MEGA DIAL

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Mega Dial Instructions

The Mega Dial consists of two units, the Control Head, and the Display Board which are connected together by a standard six conductor telephone cord, also included. The Control Head is typically mounted within easy reach of the driver, while the Display Board is mounted so it can be viewed from the tower. To help with the mounting of the Display Board it was designed to fit a Goza Racing Dial Bracket, but it will fit inside any bracket that is at least 7.5 inches wide, or, it can be fastened to a window with Velcro strips. **Both the Control Head and the Display Board require +12V power and ground to operate.** The supplied 14 foot telephone cord plugs into both the Control Head and the Display Board and is used to send information between the two units. If desired, this cord can be shortened to any desired length, using standard hand tools found at home hardware stores. Replacement or longer cords can also be found at home hardware stores, just make sure the new crimp end, or the new telephone cord has six conductors.

An additional benefit of the Mega Dial's design is, very low current draw; less than ½ Amp when set to Bright and less than ¼ Amp when set on Dim. Compared to competitors that can draw as much as 6 Amps, the Mega Dial's very low current means it can be connected to the master on/off switch on the vehicle with no concern of having to turn it off between rounds.

The Mega Dial stores two times in memory, they are called "Time 1" and "Time 2". Having two dial values to select from allows for large number changes without a lot of time wasted to scrolling. There are many useful combinations, here are just a couple of examples of how beneficial Time 1 and Time 2 can be, Time 1 stores the 1/4 mile dial while Time 2 stores the 1/8 mile dial, or Time 1 has the bracket dial while Time 2 has an 8.90 dial for a Super Comp.

Display board wiring:
   RED WIRE TO 12 VOLTS
   BROWN WIRE TO GROUND

Powering up

When power is turned on, both the Control Head and the Display Board go through a power up sequence. When first turned on the Display Board will display three dashes. Approximately ¾ of a second later the Display Board will send a signal to the Control Head stating that it is ready to receive the dial time to be displayed. Until the Control Head responds and sends the dial time the three dashes will remain displayed on the board. When the Control Head is turned on the screen will first show "Power Up" this stays on the screen until the internal processor finishes its start up routine. Once the start up routine is finished the last dial value that was displayed will be retrieved from memory, during this time the screen will show either "Time 1" or "Time 2" indicating which value is being retrieved. After the dial value is retrieved from memory it is sent to the Display Board via the telephone cord, while the information is being transmitted the Control Head screen will show "Sending". Once the data has been successfully received by the Display Board the dashes are replaced with the new dial time. The Display Board then sends back a successful receive response to the Control Head. Upon receiving a successful response the Control Head will show a locked padlock and the current dial being displayed on the Display Board. This ends a normal power up sequence of the Control Head and the Display Board. However if during transmission of the dial value to the Display Board an error occurs, one of two error messages will be shown on the Control Head screen. If either of these messages "No Board" or "Com Fail" is displayed follow the steps listed under Error Messages.

After both the Control Head and the Display Board have completed powering up, they both enter into normal run mode. While in normal run mode, the value for "Time 1" or "Time 2" can be selected, or adjusted, or the intensity of the Display Board can be set to either bright or dim.

Run Mode

Changing the Dial Time:

        To change the value of a dial time while in run mode, the dial time must first be unlocked, then adjusted, and then locked again. These three easy steps are listed below but first, the Control Head must be displaying a time. If the Control Head screen is showing a locked padlock and a dial time, go to Unlocking a Dial Time. If the Control Head is displaying either "Bright" or "Dim" press and release the lock button to send the intensity setting to the Display Board, then go to Unlocking a Dial Time. If either of the error messages "No Board" or "Com Fail" is displayed follow the steps listed under Error Messages.

Unlocking a Dial Time

        To unlock a dial time, press and hold down the Lock/Unlock button until the padlock on the screen of the Control Head unlocks. Once the padlock on the screen is unlocked release the Lock/Unlock button, the Control Head will show either "Time 1" or "Time 2" indicating which time has just been unlocked; the Display Board will now show dashes instead of a dial time. Next, the Control Head screen will start to flash the dial time that is now unlocked. If unlocked, go to Adjusting the Dial Time. If an error occurs, the error message "Com Fail" will be shown on the Control Head. If the "Com Fail" message is displayed follow the steps listed under Error Messages.

Adjusting the Dial Time

        While the screen is flashing on the Control Head, use the up and down arrows buttons to adjust the dial time. The up arrow button increases the time while the down arrow button decreases the time. If either arrow button is held down the dial time will begin to scroll, slowly at first then after a short time the scrolling speed will increase to medium and then a little later to fast. As soon as the button is released the scrolling is stopped and the scroll speed resets back to slow for the next time. Once the desired dial time is flashing on the screen it needs to be locked in, see Locking in a Dial Time.

Locking in a Dial Time

        To lock in a dial time, while the desired dial time is flashing on the screen, press and release the Lock/Unlock Button. As soon as the Lock/Unlock button is pressed, the dial value is locked into memory. Then the dial time is sent to the Display Board via the telephone cord, while the information is being transmitted, the Control Head screen will show "Sending". Once the data has been successfully received by the Display Board the dashes are replaced with the new dial time. Upon completion of sending the data, the Control Head will show a locked padlock and the current dial being displayed on the Display Board. If during transmission of the dial time to the Display Board an error occurs, the error message "Com Fail" will be shown on the Control Head screen. If the "Com Fail" message is displayed follow the steps listed under Error Messages.

Switching Between "Time 1" and "Time 2":

        To switch to either "Time 1" or "Time 2" from the other while in run mode, the Control Head must be locked (displaying a locked padlock on the screen), if the Control Head is not locked refer to Changing the Dial Time. While the Control Head is locked, press and hold down Lock/Unlock button. While holding down the Lock/Unlock button watch the screen on the Control Head, the first change will be the unlocking of the padlock, continue holding the Lock/Unlock button, about four seconds later the dial time will switch to the other dial time. At this point release the Lock/Unlock button, the Control Head will show which dial time has been retrieved from memory. At the same time data will be sent to the Display Board, instructing it to display dashes instead of a dial time. Next, the Control Head screen will start to flash the new dial time. At this point the dial value can be changed by following the instructions in Adjusting the Dial Time or if the desired dial time is all ready shown follow the instructions for Locking in a Dial Time, to display the number on the Display Board.

Changing the Display Board Intensity:

        To change the intensity level of the Display Board while in run mode, the Control Head must be locked (displaying a locked padlock on the screen), if the Control Head is not locked refer to Changing the Dial Time. While the Control Head is locked, press and hold down either of the arrow buttons, after about 5 seconds the Control Head screen will show either "Bright" or "Dim". Once bright or dim is shown release the button being held. Now select the desired intensity by pressing the up arrow for bright or the down arrow for dim. Once the desired setting has been selected, press and release the Lock\Unlock button. The Control Head screen will immediately show "Sending" indicating the data is being sent to the Display Board. Once the data has been successfully sent to the Display Board, the Control Head will show a locked padlock and the current dial being displayed on the Display Board. However if during transmission of the intensity level to the Display Board an error occurs, the error message "Com Fail" will be shown on the Control Head screen. If the "Com Fail" message is displayed follow the steps listed under Error Messages.

Error Messages

Error Message "No Board"

The "No Board" error message means that the Control Head is not receiving information from the Display Board. While this message is shown on the screen no other function of the Control Head is accessible. This will usually mean that the Display Board is turned off, or lost power. To verify this, simply look at the Display Board to see if the display is blank. If the display is blank, first check and make sure that the power is turned on. If the power is turned on, check the power and ground wires for voltage, to make sure they have not become damaged or disconnected. The "No Board" error message can also mean the there is a problem with the phone cable. If the Display Board is showing either a dial time or the dashes and the Control Head is still showing "No Board" the problem is usually with the phone cable. First make sure the cable is still plugged into both the Control Head and the Display Board. If the phone cable is plugged into both units, follow the phone cable from the Control Head to the Display Board looking for damage to the cable.

Once the problem is found and fixed the Control Head will automatically send the last dial time to the Display Board and then enter into run mode.

Error Message "Com Fail"

The "Com Fail" error message means that the information sent from the Control Head to the Display Board was corrupted in some way. The first step is to try and send the information to the Display Board again, to do this press and hold down Lock/Unlock button until the error message is replaced with an unlocked dial time. At this point release the Lock/Unlock button and the screen will start to flash. Then follow the instructions Locking in a Dial Time. If repeated "Com Fail" messages occur it could mean a damaged phone cable, try replacing the phone cable with a new one.

If the above Error Message instructions do not solve the problem, please call Digital Delay at 563-324-1046 for further help.

Special Startup Features

Bright/Dim Startup Feature

The bright/dim startup feature allows selection of either bright or dim for the Display Board when the Control Head is turned on. This is done by holding down either of the arrow buttons when power is first turned on. Once the Control Head enters into the special bright/dim startup subroutine, the screen will show either "Bright" or "Dim", release the button that was being held down. Now use the up arrow button to select bright or the down arrow button to select dim. After the desired intensity setting has been selected, press and release the Lock/Unlock button. The Control Head display will immediately show "Sending" indicating the data is being sent to the Display Board. Once the data has been successfully sent to the Display Board, the Control Head will show a locked padlock and the current dial being displayed on the Display Board and enter into normal run mode. However if during transmission of the intensity level to the Display Board an error occurs, the error message "Com Fail" will be shown on the Control Head display. If the "Com Fail" message is displayed follow the steps listed under Error Messages.

Time 1 or Time 2 Startup Feature

The Time 1 or Time 2 startup feature is used to select either Time 1 or Time 2 when first turning on the Control Head. This is done by holding down the Lock/Unlock button when power is first turned on. Once the Control Head enters into the Time 1 Time 2 startup routine the screen will display "1 Time 2", now, release the Lock/Unlock button. Next select the desired time by using the down arrow button to select Time 1 or the up arrow button to select Time 2. As soon as either of the arrow buttons is pressed, the dial time is sent to the Display Board via the telephone cord, while the information is being transmitted, the Control Head screen will show "Sending". Once the data has been successfully received by the Display Board the dashes are replaced with the new dial time. The Control Head will show a locked padlock and the current dial being displayed on the Display Board and enter into normal run mode. If during transmission of the display dial time instruction to the Display Board an error occurs, the error message "Com Fail" will be shown on the Control Head display. If the "Com Fail" message is displayed follow the steps listed under Error Messages.