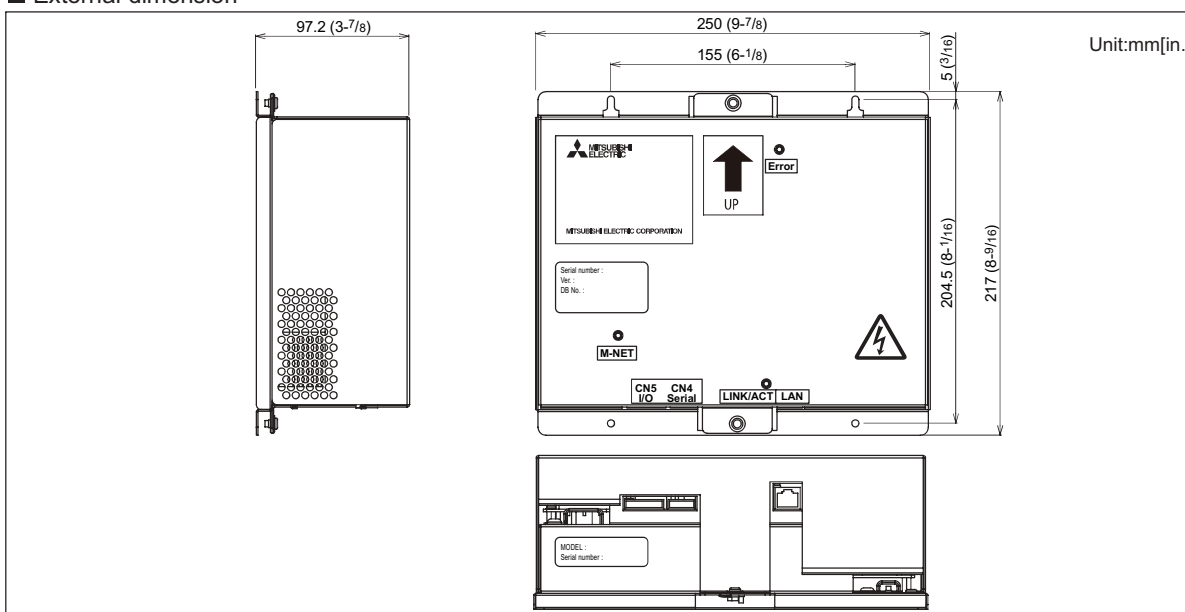




Item	Description	Operations	Display
ON/OFF	Run and stop operation for the air conditioner units	○ ● ◎	○ ◎
Operation mode switching	Switches between Cool / Dry / Auto / Fan / Heat. (Group of LOSSNAY unit: automatic ventilation/ vent - heat interchange/ normal ventilation) Operation modes vary depending on the air conditioner unit. Auto mode is only for City Multi R2 and WR2 series.	○ ● ◎	○
Fan speed setting	Models with 5 air flow speed settings: Hi/Mid-2/Mid-1/Low, Auto Models with 4 air flow speed settings: Hi/Mid/Low, Auto Models with 2 air flow speed settings: Hi/Low *Fan speed settings vary depending on the model.	○ ● ◎	○
Air flow direction setting	Air flow direction angles, 4-angle or 5-angle Swing, Auto *1: Louver cannot be set. *Air flow direction settings vary depending on the model.	*1 ○ ● ◎	○
Ventilation equipment	The interlocked system settings can be performed by the master system controller. When setting the interlocked system, you can use the ventilation switch to switch the free plan LOSSNAY settings between "Hi", "Low" and "Stop". When setting a group of only free plan LOSSNAY units, you can switch between "Normal ventilation", "Interchange ventilation" and "Automatic ventilation".		
Temperature setting	Range of temperature setting Cool/Dry : 19°C - 30°C (14°C - 30°C) / 67°F - 87°F (57°F - 87°F) Heat : 17°C - 28°C (17°C - 28°C) / 63°F - 83°F (63°F - 83°F) Auto : 19°C - 28°C (17°C - 28°C) / 67°F - 83°F (63°F - 83°F) () in case of using middle-temperature on PEFY, PEFY-VML/VMR/VMS /VMH-by setting DipSW7-1 to ON. Yet, PEFY-P/VMH-E-F is excluded. * Range of temperature settings vary depending on model.	○ ● ◎	○
Sliding Temperature setting	This function shifts the preset temperature by the preset increment to reduce the temperature difference between the indoor and outdoor air temperatures during cooling operation. The maximum shifting temperature(+1°C,+2°C,+3°C,+4°C) can be set for each group.	○	○
Schedule operation	Annual/Weekly (2 types)/today schedule can be set for each group of air conditioning units. Optimized startup setting is also available. *2: The system follows either the current day, annual schedule, or weekly, which are in the descending order of overriding priority. Twenty-four events can be scheduled per day, including ON/OFF, Mode, Temperature Setting, Operation Prohibition, Vane Direction, and Fan Speed. Two types of weekly schedule(Summer/Winter) can be set. Settable items depend on the functions that a given air conditioning unit supports.	*2 ○ ● ◎	○
Night setback setting	The function keeps the indoor temperature in a set temperature range once the unit stops and during the time this function is effective.	○	○
Permit / Prohibit local operation	Individually prohibit operation of each local remote control function (Start/Stop, Change operation mode, Set temperature, Reset filter). *3: When the local remote controller inactivation command is received from the master system controller, "Disabled" appears in inverted display on the operation setting screen.	○ ● ◎	*3 ○
Indoor unit intake temperature	Measures the intake temperature of the indoor unit only when the indoor unit is operating.	×	○
Error	When an error is currently occurring on an air conditioner unit, the afflicted unit and the error code are displayed. *4: The operation monitor screen shows the abnormal unit by flashing it. The error monitor screen shows the abnormal unit address, error code and source of detection. The error log monitor screen shows the time and date, the abnormal unit address, error code and source of detection.	×	*4 □
Interlock setting	Operation of indoor groups or general equipment can be interlocked by the change of state (ON/OFF, mode, error of indoor groups and general equipment). (GB-50ADA will execute interlocking control depending on the interlocked setting.)	○	○
Test run	This operates air conditioner units in test run mode.	○ ◎ △ ●	○
External input/output	By using accessory cables you can set the following. Input: By level signal: "Batch start/stop", "Batch emergency stop" By pulse signal: "Batch start/stop", "Enable/disable local remote controller" *5: Requires the external I/O cable (PAC-YG10HA) sold separately and external power supply. By using accessory cables you can monitor the following. Output: "Start/stop", "Error/Normal" *5: Requires the external I/O cable (PAC-YG10HA) sold separately and external power supply.	*5 ◎	×
M-NET	The "M-NET" LED lights, when M-NET power supply is turned ON. The LED blinks during M-NET communication.	×	◎ (LED)
Collective ON/OFF	All units can operate / stop with a DIP switch.	◎	◎ (7 SEG)
Data back-up (USB memory)	The initial setting data, operation data (charge parameter, power consumption data (*6)) can be stored to a USB memory. Initial setting data can be read from USB memory. *6: GB-50ADA Ver2.45 or later.	◎	—



3. SYSTEM CONTROLLER

1. M-NET power supply

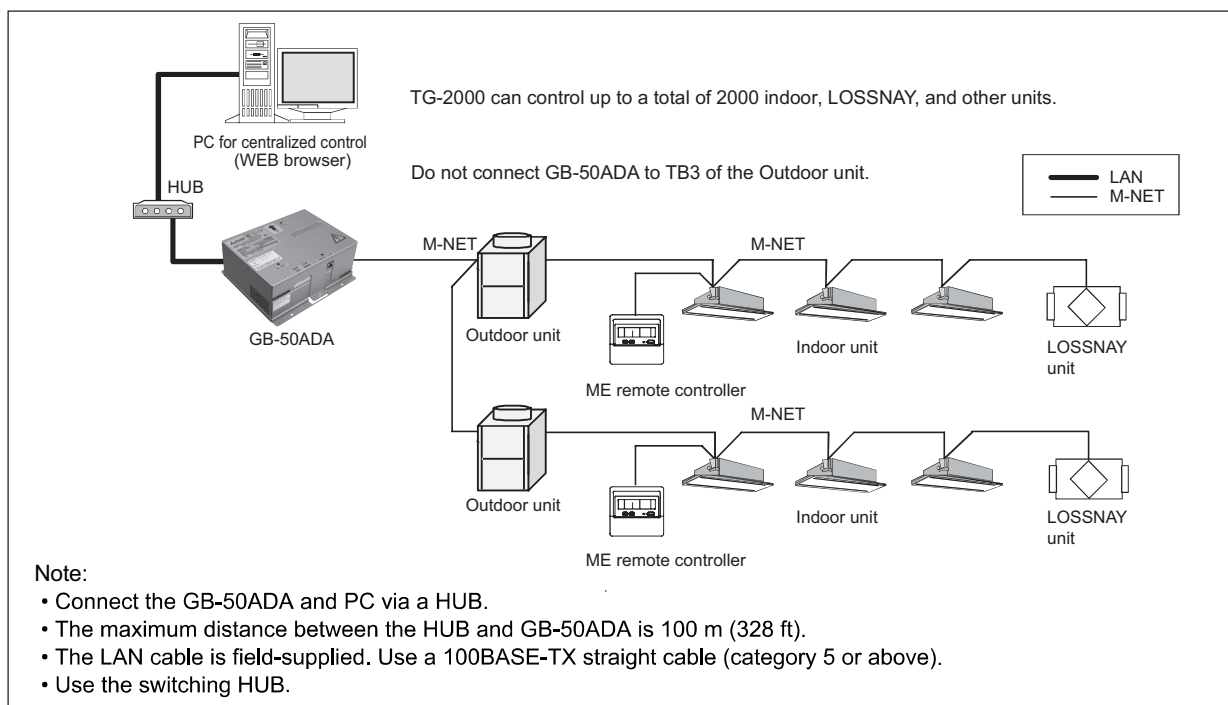
GB-50ADA has a built-in function to supply power to the M-NET transmission line. (power supply coefficient: 6)
When power is supplied from GB-50ADA, the types of system controllers listed in the table below are connectable.

	System controller		M-NET remote controller
	ON/OFF remote controller	System remote controller Schedule timer Group remote controller	ME remote controller LOSSNAY remote controller
Power consumption coefficient	1	0.5	0.25
Connectable units	6 units	12 units	24 units

	V:connectable							
	Total number of ON/OFF remote controllers							
	0	1	2	3	4	5	6	
Total number of system remote controllers, schedule timers, and group remote controllers combined.	0	✓	✓	✓	✓	✓	✓	✓
	1	✓	✓	✓	✓	✓	✓	
	2	✓	✓	✓	✓	✓	✓	
	3	✓	✓	✓	✓	✓	✓	
	4	✓	✓	✓	✓	✓	✓	
	5	✓	✓	✓	✓	✓	✓	
	6	✓	✓	✓	✓	✓	✓	
	7	✓	✓	✓	✓	✓	✓	
	8	✓	✓	✓	✓	✓	✓	
	9	✓	✓	✓	✓	✓	✓	
	10	✓	✓	✓	✓	✓	✓	
	11	✓	✓	✓	✓	✓	✓	
	12	✓	✓	✓	✓	✓	✓	

- Note**
- AG-150 and GB-50ADA cannot be used in the same M-NET system.
 - Supplying power from the Outdoor unit or the power supply unit, it is necessary to replace power supply switch connector CN40 with CN41.(Factory default is CN40.)
 - **When connecting both GB-50ADA and BAC-HD150 (BM ADAPTER) to the same M-NET system, certain restrictions apply. Consult your dealer for details.**

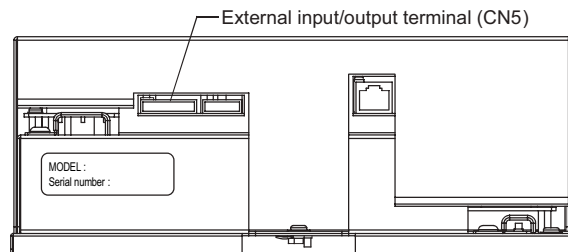
2. System configuration



3. External input/output usage

(1). External signal input function

* To use the external signal input, a separately-sold external input/output adapter (PAC-YG10HA) and external power supply are required.



1). External input signal function setting (to be set from the web browser for Initial settings)

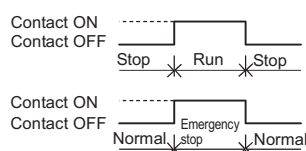
External contact signal (12VDC or 24VDC) can be used to send signals indicating the following status of all air conditioning units that are controlled by the controller: Emergency stop/Normal, Run/Stop, and local remote controller operation Prohibit/Permit.

No.	External input signal function	Notes
1	External input signal will not be used. (factory setting)	—
2	Emergency stop/Normal (level signal)	During the emergency stop, the Run/Stop mode cannot be changed from the local remote controller, and the Run/Stop mode and Prohibit/Permit settings cannot be changed from the GB-50ADA. Timer setting will be ignored.
3	Run/Stop (level signal)	The Run/Stop mode cannot be changed from the local remote controller, and the Run/Stop mode and Prohibit/Permit settings cannot be changed from the GB-50ADA. Timer setting will be ignored.
4	Run/Stop, Prohibit/Permit (pulse signal)	The pulse width (contact ON) should be between 0.5 and 1 second.

* DIDO controller (PAC-YG66DCA) cannot be collectively run or stopped by using the external input function. But when [Emergency stop (Level signal)] is selected, DIDO controller (PAC-YG66DCA) can be collectively stopped by setting the appropriate switches on the DIDO controller.

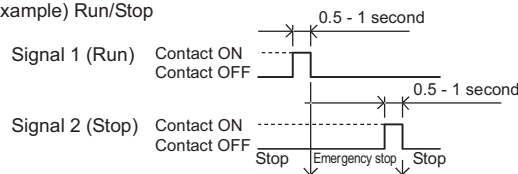
2). Level signals and pulse signals

(A) Level signals



(B) Pulse signal

(Example) Run/Stop



* Same with the Prohibit/Permit signal input.

3). External input specifications

CN5	Lead wire (PAC-YG10HA)	Emergency stop/Normal (level signal)	Run/Stop (level signal)	Run/Stop, Prohibit/Permit (pulse signal)
No. 5	Orange	Emergency stop/Normal signal input	Run/Stop signal input	Operation signal input
No. 6	Yellow	Not used	Not used	Stop signal input
No. 7	Blue	Not used	Not used	Local remote controller operation prohibit signal input
No. 8	Gray	Not used	Not used	Local remote controller operation permit signal input
No. 9	Red	External power supply 12VDC or 24VDC		

(A) Level signals

- ① If "Emergency stop/Normal operation signal" is selected, the unit will come to an emergency stop when the contact turns on, and the unit will resume normal operation when the contact turns off. When emergency stop is reset, all units will remain stopped, including the ones that were operating before the emergency stop signal input was received. To return to the previous operation status, these units need to be manually restarted.
- ② If "Run/Stop signal input" is selected, the unit will go into operation when external input signal contact turns ON, and the unit will stop when the contact signal turns OFF.

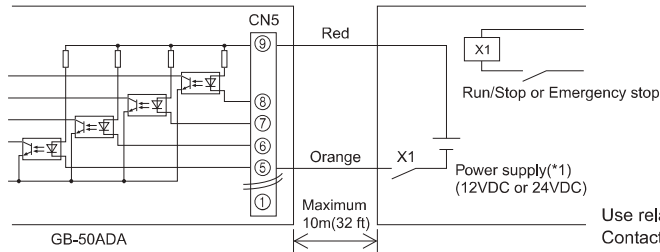
3. SYSTEM CONTROLLER

(B) Pulse signals

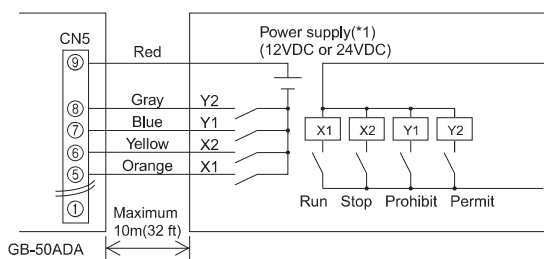
- ① If pulse signals to operate the units are received while the units are in operation, the units will continue their operation (same with the Stop, Prohibit, and Permit signals).
- ② When operation from the local remote controllers is prohibited, Run/Stop mode, operation mode, temperature setting, and filter reset settings cannot be changed from the local remote controller.
- ③ The pulse width (contact ON) should be between 0.5 and 1 second.

4). Recommended circuit

(A) Level signals



(B) Pulse signals



Use relays that meet the following specifications for X1, X2, Y1, and Y2.
 Contact rating
 Rated voltage: 12VDC or above
 Rated current: 0.1 A or above
 Minimum applied load: DC 1 mA or below
 (*1) Use a power supply suitable for the type of relays used.
 (12VDC or 24VDC)

- ① Relays, DC power supplies, and extension cables are field supplied.
- ② The maximum length of extension cable is 10 m (32 ft). (Use a cable with a diameter of at least 0.3 mm².)
- ③ Cut the excess cable near the connector, and insulate the exposed cable end with tape.

(2). External signal output function

* A separately sold external input/output adapter (PAC-YG10HA) and external power supply are required to use the external signal output.

1). External output

Operation signal is output when one or more units are in operation, and error signal is output when one or more units are in error.

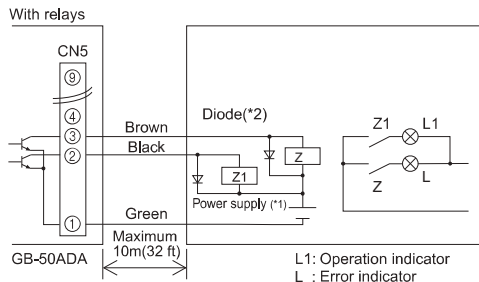
2). External output specification

CN5	Lead wire (PAC-YG10HA)	Terminal type
No. 1	Green	Common GND for external output (external DC, power supply GND)
No.	Black	Run/Stop*
No. 3	Brown	Error/Normal

* The operation status of DIDO controller is not output.

* Operation signal is output during an error.

3). Recommended circuit



Use relays that meet the following specifications for Z1 and Z2.
 Operation coil
 Rated voltage: 12VDC or 24VDC
 Power consumption: 0.9 W or less
 (*1) Use a power supply suitable for the type of relays used.
 (12VDC or 24VDC)
 (*2) Use a diode at both ends of the relay coils.

- ① Each element turns on during operation and error.
- ② The maximum length of extension cable is 10 m (32 ft).
- ③ Relays, lamps, diodes, and extension cables are field supplied.

4. LAN connection function

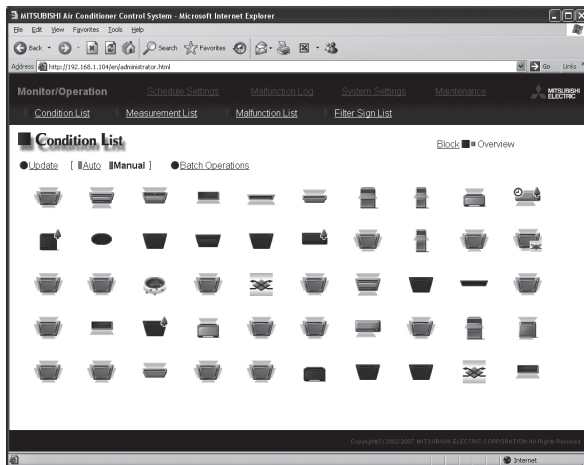
- Connect the LAN cable to the LAN connector of this device.
- * Procure the LAN cable at the site, and use an enhanced category 5 UTP cable.
 - * For a description of the IP address setting method, refer to Installation Manual.
 - * LAN is 100 BASE-TX Specification.
 - * The maximum wiring length from HUB to GB-50ADA is 100m [328ft].
 - * GB-50ADA is connected to the monitoring PC via HUB.

NOTE

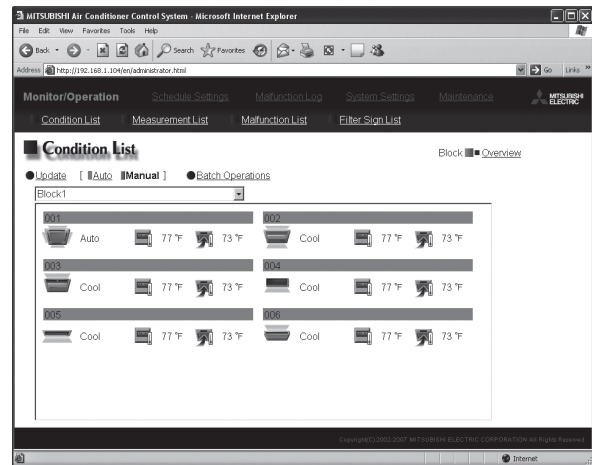
- * Perform the LAN wiring before installation, and wire up to the body by the same method as wiring the M-NET transmission line.
 - * When a LAN is already connected, decide the IP address by consultation with the system administrator and connect to the LAN body after changing the IP address.
 - * Space for the connector and wiring is required. Refer to Installation Manual.
 - * Connect GB-50ADA to a private network.
- Use a security device such as a VPN router when connecting the GB-50ADA to the Internet to prevent unauthorized access.**
(If no security devices are installed, the operation settings may be changed by an unauthorized person without the knowledge of the user.)

3. SYSTEM CONTROLLER

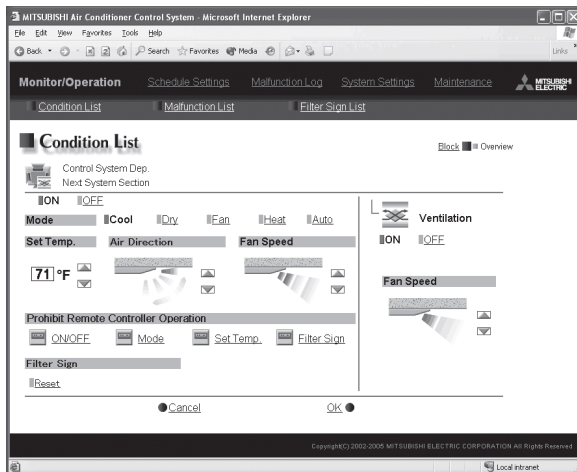
5. Browser screens of GB-50ADA



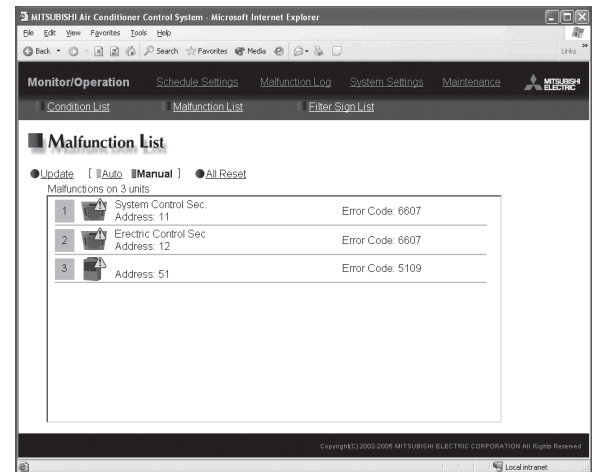
Condition List (Overview)



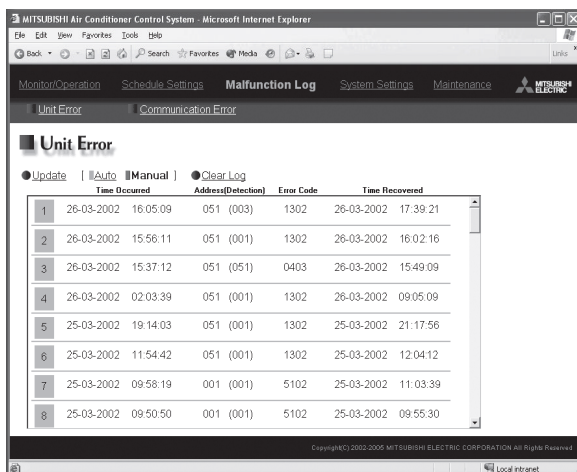
Condition List (Block)



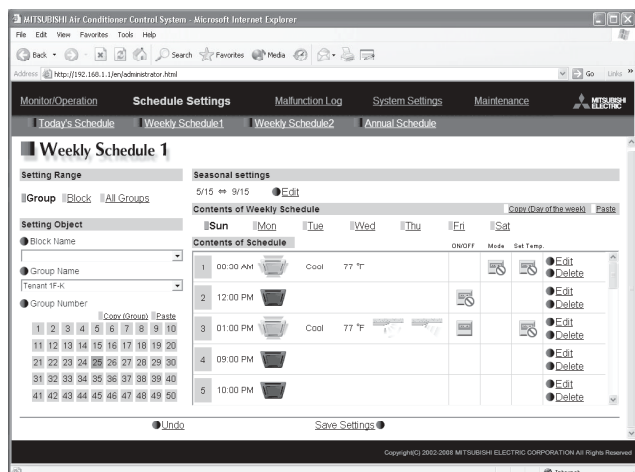
Operation



Malfunction List

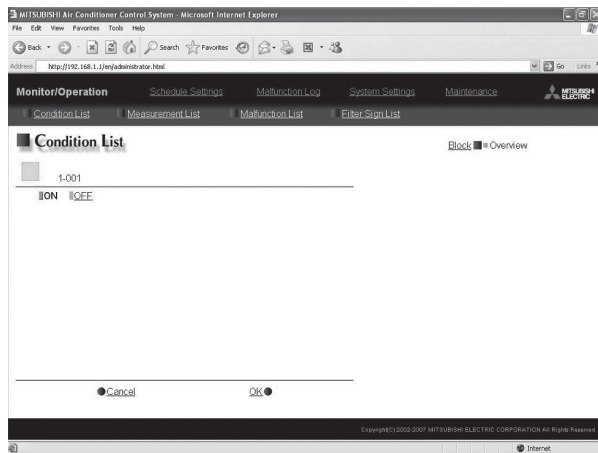


Malfunction Log

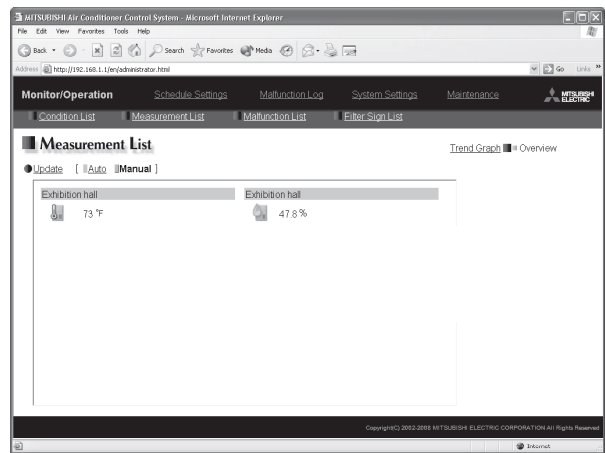


Weekly 1 Schedule

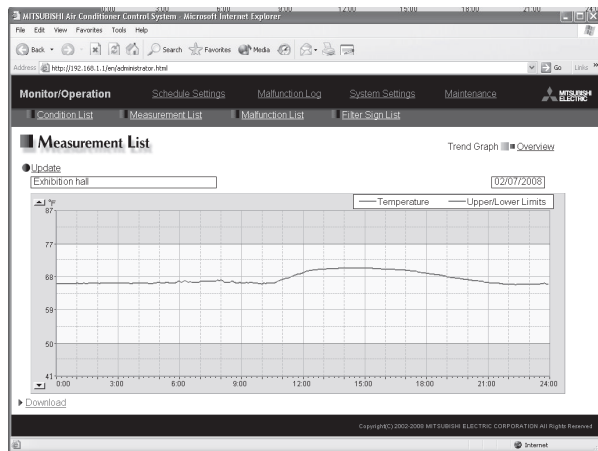
3. SYSTEM CONTROLLER



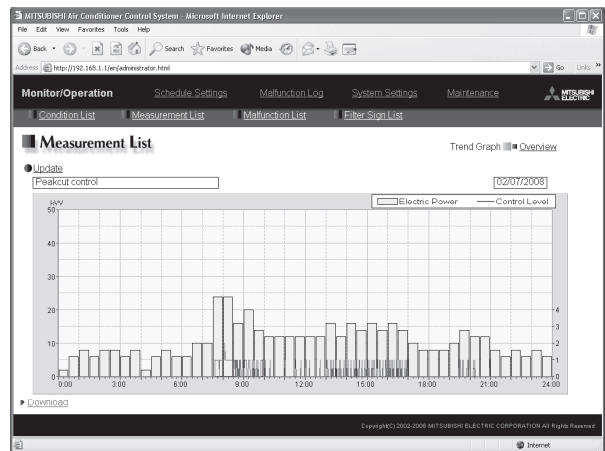
Operation (DIDO Controller)



Measurement status monitor (temperature sensor/humidity sensor /measurement meter)



Trend Graph (temperature/humidity)



Trend Graph (Peak cut control)