The Front Panel at a Glance 12 6 13 KEYSIGHT 34410A O 1 On/Off Switch 8 Exit Key (Auto Range) 9 Shift Key (Local) 2 Measurement Function Kevs 3 Configuration Key 10 Menu Navigation Keys (Range) 4 Second Display Key (Reset) 11 Front/Rear Switch **5** Null Key (Math Functions) 12 HI and LO Sense Terminals (4-wire measurements) 6 Data Logger Key (Utility) 13 HI and LO Input Terminals (all functions except current) **7** Trigger Key (Auto Trig) 14 Current Input Terminal (ac and dc current) The Front/Rear switch is used to select either the front or rear set of terminals. Use the Shift key to select shifted functions (the blue legends above the keys.) config key to open the configuration menu for the selected measurement function. selects the temperature function. Press Config again to configure temperature.

Safety Summary

Do not defeat power cord safety ground feature. Plug in to a grounded (earthed) outlet. Do not use product in any manner not specified by the manufacturer.

Do not install substitute parts or perform any unauthorized modification to the product. Return the product to Keysight Technologies or a designated repair center for service to ensure that safety features are maintained.

WARNING

A WARNING notice denotes a hazard. It calls attention to an operating procedure, practice, or the like that, if not correctly performed or adhered to, could result in personal injury or death. Do not proceed beyond a WARNING notice until the indicated conditions are fully understood and met.

CAUTION

A CAUTION notice denotes a hazard. It calls attention to an operating procedure, practice, or the like that, if not correctly performed or adhered to, could result in damage to the product or loss of important data. Do not proceed beyond a CAUTION notice until the indicated conditions are fully understood and met.

Symbols



Earth Ground



Chassis Ground



Risk of electric shock



Refer to manual for additional safety information.

CAT II (300 v) IEC Measurement Category II. Inputs can be connected to mains (up to 300 VAC) under Category II overvoltage conditions.

WARNING

Main Power and Test Input Disconnect: Unplug product from wall outlet, remove power cord, and remove all probes from all terminals before servicing. Only qualified, service-trained personnel should remove the cover from the instrument.

Line and Current Protection Fuses: For continued protection against fire, replace the line fuse and the current-protection fuse only with fuses of the specified type and rating.

Front/Rear Switch: Do not change the position of the Front/Rear switch on the front panel while signals are present on either the front or rear set of terminals. Switching while high voltages or currents are present may cause instrument damage and lead to the risk of electric shock.

IEC Measurement Category II. The HI and LO input terminals may be connected to mains under IEC Measurement Category II overvoltage conditions for measurement of line voltages up to 300 VAC. To avoid the danger of electric shock, do not connect the inputs to mains for line voltages above 300 VAC. Connect to mains only at an outlet, or in a device connected to such an outlet, on a branch circuit protected by a circuit breaker. See "Safety Notices" in the *User's Guide* for further information.

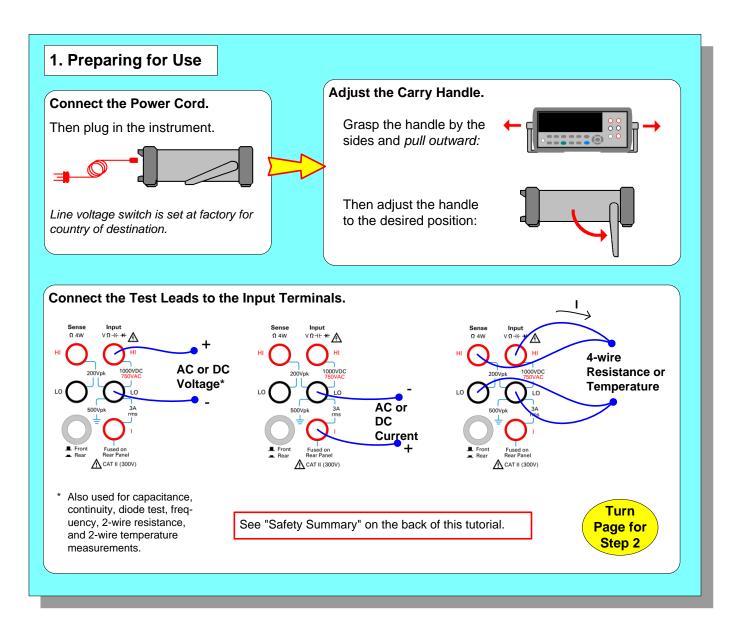
Protection Limits: To avoid instrument damage and the risk of electric shock, do not exceed any of the protection limits indicated on the terminal panel and defined in the *User's Guide*.

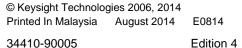
ADDITIONAL SAFETY INFORMATION

For further information, refer to the "Safety Notices" section in the *Keysight 34410A/11A User's Guide*.

Keysight 34410A/11A 6½ Digit Multimeter Quick Start Tutorial

Product Reference CD-ROM. All product documentation, software, and examples are included on the *Keysight 34410A/34411A Product Reference CD-ROM.*











In the following example we'll measure the dc and ac components of a sine wave with a dc offset:

Press the **Power** (on/off) switch:

The self test takes a few seconds. The meter defaults to DC voltage (autorange):



Note: The Power and Front/Rear switches both maintain their states mechanically. The Rear annunciator is lit on the display if the rear set of terminals is selected.

3. Selecting a Function

To select a measurement function, press the appropriate key. For example, for the AC voltage function, press:

AC V

0.164,286 VAC

Go to Step 4 at Right

4. Changing the Measurement Configuration

Each measurement function has its own configuration menu. To open the menu, press Config

AC FILTER 20 HZ : MEBIUM →

You are prompted to select an AC Filter value. The arrows indicate there are more choices to the left and right. To select 200 Hz, use

AC FILTER

Now press Enter to advance in the menu.



Select manual range (use 🕦), and press



To return to auto trigger, press:

TRIGGER

AUTO HOLD SETUP

Then press the Enter key to return to

Shift Trigger

The "fully bright" menu item ("1 V" above) is selected

You can change the range (use ()), or just press (Enter) to advance in the menu. MULL OFF ON

Press Enter again to return to the reading (or you can press Exit)

0.154,266 VAC

Range and Resolution Shortcuts

Use the menu navigation keys without going to a menu to set the range. Just press Auto Rng (Exit) to toggle between auto and manual range. Press Range + and Range - () to increase or decrease the range.

You can also use **1** to set measurement speed/resolution, or Shift, then 1 to select the number of digits.

> Go to Step 5, at far left below

5. Displaying a Second Measurement Function

For some measurements you can display another measurement on the second display Freq

Lets try it. Press

Now press

ZNI IISPLAY

Now select ACV for the second display, and press Enter

0.1644 VAC

HZ

To turn off the second display, press 2nd Disp

ZNI IISPLAY

Now select **OFF** and press Enter



6. Triggering a Measurement

The trigger function allows you to trigger measurements either internally or externally.

Lets try it. Press Trigger



The instrument goes into single trigger mode, and takes a reading. PreTrigger again to take another reading.

continuous measurements.

From the **TRIGGER** menu you can also select the reading HOLD feature, or you can select **SETUP** if you want to set the trigger parameters (see the User's Guide).

7. Hints

1. Within a measurement configuration menu, the configuration key does the same thing as the Enternology.



3. Press Shift first, and then the shifted function key.

4. You can speed through the menu and save changes by holding down the Enter key.

5. Use the **Utility** menu (Shift Data Log) to configure the LAN, USB, or GPIB remote interfaces, and for general configuration.

6. When the instrument is in remote mode, the Shift key serves as the Local key.

7. To reset the instrument, press Shift 2nd Disp (Reset).

8. For further information, see the Keysight 34410A/11A User's Guide.

9. For information on SCPI programming, see the Keysight 34410A/11A Programmer's Reference Help.

10. All documentation is included electronically on the Keysight 34410A/11A Product Reference CD-ROM.