Motion Control Engineering, Inc.
11380 White Rock Road
Rancho Cordova, CA 95742

voice 916 463 9200
fax 916 463 9201
www.mceinc.com

Motion Group Supervisor

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Important Precautions and Useful Information

This preface contains information that will help you understand and safely maintain MCE equipment. We strongly recommend you review this preface and read this manual before installing, adjusting, or maintaining Motion Control Engineering equipment. This preface discusses:

- Safety and Other Symbol Meanings
- Safety Precautions
- Environmental Considerations
- In This Guide

Safety and Other Symbol Meanings

Danger

This manual symbol is used to alert you to procedures, instructions, or situations which, if not done properly, might result in personal injury or substantial equipment damage.

Caution

This manual symbol is used to alert you to procedures, instructions, or situations which, if not done properly, might result in equipment damage.

This manual symbol is used to alert you to instructions or other immediately helpful information.

Safety Precautions

Danger

This equipment is designed to comply with ASME A17.1, National Electrical Code, CE, and CAN/CSA-B44.1/ASME-A17.5 and must be installed by a qualified contractor. It is the responsibility of the contractor to make sure that the final installation complies with all local codes and is installed in a safe manner.

This equipment is suitable for use on a circuit capable of delivering not more than 10,000 rms symmetrical amperes, 600 volts maximum. The three-phase AC power supply to the Drive Isolation Transformer used with this equipment must originate from a fused disconnect switch or circuit breaker sized in conformance to all applicable national, state, and local electrical codes in order to provide the necessary motor branch circuit protection for the Drive Unit and motor. Incorrect motor branch circuit protection will void the warranty and may create a hazardous condition.

Proper grounding is vitally important to safe and successful operation. Bring your ground wire to the system subplate. You must choose the proper conductor size and minimize the resistance to ground by using the shortest possible routing. See National Electrical Code Article 250-95 or the applicable local electrical code.

Before applying power to the controller, physically check all the power resistors and other components located in the resistor cabinet and inside the controller. Components loosened during shipment may cause damage.

For proper operation of the AC Drive Unit in your controller, you must make sure that: 1) A direct solid ground is provided in the machine room to properly ground the controller and motor. Indirect grounds such as the building structure or a water pipe may not provide proper grounding and could act as an antenna to radiate RFI noise, thus disturbing sensitive equipment in the building. Improper grounding may also render any RFI filter ineffective. 2) The incoming power to the controller and the outgoing power wires to the motor are in their respective, separate, grounded conduits.

This equipment may contain voltages as high as 1000 volts. Use extreme caution. Do not touch any components, resistors, circuit boards, power devices, or electrical connections without ensuring that high voltage is not present.

Environmental Considerations

- Keep the machine room clean.
- Controllers are generally in NEMA 1 enclosures.
- Do not install the controller in a dusty area.
- Do not install the controller in a carpeted area.
- Keep room temperature between 32 and 104 degrees F (0 to 40 degrees C).
- Prevent condensation on the equipment.
- Do not install the controller in a hazardous location or where excessive amounts of vapors or chemical fumes may be present.
- Make certain that power line fluctuations are within plus or minus 10% of proper value.

Air Conditioned Equipment Cabinets

If your control or group enclosure is equipped with an air conditioning unit, it is very important to observe the following precautions. (Failure to do so can result in moisture damage to electrical components.)

- Maintain the integrity of the cabinet by using sealed knockouts and sealing any holes made during installation.
- Do not run the air conditioning while the cabinet doors are open.
- If you turn the air conditioner off while it is running, wait at least five minutes before restarting it. Otherwise, the compressor may be damaged.
- Observe the recommended thermostat setting (75 degrees) and follow recommended maintenance schedules.
- Make certain that the air conditioning drain tube remains clear to avoid water accumulation in the unit.

In This Manual:

This manual is the installation and operating guide for the Motion Group supervisor. When viewed online as a pdf file, hyperlinks (buttons or blue text) link to related topics and informational websites. The manual includes:

- Contents: Table of Contents. When viewed online as a pdf file, hyperlinks in the Contents link to the associated topic in the body of the manual.
- Section 1. Installation and operating information
- Index: Alphabetical index to help you find information in the manual. When viewed online as a pdf file, index entry page references are hyperlinks to the associated information in the body of the manual.

Contents

Section 1. Motion Elevator Groups

Index MCE Web

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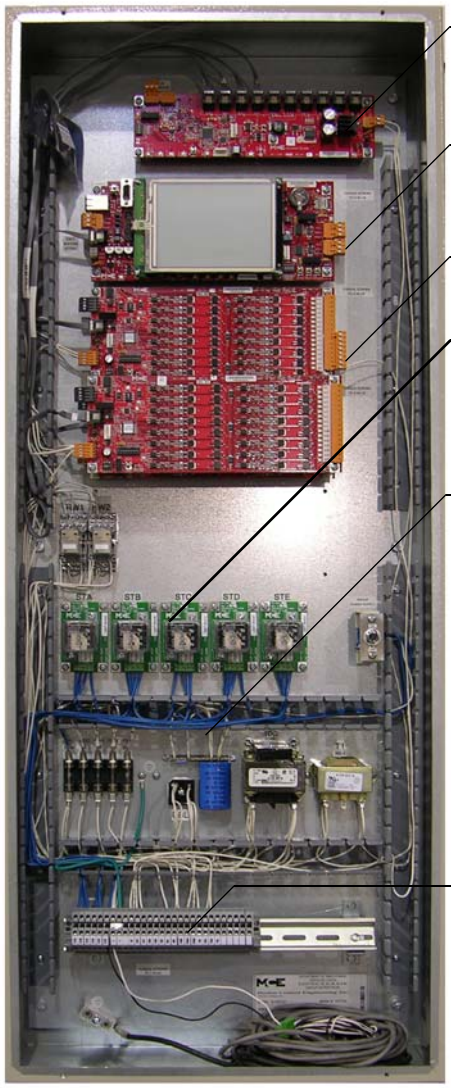
In this Section

This section contains:

Group Overview

Motion control architecture allows groups of up to eight cars. The group controller is in a separate, wall-mounted cabinet. All group hall call risers are connected to the group cabinet.

Figure 1. Group Control



CAN hub board (CHP)

Group processor and LCD (MCP)

Universal Input/Output boards (HC-UIO)

Power source relays*

24V DC power supply

Power source relays*
Each car in the group is capable of providing AC power to the group control. The power source relays determine which feed is used and automatically switch to an alternate if the selected feed fails. This arrangement provides a measure of power redundancy for the group.

PMT (Panel Mounted Terminals) for field connections

MC-MCP Motion Group Processor Board

The MC-MCP is the processing board for the mGroup dispatcher. The I/O and hub boards used in mGroup are the same as those used in the car controllers. Refer to car controller manuals for a description of those boards.

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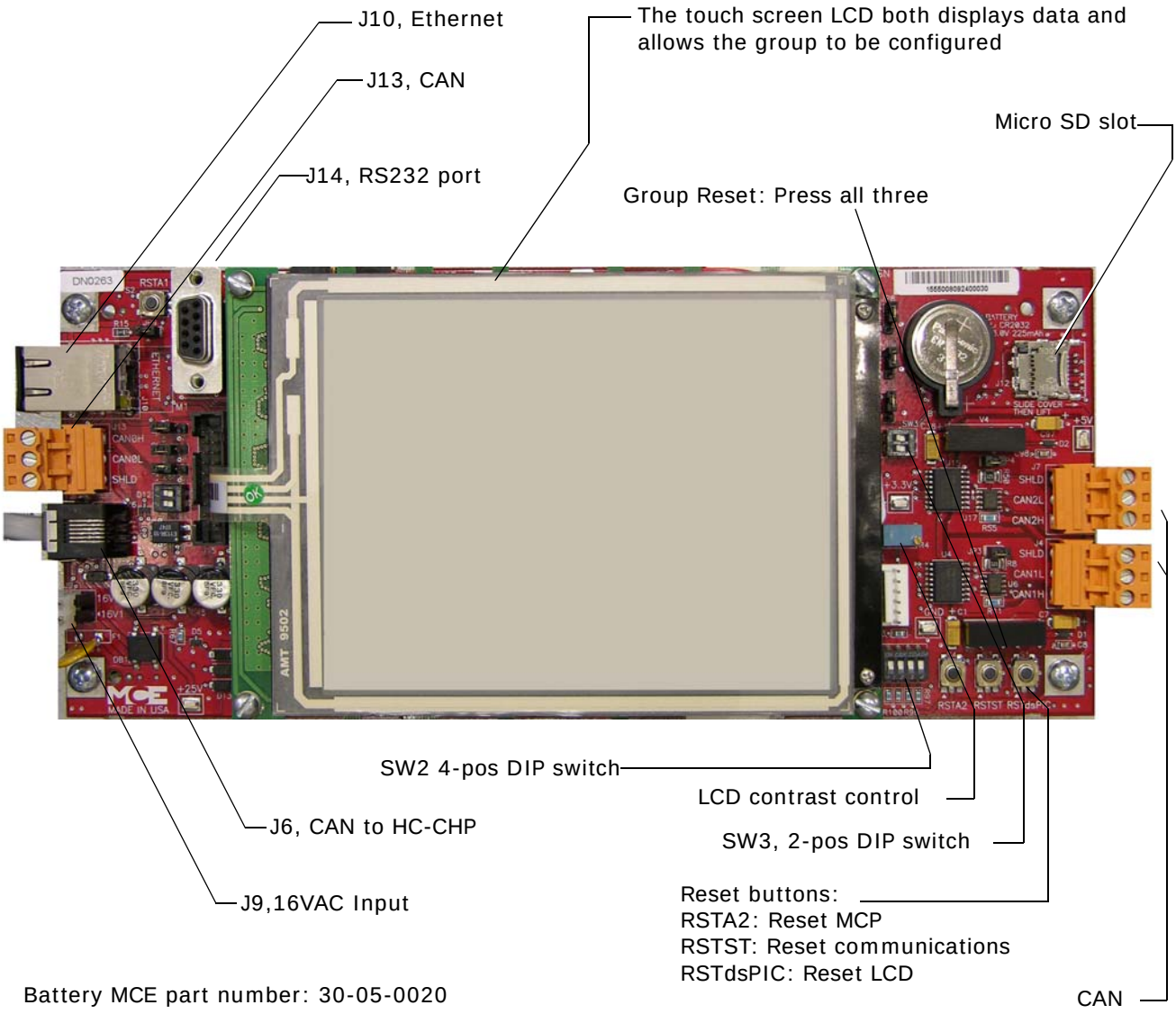
Note

Elevator and group control software changes continuously as new capabilities are added. This causes parameters to appear on information screens that will not be supported until consolidated in a future release. In these instances, the accompanying description will state “Future Release.”

Figure 2. MC-MCP Processor Board



MC-MCP Board Details

MC-MCP board field connections, DIP switches, jumpers, and momentary switches are detailed in the following table.

Table 1. MC-MCP Board Connections, Jumpers, and Switches

Component	Functionality
Connectors	
J4	CAN
J6	CAN, internal to HC-CHP board
J7	CAN, external network
J9	16 VAC input
J10	Ethernet connection, monitoring
J12	MCE micro SD card slot
J13	CAN
J14	RS 232
DIP Switches	
SW1	MCE use only.
SW2	MCE use only. Display test.
SW3	MCE use only. ARM2, U18 programming.
Jumpers	
JP1	2-position jumper. A = Normal (default). B = Boundary Scan mode for U3. Reserved for MCE use only.
JP2	2-position jumper. A = Normal (default). B = Board programming. Reserved for MCE use only.
JP3	When installed, enables signal termination for CAN connector J4. CAN termination is enabled for the devices at the beginning and end of the CAN path only.
JP4	When installed, enables signal termination for CAN connector J7. CAN termination is enabled for the devices at the beginning and end of the CAN path only.
JP5	2-position jumper. A = Normal (default). B = Flash erasure, U18. Reserved for MCE use only.
JP6	2-position jumper. A = Normal (default). B = Boundary Scan mode for U18. Reserved for MCE use only.
JP7	2-position jumper. A = Normal (default). B = Flash erasure, U3. Reserved for MCE use only.
JP8	2-position jumper. A = Normal (default). B = Programming use, U18. Reserved for MCE use only.
JP9	When installed, programming use for U14. Normal = Not installed (default).
Momentary Switches	
S1	RSTdsPIC. Resets LCD controller U2.
S2	RSTA1. Resets MCP U3.
S3	RSTST. Resets processor communications interface ST, U14.
S4	RSTA2. Resets MCP.

Table 1. MC-MCP Board Connections, Jumpers, and Switches

Component	Functionality
Diagnostic LEDs	
DS1	ON = CAN processor ARM2 running.
DS2	ON = Parallel Port Processor U14 running.
DS3	ON = Active connection to J8.
DS4	ON = LCD controller U2 running.
DS5	ON = Ethernet, X-Port, RS-232 processor ARM1 running.

Back Up Dispatching

If back up dispatching was ordered for the job, there will be a second MC-MCP processor board in the dispatcher cabinet. If the primary board fails, the second immediately takes over dispatching. Please refer to MC-MCP Motion Group Processor Board on page 3.

If a change is made in the field to the processor parameters, it must be made to both boards. Please refer to “System Performance” on page 32.

Firmware Update

mGroup firmware may be updated using the mPAC hand-held tool or the micro SD card slot. Instructions are provided when an update is distributed.

mGroup to Car Connections

Always make connections exactly as shown in the prints for your installation. 18-AWG, shielded, twisted pair conductors are normally used.

Group Field Connections

Field inputs and outputs will vary depending upon job requirements. Your installation may not use all the inputs and outputs described in this section.

Inputs

The physical locations of inputs to the group are shown on the job prints. This section lists and defines the potential input types.

- ALT: (Alternate Eligibility Map) When active, changes the normal eligibility map to use the alternate eligibility map definition.
- AUTO: Enables automatic emergency power response operation by the dispatcher when commercial power is lost.
- CRC(x): (Cross Registration Car “x” [x is the label of a cross registered car]) Used to indicate when a cross registered car is in service and can accept hall calls. These inputs are enabled only when Legacy Group Interface is set to Cross Registration. “Legacy Group Interface” on page 15. (Inputs used on version 3.xx and newer group software only.)
- EB A - EB H: Emergency Bus inputs. In installations where multiple groups share emergency power sources or where emergency power sources are shared between groups, these inputs (and associated BR outputs) allow the system to equitably share access to limited power. Future release.
- EC: Energy Conservation. Directs the dispatcher to run all cars in the group according to their energy conservation speed curve. This curve is generally used during off-peak traffic hours when conserving power may be more desirable than achieving minimum floor-to-floor times.
- EPI: Emergency Power input. When active (input polarity is user-selectable), informs the dispatcher that it is operating on emergency power. Depending on the sophistication of the emergency power system, this input may be automatically activated by external power equipment or may be a mechanical switch set by a human after emergency power has been applied to the system. When this input is active, the group will begin the emergency power sequence.
- EPIA/EPIB: Emergency Power inputs per generator source (A or B). When emergency power is provided to cars in the group by two sources (usually generators), the EPI input described above is “separated” into two inputs; one for each generator. While setting emergency power parameters, you choose which feeder/generator source provides power to which group cars. If EPIA or B becomes active, the dispatcher will begin the emergency power sequence for the affected cars while allowing unaffected cars to continue to run on normal power. Future release.
- FBY: Not used in this release.
- HBF: Hall Call Bus Failure, active low input. The dispatcher monitors hall call bus power. If power is lost, typically caused by an opened fuse, this input will be activated and HBF will drop highlighting on the status display while HCB bus fail will show in group status. To preserve service under these conditions, cars will sequentially stop at each floor in both up and down directions to accept passengers.
- HLK: When physical hall call lockout switches are present at particular landings/risers, inputs are created to support them. When one of these switches is active, HLK is highlighted on the mGroup display. Future release.

- HLOF: When active, HL and HR hall call locks are overridden. Usually connected to a keyed switch in a security lobby panel. Future release.
- HP: High Performance. When active, this input directs the dispatcher to run all cars in the group according to their High Performance speed curve. This curve is generally used during peak traffic hours when conserving power may be less important than achieving minimum floor-to-floor times. (Controller software must be capable of supporting this feature.)
- LKON: Lock On. When active, all non-lobby car calls are locked out on all group cars. Usually connected to a keyed switch in the lobby security panel. Future release.
- LKOF: Lock Off. When active, all car call locks imposed by timers, or a monitoring system, or the LKON input are overridden. Usually connected to a keyed switch in the lobby security panel. Future release.
- MRET: Manual Return. Manually initiates emergency power recall sequence.
- NPWR: Normal Power. When activated, informs the dispatcher that normal commercial power has been applied to the system following a period of operating on emergency power sources. Depending on the sophistication of the emergency power system, this input may be automatically activated by external power equipment or may be a mechanical switch set by a human after commercial power has been restored to the system. Future release.
- PTI: Power Transfer Input. When activated, causes the dispatcher to stop all cars at the next landing in the direction of travel, open the doors, and shut down. Used when transferring from emergency to normal power.
- REC / nREC: (Main Fire) Recall switch input. When active, initiates Fire Phase I recall to (usually) the lobby floor. Future release.
- RECA: Recall switch input. When active, initiates Fire Phase I recall to (usually) the lobby floor. ANSI/ASME 2000 Code only. Future release.
- RUNA - RUNH: Emergency Power (manual) car selection inputs. These inputs allow you to manually select a car to put into emergency power operation Phase 1 or Phase 2. To manually select a car on emergency power Phase 1, the MRET input must be active.
- SASW: Seismic Activity Switch. When active, informs the dispatcher that seismic activity has been detected. Once triggered, the seismic switch remains on until a reset switch is activated. When SASW is enabled, the dispatcher will send the seismic hall direction to the cars. Future release.
- SEC: Security. When active, indicates that the optional security access code feature is active on this dispatcher. Future release.

Outputs

The physical locations of outputs from the group are shown on the job prints. this section lists and defines the potential output types. Outputs from elevator equipment are monitored. When an output is active, it will be highlighted on the status display screen in the elevator or dispatcher to make an observer aware of the activity.

Most outputs are non-latching. They are active while the condition exists or time out after a few seconds. Some outputs are latching. Dispatcher outputs include:

- BAL: Balanced. Used to light an indicator and/or sound an alarm to alert observers when balanced service mode is active. Selection is based on time and up and down hall call imbalance parameters.

- DF: Dispatcher Failure. Used to light an indicator and/or sound an alarm to alert observers in the event of a dispatcher to car communication failure.
- DNP: Down Peak. Used to light an indicator and/or sound an alarm to alert observers when down peak service mode is active. Selection is based on time and up and down hall call imbalance parameters.
- EPGA or B: Emergency Power from feeder A or B. Used to light an indicator and/or sound an alarm to alert observers when the dispatcher and/or designated cars are operating on emergency power provided by that feeder. Future release.
- EPL: Emergency Power Light. Used to light an indicator and/or sound an alarm to alert observers when the dispatcher is operating on emergency power.
- EPLn: Emergency Power Light. Used to drive an indicator to alert observers when a particular car “n” in the group is operating on emergency power. The output may be off, on, or flashing depending upon the emergency power status of the car:
  - Not on emergency power: Light off.
  - On emergency power but halted: Light flashing.
  - Car returns to recall floor on manual emergency power Phase 1: Light flashing.
  - Car returns to recall floor on automatic emergency power Phase 1: Light on.
  - Car finishes emergency power Phase 1 return and is shut down: Light off.
  - Car is manually selected on emergency power Phase 2: Light on.
  - Car is automatically selected on emergency power Phase 2: Light off.
  - Car returns to emergency power recall floor after being taken off Phase 2: Light on. (MRET should be off at this time. If MRET is on, the EMLn light will flash.)
- FR1L: Fire Service Light Lobby. When active, indicates that at least one car in the group is on Fire Phase 1 (recall).
- HF: Hall Button Fail. Used to light an indicator and/or sound an alarm to alert observers in the event of a dispatcher hall call bus failure. Enabled by activation of the HBF (active low) input.
- RTDA: Return (emergency power recall for feeder source A complete) output. For groups using two feeder power sources or if two feeder power sources are used for different cars within a group, informs the next dispatcher or simplex in the recall sequence that it may begin emergency power recall for cars powered by feeder B. Future release.
- RTDB: Return (emergency power recall for feeder source B complete) output. For groups using two feeder power sources or if two feeder power sources are used for different cars within a group, informs the next dispatcher or simplex in the recall sequence that it may begin emergency power recall for cars powered by feeder A. Future release.
- UPP: Up Peak. Used to light an indicator and/or sound an alarm to alert observers when up peak service mode is active. Selection is based on time and up and down hall call imbalance parameters.

Group Configuration

You configure the group to the building environment using a touchscreen LCD. The LCD displays information over the greater area of the screen and has a group of entry buttons, the numerals 0 - 9, Left, and Right across the bottom of the screen. The numeric buttons allow numeric value entry, act as ENTER keys, toggle Yes/No selections, or scroll through options depending on screen requirements. The Left and Right buttons move the cursor horizontally or vertically depending on screen entry arrangement.

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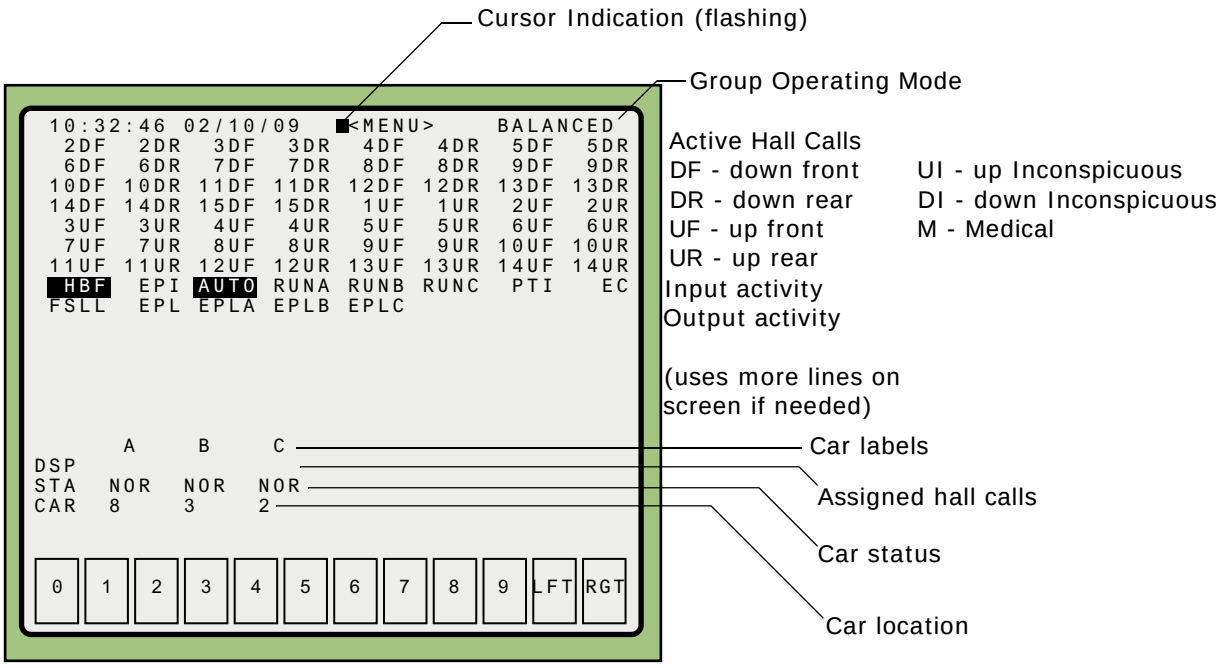
Dispatcher Screen

The dispatcher screen is displayed during normal group operation. It provides time, date, group operating mode, an overview of hall call activity, active inputs to and outputs from the group, car status, and dispatching assignments per car.

Figure 3. Dispatcher Screen



Display Interpretation

- Group operating modes may be configured to be selected by timer operation or dynamically (depending upon detected traffic imbalance):
  - Balanced: Serving up and down traffic equally (off-peak operation).
  - Lobby Peak: Favoring traffic departing the building lobby. Typically used during peak building occupant arrival times.
  - Up Peak: Favoring traffic moving in the up direction.
  - Down Peak: Favoring traffic moving in the down direction.

- Active hall calls are highlighted on the display, indicating floor number, call direction, and riser.
  - 'n' DF: Down call on Front riser.
  - 'n' DR: Down call on Rear riser.
  - 'n' UF: Up call on Front riser.
  - 'n' UR: Up call on Rear riser.
  - 'n' IUF: Up/front call on Inconspicuous riser.
  - 'n' IUR: Up/rear call on Inconspicuous riser.
  - 'n' IDF: Down/front call on Inconspicuous riser.
  - 'n' IDR: Down/rear call on Inconspicuous riser.
  - 'n' MF: Call on Medical / hospital emergency front riser.
  - 'n' MR: Call on Medical / hospital emergency rear riser.
- Car Dispatching, DSP: Shows assigned hall calls per car.
- Car Status, STA:
  - NOR: Normal operation
  - IND: Independent Service
  - REC: Fire Recall, Phase I
  - FIR: Fire Service Phase II
  - ATT: Attendant Service
  - BYP: Attendant or automatic service with weight or attendant-implemented bypass
  - MLF: Malfunction (no car communication)
  - FLT: Fault
  - INS: Inspection
  - MR2: Medical Phase 2
  - WTD: Weight Dispatch (car leaves lobby when predetermined weight attained)
  - SAF: Safety device open
  - DCB: Normal operation with Door Close Button lobby service override
  - MR1: Medical Emergency recall from car riser (has priority over group med recall)
  - SES: Earthquake with car removed from service
  - HBF: Hall Bus Failure
  - RSY: Encoder Resync
  - INI: Car removed from service - door/gate close limit failure, encoder failure, test operation, brake or overspeed fault, disconnect door service)
  - OGR: Temporarily Out of Group (out of service switch, return to lobby switch)
  - OSV: Out of Service, MPU restart
- Car Location, CAR: Floor at which car is currently located.

Placing Calls

To place a hall call:

- Touch the desired hall call location to move the cursor to that spot.
- Touch again, or press any numeric button to place the call.

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The touch screen is sensitive and densely populated. If you are navigating by touching, you will find it easier to use something like a pencil eraser or stylus to make selections. Alternatively, move the cursor where you want by touching, then press a numeric “button” to select.

Menu Access

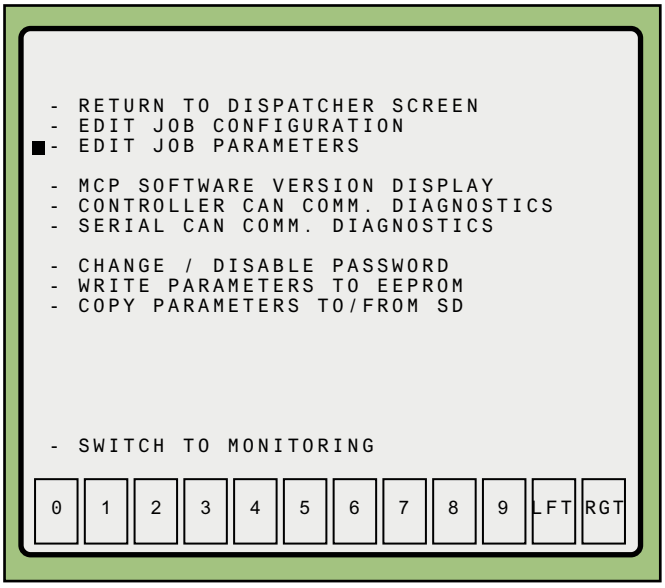
To access configuration menus:

- Touch to select <MENU>.
- Touch again or press any numeric button to access the menu.

Menu Selection

When you choose to access configuration menus from the primary display, a menu selection screen is displayed.

Figure 4. Menu Selection Screen



- Touch to move the cursor to your selection
- Touch again or use any numeric button to select

Return To Dispatcher Screen

- Return to the Dispatcher Screen

Edit Job Configuration

- Adjust group settings to suit the building

Edit Job Parameters

- Adjust group to car control settings

MCP Software Version Display

- Displays the bootloader and application versions of the dispatcher processors and system boards.

Controller / Serial CAN Comm. Diagnostics

- These menus aid in diagnosing communications problems in the Controller CAN and Serial CAN communications buses respectively.

Change / Disable Password

- Set up password access to group menus

Write Parameters to EEPROM

- When a menu change affects EEPROM stored information, the LCD will instruct you to write parameters to EEPROM and then possibly to physically reset the processor (press the RSTA2 button).

Copy Parameters To/From SD

- Allows you to use an SD card to back up parameters or to copy and move parameters from one dispatcher to another.

Switch to Monitoring

- When Switch To Monitoring is selected, a series of menus allowing you to set up communications protocol for monitoring applications appears.

Edit Job Configuration

The menus here allow you to adjust the group to building needs.

Note

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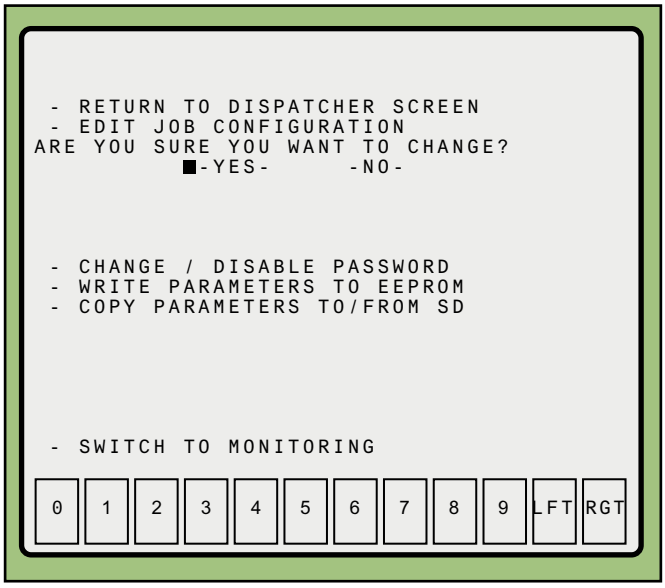
Some changes to these screens will require the user to save changes (write parameters to EEPROM) and reset the MCP board by pressing the RSTA2 button.

Decision Menu

Once you have elected to edit the job configuration, you will see a decision menu. Selecting NO allows you to view but not edit the job configuration.

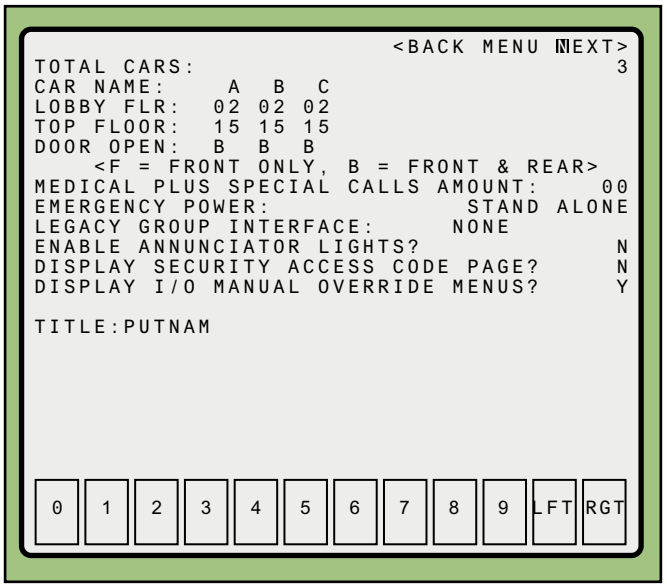
Figure 5. Job Configuration Factory Settings Decision Menu



Group Definition Menu

The first of the Job Configuration menus defines the group. If they will be needed to support changes made to this menu, the system will automatically create appropriate menus and inputs and/or outputs to support the changed feature. For example, referencing the menu below, if you were to change the Legacy Group Interface from NONE to Cross Cancellation or Cross Registration, the group would create the required outputs in software. (Obviously, you would have to have the physical I/O boards in the system to make the required mechanical connections.)

Figure 6. Group Definition Menu



- <Back Menu Next>: Navigation.
  - Position the cursor on Back and press a numeric button, or tap again, to go to the previous menu.
  - Position the cursor on Menu and press a numeric button, or tap again, to go to the main screen.
  - Position the cursor on Next and press a numeric button, or tap again, to go to the next menu.

- Total Cars:
  The number of cars connected to this group control.

- Car Name:
  Desired label for each car (two characters maximum).

- Lobby Flr:
  Designated floor to be served as the lobby floor per car.

- Top Floor: Number of floors served by this car.

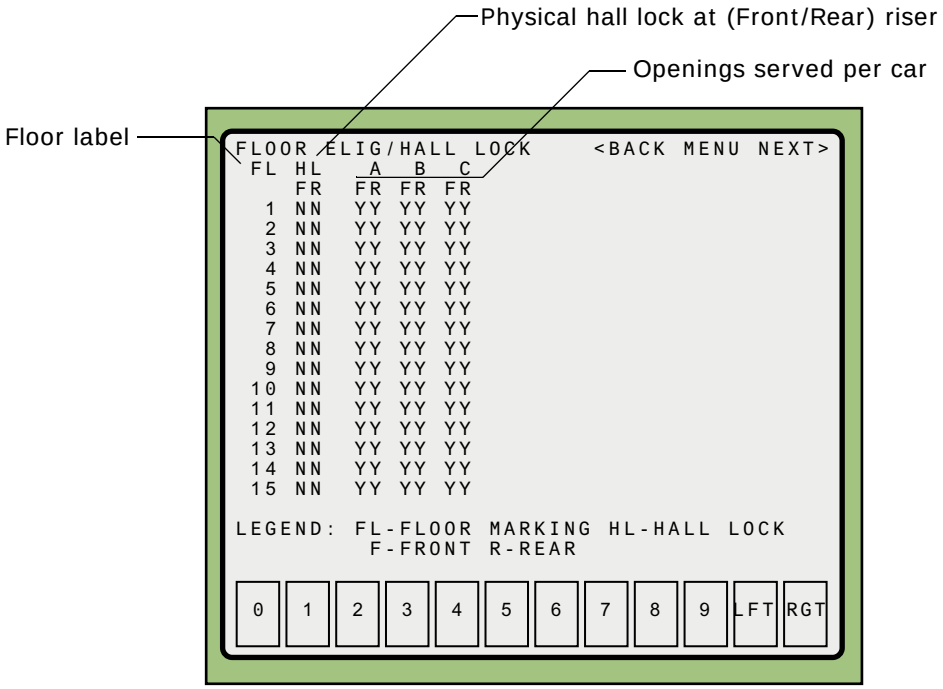
- Door Open:
  Door openings for each car (F = front only, B = front and rear).

- Medical Plus Special Calls Amount: Emergency medical and other (usually) switch activated calls for special services are handled differently than standard riser calls. Determine the number of special calls required and enter that number here. This enables a sub-menu to configure inputs and outputs for the calls, Medical / Special Call Menu on page 19.
- Emergency Power: This selection determines what inputs and outputs are created to coordinate emergency power operation.
  - Stand Alone: Emergency power for group cars is independent of other groups or elevators in the building. (Example: one emergency generator provides power to this elevator group only.)
  - Split: If cars in a group are split across different generators, select this option. Future release.
  - Master: Emergency power for this group is shared with another group or elevator. Master means that this group will initiate the emergency power return sequence and will have preference to return to service on emergency power operation. Future release.
  - Slave: Emergency power for this group is shared with another group or elevator. Slave means that this group will recall on emergency power (Phase 1) after another group or elevator has finished its recall. The Master designated group or elevator will have preference to return to service on emergency power operation over this group. Future release.
- Legacy Group Interface: Typically NONE. However, if there is a legacy group control that still shares elevator control with mGroup, Cross Cancellation or Cross Registration will allow mGroup to increase the efficiency of the combined group.
  - Cross Cancellation: mGroup will cancel a hall call placed on the legacy group control if mGroup determines that an mGroup car is able to service the call more efficiently. Future release.
  - Cross Registration: mGroup will move a registered hall call to the legacy controller if mGroup determines that a legacy car is able to service the call more efficiently.
- Enable Annunciator Lights: Y/N (Future release.)
  - Yes: The group will announce car arrival at a hall call by activating an indicator light or light/gong at the landing. (Output must be physically present.)
  - No: The group will not activate an indicator light or light/gong to announce car arrival.
- Display Security Access Code Page: Y/N (Future release.)
  - Yes: Display Security Access Code menu.
  - No: Do not display Security Access Code menu. Allows the user interface to skip unused screens, accelerating the configuration process.
- Display I/O Manual Override Menus: Y/N
  - Yes: Display Manual Override Menus.
  - No: Do not display Manual Override Menus. Allows the user interface to skip unused screens, accelerating the configuration process.
- Title: Enter the text to be displayed on the second line of the primary group display.
  - Use LFT or RGT or tap the screen to move cursor.
  - Press any numeric button to scroll through letters and numbers. (The 9 key scrolls backwards.)

Floor Eligibility Menu

This menu allows you to configure elevator service to match the floors and openings (front/rear) to be served. This menu is also used to indicate if physical hall locks are supported per floor and riser.

Figure 7. Floor Eligibility Menu



- HL - If physical hall locks are installed at particular floors and risers, their presence must be indicated here: (Future release.)
  - Position cursor on F or R riser for floor
  - Press a numeric button or tap again to change N (no physical hall lock) to Y (physical hall lock present)

- Enable front or rear opening per floor and car
  - Position cursor on F or R opening for desired car at desired floor
  - Press a numeric button or tap again to change N (no opening) to Y (opening)

Note

In the illustration above, no physical hall locks are present at any floor/opening and all openings and floors are accessible for all group cars.

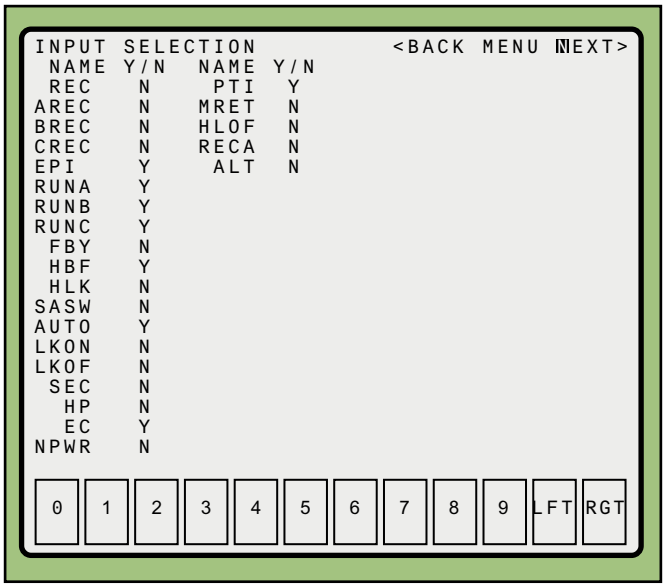
If the Alt input is used, selecting <NEXT> from this menu will bring up the Alternate Floor Eligibility Map. The Alternate map will be used anytime the Alt input is active. See Alt on page 6.

Input Selection Menu

When the system is shipped, it is configured to support inputs required per the specification. Inputs are physically connected to UIO boards. Only those inputs acknowledged here will be monitored for activity and displayed on the Dispatcher Screen. (Hall calls are edited on a separate screen. Please refer to “Manual Override Riser Menu” on page 21.)

1

Figure 8. Input Selection Menu



N: Unused input
Y: Programmed input

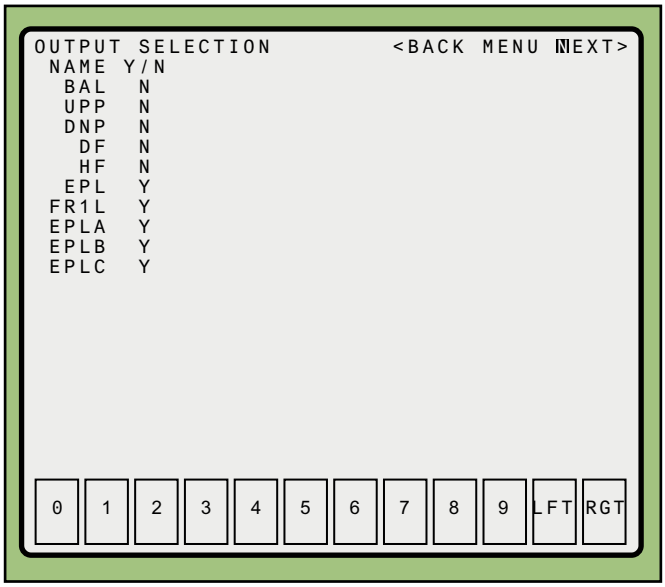
- To program an input:
  - Position the cursor on the N next to the input name
  - Use any numeric button or tap again to change the N to a Y

Please refer to “Inputs” on page 6 for input definitions. If you are making changes to this menu, it may be important for you to understand more about HC-UIO boards, please refer to the description in the Motion controller manual.

Output Selection Menu

When the system is shipped, it is configured to support outputs required per the specification. Outputs are physically connected to UIO boards. Only those outputs acknowledged here will be monitored for activity and displayed on the primary group menu.

Figure 9. Output Selection Menu



N: Unused output
Y: Programmed output

- To program an output:
  - Position the cursor on the N next to the output name
  - Use any numeric button or tap again to change the N to a Y

Please refer to “Outputs” on page 7 for output definitions. If you are making changes to this menu, it may be important for you to understand more about HC-UIO boards, please refer to the description in the Motion controller manual.

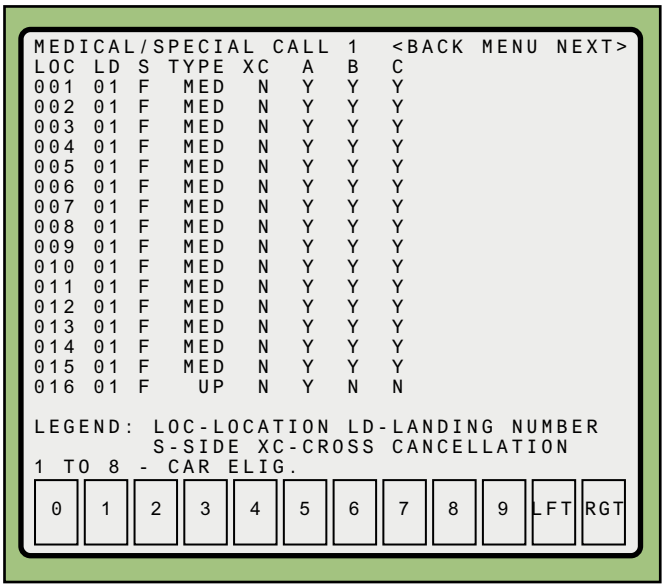
Medical / Special Call Menu

This menu supports Code Blue (Medical) or other special needs risers. If more than 16 call locations must be configured, additional screens will appear (when Next is selected). If you are making changes on this menu, you may need to understand more about how HC-UIO boards work, please refer to the Motion controller manual.

Note

This menu is enabled when a number is entered for the Medical plus Special Calls amount selection on the Group Definition menu. Please refer to “Group Definition Menu” on page 14. The number of entries on this menu matches the number entered for the Medical Plus Special Calls amount.

Figure 10. Medical / Special Call Menu



To set up a call:

- Set the location (LOC).
  - If calls are discrete (each call button connected to an HC-UIO board), this is the I/O number on the UIO board(s) dedicated to special risers.
    Physically, UIO boards are labeled IO1 through IO16. Logically, as you add UIO boards, what you see on the screen is tabled below. As shipped from MCE, labels are applied to the boards with the names of the connections as shown on the prints for the job.

Table 2. Logical I/O Assignment on UIO Boards

Board ID (DIP SW1, switches 1-6)	Logical I/O
00	IO1 through IO16
01	IO17 through IO32
02	IO33 through IO48
03 - 31	Sequence as above

- Set the landing number (LD).
- Set the call opening side (S), F-Front, or R-Rear.
- Set the type of call (TYPE).
  - MED - medical call
  - UP - Inconspicuous riser, up service call
  - DN - Inconspicuous riser, down service call
- XC: Not used in this release.
- Set which cars (1 - 8) are eligible to respond. Y(es) or N(o), per car.

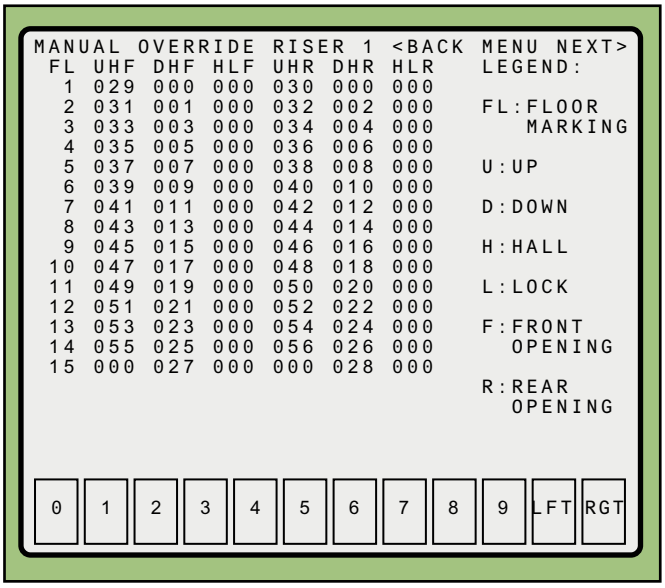
If the Alt input is used, selecting <NEXT> from this menu will bring up the Alternate Medical/ Special Call menu. The Alternate menu settings will be used anytime the Alt input is active. See Alt on page 6.

Manual Override Riser Menu

Hall call and lock inputs are connected to HC-UIO boards addressed from 00 to 31. The factory connection order is provided by the prints for the job. If necessary, on a per riser basis, the default input order may be overridden using the Manual Override menu. This also permits flexibility if inputs not originally specified are added later. For example, in the example below, the lock inputs from the hall calls have not been assigned. If this functionality is added later, additional UIO boards are added to the system and their I/O assigned here.

1

Figure 11. Manual Override Menu



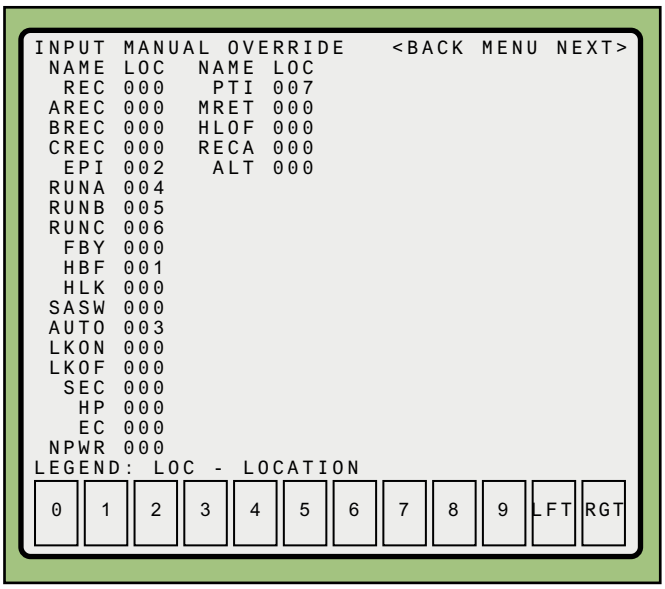
To assign or override:

- Position the cursor on the digit to be changed
- Use the appropriate numeric key to enter a new digit
- When you exit the menu, you will be prompted through the save process

Input Manual Override Menu

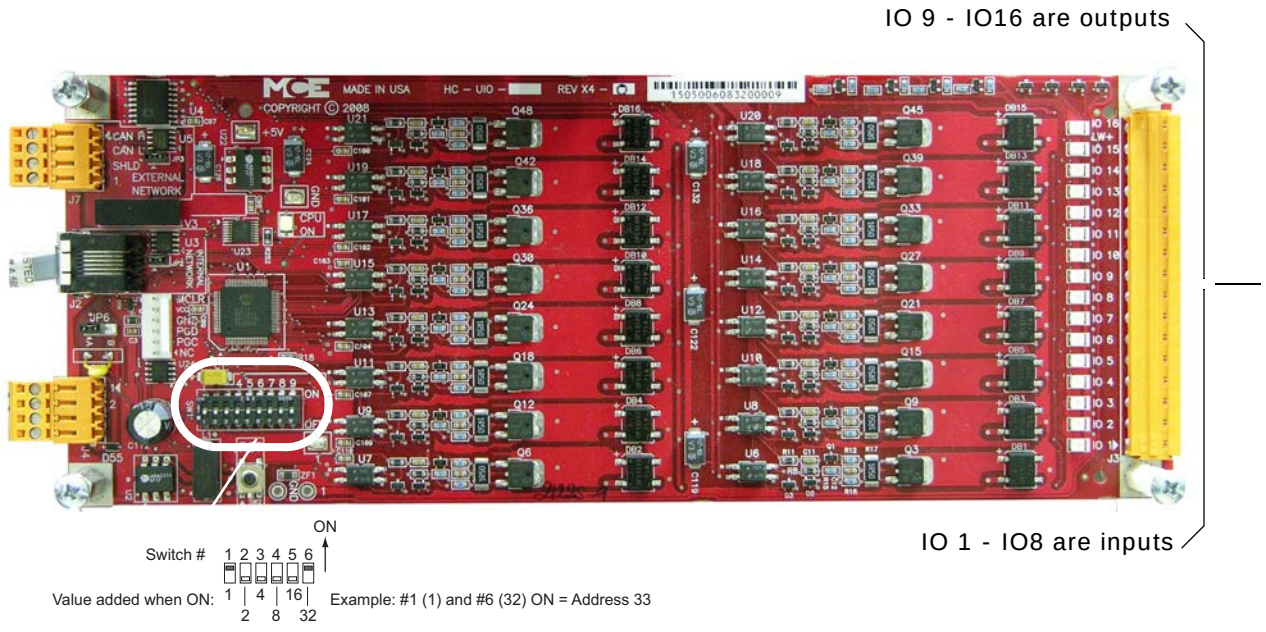
This menu defines the physical location mapped for each programmed “spare” input and allows the user to reorder the default settings.

Figure 12. Input Manual Override Menu



Inputs not related to hall and car calls are referred to as “spare” inputs. They are assigned to HC-UIO boards with addresses set from 32 through 63. When a board has one of these addresses (set by DIP switch SW1, rockers 1 through 6), its input/output pattern is set as:

Figure 13. HC-UIO Board Configured for Spare Inputs and Outputs



DIP SW1, switches 7 and 8 set the baud rate at which the CAN bus communicates with this board. (Leave both in the OFF position.)

Table 3. HC-UIO Board DIP SW1 Switches 7 and 8

Sw 7	Sw 8	Baud Rate	Description
OFF	OFF	500 kbps	For boards inside the group, RJ12 cable from J2 on HC-UIO board to HC-CHP board Internal Network J1 through J10.
ON	OFF	250 kbps	For boards on the cartop, RJ12 cable from J2 on HC-UIO board to MC-LSI board LAN connectors. **Caution:** Do not connect to J3 on the MC-LSI (Landing System) board.
OFF	ON	125 kbps	Future use

DIP SW1, switch 9 sets the activation threshold for inputs IO1 through IO16.

Table 4. HC-UIO Board DIP SW1 Switch 9

Sw 9	Description
OFF	Sets Input activation threshold to 18 Volts ac or dc
ON	Sets Input activation threshold to 55 to 65 Volts ac or 18 Volts dc

Inputs assigned to the lowest addressed board (32) are numbered 001 through 008; inputs assigned to the next addressed board (33) are numbered 009 through 016; inputs assigned to the next addressed board are numbered 017 through 024; and so on.

mGroup UIO boards with addresses 0 through 31 are used for hall call I/O exclusively.

In order to be valid, an input must:

- Have an assigned physical location (LOC) on an HC-UIO board (set up on the Input Mapping Manual Override Menu, page 22).
- Be activated on the Input Selection Menu, page 17.
- When you assign an input to a connector location, it will automatically appear and be enabled on the Input Selection Menu.

Example

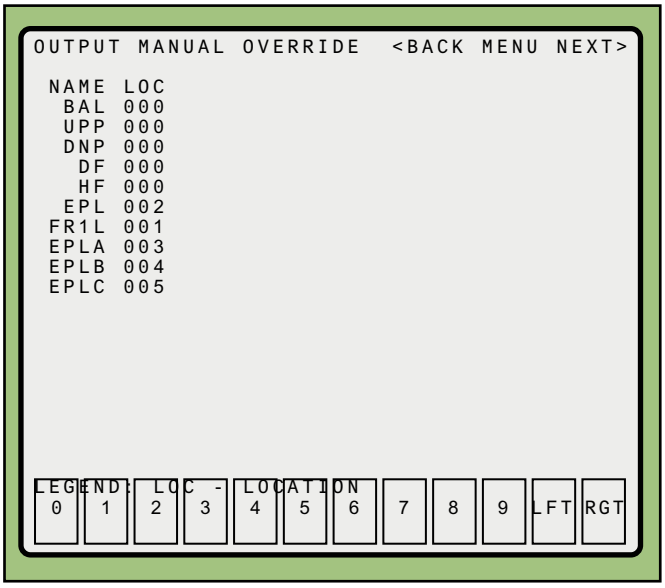
On the example Dispatcher Screen, input HBF is assigned to 001 which is node I/O 1 on the first addressed UIO board. Note that it is also the first input displayed on the Dispatcher screen, page 9.

On our example Dispatcher Screen, input EPI is assigned to 002 which is node I/O 2 on the first addressed (32) UIO board. Note that it is the second input displayed on the Dispatcher Screen, page 9.

Output Manual Override Menu

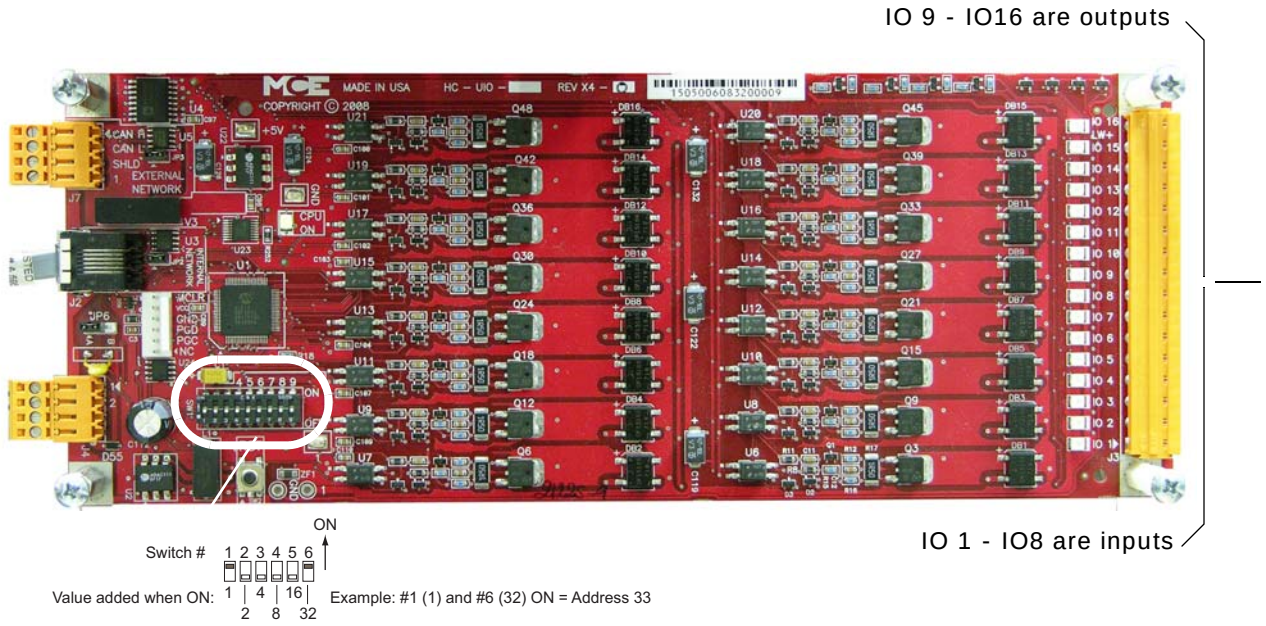
This menu allows you to reassign the physical location mapped for each “spare” output programmed and allows the user to reorder the default settings.

Figure 14. Output Manual Override Menu



Outputs not related to hall and car calls are referred to as “spare” outputs. They are assigned to HC-UIO boards with addresses set from 32 through 63. When a board has one of these addresses (set by DIP switch SW1), its input/output pattern is set as shown below.

Figure 15. HC-UIO Board Configured for Spare Inputs and Outputs



DIP SW1, switches 7 and 8 set the baud rate at which the CAN bus communicates with this board. (Leave both in the OFF position.)

Table 5. HC-UIO Board DIP SW1 Switches 7 and 8

Sw 7	Sw 8	Baud Rate	Description
OFF	OFF	500 kbps	For boards inside the group, RJ12 cable from J2 on HC-UIO board to HC-CHP board Internal Network J1 through J10.
ON	OFF	250 kbps	For boards on the cartop, RJ12 cable from J2 on HC-UIO board to MC-LSI board LAN connectors. **Caution:** Do not connect to J3 on the MC-LSI (Landing System) board.
OFF	ON	125 kbps	Future use

DIP SW1, switch 9 sets the activation threshold for inputs IO1 through IO16.

Table 6. HC-UIO Board DIP SW1 Switch 9

Sw 9	Description
OFF	Sets Input activation threshold to 18 Volts ac or dc
ON	Sets Input activation threshold to 55 to 65 Volts ac or 18 Volts dc

Outputs assigned to the lowest addressed board (32) are numbered 001 through 008; outputs assigned to the next addressed board (33) are numbered 009 through 016; outputs assigned to the next addressed board are numbered 017 through 024; and so on.

UIO boards with addresses 0 through 31 are used for call I/O exclusively.

In order to be valid, an output must:

- Have an assigned physical location on an HC-UIO board (set up on the Output Mapping Manual Override Menu, page 24).
- Be activated on the Output Selection Menu, page 18.
- When you assign an output to a connector location, it will automatically appear and be enabled on the Output Selection Menu.

Example

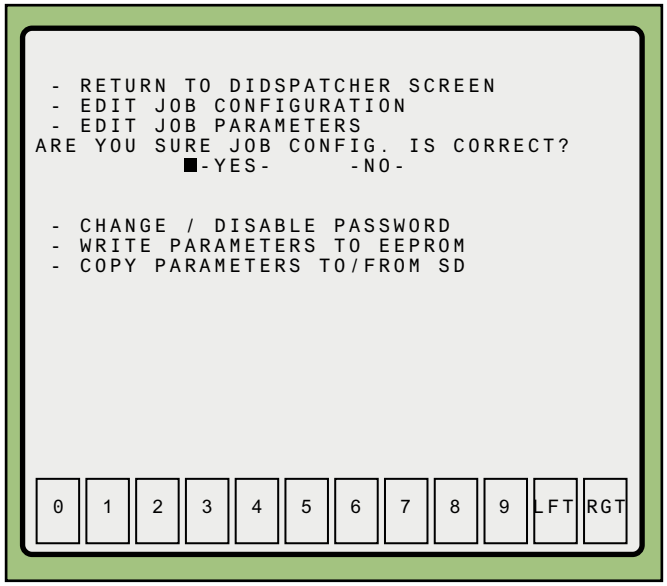
On the example Dispatcher Screen, output FR1L is assigned to 001 which is node I/O 9 on the first addressed UIO board. Note that it is also the first output displayed on the Dispatcher Screen, page 9.

On the example Dispatcher Screen, output EPL is assigned to 002 which is node I/O 10 on the first addressed UIO board. Note that it is the second output displayed on the Dispatcher Screen, page 9.

Edit Job Parameters

These screens are used to configure the behavior of the cars in the group. After selecting the Edit Parameters menu, the first screen displayed provides an opportunity to back out without making changes if the Job Configuration settings are not correct.

Figure 16. Edit Job Parameters Decision Menu



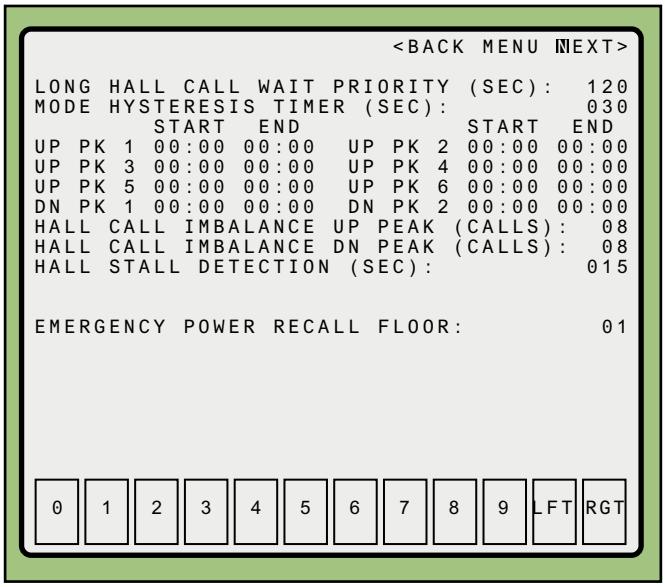
- Yes: Proceed to Edit Parameters menus
- No: Back out without changes

Dispatching Mode Timing and Assignment

This screen allows you to set up timer based up and down peak modes, to set the call factors that will trigger dynamically assigned peak modes, and to set an emergency power recall floor. Peak mode selection may be timer based (as set up on this screen) or the system may select it dynamically when traffic conditions warrant.

1

Figure 17. Dispatching Mode Timing and Assignment Menu



- Long Hall Call Wait Priority (sec):
  When a call has been registered for longer than this setting, the dispatcher assigns it high priority. Typically, this is set to about twice the average wait time for a hall call. In systems using cross registration, this setting also determines how long the dispatcher will wait for a call assigned to a legacy car to be answered before re-assigning that call to a Motion dispatched car.
  - Minimum: 45 seconds
  - Maximum: 999 seconds
  - Default: 120 seconds

- Mode Hysteresis Timer (sec):
  Sets the delay time the system will observe before dropping dynamically selected peak due to changing traffic conditions. This helps to avoid volatility across operating mode assignments due to temporary fluctuations in hall calls.
  - Minimum: 1 second
  - Maximum: 999 seconds
  - Default: 30 seconds

- Timer Based Peak Operations
  During each 24 hour period, midnight to midnight, up to six up peak and two down peak periods of operation may be specified.
  - Use 24-hour format for time entries: 0 - 23 hour entries / 0-59 minute entries.

- Hall Call Imbalance Up Peak Calls:
  The difference between the number of active up calls in comparison to the number of active down calls that will trigger dynamic selection of up peak operation.
  - Minimum: 1
  - Maximum: 30
  - Default: 8

- Hall Call Imbalance Down Peak Calls:
  The difference between the number of active down calls in comparison to the number of active up calls that will trigger dynamic selection of down peak operation.
  - Minimum: 1
  - Maximum: 30
  - Default: 8

If timer based up and down peaks overlap, the down peak will take precedence. If an imbalance of calls causes dynamic selection of peak mode, it will override any currently active timer peak selection. In the latter case, when the dynamic peak de-selects, a currently active timer peak will re-assert.

- Stall Time-out (sec):
  Determines the number of seconds the system will wait before placing the car into a temporary fault state (FLT) when the car is on the same floor as its hall call assignment but is stuck or cannot open its doors. While the car is in the fault state, the hall call will be reassigned. Default value is 15 seconds.

- Emergency Power Recall Floor:
  Selects the floor to which group cars will recall when emergency power becomes available during a commercial power loss. (Phase 1 of emergency power operation.) (Set the emergency power recall floor on individual group cars to this same landing.)

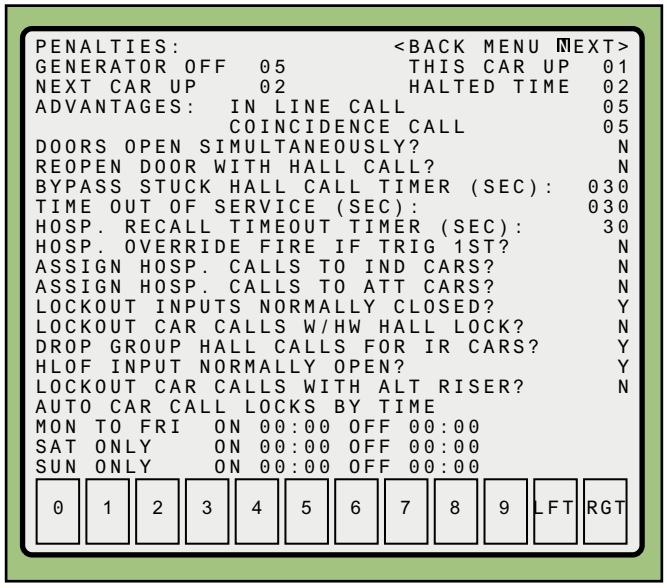
Call Assignment Weighting and Timers

When making dispatching decisions, penalties are time added to a cars estimated arrival time at a hall call to allow the dispatcher to compensate for conditions that will delay one car in comparison to others or to favor assignment of one car over another.

Advantages are time subtracted from a cars estimated arrival time at a hall call to allow the dispatcher to favor assignment of one car over another.

1

Figure 18. Call Assignment Weighting and Timers Menu



- Penalties:
  - Generator Off: Penalty assigned to a car parked with its MG set dropped. Set to “0” for SCR drive systems. In general, the more cars that are available to dispatch, the higher this penalty should be set (less need to turn on the generator in a car with its generator off). For generator systems, multiply the number of cars by two for a good starting point value. Valid entries range from 0 to 10 with a default setting of 5. Future release.
  - This Car Up: Penalty assigned to the lobby car when calculating the best car to assign to a call. Larger values will cause the lobby car to remain in the lobby and another car in the system to be assigned hall calls. Valid entries range from 0 to 5 with a default setting of 1.
  - Next Car Up: Penalty assigned to the next car up when calculating the best car to assign to a call. Valid entries range from 0 to 5 with a default setting of 2.
  - Halted Time: Penalty assigned to a car depending upon the amount of time required for it to halt (decelerate) and cycle its doors. Valid entries range from 1 to 30 with a default setting of 2. A car with a slow door operator should be assigned a comparatively longer penalty.

- Advantages:
  - In Line Call: An advantage given to a car that will pass the active hall call in its present direction of travel. Valid entries range from 0 to 10 with a default setting of 5.
  - Call Coincidence: An advantage given to a car that has a car call at the floor for which the hall call is registered. Valid entries range from 0 to 10 with a default setting of 5.

- Doors Open Simultaneously?
  For cars with front and rear doors, on Automatic (passenger) Operation only, set to Yes if both front and rear doors open together.

Doors Open Simultaneously parameters on both dispatcher and car screens must be set alike.

- Reopen Door with Hall Call?
  If set to yes, pressing the hall call button will cause a closing door to reopen or to be held open if constant pressure is applied. (The hall button will not hold the door beyond the Bypass Hall Call Time parameter unless the car has no car calls registered and no other hall assignments in the preferred direction of travel as indicated by the directional arrow.) This prevents a stuck hall call button from holding the car indefinitely. If set to no, the car will not reopen its doors if it has another hall assignment or car call registered. The default is no.

- Bypass Stuck Hall Call Timer (sec):
  The number of seconds that a continuously pressed hall call button can be used to keep the car door open at a floor. (See Reopen Door with Hall Call above.) After this amount of time, the hall button is considered stuck and the car will be released. The timer starts when the car first stops to answer the hall call. The timer increments only if the car has a hall assignment or car call at another floor. The range is 0 to 999 seconds with a default of 30 seconds.

- Time Out of Service (sec):
  Sets the amount of time that the car will be allowed to stand at a floor before the dispatcher puts it into FLT (fault) status and reassigns the hall call. The timer starts when the car arrives at the floor and the doors start to open. Setting the time too short will cause a car to go into fault mode too quickly for common problems like someone holding the doors. We recommend 30 seconds.

- Hosp. Recall Timeout Timer (sec):
  Sets the amount of time the door will remain open when the car is at the recall floor waiting to go on Phase 2 of Medical Emergency. When the timer expires, the car will close its door, go off Medical Phase 1, and rejoin the group. (Phase 2 was not initiated before the set time expired.)

- Hosp. Override Fire if Trig 1st?
  If set to yes, a car on Medical Phase 1 Recall will not respond to a subsequent Fire Phase 1 Recall but will continue traveling to, or remain standing at, the medical recall floor even though a Fire Recall has been initiated. If set to no, the Fire Phase 1 Recall will override the Medical Phase 1 recall and the car will proceed to the appropriate fire recall floor.

- Assign Hosp. Calls to Ind Cars?
  If set to yes, cars on Independent service will be assigned to medical recall (code blue) calls. If set to no, cars on Independent service will be exempted from medical recall. In order to be effective, this parameter must be set to match the like parameter on the car parameter screen.

- Assign Hosp. Calls to Att Cars?
  If set to yes, cars on Attendant service will be assigned to medical recall (code blue) calls. If set to no, cars on Attendant service will be exempted from medical recall. In order to be effective, this parameter must be set to match the like parameter on the car parameter screen.

- Lockout Inputs Normally Closed?
  Allows the user to specify the (normal operation) state of the switches connected at the hardware hall call lock inputs. Set to Yes if normally closed. Set to No if normally open. Future release.

- Lockout Car Calls w/Hardware Hall Lock?
  If set to yes, an active hardware hall lock input (see above parameter) will also lock out car calls for the associated floor.
  If set to no, an active hardware hall lock input will affect only the hall call for the associated floor. Future release.

- Drop Group Hall Calls for IR Cars?
  If set to yes, a car running on inconspicuous riser (swing) will not be assigned group hall calls. If another group car is not available, the hall call will be dropped.
  If set to no, the group hall call will be latched, regardless of the availability of other cars. If the call is still active when the car on inconspicuous riser returns to group service, it may be assigned to answer the call.

- HLOF Input Normally Open?
  Allows the user to specify the (normal operation) state of the switches connected at the All Hall Call Locks Off (HLOF) input. Set to Yes if normally open. Set to No if normally closed. Future release.

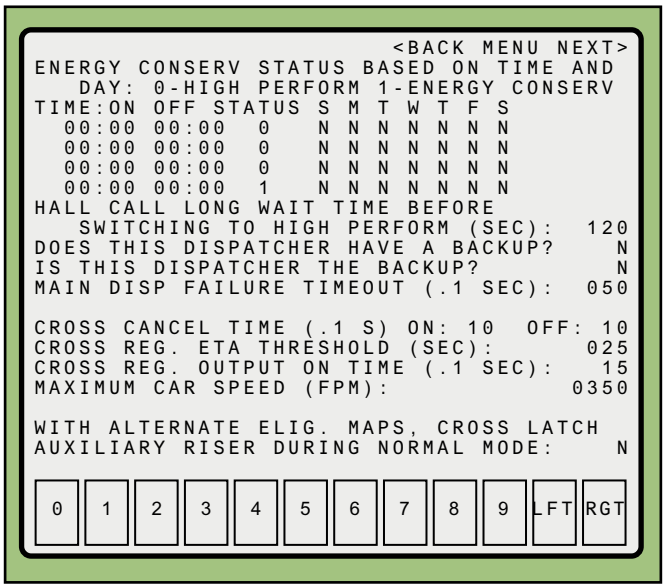
- Lockout Car Calls with Alt Riser?
  If set to yes, and the dispatcher has an alternate riser, the dispatcher will lock out the car calls corresponding to hall calls that are not valid for the selected riser. Future release.

- Auto Car Call Locks By Time:
  All car calls (except for the lobby call) on all cars will lock and unlock automatically at these set times. Locks may be set for: Monday to Friday, Saturday Only, or Sunday Only. Enter times in 24-hour (military) format. Future release.

System Performance

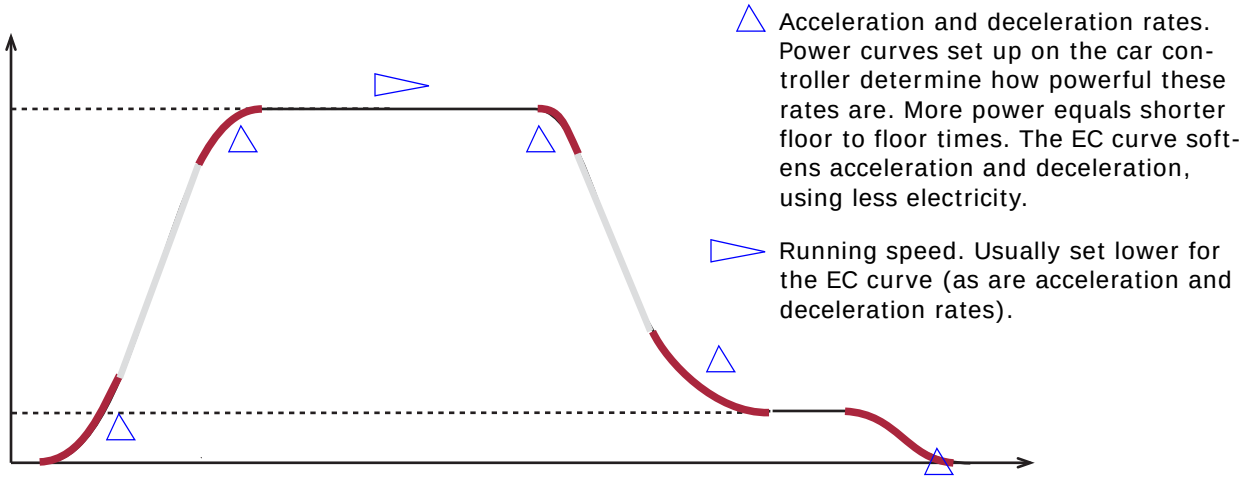
This menu allows you to set performance curve selection timers, backup dispatching, and cross cancellation/cross registration parameters.

Figure 19. System Performance Menu



- Energy Conserv Status Based On Time and Day:
  These timers allow you to set as many as four time periods a day during which the dispatcher will command High Performance or Energy Conservation speed/curve assignment to group cars, as set. The default is 0=high performance (Motion 4000 normal operating curve). A setting of 1 = Energy Conservation selects the Motion 4000 Alternate operating curve and Backup Power speed. For the timers to be effective, dispatcher EC (Energy Conservation) and HP (High Performance) inputs must be off. To use a timer:
  - Set On and Off times in 24-hour (military) format.
  - Set the desired performance curve (0=high performance, 1=energy conservation).
  - Select the days of the week during which this timer should be active by selecting a Y or an N under each day.

Figure 20. Operating Curves



- Hall Call Long Wait Time Before Switching to High Perform:
  Set to the number of seconds a hall call may be registered before the dispatcher switches a car from energy conservation to high performance operation to respond to the call. Default is 120 seconds. Range is from 0 to 999 seconds.

1

Hall Call Long Wait Time Before Switching to High Perform takes effect only if EC (Energy Conserve) and HP (High Performance) inputs are OFF, no manually set EC or HP timers are active, and cars are set to change curves dynamically (as demanded by the dispatcher).

- Does This Dispatcher Have a Backup?
  Set to Yes if this dispatcher is the primary dispatcher and there is a backup/redundant dispatcher for it.
  Set to No if there is no backup dispatcher for this dispatcher.
- Is This Dispatcher the Backup?
  Set to Yes if this dispatcher is the backup/redundant dispatcher for a primary dispatcher.
  Set to No if this dispatcher is not a backup/redundant dispatcher.

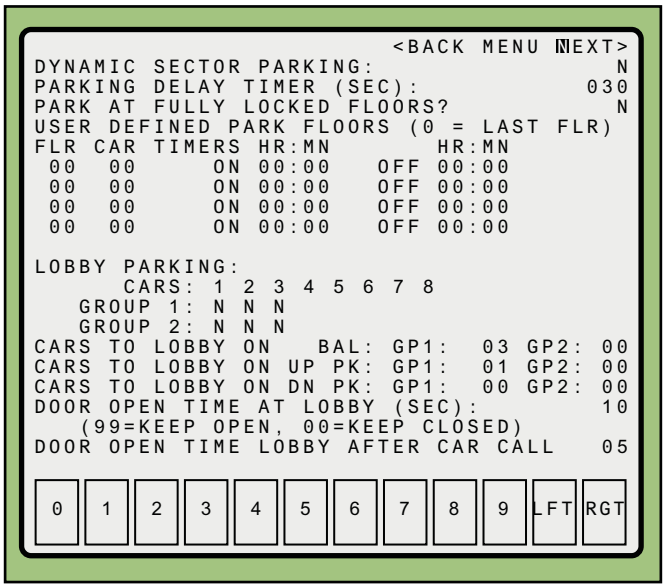
The two preceding backup parameters enable the communicating inputs and outputs between primary and backup dispatchers so that they monitor and/or transmit over the expected paths when control is transferred from one to the other.

- Main Disp Failure Time-out (0.1 sec):
  Set to the amount of time the backup dispatcher should wait before taking over car dispatching after losing communication with the primary dispatcher. The default is 5.0 seconds (setting value 50). Range is from 20 (2 seconds) to 150 (15 seconds).
- Cross Cancel Time (0.1 sec): (Future release.)
  - ON: Controls the time on (duration) for the cross cancellation signal. Set in 1/10 second increments. Default is 10 (1 second). Range is 1 (1/10 second) to 20 (2 seconds).
  - OFF: Controls the time off (duration) for the cross cancellation signal. Set in 1/10 second increments. Default is 10 (1 second). Range is 1 (1/10 second) to 40 (4 seconds).
- Cross Registration ETA Threshold (sec):
  If Cross Registration is enabled, and the time it would take a Motion car to respond to an active hall call exceeds this setting, the call will be assigned to the legacy controller. The default setting is 25 seconds. Range is from 0 to 240 seconds.
- Cross Registration Output On Time (0.1 sec):
  Sets the on time for the signal transferring a call from the Motion dispatcher to a legacy controller in 1/10 second increments. Default is 15 (1.5 seconds). Range is 1 (1/10 second) to 40 (4 seconds).
- Maximum Car Speed (FPM):
  When Cross Registration is active, set to the contract speed of the legacy cars. The Motion group uses this information in deciding whether or not to transfer a call to the legacy system. Minimum: 50. Maximum: 1200. Default 1200.
- With Alternate Elig. Maps, Cross Latch Auxiliary Riser During Normal Mode:
  - YES: When the ALT input is not active (normal mode), Auxiliary riser hall calls will function as Main riser hall calls.
  - NO: When the ALT input is not active, Auxiliary riser hall calls behave according to their normal eligibility map. See page 16.

Parking Modes

This menu allows you to set parking parameters for group cars.

Figure 21. Parking Modes Menu



- Dynamic Sector Parking:
  When set to Yes, the dispatcher will optimize parking decisions in real time, taking into consideration current building traffic conditions, and using user defined parking floors and lobby parking settings. This mode allows the system more latitude than traditional Zone parking which forces parking assignment in user-defined floor sets (zones). Timer settings are not used.
- Parking Delay Timer (sec):
  Determines how long an idle car should wait at the last served floor before moving to its parking floor.
- Park at Fully Locked Floors?
  Set to Yes if cars should park at an assigned floor even if that floor is currently fully locked (no front/rear car calls and no front/rear hall calls allowed without appropriate security input).
- User Defined Park Floors (0 = Last Floor)
  Allows a priority parking floor to be set, on a timed basis, for each car in the group.
  - If Floor is set to zero, the car will park at the last served floor unless lobby or zone parking assignments are in effect.
  - If Car is set to zero, the first available car will park at the floor.

Note

Lobby parking assignments will override Priority parking assignments. Priority parking assignments will override A.I. Zone parking assignments. Use Priority parking assignments sparingly. Forcing cars to park at specific floors can have a negative impact on overall traffic efficiency in the building.

- Lobby Parking:
  - Cars: Lists cars in the group.
  - Group 1 / Group 2: For purposes of lobby parking, you can split the group into two different groups for lobby coverage. If the group is split, you can have two “this car up” cars. This is useful if you wish to assign a specific car as the Lobby car or if the group has two types of service (high and low rise for example) and you want one car from each group to park in the Lobby.
    Enter a Y for each car you want to place in a group and an N for cars not to be placed in that group.
    If you do not want to split the group, put all cars in Group 1 (all Y’s) and no cars in Group 2 (all N’s).

- Cars to Lobby on Balanced/Up Peak/Down Peak: These three choices allow you to assign a number of cars from each “group” to the Lobby floor during balanced, up peak, or down peak operating modes.

- Door Open Time at Lobby (sec):
  When a lobby-parked car is assigned This Car Up status, it will open its doors for the period of time set here (from 1 to 98 seconds). If set to 99, doors will remain open until the car is preparing to leave the lobby. If set to 00, doors will remain closed until a lobby call button is pressed.

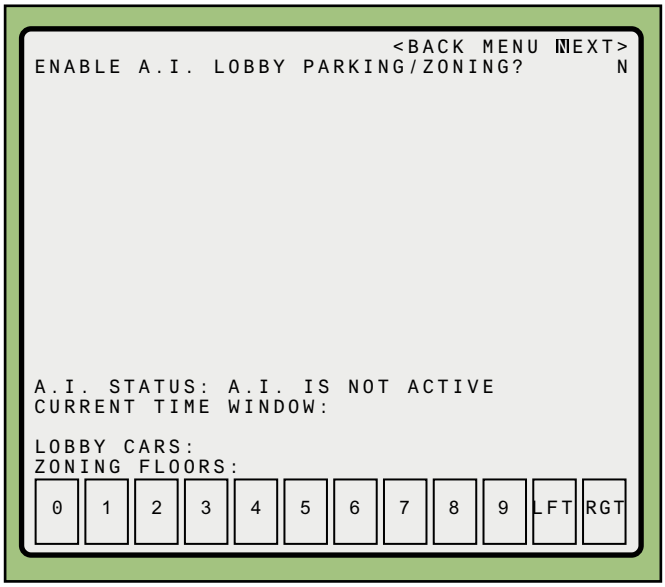
- Door Open Time Lobby After Car Call:
  This setting allows the Door Open Time at Lobby time to be truncated if a car call is entered or the car is otherwise assigned, allowing the doors to close and the car to leave the lobby. Time entry is in seconds (1 to 99); default is 5 seconds.

To park at the lobby floor with the doors closed, select user-defined parking.

A.I. Lobby Parking/Zoning

This menu allows dispatching system artificial intelligence to assign parking and zoning depending upon current traffic conditions in the building, rather than arbitrarily or by timer. User settings on the Parking Configuration menu are generally overridden.

Figure 22. A.I. Lobby Parking/Zoning Menu



- Enable A.I. Lobby Parking/Zoning?
  If set to Y, the dispatcher will use artificial intelligence to dynamically control lobby parking and zone parking features.

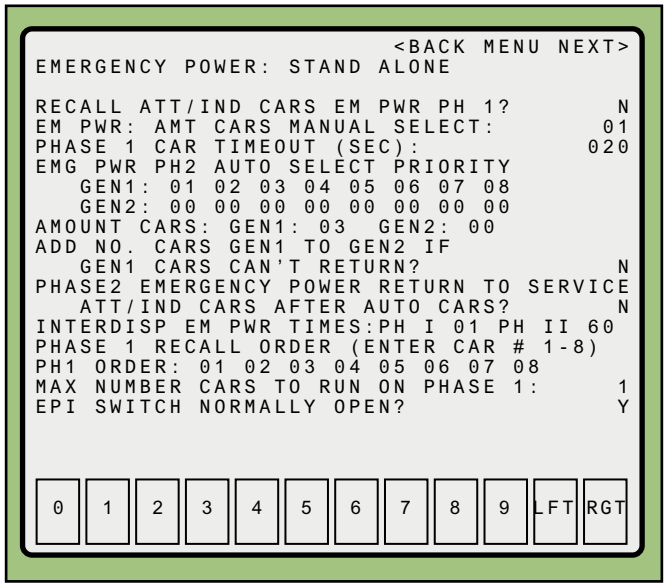
- A.I. Status:
  After operating and collecting data for 24 hours, the A.I. status display will be populated with data. The data helps you to verify lobby parking and zoning operations. These are status displays, not user-enterable parameters.

Emergency Power Configuration

This menu allows you to set group behavior during emergency power operation. Depending upon specific system inputs and outputs, one of two screens may be displayed. If the dispatcher is Stand Alone (all cars in the group are supplied by the same emergency power source), you will see this screen. If the cars in the group are supplied with power from multiple feeders (and also in some cases of multi-bank emergency power operation when a full range of options must be available), you will see the second, Split, emergency power screen.

1

Figure 23. Emergency Power Configuration Menu



- Emergency Power: Setting is read-only. Value from Group Definition screen (page 14).
  - Stand Alone: Emergency power for group cars is independent of other groups or elevators in the building. (Example: one emergency generator provides power to this elevator group only.)
  - Master: This dispatcher will initiate the emergency power return sequence and will have preference to go back to service on emergency power Phase 2.
  - Slave: This dispatcher will return on emergency power Phase 1 after the other simplex or group has finished its return. This dispatcher will not have preference to go back to service on emergency power Phase 2.
  - Split: See Split Emergency Power Configuration on page 39.

- Recall Att/Ind Cars Em Pwr Ph 1?
  Applies only to cars on Attendant or Independent service at a floor with their doors open when the Emergency Power signal is activated. If the door is not open, the car will obey a Phase 1 recall to the recall floor. If you wish to bring cars on Attendant or Independent service down to the recall floor in all situations, set this to Y. If set to Y, the door will close and the car will be returned to the recall floor in the order assigned. If set to N, the car will not return. If the car is selected to run on Phase 2 emergency power, it will return to service from the present floor.

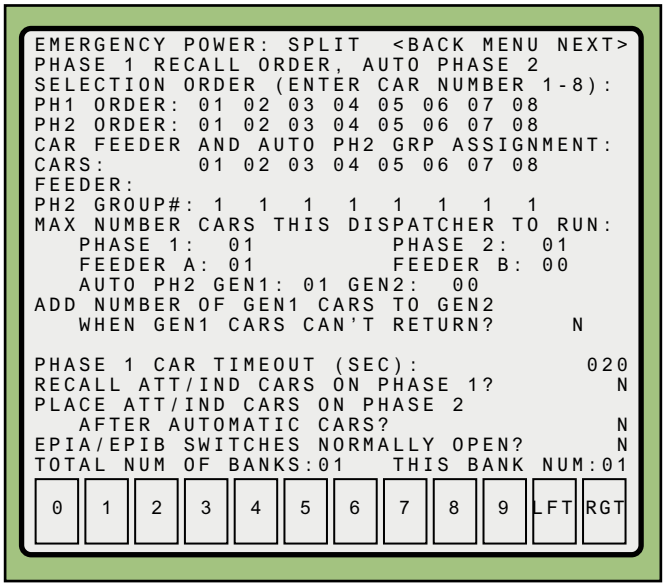
- Em Pwr: Amt Cars Manual Select:
  When the manual Phase 2 (run on emergency power) input is active, this parameter sets the number of cars from each group that are allowed to run (when multiple manual select inputs are activated). (As with lobby parking, the group of cars controlled by this dispatcher may be separated into two “groups” for emergency power assignments.)
- Phase 1 Car Time-out (sec):
  Enter the time in seconds that the dispatcher should attempt to call/return a non-responsive car on Phase 1 recall before moving on to the next car. After completing recall, the dispatcher will once again return to non-responsive cars and attempt recall. If the car again fails to respond, the dispatcher will report it Out of Service.
- Em Pwr Phase 2 Auto Select Priority:
  For each priority group, enter the car numbers in the order in which they should be selected to run on Emergency Power Phase 2. If you are not separating into priority groups, enter the car numbers in run order in Gen 1 and leave Gen 2 set to all zeros.
- Amount Cars: Gen 1: Gen 2:
  For each priority group, enter the maximum number of cars that should be run when automatic Phase 2 (run on emergency power) is active.
- Add No. Cars Gen 1 to Gen 2 if Gen 1 Cars Can’t Return?
  If Gen 1 cars are unable to return, should the number of Gen 1 cars selected to run on emergency power be added to those selected to run from Gen 2?
- Phase 2 Emergency Power Return to Service Att/Ind Cars After Auto Cars?
  If set to Y, cars on ATS/IND have lower priority than passenger cars for selection to run. If set to N, prior operating mode will not be considered when placing cars on Phase 2 service.
- Interdisp Em Pwr Times PH1: PH2:
  - PH1: Setting this parameter on Group A tied to Group B or to a simplex car for emergency power purposes will adjust the amount of time in minutes to be given Group B or the simplex to complete its emergency power return Phase 1 before allowing the emergency power Phase 2 on Group A. This parameter only affects groups set up as Master for emergency power purposes. Minimum: 0. Maximum: 20. Default: 1.
  - PH2: If Group A is tied to Group B for emergency power purposes and none of the Group A cars are able to go on emergency power Phase 2, this parameter adjusts the amount of time (in seconds) to be give Group B to go on emergency power Phase 2 before Group A retries placing one of its cars on emergency power Phase 2. This parameter only affects groups set up as Master for emergency power purposes. Minimum: 0. Maximum: 99. Default: 60.
- Phase 1 Recall Order (Enter Car # 1 - 8):
  For each car in PH 1 Order, enter the order in which it should recall. For example, if car 6 should recall first, enter a 01 for it, a 02 for the next car, etc. All entries must be two digits. This sequence will be bypassed when some of the cars are on emergency status (i.e., medical or Fire Phase 2). If an invalid car number is entered, the default order will be used (Car 1 is first, Car 2 second, etc.).
- Max Number of Cars to Run on Phase 1:
  Sets the maximum number of cars that may be run on Phase 1 (recall) simultaneously. The default is one. This must be determined by the capacity of the emergency power source.
- EPI Switch Normally Open?
  When set to Y, the dispatcher will be on emergency power when the EPI input is HIGH. When set to N, the dispatcher will be on emergency power when the EPI input is LOW.

Split Emergency Power Configuration

Split emergency power configuration is not supported in current release software.
This menu allows you to set group behavior during emergency power operation. Depending upon specific system inputs and outputs, one of two screens may be displayed. If the dispatcher is Stand Alone (all cars in the group are supplied by the same emergency power source), you will see the Stand Alone screen. If the cars in the group are supplied with power from multiple feeders (and also in some cases of multi-bank emergency power operation when a full range of options must be available), you will see the second, Split, emergency power screen.

1

Figure 24. Split Emergency Power Configuration Menu



- Emergency Power: Split. Read-only. Value from Group Definition screen (page 14).
- Phase 1 Recall Order, Auto Phase 2 Selection Order (Enter Car Number 1-8):
  These parameters allow you to enter the order in which cars should be recalled during Phase 1 and the order in which cars should be selected to run in Phase 2.
- Car Feeder and Auto PH2 Grp Assignment:
  For each car in the group, assign the feeder (generator), A or B.
  For each car in the group, assign Phase 2 group (1 or 2) priority.
- Max Number Cars This Dispatcher to Run:
  - Phase 1: How many cars can be returned to the recall floor simultaneously?
  - Phase 2: How many cars can be run on emergency/generator power simultaneously?
  - Feeder A: How many cars can be run on emergency feeder A?
  - Feeder B: How many cars can be run on emergency feeder B?
- Auto PH2 Gen 1: / Gen 2:
  When Phase 2 (run on emergency power) is active, how many cars should be run from each generator?
- Add Number of Gen 1 Cars to Gen 2 when Gen 1 Cars Can't return?
  If Gen 1 cars are unable to return should the number of Gen 1 cars selected to run (but now unavailable) be added to Gen 2? Set to Yes or No.

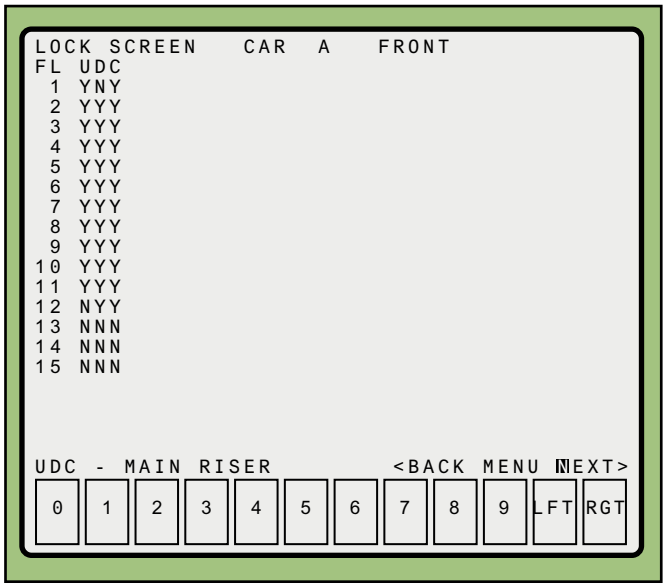
- Phase 1 Car Timeout:
  Enter the time in seconds that the dispatcher should attempt to call/return a non-responsive car on Phase 1 recall before moving on to the next car. After completing recall, the dispatcher will once again return to non-responsive cars and attempt recall. If a car again fails to respond, it will be reported out of service.
- Recall Att/Ind Cars on Phase 1?
  This only applies to cars that are on attendant or independent at a floor with their doors open when the Emergency Power signal is activated. If the door is not open, the car will do a Phase 1 recall to the recall floor. If you wish to bring cars on attendant or independent down for an Emergency Power Phase 1 Recall in all situations, set this to “Yes”. If you set this to “Yes” the door will close and the car will be brought to the recall floor in the order assigned. If set to “No” the car will not return. If the car is selected to run on phase 2, it will return to service from the present floor. This parameter should be set to match the parameter in the car parameter menu.
- Place Att/Ind Cars on Phase 2 After Automatic Cars?
  If set to Yes, cars on Attendant or Independent operation when recalled during Phase 1 will be held at the recall floor and not released to Phase 2 service until after those cars returned from automatic passenger service. If set to N, prior operating mode will not be considered when placing cars on Phase 2 service.
- EPIA/EPIB Switches Normally Open?
  If set to Yes, the dispatcher will be on emergency power when the EPI input is low.
  If set to No, the dispatcher will be on emergency power when the EPI input is high (default).
- Total Num of Banks:
  Used only on groups when the group is set up for multi-bank / split feeder Emergency Power operation. This parameter should be set to the total number of banks that will share the Emergency Power buses. It affects bus selection timing.
  Minimum: 1. Maximum: 10. Default: 1.
- This Bank Num:
  Used only on groups when the group is set up for multi-bank / split feeder Emergency Power operation. This parameter is used to identify which number bank this car is in. Each dispatcher or simplex car tied to the same Emergency Power generator(s) must have a unique number. This parameter affects bus selection timing and so will also control the order banks put cars on automatic Phase 2 service.

Call Locks: Front Riser Per Car

Future release. On a per car/per riser basis, these menus allow you to:

- Lock hall call service for a specific landing/direction.
- Lock car panel call registration to a specific landing.

Figure 25. Front Riser Lock Enable



- U: Up direction call
- D: Down direction call
- C: Car call to opening
- Y = Locked
- N = Not locked

Note

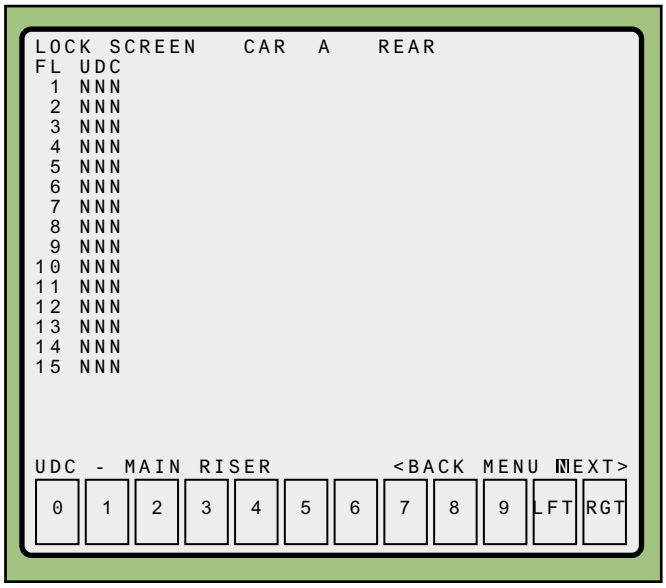
These settings will not override a hall call lock placed by a physical lock switch at that station. If a hardware override is desired, it is provided through a key switch located (typically) at a security station.

Call Locks: Rear Riser Per Car

Future release. On a per car/per riser basis, these menus allow you to:

- Lock hall call service for a specific landing/direction.
- Lock car panel call registration to a specific landing.

Figure 26. Rear Riser Lock Enable



- U: Up direction call
- D: Down direction call
- C: Car call to opening
- Y = Locked
- N = Not locked

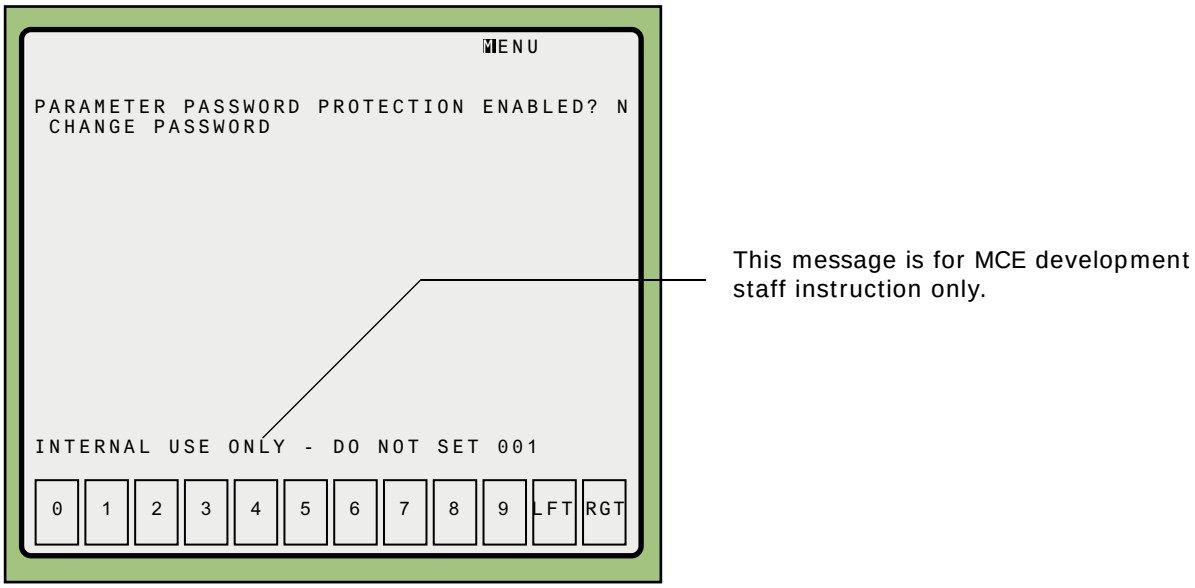
Note

These settings will not override a hall call lock placed by a physical lock switch at that station. If a hardware override is desired, it is provided through a key switch located (typically) at a security station.

Change / Disable Password

This screen allows you to set password protection such that the correct password must be entered before parameters may be changed.

Figure 27. Change / Disable Password Menu



A password protects all parameters from being changed unless the correct password is first entered.

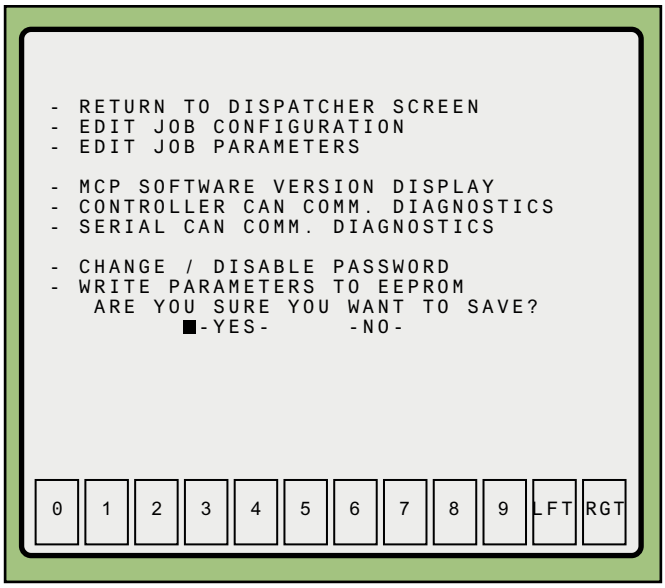
- Parameter Password Protection Enabled:
  - Yes = password entry required to change parameters.
  - No = (default) password entry not required to change parameters.
- Change Password:
  - If selected, accesses a screen on which a password may be selected.

Write Parameters to EEPROM

When a job configuration or job parameter is changed, you will be prompted to write that change into long term memory (system EEPROM) when you navigate past that parameter.

1. On the menu selection screen, select Write Parameters to EEPROM.

Figure 28. Write Parameters to EEPROM Menu



2. The message “Are you sure you want to save?” will be displayed, select Yes to proceed.
3. You may be prompted to reset the group processor board. To do this, press the RST2A button.

There will be a period of seconds during which the system is saving parameters. When parameters have been successfully saved, the main status screen for the group will be displayed.

Copy Parameters To/From SD

This selection allows you to use an SD card to copy parameters from one dispatcher to another or to use an SD card as a repository for backup parameter storage. Selecting Copy Parameters To/From SD brings up the Parameter Management screen allowing you to:

1

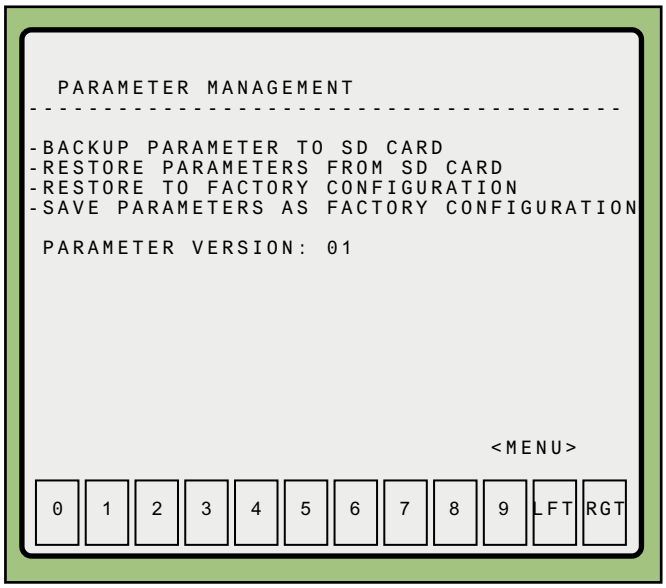
- Backup Parameters to SD Card
  Writes parameters currently in EEPROM to the SD card.
- Restore Parameters From SD Card
  Writes parameters currently on the SD card to the system EEPROM.
- Restore to Factory Configuration
  Restores group settings to last saved factory configuration
- Save Parameters as Factory Configuration
  Allows you to overwrite last saved factory configuration with current settings

Selecting any of the above will display a screen providing a final OK/CANCEL opportunity.

Note

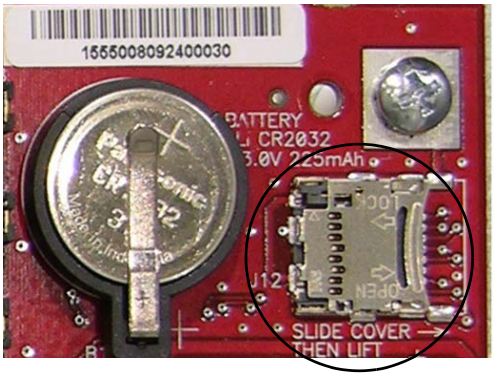
After restoring parameters from the SD card, it is necessary to Write Parameters to EEPROM and then press the RST2A button to fully implement and retain the parameter changes.

Figure 29. Parameter Management



SD Card Process

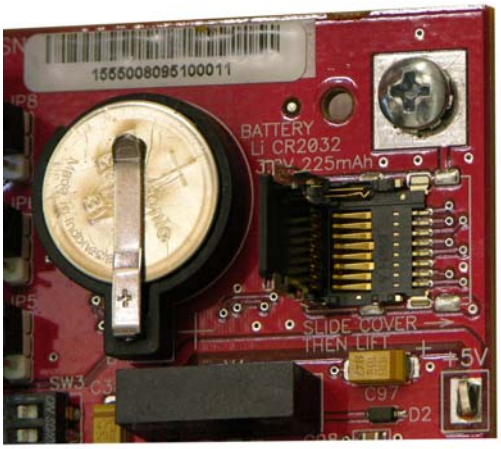
If you are backing up to or restoring from an SD Card:



Top Right Corner of MC-MCP Board

Micro SD cover closed.

Slide right and release to open



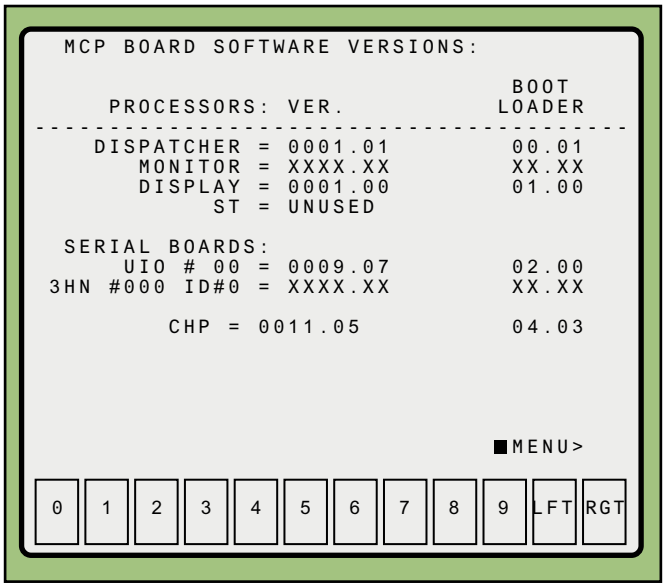
Micro SD cover open.

1. Use your finger tip to gently slide the micro SD slot cover to the right. It will slide about 1/4-inch. Lift your finger and open the cover.
2. Insert the SD card into the slot in the hinged cover, notch on top and exposed contacts facing the circuit board.
3. Use your finger tip to close the cover and gently slide it to the left. It will lock into place.
4. Select desired Parameter Management process.
5. Follow on-screen instructions.
6. If you have chosen to restore parameters from the SD card, complete that process, then:
   - Use the Write Parameters to EEPROM command
   - Press the RST2A button to complete storage to non-volatile memory.

MCP Software Version Display

This selection allows you to display the version of the software installed on dispatcher components.

Figure 30. MCP Software Version Display



- Dispatcher: Software version for dispatcher processor board and software version of boot loader routine.
- Monitor: Software version for real time monitoring software resident on dispatcher and software version of boot loader routine.
- Display: Software version for LCD display and software version of boot loader routine.
- ST: Unused in this release.
- Serial Boards -
  - UIO #00: Version of software running on HC-UIO boards (by set board address).
  - 3HN #000: Version of software running on HC-3HN boards in hall calls (by set board address and ID [riser #]). Rear node board addresses start at 129 for floor 1. Please refer to “Riser Assignment” on page 59.
  - CHP: Version of software running on HC-CHP (CAN hub) board.

- **To select a board to view software version:**
  - Use Left/Right buttons to navigate to the UIO or 3HN board address field.
  - Use numeric buttons to set the address/ID of the board you want to view.

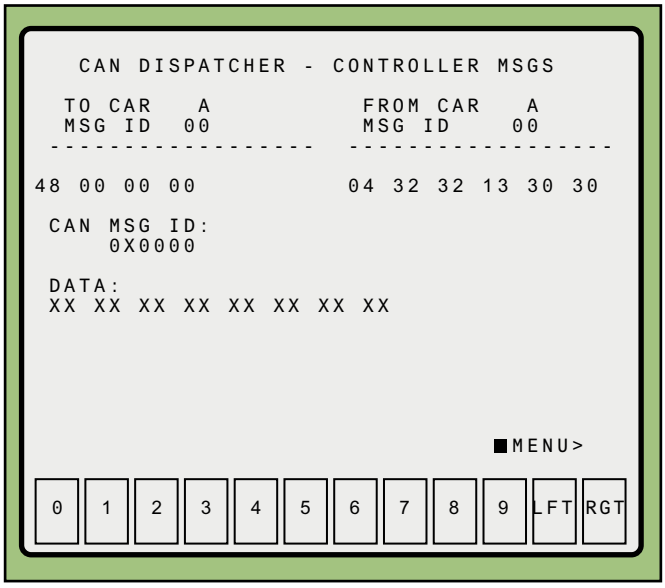
Note

For further 3HN board information, please refer to SC-3HN Three Input Serial Hall Call Node Board on page 57. For UIO board information, refer to Section 5 of the Motion 4000 Controller manual.

Controller CAN Communication Diagnostics

This screen is an aid to diagnosing problems in CAN communication between the dispatcher and a particular car. The car's sent and received messages are displayed here.

Figure 31. Controller CAN Communication Diagnostics



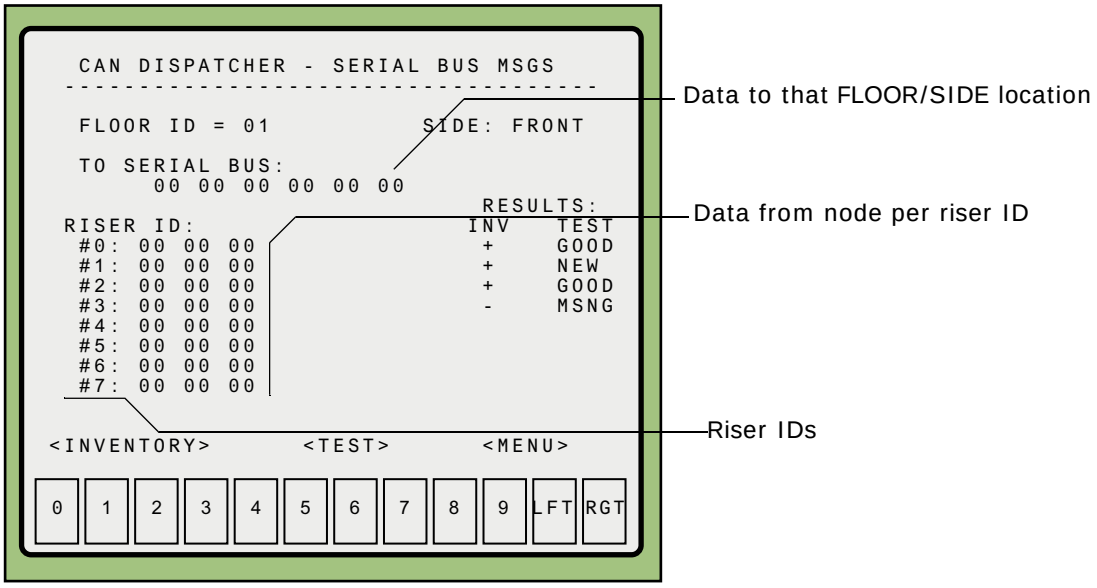
Note

This screen is primarily intended for software verification at MCE. If you have an operational issue that Technical Support determines warrants this level of attention to communications protocol, they will bring a software engineer into the support call.

Serial CAN Comm. Diagnostics

This screen allows you to inventory and test serial hall call node boards. (Supported by group software version 3.xx and newer only.)

Figure 32. Serial CAN Communication Diagnostics



1. Select a Floor ID and a car door location (SIDE = FRONT/REAR).
2. Select an operation to perform (INVENTORY or TEST [test should be run only after an inventory has been performed]).
   - INVENTORY RESULTS: If you perform an inventory, the system sends a message to and reads results from each board set to the selected FLOOR ID/SIDE on each of the 8 (#0 - #7) RISER IDs. In the RESULTS INV column, a + indicates a board is present while a - indicates no board present on the associated riser. After performing an Inventory, be sure to save the Parameters (Write to EEPROM) so they can be compared to test results in the future.
   - TEST RESULTS: If you perform a test, the system sends a message to and reads results from each board set to the selected FLOOR ID/SIDE on each of the 8 (#0 - #7) RISER IDs. In the RESULTS TEST column:
     - GOOD indicates a board that was included in the inventory reported with no errors.
     - NEW indicates a board replied that was not part of the Inventory.
     - MSNG indicates a board that was part of the Inventory failed to respond.
     - IN 1/2/3: A board that was part of the inventory detected the specified input failed.
     - OUT 1/2/3: A board that was part of the inventory detected the specified output failed.

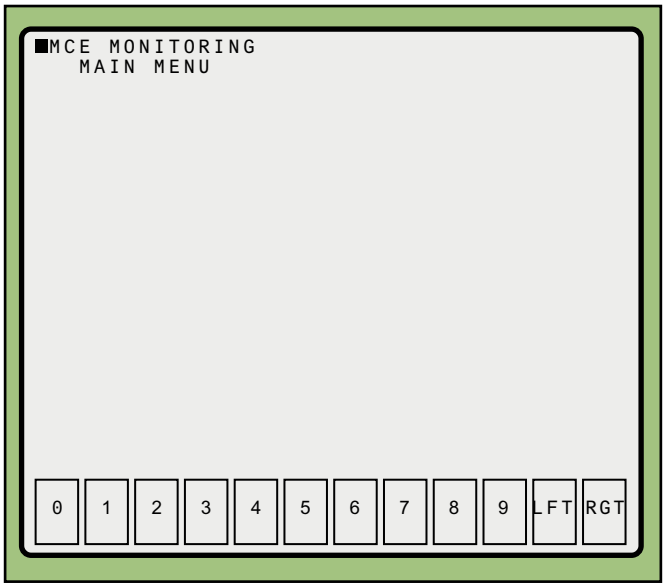
Note

Risers IDs 7 through 4are Main risers. Riser IDs 3 - 0 are Auxiliary risers. Please refer to “Riser Assignment” on page 59.

Switch to Monitoring

MCE iReport and iMonitor applications may be used to monitor Motion group controls and individual controllers. If so, the interface is configured through these menus.

Figure 33. MCE Monitoring Main Menu

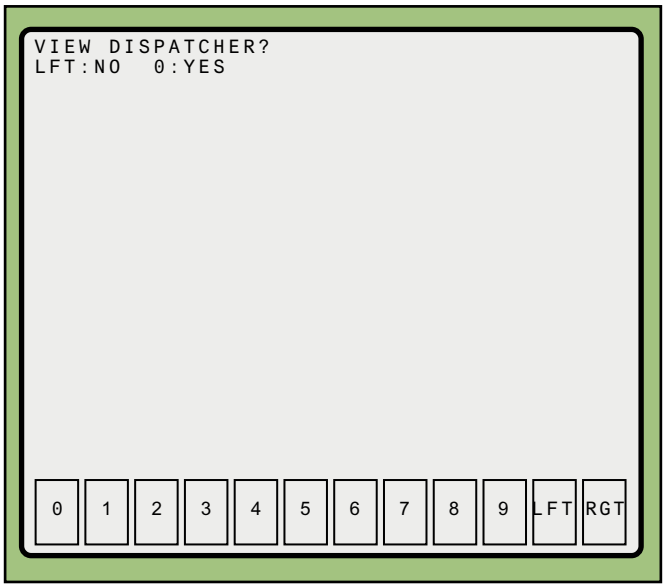


From this menu:
- Press any # to enter dispatcher view
- Press RGT to enter setup screens

Viewing

If you press any “number” button in the above screen, the dispatcher view screen will be displayed.

Figure 34. View Dispatcher



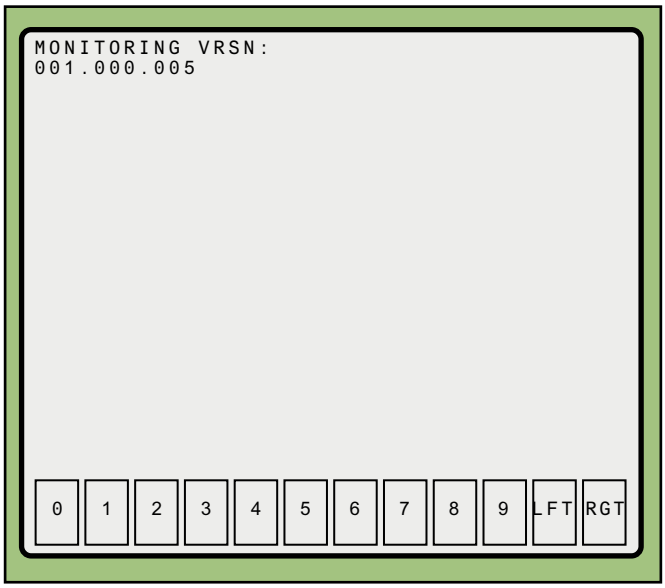
From this menu:
- Press LFT to return to the previous menu
- Press 0 to return to the main dispatcher viewing screen. Please refer to "Dispatcher Screen" on page 9.

1

Configuration

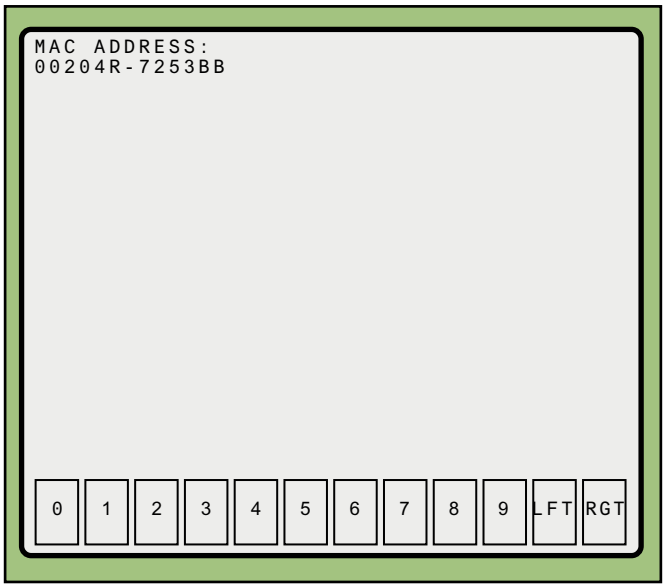
If you press RGT on the MCE Monitoring, Main Menu screen, you enter a series of screens that allow you to set up the dispatcher to be monitored by iReport or iMonitor applications. The first of these screens displays the version of the monitoring software currently on the dispatcher.

Figure 35. Monitoring Version



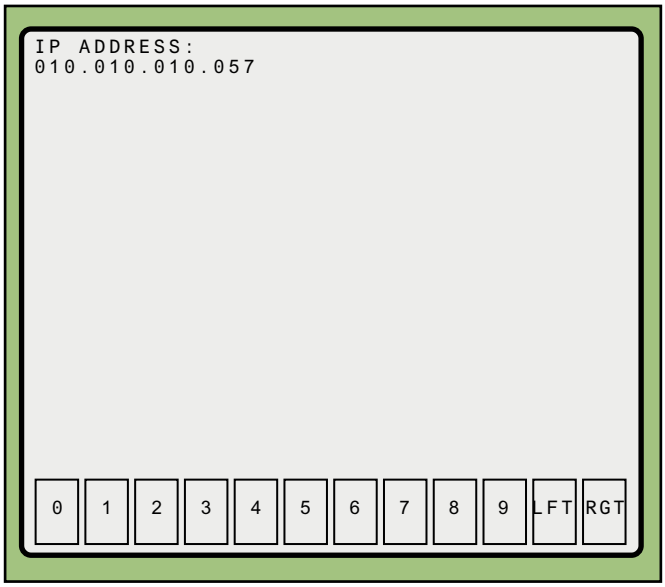
Continue pressing the RGT button to access remaining configuration screens.

Figure 36. MAC Address



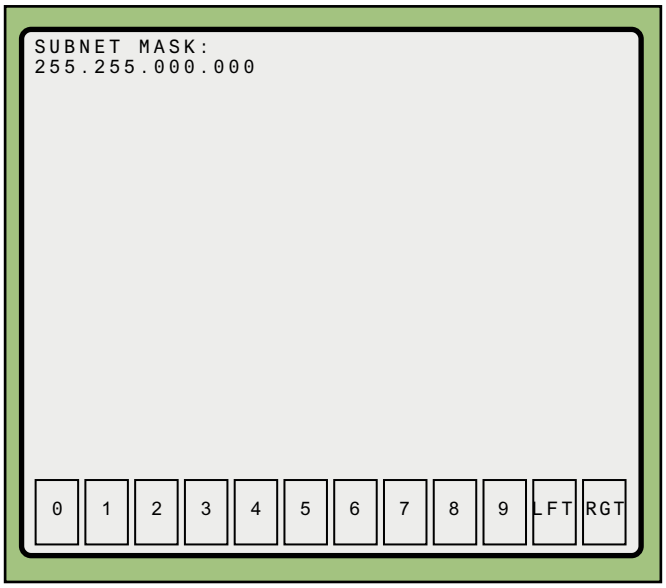
The MAC address is a unique, hardware address for the dispatcher.

Figure 37. IP Address



Sets the IP address for the dispatcher. See the iReport or iMonitor manual for information about setting the address.

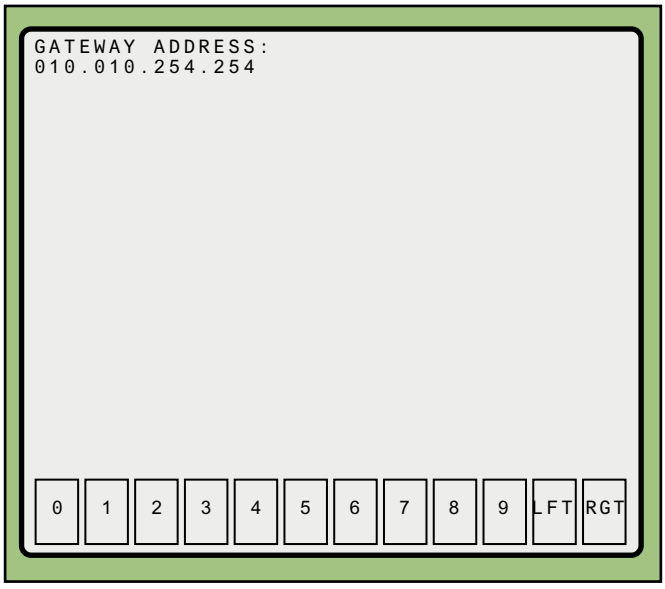
Figure 38. Subnet Mask



Sets the subnet mask for the dispatcher. See the iReport or iMonitor manual for information about setting this.

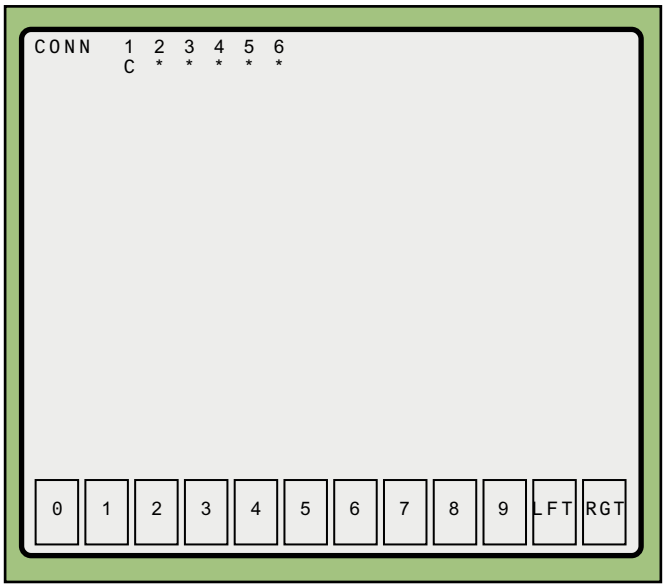
1

Figure 39. Gateway Address



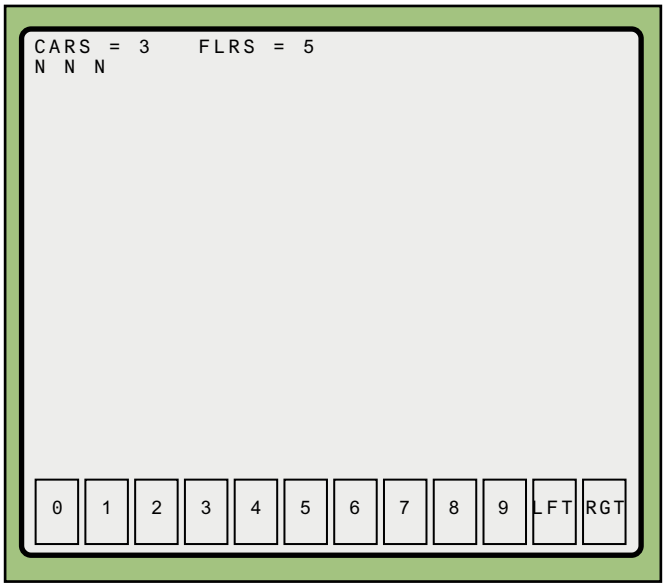
Sets the gateway address for the dispatcher.
See the iReport or iMonitor manual for information about setting this.

Figure 40. Number of Connections



Displays the number of iReport or iMonitor connections currently active on this dispatcher, by type:
M = iMonitor
R = iReport
C = Other connection

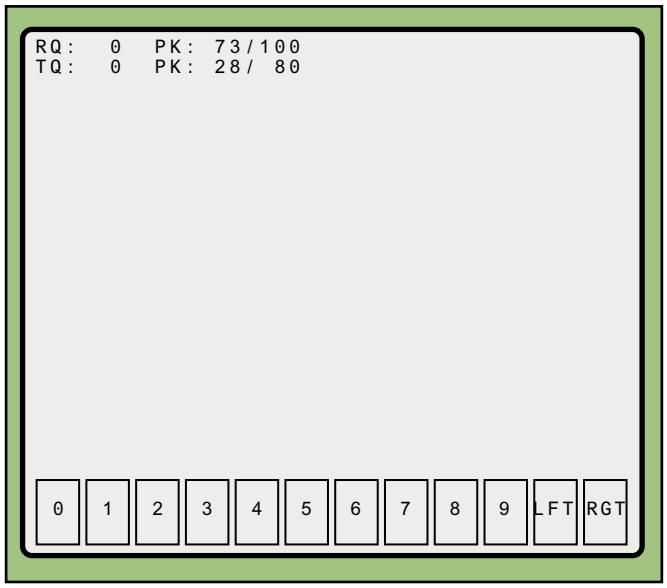
Figure 41. Cars and Floors



Displays the number of cars and floors served by this dispatcher (for use by the monitoring application).

The second line provides car to group connection status (in ascending order):
N = Not connected
C = Connected

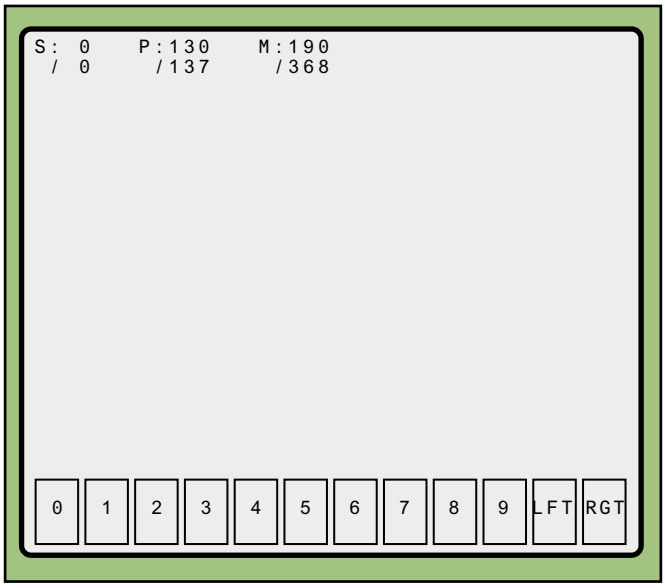
Figure 42. Communication Status, RQ TQ



Monitors the current number of receive and transmit messages in the CAN monitoring queue, the peak number of messages in that queue, and the maximum acceptable number of messages in each queue. Used to help diagnose communication problems.

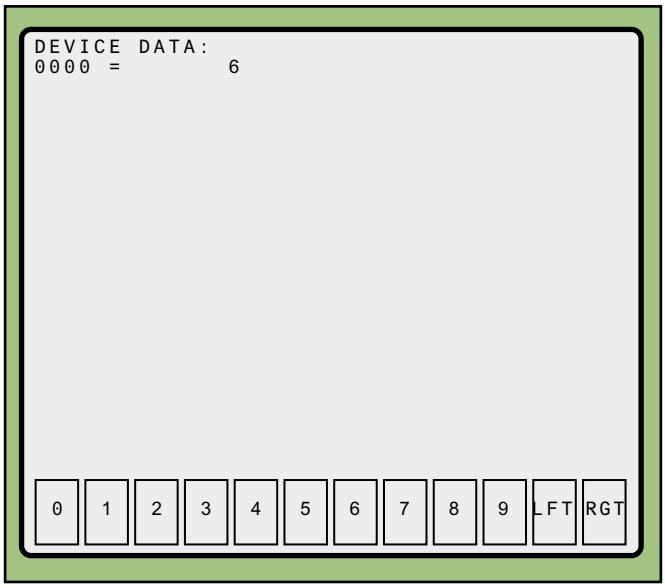
1

Figure 43. Communication Error Reporting



Displays those data points being checked for change. Used to help diagnose communication problems.
S = Status messages
P = Parameters
M = Monitors

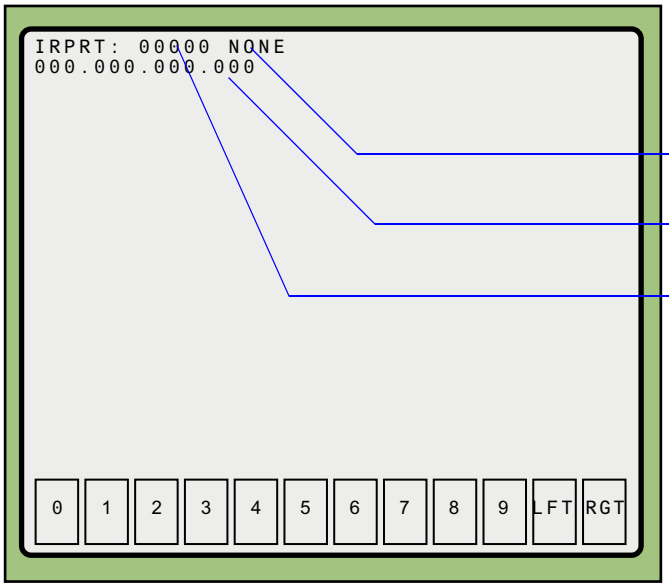
Figure 44. Device Data



Displays the current data bytes in a particular register. Used to help diagnose communication problems.

To select display, press any numeric button to display a cursor, then use numeric buttons to enter an address.

Figure 45. iReport Status



Displays current status of iReport connections and the last iReport Port and IP address connected.

Status: None, Conn, Wait

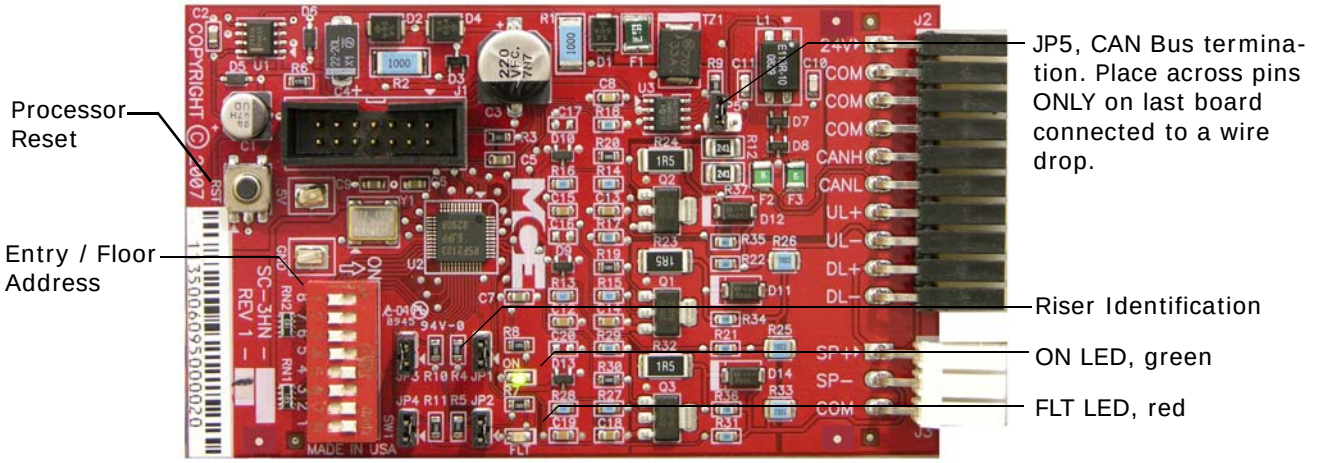
IP address of iReport server

Port # to send events to on iReport server

SC-3HN Three Input Serial Hall Call Node Board

The SC-3HN board is used to provide serial hall calls for Motion controllers. The SC-3HN provides analog inputs and outputs for the hall call buttons and LEDs and a CAN connection to the Motion group (version 3.xx and newer software only). Refer to the drawings package for connection instructions to your fixtures.

Figure 46. SC-3HN Three Input Serial Hall Call Node Board



Call Bus Conditions

In the dispatcher, the serial hall call CAN Bus originates on connectors J16 and/or J17 on the HC-CHP board. The two are electrically identical. If more than two physical connection points are required, a CAN Bus may be paralleled through the Panel Mount Terminal (PMT) strip. Refer to the drawings for the particular job.

- Eight risers are supported; four Main and four Auxiliary.
- Each hoistway wire drop consists of a twisted pair for signals and one wire each for 24V power and common. A wire drop can support more than one riser.
- Settings on each SC-3HN board determine which riser it belongs to, its floor address, and whether it is associated with the Front or Rear car entry.
- SC-3HN boards with the same floor address and entry association will register the same call and light indicators. Each must have a different riser ID but within the same riser group (Main or Auxiliary).
- Main risers A - D use riser IDs 7 - 4. Auxiliary risers A - D use riser IDs 3 - 0.

General Installation

All SC-3HN connections are at one end of the board. One board is installed in each hall call panel electrical box. The board is shipped in an anti-static bag.

1. Make connections to the hall call buttons and indicators. (See following page.)
2. Make connections to the signal/power drop. (See following page.)
3. Set floor number and door (F/R) location, page 59.
4. Set riser assignment, page 59.
5. Last board on wire drop only: Place a jumper on JP5. All other boards: Ensure jumper NOT placed across JP5 pins, page 59.
6. Insert board in anti-static sleeves and tape closed using supplied ESD sticker.
7. Tuck bag/board into electrical box and re-install hall call.

Figure 47. Hall Call Node Wiring

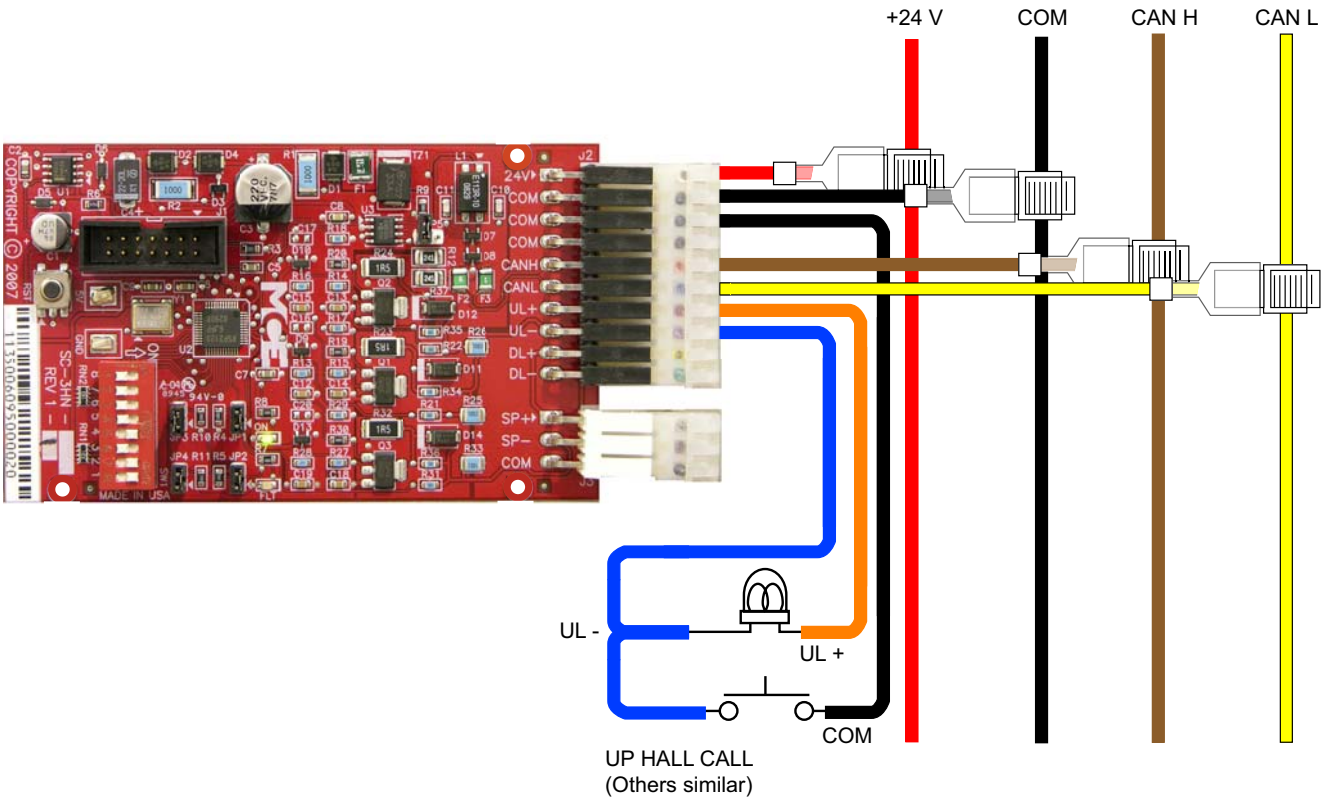


Table 7. Hall Wiring Colors

Color	Signal
red	+24V
black	common
brown	CAN H
yellow	CAN L
orange	UL+
blue	UL-
violet	DL+
green	DL-
gray	SP+
white	SP-

Addressing and CAN Bus Termination

Set SC-3HN addresses as shown in the job prints for the installation. Generic examples are provided below.

Riser Assignment

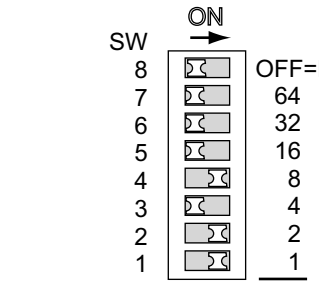
There are four Main risers and four Auxiliary risers. Jumper locations JP3, JP2, and JP1 are used to assign the appropriate riser to the SC-3HN board. In the following table, a "1" indicates a jumper in place.

Table 8. Riser Assignment by Jumper Binary Representation

JP3	JP2	JP1	Riser
1	1	1	Main A (Binary value 7)
1	1	0	Main B (Binary value 6)
1	0	1	Main C (Binary value 5)
1	0	0	Main D (Binary value 4)
0	1	1	Auxiliary A (Binary value 3)
0	1	0	Auxiliary B (Binary value 2)
0	0	1	Auxiliary C (Binary value 1)
0	0	0	Auxiliary D (Binary value 0)

Floor Number and Front or Rear Opening

DIP switch SW1, switches 1 through 7 set the floor address for the board, beginning with Floor 1. Switch 8 selects Front or Rear opening.



Floor address example = 11

ON switch adds its value to floor address.

When setting addresses, use the values silk-screened on the circuit board, not those shown on the DIP switch.

Baud Rate

Jumper JP4 is reserved for future use to select a different CAN Bus baud rate should it become necessary. For now, the only option is to leave the JP4 jumper in place, setting baud rate to 125 kbps.

CAN Bus Termination

The CAN Bus must be terminated ONLY ON THE LAST SC-3HN connected to the wire drop (farthest board from Dispatcher).

JP5 OFF/Unterminated
All but last board

JP5 ON/Terminated
Last board on wire drop ONLY.

On Board Diagnostics

Two LEDs provide diagnostic information: The ON LED (green) and the FLT LED (red).

ON LED

The ON LED reflects power/communications status.

- ON: Group communications OK
- OFF: Board is not receiving power or has no software loaded.
- Blinking: Communications error - more than ten seconds have passed without a message from the group dispatcher.

(FLT) FAULT LED

The FLT LED reflects the status of the analog outputs.

- ON steady: Internal fault -
  - Replace board if problem persists
- OFF: No Errors detected.
- Blinking: Output overload or disconnection. Pressing the Reset button on the SC-3HN board will clear a blinking Fault LED.
  - Overload: Excessive current draw. Resets when current draw is corrected and call button is pressed again.
  - Not Connected: The output is on (button pressed) but nothing is connected to the UL- or DL- output. Resets when the lamp is connected and the call button is pressed again.
  - Output Shorted: If short is very quick, the LED will flash. Pressing the call button for a few moments will cause the board to reboot. Resets when the short is removed and the call button is pressed again.

Group Settings Record

Use this table to record your group settings.

M Group Parameter Settings

1

Job#	Job Name:	
Prod Order#	Test technician:	Date:

Edit Job Configuration

Parameter Name	Description	MCE setting							
Total cars	The number of cars connected to Group								
Car Name	Desired label for each car	A	B	C	D	E	F	G	H
Lobby Floor	Designated Floor to be served as lobby floor per car								
Floor amount	The # of floors per car								
Door Open	Door Opening for each car. Program as below F=front only, B=front and rear								
Medical Plus Special Calls Amount	The # of Hall Calls dedicated for Special Service	00							
Emergency Power	The selected parameter defines emergency power inputs/outputs that are used to determine the dispatcher's configuration during the loss of commercial power. In addition, the selected parameter will define the sequence of operation during the loss of commercial power, emergency power. **Stand alone**: Emergency Power is configured for (1) power generator. During the event of emergency power based on generator 1, the current dispatcher will control all sequence of operation. Emergency Power for the current dispatcher is independent from other groups. **Split**: Emergency Power is configured for (2) Power Generators. During the event of emergency power based on generator 1, generator 2 or both, the current dispatcher will control all sequence of operation. Emergency Power for the current dispatcher is independent from other groups. **Master:** Emergency Power is configured for Multiple Groups with different generator. During the event of emergency power, the current dispatcher will control the sequence of operation for each group connected to the Master. Emergency Power for the current dispatcher is based on the connected groups. **Slave:** Emergency Power is configured for a generator that is controlled by a Dispatcher with emergency power set to Master, Master Dispatcher. During the event of emergency power, the current dispatcher will operate according to the Master Dispatcher. Emergency Power for the current dispatcher is define as one of the groups connected to the Master.								
Legacy Group Interface	Determined if the Dispatcher will interface with legacy controller or Legacy dispatcher will interface with controller **None:** If group design has no Cross-Reg or Cross-Cancel **Cross Cancellation**: Legacy Dispatcher manages hall call dispatching. **Cross Registration:** MCE Group receives and manages hall call dispatching based on certain criteria.								
Enable Annunciator Lights?	This feature is not available yet.								
Display Security Access Code Page	Yes: Display security Access Code Menu No: Don't display security Access Code Menu								
Display I/O Manual Override Menus	Yes: Display I/O Manual Override Menus No: Don't display I/O Manual Override Menus								
Title	Type job Name								

Floor Eligibility/ Hall Lock Config. for Main Riser during Normal Mode

This Menu allows you to configure elevator service to match the floors and openings (front/rear) to be served. **HC-UIO board addresses 00 to 31 are used for these calls. I/O's sequence start with standard hall calls (front and rear), Medical/Code blue calls then Auxiliary Calls. If Hall Lock out eligibility is programmed then Hall Lock out inputs start with UIO address 32.**
FL=Floor Label, **HL**=Physically hall lock at (Front/rear) riser

FL	HL		Car# A		Car# B		Car# C		Car# D		Car# E		Car# F		Car# G		Car# H	
	F	R	F	R	F	R	F	R	F	R	F	R	F	R	F	R	F	R

M Group Parameter Settings

Alternate Floor Eligibility MAP for Main Riser during Alternate Mode	This Menu allows you to configure elevator service to match the Auxiliary calls to be served. **HC-UIO board addresses 00 to 31 are used for these calls. I/O's sequence start with standard hall calls (front and rear), Medical/Code blue calls then Auxiliary Calls.** **FL**=Floor Label, **HL**=Physically hall lock at (Front/rear) riser

FL			Car# A		Car# B		Car# C		Car# D		Car# E		Car# F		Car# G		Car# H	
			F	R	F	R	F	R	F	R	F	R	F	R	F	R	F	R

Input Selection menu	This screen is used to configure the inputs as per controller design. **HC-UIO board addresses 32 to 63 (except 37-44) are used for these inputs. Whenever address 32-63 is selected, then software automatically configure first 8 terminals (I/O 1-8) for inputs and other 8 terminals (I/O 9-16) for outputs. If Hall Lock out eligibility is programmed then Hall call Lock out inputs start with UIO address 32 then follow by standard inputs.**

Name	Y/N	Name	Y/N	Name	Y/N	Name	Y/N
REC		RUNH	N/A	PTI			
AREC		FBY		MRET			
BREC		HBF		HLOF			
CREC		HLK		RECA			
EPI		SASW		ALT			
RUNA		AUTO					
RUNB		LKON					
RUNC		LKOF					
RUND		SEC					
RUNE		HP					
RUNF		EC					
RUNG		NPWR					

M Group Parameter Settings

Output Selection menu

This screen is used to configure the outputs as per controller design. **HC-UIO board addresses 32 to 63 (except 37-44) are used for these inputs. Whenever address 32-63 is selected, then software automatically configure first 8 terminals (I/O 1-8) for inputs and other 8 terminals (I/O 9-16) for outputs.**

Name	Y/N	Name	Y/N	Name	Y/N	Name	Y/N
BAL		EPLC					
UPP		EPLD					
DNP		EPLE					
DF		EPLF					
HF		EPLG					
EPL		EPLH					
FR1L							
EPLA							
EPLB							

Code Blue/Special call menu for Auxiliary Riser during Normal Mode

On per landing/per car basis, this menu supports code blue or other special needs risers. If more than 15 landings, additional screens will appear. **HC-UIO board addressees 00 to 31 are used for these calls. I/O's sequence start with standard hall calls (front and rear), Medical/Code blue calls then Auxiliary Calls.**
LOC= Input location on the UIO, LD=Set the landing#, S= F for front and R for Rear, Type=MED (Medical cal) or UP (Inconspicuous riser UP call) or DN (Inconspicuous riser Down call), XC= Cross Cancellation, Y/N = Program as per car's eligibility.

LOC	LD	S	Type	XC	Car# A	Car# B	Car# C	Car# D	Car# E	Car# F	Car# G	Car# H
001												
002												
003												
004												
005												
006												
007												
008												
009												
010												
011												
012												
013												
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044												
045												
046												
047												
048												

M Group Parameter Settings

ALT Medical/ Special Calls for Auxiliary Riser during Alternate Mode

On per landing/per car basis, this menu supports ALT code blue or other special needs risers (Auxiliary). If more than 15 landings, additional screens will appear. **HC-UIO board addressees 00 to 31 are used for these calls. I/O's sequence start with standard hall calls (front and rear), Medical/Code blue calls then Auxiliary Calls.**
LOC= Input location on the UIO, LD=Set the landing#, S= F for front and R for Rear, Type=MED (Medical cal) or UP (Inconspicuous riser UP call) or DN (Inconspicuous riser Down call), XC= Cross Cancellation, Y/N = Program as per car's eligibility.

LOC	LD	S	Type	XC	Car# **A**	Car# **B**	Car# **C**	Car# **D**	Car# **E**	Car# **F**	Car# **G**	Car# **H**
001												
002												
003												
004												
005												
006												
007												
008												
009												
010												
011												
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028												
029												
030												
031												
032												

Manual Override Riser menu

Hall call inputs are connected to **HC-UIO board addressed from 00 to 31 are used for these calls. I/O's sequence start with standard hall calls (front and rear), Medical/Code blue calls then Auxiliary Calls.**
Hall lockout inputs are assigned to UIO address 32 then follow by standard inputs. Hall lockout inputs location is automatically assigned to next available byte after standard hall calls (front and rear), Medical/Code blue calls then Auxiliary Calls. For example job with 5 floors with standard front riser, HLF location start with 009. Job with 8 floors with standard front riser, HLF location start with 017. Job with 12 floors with standard front riser, HLF location start with 025. mGroup automatically sets the order of the inputs.
Reference to job print to correctly program the hall calls and Lock inputs on the HC-UIO board.
FL=Floor Label, U=UP, D=Down, H=Hall, L=Lock, F=Front, R=Rear

FL	UHF	DHF	HLF	UHR	DHR	HLR

M Group Parameter Settings

Input Mapping Manual Override Menu

This menu defines the physical location mapped for each programmed "spare" input allows the user to reorder the default setting. **HC-UIO board addresses 32 to 63 (except 37-44) are used for these inputs. Whenever address 32-63 is selected, then software automatically configure first 8 terminals (I/O 1-8) for inputs and other 8 terminals (I/O 9-16) for outputs**
Note: If job Eligibility is programmed with Hall lockout inputs then first UIO Boards are dedicated for hall lock inputs then follows by below inputs. LOC ID for standard inputs start with assigned Hall lock bytes+1. For example: Hall lock inputs=5 then LOC ID start with 009. Hall lock inputs = 9 then LOC ID start with 017.
LOC= Location

NAME	LOC	NAME	LOC	NAME	LOC	NAME	LOC
REC		RUNH		PTI			
AREC		FBY		MRET			
BREC		HBF		HLOF			
CREC		HLK		RECA			
EPI		SASW		ALT			
RUNA		AUTO					
RUNB		LKON					
RUNC		LKOF					
RUND		SEC					
RUNE		HP					
RUNF		EC					
RUNG		NPWR					

Output Mapping Manual Override Menu

This menu allows you to reassign the physical location mapped for each "Spare" output programmed and allows the user to reorder the default settings. **HC-UIO board addresses 32 to 63 (except 37-44) are used for these outputs. Whenever address 32-63 is selected, then software automatically configure first 8 terminals (I/O 1-8) for inputs and other 8 terminals (I/O 9-16) for outputs**
Note: when Cross Cancellation option is enabled, cross cancel outputs start on first available output byte after standard I/O.
LOC= Location

NAME	LOC	NAME	LOC	NAME	LOC	NAME	LOC
BAL		EPLF					
UPP		EPLG					
DNP		EPLH					
DF							
HF							
EPL							
FR1L							
EPLA							
EPLB							
EPLC							
EPLD							
EPLE							

M Group Parameter Settings

Edit Job Parameters

Peak Modes and Emergency Power Recall floor

Parameter Name	Description	MCE Setting
Long Hall call wait Priority (Sec)	When a call has been registered for longer than setting, the dispatcher assigns it high priority	
Mode Hysteresis Timer	Sets the delay time the system will observe before dropping dynamically selected peak due to changing traffic conditions **Timer Based Peak Operation** During each 24 hour period, midnight to midnight, up to six up peak and two down peak periods of operation may be specified. Set all start and end Timers to 00:00 to turn off.	

	Start	End		Start	End
UP PK 1			UP PK 2		
UP PK 3			UP PK 4		
UP PK 5			UP PK 6		
DN PK 1			DN PK 1		

Hall call Imbalance UP peak calls	The difference between the number of active up calls in comparison to the number of active down calls that will trigger dynamic selection of up peak operation	
Hall call Imbalance Down peak calls	The difference between the number of active down calls in comparison to the number of active up calls that will trigger dynamic selection of down peak operation	
Hall Call Stall Detection (Sec)	Determine the number of seconds the system will wait before placing the car into a temporary fault state (FLT) when the car is on the same floor as its hall call assignment but is stuck or can't open its doors. During the fault state, the hall call will be reassigned.	
Emergency Power Recall floor	Selects the floor to which group cars will recall when emergency power becomes available during a commercial power loss (Phase 1 of Emergency Power Operation)	

Dispatching Penalty and Advantage assignment menu

Generator Off	Description Penalty timer assigned to a car with MG set. Set to 0 for AC drive and SCR drive	00	This car UP	Description Penalty assigned to lobby car when calculating the best car to assign to a call	
Next car UP	Description Penalty timer assigned to next car up when calculating the best car to assign to a call	02	Halted Time	Description Penalty assigned to a car depending upon the amount of time required for it to decelerate and cycle its doors.	
Advantages: In Line Call Call Coincidence	In Line Call: An advantage given to a car that will pass the active hall call in its present direction of travel. Call Coincidence: An advantage given to a car that has a car at the floor for which the hall call registered				In Line Call=05 Call Coincidence=05
Doors Open Simultaneously	Program to "Yes" if front and rear doors open simultaneously. Program to "No" if front and rear doors open sequentially. Default setting is "Yes".				
Reopen Door with hall call	Set to "Yes", pressing the hall call button will cause a closing door to reopen or to be held open if constant pressure is applied				
Bypass stuck hall call Timer (sec)	The number of seconds that a continuously pressed hall call button can be used to keep the car door open at a floor				
Time out of Service (sec)	Set the amount of time that the car will be allowed to stand at a floor before the dispatcher puts into fault status and reassigns the hall call				
Hosp. Recall Timeout Timer (sec)	Set the amount of the time door will remain open when the car is at the recall floor waiting to go on phase 2 of medical emergency				
Hosp Override Fire if trig 1st (sec)	Set to yes, a car on medical phase 1 recall will not respond to a subsequent fire phase 1 recall. Set to No, fire phase 1 recall will override the Hosp service				
Assign Hosp. Calls to IND cars	Set to Yes, cars on independent service will be assigned to medical recall. Set to No, cars on independent service will be exempted from medical call				
Assign Hosp. Calls to ATT cars	Set to Yes, cars on Attendant service will be assigned to medical recall. Set to No cars on Attendant service will be exempted from medical call				
Lockout inputs Normally Closed	Set to NO if job print shows Lockout inputs are normally open. Set to Yes if job print shows Lockout inputs are normally closed				
Lockout Car calls w/hw hall Lock	Set to Yes, an active hardware hall lock input will also lockout car calls for the associated floor. Set to No, an active hardware hall lock input will affect only the hall calls for the associated floor.				
Drop Group Hall calls for IR cars.	Set to Yes, a car running on inconspicuous riser (Swing) will not be assigned group hall calls Set to No, a car running on inconspicuous riser (Swing) after answering swing hall calls, it may accept group hall calls				
HLOF input Normally Open	Set to Yes when Hall Call Lock Off input are normally open. Set to No when Hall Call Lock Off inputs are normally Closed.				
Lockout Car calls with Alt riser	Set to Yes, and the dispatcher has an alternate riser, the dispatcher will lockout the car calls corresponding to hall calls that are not valid for the selected riser				
Auto Car call Locks by Time	All car calls (except for the Lobby) on all cars will lock and unlock automatically at these set time.				
	Mon to Fri	ON		OFF	
	Sat only	ON		OFF	
	Sun only	ON		OFF	

M Group Parameter Settings

Performance Curves and Backup Dispatching

Energy Conserv. status based on Time and Day

These timers allow you to set as many as four time periods a day during which the dispatcher will command High Performance or energy conservation speed curve assignment to group cars as set. 0 = High Perform, 1 = Energy Conserv.

Time On	Time Off	Status	S	M	T	W	T	F	S

Hall Call Long Wait Time before switching to high Perform

The number of seconds for a hall call being registered before the dispatcher switches a car from energy conservation to high performance operation to respond to a call

Does this dispatcher have a backup

Set to Yes, there is a backup dispatcher feature

MC-MCP Board#1 (For Main Dispatcher)	MC-MCP Board#2 (For Backup Dispatcher)

Is this dispatcher the backup

Set to Yes, if this is backup dispatcher. Set to No, if this is Primary or Main dispatcher

MC-MCP Board#1 (For Main Dispatcher)	MC-MCP Board#2 (For Backup Dispatcher)

Main Dispatcher failure Time out (.1 sec)

Set the amount of time the backup dispatcher should wait before taking over car dispatching after loosing communication with the primary dispatcher. Default setting is 5.0 sec (050)

Cross cancel Time (.1 sec)

ON: Controls the time ON duration for cross Cancellation signal.
OFF: Controls the time OFF duration for cross Cancellation signal.

Cross Reg. ETA threshold

If cross Registration is enabled, the time allotted for a controller to respond to an active hall call. If the timer expires the hall call will be reassigned to a legacy controller.

Cross Registration Output On time (.1 sec)

The time allotted for a signal transferring a call from the MCE dispatcher to a legacy controller. Default setting 15 sec

Maximum car speed (FPM)

When Cross Registration is active, set the contract speed of legacy cars.

With Alternate ELIG MAP, cross latch auxiliary riser during Normal mode (for dispatcher software 4.0 or greater only)

This setting is used to select cross latch auxiliary riser during Normal Operation

For Cross Registration, Cars in service on the Old dispatcher

When Cross registration is active, this parameter set tells the MCE group which legacy cars are in service. Default setting is No for all car's

Car A	Car B	Car C	Car D	Car E	Car F	Car G	Car H

Parking Configuration

Dynamic Sector Parking

When set to Y, the dispatcher will optimize parking decision in real time, taking into consideration current building traffic conditions

Parking Delay timer

Determine how long an idle car should wait at the last served floor before moving to its parking floor

Parked at fully locked floors

Se to Yes, if cars should park at an assigned floor even if the floor is currently fully locked

User defined parking floors

Allows a priority parking floor to be set, on timed basis, for each car in group
Floor set to 00, the car will park at the last served floor unless lobby or zone parking assignments are in effect
Car set to 00, the first available car will park at the floor.

FLR	CAR	Timers	HR:MIN	Timers	HR:MIN
		ON		OFF	
		ON		OFF	
		ON		OFF	
		ON		OFF	

Lobby Parking

This setting allows you to split the group, (GRP1 and GRP2), into two different lobby coverage and standard "lobby" parking.
Set to 'Y', car is set for the defined group. Set to 'N' car is excluded from the defined group

Cars	1	2	3	4	5	6	7	8
Grp1								
Grp2								

Cars to Lobby On: Balance, Up peak, Down peak

The # of cars within that group, (GRP1 and GRP2), set to lobby floor during BALANCE, UP PK, and DN PK operation

BAL	GP1:	GP2:
UP PK	GP1:	GP2:
DN PK	GP1:	GP2:

Door open Time at

Doors Dwell Time when This CAR UP status is active for car at lobby parking.

M Group Parameter Settings

lobby(sec)	Door Dwell Time: 1 – 98 Seconds. Dwell Time 99 -Door remains open at lobby floor	
Door Open Time lobby after car call	Door Dwell Time for lobby floor. Note: Door Dwell time will be canceled by latching car calls	
Enable Artificial Intelligence Lobby Parking/Zoning		
Enable A.I Lobby Parking/Zoning	Set to Y, the dispatcher will use artificial intelligence to dynamically control lobby parking zone and zone parking features.	
A.I. Status	After operating and collecting data for 24 hours, the A.I. status display will be populated with data. The data helps you to verify lobby parking and zoning operations. These are status displays, not user-enterable parameters	
Emergency Power configuration –stand alone Note: Emergency Power Configuration –Split (Not available at this time)		
Emergency power	This menu allows you to setup group behavior during emergency power operation. **Stand alone**: During the event of emergency power, the dispatcher will control all sequence of operation. The Dispatcher's Emergency Power is independent from other groups. **Split**: During the event of emergency power, the dispatcher will control all sequence of operation. The Dispatcher's Emergency is independent from other groups. **Master:** During the event of emergency power, the dispatcher will control the sequence of operation for each group connected to the Master. The Dispatcher's Emergency Power is based on the connected groups. **Slave:** During the event of emergency power, the dispatcher will operate according to the Master Dispatcher. The Dispatcher's Emergency Power is define as one of the groups connected to the Master.	
Recall ATT/IND Cars EM power Ph 1	Set to 'Y', Cars on ATT/IND mode with doors open, will close its door and return to the recall floor on Emergency Power Phase 1 Set to 'N', Cars on ATT/IND mode with doors open will remain open. Car will be out of Service. On emergency Power Phase 2 Auto-run, car will be in service at the present floor.	
EMG PWR: Amt cars manual select	The # of cars to run on Emergency Power Phase 2: Manual Select	
Phase 1 car Time-out	Recall time (sec) allotted for a car to return to the recall floor on emergency power phase 1. If timer expired and car fails to respond, the dispatcher will put the car out of service and recall the next car	

EMG Power phase 2 auto select priority groups

For each Priority group, enter the car numbers in order in which they should be selected to run on emergency power phase2 during AUTO selection. If you are separating into priority groups, enter the car numbers in run in Group1 and leave group2 set to all zeros.

	Description	Car#	Car#	Car#	Car#	Car#	Car#	Car#	Car#
1	EMG Power PH2 auto select Priority for GRP 1 or GEN 1								
2	EMG Power PH2 auto select Priority for GRP 2 or GEN 2								

Amount cars

Description	Group1 or GEN		Group2 or GEN	
The # of cars to run on Emergency Power Phase 2:Auto Run				

Add No. Cars group1/GEN 1 to group2 / GEN 2 if group1/ GEN 1 cars can't return	Set to 'Y', GRP 1's car fail to return to recall floor. The # of cars defined to run on GRP 1's EPI will be combined with GRP 2. Set to 'N', Do not combine GRP 1and GRP 2 # of cars to run on EPI	
Phase2 emergency power return to service ATT/IND cars after auto cars	Set to 'Y', on Emergency Power Phase 2 Auto Run cars on ATT/IND mode have higher priority to be selected to run than cars defined in Auto Run Sequence Set to 'N', on Emergency Power Phase 2 Auto run the selected car to run is based on the Auto run Sequence	

InterDisp EMG PWR Times PH1: Ph2:

Description	PH1		PH2	
On Master Emergency Power, define the timer for PH1, (Recall), and PH2 (EP2 Run) PH1: Recall Timer (MIN) for Slave Group or Simplex PH2: Timer (sec) set to run Automatic EPI Phase 2 for cars define for the Master Dispatcher. If timer expired and cars within the Master Dispatcher fail to run on EMG PWR PH2, cars define in the Slave Dispatcher or Simplex will be elected to run on EMG PWR PH2				

Phase1 recall Order

Enter the order in which cars recall

PH1 Order	Description	Car 1	Car 2	Car 3	Car 4	Car 5	Car 6	Car 7	Car 8
	Recall Sequence								

Max Number car's to run on Phase 1	The number of cars to be recall simultaneously on Emergency Power Phase 1 Recall	
EPI Switch Normally Open	Set to Yes, EPI contact is normally open. Se to No. EPI contact type is normally Closed	
Call Locks: Front Riser per car		

Front Riser Lock Enable

This screen used to Lock or Unlock the front riser on per car/per riser basis. **For dispatcher software version 4.0 or greater, this screen is visible only if Hall lock configuration program to "Yes" for front riser under job configuration (floor eligibility/hall lock configuration).**
U = UP, D = DOWN, C = CAR, Y= Locked, N= Not Locked

	Car A				Car B				Car C			
	FL	U	D	C	FL	U	D	C	FL	U	D	C

1

M Group Parameter Settings

	Car D				**Car E**				**Car F**			
	FL	**U**	**D**	**C**	**FL**	**U**	**D**	**C**	**FL**	**U**	**D**	**C**

Call Locks: Rear Riser per car

Rear Riser Lock Enable	This screen used to Lock or Unlock the front riser on per car/per riser basis. **For dispatcher software version 4.0 or greater, this screen is visible only if Hall lock configuration program to "Yes" for rear riser under job configuration (floor eligibility/hall lock configuration).** U = UP, D = DOWN, C = CAR, Y= Locked, N= Not Locked											
	Car A				**Car B**				**Car C**			
	FL	**U**	**D**	**C**	**FL**	**U**	**D**	**C**	**FL**	**U**	**D**	**C**

M Group Parameter Settings

	Car D				Car E				Car F			
	FL	U	D	C	FL	U	D	C	FL	U	D	C

Index

E

F

G

H

R

S

T

U

W