HYAMP® III GROUND BOND TESTER

QUICKSTARTGUIDE

For the following model:
3140 (40A Ground Bond)
Can also be used with:
3130 (30A Ground Bond)
3160 (60A Ground Bond)

SAFETYCHECKLIST

KEEP unqualified/unauthorized personnel away from test area

ARRANGE test stations in a safe and orderly manner

NEVER touch products or connections during a test

STOP the test first in the event of a problem

NEVER perform a ground bond test on energized circuitry or equipment

BE SURE to always connect the return test lead first

HANDLE test clips by insulation only, never touch clips directly

WARNING: THIS GUIDE WAS CREATED FOR OPERATORS HAVING SOME FAMILIARITY WITH ELECTRICAL SAFETY TESTING. AN ELECTRICAL SAFETY TESTER PRODUCES VOLTAGES AND CURRENTS THAT CAN CAUSE HARMFUL OR FATAL ELECTRIC SHOCK. TO PREVENT ACCIDENTAL INJURY OR DEATH, THESE SAFETY PROCEDURES MUST BE STRICTLY OBSERVED WHEN HANDLING AND USING A TEST INSTRUMENT.

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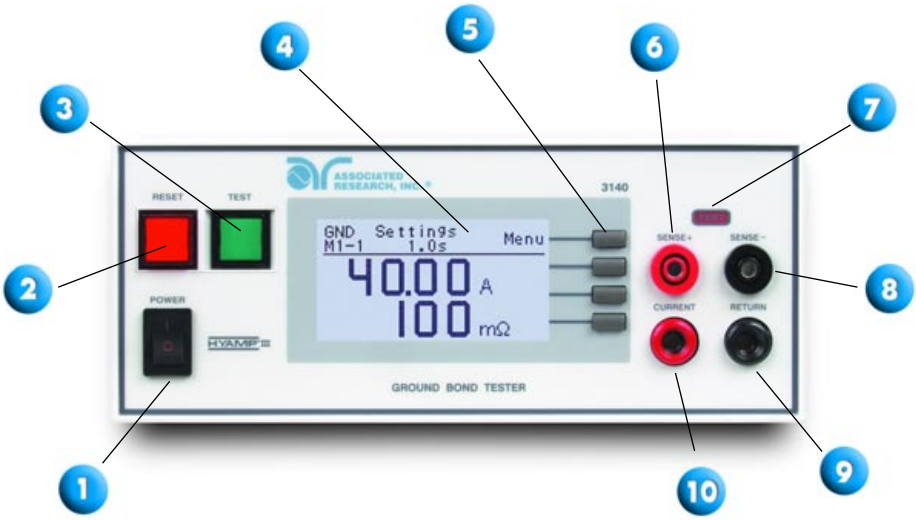
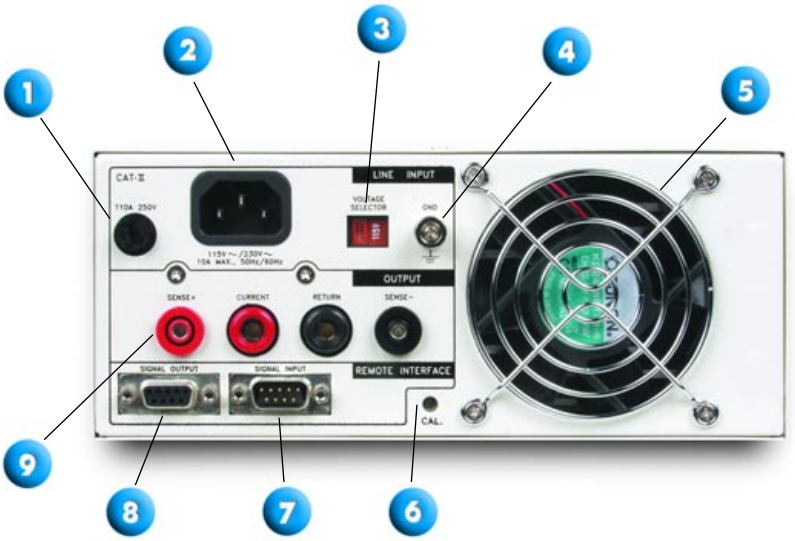
FRONTPANELCONTROLS



1. **POWER SWITCH**: Rocker style switch with International ON (I) and OFF (0) markings.
2. **RESET BUTTON**: Red momentary contact switch used to reset the instrument in case of a failure or to proceed to the next test. Also serves as an abort signal to stop any test in progress.
3. **TEST BUTTON**: Green momentary contact switch used to start tests.
4. **GRAPHIC LCD**: 128 X 64 monographic LCD.
5. **SOFT KEYS**: Multifunction parameter selection keys. Keys used to select screens and change parameters.
6. **SENSE(+) JACK**: Used to attach the Current test lead or test fixture to the instrument. Provides positive Kelvin voltage sensing for the instrument.
7. **TEST LED INDICATOR**: Flashing indicator to warn the operator that voltage is present at the output terminal and a test is in process.
8. **SENSE(-) JACK**: Used to attach the Return test lead or test fixture to the instrument. Provides negative Kelvin voltage sensing for the instrument.
9. **RETURN OUTPUT JACK**: Used to attach the Return test lead or test fixture to the instrument. This connector provides the high current return path from the instrument.
10. **CURRENT OUTPUT JACK**: Used to attach the Current test lead or test fixture to the instrument. Provides the high current output from the instrument.

BACKPANELCONTROLS



1. **FUSE RECEPTACLE**: Socket for the input power fuse. See operation and service manual for ratings and replacement instructions.

2. **INPUT POWER RECEPTACLE**: Standard IEC 320 connector for connection to a standard NEMA style line power (mains) cord.

3. **INPUT POWER SWITCH**: In the left position line voltage is set for 115 volt operation, in the right position line voltage is set for 230 volt operation.

4. **CHASSIS GROUND (EARTH) TERMINAL**: This terminal should be connected to a good earth ground before operation.

5. **THERMAL COOLING FAN**: Continuous run cooling fan.

6. **CALIBRATION BUTTON**: Used to put the instrument into calibration mode.

7. **REMOTE SIGNAL INPUT**: 9-Pin D sub-miniature male connector for remote control of test, reset, interlock, memory selection and withstand processing input.

8. **REMOTE SIGNAL OUTPUT**: 9-Pin D sub-miniature female connector for monitoring pass, fail, processing, and reset output relay signals.

9. **REAR PANEL OUTPUT JACKS**: These jacks can be used instead of the front panel jacks. For interconnection to a hipot tester or for installation into a rack mount system.

SYSTEMSETUP

WARNING: LOCATE A SUITABLE TESTING AREA WITH A THREE-PRONG, GROUNDED OUTLET. BE SURE THAT YOUR THREE-PRONG OUTLET HAS BEEN TESTED FOR PROPER WIRING. ALSO, MAKE SURE YOU READ THE SAFETY CHECKLIST OF THIS GUIDE BEFORE STARTING TO TEST.

1. Choose the correct input line voltage on the rear panel of the instrument, either 115V AC or 230V AC.

2. Connect the power-input plug into the rear of the instrument and plug the male end of the cord into a grounded power source.

3. Plug the interlock connector into the signal/input connector on the rear panel of the instrument.

4. Turn the POWER switch to ON.

The initialization screen will appear. After three seconds the Perform Test Screen will appear as shown below.

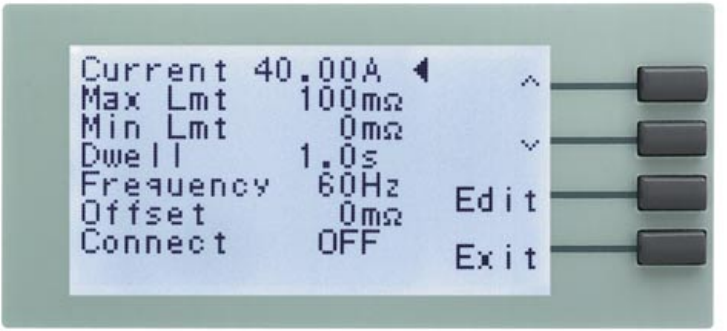
(Perform Test Screen)

The HYAMP III is automatically set with default parameters.

Press MENU to read those settings.

CHANGING TEST SETTINGS

If the default settings do not apply to your specification, the test parameters are fully adjustable. Common parameters that can be adjusted include CURRENT, MAX. LIMIT, MIN. LIMIT, DWELL, FREQUENCY and OFFSET among others.



(Test Settings Screen)

ADJUSTING DEFAULT TEST SETTINGS

Choose MENU from the Perform Test screen.

Select MENU then TEST from the Test Settings screen.

Select a parameter to edit by scrolling with the UP and DOWN soft keys.

Press EDIT once you have chosen the correct parameter.

Use the + or - soft keys to adjust the parameter value.

Press ENTER then EXIT twice to return to the Perform Test screen.

DUT CONNECTION

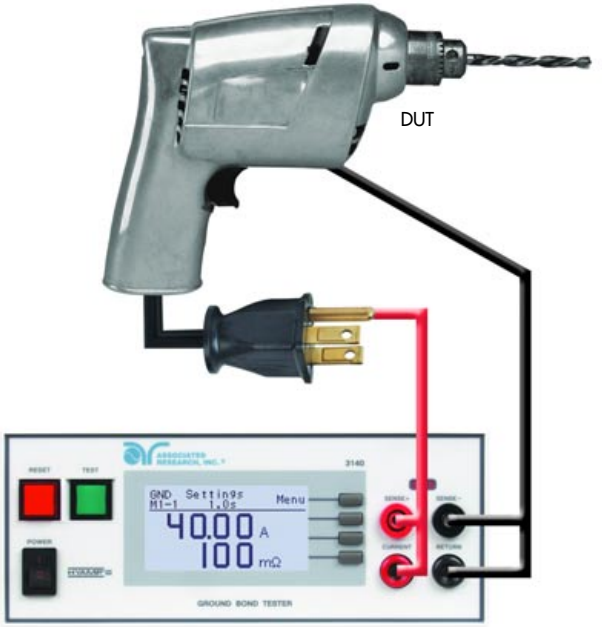
TEST LEAD CONNECTION (SEE DIAGRAM ON NEXT PAGE)

The provided Current and Return test leads are equipped with high current locking connectors that should be pushed into their mating jack until seated against the rubber grommet. Avoid excessive insertion force. If the grommet becomes compressed the lock feature may not activate. To release the lock and remove the leads, push the lead in towards the instrument compressing the grommet then pull back on the lead to remove.

Connect the black Return test lead (heavy wire) to the return jack on the front panel of the instrument. Then connect the Kelvin lead (smaller accompanying wire enclosed in the same sleeve) to the SENSE(-) jack. Next connect the end of the test lead terminated in a clip to chassis ground.

Connect the High Current test lead to the current jack on the front panel of the instrument. Then connect the Kelvin lead to the SENSE(+) jack. Next connect the end of the test lead terminated in a clip to the ground/earthing contact.

Always connect the ground return clip first and double check that both clips have a solid connection to the DUT.



CONDUCTING A TEST

The 3140 is equipped with a Remote Interlock feature which utilizes a set of closed contacts to enable the instrument's output. This feature may be bypassed by using the 9-pin D sub-miniature connector (P/N 38075) provided with the instrument. The connector must be plugged into the Signal/Input connector on the rear panel of the instrument. This feature must be bypassed for the instrument to conduct a test.

With the instrument set to the desired test parameters and your DUT correctly connected to the instrument, you are now ready to start testing.

Press the green TEST button on the front panel.

The test will be conducted on the DUT for a duration equal to the Dwell setting.

WARNING: DO NOT TOUCH THE DEVICE UNDER TEST ONCE THE TEST HAS BEEN STARTED.

TESTRESULTS

(PASS/FAIL Indication Screen)

PASS

If the DUT passes the test, you will hear a short audible beep and the display will indicate the test results.

FAIL

If a failure occurs, you will hear a long audible alarm and the red failure indicator will light up. To stop the alarm press the red Reset button.

HYPOT®IIIINTERCONNECTION

The 3140 can be interconnected to all Hypot III models to form a complete test system. This requires a number of steps.

FIRST ACTIVATE THE PLC REMOTE ON THE HYPOT III

Choose MENU twice from the Perform Test screen.

Select SYSTEM then select PLC REMOTE.

Use the + and - soft keys to turn the PLC Remote Setting to ON.

Press EXIT to return to the Perform Test screen.

INTERCONNECTION OF HYAMP III TO HYPOT III AND CONNECTION TO A DEVICE UNDER TEST (SEE DIAGRAM ON NEXT PAGE)

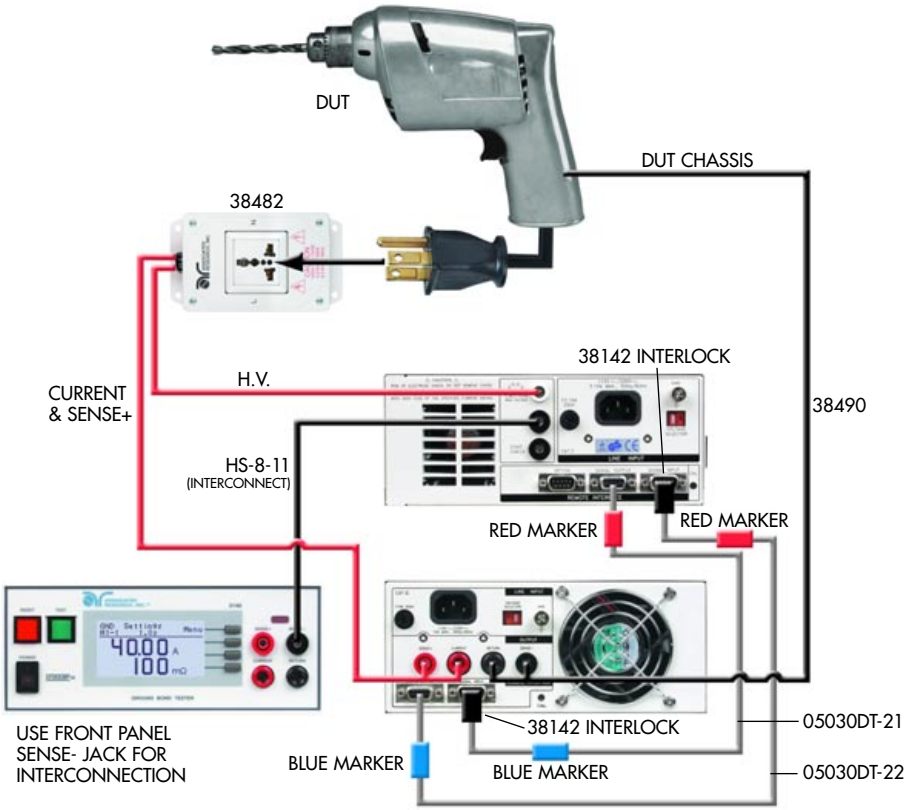
Plug double sided interlocks (P/N 38142) into the Signal Inputs of both instruments.

Using the front and back panel connections, connect the following cord:

P/N HS-8-11 - Plug one end into the front panel SENSE(-) jack on the Ground Bond tester. Plug the other end into the back panel return jack on the Hipot tester.

Using the back panel connections, connect the following cords:

P/N 5030DT-21 - Plug the blue coded end into the Ground Bond interlock connector. Plug the red coded end into Hipot Signal output.



P/N 5030DT-22 - Plug the blue coded end into the Ground Bond Signal Output. Plug the red coded end into the Hipot interlock connector.

P/N 38490 - Plug the black Return test lead to the back panel return jack on the 3140. Then connect the Kelvin lead to the back panel SENSE(-) jack. Next connect the end of the test lead terminated in a clip to chassis ground.

P/N 38482 - Plug the High Current lead of the adapter box into the back panel current jack on the 3140. Then connect the Kelvin lead to the back panel SENSE(+) jack. Plug the white Alden plug into the back panel H.V. jack on the Hipot tester.

Plug the DUT line cord into the adapter box.

Once the test parameters are set, start the test from the 3140.

If the Ground Bond test passes, the Hipot test will automatically start. If a test fails, the test sequence will abort and failure results will be displayed.

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For additional information about these and other key features of the HYAMP®III, please consult the full Operation and Service Manual or call us toll-free 1-800-858-TEST (8378) or +1-847-367-4077

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