



Installation, Operation and Maintenance Guide

MC-880 System Series

OUR MISSION

To design and build quality engineered air cleaning systems to provide indoor comfort, protect occupants, and ensure the reliability of critical systems and processes.

IMPORTANT

Save this Document for Future Reference & Warranty Information



Bioclimatic.com
356-JUN-2022

!IMPORTANT!

READ THIS BEFORE STARTING INSTALLATION.
DO NOT THROW AWAY THIS GUIDE.

For installation you **MUST**:

- Always disconnect power to the unit before handling any of the components.
 - **DO NOT** connect to the power before the installation is complete and personnel are aware of the imminent operation.
 - Carefully read this instruction booklet before beginning the installation.
 - Follow each installation or repair step exactly as shown and explained in this guide.
 - Observe all local, state, national and international electrical codes.
 - Pay close attention to all warnings and caution notices given in this guide.
-

How to Contact Us: If you need help, please contact a Bioclimatic Air Systems Representative for technical assistance.

!CAUTION!

Do not touch while in operation shut off electricity before servicing!

This equipment should be inspected frequently and collected dirt removed from it regularly to prevent excessive accumulation that may result in flashover or risk of fire.

!MISE EN GARDE!

Ne touchez pas pendant le fonctionnement couper l'électricité avant l'entretien

Cet équipement doit être inspecté fréquemment et la saleté collectée doit être retirée régulièrement pour éviter toute accumulation excessive pouvant entraîner un court-circuit ou un risque d'incendie.

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01 INTRODUCTION

1.1 Disclaimer

These instructions are submitted with the implicit understanding that:

1. This manual is to guide the user of Bioclimatic equipment in the proper installation, operation and maintenance procedures to insure maximum equipment life with efficient operation.
2. The customer has assigned competent maintenance and operating personnel to the system described herein and will assume operational and maintenance responsibility upon start-up of the system.
3. The customer will read and thoroughly examine the foregoing instructions and will notify the seller of any points not fully understood, points of conflict or error.
4. The customer, in lieu of any notification to the contrary, has read and fully understands the operation of the system and is aware of the hazards of corrosion, abrasion and fire or explosion and shall take the necessary steps in the operation of equipment to control such hazards to the maximum extent possible.
5. Start-up assistance or field engineering service provided by Bioclimatic shall in no way relieve the customer of responsibility for the proper operation of the system.



IMPORTANT: Any modifications to the unit by unauthorized personnel will void factory warranty. The unit must be installed in accordance with the manufacturer's instructions to preserve warranty.

1.2 Receiving

Products leaving the Bioclimatic factory are inspected and in satisfactory operating condition. All equipment should be thoroughly inspected when received. Although all units are properly packaged, rough handling in transit can cause breakage. Any shortage or damage should be reported at once to the transportation company. Note the damage on the bill of lading before signing for the shipment. **No equipment may be returned to Bioclimatic without written authorization. Returned equipment sent without authorization will be refused and returned to sender.**

After receiving the MC-880, remove the carton and place the unit in its operating location. Remove the access panel and remove the ionization tubes and filters. Inspect all parts for damage. If any parts are damaged, contact the shipping company immediately to file a claim for damaged equipment. Note the damage on the bill of lading before signing for the shipment.

All products are shipped F.O.B. (Ex Works, FCA) Bioclimatic warehouse. Responsibility for all equipment passes to the buyer at the time equipment is loaded onto the carrier's truck.

1.3 Handling

Handle equipment with care when removing external packaging or moving equipment to prevent damage to special paints and surface coating. A small chip in the paint or coating will break the continuity of the surface treatment and destroy its protective value. Always touch-up scratched surfaces prior to installation and start-up.

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1.4 Storage

When storing equipment, care must be taken to protect bearings, shafts, electrical connections, leads and finished surfaces from moisture, and contamination. Do not store unit outdoors. Do not store any other material on top of equipment. Periodic inspections of the equipment should be made until it is ready to be put into service. Remove and seal all filters from equipment when storing.

Note: If components are not installed upon delivery, it must be stored in a weather-protected area.

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1.5 Warranty

The seller warrants the equipment against defective workmanship and material for fifteen (15) months from date of factory shipment or one (1) year from commissioning, whichever occurs first. In the fulfillment of its warranty, the sole obligation of seller shall be to repair or replace, at its option, F.O.B. its factory, any part or parts which are returned F.O.B. its factory, shipping charges prepaid, and which after inspection by seller are found to be defective. Buyer shall notify seller of defect in writing, promptly upon discovery and within the warranty period. This warranty does not cover defects caused by corrosion or normal deterioration; it does not extend to consequential damage, loss or delay associated with a warranty defect; and it does not cover any cost of labor, travel, or other expense associated with the repair or replacement of defective parts. Seller assumes no liability for product loss or other claims whatsoever arising out of the use or application of the equipment in any operations, whether the machine is used alone or in conjoint use with other equipment or processes. Notwithstanding the foregoing, seller's warranty obligations with respect to any items not manufactured by seller shall not exceed the obligations undertaken by the manufacturer thereof under express warranty to the seller. This express warranty is in lieu of all other warranties of fitness of the machine for any particular purpose.

There are no other representations, warranty of condition in any respects either expressed or implied, statutory, or otherwise in contract or tort, other than what is stated above.

The seller shall not be held liable in any way for consequential damages, however caused.

This warranty will not apply if the seller's equipment has been damaged due to improper installation, alteration, abuse or misuse, accident, fire, flood, or unavoidable circumstance. Further, this warranty will not apply if repairs, replacements, or alterations are made by others without the seller's prior written authorization.

In the event the state in which the equipment is installed does not permit the limitation or exclusion of implied warranties or conditions under given circumstances, the provisions of this written warranty are in addition to and not a modification of the statutory warranties and other rights and remedies provided by such laws.

Any modification to original equipment by any company or person other than the manufacturer will serve to cancel and void all of the seller's liability under the manufacturer's warranty. Enclosures containing electronic components are normally sealed by the manufacturer to prevent unauthorized tampering or adjustments. Only authorized service provides may break seals to complete calibration or to trouble shoot the unit. Unauthorized tampering or breaking seals will release the seller from any future liability under the warranty.

Disclaimer: The air purification technologies provided by Clean Air Group are intended to improve indoor air quality. They are not intended as a replacement for reasonable precautions aimed at preventing the transmission of contaminants, airborne or otherwise. All persons having access to the serviced premises should comply with applicable public health laws and guidelines issued by federal, state and local governments and health authorities such as the Centers for Disease Control and Prevention (CDC). Clean Air Group does not maintain that its products will protect people from all modes of transmission of bacteria, viruses or other contaminants, and excludes liability for loss or damage arising from any such claims or the consequences arising out of the application, use or misuse of its products.

02 SAFETY CONSIDERATIONS

Improper installation, adjustment, alteration, service, maintenance, or use can cause fire, electrical shock, or other conditions which may cause personal injury or property damage. Consult a qualified installer, service agency, or your supplier for information or assistance. The qualified installer or agency must use factory kits or accessories when installing this product. Refer to the individual instructions packaged with kits or accessories when installing them.

Follow all safety codes, wear safety glasses and work gloves. Read all instructions thoroughly and follow any warnings or cautions attached to any accessed area. Consult local building codes and the National Electrical Code (NEC) for special requirements.

03 INSTALLATION

3.1 Unit Location

Select a location for the unit that best suits the application. Odor control and unit efficiency can be significantly affected if the unit is located improperly. When in position, the unit is designed to draw contaminated air from one direction and discharge purified air in three directions from the adjustable curved blade diffusers located on the supply side. Clean air is thrown about 20 feet in a conical pattern along the ceiling in order to provide thorough mixing with room air, while also preventing uncomfortable drafts on occupants within the room. The adjustable curved diffuser blades may be opened or closed to create the desired circulation patterns.

The unit's effectiveness will be determined by the ability of the established air pattern to "push" or "blow" the polluted air. Suction or pulling power of any system is limited to a small area near the unit's intake. The supply air "blow" is effective further away from the machine than is the suction.

When selecting a location for the MC-880, it should be located such that air currents are established which displaces the pollute air from the source back to the intake on the MC-880, it is not necessary to install the unit directly above the pollution source. Because of the recirculation capability, it is always important to position the unit such that it is offset in the room with the intake grille positioned toward the nearest wall. The three-way supply grille should then be aligned so that air is directed at the farthest point in the room.

While the noise level generated by the MC-880 is acceptable for most general office and commercial applications, it is not advisable to place the unit directly over a workstation when ceiling heights are 9 ft. or less. The measured noise level at 1 meter below and 1 meter to the side with a 95% HEPA and 30% prefilter is 48 dBA. Operation on low speed will result in a noise reduction of 8-10 dBA compared with operation on high speed. This noise level is suitable for most quiet office areas and conference rooms.

When installing multiple units, sub-divide the room into equal parts and locate the MC-880 units to establish the desired circulation patterns. Locate the MC-880 such that its air supply grille is at least 12 ft. from a building supply or return air grille/diffuser, i.e., a 12 ft. radius, 180 degrees arc on the supply side of the MC-880.

NOTE: Consult with local building authorities to ensure compliance with local building code ordinances.

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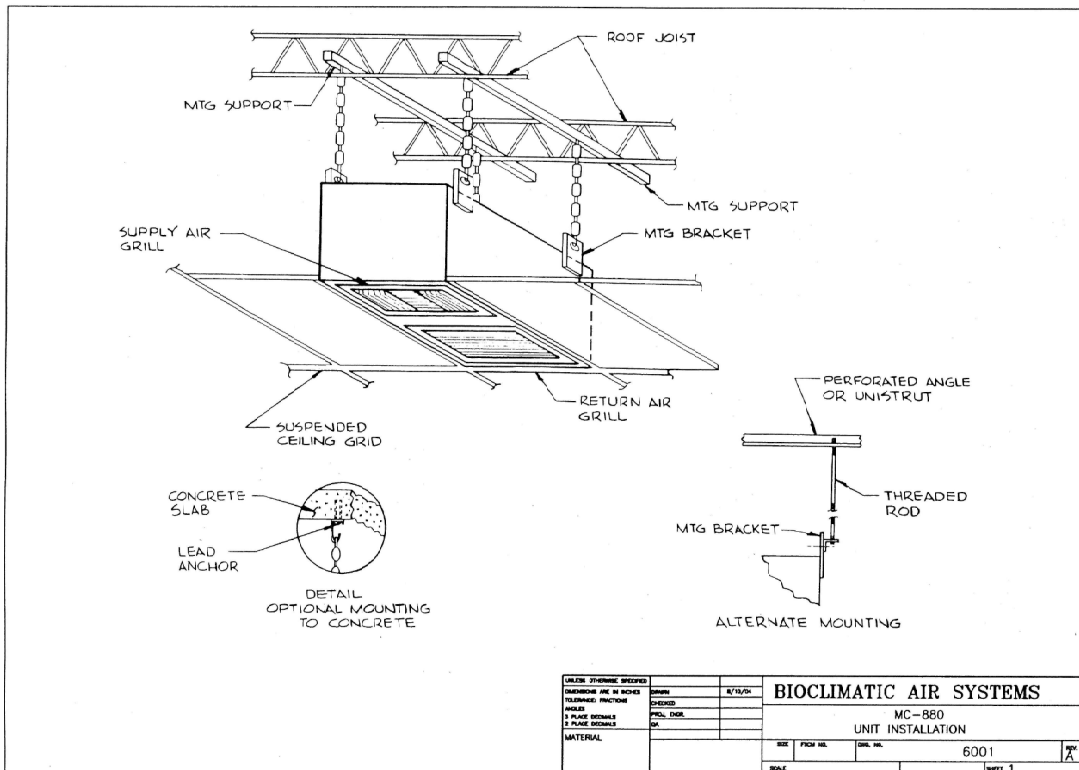
3.2 Unit Installation

The MC-880 is designed to flush mount within the standard drop ceiling T-bar grid system commonly found in most commercial buildings. The unit should be mounted as follows:

1. Four mounting plates (with holes) are attached to the upper portion of the long sides. Remove the two outside screws and loosen the center screw on the mounting plates. Pivot the mounting plate into a vertical position so the hole is exposed. Install two screws and tighten the center screw.

Note: Do not support the MC-880 by any other means except the four mounting plates provided. Do not make any penetrations into the MC-880 cabinet. Alterations to the MC-880 housing may affect system performance.

2. Heavy duty wire (60 lbs. rating) or electrician's chain should be used to support the unit by securing the upper end to a roof support joist or beam, capable of supporting a minimum load equal to two (2) times the weight of the completely loaded unit. In this manner, the weight of the unit is not placed directly on the ceiling grid supports. Four turn buckles may also be used if desired to obtain precise vertical adjustment and level.
3. In order to reduce noise and vibration, the MC-880 should be isolated from the ceiling system by installing 1/4 in. W x 1/16 in. thick PVC stripping (supplied with the unit) on the horizontal and vertical sections of the T-bar. Continuous coverage on the T-bar is recommended to prevent metal to metal contact.



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3.3 Electrical Connections

Unit Power

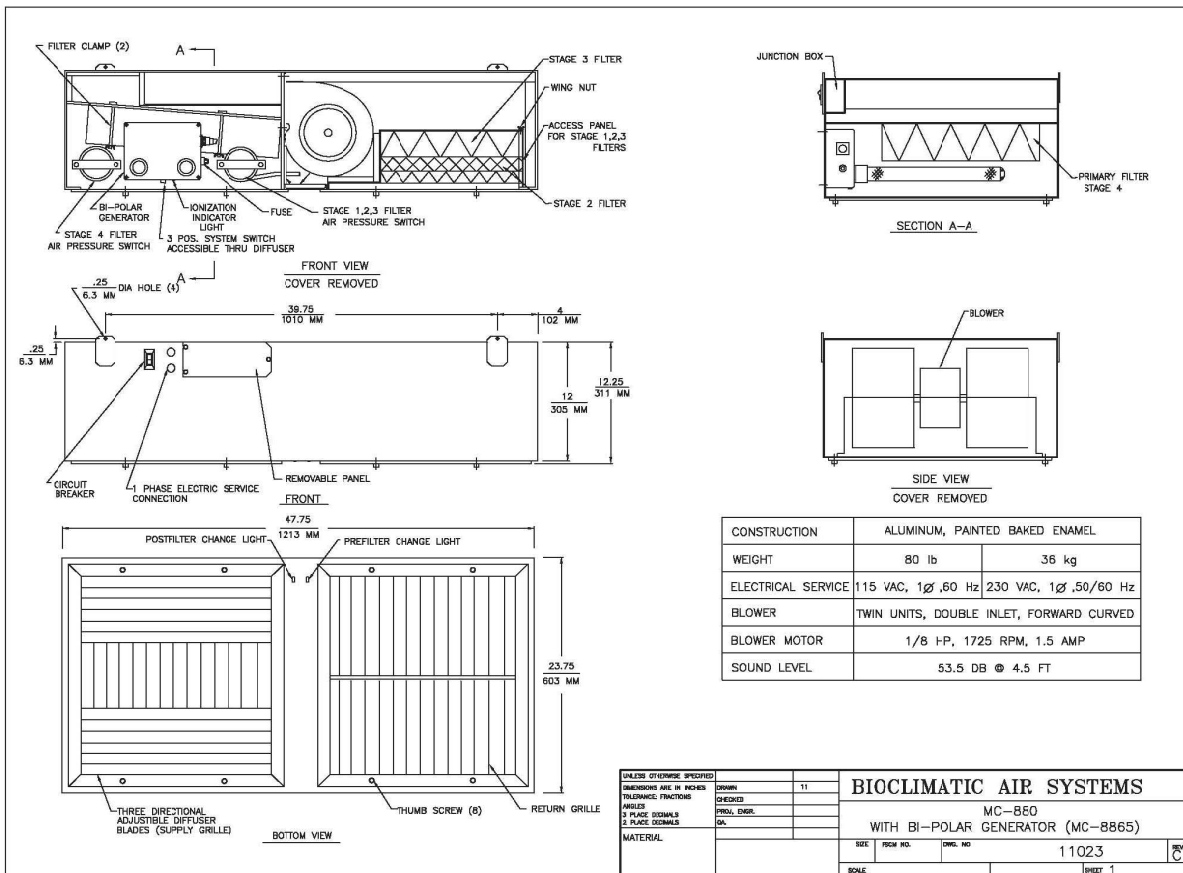
Power input is 115 volt, 1 phase, 60 Hz (230 volt, 1 phase, 50/60 Hz). One circuit breaker on the right side of the unit (when facing the end with the discharge grille) controls the blower and ionization settings. The lamp indicates operation of the bi-polar ionization unit. High and low settings will adjust both blower speed and ionization levels simultaneously. Adjust the blower setting (high or low) depending on the room size, amount of contamination and noise criteria. For units designed for 220/240 volts, 1 phase, 50/60 Hz; the high-low setting will adjust only ionization levels. The blower for 220/240 volt systems operates at one speed only.

Power is provided to the unit by means of a three-prong power cord connected to any standard 115 volt electrical outlet.

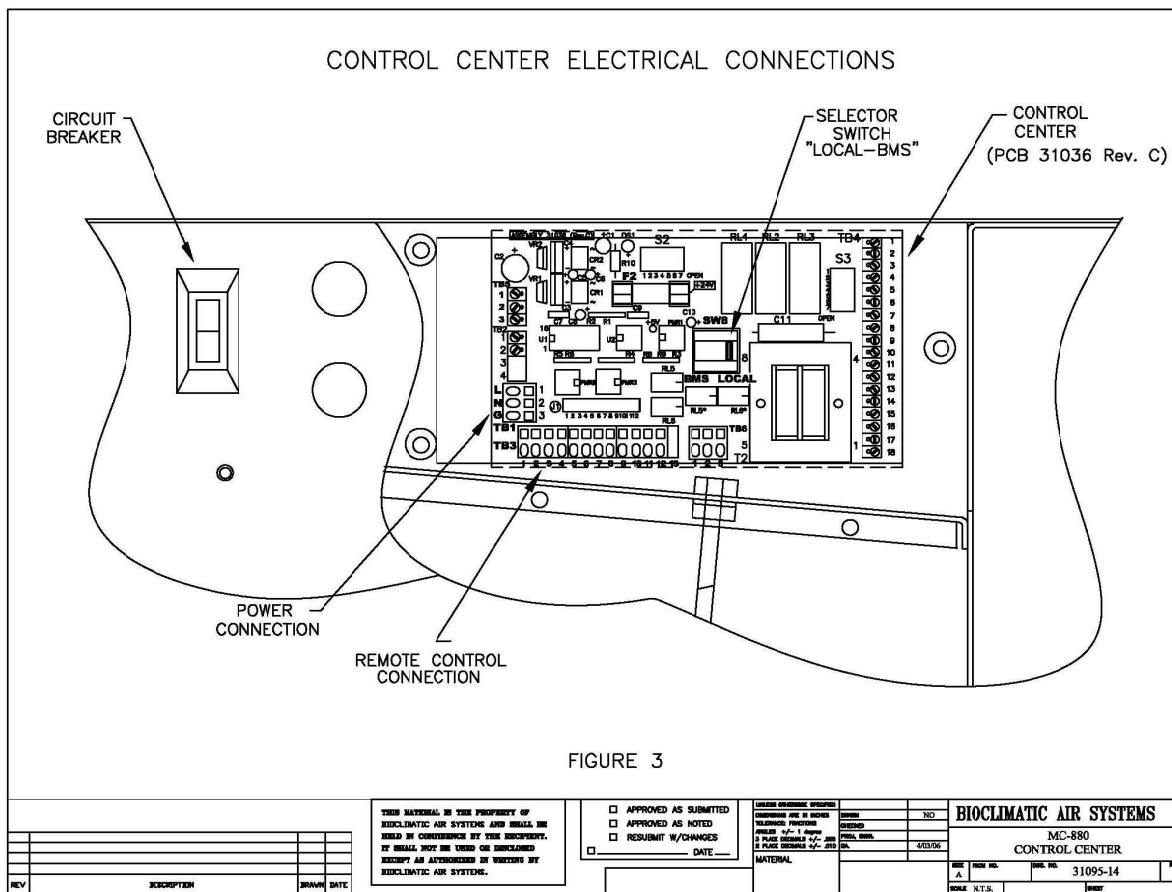
Remote Control Connection Option

Refer to the appendix for the schematic MC-880 Full Function Remote Control and complete all connections between remote control from TB-3. Use 22-20 AWG stranded copper wire. Electrical codes must be followed for installing this cable.

1. Place system master switch (circuit breaker) to the "Off" position. This switch is located on the side of the MC-880 unit.
2. Connect 115 volt (220/240), single phase service lines to terminals 1,2 and 3 on TB-1. These are line, ground and neutral respectively.
3. Double check that wire #9 on remote control, is grounded to the 2-gang electrical box and also to the aluminum face plate.



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3.4 Filter Installation

When installing filters, refer to the filter label located on the unit. This label itemizes all filters in the unit and their arrangement.

Note: Make sure that airflow arrow on each filter points in the direction of airflow through the unit. Unit should not be operated without filters in place because the lack of adequate static pressure will cause the motor to draw too much current and potentially over-amp.

Prefilters

1. Loosen the four thumbscrews on the return (intake) grille (two on each side) and remove the entire intake assembly. On the backside, you will find a three position filter rack with various combinations of prefilters and a metal tray (chemical filter).
2. Remove the wing nuts that hold the filter retainer in place.
3. Slide the filter(s) into their respective track(s).
4. Move the filter retainer back into operating position and replace the wing nuts.
5. Replace the return (intake) grille and tighten the four thumbscrews.

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Primary Filter

Primary Filter installation is accomplished through the supply or discharge (adjustable louvered) grille as follows:

1. The discharge grille is held in place with four thumbscrews and must always be installed such that center row of diffuser blades points away from the return grille. This will prevent short cycling of air. Remove the discharge grille.
2. The Primary Filter tracking can be removed by loosening the four wing nuts holding the two angles in place.
3. Slide the filter into its track.
4. Move the two angles back into operating position and replace the wing nuts.
5. Replace the supply (discharge) grille and tighten the four thumbscrews.



CAUTION: Whenever handling primary filter, be careful to hold it by frame. Prevent any sharp objects or fingers from coming into contact with the media pack as it is fragile and can be damaged easily.

04 PHYSICAL DESCRIPTION

4.1 Principle of Operation

The MC-880 System is designed for filtration of environmental air so as to control particulate and gaseous contaminants for new or retrofit HVAC applications. Please refer to the filter arrangement drawings for proper filter orientation. The filter stage designation refers to the installation sequence in the direction of airflow.

4.2 Remote Control (Optional)

These are the options which are available to the basic MC-880 Micro/Climatic Purification System:

- Full Function Remote Control Option (24 VDC) (MC-8847A, Recessed Wall Mount)
- Multiple Remote Control
- Building Management System Control interface (MC-8849)

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Full Function Remote Control

This option permits full operational control and status monitoring of the MC-880 from any remote location. Included are the following functions:

Control Functions

- On/Off control of System power (Selector switch “Local-BMS” on “Local” position)
- High/Low motor speed selection
- High/Low ionization level selection
- Filter alarm test
- Generator alarm test

Visual Indicators

- Prefilter static pressure
- Final Filter static pressure
- Motor/Ionization System High
- Motor/Ionization System Low
- Local/BMS Control
- Ion generator fault (alarm)

All of the operating controls and visual status indicators are arranged in a functional grouping on a 4” x 4” aluminum plate. The plate is mounted to a standard two gang recessed electrical box using a tile ring adapter and connected using wires 20-22 AWG to TB3 PCB 31036 in MC-880 control center box.

Multiple Remote Control

This option permits simultaneous operational control of multiple units, ranging from two to five, from any remote location. Full function remote control is connected to the unit named “Master”.

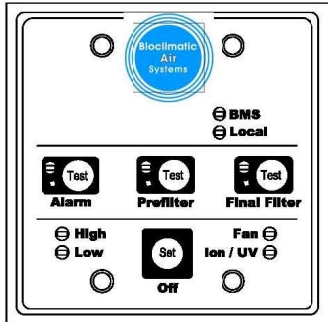
Control Functions

- On/Off control of system power (Selector switch “Local-BMS” for Master unit on “Local” position, for other unit(s) – “BMS” position).
- High/Low motor speed selection
- High/Low ionization level selection
- Filter alarm test (for master unit)
- Generator alarm test (for master unit)

Visual indicators for Master unit are located on the FF Remote control panel.

The Master unit “Prefilter” and “Final Filter” lights are used also as an indication to determine the filter service for the rest of the units.

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REMOTE CONTROL

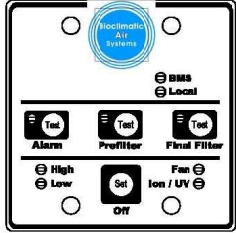
TO START UNIT:

- PUSH BUTTON "SET" FIRST TIME - "HIGH", "LOCAL", "FAN", & "ION" LIGHTS WILL BE ON. UNIT WILL BE ON (HIGH - MOTOR SPEED/IONIZATION LEVEL).
- PUSH BUTTON "SET" SECONDD TIME - "LOW", "LOCAL", "FAN", & "ION" LIGHTS WILL BE ON. UNIT WILL BE ON (LOW - MOTOR SPEED/IONIZATION LEVEL).
- PUSH BUTTON "SET" THIRD TIME - NO LIGHTS. UNIT OFF.

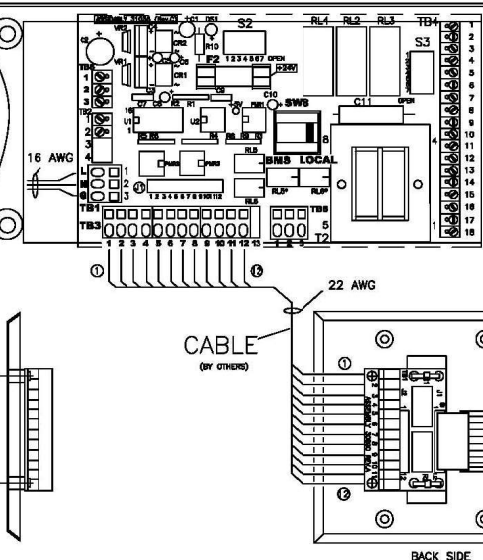
"ALARM" LIGHT COMES ON WHEN IONIZATION GENERATOR REQUIRES TECHNICAL SERVICE.
 "PREFILTER" & "FINAL FILTER" LIGHTS WILL COME ON WHEN IT IS NECESSARY TO CHANGE FILTERS.

	THIS MATERIAL IS THE PROPERTY OF BIOCLIMATIC AIR SYSTEMS AND SHALL BE USED IN CONFORMANCE BY THIS INDUSTRY. IF RECALD NOT BE FOUND OR UNRECOGNIZED, NOTIFY AN APPROVED BY VISITORS BY BIOCLIMATIC AIR SYSTEMS.	<input type="checkbox"/> APPROVED AS SUBMITTED <input type="checkbox"/> APPROVED AS NOTED <input type="checkbox"/> RESUBMIT W/CHANGES <input type="checkbox"/> _____ DATE _____	LOCAL FUNCTION CENTER APPROVED AND IN CHARGE: _____ DRAWING NO. MC-880 REV. NO. 31095-22 DATE 03/20/22	BIOCLIMATIC AIR SYSTEMS MC-880 REMOTE CONTROL PANEL
REV	DESCRIPTION	DRAWN DATE	MATERIAL	REV. NO. 31095-22

CONTROL CENTER ELECTRICAL CONNECTIONS



REMOTE CONTROL PANEL

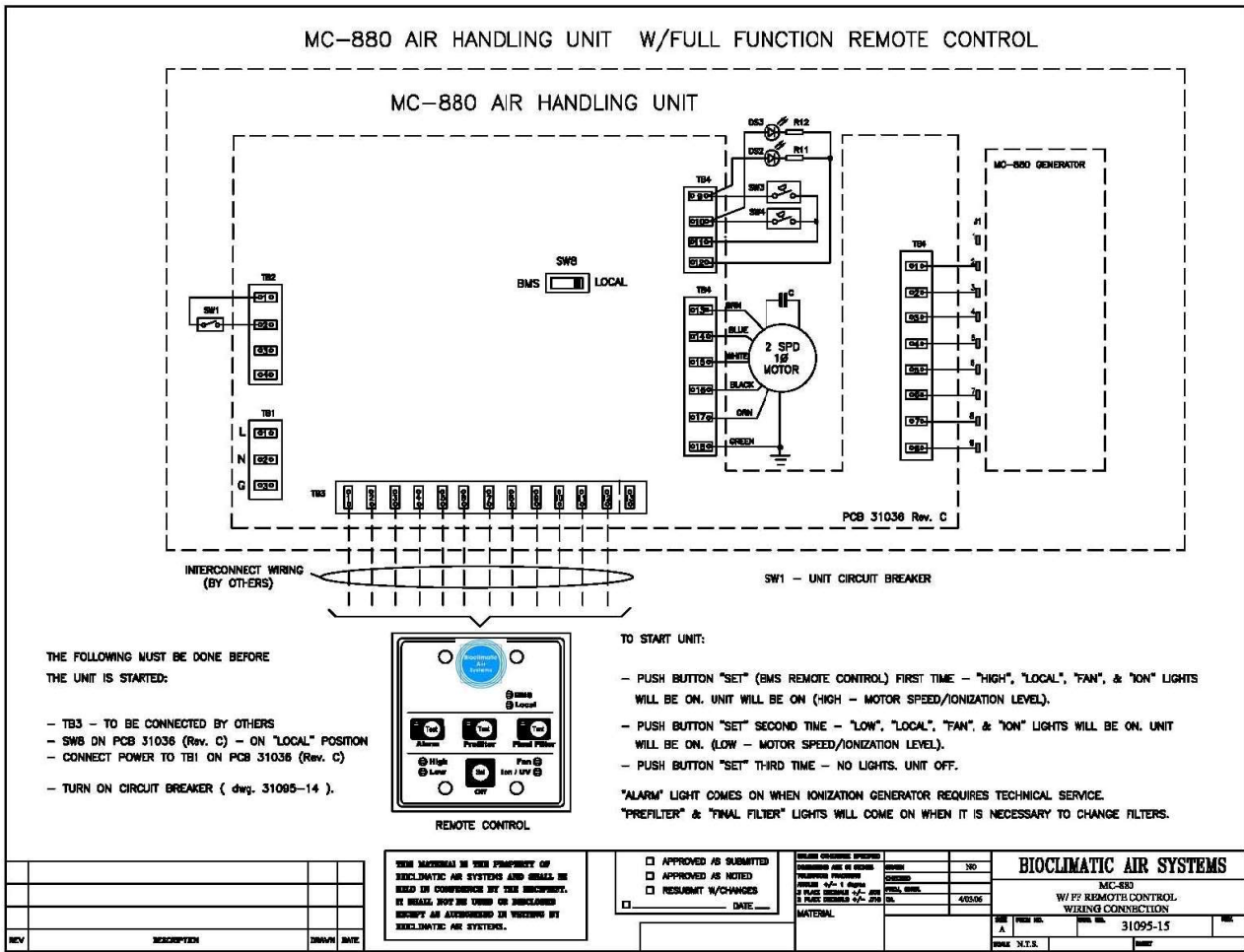


BACK SIDE

CABLE (BY OTHERS)

22 AWG

	THIS MATERIAL IS THE PROPERTY OF BIOCLIMATIC AIR SYSTEMS AND SHALL BE USED IN CONFORMANCE BY THIS INDUSTRY. IF RECALD NOT BE FOUND OR UNRECOGNIZED, NOTIFY AN APPROVED BY VISITORS BY BIOCLIMATIC AIR SYSTEMS.	<input type="checkbox"/> APPROVED AS SUBMITTED <input type="checkbox"/> APPROVED AS NOTED <input type="checkbox"/> RESUBMIT W/CHANGES <input type="checkbox"/> _____ DATE _____	LOCAL FUNCTION CENTER APPROVED AND IN CHARGE: _____ DRAWING NO. MC-880 REV. NO. 30725-00-01 DATE 03/20/22	BIOCLIMATIC AIR SYSTEMS MC-880 FULL FUNCTION REMOTE CONTROL PANEL (MC-8847A) CONNECTION
REV	DESCRIPTION	DRAWN DATE	MATERIAL	REV. NO. 30725-00-01



Building Management System Control (BMSC)

This option also provides full operation control and filter and ionization alarm observation from any location with one or multiple units.

The functions and indicators for the BMSC are the same as instructed previously for simple and multiple units with FF Remote Control.

4.3 Filter Change Indicator (Lights)

As the MC-880 operates, it collects and retains particles from the air such as dust, pollen and smoke. Over a period of time, filters installed in the MC-880 (particularly the first and second stage filters) become contaminated. As they do, the static pressure increases across the filters in proportion to the amount of dirt collected and air flow becomes restricted. Eventually, unless filters are replaced, air flow through the System will drop below acceptable efficiency levels.

Each MC-880 has two pressure control switches mounted inside the of the air handling unit. These devices sense static pressure across both filter sections. They are individually adjusted at the factory to operate when differential pressure across respective filters drops below a minimum preset threshold. Two visual indicators (Red LED) on the front louvered panel of the MC-880 respond independently to the pressure switches in the MC-880. When either of these filter alarm indicators comes “on”, its time to change the corresponding filter.

4.4 Prefilter

Prefilters are 2 in. deep, disposable type, pleated MERV 8. Filters are listed Class 2 by Underwriters' Laboratories.

4.5 Primary Filter

Prefilters are 4 in. deep, disposable type, pleated MERV 11. Filters are listed Class 2 by Underwriters' Laboratories.

4.6 UV-C Emitters

Ultraviolet (UV) lamps or emitters are effective as a germicidal mechanism for the mitigation of a wide range of bacteria, viruses, and fungi based on the exposure duration and UV light intensity.



CAUTION: Never expose eyes or skin to UV light - read all materials before proceeding.

4.7 Bi-polar Ionization (optional)

The bipolar ionization if applicable consists of needlepoint type ion generators. These modules are affixed on a rail after the prefilter.

05 SYSTEM START-UP

5.1 General

Before starting the system, a complete inspection should be made to ensure that all the equipment is installed and proper operation. It is particularly important that the system is free of all foreign objects. Be sure that the access panel is securely attached.

5.2 Inspection Check List

Filters:

- Complete filter installation
- Surface continuity between adjacent filters & seal surfaces
- Unit sections are clean

Panels:

- Insulation is intact
- Fasteners are secure
- Gaskets are intact

UV Emitter:

Lamp Clean

General:

Wipe interior and grille clean

5.3 Electrical Connection & Power Up

Provide electrical connection to the system. All external wiring must be in accordance with National and Local Electrical Codes. Pay particular attention to proper grounding of the system. After checking that all filters are in place, input electrical power is correct, and all electrical connections are as per the National and Local codes, energize the unit. The current being supplied to the unit should be checked after powering up the unit. It should not exceed the full load amperage.

06 OPERATION & MAINTENANCE

6.1 General

The initial set of particulate filters is included and shipped with the unit. The power to the unit can be controlled using the power master switch (circuit breaker) on the right side of the unit. When the power switch is "On", the unit is ready to operate using:

1. "Hi/Off/Lo" control switch on the top side of the generator (basic or standard MC-880), or
2. "Set" pushbutton on the remote-control panel (Full Function MC-880), or
3. Multiple Remote Control.
4. Building Management System Control (BMSC) (Full Function MC-880) - to energize the fan-motor, and ionization generator of the unit. The user should determine the best mode of operation for any individual application.

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6.2 Standard Control

1. Turn master switch on MC-880 "ON". This is a thermal reset switch providing overload protection to the motor and power to the rest of the System.
2. Turn control switch on the generator to "Hi" or "Low" position. This will cause the motor speed and ionization generator to alternately switch from high to low, or low to high status.
3. Observe visual Green LED indicator on the top of the generator confirm the operational status.

6.3 Remote Control Option

1. Turn master switch on MC-880 "ON". (Selector switch "Local-BMS" on "Local" position).
2. Push button "Set" first time – "High", "Local", "Fan" and "Ion" lights will be "ON". Unit will be ON (High – motor speed/ionization level). Push button "Set" second time – "Low", "Local", "Fan", and "Ion" Lights will be ON. Unit will be ON (Low – motor speed ionization level). Push button "Set" third time – No lights. Unit OFF.
3. Push, momentarily, each of the three buttons marked "Test" (when unit is ON). This will cause the visual indicators marked "Alarm", "Prefilter" and "Final Filter" to briefly illuminate. This test will confirm that the three systems are armed and that three visual fault indicators are functioning normally.

6.4 Multiple Remote Control (Optional)

The following must be done before the units are started:

- Interconnect wiring between Remote Control and Master unit, between units
- SW8 (Master unit) on PCB 31036(C) - on "Local" position
- SW8 (units: 1-4) on PCB 31036(C) - on "BMS" position
- Connect power (all units) to TB1 on PCB 31036(C)
- Turn ON circuit breakers

To start unit(s) - follow above Remote Control Option steps.

6.5 Building Management System Control (BMSC)

The following must be done before the unit(s) are started.

For single unit:

- Interconnect wiring between remote control panel and unit
- SW8 on PCB 31036(C) - on "BMS" position
- Connect power to TB1 on PCB 31036(C)
- Turn ON circuit breakers

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For multiple units:

- Interconnect wiring between remote control and master unit, between master unit and other units
- SW8 (all units) on PCB 31036(C) - on "BMS" position
- Connect power (all units) to TBI on PCB 31036(C)
- Turn ON circuit breakers

To start unit(s) - follow above Remote Control Option steps.

6.6 Filter Change Light Adjustment



CAUTION: Disconnect all power before opening doors for service or maintenance. Observe routine precautions when servicing unit.

The fibrous filters and optional gas phase filtration section require periodic maintenance in order to ensure satisfactory system performance over an extended period. The filter change light indicates the need to replace fibrous filters. The differential pressure switch which activates the filter change light is preset at the factory to light when a static pressure increase of approximately 1 in. WC (249 Pa) occurs.

It is possible to calibrate the static pressure differential which illuminates the filter change light as follows:

1. Remove the hole plug in the top of the unit for access to the adjustment screw.
2. With clean filters, turn the unit on cover approximately 67% of the return grille with cardboard. The light should come on.
3. For more time between filter changes (less air flow), cover more of the opening and for less time between changes (more air flow), cover less of the opening.
4. With a standard screwdriver, turn the adjustment screw clockwise until the light goes off, or counterclockwise until the light comes on.

6.7 Filter Maintenance

Fibrous Filters:

When the filter change light illuminates, it is time to replace the fibrous filters. It is important to use high quality filters with the same specifications as those provided with the unit. The filter label affixed on the inside of the access door lists the part number of the filters supplied with the unit. Refer to the specifications for optional features for the specifications of the proper replacement filters for your unit.

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UV Emitters:

CAUTION: Disconnect all power before opening doors for service or maintenance. Observe routine precautions when servicing unit.

1. UV General

UV(C) is a specific type of ultraviolet lamp that emits germicidal C-band UV light. The UV system emitter is interlocked with the power source to turn lamp(s) off when the lamp area is accessed. Do not override or otherwise disturb this safety feature without adequate safety precautions. Common glass or Lexan® will block (absorb) UVC energy.

2. UV Emitter

Before installation, lamps should be cleaned using 99% isopropyl alcohol and a lint free cloth. Then install lamp by grasping each non-glass end with the thumb and index fingers. Carefully push lamp pins into pin slots of each socket until seated. Rotate until one distinct click is heard.

3. Lamp Service

Lamps typically degrade the organic debris and therefore minimize the need for cleaning. However, a thin layer of contamination will decrease the effectiveness of the UV lamp. At least quarterly use a lint-free cloth soaked in IPA (isopropyl alcohol) or methylated spirits as required. Never touch quartz lamps with bare hands. Natural oily deposits left by fingers and palms create an opaque mark on the lamp thereby reducing the UV transmission. These marks also cause the quartz to break down, causing premature lamp failure. Use caution when cleaning near the ends of the lamps excessive pressure may remove or smear the coating protecting the lamp electrodes.

Operating life of the lamps is maximum 9,000 hours. UV output will diminish even if lamp appears to be functional. Timely replacement is extremely important for proper function.

Disposal. Lamps contain mercury and must be disposed of per code as hazardous waste. Consult local municipality.

Ionizers

Semi-annual inspections to be sure the modules are free of debris. The ion generating modules include two needles or pins that should appear sharp. Clean as needed to assure maximum ion output. The ion generating modules can be cleaned using a compressed gas duster (as used to clean electronic equipment) or a cotton swab or small soft brush (similar to a stiff artist's brush). Caution should be taken not to damage the needles.

6.8 Gasket Replacement

After a period of operation, the gasketing on the unit may need to be replaced. It is important to replace it only **with closed cell neoprene gasketing**. Do not use rubber gasketing as it is not suitable for use in this application.

08 PRODUCT NUMBERS*

MC-880
MC8809
MC8809-NR
MC8809-UV

*If your specific model is not listed please contact the factory at:
1-800-394-3458 for operating instructions, safety information and
replacement parts or service.