accutherm
INTERNATIONAL

ACCU-TEST *touch*

GAS SAFETY CONTROLLER

accutherm

OPERATING & INSTALLATION MANUAL

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1. PRINCIPLE OF OPERATION

The Gas Safety Shut-off system **(ACCU-TEST** touch**)** is purposely designed to prevent gas being restored to open, unsafe downstream piping, appliances and outlets. The safety of personnel and plant is given added protection with the installation of the **ACCU-TEST** touch system.

The **ACCU-TEST** touch is an ideal solution for the protection of appliances that do not have inbuilt safety shut-off controls.

Gas flow can be interrupted either by manual activation or automatically. It is also possible to safely shut-off the gas flow by connecting remote interlocks (such as Emergency Stop “E-Stop” buttons, fire alarms or such like inputs) into the control circuit.
Linking to remote activation devices will ensure the safe isolation of gas flow making it ideal for appliances in residential and commercial kitchens, schools, TAFE colleges, hospitals, hotels, apartment buildings etc.

The **ACCU-TEST** touch system will also cut the gas flow to downstream pipe work in the event of a power failure. Once power is restored the system will need to be re-set - this requires all gas outlets downstream to be isolated before the system will allow gas to be safely delivered.

The **ACCU-TEST** touch can be ordered in standard pipe sizes or designed to meet specific requirements.

The **ACCU-TEST** touch is simple to install and is available in 230VAC.

Once the system has been tripped, restoration of gas is only possible by following the resetting procedure.

SAFETY ALERT
*The **ACCU-TEST** touch prevents gas being restored to unsafe downstream piping.*
It does not detect hazardous or unsafe conditions once gas has been restored to the installation.

During system commissioning, it is essential to setup the fitted pressure switch or pressure transmitter to ensure the downstream piping is gas-tight and aligned with the specific on-site conditions. These units cannot be preconfigured and require on-site adjustment by the commissioning personnel.
The system also incorporates an important safety mechanism. In the event of a catastrophic rupture or significant leak in the downstream piping, the system will automatically cut off the gas supply.
This safety measure is triggered when the downstream pressure falls below the minimum set points, preventing potential hazards and ensuring safety.

SAFETY ALERT
*Installation and commissioning of the **ACCU-TEST** touch must only be performed by competent and suitably licensed Gas Fitters and Electricians. Compliance to all regulations and guidelines must apply. Refer to your local authorities or governing bodies for further information.*

2. INSTALLATION INSTRUCTIONS

The following instructions provide information required to set up, functionally test and use the **ACCU-TEST** touch system. For assistance, please contact the supplier for more information.

SAFETY ALERT

Do not attempt to install or operate the ACCU-TEST touch system unless you have fully read and understood the instructions.

2 – Gas Train Components

The **ACCU-TEST** touch gas train consists of the following components, depending on which accessories are purchased:

2(a) – Gas Train with Pressure Transmitter

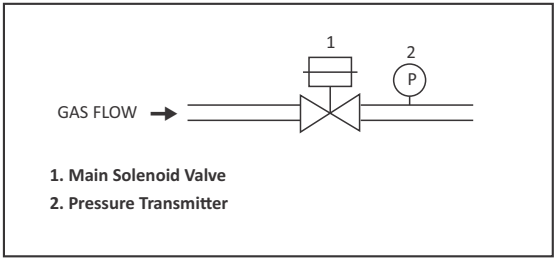

Figure 2 (a) – Gas Train Components

1. Solenoid Valve
2. Pressure Transmitter

Note: The Pressure Transmitter can be easily configured using the intuitive touch screen software setup, eliminating the need for additional calibration or adjustments.

2(b) – Gas Train with Pressure Switch

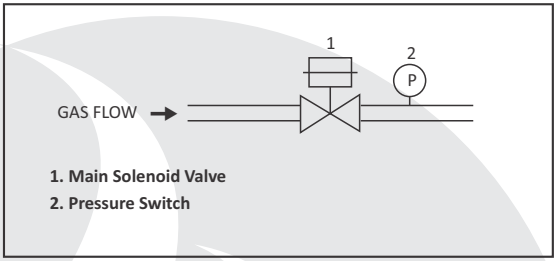

Figure 2 (b) – Gas Train Components

1. Solenoid Valve
2. Pressure Switch

Note: On-site setup is necessary for the pressure switch, and it is usually adjusted to be approximately 10-20% lower than the incoming gas pressure.

SAFETY ALERT

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SAFETY ALERT

*The **ACCU-TEST** touch pressure switch is NOT supplied pre-set for the operating flow & pressure, but are supplied to cover the range specified at time of order. Adjustments to settings must only be performed by competent and suitably licensed persons.*

Important:

- The direction of flow on the gas valves must be observed.
- The valve is to be installed in a straight pipe section.
- Valve can be installed up to 90° Degrees from the Horizontal.
- Valve can be installed up to 90° Degrees from the Vertical.
- The valve cannot be mounted upside down.
- Surface of the valve may be hot. Avoid contact. Leave minimum 30mm space for ventilation.
- The equipment must be installed in a weather protected area.
- Gas pressure and electrical supply must be confirmed.
- The voltage of the **ACCU-TEST** touch must be checked to confirm the power source.
- Wiring from the control panel to the gas train must comply with local codes.
- It is recommended that the **ACCU-TEST** touch gas train is situated as close as possible to the appliance under supervision.
- Voltage free safety interlocks that are added must be normally closed volt free contacts which will "fail open" when in the fault mode. These interlocks may be emergency stop buttons, sprinkler flow switches, key isolators, gas or smoke detectors etc.
- Where multiple appliances need to be supervised, it is advisable to have separate **ACCU-TEST** touch system for each area.

SAFETY ALERT

The operation integrity of any interlock is the responsibility of the installing contractor. Accutherm accepts no responsibility for any remote devices connected.

SAFETY ALERT

*Installation and commissioning of the **ACCU-TEST** touch must only be performed by competent and suitably licensed Gas Fitters and Electricians. Compliance to all regulations and guidelines must apply. Refer to your local authorities or governing bodies for further information.*

Important:

Before gas or electricity is turned on make sure every isolation point is in the "OFF" or closed position. Once the **ACCU-TEST** touch has been connected to the gas and electrical services the next step is to commence with the initial set up and operation of **ACCU-TEST** touch.

2(c) – Control Panel Description

1. Touch Screen
2. Main Power Isolator
3. Emergency Stop Push Button

Figure 2 (c) – Control Panel Front Description

3. STEPS FOR INITIAL SETUP

SAFETY ALERT

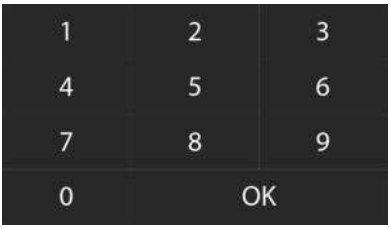
For initial setup, you may need to open to atmosphere the downstream piping. Make sure that there is adequate ventilation in the area and there are no naked flames or sources of ignition. Venting of gas must be in accordance to an approved and safe procedure. Refer to the approved regulations and guidelines applicable to this process.

STEP 1

ENTER SETUP MENU

To enter the setup menu from the home screen, press and hold the top left of the screen for 5 seconds.

STEP 2



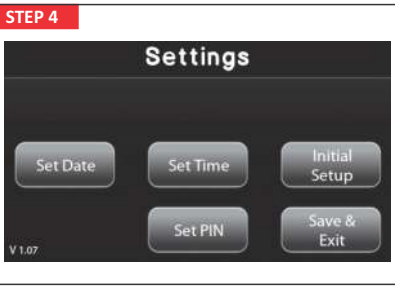
The setup menu requires entering a password, the default password is set to **"3876"**

STEP 3

SET PIN

This allows you to change the default setup menu pin code to prevent unauthorised access into the setup menu.

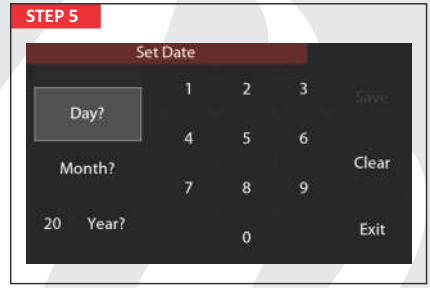
STEP 4



DATE

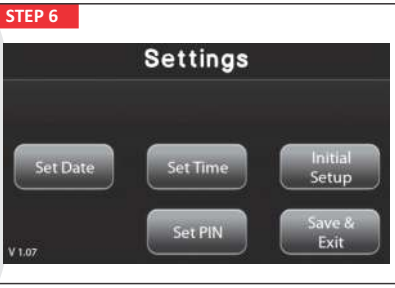
For configuring the date, press the **"set date"** key and input the date in the format **DD/MM/YY**

STEP 5



Enter the DD/MM/YY here.

STEP 6



TIME

To set the current time, press the **"set time"** key and enter the desired time.

STEP 7

Enter the current time here.

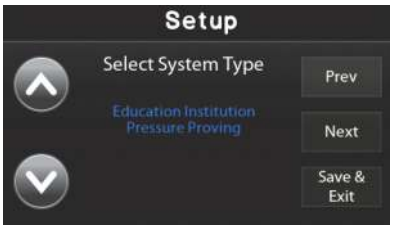
STEP 8

INITIAL SETUP
Press the **"Initial Setup"** Key.

STEP 9

BASE UNIT SELECTION
Pressure Proving - is the standard pressure proving device, this option allows any interlock to be selected.

STEP 10



Education Institution Pressure Proving - is our Schools Specific Device.

STEP 11

Non-Pressure Proving - is our non-pressure proving gas safety controller.

STEP 12

Ventilation Control - as a ventilation control box to ensure gas can only be supplied when ventilation fan is running.
This is a non-pressure proving system.

STEP 13

GAS SENSOR SELECTION
Sensor selection offers two choices:
1. Gas Pressure switch - this allows you to select an on/off pressure switch suitable to the unit.

STEP 14

2. Gas Pressure Transmitter - Enables real-time pressure readings and improved leak and pressure detection ability.

STEP 15

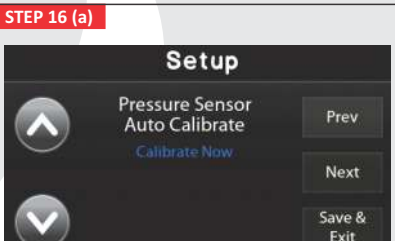
Gas Pressure transmitter is available in three ranges

- 0-200mbar for low pressure
- 0-1000mbar for medium / high pressure
- 0-6000mbar for high pressure

STEP 16

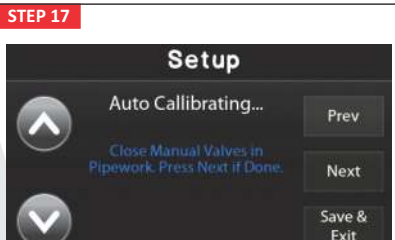
AUTO CALIBRATING
The **"Auto Calibrating"** process establishes a baseline gas pressure setup by pressurising the system, closing the gas valve, and displaying the gas valve status.
Calibrate Later will skip this process.

STEP 16 (a)



Calibrate Now enters the setup.

STEP 17



Ensure all appliances are off and all gas cocks are shut.

STEP 18

The unit will then open the gas valve and pressurise the system. **SAFETY NOTE:** Gas will now be in your downstream pipework.

STEP 19

The unit will then close the gas valve and display the current gas pressure value.

STEP 20

MINIMUM GAS PRESSURE
Determines the minimum allowed gas pressure in the system to detect abnormalities like pipe ruptures. Below this value, the system will automatically trigger a Low Pressure fault. This option is only available if pressure transmitter is installed.

STEP 21

MAXIMUM GAS PRESSURE
Determines the maximum allowed gas pressure in the system to detect overpressure situations. Can be disabled to prevent the system from looking for a maximum gas pressure.

STEP 21 (a)

When enabled the system is looking for a maximum gas pressure.

STEP 21 (b)

Set the maximum gas pressure here.
Above this value, the system will automatically trigger a High Gas Pressure fault.
Note: This option is only available if a pressure transmitter is installed.

STEP 22

GAS LEAKAGE PRESSURE DROP

Sets the permissible gas pressure drop during the test phase without triggering a fault.
This value depends on the system's pipework and other factors. This option is only available if gas pressure transmitter is installed.

STEP 23

GAS SOLENOID PULSE TIME

Specifies how long the gas valve will open during the test phase to pressurize the system. This can be increased if the volume of gas pipe is very large.

STEP 24

GAS PRESSURE TESTING TIME

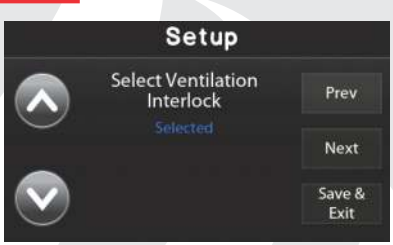
Denotes the duration of the test phase, dependent on the system's size and the number of appliances.

STEP 25

VENTILATION INTERLOCK

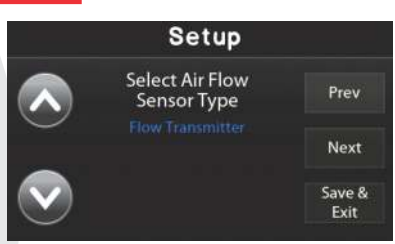
This feature is intended to ensure the proper functioning of the ventilation system, where ventilation is provided by mechanical means. When the system is in the "Not selected" state, it indicates the absence of a fan within the system

STEP 26



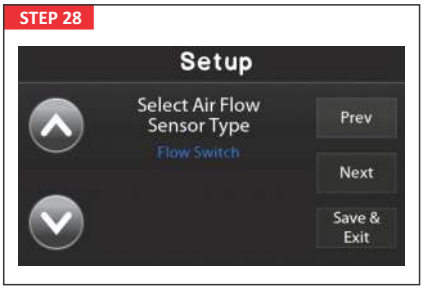
When the system is in the "Selected" state, it actively seeks a ventilation input and activates the fan contacts on the control board accordingly. Note: Fan output on the board is to drive your fan relay only, it does not provide power supply to the fan motor.

STEP 27



SELECT AIR FLOW SENSOR TYPE

Sensor selection offers two choices:
1. Air Flow Pressure Transmitter
Selection is intended for a fan transmitter to measure mechanical ventilation airflow speed.

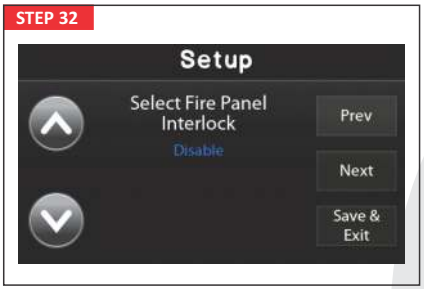


2. Air Flow Pressure Switch
Looks to detect in-duct pressure and confirm the effectiveness of the mechanical ventilation system.

If Air Flow Transmitter is selected, the system will ask you to set the minimum airflow the unit requires before a fault will occur.

This is the time the unit will check the system to prove that the fan is not operating, is in a zero flow condition, and the Air Flow sensor is reading zero.

Fan test time is the time required for the fan to start and for the system to reach the minimum set air flow or pressure.



FIRE PANEL INTERLOCK
Can be disabled to prevent the system from searching for a fire panel interlock.

When enabled, the system will look for one of two types of inputs:

STEP 34

FIP - Type 1
Requires a dry (volt-free) contact from the Fire Interface Panel.

STEP 35

FIP - Type 2
Requires a 24-240VAC or 24VDC input from the Fire Interface Panel.

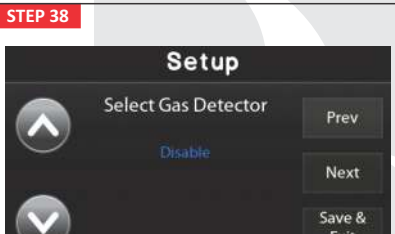
STEP 36

REMOTE INTERLOCK
Can be disabled to prevent the system from searching for a remote interlock.

STEP 37

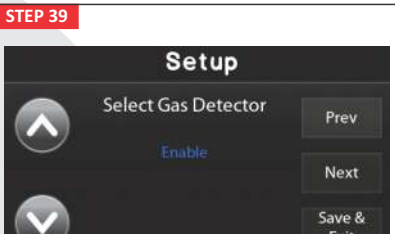
When enabled, the system will search for a remote 24-240VAC, or 24VDC input.

STEP 38



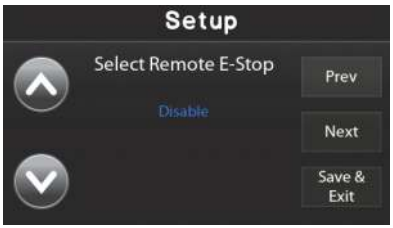
SELECT GAS DETECTOR
Can be disabled to prevent the system from searching for a gas detector.

STEP 39



When enabled, the system looks for a dry (volt-free) contact from a gas detector.

STEP 40

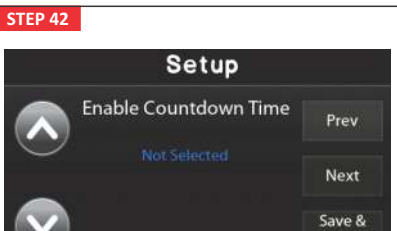


REMOTE E-STOP
Can be disabled to prevent the system from searching for a remote Emergency Stop.

STEP 41

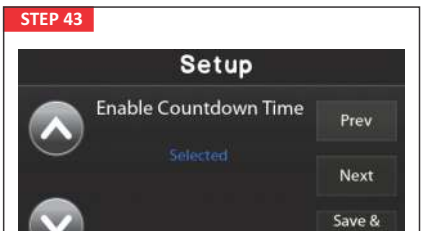
When enabled, the system looks for a dry (volt-free) contact from an Emergency Stop button. This contact can be wired in series with multiple E-Stop buttons.

STEP 42



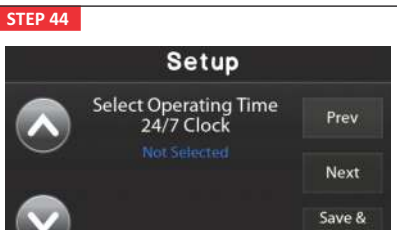
ENABLE COUNTDOWN TIMER
If not selected, the unit will run indefinitely once started.

STEP 43



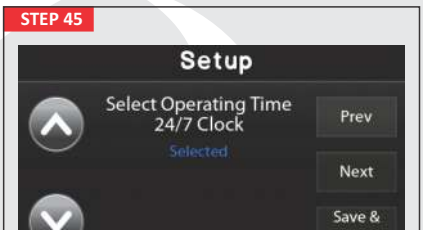
If enabled, the system will prompt for the desired run time (from 5 minutes to 8 hours) on each gas startup.

STEP 44



24/7 CLOCK OPERATION
Controls whether the unit will monitor the Date/Time. If not selected the unit will not monitor the Date/Time.

STEP 45



When selected, the unit is only allowed to operate within specific dates and times set by the user.

STEP 46

Set the start time the unit will be enabled.

STEP 47

Set the stop time the unit will disable.

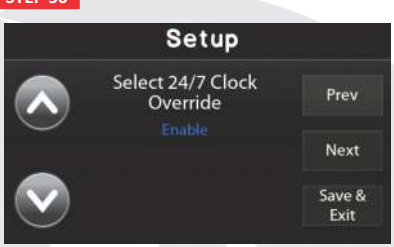
STEP 48

Set the operation days.

STEP 49

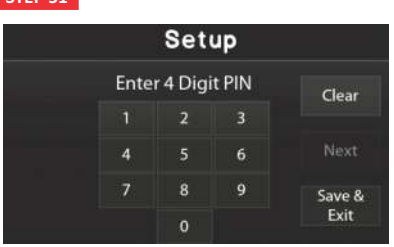
24/7 OVERRIDE
Can be disabled to lock the unit if it's outside the operational hours defined by the 24/7 clock.

STEP 50



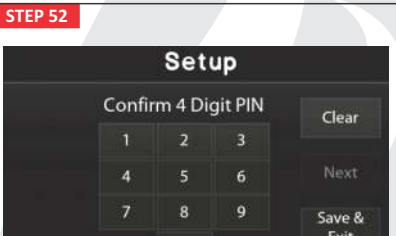
When enabled, the 24/7 clock can be overridden to accommodate gas usage requirements outside normal hours, requiring a unique password to be set.

STEP 51



OVERRIDE CLOCK PIN
Set the override PIN here.

STEP 52



Confirm the OVERRIDE PIN here.

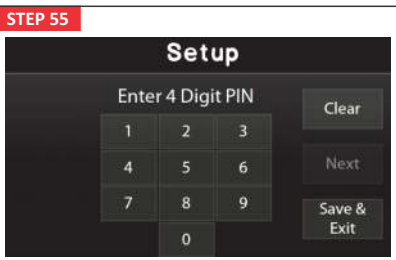
STEP 53

ENABLE PASSCODE PROTECTION
Can be disabled to bypass the need for a passcode to operate the unit.

STEP 54

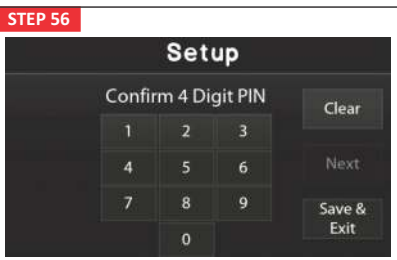
When enabled, a passcode is required each time gas is to be enabled. This can remove the need for physical keys to operate your system.

STEP 55



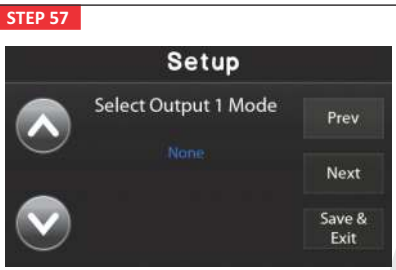
PIN SETUP FOR PASSCODE
Enables the user to set and confirm the passcode for operating the unit. Set the PIN here.

STEP 56



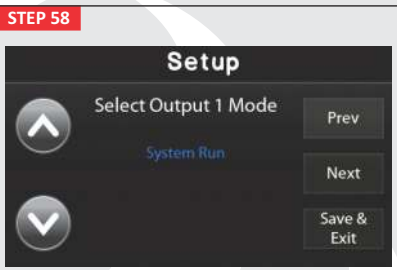
Confirm the PIN Here.

STEP 57



CONFIGURABLE OUTPUT
This is a user configurable optional relay output. Can be configured to suit your application requirements. When None is selected output will be disabled.

STEP 58



System Run - Output will be active when the system is on and running. This will become active after a successful test procedure.

STEP 59

System Fault - Output will be active when the system is in fault. This will become active after any fault or warning in the system.

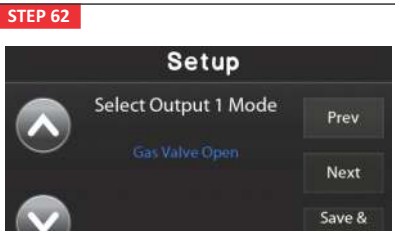
STEP 60

Remote E-Stop Activated - Output will be active only when a Remote Emergency Stop button has been activated.

STEP 61

Ventilation Fan Running - Output will be active when the Ventilation fan is running, this includes during the testing period when the fan flow is being proved.

STEP 62



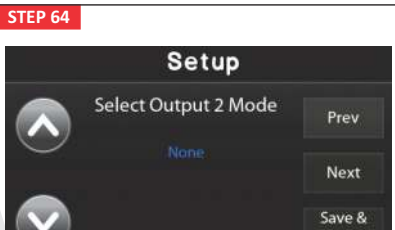
Gas Valve Open - Output will activate when the gas valve is open. This includes during the testing period when the gas valve pulses to allow pressure testing.

STEP 63

Gas Leak Detected - Output will be active if the Gas Detector goes into alarm indicating that there is a gas leak present within the room.

WARNING - The Gas Detector is detecting leaking gas. Evacuate the room until the source of gas leaking can be found.

STEP 64



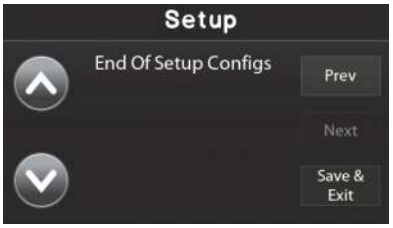
SELECT OUTPUT 2 MODE

This is a user configurable optional relay output. This has the same output options as OUTPUT 1 above.

STEP 65

FAULT LOG
Enables the unit's fault log, storing a history of the last 4 faults.
Fault log can be accessed by a short press of the upper left of the screen.

STEP 66



END OF SETUP
Saves and exits the configuration.

4. NORMAL OPERATION

STEP 1

HOME SCREEN
To Start System press **"Start"**.

STEP 2

If Passcode Protection is enabled, the unit will now prompt a 4-digit passcode selected at startup. If Passcode Protection is disabled, this stage will be skipped.

STEP 3

If Countdown Timer is Selected the next screen will be shown, enter required Countdown time and press start. If Countdown timer is disabled, this stage will skip.

STEP 4

Gas Valve will then Pulse and Stabilise.

STEP 5

Pressure testing will commence.

STEP 6

Test will pass.

STEP 7

Gas flow will commence.

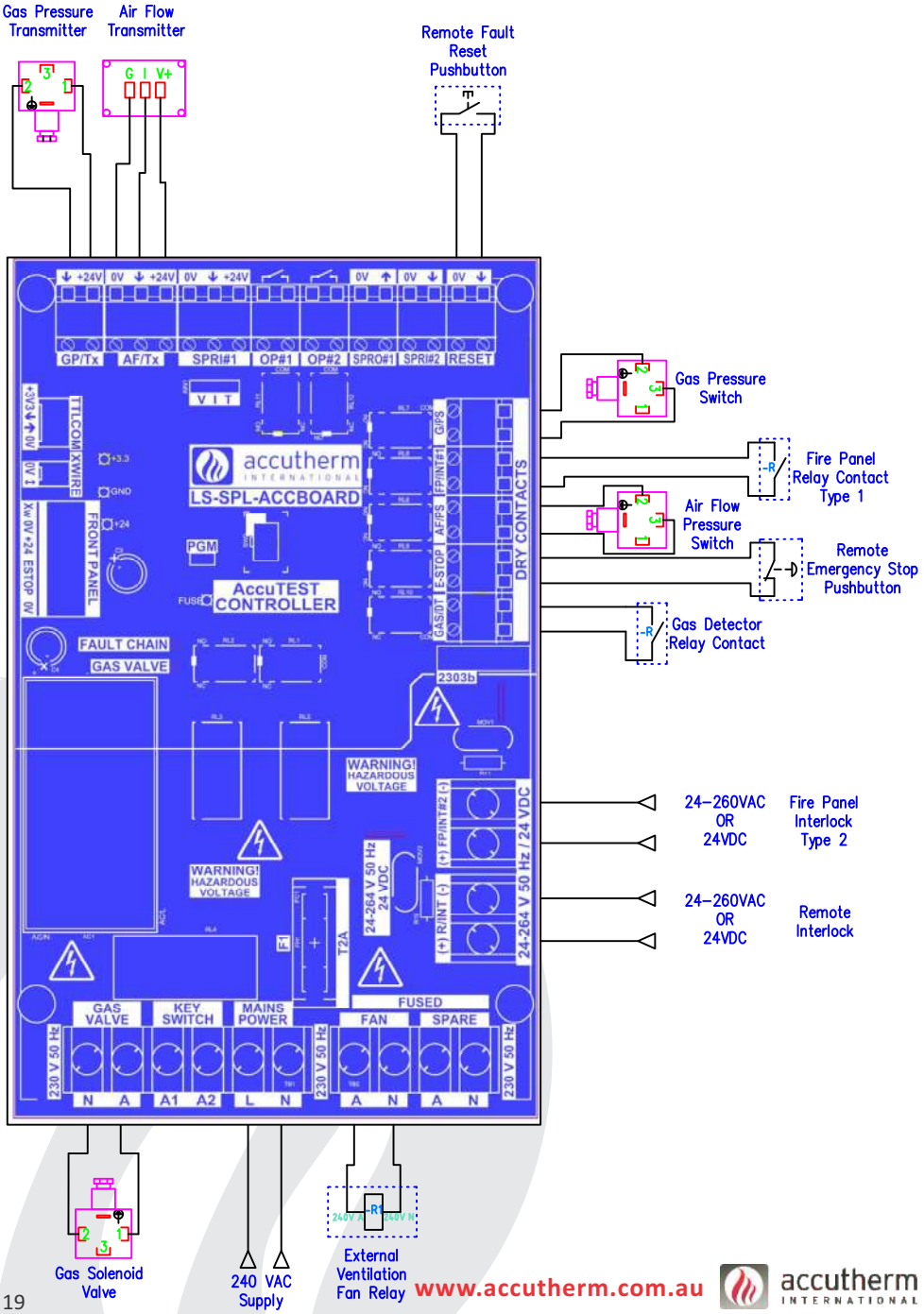
STEP 7 (a)

24/7 CLOCK OPTION

If the 24/7 Clock setting is activated, the gas will automatically turn off and display this screen outside the designated operating hours. Moreover, the 24/7 Clock Override button will only be accessible if the override option is chosen, and using it will necessitate entering a unique password.

5. TERMINAL LAYOUT

5 (a) – Main PCB Layout with Connection Wiring



5 (b) – Terminal Descriptions

ACCUTEST TOUCH I/O TABLE					
DESCRIPTION	**TERMINAL LABEL**	**INPUT/OUTPUT**	**INPUT/OUTPUT TYPE**	**TERMINAL RATINGS**	**COMMENTS**
Air Flow Transmitter	**AF/Tx**	Input	Analogue	0-22mA, 4-20A nominal, 24 VDC short circuit current 0.26 Amps	In the event of a short circuit, power is pulsed until short is removed
Gas Pressure Transmitter	**GP/Tx**	Input	Analogue	0-22mA, 4-20A nominal, 24 VDC short circuit current 0.26 Amps	In the event of a short circuit, power is pulsed until short is removed
Air Flow Pressure Switch	**AF/PS**	Input	Dry Contact	Open circuit voltage 24 VDC, Closed circuit current 20mA	Part of fault chain. Acts directly on gas valve relay.
Gas Pressure Switch	**G/PS**	Input	Dry Contact	Open circuit voltage 24 VDC, Closed circuit current 20mA	Part of fault chain. Acts directly on gas valve relay.
Fire Panel Interlock #1	**FP/INT #1**	Input	Dry Contact	Open circuit voltage 24 VDC, Closed circuit current 20mA	Part of fault chain. Acts directly on gas valve relay.
Fire Panel Interlock #2	**FP/INT #2**	Input	Voltage	24 VDC, 24-230 VAC, Input current 2mA.	Optically isolated input. **Note polarity for DC use.** Part of fault chain. Acts directly on gas valve relay.
Local Gas Emergency Stop (Front Panel)	**E-STOP**	Input	Dry Contact	Open circuit voltage 24 VDC, Closed circuit current 20mA	Part of fault chain. Acts directly on gas valve relay.
Remote Gas Emergency Stop	**E-STOP**	Input	Dry Contact	Open circuit voltage 24 VDC, Closed circuit current 20mA	Part of fault chain. Acts directly on gas valve relay.
Remote Interlocks	**R/INT**	Input	Voltage	24 VDC, 24-230 VAC, Input current 2mA.	Optically isolated input. **Note polarity for DC use.** Part of fault chain. Acts directly on gas valve relay.
System Isolator Switch	**KEY SWITCH**	Input	Voltage	230 VAC supply voltage, 0.4 Amps + Gas Valve + Fan + Spare. Controller cold start in-rush current 40 Amps Max.	
Remote Fault Reset	**RESET**	Input	Dry Contact	Normally open, close contact to remote reset fault. Open circuit voltage 24 VDC, closed circuit current 70mA peak, 2mA steady state	

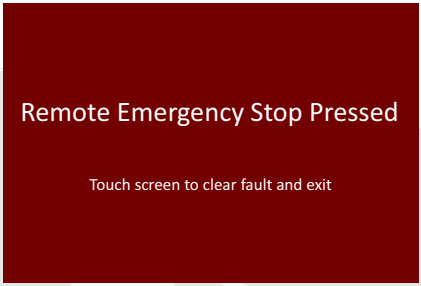
5 (f) – Terminal Descriptions

ACCUTEST TOUCH I/O TABLE					
DESCRIPTION	**TERMINAL LABEL**	**INPUT/OUTPUT**	**INPUT/OUTPUT TYPE**	**TERMINAL RATINGS**	**COMMENTS**
Gas Detector	**GAS/DT**	Input	Dry Contact	Open circuit voltage 24 VDC, Closed circuit current 20mA	Part of fault chain. Acts directly on gas valve relay.
Spare Input	**SPRI#1**	Input	Analogue	0-22mA, 0-10 volts, Thermistor sensor short circuit current 0.26 Amps	Configured with VIT link: V=0-10V, I=0 22mA, T=Thermistor. In the event of a short circuit, power is pulsed until short is removed.
Spare Input	**SPRI#2**	Input	Dry Contact	Normally open. Close contact to activate input. Open circuit voltage 24 VDC, closed circuit current 70mA peak, 2mA steady state	Can also be activated with an NPN output device.
Mains Power	**MAINS POWER**	Input	Voltage	230 VAC supply voltage, 0.4 Amps + Gas Valve + Fan + Spare. Controller cold start in-rush current 40 Amps Max.	
Gas Solenoid Valve	**GAS VALVE**	Output	Voltage	230 VAC, 9 Amps maximum at COS Phi 0.4	
Selectable Output	**OP#1**	Output	Dry Contact	24 VDC, 1 Amp resistive max, Minimum load current/voltage 1mA/5 VDC	Suitable to drive external relays and PLC inputs
Selectable Output	**OP#2**	Output	Dry Contact	24 VDC, 1 Amp resistive max, Minimum load current/voltage 1mA/5 VDC	Suitable to drive external relays and PLC inputs
Ventilation Fan	**FAN**	Output	Voltage	Switched 230 VAC, 5 Amps resistive max	
Spare Output	**SPRO#1**	Output	Digital	24 VDC @ 260mA maximum current limited	"PNP', high side switched 24 VDC output. Can be used with relay coils, LED enunciators etc. In the event of a short circuit, power is pulsed until short is removed.
Spare Output	**SPARE**	Output	Voltage	Switched 230 VAC, 5 Amps resistive max	

6. FAULTS & TROUBLESHOOTING

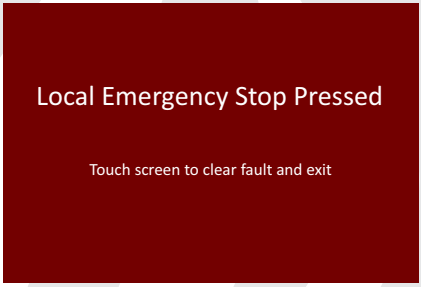
This indicates that the minimum gas pressure setting has not been reached. Measure and confirm the incoming gas pressure is within the expected pressure range.
In the settings menu check the minimum gas pressure setting is correct. Adjust if necessary.

During pressure testing, the **ACCU TEST** touch has failed the pressure test, indicating a gas leak, or an appliance has not been switched off.
Check that all appliances are turned off, and that there are no leaks in your system before repeating test.



The Remote Emergency Stop button has been activated. Reset the Emergency Stop Button to clear fault.

If no Emergency Stop button is connected to the **ACCU-TEST** touch, disable the remote Emergency Stop in the Setting Menu.



The stop button integrated into the **ACCU-TEST** touch has been activated. Reset the Stop button to clear fault.

Air Flow Detected When OFF

Touch screen to clear fault and exit

This indicates that during your ventilation start check there was airflow detected when no airflow was expected. Check the wiring. If using a pressure flow switch for ventilation check the pressure switch setting. In the setup menu increase the time for the fan off mode to allow more time for your fan to shutdown before test.

No Air Flow Detected When ON

Touch screen to clear fault and exit

The fan has not reacted the minimum ventilation level.
If using pressure switch check the pressure setting. If using transmitter increase the test duration. If fan fails during run, check the operation of the fan and for blockages (such as closed ducts) in your system.

Voltage Free Fire Interlock Fault

Touch screen to clear fault and exit

This indicates that the Fire Panel is in Alarm.

The Fire Panel Voltage Free Input has gone open circuit. This needs to be a closed contact to run.

Check Wiring, and that the FIP is providing a closed volt free (dry) contact.

If no Volt Free FIP is connected to the **ACCU-TEST** touch, disable in the Setting Menu.

24DC/24-240VAC Fire Interlock Fault

Touch screen to clear fault and exit

This indicates that the Fire Panel is in Alarm.

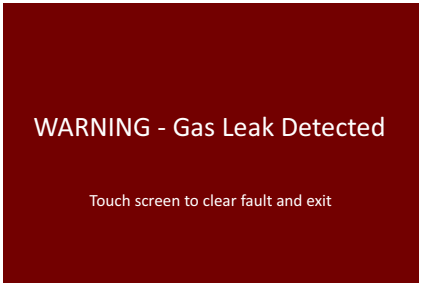
The Fire Panel Voltage Input is not detecting a voltage. There needs to be a voltage here to run. The voltage can be 24-240VAC or 24VDC.

Check Wiring, and that the FIP is providing a voltage into the **ACCU-TEST** touch panel.

If no Voltage FIP is connected to the **ACCU-TEST** touch, disable in the Setting Menu.

The Remote Interlock Input has not detected a voltage. There needs to be a voltage here to run. The voltage can be 24-240VAC or 24VDC.Check Wiring, and that your Remote Interlock is providing a voltage into the **ACCU-TEST** touch panel.

If no Remote Interlock is connected to the **ACCU-TEST** touch, disable in the Setting Menu.



WARNING -The Gas Detector is detecting leaking gas. Evacuate the room until the source of gas leaking can be found.

Check Gas Detector Wiring. Ensure that the gas detector is providing a volt free (dry) closed contact.

If no Gas Detector is connected to the **ACCU-TEST** touch, disable in the Setting Menu.

This indicates an overpressure of your system has been detected, and the system has shut down. In the settings menu confirm your maximum pressure setting is correct. Adjustment of your incoming gas supply may be required.

7. FAULT SIMULATION TESTS

SAFETY ALERT
*Fault simulation tests of the **ACCU-TEST** touch must only be performed by competent and suitably licensed Gas Fitters and Electricians. Compliance to all regulations and guidelines must apply. Refer to your local authorities or governing bodies for further information.*

TESTS

The **ACCU-TEST** touch is designed to prevent the gas supply from being restored until the downstream pipe-work is pressure tight and all gas outlets are turned off. To prove the correct and proper operation of the **ACCU-TEST** touch safety shut off system the following fault simulation tests are necessary:

- TEST 1 – External Interlocks
- TEST 2 – Gas Tightness Check
- TEST 3 – Loss of Power
- TEST 4 – Full Flow Test

TEST 1 – EXTERNAL INTERLOCKS

OBJECTIVES

- To ensure that any fitted external interlocks fitted are functioning correctly and that they shut off the supply to the main gas solenoid through the **ACCU-TEST** touch control system.

PROCEDURE:

1. Operate all the remote safety interlocks to ensure they shut down the **ACCU-TEST** touch.
2. When each interlock is tripped the Main Solenoid Valve should shut off and the **ACCU-TEST** touch will display a fault condition.

SAFETY ALERT
Warning: All interlocks must be proven. Bridging contacts to simulate operation is dangerous and is strongly discouraged.

TEST 2 – GAS TIGHTNESS CHECK

OBJECTIVES

- To prove that the system will **NOT RESTORE** the main gas supply when gas pressure is lost by the smallest appliance outlet being left open.

SAFETY ALERT *To simulate the fault, you may need to open to atmosphere the downstream piping. Make sure that there is adequate ventilation in the area and there are no naked flames or sources of ignition. Venting of gas must be in accordance to an approved and safe procedure. Refer to the approved regulations and guidelines applicable to this process.*

PROCEDURE:

1. Shut the **ACCU-TEST** touch system down by pressing the stop button.
2. Close off all outlets except for the smallest gas outlet or device.
3. Attempt to start the system by pressing the Start button on the home screen.

SAFETY NOTE: *Gas will be escaping from the open pipe or device (see safety alert above)*

4. If the system has been set correctly the **ACCU-TEST** touch will indicate a fault condition.
5. Close off the opened gas outlet.
6. Reset the system by pressing the fault screen.
7. Start the system again by pressing the start button and ensuring the unit starts successfully.

TEST 3 – LOSS OF POWER

OBJECTIVES

- To prove that the system will shut off the main gas solenoid when power is lost and only open the main gas solenoid if the system is gas tight.

  Once you have successfully completed the **Initial Setup** the following steps can be undertaken to prove the correct operation.

PROCEDURE:

1. Turn the keyed power Isolator Switch off
2. The Main Solenoid Valve will close. Check and confirm result.
3. Restore power and reset the system.
4. Externally isolate the source supply to the control box
5. The Main Solenoid Valve will close. Check and confirm result.
6. Restore power and reset the system if required

SPECIAL NOTES:

1. In the event of external de-activation or loss of the mains power supply to the control panel, the supply of gas will be shut off. The **ACCU-TEST** touch will need to be reset as per the **"Normal Operation"** section.

TEST 4 – FULL FLOW TEST

OBJECTIVES

- To ensure the **ACCU-TEST** touch and supply pipe are large enough to provide enough gas downstream when ALL appliances are on.

SAFETY ALERT

Appliances must be properly supervised during this test. It is the responsibility of the installer to ensure adequate ventilation and supervision of equipment at all times.

PROCEDURE:

1. Reset the **ACCU-TEST** touch.

2. Monitor the downstream pressure reading while switching on all the appliances downstream, one at a time.

3. The gas pressure should not drop below the Minimum Pressure Setpoint.

3. If it does fall below the setpoint, the system will trip, and the gas supply will be cut off. The pipework or **ACCU-TEST** touch main valve may be too small to handle the require flow to all appliances.

8. NORMAL OPERATING INSTRUCTIONS

The normal operating instructions for **ACCU-TEST** touch system apply once the initial testing, functional operation and fault testing have all been successfully completed.

TO START THE SYSTEM

1. Do **NOT** turn on any power. Leave the keyed power Isolator Switch in the **OFF** position.
2. Make sure all gas outlets downstream of the **ACCU-TEST** touch gas train are shut off.
3. Slowly open upstream gas isolation valve (by others) to permit gas to **ACCU-TEST** touch.
4. Turn the keyed power Isolator Switch to the **ON** position.
5. The touch screen will illuminate.
6. Press the start button.
7. Follow the on-screen instructions.
8. Wait for the touch screen to indicate the operation of gas.
9. The downstream piping to appliances and outlets are now charged.
10. The system is now ready

TO STOP THE SYSTEM

1. Push the **stop** button
2. Push the **Emergency Stop** Pushbutton, ***OR***
3. Turn the keyed power Isolator Switch to the **OFF** position or isolate the mains power, ***OR***
4. Initiate one of the external interlocks, eg: an Emergency Stop button, ***OR***
5. Turn off the Gas Supply

DISCLAIMER

Accutherm International Pty Ltd continually improves and upgrades its products and reserves the right to alter the design and documentation of this device without notice.

Accutherm International Pty Ltd shall not be liable for damages resulting from misapplication or misuse of its products.

The design and integrity of all interlocks connected to the **ACCU-TEST** touch are the responsibility of the installing contractor.

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