

Using TECLOG3 for a full building blower door test simultaneously with a target *dwelling units*

The goal of this test is to measure leakage to the outside of dwelling units by depressurizing the entire building to 50 Pa and at the same time bringing a dwelling units to the same pressure. You have the option of bringing multiple dwelling units at a time up to pressure to reduce the amount of time spent at the building. Using TECLOG3 software for this application will give you the ability to control and monitor the pressure in the full building as well as monitoring pressure and flow in multiple target dwelling units. In this example we will be setting up a three fan blower door system in an exterior door of the building, propping open doors to all dwelling units and opening all other interior doors. We will also be setting up blower door fans in three dwelling units at a time. You can then move throughout the building to test all of the required number of units. The software will be documenting the entire test and gathering all of the CFM50 leakage to the outside data for the units being tested. We will be doing a single point test at 50 Pa.

This tutorial assumes you already know how to run the TECLOG3 software. It will not outline in detail every step needed to perform the test.

Figure 1 below shows the tubing setup for this test. We are only using the 3 fan system to cruise 50 Pa, so we can do this with a single DG-700. Channel A is used to measure Building WRT Outside. A blue tube is being connected to the Input of Channel A because 3 fans will cause a lot of turbulence at the fan location, so we want the input measured from an area with less turbulence. Channel A of the other

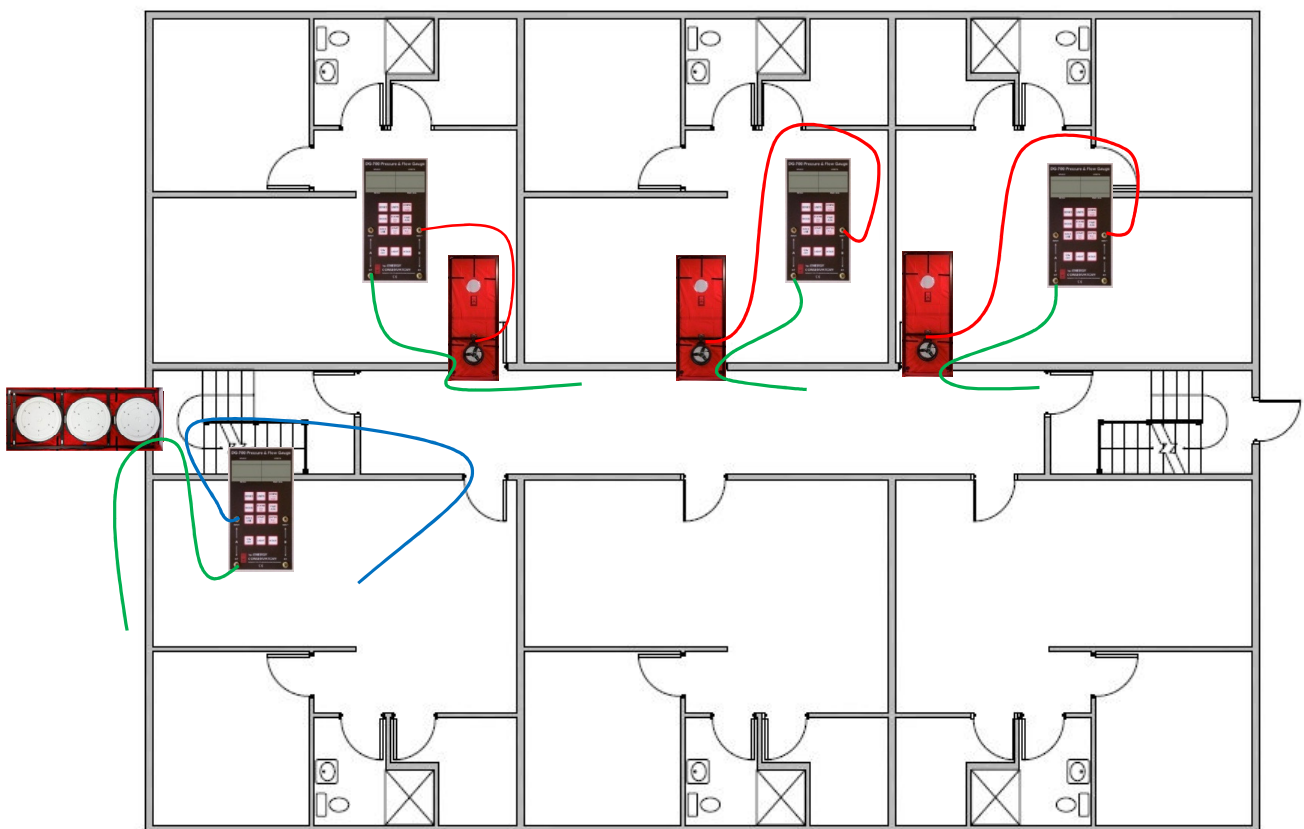


Figure 1

three gauges will measure the unit pressure WRT the building. The tubes in the hall should be far enough away from the 3 fan system to avoid turbulence.

All three of the fans in the multifan system can be controlled from the single DG-700 by connecting a 3 way fan control splitter cable to the gauge and running cables to each of the fan controllers. The multifan system can now be set to cruise the building to 50 Pa using the master controller (see figure 2).

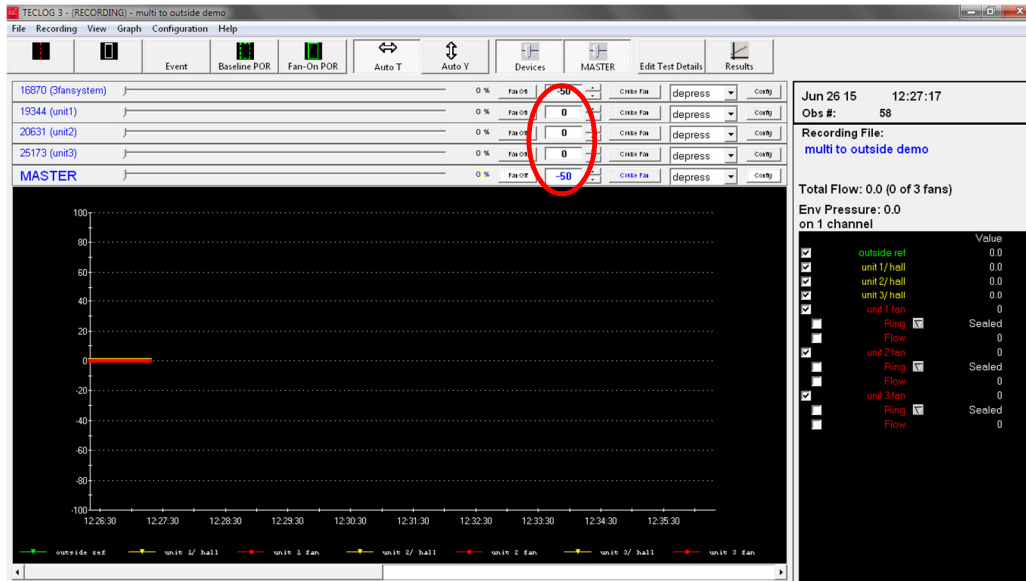


Figure 2

The other fans in the dwelling units will each be set to cruise 0 Pa and will need to be unlinked from the master (see figure 3).

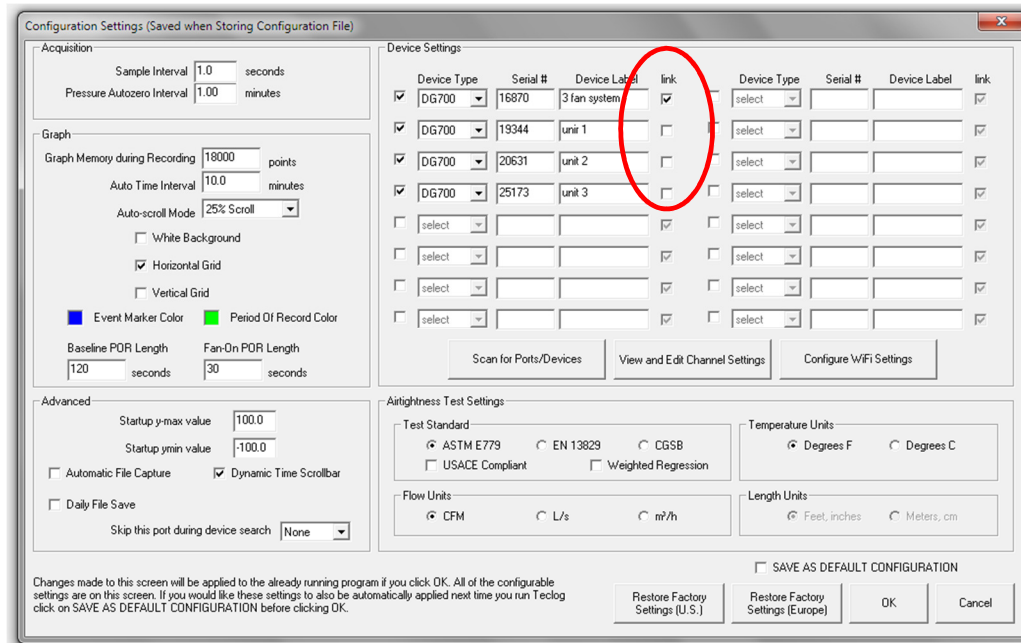


Figure 3

The DG-700 for the 3 fan system will be configured in TECLOG3 with Channel A being an Envelope pressure and Channel B will be unused and can therefore be unchecked in the On column (see figure 4).

The screenshot shows the 'Channel Settings' window for a 'DG700-16870 3 fan system'. At the top, there are four input fields: 16870, 19344, 20631, and 25173. Below these, the title 'DG700-16870 3 fan system' is displayed. The main table has columns: Color, Label, On, Channel Type, Device SN, Cal Date, # Dec, Sensor, Plot Format, and Plot Style. Channel A is configured with a green color, label 'outside re', checked 'On', 'Envelope Pressure' type, and '1' for # Dec. Channel B is configured with a red color, label 'blank', unchecked 'On', 'Pressure' type, and '1' for # Dec. A red circle highlights the 'On' checkbox for Channel B. At the bottom, there is a 'Color Scheme' dropdown set to 'Select and Apply' and an 'OK' button.

Color	Label	On	Channel Type	Device SN	Cal Date	# Dec	Sensor	Plot Format	Plot Style
A	outside re	<input checked="" type="checkbox"/>	Envelope Pressure			1	settings	Symbol and Line	style
B	blank	<input type="checkbox"/>	Pressure			1	settings	Symbol and Line	style

Figure 4

The DG-700 for unit 1 will be configured with Channel A being a pressure and Channel B being a Model 3 fan flow (see figure 5). Unit 2 and unit 3 will be configured similarly.

The screenshot shows the 'Channel Settings' window for a 'DG700-19344 unit 1'. At the top, there are four input fields: 16870, 19344, 20631, and 25173. Below these, the title 'DG700-19344 unit 1' is displayed. The main table has columns: Color, Label, On, Channel Type, Device SN, Cal Date, # Dec, Sensor, Plot Format, and Plot Style. Channel A is configured with a yellow color, label 'unit 1 / hall', checked 'On', 'Interior Building Pressure' type, and '1' for # Dec. Channel B is configured with a red color, label 'unit 1 fan', checked 'On', 'Model 3 Fan Flow' type, and '0' for # Dec. At the bottom, there is a 'Color Scheme' dropdown set to 'Select and Apply' and an 'OK' button.

Color	Label	On	Channel Type	Device SN	Cal Date	# Dec	Sensor	Plot Format	Plot Style
A	unit 1 / hall	<input checked="" type="checkbox"/>	Interior Building Pressure			1	settings	Symbol and Line	style
B	unit 1 fan	<input checked="" type="checkbox"/>	Model 3 Fan Flow			0	settings	Symbol and Line	style

Figure 5

After the gauges are configured you are ready to start recording. Cap the fans and create a baseline Period of Record. Then choose the correct ring configurations and start cruising the fans. After the pressures have stabilized create a Fan On period of record and uncheck the box before ***Include in Airtightness Test Results***. You should name each period of record in a way that will identify which three units are being tested. After the Period of Record is complete you can turn off the fans in the dwelling units and move them to the next set of units. Once they are all ready to go, you can start cruising zero with those fans and create another period of record.

After all units are tested you can view the results by clicking on the first fan on period of record so the outline of the Period of Record turns white, then right click in the Period of Record. A pull down menu will appear. Choose Show Stats from this menu (see Figure 5). If you look down the Avg column you will see the *outside ref* pressure and the CFM flow for the fans in these three units

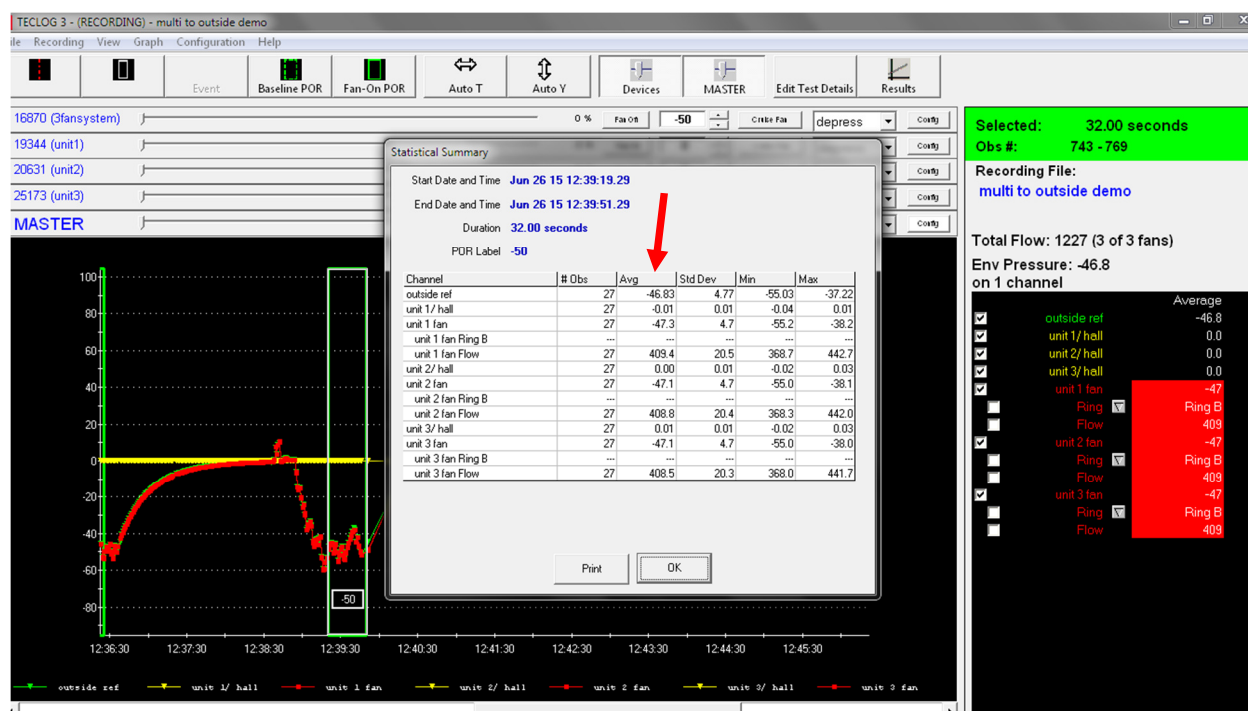


Figure 5