# OWNER'S MANUAL

# AUTOPILOT TOUCHSCREEN MULTI-FAN CONTROLLER AIRFLOW HVLS FANS

Shipping     Fan Control      Calling 75,4%     Floor 75,4%	er 🕜	
201         10%           C         Manual           Production Area         Ceiling         75.4%           Floor         75.4%	BLUE	BIANT.
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10:50	₩, 75.6°F	





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# 1.0 SOFTWARE FEATURES

- End user to have full control of each individual AirFlow HVLS Fan's output RPM.
- Ability to view current speed of each AirFlow HVLS Fan.
- Ability to turn each AirFlow HVLS Fan on or off from the controller.
- Ability to control and network a minimum of 24 AirFlow HVLS Fans (12 per leg) together.
- Ability to continue to operate AirFlow HVLS Fans in both forward and reverse directions.
- Ability to name each AirFlow HVLS Fan connected separately.
- Password lockout with four (4) user levels.
- Three (3) preferred settings. Each AirFlow HVLS Fan connected to the controller will have these options and each AirFlow HVLS Fan will be able to have a different preferred temperature setting:
  - **Cooling:** Ability to choose a temperature at the floor level in which if the temperature rises too much, the fan will increase its RPM automatically until the chosen temperature is reached.
  - Destratification: Ability to choose a temperature at the floor level and have the fan adjust it's RPM automatically to level out the floor and ceiling temperature.
  - Manual: Gives user full control of each individual fan's output RPM.
- Schedule a fan or group of fans to start and stop at user defined time intervals.

# 2.0 TECHNICAL SPECIFICATIONS

#### **AutoPilot Controller Specifications**

Power Supply	90-250V 50/60 Hz
Dimensions	13.5" w x 10" h x 6" d (343 mm x 254 mm x 153 mm)
Weight	5.3 lbs (2.4 kg)
Language Protocol	Modbus RS485 communication
Temperature Inputs	Two local inputs / Up to 48 remote inputs
Display Operating Temperature	32°F - 105°F (0°C - 40.5°C)
Display	800 x 480 pixels
Touchscreen Size	6" w x 3.375" h (153 mm x 86 mm)
Enclosure Material	B1 standard splash proof
User Interface	7" (178 mm) capacitive touchscreen
Power Consumption	25W
Fans per AutoPilot	Maximum 24 fans; 12 fans per leg

# 3.0 FIELD WIRING DIAGRAM



# 4.0 INTEGRATION

- Control your fans from a computer or web-enabled smart device.
- Multiple levels of access:
  - Administrator
  - Technician
  - Operator
  - Viewer
- Control fans from almost anywhere.
- Updates and patches are automatic.
- Two (2) temperature probes per fan required. One (1) located at roof level and one (1) located at occupant level.



#### 5.0 **CONTROLLER WIRING DIAGRAMS**





SAFETY SWITCH

-vh

T°SENSOR #FLOOR

(\*\*)

T°SENSOR

#CEILING

10K

- 1. electrician and installed as prescribed by the applicable regulations of the electrical code.
- Use AWG#14 wire for power. 2.

**General Notes** 

- 3. Use CAT5E ethernet wire to connect fan drive to the communication port.
- Use 2C 22/7T SH CSA FT4 wire to connect alarm and sensors to input 4. channels.

# 5.0 CONTROLLER WIRING DIAGRAMS (continued)



# 6.0 **PROGRAMMING**

All interfaces will be accessible via a web browser; either desktop or mobile device. However, it must be touch screen compatible.

The controller will allow a maximum of 16 users to be defined and will support a minimum of three (3) simultaneous connections.

The following example shows a typical interface on a mobile device that the controller is able to offer.

• Design for 800 x 480 HMI

It will display the same way on the local touch screen via local web browser connected to the Internet / Wi-Fi.

$\bigcirc \bigcirc \bigcirc \bigcirc$	Fan	Controller		
Shipping		Ceiling Floor 10% Manual	75.4 F 75.4 F	
Production Area	<b>k</b> x; c	Ceiling Floor 10% Manual	75.4 F 75.4 F	
Entrance 1	<b>k</b> 24 0	Ceiling Floor 45% Manual	75.4 F 75.4 F	
Mechanic		Ceiling Floor 0% Manual	75.4 F 75.4 F	
-•;•-	c	Manual		

Each page will follow this typical configuration:

#### Header

- Page title and icon
- Blue Giant logo

Main Content (depending on the page)

#### Footer

- Current time (AM / PM display)
- Current season
- Outside temperature



Winter



Summer

The application must be multilingual (English by default).

All interfaces will be accessible via a Web browser; ether desktop or mobile device. The software will allow four (4) types of access based on privileges (see 3.3.3.4.1 for details).

The controller will allow a maximum of 16 users and support a minimum of three (3) simultaneous connections.

# 6.0 PROGRAMMING (continued)

Here you can set the preferred temperature set points of each fan individually and set the fans to automatic or manual control modes.

	Fan Controller		Fan Controller		0	Fan Controller
F01-Shipping	100% 🔊	A Home		Ø	Ceiling Probe	78.5°F Ø
F02-Production Area	50% 🕥	✤ Settings		0	Floor Probe	78.5°F 🖉
F03-Entrance 1	50% 🕥	✤ Configuration		0	Current Mode	Winter 🥥
F04-Mechanic	10% 🔊				Speed	50% 🧭
F05-Entrance 2	50% 🔊				Control	Auto 🧭
					Mode	Auto Seasonal 🧭
					Winter Settings	0
					Summer Settings	0

#### This page displays current fan data:

- Current ceiling temperature
- Current floor temperature
- Current mode (manual control, override, winder, summer)
- Current speed (%)

#### It displays the following parameters:

- Control (Auto / OFF / Manual)
- Mode (Auto Seasonal / Winter / Summer / Override)

#### In Auto-Seasonal mode it provides also shortcut to (see above):

- Schedule setting
- Winter settings
- Summer settings (destratification)

#### In Winter mode it provides also shortcut to (not illustrated):

- Schedule setting
- Winter settings (destratification)

#### In Summer mode it provides also shortcut to (not illustrated):

- Schedule setting
- Summer settings

# 6.0 PROGRAMMING (continued)

Here you can connect the AutoPilot to your network. By connecting to your network, you can control your fans from any internet ready mobile device.

F01-Sheping       100% 0)         F02-Sheknok Area       60% 0)		Fan Controller			Fan Controller			Fan Controller
Image: Project production Area         Stortman         Optimized Production Area         Stortman         Stortman <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
Trick Production Area         50% (b)         Icoal Settings         (c)         IP Address         192-08-10.10         State Configuration         (c)         Solution         192-08-10.10         Solution	F01-Shipping	1	00% 💿	Local Network		0	Local Network	
F03-Entrance 1     50% ©       F04-Mechanic     10% ©       F05-Entrance 2     50% ©       Diagnosis     ©       About     ©       Pinary DNS     8.84.4 @       Apply Settings     ©       User name        User name        Diagnosis     ©       Point     Secondary DNS       Secondary DNS     8.84.4 @       Apply Settings	F02-Production Area		50% 🕥	Local Settings		Ø	IP Address	192.168.1.10 🖉
F04 Mechanic     10% ©       F05 Entrancé 2     50% ©         Ibers     ©         About         Mask     255 250.0 °         Mask     255 250.0 °         Bignoisis     ©         About     ©         Mask     255 250.0 °         Bignoisis     ©         About     ©         Mask     255 250.0 °         Primary DNS     8.88.48         Apply Satings     ©         Optimize DNS         Barrice Privide     - °         View rame     - °         Apply Satings     ©         Image: Comparison of the privide         Apply Satings         Image: Comparison of the privide         Apply Satings         Image: Comparison of the privide         Apply Satings         Image: Comparison of the privide         Image: Comparison of the privide <tr< td=""><td>F03-Entrance 1</td><td></td><td>50% 🕥</td><td>System Configuration</td><td></td><td>۲</td><td>Subnet</td><td>192.168.1.1 🖉</td></tr<>	F03-Entrance 1		50% 🕥	System Configuration		۲	Subnet	192.168.1.1 🖉
F05-Entrance 2       50% ©         About       ©         About       ©         About       ©         Times DNS       88.88 @         Service Provider       - @         Operation Name       - @         Apply Settings       @         Outsername Name       - @         Apply Settings       @	F04-Mechanic		10% 🕥	Users		Ø	Mask	255.255.0.1 🖉
About       Image: Secondary DNS       8.8.4.4 (Characterization of the secondary DNS)       8.8.4.4 (Characterization of the secondary DNS)         Secondary DNS       Secondary DNS       8.8.4.4 (Characterization of the secondary DNS)         Secondary DNS       Secondary DNS       8.8.4.4 (Characterization of the secondary DNS)         Secondary DNS       Secondary DNS       Secondary DNS         Secondary DNS       Secondary DNS	F05-Entrance 2		50% 🕥	Diagnosis		Ð	Primary DNS	8.8.8.8 🖉
Apply Settings C				About		Ø	Secondary DNS	8.8.4.4 🖉
Image: Service Provider       - 0         Service Provider       - 0         User name       - 0         Password       - 0         Apply Settings       0							Apply Settings	9
							Dynamic DNS	
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<ul> <li>The second second</li></ul>							User name	0
							Password	Ø
							Domain Name	Ø
							Apply Settings	G
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This page allows configuration of all network settings of the fan controller. If these parameters are modified through remote connection, the connection will be lost. User must have to reconnect with the new settings. Here you can display all defined users and accessibility.

Tan Controller	Example 1 Fan Controller			Fan Controller
F01-Shipping 100% 🕥	Local Network	0	John Martin	Administrator 🔊
F02-Production Area 50% 🔊	Local Settings	O	Adam Smith	Technician 🔊
F03-Entrance 1 50% (>	System Configuration	۲	Janet Smith	Operator 🔊
F04-Mechanic 10% 🕥	Users	۲	George Adams	Viewer 🔊
F05-Entrance 2 50% O	Diagnosis	Ø	Add New Liser	0
	About	Θ		

# 6.0 PROGRAMMING (continued)

All interfaces will be accessible via a web browser; either desktop or mobile device. The software will allow four (4) types of access based on privileges.

Erable Name Profi	Fan Controller	Of John Martin @ Administrator @	Administrator: This user has all accesses and can manage the account of other users. Technician: This user can modify any installation setup and operational parameters but cannot
			<ul> <li>manage users.</li> <li><b>Operator:</b> This user can only modify operational parameters but cannot see installation setup or other users.</li> <li><b>Viewer:</b> This user can only see operational parameter but access to the configuration menu is not allowed.</li> </ul>

If **DELETE USER** is selected, a message is displayed to confirm before deleting.

- Here you can set the preferred temperature set points of each fan individually and set the fans to automatic or manual control modes
- Here you can connect the AutoPilot to your network. By connecting to your network, you can control your fans from any internet ready mobile device.
- · Here you can display all defined users and accessibility.



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NOTES



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