



Rick Hance
Engineering Note

Date: 4/18/01
Rev Date: 11/01/02

Project: General Support
Doc. No: H010418A

Subject: Dzero Status Display Panels

There is an LED status display panel in the Dzero control room that provides 8 lines of status information. There is another 8 line status display panel in the 4th floor lobby that displays the same information. There is also a 1 line status display panel at each of the entrances into DAB that cycles through the same information displayed on the control room panel.

The controller for these display panels contains a PROM that can be programmed to display different messages on each line in response to external inputs. The external inputs are connected inside the locked cable cross-connect located in the south-west corner of the control room. The inputs are labeled inside the cross connect. Connecting an external contact between +12v provided within the cross-connect and an input causes a message to be displayed. Opening the contact causes a different message to be displayed. In addition, message #1 (Time & Date) can be programmed via an RS-232 connection. Message #3 can also be programmed via the RS-232 connection to display a custom message when the contact for input #3 is OPEN.

If the Status Panel system is malfunctioning, then one or more of its components may need to be RESET as follows: 1) The "Input Signal Resets" are located on the face of the cross-connect in the form of two buttons which merely open the input circuits when depressed simultaneously and held for a few moments until the sign is seen to change states. This often clears up garbled or stuck messages. 2) The on/off switch for each of the display PANELS is located on the right side of each unit. If a display unit is garbled or otherwise malfunctioning, try cycling its on/off switch. 3) The on/off switch for the "Message Injector" (main controller) is located on the right side of the Message Injector box located above the ceiling tiles, just above the control room sign. If the previous RESETs fail, then try resetting the Message Injector by cycling its on/off switch.

Control Room Status Display Panel Row Assignments

Message 1	Message 5
Message 2	Message 6
Message 3	Message 7
Message 4	Message 8

Input Signal Inputs at Cross-Connect

Display Panel Row	Status with 0V input (open contact)	Status with 12v input (closed contact)
Input 1	Time & Date (user changeable)	ODH Alarm
Input 2	Blank	Blank
Input 3	**User Programmable**	Blank
Input 4	Area Not Secured	Area Secured
Input 5	No PS Permit	Power Supply Permit
Input 6	Solenoid Off	Solenoid Energized
Input 7	Toroid Off	Toroid Energized
Input 8	Blank	Blank

Programming Information

Time & Date Programming

1. Connect the RS-232 line labeled "EDI" to a serial port on a computer.
2. Do whatever you have to do to setup your serial port as 1200 baud, 1 start bit, 8 data bits, 1 stop bit, no parity.
3. To change the time:

Begin with ^V^V (that's ctrl V ctrl V)(see ASCII Table)
Followed with.... h1 h2 m1 m2 s1 s2 (do not send spaces)
End with ^R^R

Where: h1 = tens of hours (24 hour format)
h2 = ones of hours
m1 = tens of minutes
m2 = ones of minutes
s1 = tens of seconds
s2 = ones of seconds

Example BASIC Program:

```
10 PRINT "Program to Set Time on Display Panel"  
40 INPUT "Enter Tens digit of Hours ",h1$  
50 INPUT "Enter Ones digit of Hours ",h2$  
60 INPUT "Enter Tens digit of Minutes ",m1$  
70 INPUT "Enter Ones digit of minutes "m2$  
80 INPUT "Enter Tens digit of Seconds "s1$  
90 INPUT "Enter Ones digit of Seconds "s2$  
100 OPEN "COM1:1200,N,8,1,cs0,ds0,op0,rs,tb20,rb20" FOR OUTPUT AS #1  
110 PRINT #1,CHAR$(22);CHAR$(22);h1$;h2$;m1$;m2$;s1$;s2$;CHAR$(18);CHAR$(18)  
120 CLOSE #1  
130 PRINT "Done"  
140 END
```

ASCII Table:

Character	Dec Value	Character	Dec Value
0	48	^C	3
1	49	^D	4
2	50	^R	18
3	51	^S	19
4	52	^V	22
5	53		
6	54		
7	55		
8	56		
9	57		

4. To change the date:

(The following programming information was copied from old documentation whose author may not have been particularly careful about exact syntax. The exact use of commas and spaces may not be correct and some experimentation may be required. The information will be tested and updated eventually.)

```
Begin with ^V C C
Followed with.... d1,d2,d3,m1,m2,y1,y2,
End with ^R^R
  Where: d1 = day of the week (sun=1, mon=2, etc)
         d2 = tens of day of the month
         d3 = ones of day of the month
         m1 = tens of month
         m2 = ones of month
         y1 = tens of year
         y2 = ones of year
```

Message #3 Programming:

1. Connect the RS-232 line labeled "EDI" to a serial port on a computer.
2. Do whatever you have to do to setup your serial port as 1200 baud, 1 start bit, 8 data bits, 1 stop bit, no parity.
3. Send a file that:
 - a) begins with ^D^S (that's ctrl D, ctrl S)
 - b) followed by message up to 20 characters
 - c) ends with ^R^R