



MegaFan HVLS Fan Controller Operating Manual

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1.0 Home Screen

ALARM BUTTON –
Shows Alarm screen

HOME BUTTON –
Shows Home screen

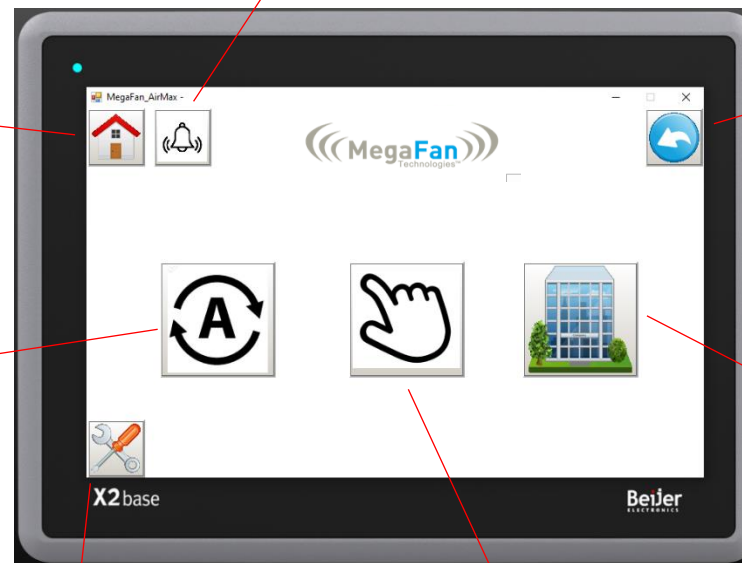
BACK BUTTON –
Shows previous screen

AUTOMATIC BUTTON –
Shows winter/summer mode
select screen

BMS BUTTON –
Shows BMS screen and
enables BMS mode

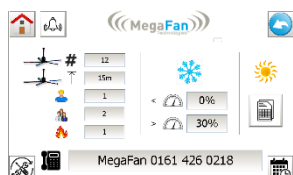
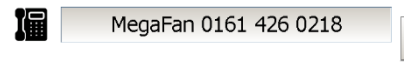
SETTINGS BUTTON –
Shows parameters &
settings screen to allow
system configuration

MANUAL BUTTON –
Shows Manual operation
screens





2.0 System Configuration – Initial Set Up

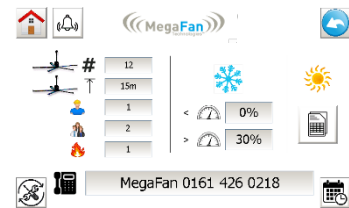
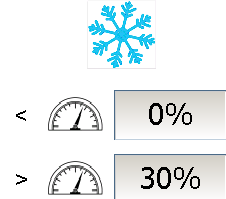
Step	Action	Result	Image	Notes
	For Installation parameters – press settings button on Home Screen 	Installation parameter screen is shown.		Screen is Password protected. Access level: Engineer
	Press title bar at bottom of screen to enter service provider contact details	Alpha-numeric keyboard is presented		This information will be shown across service information screens
	Enter metabolic rate and worker clothing level by touching numerical input boxes and using keypad.	Values will be saved after pressing enter on the keypad.		These values are relevant to the real feel temperature.
	Enter fan quantity by touching numerical input and using keypad.	Values will be saved after pressing enter on the keypad.		This value must be correct according to the number of fans installed. Incorrect value will result in communication errors.
	Enter fan height by touching numerical input and using keypad.	Values will be saved after pressing enter on the keypad.		Unit is meters
	Enable start enable function by entering value of 1	Zero volts must be applied to pink wire of pre-made fan control cable		Modbus address 44 is set to 1.



3.0 Installation Date

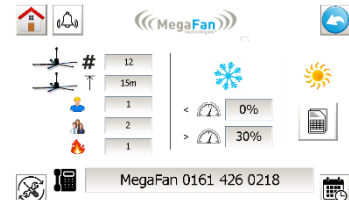
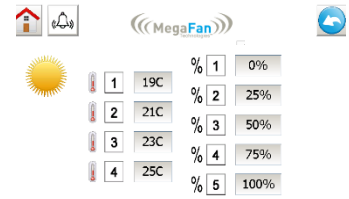
Step	Action	Result	Image	Notes
	To set installation date – press calendar icon on bottom right corner of installation parameters screen 	Installation date screen is shown		Fans will be permitted to run for a period of 15 minutes for testing. After this time, the fans will stop and the operator will be prompted to enter and installation date.

4.0 System Configuration – Winter Settings

Step	Action	Result	Image	Notes
	For Installation parameters – press settings button on Home Screen 	Installation parameter screen is shown.		Screen is Password protected. Access level: Engineer
	Press numerical input for winter max speed settings.	This is the maximum speed the fans will operate in automatic destratification mode		Minimum speed is fixed at 0% - fans will operate at 10RPM when $\Delta T \leq 2^{\circ}\text{C}$



5.0 System Configuration – Summer Settings

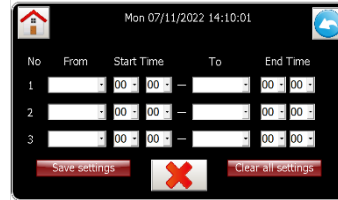
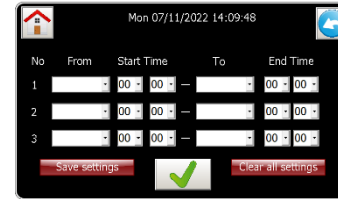
Step	Action	Result	Image	Notes
	For Installation parameters – press settings button on Home Screen 	Installation parameter screen is shown.		Screen is Password protected. Access level: Engineer
	Press button to load summer settings screen  	Summer settings screen is shown		Set temperatures and fan speed percentages as required



6.0 Automatic Control

Step	Action	Result	Image	Notes
	Press Automatic button on Home Screen 	Summer/Winter mode select screen will show		Schedule can also be accessed from this screen
	For Winter mode – press snowflake button 	Winter home screen will show		Winter automatic mode is only enabled when this screen is displayed. Information shown: • Fan speed • High level temperature & humidity • Low level temperature & humidity • Temperature differential



Step	Action	Result	Image	Notes
	For Summer mode – press sun button 	Summer home screen will show		Summer automatic mode is only enabled when this screen is displayed. Information shown: - Fan speed - Low level temperature & humidity - Real feel temperature
	For Schedule – press clock button 	Schedule screen will show Screen is Password protected. Access level: Operator		Schedule is NOT enabled when red cross (X) is shown and operation will be constant. Schedule is ONLY enabled when green tick (✓) is shown.
	Enter days and times for intended operation	Settings can be saved using “Save” button or cleared using “Clear” button		If fields are left blank and green tick is shown, summer & winter automatic modes will not operate.

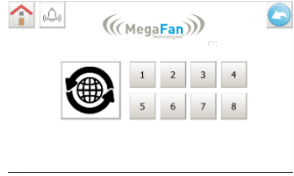


7.0 Manual Control - ALL

Step	Action	Result	Image	Notes
	For Manual mode – press Manual button on Home screen 	Manual option screen will show		Fans can be manually controlled individually or globally(ALL)
	For Manual ALL control – select global button 	Manual ALL control screen will be shown		Any speed settings from Summer, Winter or Individual control will be overwritten when using this screen
	Fans can be started using green (+) & red (-) buttons to set speed	Speed command will be sent to ALL fans.		Information: Range of speed available shown by green status bar. Fans running will be indicated by flashing rotation icon.
	Fans can be stopped using stop button	ALL fans will stop		Fans will coast to a stop

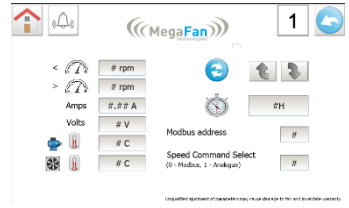


8.0 Manual Control - Individual

Step	Action	Result	Image	Notes
	For Manual mode – press Manual button on Home screen 	Manual option screen will show		Fans can be manually controlled individually or collectively (ALL)
	For Manual Individual control – select numerical button of fan 	Fan control screen of the selected fan will be shown – indication in top right corner (1)		Only the selected fan will be controlled. All other fans will continue to run at the last selected speed, if running.
	Fan can be started using green (+) & red (-) buttons to set speed	Speed command will be sent to the selected fan.		Range of speed available shown by green status bar. Fan running will be indicated by flashing arrows showing direction of airflow.
	Fan can be stopped using stop button	Selected fan will stop		Fan will coast to a stop
	No Action – In the event of an alarm condition the alarm code will be shown on the bottom right corner of the screen	Alarm codes and definitions are included in section 13 of this manual.		Alarm codes will only show while the alarm condition is present



9.0 Manual Control – Fan Parameters

Step	Action	Result	Image	Notes
	For Fan Parameters – press settings button on bottom left corner of any manual individual screen 	Fan Parameters screen of selected fan will show Screen is Password protected. Access level: Operator		Information (Read only): Fan minimum speed Fan Maximum speed Fan Current (Amps) Fan Voltage (Volts) Drive Temperature Fan Temperature Fan runtime (Hours) Modbus Address
	Change Fan direction using UP/DOWN arrows	Current Fan direction is indicated as green arrow. Default/normal operation is clockwise/down.		It is only possible to change direction while the fans are stationary. This option is not available while fans are running.
	Set Speed command select option to (0) for Modbus control	Fan will respond to Modbus commands for operation and control	Speed Command Select (0 - Modbus, 1 - Analogue) 	It is only possible to change the fans from Analogue to Modbus control. If fans are required to revert back to Analogue mode, other software must be used.



10.0 BMS Control

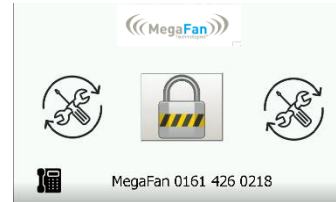
Step	Action	Result	Image	Notes
	To select BMS control – press BMS button on Home screen 	BMS screen will show		BMS mode ONLY active when this screen shows. Winter, Summer & Stop signals are sent from BMS and are read only by the controller. Alarm signal is generated by the controller and sent to BMS in the event of a fault or alarm condition.



11.0 Service and Safety Check Schedule

Step	Action	Result	Image	Notes
	To access service and safety check screen – press maintenance icon on bottom right corner of Home screen 	Service option screen will show		Screen is Password protected. Access level: Service
	Press Clock icon to view next service and safety check date 	Service date screen will show		Service date is generated 12 months from installation date
	Press tick icon to confirm service and safety check has been completed 	Dialog box will confirm that service and safety check has been carried out		A new service and safety check date will be generated 12 months later



Step	Action	Result	Image	Notes
	No action – automatic function Press back button to navigate away from warning screen 	Screen will show 30 days ahead of service and safety check due date		Fans will stop on this date to alert operators of imminent service date. Operator will be able to restart fans immediately.
	No action – automatic function Press back button to navigate away from warning screen 	Screen will load every day showing countdown to service and safety check date until 30 days after due date.		Fans will stop again on service and safety check due date. Operator will be able to restart fans immediately.
	No action – automatic function	If service and safety check has not been completed 30 days after due date then fans will stop and screen will lock		Engineers' password will be required to access screen.



12.0 Maintenance Lockout

Step	Action	Result	Image	Notes
	To access service and safety check screen – press maintenance icon on bottom right corner of Home screen 	Service option screen will show		Screen is Password protected. Access level: Service
	Press the padlock icon to lock screen whilst service and safety check is carried out to avoid unsafe operation 	Service lockout screen will show		Engineers' password will be required to access screen.



13.0 Alarm Codes

Alarm Codes detailed on pages 7 & 8 in the MegaFan AirMax 660 Manual.