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MODEL V800/H800-P8
CONTROLLER

MANUAL FOR FIELD RE-PROGRAMMING
AND USE OF ON-BOARD DIAGNOSTICS

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Rev 3/08/05

TABLE OF CONTENTS

Introduction

Throughout this manual, icons will be used to accentuate certain areas of text. These icons represent safety warnings, cautions, and interest areas. These icons are explained below:

WARNING: Denotes operating procedures and practices that may result in personal injury and/or equipment damage if not correctly followed.

CAUTION: Denotes operating procedures and practices that may result in equipment damage if not correctly followed.

NOTE: Denotes useful and informative procedures.

Throughout this instruction manual, it is assumed that the field personnel doing the reprogramming has experience dealing with microprocessor reprogramming. This manual should be read in its entirety before any actions are taken, in order to familiarize yourself with the operation of the processor and the controller.

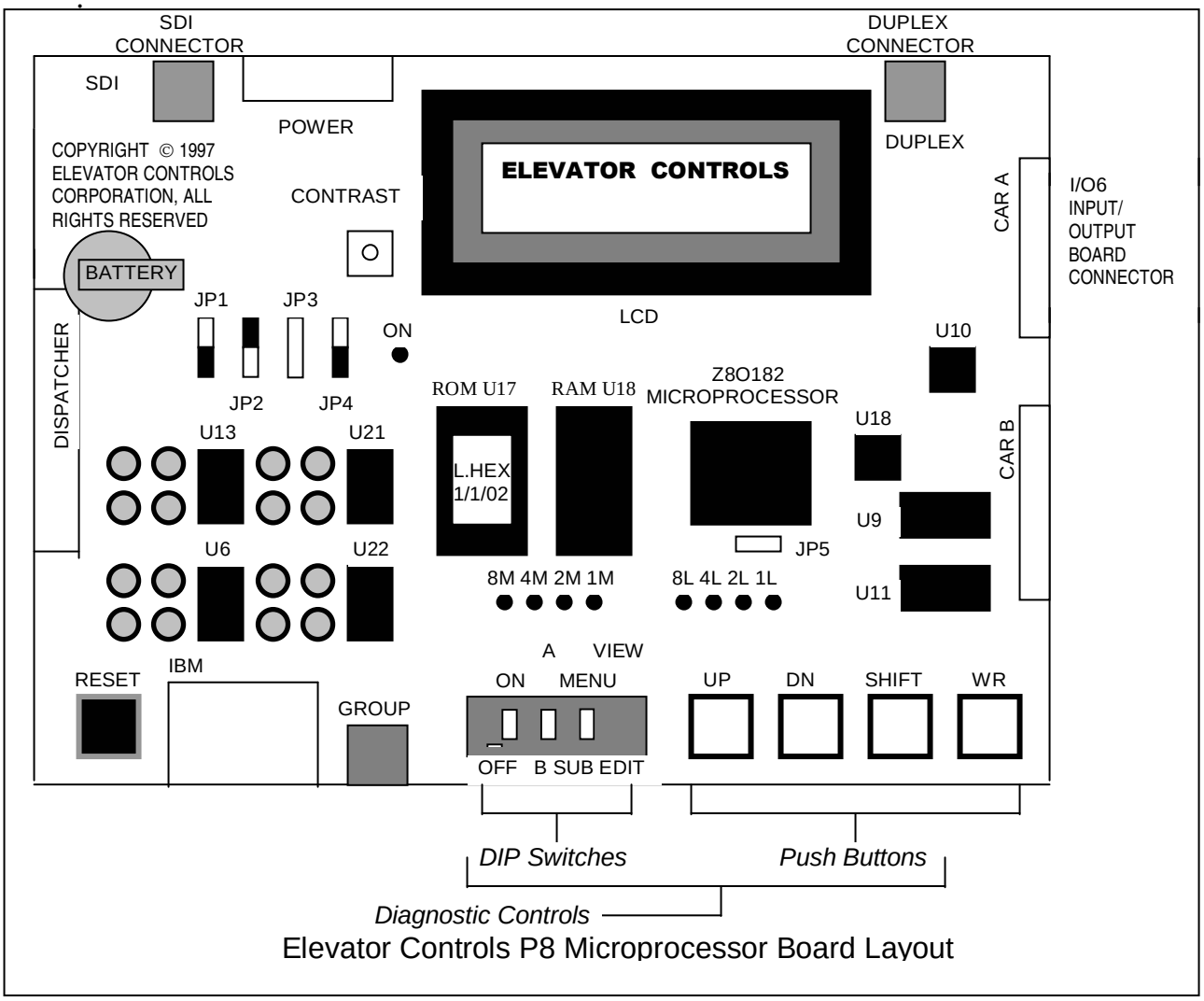
NOTE: This manual contains some information pertinent only to Part # MPC-P8 with software version 3.9 and above, dated 6/26/02 or later. The software version and date can be found at User Menu - Software Version, refer to page 23.

NOTE: Part # MPC-P8 –7 does not contain a 24 hour time clock. The information about the "Time Clock" in this manual does not apply to MPC-P8 –7. Also, it does not drive the IBM-PC port; and it is not used with group systems.

SECTION I

RE-PROGRAMMING USING THE ON-BOARD DIAGNOSTICS

The P8 microprocessor (MPC) board is pictured below. The reprogramming and diagnostic controls are located on the bottom right-hand side of the P8-MPC. The liquid crystal display (LCD) is also used by the on-board diagnostics. The LCD is located at the top center of the P8-MPC board



Elevator Controls P8 Microprocessor Board Layout

WARNING: Do not depress the reset button (labeled RESET) on the board while elevator is in operation as it will cause the car to come to an immediate and sudden stop

The four DIP switches and four push buttons make up the diagnostic controls. The name and function of each control is summarized in a table on the next page. The buttons listed in the table from top to bottom correspond to the buttons on the P8 going from left to right. The name of each button on the left column of the table corresponds to the labels on the P8 board and to the labels on the drawing above. For more information on the function of each button, please refer to the sections later in this chapter.

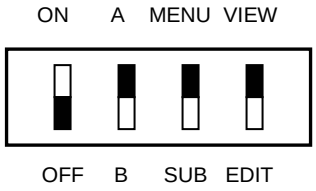
Push Button Functions	
Button Name	**Button Function**
ON/OFF DIP switch	Selects between elevator status and user display
A/B DIP switch	Selects between car A and car B for a single computer duplex system.
MENU/SUB DIP switch	Selects menu or sub-menu display in the user display
VIEW/EDIT DIP switch	Selects view parameter or edit (change) parameter in the user display.
UP push button	Selects the next menu or sub-menu in the user display.
DOWN push button	Selects the previous menu or sub-menu in the user display.
SHIFT push button	Selects the next parameter or digit in the edit (change) parameter mode in the user display.
WR (WRITE) push button	Saves the changed parameter permanently on the edit (change) parameter mode in the user display.

Selecting the Elevator Status Display

Move the ON/OFF DIP switch to the OFF position. The Elevator Status display is now selected and the LCD will display up to four of the following messages. The LED's display the highest priority code below:

SIMPLEX-DUPLEX COMPUTER DISPLAY
SCANNING : NORMAL OPERATION-DOORS LOCKED.

LED DISPLAY CODE Left to Right	HEX VALUE	DESCRIPTION
○○○○ ○○○●	01	: ELECTRICALLY ON BOTH USD2 & DSD2 SIMULTANEOUSLY.
○○○○ ○○●○	02	: TRYING TO STEP UP AND DOWN AT SAME TIME.
○○○○ ○○●●	03	: DECREMENTED P.I. OFF BOTTOM OF BLDG.
○○○○ ○●○○	04	: INCREMENTED P.I. OVER 32 FLOORS.
○○○○ ○●○●	05	: RELAY DRIVER CHECK INDICATES AN ERROR.
○○○○ ○●●○	06	: ACCESS OR INSPECTION OPERATION.
○○○○ ○●●●	07	: SAFETY STRING OPEN.
○○○○ ●○○○	08	: FIRE SERVICE PHASE 1 ACTIVE.
○○○○ ●○○●	09	: FIRE SERVICE PHASE 2 ACTIVE.
○○○○ ●○●○	0A	: EARTHQUAKE NORMAL CONDITION.
○○○○ ●○●●	0B	: EARTHQUAKE ABNORMAL CONDITION.
○○○○ ●●○○	0C	: BOTH SUA & SDA ON AT THE SAME TIME.
○○○○ ●●○●	0D	: ISTU & STU OR ISTD & STD IF HSS=1
○○○○ ●●●○	0E	: INDEPENDENT SERVICE.
○○○○ ●●●●	0F	: OUT OF SERVICE TIMER ELAPSED
○○○● ○○○○	10	: HEAVY LOAD IN CAR
○○○● ○○○●	11	: LOSS OF HALL CALL COMMON (NO 50 BUS)
○○○● ○○●○	12	: DOL & DLK LOW SIMULTANEOUSLY.
○○●● ●●●●	3F	: TOP SLOWDOWN LIMITS WIRED BACKWARDS.
●●○○ ●●●●	CF	: BOTTOM SLOWDOWN LIMITS WIRED BACKWARDS.
○○○● ○●●●	17	: LEVELING DOWN
○○●○ ○●●●	27	: LEVELING UP.
○○●● ○●●●	37	: IN LEVELING ZONE w/MG OFF.
○○○● ○●●○	16	: RE-LEVELING DOWN.
○○●○ ○●●○	26	: RE-LEVELING UP.
○●○○ ○●○○ *	44	: MOTOR LIMIT TIMER-LOW OIL (Hydro). : MOTOR STALL (Traction)
○○●● ○●●○	36	: TRYING TO RE-LEVEL w/MG OFF.
○○○● ○○●●	13	: CAR'S MG STUCK IN WYE OR BLOWN MGR RELAY DRIVER.
○○○● ○●○○	14	: EXECUTING WILD OPERATION DUE TO DISPATCHER LOSS.
○○●○ ●○○○	18	: NO I/O DRIVER BOARD.
○●○● ○●○●	55	: READ AN FF INSTRUCTION (BAD PROGRAM CHIP)
○●○○ ○○○○	40	: SECURITY OPERATION.
○●○○ ●●●○	4E	: INDEPENDENT & SECURITY.
○○○● ○●○●	15	: PASSWORD KEY ENTERED
○○○● ●○○●	19	: CAR A OUT OF STEP
○○○● ●○●○	1A	: CAR B OUT OF STEP
●●●○ ○○○○	E0	: CAR A ON HOSPITAL EMERGENCY.
●●●○ ○○○●	E1	: CAR B ON HOSPITAL EMERGENCY.
●●●○ ●●●○	EE	: EMERGENCY POWER.
●●●● ○●●●	FA	: ALTERNATE FIRE SERVICE.
●○●○ x x x x	AX	: DOORS UNLOCKED (X=P.I. VALUE., 1ST TO 15TH LDGS)
●○●● x x x x	BX	: DOORS UNLOCKED (X=P.I. VALUE., 16TH TO 32ND LDGS)
●●○○ x x x x *	CX	: same as AX above, but DLK clipped-open at high speed.
●●○● x x x x *	DX	: same as BX above, but DLK clipped-open at high speed.



The left hand column of the table above gives the LED codes for each error display. These codes are generally only useful if there is no LCD installed on your system; the LCD messages provide the same information.

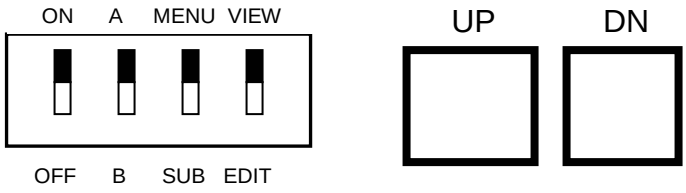
The Elevator Status display will also display the car position (floor number) and date and time for the current job.

Selecting the User Display

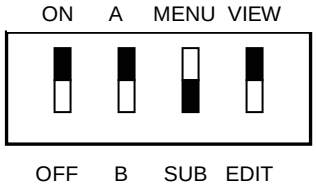
To select the User Display, move the ON/OFF switch to the ON position. Move the MENU/SUB DIP switch to the MENU position. Finally, move the VIEW/EDIT switch to the VIEW position.

The User Display has thirteen options that you can select from, given below. The exact function of each of the menu items is explained on the following pages. Each menu works in the same way, however. Use the UP and DN (DOWN) push buttons to select the menu item from the list below. When the menu item you want is displayed, move the MENU/SUB DIP switch to the SUB position. The LCD will then show the sub-menu for that User Display menu.

User Display Menus		
Direct Access	System Variables	Alt Call Scheme
Serial EEPROM**	System Control	Password Access
Set Time Clock*	Stopping Table	Software Version
Fault Log	Mem Flag List	
System Timers	Elevator Timers	



1. Set the DIP switches as shown and use the UP and DN push buttons to select the User Display menu you want.



2. Then move the MENU/SUB DIP switch to the SUB position. The LCD will then show the sub-menu for that User Display menu.

3.Use the UP and DN push buttons to select the parameter to be viewed.

Changing a User Display Menu Parameter

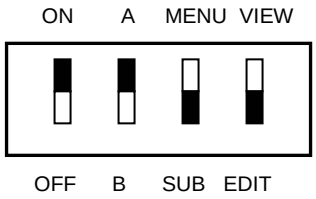
Once you have selected a user display parameter, you have the option of changing its value. For all User Display menus, except Direct Access and Serial EEPROM, follow this procedure.

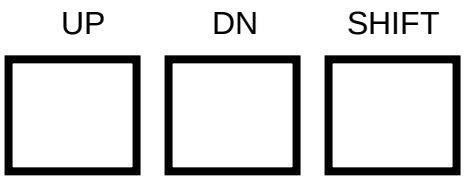
Move the VIEW/EDIT DIP switch to the EDIT position. The bottom line of the LCD will change; 'New=XX' will appear where XX is the current value of the User Display parameter.

Next, use the UP and DN (DOWN) push buttons to change the value. Use the SHIFT push button to switch to the next digit. When you have the value you want press the WR (WRITE) push button to record the new value permanently. Move the VIEW/EDIT DIP switch back to the VIEW position.

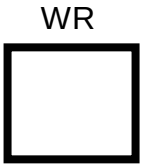
CAUTION: Write down the value of the parameter before you begin changing it. If you make a mistake, you can always restore the old value.

WARNING: If you realize you made a mistake, **DO NOT** PRESS THE WR BUTTON. Instead, skip that step and move the VIEW/EDIT DIP switch to the VIEW position. The old value will automatically be restored

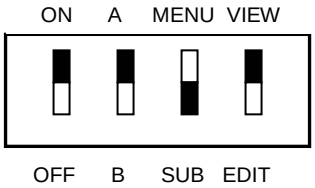




1.Set the DIP switches as shown to change a User Display parameter. Use the UP, DN and SHIFT push buttons to change the value of the parameter



2. Press The WR (WRITE) push button to record your changes permanently. Skip this step if you decide that you don't want to record your changes permanently.



3. Move the VIEW/EDIT DIP switch back to the position shown. To select another Parameter in the selected sub-menu, use the UP and DN push buttons. To select another User Display sub-menu, start over again as on the previous page.

Changing a Direct Access Parameter

Once you have selected the Direct Access menu, you have the option of selecting an individual parameter and changing its value.

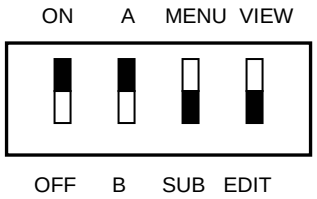
Move the MENU/SUB DIP switch to the SUB position. The bottom line of the LCD will change; 'A000=XX' will appear where XX will be the current value of the selected parameter.

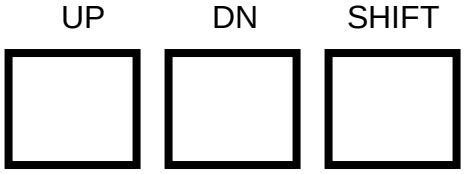
Next, use the UP, and DN push buttons to change the first digit (A). Use the SHIFT push button to switch to the next digit, etc. When you have the parameter value you want, move the VIEW/EDIT DIP switch to the EDIT position. The bottom line of the LCD will change; 'New=XX' will appear where XX is the current value of the User Display parameter.

Use the UP and DN (DOWN) push buttons to change the value. Use the SHIFT push button to switch to the next digit. When you have the value you want press the WR (WRITE) push button to record the new value permanently

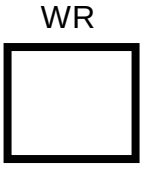
CAUTION: Write down the value of the parameter before you begin changing it. If you make a mistake, you can always restore the old value.

WARNING: If you realize you made a mistake, **DO NOT** PRESS THE WR BUTTON. Instead, skip that step and move the VIEW/EDIT DIP switch to the VIEW position. The old value will automatically be restored

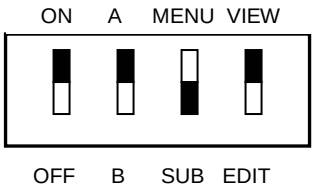




1.Set the DIP switches as shown to change a User Display parameter. Use the UP, DN and SHIFT push buttons to change the value of the parameter



2. Press The WR (WRITE) push button to record your changes permanently. Skip this step if you decide that you don't want to record your changes permanently.



3. Move the VIEW/EDIT DIP switch back to the position shown. To select another Parameter in the selected sub-menu, use the UP and DN push buttons. To select another User Display sub-menu, start over again as on the previous page.

Direct Access User Display

The Direct Access User Display menu bypasses many of the other menus. Use this menu when directed by Elevator Controls' technical support. For those familiar with EC's MPC-P7 computer boards, you can reprogram the MPC-P8 in a similar "address/data" fashion as done with the -P7 switchgear. The reprogramming address conversions are: (P7) E400's = FC00's (P8), and (P7) E700's = FF00's (P8). To view "Memory Flags, inputs and outputs" using direct access, refer to "Memory Flag Listing" table in the MPC-P8 PROGRAMMING REFERENCE GUIDE, page 19.

Normally, you will use one of the other User Display menus:
To change system clock, use the SET CLOCK TIME User Display menu.
To change system timers, use the SYSTEM TIMERS User Display menu.
To change system programming, use the SYSTEM VARIABLES User Display menu.
To change system I/O programming, use the SYSTEM CONTROL User Display menu.
To change floor stopping variables, use the STOPPING TABLE User Display menu.
To view computer inputs, use the MEM FLAGS LIST User Display menu.
To change car and door timers, use the ELEVATOR TIMERS User Display menu.
To change alternate call scheme, use the ALT CALL SCHEME User Display menu.

Serial EEPROM

** The Serial EEPROM User Display is no longer used.

Set Clock Time
L=0B M/S UP DN

**Set Clock Time (not available on part # MPC-P8-7)*

Use the Set Clock Time User Display to change your date and time display. The table below lists all of the options available with the Set Clock Time menu. Use the UP and DN (DOWN) push buttons to select parameter to view.

Set Time Clock Parameters	
Parameter	**Function**
Clk: Seconds	Sets the current second for the system clock.
Clk: Minutes	Sets the current minute for the system clock.
Clk: Hours 00-23	Sets the current hour for the system clock. The clock uses military time. 00 hour is midnight to 1AM. 13 hour is 1PM.
Clk: Day	Sets the current day of the week. Days are set as follows: Sun, Mon, Tue, Wed, Thu, Fri, Sat.
Clk: Date 01-31	Sets the current day of the month.
Clk: Month 01-12	Sets the current month of the year
Clk: Year 00-99	Sets the current. Only two digits are allowed; 02 equals 2002

Fault Log List

Fault Log List
L=01 M/S UP DN

The Fault Log List is not available on this model.

System Timers

System Timers
L=00 M/S UP DN

The table below lists parameters available in the System Timers Sub-menu. Use the UP and DN (DOWN) push buttons to select one of the parameters below.

✍ NOTE: Timers can be disabled by setting the Direct Access parameters to 00.

SYSTEM TIMERS	
Timer Name (Direct Access Parameters)	**Description**
Inspection Timer (FF90 / FF91)	For Ansi-2000, delays fault to allow exit from elevator Default 15 seconds
Contact Drop Tmr (FF8C /FF8D)	Time allowed for M Contactor to drop Default 5 seconds
Park Delay Timer (FF88 / FF89)	Time before car parks when no demand Default 15 seconds
Park Release Tmr (FF80 / FF81)	Time car will hold at lobby if other car is busy Default 15 seconds
Hospital Emerg Tmr 1 (FF82 / FF83)	Time to enter car for hospital control Default 15 seconds
Hospital Emerg Tmr 2 (FF84 / FF85)	No longer used, was car B
F Door EQA Timer (FF86 / FF87)	Door open delay after Earthquake emergency stop, Front Door Default 5 seconds
R Door EQA Timer (FF8A / FF8B)	Door open delay after Earthquake emergency stop, Rear Door Default 5 seconds
IND Hold Timer (FF8E / FF8F)	Time before car will switch from IND to Phase 1 on Fire Service Default 30 seconds

System Variables

System Variables
L=33 M/S UP DN

The System Variables represent a variety of options. The table below lists parameters available in the System Variables Sub-menu. Use the UP and DN (DOWN) push buttons to select one of the parameters below.

Some of the options should not be changed unless directed to by E.C. technical support staff. These option will change the configuration of your I/O and will require some re-wiring. These options are marked with a †.

SYSTEM VARIABLES	
Variable Option Name	**Description**
LCD Display Rate	Controls system LCD scroll rate. Normally set to 5.
RL/EQS/ PI Option †	Factory set . Normally 0 for none. Do not change.†
ETA Stop Time	No longer used.
ETA Threshold	No longer used.
ETA Run Time	No longer used.
Swap PI Option 2 †	Factory set. Normally FF for none. Do not change.†
Miscell Options †	Use 43 for tractions ; 4B for hydros. 63 for INT-IO-6 boards. Factory set. Do not change. †
Alt Park floor†	Factory set. Normally FF. This is not same as upper parking
Miscell Options 2 †	Factory set. Normally 08. Do not change.†
Park Pref Option *	Normally 00 for off. 80 if car A is preferred free. C0 if car B is proffered free. *
PASS1	Password data. Use the PASSWORD ACCESS User Display
PASS2	
NPO	Factory set timer. Do not change.
NPT 1	Factory set. Normally 0.
NPT 2	Factory set. Normally 0.
Serial Duplex	00 = Simplex. 03 = Master car. 01 = Slave car.
Reserved	
SDI Option (PVF)	00 = Off. 01 = Yes.
Reserved	
Reserved	
Lobby Floor No.	Set to the floor number, minus one, of the lobby.
Std. Fire Rtn:Exh	Set to EX, where X is the floor number, minus one, of the main fire recall floor.
Lower Parking Fl	Set to floor number, minus one, of the main parking floor.
Upper Parking Fl	Set to the floor number, minus one, of a 2nd parking floor.
Excess Call Can.	Set to 82 to cancel car calls after 2 floors of no activity on the photo-eye. Set to 04 to cancel calls after 4 if the light load weight switch is active.
(Old) Simp./Dup. *	Set to 00 for simplexes and serial duplex systems. Set to 01 for old single computer duplex system. *
Car Stop SW Bypass	Normally 00 for ANSI fire service. Set to 04 to bypass car stop switch immediately during door close on fire phase 1.
Rot MG Start Opt	Normally 00. Set to 01 to start MG sets one at a time on duplexes and groups.
Door Lock Gong	Normally 00. Set to 80 to delay gongs until the door lock breaks (for jobs w/o hall gongs).
Alt Fire Rtn: Exh	Set to EX, where X is the floor number, minus one, of the secondary fire recall floor.
Safety Edge Qual	Normally 01 for ANSI, this ignores the safety edge input on fire phase 2. Set to 00 to enable safety edge.
Rear Door Option †	Set to 00 for front only or staggered rear doors. Set to 41 for selective rear doors. †

Bth Door Lob Rtn	Normally 00 open both front and rear doors, 02 front only, or 01 rear only at the lobby. 08 front / 04 rear for Alt. Flr
Door Time Short	Normally 00. Set to 01 to prevent car call button from shortening door time. Set to 02 to shorten the door time when a hall call, SE or PHE are activated. Set to 80 to close doors on lobby park and DCB or CCI.
Emer Pwr - 01=Y	Normally 00. Set to 01 if the system has emergency power generators and appropriate system operation.
Dbl Ding - 10=DN	Normally 10 which generates two gong pulses for down travel. Set to 00 to generated one pulse for gongs which generated two on their own.
Pass Flr Ding Opt	Normally 00; PGO is used for a floor passing chime. Set to 01 for a single pulse on car gongs as car passes each floor.
Wild Op if no 50 †	Normally 00. Set to 10 to use Wild Operation if 50 bus (hall riser supply) looses power. †
CCD on Reversal	Normally 00. Set to 80 for group systems.
CCD, Slwdn & Ind	Normally 00. Set to 80 for group systems.
Fire: Chicago Opt	Normally 00. Set to FF to select fire operation for the city of Chicago.
Hall Call Rej Op †	Set to 41 to select HCRO on the I/O. Set to 00 to remove HCRO on the I/O. †
DOB Enab: Nudging	Normally set to 20 which allows the door open button to re-open doors in nudging mode. Set to 00 to disable DOB in nudging mode.
Door Lk Dir Pref	Normally 00. Set to 80 to cancel direction preference (UPD and DPD) with DLK instead of DCF. (Do this if directed by E.C. support staff.)
Bypass CS on Ph2	Normally 00. Set to FF to bypass the car stop switch on fire phase 2 mode.
Fire: New York Opt	Normally 00. Set to FF for old New York fire phase 2.
SE No Stop: Nudg	Normally 00. Set to FF to ignore safety edge during nudging.
SE Qualif: Phase 2	Normally 00. Set to FF for photo-electric SEs, these must be bypassed in phase 2.
N.Y. Const Pressure	Normally 00. Set to FF for New York style momentary pressure to close doors on fire phase 2.
Start Bit Mask	These two options are described under SECURITY CODING later in this manual.
Sec Digits Numbr	
Fire: ANSI87 Optn	Set to C8 for ANSI fire with E.C. fire module; use E8 for ANSI fire without a fire module. Set to C8 for N.Y. fire service. Set to 08 for Chicago fire service. Set to D8 for Canada fire service.
* These options are for single computer duplex systems only. This type of system is obsolete and the options should be left in their normal or default state unless you are refitting an existing job.	
† These options will cause your wiring hookup terminals to change. Elevator Controls Corporation support staff will need to assist you in rewiring your system if you change one of these options	

System Control

System Control
L=33 M/S UP DN

Use System Control to view or change system parameters for a simplex, serial duplex or group system. The table below lists parameters available in the System Control Sub-menu. Use the UP and DN (DOWN) push buttons to select one of the parameters below.

Many of these parameters will change the I/O configuration of the controller. These parameters are marked with a †. Do not change these parameters without contacting E.C. support staff for assistance.

System Control	
Bottom Floor No.	Normally 00. Increase this value to start the PI outputs for duplex or group jobs with different bottom floor levels.
No. of Floors - 1	Set to number of floors on job, minus one.
Hi Speed Step Op	Normally 00. Set to 20 on jobs that require slowdown distances greater than the floor height.
Hydro? 00=N,FF=Y	Normally 00 for traction jobs. Set to FF for hydro-electric systems.
Car Call Fr Ctr	Set to the number of front car call inputs.
Car Call Rr Ctr	Set to the number of rear car call inputs in a selective front/rear door system.
Number of PI's	Set to the number of PI outputs on the system.
Total No. Outputs	Normally set to FF.
Tot Up Calls Fr.	Set to the number of front up hall calls.
Tot Dn Calls Fr.	Set to the number of front down hall calls.
Tot Up Calls Rr.	Set to the number of rear up hall calls inputs in a selective front/rear door system.
Tot Dn Calls Rr.	Set to the number of rear down hall calls inputs in a selective front/rear door system.
No of Hosp Inputs	Normally 00. Actually the number of 400 series hospital outputs in a system with hospital operation.
INAOP1 †	A hex number with seven options. See appendix A for complete information on hex numbers. The hex number is: **M:** X ATT UCR DCR**; L:** CCR UCF DCF CCF Descriptions: CCF- Set to 1 to enable Car Call input † DCF- Set to 1 to enable Down Call input † UCF- Set to 1 to enable Up Call input † CCR- Set to 1 to enable Rear Car Call input † DCR- Set to 1 to enable Rear Down Call input † UCR- Set to 1 to enable Rear Up Call input † ATT- Set to 1 to enable Attendant inputs & outputs † X- Unused. Set to 0.
INAOP2 †	Factory set. Do not change. †
INAOP3 †	Factory set. Do not change.†
INAOP4 †	Factory set. Do not change.†
Nudging? 10 = Yes	Normally 00. Set to 10 (on) when the door operator has nudging.
Reserved	
Reserved	
† These options will cause your wiring hookup terminals to change. E.C. support staff will need to assist you in rewiring your system if you change one of these options. Record current values before changing.	

Stopping Table

Stopping Table
L=1F M/S UP DN

The Stopping Table User Display is used to program which floors-and how many-the elevator car will stop at. This is the User Display to change if you need to increase or decrease the number of floors in the system. This user display also programs which calls (up, down and car calls) are accepted at each floor, so this User Display can be used to set up systems like down collective.

If you do change car stopping information in this User Display, you will also need to change parameters in SYSTEM CONTROL. If you change the number of car, up or down calls, the Car Call Fr Ctr, Tot Up Call Fr and Tot Dn Call Fr parameters will need to be changed to match the new system configuration. The same applies to any rear car call parameters that you change.

You can increase or decrease the number of stops in the system by adding or removing entire floors from the top of the stopping table. When you do this, you will need to change No. Floors-1 and Number of PI's parameters in the SYSTEM CONTROL User Display.

✍ NOTE: Changing parameters in this User Display will cause you terminal wiring configuration to change. You should contact Elevator Controls Corporation support staff for help if you need to change any of these parameters.

Stopping Table	
Parameter	**Function**
Fl 1 †	Each parameter contains the hex coding for one floor of the elevator system. **M:** X CCR X CCF**; L:** UPR DNR UPF DNF † Description: DNF- Set to 0 to enable a down call at this floor. † UPF- Set to 0 to enable an up call at this floor. † DNR- Set to 0 to enable a rear down call at this floor. † UPR- Set to 0 to enable a rear up calls at this floor. † CCF- Set to 0 to enable a car call at this floor. † X- Unused. Set to 1.
Fl 2 †	same as above †
Fl 3 †	same as above †
etc.	etc.
† Changing these parameters will change your terminal I/O configuration. Contact Elevator Controls Corporation support staff for assistance.	

You can use appendix A to get the correct hex number codes for each floor. However there are some common codes that you will use listed on the next page.

Common Codes for Stopping Table	
	Function
FF †	Car doesn't stop here. All your floors above the top one must have this code. †
EE †	One car call and one down call. This is the normal code for the top floor. †
EC †	One car call, up call and down call. This is the normal code for an intermediate floor. †
ED †	One car call and one up call. This is the normal code for the bottom floor, Fl 1. †
A0 †	All calls-front and rear car calls, up calls and down calls. This is the code for levels with two openings. †
BB †	One rear car call and down call. A top floor with a only a rear opening. †
B3 †	One rear car call, up call and down call. An intermediate floor with a rear opening. †
B7 †	One rear car call and up call. A bottom floor with rear openings. †
† Changing these parameters will change your terminal I/O configuration. Contact Elevator Controls Corporation support staff for assistance.	

Security Coding

Security Coding is available only by special order from Elevator Controls. The programming will then be accomplished thru the Direct Access menu and is programmed as shown below. The table below lists parameters used for Security Coding.

Elevator Controls security operation employs the first eight car call push-buttons to enter a code sequence required to obtain registration of a car call to a secured floor. The Code Sequence starts with the secured floor button. After selection of a restricted floor, a "Restricted Floor Indicator (RFI)" will be activated (if programmed on), passenger will be allowed 5 seconds (field adjustable) to start the entry of the security code. The floor code is entered using any of the first eight floor buttons (secured or not). The code length can be from 3 to 7 digits long, not including the selected floor. Input BSI on the I/O board is grounded to activate security.

Programming will be as follows:

Direct Access Parameter	**Data**	**Description**
FEC0	xx, hex	Set one bit for each of first 8 front floors to be secured 8th x x x x x x 1st, See Appendix A for converting Hex No.s
FFC1	xx, hex	Same as above for front floors 9 to 16
FFC2	xx, hex	Same as above for front floors 17 to 24
FFC3	xx, hex	Same as above for front floors 25 to 32
FEC4	xx, hex	Same as above for rear floors 1 to 8
FFC5	xx, hex	Same as above for rear floors 9 to 16
FFC6	xx, hex	Same as above for rear floors 17 to 24
FFC7	xx, hex	Same as above for rear floors 25 to 32
FFDE	03 - 07	Length of Access code
FF1E	01	Restricted Floor Indicator, 01 = ON
FD00 TO FDFF		Each restricted floor will require 8 bytes, ie, first secured floor will use FD00 to FD07, next FD08 to FD0F, etc., up to FDFF. Floors need not be in order since the last of the 8 bytes will determine the floor secured. Data for the sequence code is bytes 0 to 6, the data for the floor buttons is in the table below, unused bytes will be entered as 00. Data for byte 7 which must be converted to hexadecimal is: Bits 0 – 5 indicates secured floor number –1 Bit 6 indicates front door access Bit 7 indicates rear door access

Floor Button	**Front Landing**	**Rear Landing**
1st Landing	01	81
2nd Landing	02	82
3rd Landing	04	84
4th Landing	08	88
5th Landing	10	90
6th Landing	20	A0
7th Landing	40	C0
8th Landing	80	8F

Mem Flags List

Mem Flag Listing
L=08 M/S UP DN

Use the Mem Flag List User Display to monitor the system inputs. This User Display can be an important debugging aid. If you suspect that the system is not responding to a signal, you should check here to see if the system is receiving the signal. If the signal is not received, verify the input voltage at the hookup terminal with a voltmeter. If the signal is present there, you may have a defective board. Please contact Elevator Controls Corporation support staff for help.

The table below lists parameters available in the Mem Flag Listing Sub-menu. Use the UP and DN (DOWN) push buttons to select one of the parameters below.

Mem Flags List	
Parameter	**Function**
480	This is a hex number with eight inputs. See appendix A for complete information on hex numbers. The description is: **M:** DOLF DBC SAF LLI**; L:** FRA STU STD IND DOLF - Term. 36, Door Open Limit DBC - Door Button Close terminal, from COP SAF - Safety String input; this does not include door interlocks LLI- Term 76, Light Load input; also used for Car Call Cancel input and Bypass (fire phase 1) input. FRA- Term 444, Alternate Fire Return STU- Term. 71, Step Up (increments PI when going up) STD- Term. 72, Step Down (decrements PI when going down) IND- Term 49, Independent; also used in test mode.
481	This is a hex number with eight inputs. See appendix A for complete information on hex numbers. The description is: **M:** IN DOB DLK DEL**; L:** UPS DNS LVL EPI IN- Term 59, Inspection; also controller inspection switch input DOB- Door Open Button input, from COP DLK- Term. 11, Door Interlock input; *this input is reversed.* DEL- Delta Starter input; set by Y-Δ timer contact UPS- Up Sense; activated by U NO-1 contact on HLS board DNS- Down Sense; activated by D NO-4 contact on HLS board LVL- Leveling; active if LU (term. 26) or LD (term. 27) active EPI- Emergency Power mode input
482	This is a hex number with eight inputs. See appendix A for complete information on hex numbers. The description is: **M:** SE PHE DZ FRS**; L:** FCS USD1 DSD1 DHLD SE- Safety Edge PHE- Photoeye DZ- Term. 27, Door Zone FRS- Term. 443, Main Fire Recall FCS- Term. 435, Fire Phase 2 USD1- Term. 32, Up Terminal Slowdown DSD1- Term. 35, Down Terminal Slowdown DHLD- Term 82, Door Hold input; also fire phase 2 hold

483	This is a hex number with eight inputs. See appendix A for complete information on hex numbers. The description is: **M:** USD2 DSD2 ISTU ISTD**; L:** ATT UP DN HLI USD2- Term 31, Up Terminal Slowdown DSD2- Term 34, Down Terminal Slowdown ISTU- Term. 74, Intermediate Step Up ISTD- Term. 73, Intermediate Step Down ATT- Attendant mode UP- Attendant Up switch DN- Attendant Down switch HLI- Heavy Load Input
484	This is a hex number with eight inputs. See appendix A for complete information on hex numbers. The description is: **M:** PTR PTS N5B X**; L:** BSI ACS HSI WILDSW PTR- Permission to Run (Group Control Only) PTS- Permission to Start (Group Control Only) N5B- 50 Bus power input X- unused BSI- Building Security ACS- Alternate Call Scheme HSI- Hospital Mode Select WILDSW- Wild Operation Switch
485	This is a hex number with eight inputs. See appendix A for complete information on hex numbers. The description is: **M:** DOLR DBCR DOBR DHLDR**; L:** PITF SER PHER DZR DOLR- Rear Door Open Limit DBCR- Rear Door Close Button DOBR- Rear Door Open Button DHLDR- Rear Door Hold Input PITF- Position Indicator Test input (obsolete) SER- Rear Door Safety Edge PHER- Rear Door Photoeye DZR- Rear Door Zone Input
486	This is a hex number with eight inputs. See appendix A for complete information on hex numbers. The description is: **M:** EQI CWI EDS APF**; L:** PGN X X X EQI- Earthquake Seismic Switch input CWI- Earthquake Counterweight Derailment input EDS- Earthquake Direction Switch input APF- Alternate Parking Floor input PGN- Passing Gong Activation input X- unused

ELEVATOR CONTROLS
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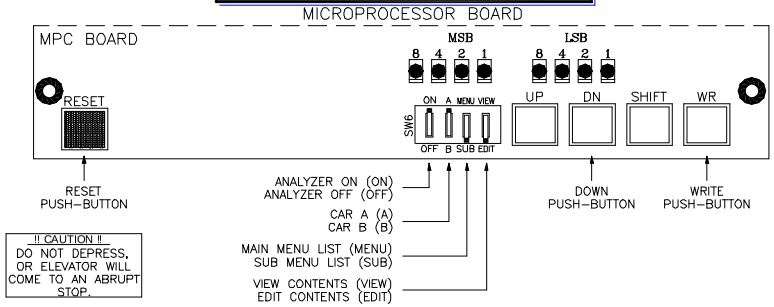
ELEVATOR CONTROLS
MPC–P8 PROGRAMMING REFERENCE GUIDE

Bar over signal name indicates the signal is active when LED is off.

MEMORY FLAG LISTING

"DIRECT ACCESS" ADDRESS	Left Most L.E.D. ⑧	④	②	①	⑧	④	②	Right Most L.E.D. ①	
F-0-8-0	DOLF	DBC	SAF	LLI	FRA	STU	STD	IND	INPUTS
F-0-8-1	IN	DOB	DLK	DEL	UPS	DNS	LVL	EPI/CBSI	
F-0-8-2	SE	PHE	DZ	FRS	FCS	USD1	DSD1	DHLD	
F-0-8-3	USD2	DSD2	ISTU	ISTD	ATT	UP	DN	HLI	
F-0-8-4	PTR	PTS	N5B	BPI	BSI	ACS	HSI	WILDSW	
F-0-8-5	DOLR	DBCR	DOBR	DHLDR	PITF	SER	PHER	DZR	
F-0-8-6	EQI	CWI	EDS	APF	PGN	CSI(A)	DCLR	DCLF	
F-0-8-7	MGR/AA	CSB	HR	HIR	DOF	SU	SD	RL	OUTPUTS
F-0-8-8	DCF	DCP	EQS	NUDG	SPR	FGEU	FGED	MPR	
F-0-8-9	FWI	85X	SUA	SDA	P4	P3	P2	P1	
F-0-8-A	ATE	ATB	ATU	ATD	HEWI	HCRO	HLWO	SLRM	
F-0-8-B	DOFR	RGEU	RGED	EQAM	DCFR	DCPR	EPIM	SAFM	INTERNALLY GENERATED FLAGS
F-0-8-C	TFAR	CCR	UCR	DCR	NDSR	FDCR	DPD	UPD	
F-0-8-D	LTR	HCTR	CCTR	SDTR	UFQ	FDC	DHOR	RXEL	
F-0-8-E	STRE	TFX	DS	DOIR	FRM	FRC	EQN	EQA	
F-0-8-F	HCR	INC	ISV	CCD	PK	TFD	BFD	STC	
F-0-9-0	DO-PH2	CMC	CCA	CCB	CSE	DCA	DCB	MTCH	
F-0-9-1	UFP	LFP	DMU	DMD	TFA	CCF	UC	DC	
F-0-9-2	DSM	DGTCTR	CTR	PG-P	DOM	UCA	UCB	CSB(FIRE)	
F-0-9-3	NBPT	NBTE	BCK	BPI-TRIP	MLT	CCDFU	CCDFD	CSB(LVL)	
F-0-9-4	LTF	FCSWO	LCD	ISRT	SHLD	ISC	SELDLY	HSEL	
F-0-9-5	DOLM(F)	EPS	FCSM	DHLDTF	DOLM(R)	NDGBPS	DCC	DHLDTR	
F-0-9-6	CAC	CBC	UDP	DDP	LT(F)	HCT(F)	CCT(F)	SDT(F)	
F-0-9-7	DIN	CCH	DHO	DOI	RUN	HD	H	HI	
F-0-9-8	LRC	LRF	DPR	THO	LBF	ISR	YRQ	TOS	
F-0-9-9	NDS	STE	SQH	STCP	ECC	LWQ	HLW	LLW	
F-0-9-A	FRSS	GHTF	PSTX	RMGT	FRAS	GHTR	DSR	DZORDZ	
F-0-9-B	DDF	EPR	CCCI	CD	YBP	ECRN	GTUE	GTDE	
F-0-9-C	PRT	TPR	HCDX	-	-	-	-	SRL	

CONTROLS and INDICATORS



ERROR CONDITION CODES

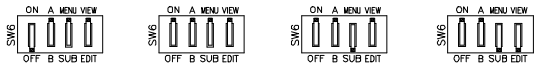
SIMPLEX-DUPLEX COMPUTER DISPLAY
SCANNING : NORMAL OPERATION-DOORS LOCKED.

LED DISPLAY CODE Left to Right	HEX VALUE	DESCRIPTION
○○○○ ○○○●	01	: ELECTRICALLY ON BOTH USD2 & DSD2 SIMULTANEOUSLY.
○○○○ ○○●○	02	: TRYING TO STEP UP AND DOWN AT SAME TIME.
○○○○ ○○●●	03	: DECREMENTED P.I. OFF BOTTOM OF BLDG.
○○○○ ○●○○	04	: INCREMENTED P.I. OVER 32 FLOORS.
○○○○ ○●○●	05	: RELAY DRIVER CHECK INDICATES AN ERROR.
○○○○ ○●●○	06	: ACCESS OR INSPECTION OPERATION.
○○○○ ○●●●	07	: SAFETY STRING OPEN.
○○○○ ●○○○	08	: FIRE SERVICE PHASE 1 ACTIVE.
○○○○ ●○○●	09	: FIRE SERVICE PHASE 2 ACTIVE.
○○○○ ●○●○	0A	: EARTHQUAKE NORMAL CONDITION.
○○○○ ●○●●	0B	: EARTHQUAKE ABNORMAL CONDITION.
○○○○ ●●○○	0C	: BOTH SUA & SDA ON AT THE SAME TIME.
○○○○ ●●○●	0D	: ISTU & STU OR ISTD & STD IF HSS=1
○○○○ ●●●○	0E	: INDEPENDENT SERVICE.
○○○○ ●●●●	0F	: OUT OF SERVICE TIMER ELAPSED
○○○● ○○○○	10	: HEAVY LOAD IN CAR
○○○● ○○○●	11	: LOSS OF HALL CALL COMMON (NO 50 BUS)
○○○● ○○●○	12	: DOL & DLK LOW SIMULTANEOUSLY.
○○●● ●●●●	3F	: TOP SLOWDOWN LIMITS WIRED BACKWARDS.
●●○○ ●●●●	CF	: BOTTOM SLOWDOWN LIMITS WIRED BACKWARDS.
○○○● ○●●●	17	: LEVELING DOWN
○○●○ ○●●●	27	: LEVELING UP.
○○●● ○●●●	37	: IN LEVELING ZONE w/MG OFF.
○○○● ○●●○	16	: RE-LEVELING DOWN.
○○●○ ○●●○	26	: RE-LEVELING UP.
○●○○ ○●○○	*44	: MOTOR LIMIT TIMER-LOW OIL (Hydro). : MOTOR STALL (Traction)
○○●● ○●●○	36	: TRYING TO RE-LEVEL w/MG OFF.
○○○● ○○●●	13	: CAR'S MG STUCK IN WYE OR BLOWN MGR RELAY DRIVER.
○○○● ○●○○	14	: EXECUTING WILD OPERATION DUE TO DISPATCHER LOSS.
○○●○ ○○○○	18	: NO I/O DRIVER BOARD.
○●○● ○●○●	55	: READ AN FF INSTRUCTION (BAD PROGRAM CHIP)
○●○○ ○○○○	40	: SECURITY OPERATION.
○●○○ ●●●○	4E	: INDEPENDENT & SECURITY.
○○○● ○●○●	15	: PASSWORD KEY ENTERED
○○○● ●○○●	19	: CAR A OUT OF STEP
○○○● ●○●○	1A	: CAR B OUT OF STEP
●●●○ ○○○○	E0	: CAR A ON HOSPITAL EMERGENCY.
●●●○ ○○○●	E1	: CAR B ON HOSPITAL EMERGENCY.
●●●○ ●●●○	EE	: EMERGENCY POWER.
●●●● ○●●●	FA	: ALTERNATE FIRE SERVICE.
●○●○ xxxx	AX	: DOORS UNLOCKED (X=P.I. VALUE., 1ST TO 15TH LDGS)
●○●● xxxx	BX	: DOORS UNLOCKED (X=P.I. VALUE., 16TH TO 32ND LDGS)
●●○○ xxxx	*CX	: same as AX above, but DLK clipped-open at high speed.
●●○● xxxx	*DX	: same as BX above, but DLK clipped-open at high speed.

HEXADECIMAL NUMBERS		
DISPLAY (8 4 2 1)	HEX#	DECIMAL#
○○○●	01	1
○○●○	02	2
○○●●	03	3
○●○○	04	4
○●○●	05	5
○●●○	06	6
○●●●	07	7
●○○○	08	8
●○○●	09	9
●○●○	0A	10
●○●●	0B	11
●●○○	0C	12
●●○●	0D	13
●●●○	0E	14
●●●●	0F	15

● = LED ON,
○ = LED OFF.

*NOTE: Latching display. Flip controller INSP switch on/off to restore to normal.
NOTE: IF LIQUID CRYSTAL DISPLAY IS PROVIDED, ERROR CODES ARE "SCROLLED" IN ENGLISH, AS INDICATED, IN ANY CASE, THE L.E.D.'s WILL ALSO DISPLAY ERROR CODES AS INDICATED.



NORMAL OPERATION | MENU MODE | SUB-MENU MODE | EDIT MODE

Elevator Timers

Elevator Timers
L=0E M/S UP DN

Use the Elevator Timers to review and adjust most of the timers used by the controller. The table below lists parameters available in the Elevator Timers Sub-menu. Use the UP and DN (DOWN) push buttons to select one of the parameters below.

✍ NOTE: The ***Elevator Timers*** can only be used to change timer values from 0 to 99 seconds. The Direct Access menu is used to change timer values larger than 99 seconds, contact Elevator Controls for timer values over 99 seconds.

✍ NOTE: Timers can be disabled by setting the Direct Access parameters to 00.

Elevator Timers	
Timer Parameter **Direct Access Parameters**	**Function**
Door Protect'n (FFA0 - FFA1)	Set for the maximum time that the doors are allowed to close. Default is 30 seconds.
Short Door Tmr (FFA2 – FFA3)	Set for the time the doors will wait at the open limit after re-opening. Default is 2 seconds.
Car Door Timer (FFA4 – FFA5)	Set for the time the doors will wait at the open limit after opening for a car call. Default is 3 seconds.
Hall Door Time (FFA6 – FFA7)	Set for the time the doors will wait at the open limit after opening for a hall call. Default is 7 seconds.
EQ Normal Time (FFA8 – FFA9)	Set for the delay after the seismic switch returns to a normal condition before returning the car to automatic operation. Default is 30 seconds.
EQ Door Delay (FFAA – FFAB)	Set for the delay before opening the doors at a floor after making an emergency stop due to earthquake operation. Default is 5 seconds.
MG Timer (FFAC – FFAD)	Used for two purposes. The first is the time a generator is allowed to run before shutting down if there is no activity. Default is 90 seconds. The second purpose is the soft stop timer on a hydro. Default is 1 second.
TOS Timer (FFAE – FFAF)	Set for the time the car can be held normally at a floor before the system attempts to use nudging to close the doors. Default is 45 seconds.
Lobby Door Tmr (FFB1 – FFB2)	Set for the time the doors will wait at the open limit at the lobby, if lobby timing is programmed. See Car Call Disconn parameter in the System Variables section, page 10. Default is 10 seconds.
EQ Stop Timer (FFB2 – FFB3)	Recover time after derailment. Default 5 Seconds.
Gong Timer-DD (FFB4 – FFB5)	Set for the time between pulses for a double ding. Default is 0 seconds.
Gong Hold Time (FFB6 – FFB7)	Set for the time a gong pulse will be held. Default is 3 seconds.
Trip Failure (FFB8 – FFB9)	Set for the maximum time the car is allowed to run in the hoistway. Default is 180 seconds for an open loop, 0 seconds for a closed loop.
MG Rotational (FFBA – FFBB)	Set for the maximum time the starter is allowed to spend in wye (Y-starting) configuration. Default is 15 seconds.
Door Hold Time (FFBC – FFBD)	Set for the time doors will wait at the door open limit when the Door Hold input is used. Default is 10 seconds.
Secur Code Seq (FFBE – FFBF)	Time allowed to start Secured Floor Sequence. Default is 5 seconds

Alt Call Scheme

An Alternate Call Scheme for wild operation (loss of Hall Calls) can be set by changing Parameter FF0E thru the Direct Access menu. Setting bit 1 of parameter FF0E (increasing the data by 02) will add two additional outputs to the output chain, one of which will be ACS. Call Elevator Controls for advice. Below is the Stopping table for the alternate calls.

Alt Call Scheme
L=04 M/S UP DN

Sub Menu:

ACS 1
Val=00hex UP DN

Stopping Table	
Parameter	**Function**
ACS 1 †	Each parameter contains the hex coding for one floor of the elevator system. **M:** X CCR X CCF**; L:** X X X X † Description: CCF- Set to 0 to enable a front car call at this floor. † CCR- Set to 0 to enable a rear car call at this floor. † X- Unused. Set to 1.
ACS 2 †	same as above †
ACS 3 †	same as above †
etc.	etc.
† Changing these parameters will change your terminal I/O configuration. Contact Elevator Controls Corporation support staff for assistance.	

Password Access

A password is a way to protect your controller. A password prevents one who does not know the password from reprogramming timers, floor eligibility, special features or other data. TheV/H800 controller will ignore the WR (Write) push button when a personality address is displayed, thereby preventing the data values from being changed.

The controller can be reprogrammed by first entering the password key. The key is a sequence of four digits and letters, broken into two parts, PW 1 and PW 2. Entering the correct keys, which will be supplied by Elevator Controls under a separate cover, will enable the WR push button to allow normal programming.

Cycling the power to, or resetting (pushing the “Reset” button) the MPC will remove the password keys entered.

Password Access
L=04 M/S UP DN

Sub Menu:

PW 1
Val=00hex UP DN

Software Version

Sub Menu:

ANSI-2000 Settings

If the controller is to comply with the requirements of ASME Code A17.1 – 2000, the controller has incorporated a Monitor Board and the following Direct Access parameters have been set. . The table below lists parameters required for ANSI-2000 operation.

ANSI-2000 Settings	
Direct Access	Function
FF16 = 69†	Bit 0- 2000 code option bit Bit 1- Car has PI's at lobby Bit 2- Car has PI's at alternate fire floor Bit 3- 2000 code, Monitor safeties through car B port
FF18 = 15	Noise Filter; No of computer loops before fault is latched
FF8C / FF8D	Contactor Drop T (set for 5 seconds)
FF90 / FF91	Inspection Timer (set for 15 seconds)
† Changing this parameter will change your terminal I/O configuration. Contact Elevator Controls Corporation support staff for assistance.	

ANSI-2000 DIAGNOSTICS

The following is a list of ASME / B44 A17-2000 Monitoring Faults with information on the related circuits that will cause indicated condition.

ANSI 2000 Faults	Possible Causes
Hydro	
GTS Relay Fault	GTS / GTSX relay not picking Safety String made (GOV = GTSM)
Traction	
Governor Contact System Fault	Governor Switch Open (GOV to 4A)
GTS Relay Fault	Contact Failure on GTS or GTSX relays (GTS = GTSM)
Contactor Drop System Fault	Motor Contactor Failure
Hydro & Traction	
Stop Relay Fault	Contact Failure on Stop relay (stop = stopm)
Front Door Limit System Fault	DCLF & DOL both out
Rear Door Limit System Fault	DCLR & DOLR both out
Door Zone Relay Fault	Contact failure on DZ relay (DZ = DZM)
Door Lock Relay Fault	Car Gate (CG) or Hoistway (THD) contact Failure (CG or HDL = DLM)
Level Relay Fault	LVL relay contact failure (LVL = LVLM)
Bypass System Fault	Car / Hall Door Bypass Switch On with Car on Automatic Operation
Inspection Relay Fault	IN relay contact failure (IN = INM)
Car Stop Bypass Relay Fault	CSB relay contact failure (CSB = CSBM)
Door Lock System Fault	Car Gate (CG) or Hoistway (HDL) contact did not drop when doors fully open (DOL)
Unintended Movement System Fault	Loss of CG & HDL + DCLF or DCLR when elevator out of floor level (DZ).

Note: Most ANSI 2000 Faults require pushing the Reset Button on the TMON-2A board, once cause has been resolved, to restore elevator to normal operation.

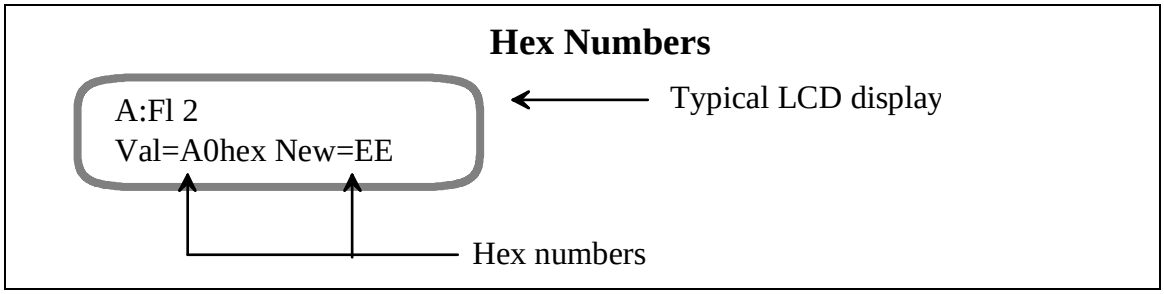
Appendix A

Working with Hexadecimal Numbers

Elevator Controls uses hexadecimal (hex) numbers in several of the User Displays. Hex numbers are a compact way of representing information.

Converting Hexadecimal Numbers

Hex numbers are always displayed as two digits. The first (left hand side) digit contains the M or most significant information; the (second right hand side) digit contains the L or lest significant information. The digits themselves use the number 0 through 9 and letters A through F.



In the example above, A0 and EE are the hex numbers. A and E are the M digits and 0 and E are the L digits. The M and L digits are indicated in the description in the text by bold letters.

To use hex numbers, you must convert each digit separately into a series of four ones and zeros. Use the table on the next page to do the conversion. Then compare the ones and zeros with the description given in the User Display.

Converting Hex Numbers

Example convertion A:Fl 2 VAL=A0hex (see page15)

Hex Number	**A**	**0**
Converted	**1 0 1 0**	**0 0 0 0**
Description	**M:** X CCR X CCF	**; L:** UPR DNR UPF DNF

Result This shows that car will respond to front and rear car calls (CCR/CCF =0), and to all hall calls front and rear (UPR=. DNR=UPF=UPR=0) . Since a 0 here means "elegible" (see text).

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Hexadecimal Number Convertions			
Hex Number	Convertion	Hex Number	Convertion
0	0 0 0 0	8	1 0 0 0
1	0 0 0 1	9	1 0 0 1
2	0 0 1 0	A	1 0 1 0
3	0 0 1 1	B	1 0 1 1
4	0 1 0 0	C	1 1 0 0
5	0 1 0 1	D	1 1 0 1
6	0 1 1 0	E	1 1 1 0
7	0 1 1 1	F	1 1 1 1

Changing Hex Numbers

Changing a hex number is a four step process, whether its an option, an internal flag or anything else. Follow the outline below:

1. Convert the hex number as described on the previous page. This will show you what options are set now.

2. Decide what options you what to set or reset. If necessary, write the new series of ones and zeros down on paper. This will help you verify that the new series is correct. Do not try to proceed until you've checked this new series at least once. It is very easy to make a mistake at this point.

3. Use the table above to look up the new hex number from the new series of ones and zeros. The ones and zeros are in no particular order so you'll have to search the table carefully. Double check that you have the correct new hex number, maybe by converting the new number as described in the previous page.

4. Now change the hex number in the User Display as described on page 5 of this manual.

Changing a Hexadecmal Number

1. First convert the existing number to see what options are already set. See the instructions on the previous page.

   A 0

   1 0 1 0 0 0 0 0

   X=1, CCR=0, X=1, CCF=0; UPR=0 DNR=0, UPF=0, DNF=0

2. Then decide what options need to be changed. For example, assume that we only want car to respond to front calls car and hall up and down.

   X=1, CCR=1, X=1, CCF=0; UPR=1 DNR=1, UPF=0, DNF=0

   1 1 1 0 1 1 0 0

3. Lookup the new series of ones and zeros in the table above.

   E C

4. Finally, follow the instructions on page 5 of this manual to change the number.

Appendix B

Using Direct Access
for Viewing System Flags

		Led Bank									
Name	Address	8	4	2	1	8	4	2	1	Type	Description
ACS	F084	1					X			S1	Alternate Call Scheme
BFD	F08F							X		S2	Bottom Floor Demand
BSI	F084					X				S1	Building Security Input
CAC	F096	X								S2	Car Above Counterweight
CBC	F096		X							S2	Car Below Counterweight
CCA	F090			X						S2	Car Call Above Car
CCB	F090				X					S2	Car Call Below Car
CCCI	F09B			X						S2	Car Call Cancel Input Flag
CCD	F08F				X					S2	Car Call Disconnect
CCF	F091						X			S2	Car Call Cancel Flag - Front
CCH	F097		X							S2	Car Call Hold
CCR	F08C		X							S2	Car Call Cancel Flag - Rear
CCT	F096							X		S2	Car Call Door Time - Front
CCTR	F08D			X						S2	Car Call Door Time - Rear
CSB	F087		X							O	Car Stop Bypass Output
CSB(lvl)	F093								X	S2	Car Safety Stop Switch Bypass
CSB(fire)	F092								X	S2	Car Safety Stop Switch Bypass
CWI	F086		X							S1	Counterweight Earthquake Input
DBC	F080		X							S1	Door Close Pushbutton
DBCR	F085		X							S1	Door Close Pushbutton - Rear
DC	F091								X	S2	Down Call Cancel Flag
DCA	F090						X			S2	Down Call Above the Car
DCB	F090							X		S2	Down Call Below the Car
DCF	F088	X								O	Door Close Function
DCFR	F08B					X				O	Door Close Function - Rear
DCP	F088		X							O	Door Close Power
DCPR	F08C						X			O	Door Close Power - Rear
DCR	F08C				X					S2	Down Call Cancel Flag - Rear
DEL	F081				X					S1	Delta Enabled
DHLD	F082								X	S1	Door Hold Input

		Led Bank									
Name	Address	8	4	2	1	8	4	2	1	Type	Description
DHLDR	F085				X					S1	Door Hold Input - Rear
DLK	F081			X						S1	Door Lock Input
DNS	F081						X			S1	Down Sense
DOB	F081		X							S1	Door Open Push-button - Front
DOBR	F085			X						S1	Door Open Push-button - Rear
DOI	F097				X					S2	Door Open Intent
DOIR	F08E				X					S2	Door Open Intent - Rear
DOLF	F080	X								S1	Door Open Limit - Front
DOLR	F085	X								S1	Door Open Limit - Rear
DOF	F087					X				O	Door Open Function
DOFR	F08B	X								O	Door Open Function - Rear
DPD	F08C							X		S2	Down Previous Direction
DS	F08E			X						S2	Door Time Shortening Flag
DSD1	F082							X		S1	Down Slowdown Switch 1 Input
DSD2	F083		X							S1	Down Slowdown Switch 2 Input
DZ	F082			X						S1	Door Zone - Front
DZR	F085								X	S1	Door Zone - Rear
EPI/CBSI	F081								X	S1	Emergency Power Input
EQI	F086	X								S1	Earthquake Input
FCS	F082					X				S1	Fire Service Phase 2 Input
FGED	F088							X		O	Front Gong Enable Down
FGEU	F088						X			O	Front Gong Enable Up
FRA	F080					X				S1	Fire Return Alternate Input
FRC	F08E						X			S2	Fire Service Phase 2
FRM	F08E					X				S2	Fire Service Phase 1
FRS	F082				X					S1	Lobby Fire Service Input
FWI	F089	X								O	Fire Warning Indicator
H	F097							X		S2	High Speed
HCDX	F09C			X						S2	Hall Call Disconnect
HCR	F08F	X								S2	Hall Call Reject
HCRO	F08A						X			O	Hall Call Reject Output
HCT	F096						X			S2	Hall Call Door Time - Front
HCTR	F08D		X							S2	Hall Call Door Time - Rear
HD	F097						X			S2	High Speed Delay
HI	F097								X	S2	High Intermediate Speed

		Led Bank									
Name	Address	8	4	2	1	8	4	2	1	Type	Description
HIR	F087				X					O	High Intermediate Speed Output
HLI	F083								X	S1	Heavy Loadweigher Input
HLW	F099							X		S2	Heavy Load
HR	F087			X						O	High Speed Output
IN	F081	X								S1	Inspection or Access Input
INC	F08F		X							S2	Independent Service Aux. Flag
IND	F080								X	S1	Independent Service Input
ISTD	F083				X					S1	Intermediate Step Down Input
ISTU	F083			X						S1	Intermediate Step Up Input
ISR	F098						X			S2	In Service & Ready
ISV	F08F			X						S2	In Service
LBF	F098					X				S2	Car-At-Lobby
LFP	F091		X							S2	Lower Floor Parking Intent
LLI	F080				X					S1	Light Loadweigher Input
LLW	F099								X	S2	Light Load
LRC	F098	X								S2	Lobby Return Call
LRF	F098		X							S2	Lobby Return Function
LT	F096					X				S2	Lobby Door Time
LTR	F08D	X								S2	Lobby Door Time - Rear
LVL	F081							X		S1	Not Leveling Input
MGR/AA	F087	X								O	M/G Set Run Output
MLT	F093					X				S2	Motor Limit Timer
MPR	F088								X	O	Microprocessor Running
NUDG	F088				X					O	Nudging
N5B	F084			X						S1	No 50 Buss (Hall Call Common)
PGN	F086					X				S1	Passing Gong Input
PG-P	F092				X					O	Passing Gong Out
PK	F08F					X				S2	Car Parked
PHE	F082		X							S1	Photo-Eye Input
PHER	F085							X		S1	Photo-Eye Input - Rear
PRT	F09C	X								S2	Park Release Timer Elapsed
PTR	F084	X								S1	Permission to Run
PTS	F084		X							S1	Permission to Start
RGED	F08B			X						O	Rear Gong Enable Down
RGEU	F08B		X							O	Rear Gong Enable Up

		Led Bank									
Name	Address	8	4	2	1	8	4	2	1	Type	Description
RL	F087								X	O	Level/Relevel Output
RUN	F097					X				S2	Elevator Run Flag
SAF	F080			X						S1	Primary Safety String Input
SD	F087						X			O	Down Direction Output
SDA	F089				X					O	Down Direction Arrow
SDT	F096								X	S2	Short Door Time
SDTR	F08D				X					S2	Short Door Time Rear
SE	F082	X								S1	Safety Edge Input
SER	F085						X			S1	Safety Edge Input - Rear
STC	F08F								X	S2	Stepping Complete
STD	F080							X		S1	Step Down Input
STU	F080						X			S1	Step Up Input
SU	F087						X			O	Up Direction Output
SUA	F089			X						O	Up Direction Arrow
TFD	F08F						X			S2	Top Floor Demand
TFX	F08E		X							S2	Transfer Function
THO	F098				X					S2	Tongue Hanging Out
TOS	F098								X	S2	Timed Out Of Service
UC	F091							X		S2	Up Call Cancel Flag
UCA	F092						X			S2	Up Call Above the Car
UCB	F092							X		S2	Up Call Below the Car
UCR	F08C			X						S2	Up Call Cancel Flag - Rear
UDP	F08C								X	S2	Up Direction Preference
UFP	F091	X								S2	Upper Floor Parking
UPD	F08C								X	S2	Up Previous Direction
UPS	F081					X				S1	Up Direction Sense
USD1	F082						X			S1	Up Slowdown Switch 1 Input
USD2	F083	X								S1	Up Slowdown Switch 2 Input
WILDSW	F084								X	S1	Wild Switch Input
YRQ	F098							X		S2	Request to Start M/G
85X	F089		X							O	Fire Service Output