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# SERIES 6200
# Timer System
# INSTALLATION & SPECIFICATION GUIDE


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**D6200-7010**

**Limited Warranty Agreement**
Your Microframe System is warranted against failure due to defects in workmanship or material for a period of one (1) year from the date of purchase. Microframe Corporation will repair or replace any defective unit. Obvious abuse or mishandling of the unit is NOT covered by this warranty.

**Merchandise Return**
If your Unit does not work satisfactorily, please give us a call. We may be able to clear up the problem by phone. If it becomes necessary to return your Unit to the factory, please observe the following:
1. Call Microframe for an RMA number. This number authorizes you to return the product.
2. Place Unit in a sturdy box with sufficient packing material. Be sure the RMA number is on the outside of the box.
3. If requested, include the AC power adapter. It is not necessary to return the cable and connectors unless they are the problem.
4. Return the system insured and prepaid. Microframe is not responsible for shipping damages and losses on returned Units.

**Warranty Service**
For warranty service, please contact Microframe toll-free at 800-635-3811. One of our technicians will be glad to assist you.

**Assistance**
For any product assistance or maintenance help, contact Microframe by either calling 800-635-3811 or e-mailing us at: support@microframecorp.com.

**Safety**
Do not install substitute parts or perform any modification to the product without first contacting Microframe.

**Disclaimer**
We constantly strive to improve our products. Specifications are subject to change without notice.

**Warning**
All power adapters, line cords, and electrical equipment should be kept out of the reach of children and away from water. (If you are installing cable in an air plenum area, such as a drop ceiling used for air return, you must use plenum-rated cable. The cable supplied from Microframe is rated CL2 and is approved for indoor installation everywhere except plenum areas.)

**Life Support Policy**
Microframe's products are not authorized for use as components in life support devices or systems without the express written approval of the President of Microframe Corporation. As used herein:
1. Life support devices or systems are defined as systems which support or sustain life, and whose failure to perform when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in a significant injury to the user or any one depending on the system.
2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

**FCC Notice (for wireless products only)**
Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
— Reorient or relocate the receiving antenna.
— Increase the separation between the equipment and receiver.
— Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
— Consult the dealer or an experienced radio/TV technician for help.

# Series 6200
# Timer System
# Installation and Specification Guide

## Table of Contents


Model 6200 Keypad Features 4
Remote Visual Display Features 5
Installation Instructions 6
Timer System Connection Diagram 7
Detailed Keypad Connection 8
Maximum Cable/Wire Length Chart 9
Keypad Operation 10
Keypad Mode Options 11
Keypad Operations, continued 12
Keypad Options 13
Error Codes/Troubleshooting Chart 14

# System Components and Features

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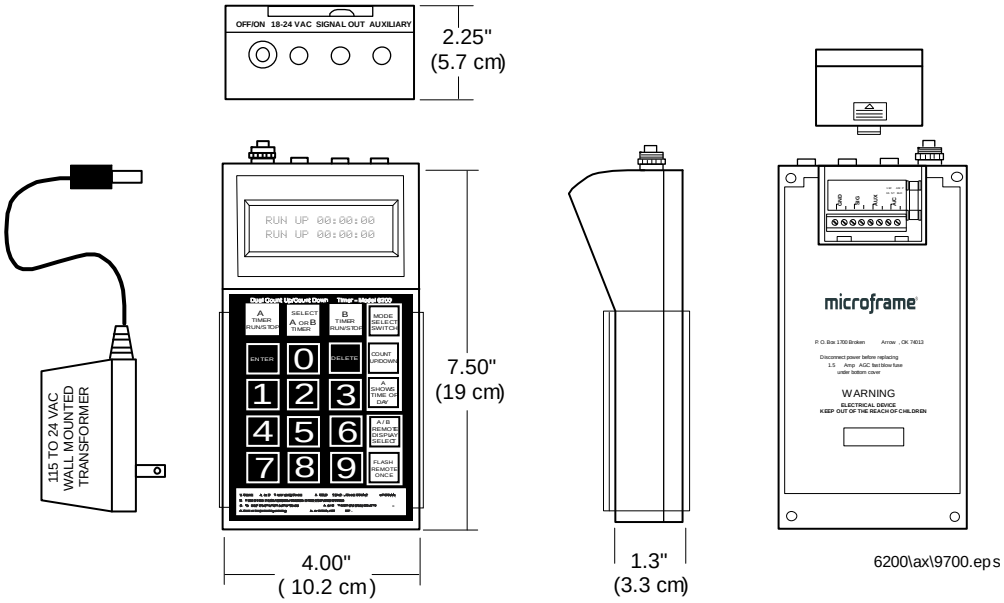
## Model 6200 Timer Keypad

**Features**

The 6200 Timer Keypad connects to either the Model 940 (4-digit) Remote Display or the Model 960 (6-digit) Remote Display with 18 AWG 2-conductor wire. The 6200 Series is a simple and effective count up or down timer for managing timed speaking events, including on-stage performances, or radio/television broadcasts.

The 6200 Timer Keypad has its own LCD display that allows the user to view the same time that is displayed on the Model 940 and 960 displays. The timer can be programmed to automatically reset and reload or reset and start over. The keypad's LCD display shows both A and B timers simultaneously and allows the user to select which timer will appear on the display. Changes entered on one timer do not affect the contents and/or mode of the other timer. Either timer can count up or down and start or stop independently. Note: The timer can also start and stop with external remote push buttons, available from Microframe.




## Keypad Specifications

| | | |
|---|---|---|
| Local Keypad Display | ..... | Backlit LCD Screen |
| Timers | ..... | Timer A, Timer B, TOD (clock) |
| Max Keypads in System | ..... | 1 Keypad (there are no slaves in this system) |
| Input Power | ..... | 115 VAC into Power Adapter |
| Power Adapter | ..... | 24 VAC, 1.2A Standard, 2.5A Optional |
| Line Frequency | ..... | 50 or 60 Hz |
| Fuse Requirements | ..... | 1.6A Fast-Acting Fuse (5mm x 20mm) or 2.5A |

# System Components and Features

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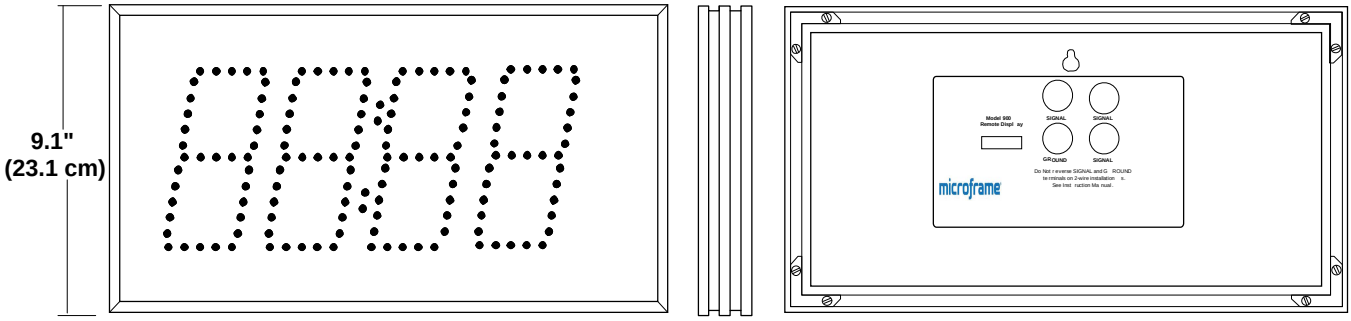
## Remote Visual Display

**Features**

The Microframe Model 940 is a 4-digit display designed to work with the 6200 Timer Keypad, while the Model 960 is a 6-digit display. Each is wired to the keypad with 18 AWG 2-conductor wire. The display has 5.5-inch tall digits viewable up to 125 feet and is encased in an extruded-aluminum case. The 940 display will show a 2-digit hour/2-digit minute (hh:mm) or a 2-digit minute/2-digit second (mm:ss) combination, while the 960 display will show a 2-digit hour/2-digit minute/2-digit second (hh:mm:ss) combination.

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## Remote Visual Display Specifications

| | | |
|---|---|---|
| Remote Display | ……. | Wall-Mount Red LED Display |
| Power Input Requirements | ……. | Powered by Keypad |
| Character Height | ……. | 5.5” Tall |
| Character Viewing Distance | ……. | 125’ Indoors |
| Case | ……. | Aluminum with Plexiglas Faceplate |

# Installation Instructions

**INTRODUCTION**

**Save yourself some work - review these instructions before starting installation.**

This Keypad is configured to work with 4-digit displays. For 6-digit displays change the option "DispSize" to 6-digits. See Option 1.3 in "Keypad Options".

**PRE-INSTALLATION**

We recommend testing the system before installation. Connect the keypads and displays together in one room. Once you are satisfied that the system is working, proceed with your cable runs and equipment mounting.

**CABLE INSTALLATION**

A single cable carries both power and signal from the keypad to the displays. RCA cable may be used, but most installers find it easier to work with 2-conductor, 18AWG wire. Use 16AWG wire to improve the maximum distance. Unshielded cable is acceptable. CAT 5/6 cable is not recommended, as the small wires tend to break at the keypad. For aesthetic reasons, the installer may want to hide the cable to the displays. This can be accomplished by punching holes in the wall directly behind the displays. To support additional displays or longer cable runs than the keypad can handle, use Booster Amp Model A0160.

**KEYPAD CONNECTION**

Unplug the keypad before continuing. Slide off the back cover of the keypad and connect the 2-conductor wire. Connect the black wire to "GND" and the red wire to "SIG." There are two terminals for both "GND" and "SIG," allowing for two sets of wires to be connected.

**CAUTION: be careful not to connect to the AUX or AC terminals. The AC terminals are used as an alternate connection point for power. This is only used with power adapters that have bare wires instead of a plug.**

Once the wires are firmly connected, slide the protective cover back on and place the keypad back into the holder.

**DISPLAY INSTALLATION**

The display will have optimum visibility when mounted vertically within three to four feet of eye level. This will keep the display in the proper field of view for the observer. To hang a display on the wall, place an anchor screw into the wall, leaving the screw-head exposed. Line up the keyhole on the back of the display with the screw. Hang the display from the screw.

**DISPLAY CONNECTION**

On the back of the display, connect the black wire to "GND" and the red wire to "SIG." The additional terminals allow a parallel set of wires to carry power to the next display. Once the wires are firmly connected, hang the display back on the mounting screw(s). Please refer to the installation decal on the back of the display.

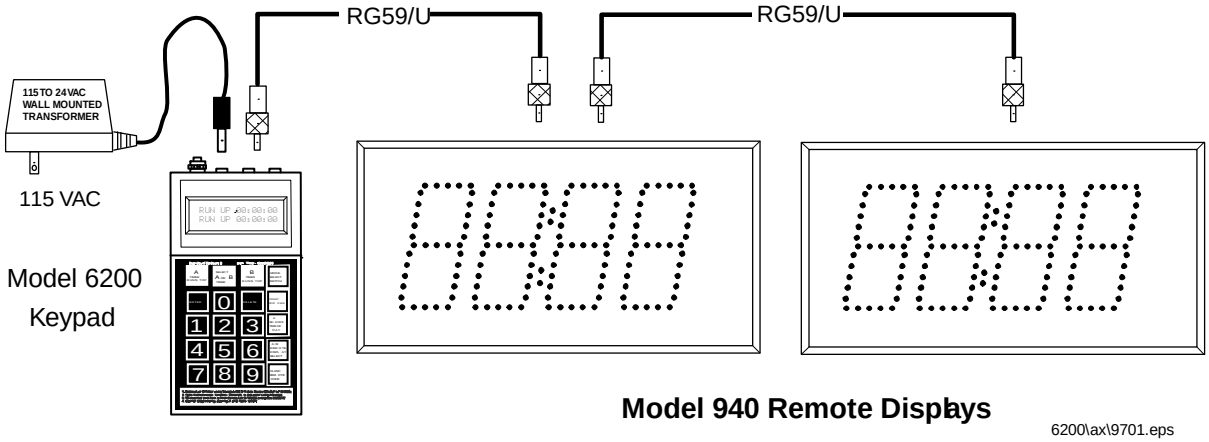
**TESTING THE SYSTEM**

Once the system is wired together, plug in the keypad and turn it on. If the keypad shows "SHORT", then there is a short in the wiring. Turn off the keypad and check the wiring. Otherwise, start Timer A and verify that the Remote Visual Display(s) are also counting. See the "Troubleshooting Chart" at the end of this manual for additional assistance.

# Timer System Connection Diagram

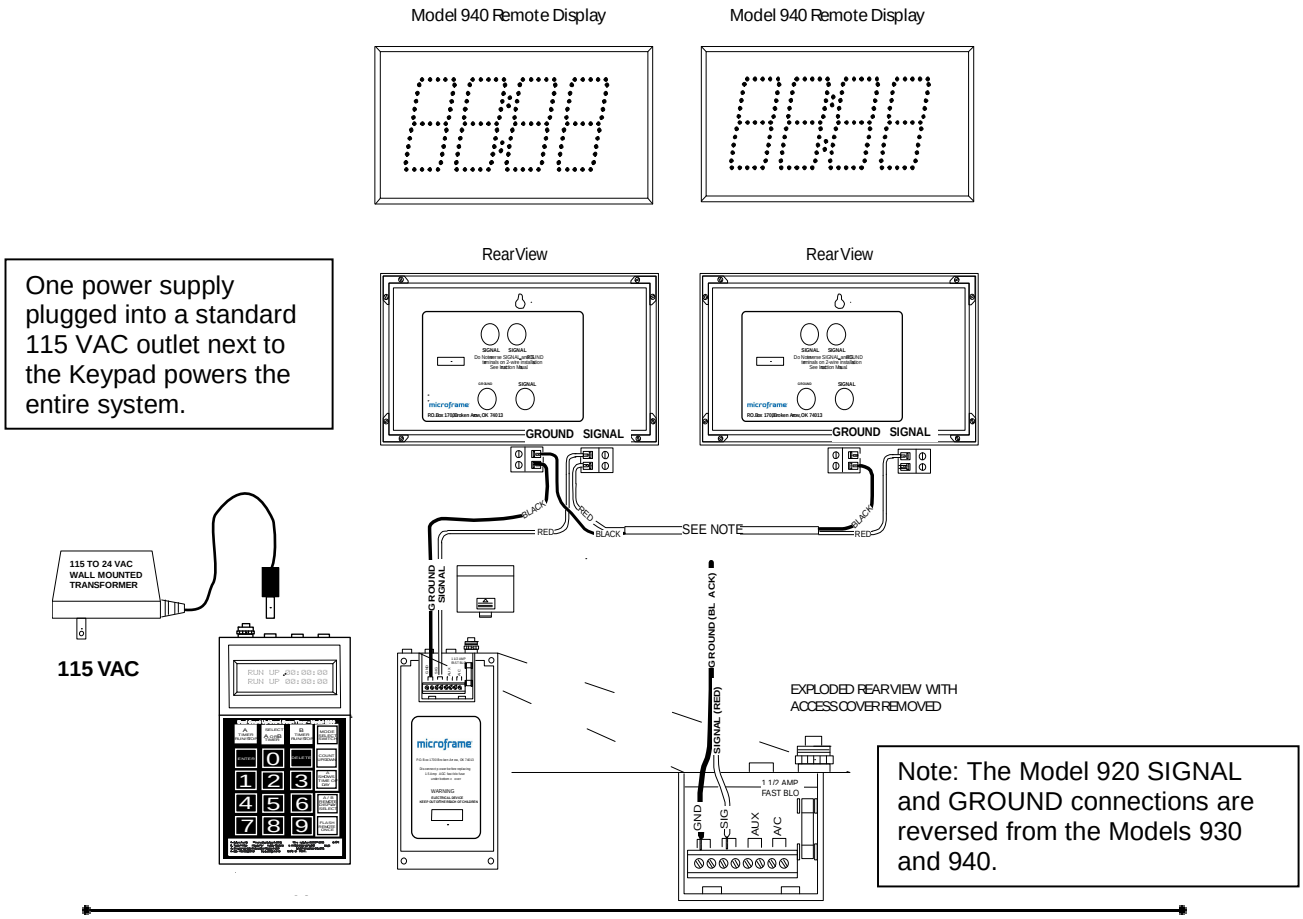
**Using RG59/U Cable**

The timer system is very easy to install if connected as shown using cable that is furnished, pre-cut, and assembled by Microframe.




**Using 16 or 18 AWG Paired Wire**

The timer system may also be connected with common 16 or 18 AWG paired wire utilizing the terminal blocks located on the rear of the displays and under the small slide-on cover of the keypad.





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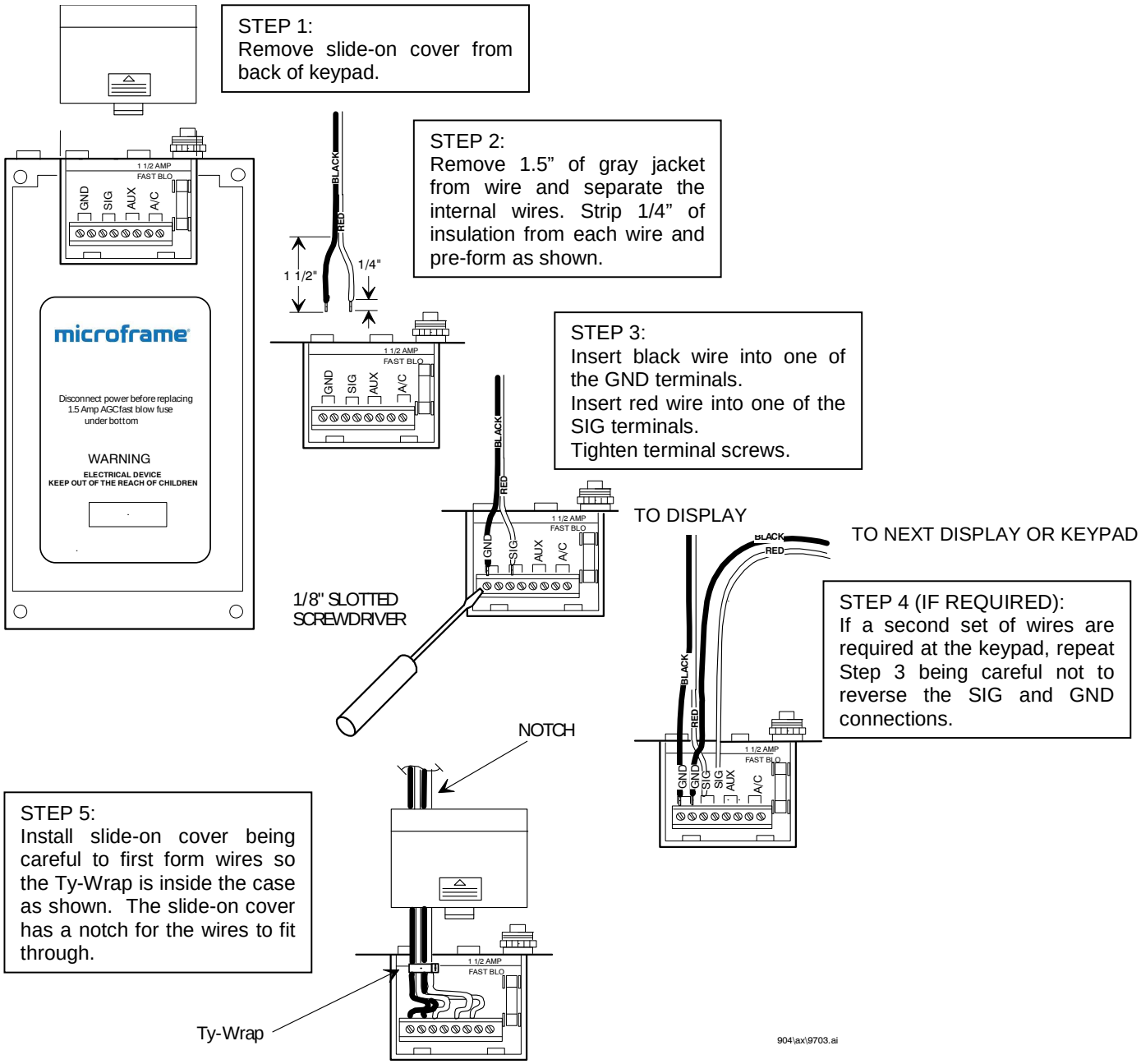
# Detailed Keypad Connection

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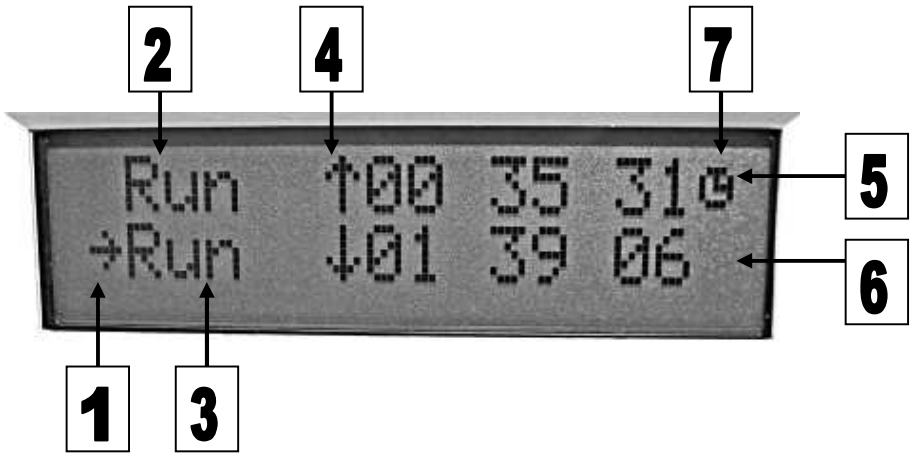
## Maximum Cable/Wire Length Chart

The following chart shows the maximum number of displays that can be installed per cable/wire length indicated. The cable/wire length can be increased by simply putting fewer displays on EACH CABLE connected to the Model 6200 Keypad. Distances cited are for a keypad with a 1.25A adapter. The total cable/wire length of the entire system should not exceed 10,000 feet.

| Number of Displays | Maximum Cable/Wire Distance in Feet | | | |
|---|---|---|---|---|
| | Model 940 | | Model 960 | |
| | 18 AWG | 16 AWG | 18 AWG | 16 AWG |
| 1 | 2000 | 2000 | 2000 | 2000 |
| 2 | 1500 | 2000 | 800 | 1300 |
| 3 | 800 | 1300 | 500 | 700 |
| 4 | 600 | 900 | 300 | 400 |
| 5 | 400 | 600 | 100 | 200 |
| 6 | 300 | 400 | | 100 |
| 7 | 200 | 300 | | |
| 8 | 100 | 200 | | |
| 9 | | 100 | | |

# Keypad Operation

**Introduction**
The Model 6200 Keypad has its own built-in, easy-to-read LCD display so you can see what numbers are being entered, as well as what time is currently being shown on the Remote Display.




**Normal Operation LCD Display Legend**
1. Line Being Edited
2. The Run Status
3. Error Message (replaces Run Status)
4. Timer Direction (Counting Up or Counting Down)
5. Timer A
6. Timer B
7. Which Timer (A or B) Shown on the Remote Display

**Quick Start**
1. Connect the power to the keypad and turn it on.
2. Select the timer you wish to set using the [SELECT TIMER A OR B] button. The arrow (1) will indicate which timer is being edited. Type in the desired time. The new time is automatically displayed after 6 digits are typed. For shorter entries, press [ENTER]. To abort an entry, press [DELETE].
3. Select which timer you wish to show on the Remote Display using the [A/B REMOTE DISPLAY SELECT] button. A clock symbol (7) will appear next to the timer being displayed.
4. Start the desired timer by pressing [A TIMER RUN/STOP] or [B TIMER RUN/STOP].

**Keypad Button Operation**
- [A TIMER RUN/STOP] – Starts or stops the timer on the top line.
- [B TIMER RUN/STOP] – Starts or stops the timer on the bottom line.
- [SELECT A OR B TIMER] – Selects which line the user is editing.
- [MODE SELECT SWITCH] – Allows quick access to commonly used options.
- [ENTER] – Enters a short time entry, less than 6 digits.
- [DELETE] – During time entry, acts as cancel. For a "count-up" it resets to zero. For a count-down, reloads the time.
- [COUNT UP/DOWN] – Sets the timer direction up or down.
- [A SHOWS TIME OF DAY] – Alternates between Timer A and TOD. When Time-of-Day is displayed, "Time" will show at (2).
- [A/B REMOTE DISPLAY SELECT] – Selects Timer A or B to be shown on the Remote Display.
- [FLASH REMOTE ONCE] – Flashes the displayed time once on both the LCD and Remote Displays. TOD cannot be flashed.

# Keypad Operation continued…
# Mode Options

**Mode Options**
Commonly used options can be set here. Enter this mode by pressing [MODE SELECT SWITCH]. Advance to the next option by pressing [MODE] or [ENTER]. If an error is made during the entry, press [DELETE] to revert to the saved setting.


**Mode Option LCD Display Legend**
1. Option Name
2. Value Range
3. Selected Value
4. Description of Selected Value

**MODE – A: OnZero**
*0-4 Stop / Reload / Start / Count Up; Default 1*
This is the action to take when Timer A counts down to zero.
*0 Stop* – Stop at zero.
*1 Reload / Stop* – Set Timer A to reload time.
*2 Reload / Start* – Set Timer A to reload time and start counting down.
*3 Count Up* – Change direction of count and start counting up from zero
*4 Flash Zero* – Stop at zero and flash display until acknowledged. Flash can be cancelled by [DELETE] or by setting a new time.

**MODE – A starts B**
*0-1 Disabled / Enabled; Default 1*
Timer A can automatically start Timer B when it counts down to zero. The Remote Display is also set to show Timer B. This option can be used to set up cycling between the two timers.
*0 Disabled* – Do nothing.
*1 Enabled* – Start Timer B. This is the same as pressing [B TIMER RUN/STOP].

**MODE – A: Reload Time**
*Default 00:45:00*
This is the time loaded into the timer during and OnZero event or when the user presses [DELETE] during a count down.

# Keypad Operation
## Mode Options continued…

**MODE – A: Chime Time**
*Default 00:00:00*
Causes the Remote Display to activate its chime output when Timer A is equal to the set time. A time of 00:00:00 disables the chime. The Remote Display must have the Chime Option installed. Time-of Day mode uses both Chime Times A and B if TOD is displayed.

**MODE – B: OnZero**
*0-4 Stop / Reload / Start / Count Up; Default 1*
The action to take when Timer B counts down to zero.
*0 Stop* – Stop at zero.
*1 Reload / Stop* – Set Timer B to reload time.
*2 Reload / Start* – Set Timer B to reload time and start counting down.
*3 Count Up* – Change direction and start counting up from zero.
*4 Flash Zero* – Stop at zero and flash display until acknowledged. Flash can be cancelled by pressing [DELETE] or by setting a new time.

**MODE – B starts A**
*0-1 Disabled / Enabled; Default 1*
Timer B can automatically start Timer A when it counts down to zero. The Remote Display is also set to show Timer A. This option can be used to set up cycling between the two timers.
*0 Disabled* – Do nothing.
*1 Enabled* – Start Timer A. This is the same as pressing [A TIMER RUN/STOP].

**MODE – B: Reload Time**
*Default 00:45:00*
This is the time loaded into the timer during an OnZero event or when the user presses [DELETE] during a count down.

**MODE – B: Chime Time**
*Default 00:00:00*
Causes the Remote Display to activate its chime output when Timer B is equal to the set time. A time of 00:00:00 disables this chime. The Remote Display must have the Chime Option installed. Time-of-Day mode uses both Chime Times A and B if TOD is displayed.

**Error Messages**
Error Messages replace the run status (3) for Timer B. While in an error state timers continue to run and the keypad will still respond to user input. Once the problem is corrected, the error will automatically clear in a few seconds. For a description of error codes, please see "EXPLANATION OF ERROR CODES" at the end of this manual.

**Multiple Outputs**
The keypad will power multiple Remote Displays (see Maximum Cable/Wire Length Table.)

**Powering OFF the System**
It is recommended that you turn the power off using the "ON/OFF" switch on the keypad when not in use. This will greatly prolong the life of the system.

**Replacing the Fuse**
The keypad contains a fuse inside the case under the small slide-on cover. To prevent permanent damage, replace with the correct fuse. For standard keypads use a 1.6A (5mmx20mm) fast acting fuse. For keypads with a 2.5A adapter, use a 2.5A (5mmx20mm) fast acting fuse.

**BEFORE REPLACING THE FUSE, BE SURE TO DISCONNECT POWER FROM THE AC WALL OUTLET.**

**Option Connections**
The Keypad has two optional connections on the 8-pin terminal block located under the small removable cover:
1. AUX—Auxiliary connection for use with the extra cost Remote Delete Option.
2. A/C—Remote 24 VAC Input used when a adapter other than the wall mounted one supplied with the system is required, such as an attic-mounted adapter installation.
Note: Keypads cannot share power adapters.

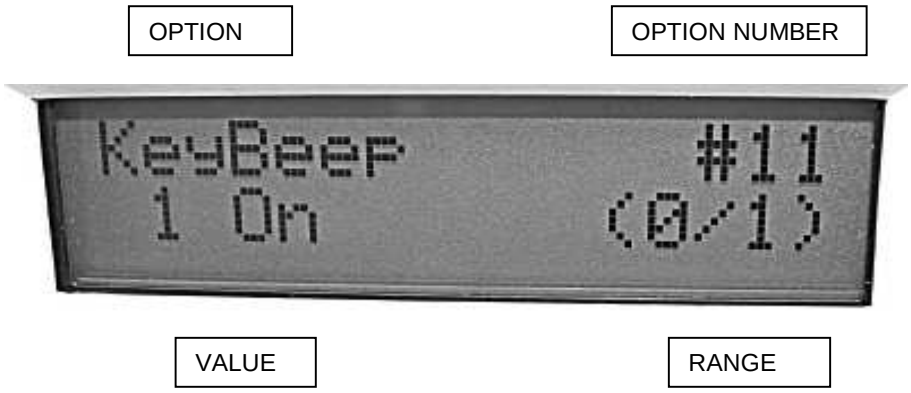
# Keypad Options

**Entering Options Mode**
To enter the Options Mode:
1. Turn on the keypad.
2. During the startup screen, press [0].
3. "System Options" will display, signifying you are in the Options Mode.

**Options Table Summary**
Options are organized as follows:

| | |
|---|---|
| General | #1 |
| KeyBeep | #11 |
| Chime | #12 |
| DispSize | #13 |
| 24H Clock | #14 |
| Fact Reset | #19 |

**Options Navigation**
Type the two-digit number for the option you wish to set. The current value will be shown. Type a new number to change the value. Press [ENTER] to save or [DELETE] to cancel.




**Options Definitions**

**1.1 KeyBeep**
*0-1 Off / On; Default 1*
The audible feedback sound can be enabled or disabled.

**1.2 Chime**
*0.0-9.9 Seconds; Default 0.3*
Sets the Remote Display chime duration. Not all displays follow this option.

**1.3 DispSize**
*4 and 6 Digits; Default 4*
Sets the display size with which the keypad will work.
*4-digits* – Works with Model 940 displays.
*6-digits* – Works with Model 960 displays.

**1.4 24H Clock**
*0-1 Off / On: Default 0*
Shows regular or military time for Time-of Day.

**1.9 Factory Reset**
*0-1 No / Yes*
Resets all options to factory defaults.

## EXPLANATION OF ERROR CODES

There are five error conditions that will cause an Error Code to appear on the Model 6200 Keypad display. It will be of great assistance in troubleshooting the system if you will note the displayed code when calling for assistance. For technical support call 1-800-635-3811.

| ERROR MESSAGE | CAUSE |
|---|---|
| **Short** | The cable is shorted between the keypad and the display. |
| **StuckHi** | The keypad output is damaged or there is another device on the line holding it high. |
| **NoInts** | Master or Slave Keypad is not getting the interrupts it needs to work. |
| **EEfail** | Keypad is unable to remember settings. |
| **CommErr** | Communication error. |

## TROUBLESHOOTING CHART

| SYMPTOM | POSSIBLE CAUSE | CURE |
|---|---|---|
| Keypad is dark and unresponsive | Keypad is not receiving power. | Check that keypad is plugged in. Is the AC outlet working? Is the keypad fuse blown? Is the keypad power switch on? |
| Keypad displays **SHORT** | There is a short across the output of the keypad. | Does disconnecting the signal cable solve the issue? If so, the problem is in the cable. |
| Keypad displays **StuckHi** | Keypad is unable to send data on the line. | Does disconnecting the signal cable solve the issue? If not, the keypad is damaged and needs service. |
| Keypad displays **NoInts** | The wrong power adapter is in use.<br><br>The keypad is damaged. | Does the power adapter have an output of 24VAC, 1.2A?<br>If damaged, return keypad for service. |
| **EEfail** | Keypad cannot remember settings. | Keypad is damaged. Return for service. |
| **CommErr** | Communication Error. | Verify programming to make sure only one keypad is a master. Check wiring between keypads. Check for strong interference next to signal cable. |
| Keypad works but does not light up or has erratic numbers | Poor signal connection to Remote Display. | Does the display work when connected to the display with a short (i.e. 3 ft) piece of cable?<br>If so, the problem is in the wiring. |

**CAUTION:** Always unplug power before connecting/disconnecting the signal cable or changing the fuse.