

## Simplicity Fault Codes and Set up

- **Steady On LED** - A steady on LED, or an LED that does not light at all when power is applied, indicates a possibly defective board. If the condition does not correct itself after cycling power to the board, it must be replaced.  
*NOTE:* An LED that is not lit may be an indication that the board is not energized. This could be due to no power or a shut down circuit.
- **FC 2** - Indicates the anti-short cycle delay, for either stage 1 or stage 2 is active. This code is not considered an alarm, but flash code to alert the technician the control is waiting for a compressor anti-short cycling delay to expire.
- **FC 3** - High pressure switch trip or lockout on 1st stage. During this condition, the output for 1st stage (CR1) will not be energized. The pressure switch will open at 380 PSIG and close at 300 PSIG. If the pressure switch trips 3 times within a two hour window, the control locks out CR1.
- **FC 4** - High pressure switch trip or lockout on 2nd stage. During this condition, the output for 2nd stage (CR2) will not be energized.
- **FC 5** - Low pressure switch trip or lockout on 1st stage. During this condition, the output for 1st stage (CR1) will not be energized. The pressure switch will open at 7 PSIG and close at 22 PSIG. If the pressure switch trips 3 times within a one hour window, the control locks out CR1.
- **FC 6** - Low pressure switch trip or lockout on 2nd stage. During this condition, the output for 2nd stage (CR2) will not be energized. The pressure switch will open at 7 PSIG and close at 22 PSIG. If the pressure switch trips 3 times within a one hour window, the control locks out CR2.
- **FC 7** - Freeze stat trip on 1st stage. During this condition, the output for 1st stage (CR1) will not be energized. If a freeze stat were to trip 3 times within a two hour window, the control locks out CR1.
- **FC 8** - Freeze stat trip on 2nd stage. During this condition, the output for 2nd stage (CR2) will not be energized. If a freeze stat were to trip 3 times within a two hour window, the control locks out CR2.
- **FC 9** - Ignition control lockout or heating failure. Indicates no 24vac at the GV terminal of the board during a call for heat or no 24vac at the limit terminal anytime the board is energized.
- **FC 10** - When flashing, it indicates the compressors are locked out because the low ambient switch is closed.
  - When this software switch is set to off, which is the factory default on units that ship without economizers, the compressors are cycled 10 minutes ON and 5 minutes OFF, when the low ambient switch closed and a call for cooling exists.  
When the compressor is off in this mode, the control displays a FC2, indicating an active anti-short cycle timer
  - This option can be changed using the Simplicity Software.
  - When set to the OFF position, which is the factory default, the control will bring on 1st stage compressor with a second stage call for cooling from the thermostat.
  - *NOTE:* If the second stage call for cooling lasts for longer than twenty minutes, the second stage compressor will be energized, unless the unit is equipped with a power exhaust. With power exhaust active, the second stage compressor is locked out.
- **FC 11** – If unit is shipped with factory installed economizer the switch is set to ON, the compressors are locked out if the economizer is in free cooling mode.
- **FC 12** - Fan Overload Lockout. Indicates 24vac is not detected on the Fan Over terminal.
- **FC 13** - Low voltage indication or lockout. The control sensed less than 19.2vac while attempting to energize a relay, or less than 16vac with any relays already energized.
- **FC 14** - EPROM failure. This is an internal control fault. If the fault does not reset after cycling power, the board must be replaced.
  - 031-01934-000 TI board Package Gas/Electric 3-25 Ton. {UT Board has large buttons.}
  - 031-01934-001 TI board Package Heat Pump 3-25 T.
  - 031-01947-000 TI board 2 pipe 7.5-20 Ton Millennium Split Unit. HA units.
  - 031-01948-000 TI board 25-50 T Millennium Splits Y1/Y2.
  - 031-01949-000 TI board 25-50 T Millennium Splits Y3/Y4.



**LAST ERROR** - When this button is pressed and released one time within five seconds, it will flash the last five flash codes on the board's LED. The most recent alarm will be shown first and the oldest alarm will be shown last.

- When pressed and released twice within a five second span, the fault history is cleared.
- **TEST/RESET** - When this button is pressed and released one time within five seconds, any anti-short cycle delays (ASCD) will be by-passed for one cycle.
- When this button is pressed twice within five seconds, any active lockouts will be reset.
- **COMM SET UP** - If the board is to be networked with other units, this button is used to set the network address.
  - The first time the button is pressed within five seconds, it will scan the bus, then assign itself the first available address. {starts at 2} It will then flash that address one time.
- **COMM SET UP**
  - Pressing the button two times within five seconds will cause the control to flash its address.
  - Pressing the button three times within five seconds will force the control to reset its address to one, which is the factory default. Simplicity Board does not recognize 1.

**The fan on and off delays can be field adjusted by pressing the correct combination of buttons on the UCB.**

- **Gas Heat Option #1** - Press the **LAST ERROR** and **TEST/RESET** buttons simultaneously and then release. The control will flash three times as it writes a 30 second delay ON and a 90 second delay OFF to the program.
- **Gas Heat Option #2** - Press the **COM SET UP** and **TEST/RESET** buttons simultaneously and then release. The control will flash four times as it writes a 30 second delay ON and a 180 second delay OFF to the program.
- **ELECTRIC HEAT** - Press and release the **COMM SETUP** and **LAST ERROR** buttons at the same time. The control will flash twice on the LED as the control writes a 0 second ON and a 30 second OFF fan delay to the control's program memory.

### Simplicity Communication Trouble Shooting

The "G" Com circuit terminal is tied to the unit ground and is the same connection point as the "C" terminal on the Simplicity board. The 24 vac supplied to the board is converted to 35 vdc, then regulated to 5 vdc for the communication circuit.

The three COM port terminals. Voltages will vary on every job.

A {lower +}

B {higher +} Voltage at B should always be greater than .250 vdc than at A.

G {-} does not connect directly to the cabinet ground

Board alone

USB Computer converter alone

Board, USB and Wireless

A to G.....150 to .155 vdc      TDA to G.....00.00 vdc      A to G.....007 vdc

B to G.....425 to .430 vdc      TDB to G.....4.009 vdc      B to G.....3.88 vdc

Do not apply 24vac to the RS485 port as it will destroy the communication driver chip.

Do not short any COM terminals and always take extra care installing the communication loop.

Serial Adapter voltages will be about the same as USB adapters.

025-38682-000 PC Cable only to connect to Simplicity. 031-01967-000 USB Complete Kit