **Default**: Return to the default values.
- **Quit**: Return to the previous page without saving the settings.

4.2.3 Surge voltage test

This function requires a high-voltage meter to check the voltage.

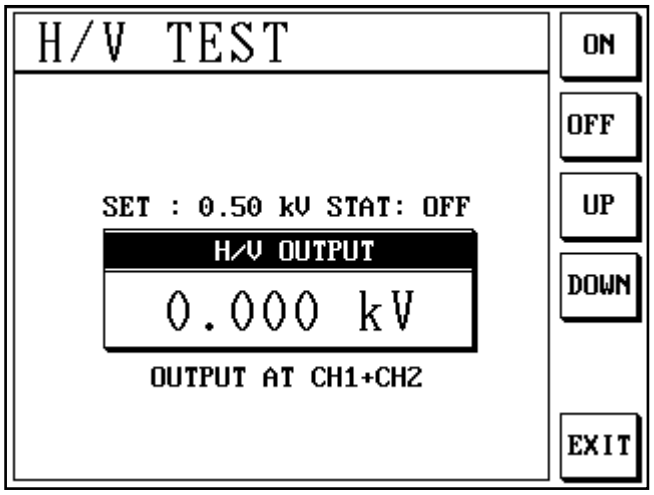


Figure 4.2.3 Surge voltage test screen

- **On**: Turn on the H/V output.
- **Off**: Turn off the H/V output.
- **Up**: To increase the SET voltage value.
- **Down**: To reduce the SET voltage value.

4.2.4 About…

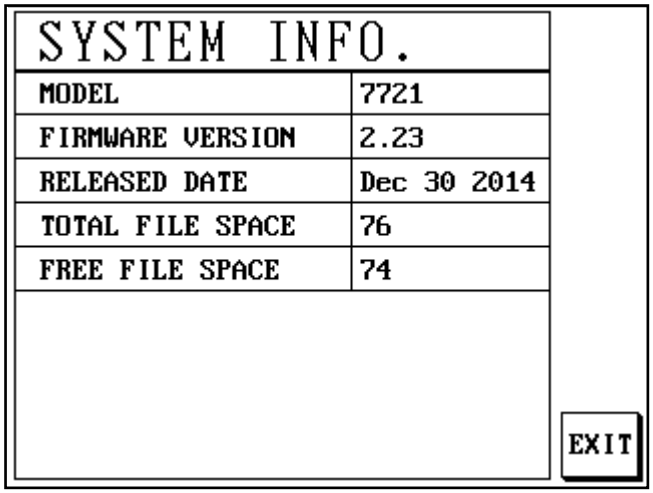


Figure 4.2.4 About… screen

- **Model**: The name of this model.

- **Firmware version**: The current firmware version.
- **Released date**: The date of released date.
- **Total file space**: The total files you can create in this model.
- **Free file space**: The number of files you can create currently.

4.3 Test Setting Menu (Set)

Press the **Set** control key, the screen will display the Test Setting Menu. This is where the various test items of 3 in 1 can be edited.

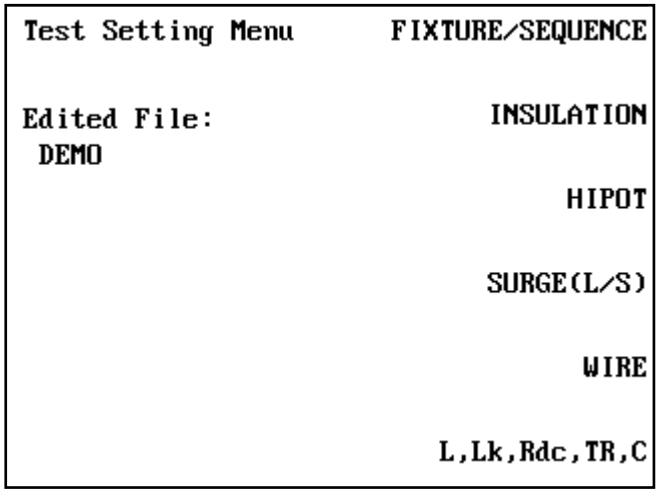


Figure 4.3.1 Test setting screen

4.3.1 Fixture/ Sequence

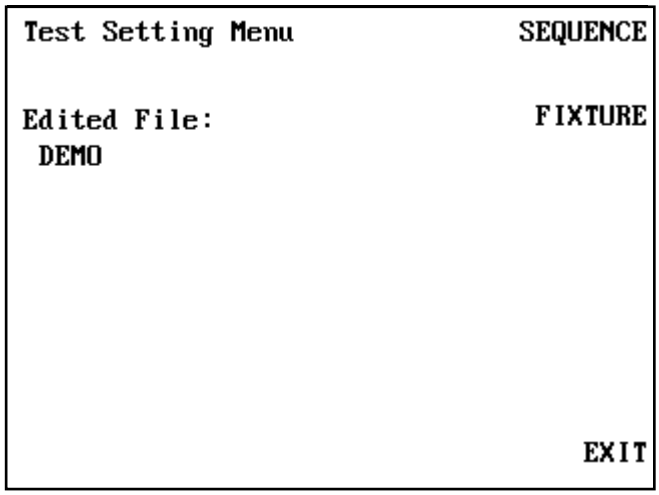


Figure 4.3.2 Test setting sequence screen

- **Sequence**: Sets the test order of each item / whether to test each item.
- **Fixture**: Sets the transformer and fixture pin allocation.

4.3.1.1 Sequence

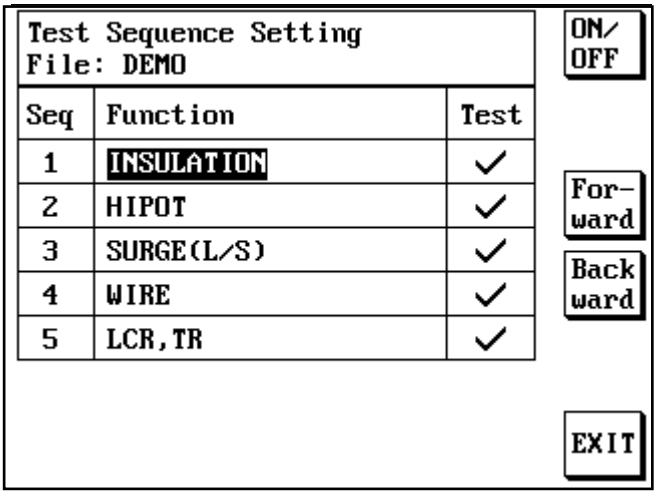


Figure 4.3.3 Test Sequence Setting screen

- **Forward/ Backward**: Changes test order, it moves the currently selected test item up/down by one slot.
- **On/ Off**: Sets whether to enable/disable test for the currently selected test item.
- **Exit**: Return to the previous screen.

4.3.1.2 Fixture

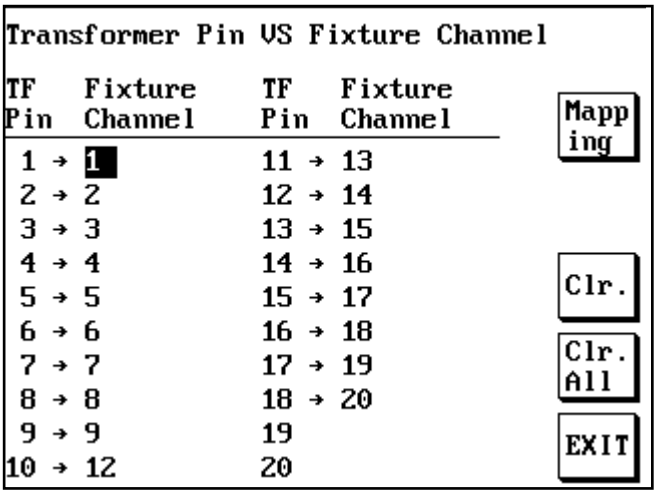


Figure 4.3.4 Transformer pin VS Fixture channel screen

- **Mapping**: Automatic transformer pin allocation; after entering the two parameters below and pressing the ENTER key**,** the corresponding pins of the transformer and fixture will be set automatically.
- **Clr.**: Clears the single setting.
- **Clr. All**: Clears all settings previously made for the corresponding transformer pins to the fixture.

4.3.2 Insulation

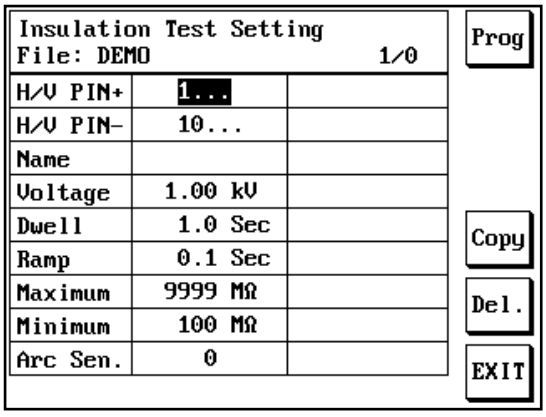


Figure 4.3.5 Insulation screen

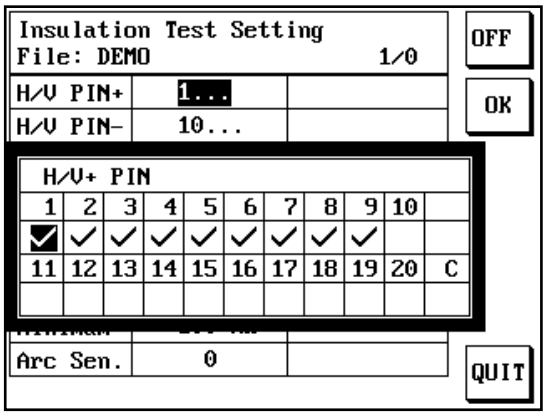


Figure 4.3.6 Insulation Prog screen

- **Prog**: Selects the test pin of insulation test.
- **Copy**: Copy the previous setting to next setting.
- **Del.**: Delete the current setting.

- **Exit**: Return to the previous screen.

- **H/V Pin+**: This item sets up the high voltage Pin+ output channel. There are **20** options for you to set as desired. Select the channel number in the H/V Pin+ set it as the high voltage channel, not selected represent closed channels.
- **H/V Pin-**: This item sets up the high voltage Pin- output channel. There are **21** options for you to set as desired. Select the channel number in the H/V Pin- set it as the high voltage channel, not selected represent closed channels.
- **Name**: Sets the name of this test setting.
- **Voltage**: Setup the test voltage by typing its value with a numeric key. The maximum voltage is 1kV; the minimum values is 0.1kV.
- **Dwell**: This is the time span for sustaining the test after the voltage reaches the given settings.
- **Ramp**: This is the time span for the voltage to rise from 0 to the target value ranging from 0.1S to 99.9S.
- **Maximum**: This is the upper limit of measurement. In case test readings exceed this limit the test has failed and is ended immediately.
- **Minimum**: This is the lower limit of measurement. In case test readings exceed this limit, the test has failed and is ended immediately. For settings at a value 0, no lower limit will be judged.
- **Arc Sen.**: This item sets up arc sensitivity. The higher the value, the less severe. Sets 0 means disable the arc sensitivity.

4.3.3 Hipot test setting

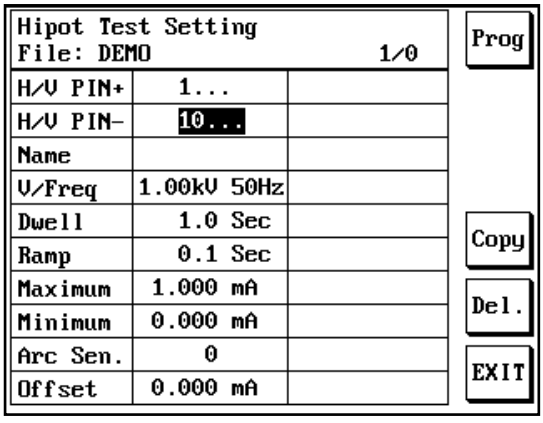


Figure 4.3.7 Hipot Setting screen

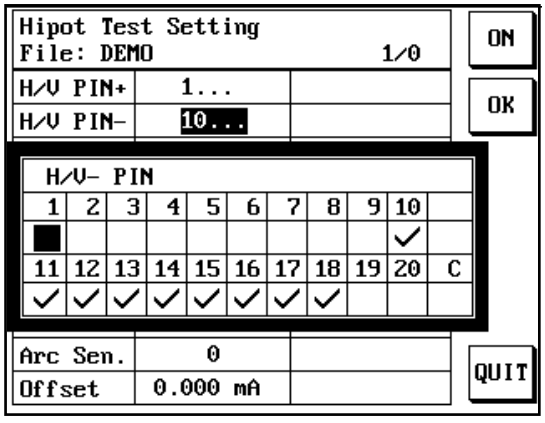


Figure 4.3.8 Hipot setting Prog screen

- **Prog**: Selects the test pin of Hipot test.

- **Copy**: Copy the previous setting to next setting.
- **Del.**: Delete the current setting.
- **Exit**: Return to the previous screen.

- **H/V Pin+**: This item sets up the high voltage Pin+ output channel. There are **20** options for you to set as desired. Select the channel number in the H/V Pin+ set it as the high voltage channel, not selected represent closed channels.
- **H/V Pin-**: This item sets up the high voltage Pin- output channel. There are **21** options for you to set as desired. Select the channel number in the H/V Pin- set it as the high voltage channel, not selected represent closed channels.
- **Name**: Sets the name of this test setting.
- **V/Freq**: Setup the test voltage by typing its value with a numeric key. The maximum voltage is 1kV; the minimum values is 0.1kV. And sets the frequency of the voltage 50/ 60 Hz.
- **Dwell**: This is the time span for sustaining the test after the voltage reaches the given settings.
- **Ramp**: This is the time span for the voltage to rise from 0 to the target value ranging from 0.1S to 99.9S.
- **Maximum**: This is the upper limit of measurement. In case test readings exceed this limit the test has failed and is ended immediately.
- **Minimum**: This is the lower limit of measurement. In case test readings exceed this limit, the test has failed and is ended immediately. For settings at a value 0, no lower limit will be judged.
- **Arc Sen.**: This item sets up arc sensitivity. The higher the value, the less severe. Sets 0 means disable the arc sensitivity.

Arc sen.	mApeak	Arc sen.	mApeak
Level 1	1mApeak	Level 11	11mApeak
Level 2	2mApeak	Level 12	12mApeak
Level 3	3mApeak	Level 13	13mApeak
Level 4	4mApeak	Level 14	14mApeak
Level 5	5mApeak	Level 15	15mApeak
Level 6	6mApeak	Level 16	16mApeak
Level 7	7mApeak	Level 17	17mApeak
Level 8	8mApeak	Level 18	18mApeak
Level 9	9mApeak	Level 19	19mApeak
Level 10	10mApeak	Level 20	20mApeak

- **Offset**: This item resets the test end to prevent the impact of the external jig on

accuracy. It deducts the leak current by the jig in advance and displays the actual leak current of the DUT with the equation “measurement readings = actual measurement less reset value”. This item has two options: Manual and auto. The first requires manual input of the leak current value. The second contains the following steps: Remove the DUT from your machine; point the cursor to the field OFFS and press the software key AUTO; your machine measures according to the given voltage statistics and prompts the results; the message displays after the measurement operation is done; press Save to save the test value or the EXIT to exit without saving it; the saved value will be deducted from each measurement to enable a more accurate test.

4.3.4 Surge(L/S)

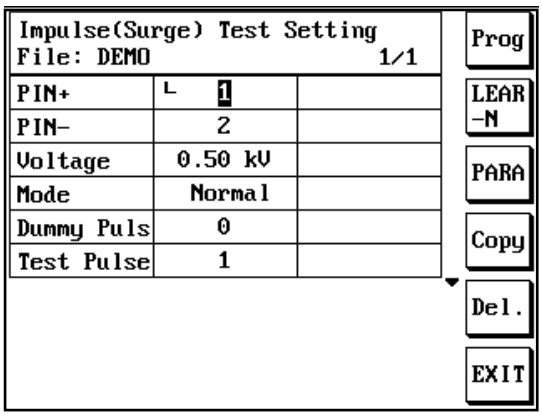


Figure 4.3.9 Impulse (Surge) Test Setting

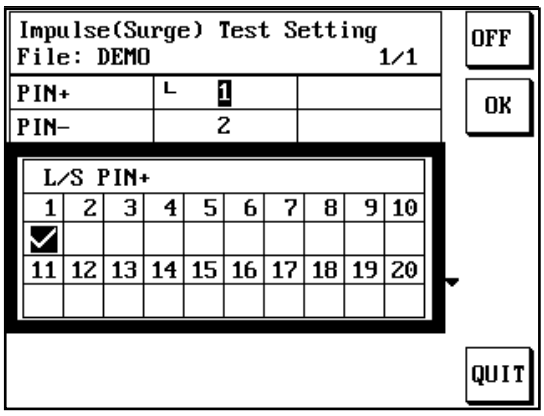


Figure 4.3.10 Pin Prog

- **Prog**: Selects the test pin of Surge test.
- **Learn**: To learn the wave of product.
- **Para**: To sets the parameter.
- **Copy**: Copy the previous setting to next setting.
- **Del.**: Delete the current setting.
- **Exit**: Return to the previous screen.

- **Pin+**: This item sets up the Pin+ output channel. There are **20** options for you to set as desired. Select the channel number in the Pin+ set it as the high voltage channel, not selected represent closed channels.
- **Pin-**: This item sets up the Pin- output channel. There are **20** options for you to set as desired. Select the channel number in the Pin- set it as the high voltage channel, not selected represent closed channels.
- **Voltage**: Setup the test voltage by typing its value with a numeric key. The maximum voltage is 5kV; the minimum values is 0.2kV.
- **Mode**: There have three modes that can be selected 1st Normal: The general mode that usually used. 2nd Low L mode and 3rd Low Q mode: These two modes will using when your product cannot use the normal mode to get the wave.
- **Dummy Puls**: The Dummy Pulse facility pre-magnetized a component and may be useful where a residual magnetic field is present prior to applying the test pulse.
- **Test Pulse**: To set the number of Pulses generated when testing a component.

4.3.4.1 Learn

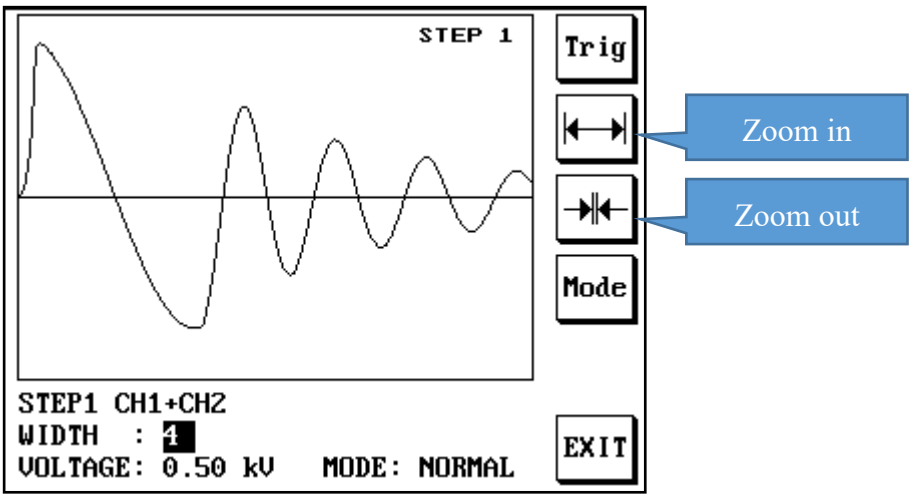


Figure 4.3.11 Learn Screen

- **Trig**: To start learning.
- **Zoom in**: To zoom in the wave that at least have one complete cycle.
- **Zoom out**: To zoom out the wave that at least have one complete cycle.
- **Mode**: To select the mode
- **Exit**: Return to the previous screen.

4.3.4.2 Parameter(Para)

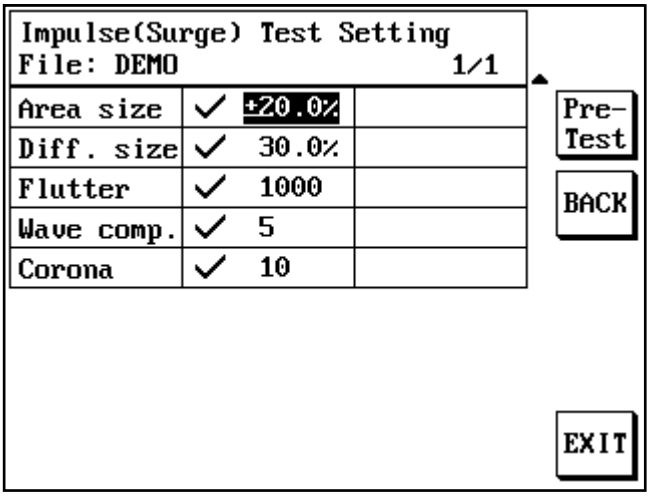


Figure 4.3.12 Parameter setting screen

- **Pre-Test**: Sets the test range. (Please refer the figure 4.3.13~4.3.21)
- **Back**: Return to the Impulse(Surge) test setting screen.
- **Exit**: Return to the previous screen.

- **Area size**: Its test looks for a change in the area under the waveform but does not take into account any distortion or movement of the waveform.

※ The test range can use the software key T1(T1→ ,T1←) and T2(T2→ ,T2←) to set.

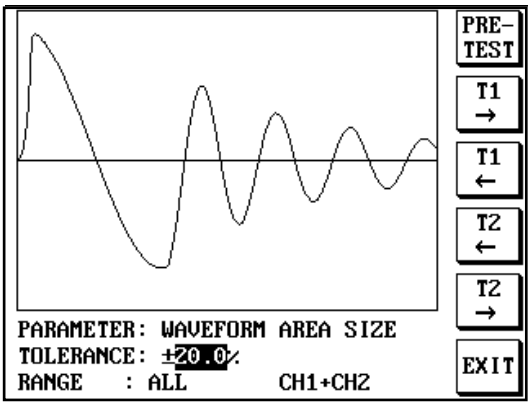


Figure 4.3.13 Area size

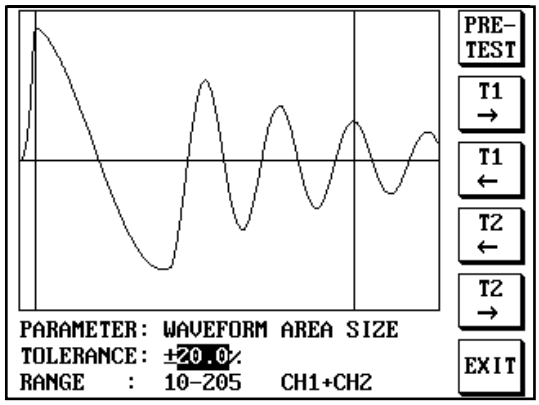


Figure 4.3.14 Set the Area size test range

- **Diff size**: Its test looks for any movement or distortion outside the waveform but does not take into account any change in the area of the waveform.

※ The test range can use the software key T1(T1→ ,T1←) and T2(T2→ ,T2←) to set.

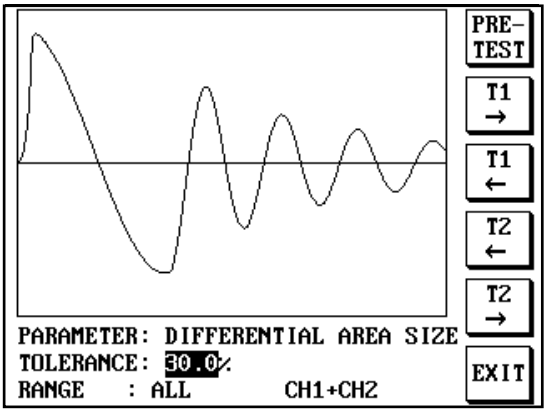


Figure 4.3.15 Differential area size

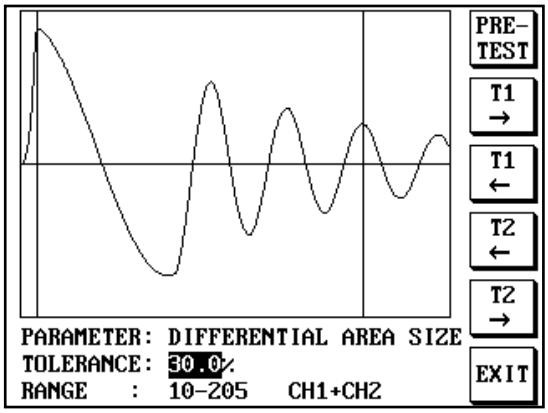


Figure 4.3.16 Set the diff area test range

- **Flutter**: Its calculates the number of level differences (corona discharges) from one waveform point to the next on a voltage waveform.

※ The test range can use the software key T1(T1→ ,T1←) and T2(T2→ ,T2←) to set.

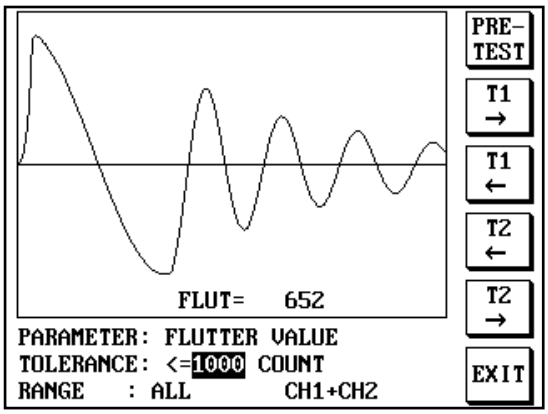


Figure 4.3.17 Flutter value

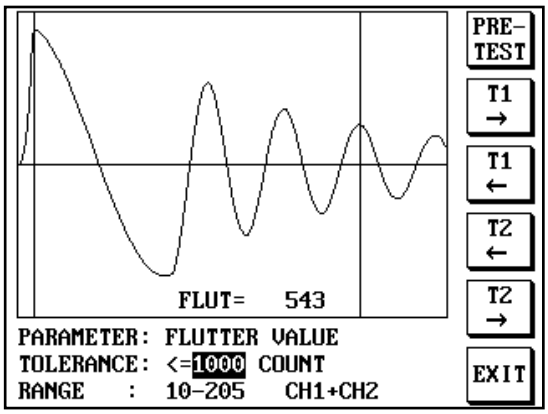


Figure 4.3.18 Sets the Flutter test range

- **Wave comp**: Its looks for a change in the waveform voltage or frequency.

※ The test range can use the software key T1(T1→ ,T1←) and T2(T2→ ,T2←) to set.

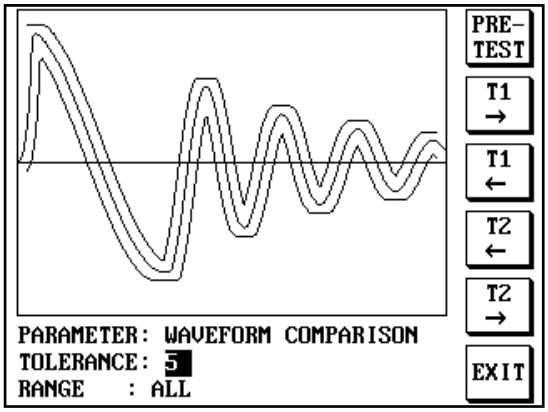


Figure 4.3.19 Waveform comparison

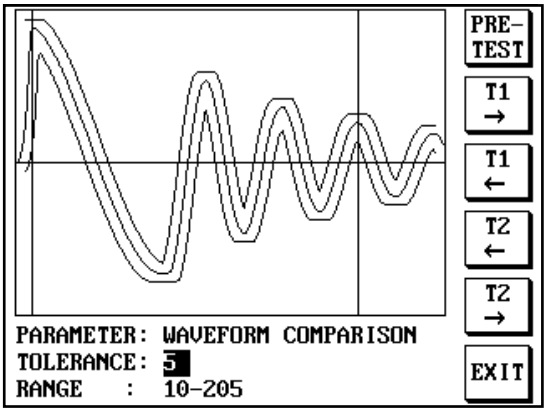


Figure 4.3.20 Sets the test range

- **Corona**: Corona Value is a number that is affected by high frequency noise. If D.U.T. has corona inside, the corona value with becoming higher. Set appropriate corona value can catch out some Layer Short problem.

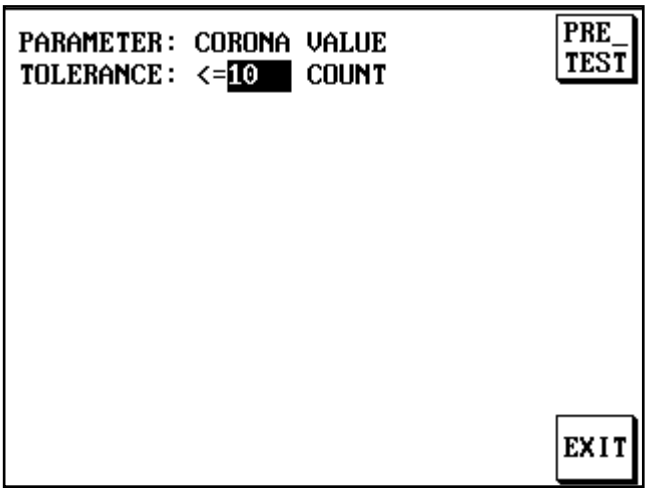


Figure 4.3.21 Corona setting screen

4.3.5 Wire

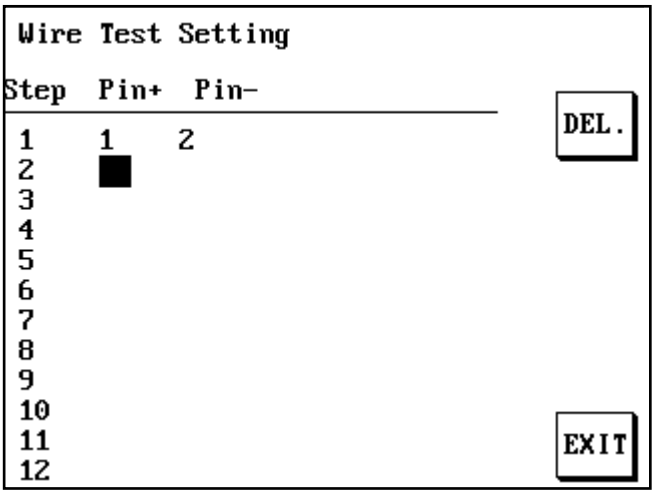


Figure 4.3.22 Wire test setting

- **Del.**: Delete the current setting.
- **Exit**: Return to the previous screen.

- **Step**: Test step; a maximum of 12 short-circuit test items can be edited.
- **Pin+/Pin-**: Sets the test pin combinations for the short-circuit test.

4.3.6 L, Lk, Rdc, TR, C

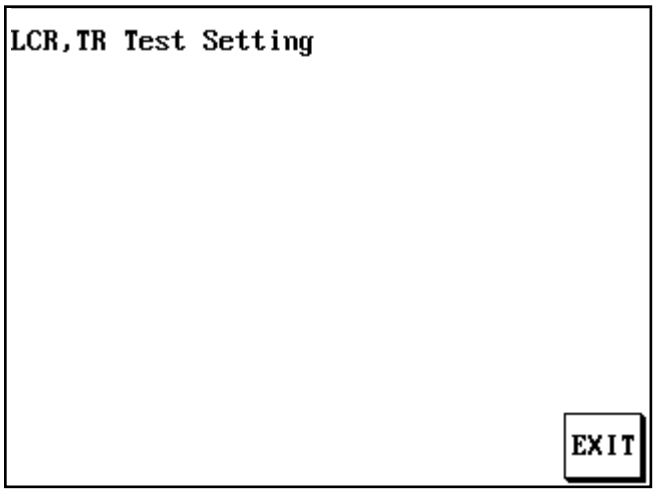


Figure 4.3.23 LCR, TF Test setting screen

This function is to setting the transformer tester(626X,623X series).

- **Exit**: Return to the previous screen.

4.4 File

Press the **File** control key, the screen will display the File management menu.

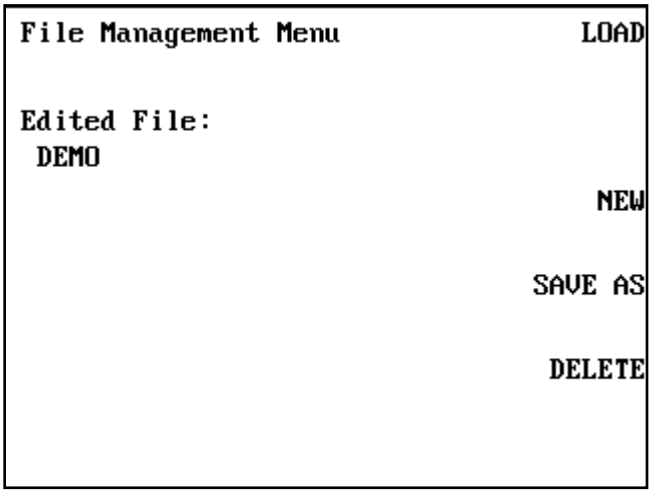


Figure 4.4.1 File management menu

4.4.1 Load

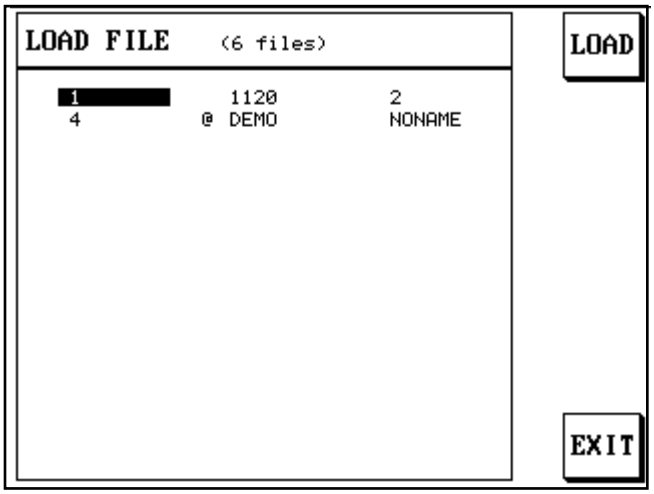


Figure 4.4.2 Load file screen

- Load: To load file. Select the file that you need the press LOAD.
- Exit: Return to the previous screen.

4.4.2 New

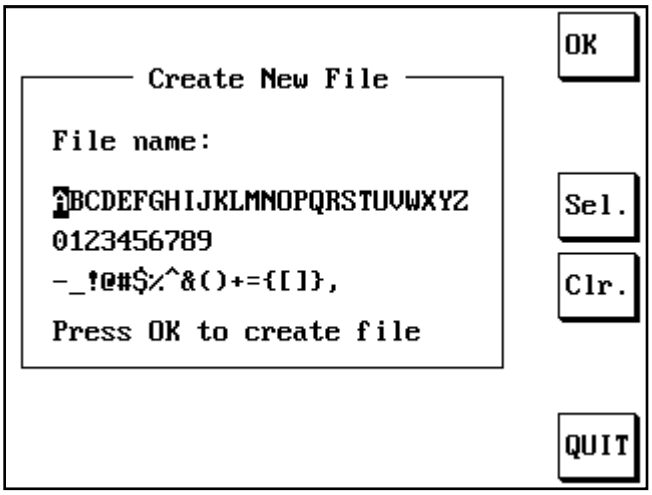


Figure 4.4.3 Create new file screen

- **Ok**: After naming, press OK to save the file name.
- **Sel.**: To select the name.
- **Clr.**: To clear the selected name.
- **Quit**: Return to the previous screen.

4.4.3 Save as

This function is to copy the file and save under another name.

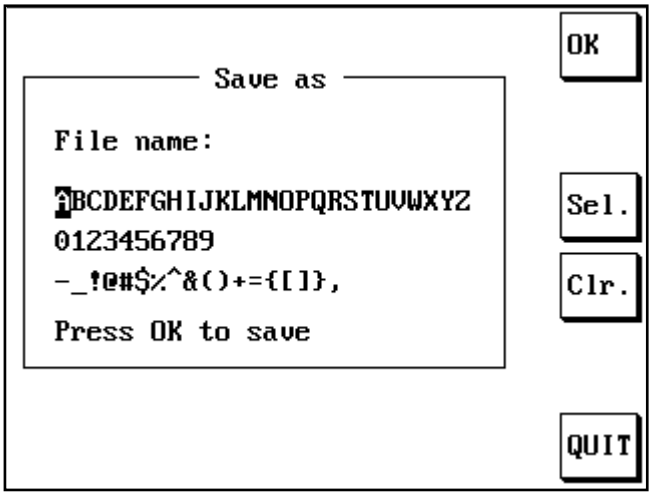


Figure 4.4.4 Save as screen

- **Ok**: After naming, press OK to save the file name.
- **Sel.**: To select the name.
- **Clr.**: To clear the selected name.
- **Quit**: Return to the previous screen.

4.4.4 Delete

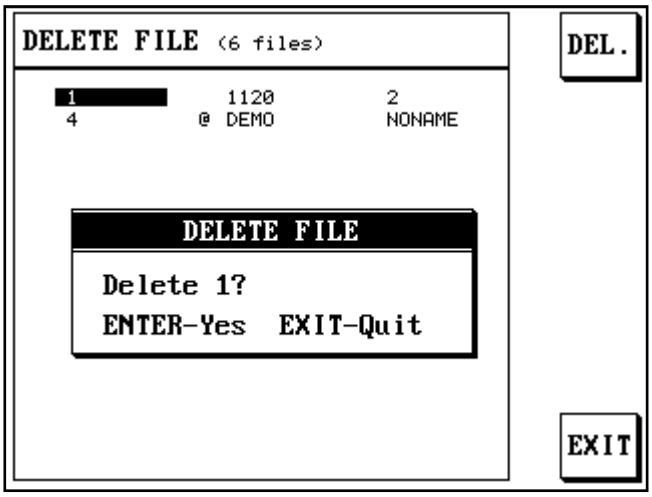


Figure 4.4.5 Delete file screen

- Delete: After selected the file which is going to delete then press “DEL.” then press ENTER=Yes or EXIT=Quit.

4.5 Statistics(Stat)

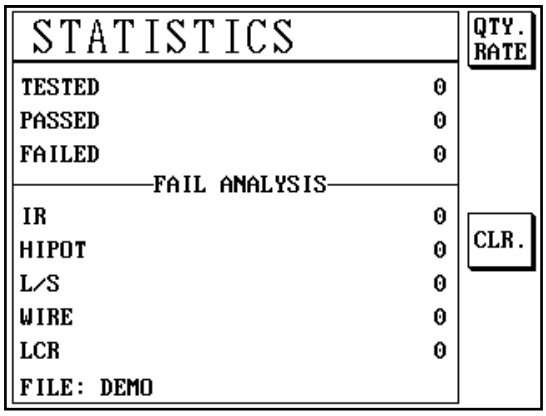


Figure 4.5.6 Statistics screen(1/3)

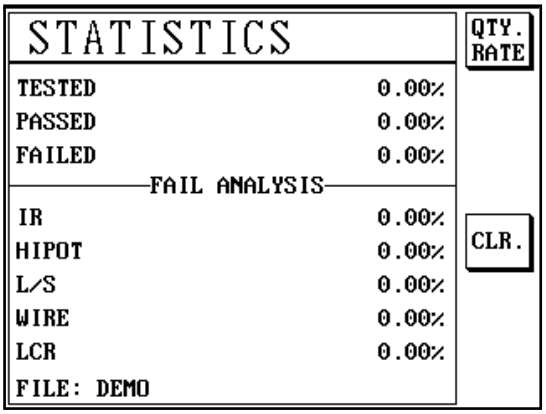


Figure 4.5.7 Statistics screen(2/3)

- **Qty.rate**: To change the display method, number or percentage.
- **Clr.**: To clear all the statistics data.

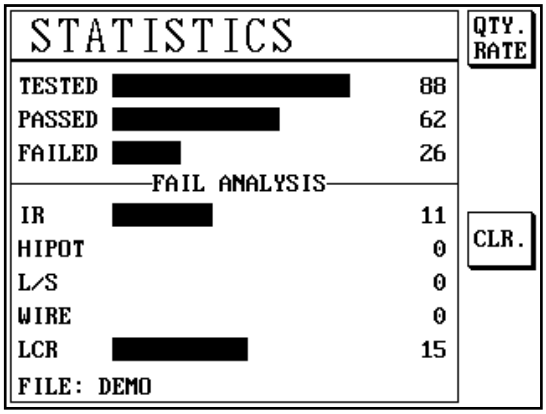


Figure 4.5.7 Statistics screen(3/3)

- **Tested**: Shows how many times have been **tested**.
- **Passed**: Shows how many times have been **passed**.
- **Failed**: Shows how many times have been **failed**.
- **IR**: Shows how many times have been **IR** failed.
- **Hipot**: Shows how many times have been **Hipot** failed.
- **L/S**: Shows how many times have been **L/S** failed.
- **Wire**: Shows how many times have been **Wire** failed.
- **LCR**: Shows how many times have been **LCR** failed.

Remark

1. 2022/12/16 Update Arc Sen. level