

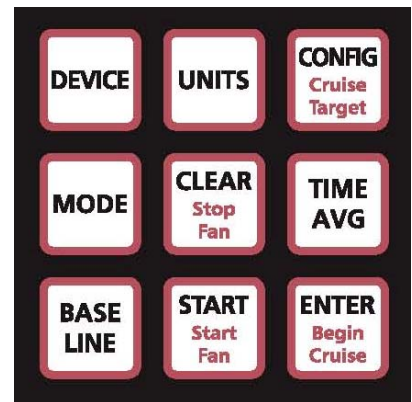
Cruise Control with the DG-700 Gauge

Beginning June 2007, a Cruise Control feature has been added to the DG-700 which allows you to automatically control the Blower Door fan to maintain a constant 50 Pa, 25 Pa or 0 Pa building pressure without having the gauge connected to a computer.¹ Common applications of the Cruise Control feature include:

- Quickly measuring building airtightness using a “one-point” 50 Pa test.
- Maintaining a constant 25 Pa building pressure while conducting a “duct leakage to outside” test with a Duct Blaster system.
- Pressure pan testing for evaluating leakage in forced air duct systems.
- Maintaining a constant building pressure while locating and sealing air leaks.
- Performing series leakage to quantify leakage rates between various zones within a building.

In order to use the Cruise Control feature you will need the following 3 items:

- A “Cruise compatible” DG-700 gauge. Your DG-700 is compatible with Cruise Control if the CONFIG, CLEAR, START, and ENTER keys have additional red lettering below the main black script.
- A Blower Door fan speed controller with a 3.5 mm communication jack on the side of the controller box (standard equipment since September 2004).
- A fan control cable to connect the DG-700 fan control jack to the speed controller communication jack.



Fan control cable.



Fan control jacks.

¹ Cruise Control has previously been available when conducting fully automated Blower Door testing using TECTITE software and a laptop computer.

Cruise Overview

Cruise Control uses the DG-700's fan control feature to continuously adjust the (Blower Door) fan to maintain a constant Cruise target pressure on **Channel A** of the gauge. Cruise Control can be used in the following gauge Modes to maintain the listed target pressures:

Gauge Mode	Cruise Target Pressures Available
PR/ FL @50	50 Pa
PR/ FL @25	25 Pa
PR/ FL	50 Pa, 25 Pa, +0, -0
PR/ PR	50 Pa, 25 Pa, +0, -0

Before starting Cruise, the Blower Door and DG-700 should be completely set-up (including tubing connections), the gauge should be in the Mode you wish to use, and the correct Device and Configuration settings should be entered. If you wish to Cruise with a baseline pressure adjustment applied to **Channel A**, simply use the Baseline feature first before beginning Cruise. You will also need to install the fan control cable and turn the Blower Door speed control knob to the "just on" position (i.e. the controller is on, but it is turned all the way down and the Blower Door fan is not turning).

Begin Cruise button: When you are ready to begin Cruise, press **Begin Cruise** to enter Cruise setup. A Cruise target pressure will appear in the **Channel A** display and the Cruise icon will flash. The flashing Cruise icon indicates that the gauge is ready to begin Cruising but is not yet controlling the fan. If you are in the **PR/ FL** or **PR/ PR** modes, you may change the Cruise target pressure at this point by pressing the **Cruise Target** button. **Note:** You can not change the Cruise target pressure when in the **PR/ FL @50** and **PR/ FL @25** modes.

Start Fan button: Press **Start Fan** to instruct the DG-700 to begin ramping up the fan to achieve the target pressure on **Channel A**. The fan will slowly start increasing speed until the pressure reading on **Channel A** matches the Cruise target pressure. The fan will simply run at full speed if the target pressure can not be achieved. Whenever the DG-700 is calling for full fan speed, the gauge will emit a beeping sound.

Stop Fan button: Press **Stop Fan** to turn off the fan when you are done Cruising, or need to change Blower Door fan Flow Rings. When the fan is turned off by pressing **Stop Fan**, the DG-700 returns to the Cruise setup state (i.e. the Cruise icon is flashing and a Cruise target pressure is displayed on **Channel A**). You may re-start Cruise again by pressing **Start Fan**, or exit the Cruise feature altogether by pressing the **CLEAR** button.

The fan will also be stopped while Cruising under the following circumstances:

- If **Channel A** registers a pressure of 100 Pa or more, the fan will automatically be shut down and the gauge will revert back to the Cruise setup state.
- The DG-700's auto-off feature will shut down the gauge and turn off the fan after 2 hours of run-time (if no buttons are pressed during that time).

Cruising Zero (+0 and -0)

Cruising Zero is designed for specialized testing/research applications and will typically not be used by most Blower Door technicians. Cruising Zero is useful if you want to control the Blower Door fan to remove an existing pressure from a building or other enclosure. When using the fan to pressurize a space (that is currently depressurized) use +0 as your Cruise target pressure. When using the fan to depressurize a space (that is currently pressurized), use -0 as the Cruise target pressure.