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SECTION 4 - FUTURA GROUP SETUP

Setting Group Parameters

1. Set the following parameters for the group under the Group Parameters Menu.

Note: *These parameters that set floors must also be set to the same floor in each car parameter.*

LBY	Lobby Floor Designation – Set this to the floor designated as the main building lobby floor. Count up from the lowest landing served by this group.
FIR	Main Fire Recall Landing – Set this to the floor where the Phase 1 Recall switch is located. Count up from the lowest landing served by this group.
FAL	Fire Alternate Floor Landing – Set this to the floor where the elevators are to travel to when the smoke detector at the main floor activates (input FAL) Count up from the lowest landing served by this group.
EPF	Emergency Power Floor – Set this to the floor where the elevators are to travel to when returning on Em Power Return Operation. Count up from the lowest landing served by this group. – <i>This is normally the same as FIR</i>
MEP	Maximum Cars on Emergency Power – Set this to the number of elevator allowed to run when power is being supplied by other than the normal source
LER	Elevator Lobby Request – This is the number of elevators required to be in at the lobby floor at all times.

Adjusting Group Dispatching

Note: *This procedure can be set up when 2 or more of the cars have been put into service. It is ideal to set the group up when all cars are in service.*

Note: *Prior to setting up the group, it is a good idea to monitor and note existing traffic patterns. For example, if the main lobby has continuous traffic all day, then an elevator might want to be returned to the lobby when free.*

The Futura is defaulted so that one elevator will return to the Lobby if there is no demand. If this is what is required, there is no further adjustment necessary.

Parking One or More Cars at the Lobby

1. Note which floor in the building is referred to as the main lobby.
2. Set Group parameter **LER** to the number of elevators wanted to be placed at the lobby. In most cases this will be 0 (no elevators required) or 1.
3. Place all the elevators on Automatic and observe, verifying that the number of cars returning to the lobby matches what was set for parameter **LER**.

Note: *If the lobby has floors below, an elevators going up from those lower floors will always stop at the lobby if there is not enough elevators at the lobby to satisfy the LER setting.*

4. Once the proper number of elevators have been assigned to stop at the lobby an extended door time can be programmed in for that floor. If this is desired set CSW 0 bit 1 and entering the time required to stay open at group parameter NDH.

Note: *NDH is set in increments of 1/16 of a second, so if NDH is set to 160 this is a time period of 10 seconds.*

Should the remainder of the elevators be required to space themselves out in the building once they are free for a period of time, then Zoning can be utilized.



Zoning Setup

1. Note the traffic in the building and determine the following:
 - A. Is one or more cars required in the lobby?
 - B. Are there certain floors where you would want to park an elevator?
 - C. What floor spacing would be required to accommodate one elevator per zone? (Having an elevator parked at the lobby will be a separate zone function).
2. Count the number of elevators that are in the group minus **LER** value and set Group Parameter **NZN** to that number.

Example: *If there is 4 cars total in the group and LER is set to 0 then NZN should be set to 4. If LER is set to 1 then NZN should be set to 3.*

3. Set **CSW 0 Bit 4** and **CSW 0 Bit 5** to have the elevators park at specific floors.

Command: *BITS0,4 & BITS0,5*

4. Set **ZN1** (first zone) to the floor where an elevator should park.

Note: *Count up from the lowest landing the group serves and enter that number to designate the landing to park at.*

5. Set **ZN2** (second zone) to the floor where an elevator should park.
6. Continue setting **ZN#** until there are no more elevators for zones. The **ZN#** should equal the **NZN** parameter.
7. Set the time the elevators have to set idle before zoning using **PFT** parameter.

Note: *PFT is in increments of 2 seconds, so if PFT is set to 5 then the time period is 10 seconds.*

8. Once these are set, use the **WRT** Car command to save to flash memory and then the **GET** Car command to ensure the updated parameters are loaded.

Up Peak and Down Peak

1. In order to trigger up peak automatically from the number of calls or load, set the following Group Parameter:

UCC – Number of trips from the lobby with more than 2 calls entered.

ULC – Number of trips from the lobby with load switch tripped.

2. In order for Down peak to be triggered by calls, ETA times and wait times, set the following parameters:

DCC – Number hall calls initiated at one time.

Example: *If set to 10 then when a total of 10 down hall calls are registered Down Peak will Activate.*

DTT – Down peak Trigger Time. The time period which will triggers down peak if the average Down Call ETA time exceeds this value.

Example: *If DTT is set to 40 then when the average wait time for all the down calls registered exceeds 40 seconds the Down Peak Operation will be triggered.*

DWT – Long down call waiting time. If a down call is not answered in this amount of time the system will swing to Down Peak.

Example: *If DWT is set for 20 then if a down hall calls wait time exceeds 20 seconds the Down Peak Operation will be triggered.*



Setting Elevator ETA Parameters in the Group

In order for the group to properly dispatch the elevators to the call, it must know specific details of each elevator.

1. Using a stop watch, observe and note the following:
 - A. **ACC:** Average acceleration time it takes the elevator to reach top speed.
 - B. **ATT:** Average transfer time the doors are fully open when loading and unloading passengers.
 - C. **BBT:** Blind travel time it takes the car to travel through a blind hoistway. *(Not Applicable on Hydro installation and should remain at the default value of 0)*
 - D. **DCT:** Door closing time it takes the doors to close.
 - E. **DEC:** Average deceleration time it take the elevator to slow from top speed to stopping at a floor.
 - F. **DOT:** Door open time it takes to open the doors fully.
 - G. **SPE:** Speed of elevator in timed units by using the formula:

$$\text{Average floor height (h)} / (\text{Speed in FPM}/60) \times 16 = \text{SPE value}$$

or for metric

$$\text{Average floor height in meters} \times 3.28 / (\text{Speed in meters per second} / .3048) \times 16 = \text{SPE value.}$$
 - H. **GPT:** If this is a generator application the time it takes for the generator to start completely. *(Not Applicable on Hydro installation and should be set at the value of 0)* (GPT).
2. Using the **Group Command REE**, enter the car number you are working on, then enter the previous values For example, REE = 1.
3. With the exception of **SPE** all values recorded in the previous steps will be multiplied by 16 and entered into these related group parameters. **ACC, ATT, BTT, DCT, DEC, DOT, GPT, SPE.**

HPU Hall Call Activation

(If using discrete wired hall button disregard)

1. Verify that all HPUs for the hall push buttons have been installed and properly addressed.
2. Type in "RMA" and press enter to make the car you are adjusting the master (Dispatcher).
3. Verify the following Group CSW bits are reset (disabled):
 - CS4 bit 5 - Set to use SMI Boards for Hall Calls else HPUs (BITS4,5)
 - CS4 bit 13 - Set to enable front auxillary riser. (If applicable BITS4,13)
 - CS4 bit 14 - Set to enable rear auxillary riser. (If applicable BITS4,14)
4. Set Group CS4 bit 3 to disable Emergency dispatching. *This will be reset after HPU are communicating.* (BITS4,3)
5. Verify hoistway wiring for HPUs are connected to terminals, VH+, VHC, HCRT+ & HCRT- and is clear from all high voltage wires.
6. Verify this wiring is at least 6" away from any high voltage wiring. (mainline and motor).

Note: *If the HPU's LED is not on, check the VH+ & VHC power connections to the card. If it is on solid, check the HCRT+ and HCRT- communication connections.*
7. Scroll to Car Commands and select CMG and press enter (this can only be done when connected to the car which is performing as the Master). This will display the address of each hall HPU and the status of its communication. The primary HPU addresses are 11 through 42.

Note: *If there are any with 100% failures, check the connection address of that HPU. If problem still exists, replace HPU.*

Note: *If aux. risers are used, set Group CS4 bit 13 and repeat step 6.*

Note: *If RPU's are utilized due to a large amount of HPU's then the commands RPU1, RPU2, etc would be used to verify HPU communications*
8. With all the HPUs showing good communications, place the car on Automatic and, using the hall push button stations, call the car to each landing, using both the up and down push buttons.

