

Microframe Corporation

Series 4060: Multi-Number Paging System

6 Each 2-Digit Numbers

100 Number Memory

Skipped Number Detect



Operating Manual

A4060-7012



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. Place Unit in a sturdy box with sufficient packing material.
2. If requested, include the AC power adapter. It is not necessary to return the cable and connectors unless they are the problem.
3. Return the system insured and prepaid since we are not responsible for shipping damages and losses on returned Units.

Warranty Service

For warranty service, please contact Microframe at 1-800-635-3811. A technician will gladly assist you.

Assistance

For any product assistance or maintenance help, contact Microframe by either calling 1-800-635-3811 or emailing us at support@microframecorp.com.

Safety

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

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 installation everywhere indoors 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.

Disclaimer

We are constantly striving to improve our products. Due to this, specifications are subject to change without notice.



SERIES 4060

INSTALLATION & SPECIFICATION GUIDE

ITEM NO: A4060-7012

REVISION DATE: 11/09

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MODEL 4060 SPECS

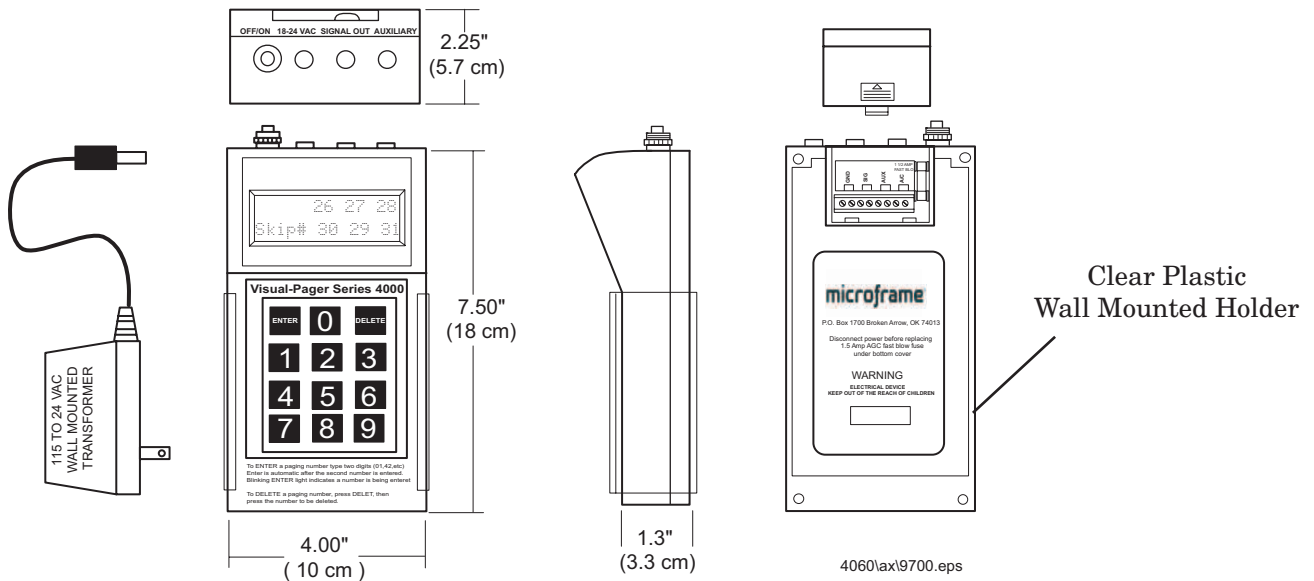
Keypad

Operation

The Model 4060 Keypad is designed to accept numbers entered into the Keypad and display them on a Remote Display. Up to 100 different 2-digit numbers will be remembered and rotated on a customer programmed time schedule; i.e. every three seconds. The Keypad will display six different 2-digit numbers at one time and change to a new set of six numbers every three seconds. This allows the Keypad to show all 100 numbers within a 50-second period (six numbers every three seconds). The Model 4060 Keypad can automatically delete each number after a user-programmed display time from 1 to 99 minutes. The Keypad also features skipped number detection.



Microframe® Model 4060 Keypad



Model 4060 Keypad Specifications

Local Display	Built-in 32 Character LCD Readout.
Remote Display	Microframe Model 9620, 9320, or 920 Remote Display.
Maximum Distance from Keypad	100 Feet (30 meters) to 2,000 Feet (600 meters) depending on to Remote LED Displays
Maximum Number of LED Displays	Up to 4 Model 9620, 4 Model 9320, or 11 Model 920 Displays without an additional AC Power Adapter or Booster Amp.
Maximum Numbers Stored	Up to 100 different 2-Digit numbers are stored in the Model 4060 Keypad.
Maximum Number of Keypads	Up to 32 Keypads may be connected together to allow inputs from 32 different locations to a combined output to one or more displays.
Power Input Requirements	24 VAC 1.2A supplied by the AC Power Adapter which requires 115 Volts AC @ .72 Amps.
Fuse Requirements	1.5 Amp GMA (5mm x 20mm) normal blow fuse.
Weight75 Lb (.4 kg) with AC Power Adapter 2.25 Lb (1.0 kg).

Support and Sales
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MODEL 9620 SPECIFICATIONS

Remote Display

Features

The Model 9620 Remote Display is designed to display up to six 2-digit numbers at a time. The Model 9620 Display has 2.5 inch tall digits viewable up to 80 feet and is encased in an aluminum extruded cabinet. Optional ceiling mounts are available in a single, double, or triple cluster for easy mounting in the center of or around the peripheral of a large retail area. Outdoor displays are also available.

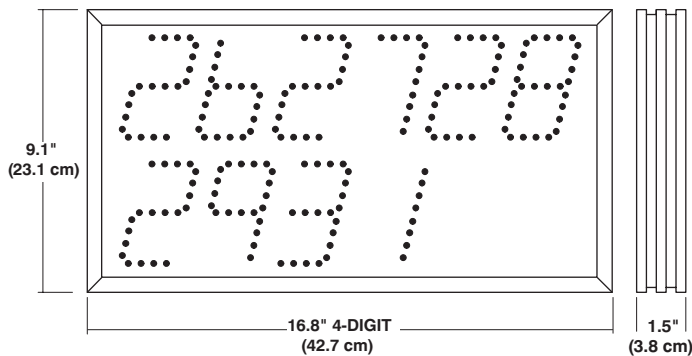


Microframe® Model 9620 Display

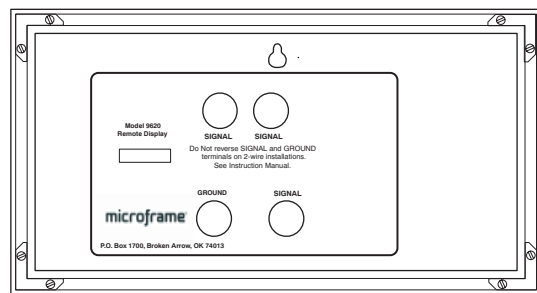
Operation

The Model 9620 Remote Display is designed to operate with the Microframe Model 4060 or 9060 Keypad. The signal and power is received from a single cable connected to the Keypad. Up to four displays may be connected directly to the Keypad.

Front View



Back View



4600\AX\9700.ai

Model 9620 Specifications

Remote Display	Wall Mount 2.5-inch (6.4 cm) LED Displays
Maximum Distance from Keypad to LED Display.....	100 Feet (30 meters) to 2,000 feet (600 meters)
Power Input Requirements	depending on quantity of Displays
Maximum Number of Digits	Power supplied by Keypad
Character Height	6 each 2-digit numbers
Character Viewing Distance	2.5 inch (6.4 cm)
Weight	80 feet 3.5 lbs (1.6 kg)

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MODEL 9320 SPECIFICATIONS

Remote Display

Features

The Model 9320 Remote Display is designed to show up to three 2-digit numbers at a time. The Model 9320 Display has 5.5 inch tall digits viewable up to 125 feet and is encased in an aluminum extruded cabinet. Optional ceiling mounts are available in a single, double, or triple cluster for easy mounting in the center of or around the peripheral of a large retail area. Outdoor displays are also available.

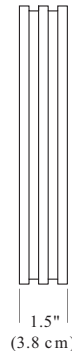
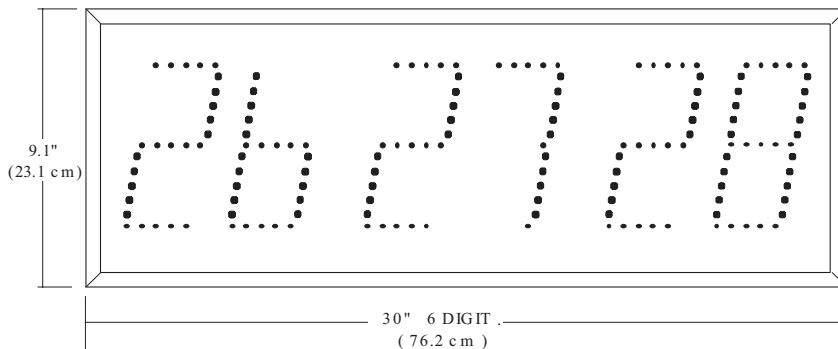


Microframe® Model 9320 Display

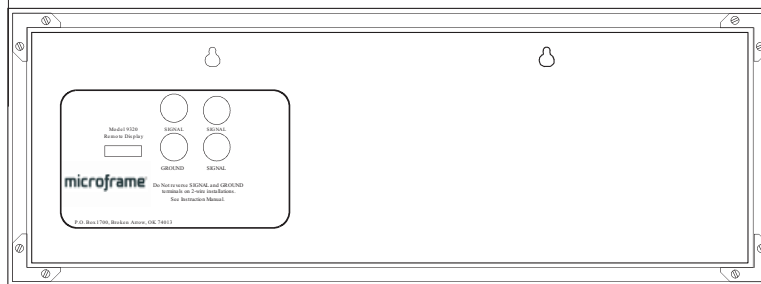
Operation

The Model 9320 Remote Display is designed to operate with the Microframe Model 9060 or Model 4060 Keypads. The signal and power is received from a single cable connected to the Keypad. Up to four displays may be connected directly to the Keypad.

Front View



Back View



G: W 9320 AX 9700

Model 9320 Specifications

Remote Display	Wall Mount 5.5-inch (14 cm) LED Displays
Maximum Distance from Keypad to LED Display.....	100 Feet (30 meters) to 2,000 feet (600 meters) depending on quantity of Displays
Power Input Requirements	Power supplied by Keypad
Maximum Number of Digits	Three each 2-digit numbers
Character Height	5.5 inch (14 cm)
Character Viewing Distance	125 feet
Weight	5.25 lbs (1.6 kg)

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MODEL 920 SPECIFICATIONS

Remote Display

Features

The Model 920 Remote Display is designed to show a single 2-digit number at a time. The Model 920 Display has 5.5 inch tall digits viewable up to 125 feet and is encased in an aluminum extruded cabinet. Optional ceiling mounts are available in a single, double, or triple cluster for easy mounting in the center of or around the peripheral of a large retail area. Outdoor displays are also available.

Operation

The Model 920 Remote Display is designed to operate with the Microframe Model 9060 or Model 4060 Keypads. The signal and power is received from a single cable connected to the Keypad. Up to 11 displays may be connected directly to the Keypad.

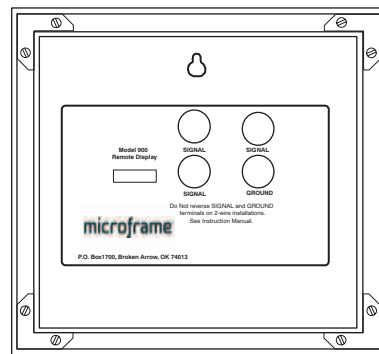
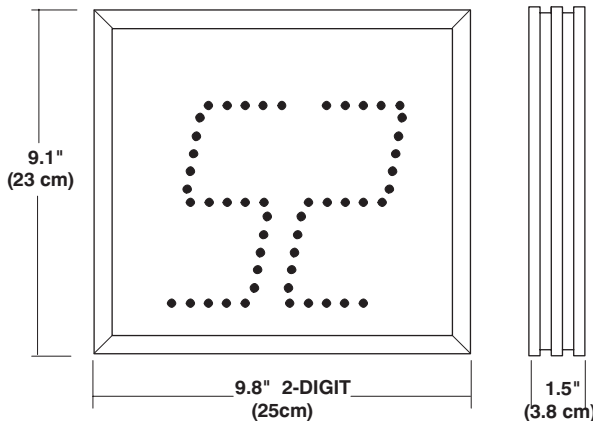


Microframe® Model 920 Display

Front View

Back View

Red Plastic with Extruded Aluminum Frame



4100\ax\9700.ai

Model 920 Specifications

Remote Display	Wall Mount 5.5-inch (14 cm) LED Displays
Maximum Distance from Keypad to LED Display.....	100 Feet (30 meters) to 2,000 feet (600 meters) depending on quantity of Disp
Power Input Requirements	Power supplied by Keypad
Maximum Number of Digits	One each 2-digit numbers
Character Height	5.5 inch (14 cm)
Character Viewing Distance	125 feet
Weight	2.5 lbs (1.6 kg)

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1 INSTALLATION PROCEDURES

Before permanent installation, we recommend that you test your entire system in one room on a table or floor. This will be beneficial in troubleshooting should you have any problem after installing the system.

1.1 TEST THE 4060 KEYPAD

Connect the AC Power Adapter to the Model 4060 Keypad at the **18-24 VAC connector**. Turn power "ON" and enter a number. If the number is shown on the built-in display of the Keypad, the Keypad works.

1.2 TEST 4060 KEYPAD AND CABLE

Turn power "OFF" and select the cable to be used between the Keypad and the Remote Display. Connect one end of this cable to the Keypad (see **Visual Pager Connection Diagram**) and turn power "ON." If the message "SHORT 1" or "SHORT 2" appears in the local display, there is a short in the cable and needs to be repaired before proceeding.

1.3 TEST KEYPAD, CABLE, DISPLAY

Turn power "OFF." Connect the other end of the cable to the Remote Display and verify that it works by turning the power "ON." If the message "SHORT 1" or "SHORT 2" appears, there is a short in the Display. Should the message "SHORT 3" appear, check the **Troubleshooting Chart** for possible solutions. If the Remote Display does not show the numbers once they

are entered and there is no error code displayed, then the signal cable is *open*. An *open* cable is one where the wires are not making a connection or it has a broken wire.

1.4 INSTALL 4060 KEYPAD

Select a convenient but discreet location for the Keypad. The Model 4060 Keypad may be mounted on a table top or on the wall. Locate the Keypad so that the cord from the wall-mount AC Power Adapter will not present a safety hazard. The installation location must be within 5 feet of an AC power outlet so that the cord reaches the Keypad.

You may place the Keypad in the enclosed plastic wall mounting bracket if needed. Place the mounting bracket on the Keypad at the desired mounting location on a table top or wall and mark the position. Then slide the Keypad up out of its mounting bracket and attach the bracket using screws supplied. Once the screws are screwed in flush with back of bracket, slide Keypad into bracket. The Keypad may be easily removed, if necessary.

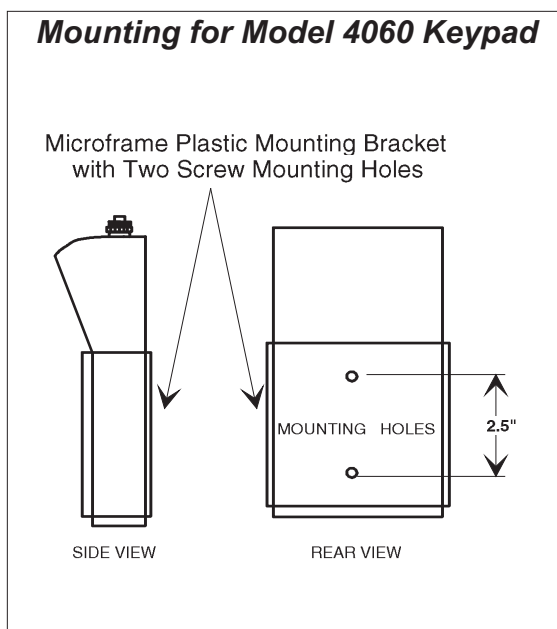
Install the Keypad and connect to AC power. **Do not** attach the cable that runs to the Remote Displays yet. Test for operation by entering a number and observing this number in the built-in display of the Keypad. This verifies that the system is working. If the unit did not work, refer to the **Troubleshooting** section. Now turn power "OFF."

NOTE: Only the Model 4060 Keypad needs an AC outlet for the wall mount AC Power Adapter. Power and Signal for the Remote Displays will be provided from the Keypad.

1.5 INSTALL THE REMOTE DISPLAY

The Remote Display should be located within three or four feet of eye level to provide maximum visibility for the observer.

The Remote Display may be hung on a screw anchored in the wall. First, place the mounting template on the wall and mark the location for the mounting screw through the template. Next, punch one hole for the input cable from the Keypad and a second hole for the cable to the next Display, if applicable. **Do not connect the cable to any Display yet.** If you have purchased an optional ceiling assembly, follow the instructions included with the assembly.



1.6 INSTALLING SIGNAL CABLE

One signal cable must be installed between the Keypad and the Remote Display. For proper cable selection, please refer to the **Maximum Cable Length Table**. This will allow the longest distance and the most reliable operation.

The Visual-Pager System uses an 18 AWG wire pair. Cable supplied by Microframe has the ends prepared ready to connect to the Keypad and Remote Display (See **Visual Pager Connection Diagrams**).

If you have soldered your own cable connectors, you should test the cable for shorts with a short tester or Ohm meter (after the cable is installed and before you connect the Remote Display).

Next, connect the cable to the Keypad connector marked **"Signal Out."** Turn **"ON"** the power switch. When the Keypad LCD comes on it will display **"Ready."** If Error Code **"SHORT 1"** or **"SHORT 2"** appears, there is a short in your cable, and it needs to be repaired before proceeding. See **Troubleshooting Chart** for additional help.

Next, turn power **"OFF"** and proceed to **Step Four: Display Connection.**

If you turn your Keypad **"ON"** and you do not see **"Ready,"** you may have blown a fuse. Turn power **"OFF"** and remove AC Power Adapter from wall outlet.

You may gain access to the fuse by removing the small slide-on cover on the rear cover of the Keypad. Replace only with fuse as stated in 4060 SPECIFICATIONS to prevent permanent damage to the Keypad. (Remember to remove AC Power Adapter from wall outlet before

The number you entered should appear on the left side of the Keypad Display for approximately one (1) second, then appear and remain on the right side of the LCD Display. The number should also appear on the Remote Display. If nothing is shown on the Remote Display, then the signal cable is "open." (*The wire is not making connection or it has a broken wire.*) Check the connectors and replace, if necessary.

CAUTION

24 VOLTS AC IS PRESENT UNDER THE SMALL SLIDE-ON COVER. DISCONNECT AC ADAPTER BEFORE SERVICING.

1.7 DISPLAY CONNECTIONS

After the cable is installed and connected to the Keypad and tested, turn the power **"OFF"** and connect the cable to the Remote Display. Turn the Keypad power **"ON."** The Keypad Display should show **"READY."** The Remote Display should be blank. Now type in a number.

2 KEYPAD OPERATION

2.1 INSTRUCTIONS FOR USE

The Model 4060 Keypad has its own built-in LCD display so that you can view the numbers that are being entered and shown on the Remote Display.

2.2 AUTOMATIC ENTRY

When number buttons 00 to 99 are pressed, they are automatically entered into the Remote Display and also displayed on the Model 4060 Keypad. After you push the first number, such as "1," the local display shows "Ent>1." After you enter the second number "2," the local display shows "Ent>12" for one second and disappears. The number "12" will then appear in order in sequence on the Remote Display.

2.3 SELECTIVE DELETE

To selectively delete a paging number, push "DELETE" then the number you wish to delete from the Remote Display. After you push delete, the local display shows "De1>." After entering the first number "1," the display shows "De1>1." After you enter the second number "2," the display shows "De1>12" for one second and disappears. The Keypad will delete "12," once it's found. The Skipped Number Memory Hopper will also search for "12," and it will be removed if found.

2.4 QUICK DELETE

The 4060 Keypad can be programmed to be a 2-key Quick Delete function. After you push the first number, such as "1," the local display shows "De1>1." After you enter the second number "2," the display shows "De1>12" for one second and disappears. When in this mode, you press only two numeric keys and the number is deleted. This is useful in locations where one Keypad is primarily an entry station and a second Keypad is primarily a delete station, and thus programmed for Quick Delete.

2.5 AUTOMATIC DELETE

Each number will automatically be deleted after a predetermined display time, programmable from the Keypad (see **Programming Options** section). Once the numbers are entered, they will remain on the Remote Display until they are deleted manually or until the display time-out is reached.

The Remote Display time can be programmed from the Keypad over the range of 1 to 99 minutes. If you select "0" minutes, the Automatic Delete will be disabled, and the numbers will remain until manually deleted.

2.6 MULTIPLE PAGING

The 4060 Keypad will store up to 100 different 2-digit numbers in any order. The numbers are displayed in numeric order until the operator manually deletes them or they are automatically deleted (see **Auto Delete** above).

2.7 MULTIPLE OUTPUTS

The 4060 Keypad will directly drive up to four Model 9620, eleven Model 920 or four Model 9320 Remote Displays, without a booster amp. An unlimited number of Remote Displays may be connected using a combination of booster amps.

2.8 MULTIPLE INPUTS MODEL 4060

You may connect up to 32 Model 4060 Keypads on the same common cable to the Remote Display(s). Each "Slave" Keypad will send its numbers to the "Master" Keypad which will automatically store, combine, and display all the numbers entered from all Keypads. Each Keypad will display numbers entered from itself as well as all numbers entered from all other Keypads. Any number may be entered or deleted from any "Slave" or "Master" Keypad.

MULTIPLE KEYPAD NOTE

The first Keypad turned "ON" each day becomes the "Master Keypad" and should not be turned off before the other Keypads because you may lose displayed numbers.

2.9 "SKIPPED" NUMBERS DISPLAY

The Model 4060 Keypad remembers up to nine missing numbers in sequence from the first number entered that day that has not been called. After a programmable delay time, the "Skipped Number(s)" will appear on the left side of the local display until the number is entered. If you entered 26, 27, 28, 29, 31, then 30 would be the "Skipped Number." After a time delay the display would show "Skip#30" in the lower left screen. Up to 9 Skipped Numbers may be displayed after skipping their sequence in entry. If any of these numbers are entered within the programmable time-out period, they will not be displayed and will be removed from the Skipped-Number-Hopper. These numbers may also be removed from the Skipped-Number-Hopper by pressing "DELETE," then the number you want deleted.

2.10 POWER CONNECTION

Connect the AC Power Adapter to an AC outlet and connect the power plug to the connector on the top side of the Keypad marked "18-24 VAC" Power In, or use the optional connectors under the cover marked "A/C."

2.11 FUSE

The Model 4060 Keypad contains a fuse which is accessible through the small slide-on cover located on the bottom of the Keypad. When replacing the fuse, be sure to **DISCONNECT** the AC Power Adapter from the AC wall outlet. Replace **ONLY** with the value stated on the 4060 specification page.

2.12 PROGRAMMING OPTIONS

The following user programmable options are available in the Model 4060 Visual-Pager. See **Programming Options Instructions** for details in using these options.

OPTION	DESCRIPTION	FACTORY DEFAULT
13	Display Roll Over Time	3 Seconds
14	Auto Deletes Numbers After	30 Minutes
15	Skipped Number Display Enable.....	Enabled
16	Skipped Number Display Delay Time Before It Shows Skipped Number	5 Minutes
17	Keyboard Beep Enable	ON
18	Quick Delete Enable	OFF
19	Restore Factory Defaults	
23	Blink Mode enable	OFF
24	Slow Blink Time.....	10
25	Fast Blink Time	20
26	Auto Delete in Blink Mode Enabled	OFF

2.13 OPTIONAL CONNECTIONS

The Model 4060 Keypad has three 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 an AC Power Adapter other than the wall mounted one supplied with the system is required, such as an attic-mounted AC Power Adapter installation.

3. **SIG & GND**—You may connect the 18 AWG wire to the Remote Display using these two terminals.

3 DISPLAY OPERATION

3.1 POWER

All of the Remote Displays are designed to operate with the Model 4060 Keypad. When the Keypad is turned off, all of the Model 4060 Displays are also turned off automatically. Since the Keypad supplies all the power and signal through the same wire pair, an AC power outlet is not needed at the Remote Displays. A Booster Amp is available to power an unlimited number of additional Remote Displays.

3.2 SYSTEM SIGNAL CONNECTION

You may refer to the **Visual Pager Connection Diagram (pg. 16)** of this manual for Remote Display connections. You may connect the system with 16 or 18 AWG paired wire by using the 8-pin terminal block located under the small slide-on cover on the back of the Model 4060 Keypad. If you are using RCA connectors, then connect the cable to the Keypad where it is marked "**Signal Out.**" **NOTE:** The "**Auxiliary Connector**" should **NOT** be used with any of the Remote Displays.

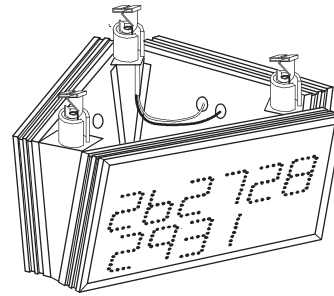
For 16 or 18 AWG paired wire installations, use the 2-conductor terminal block located inside the rear cover. Be very careful to observe **SIGNAL** and **GROUND** polarity. There is a second set of connectors to run another wire to the next Remote Display if needed.

Model 9620 Display Operation

Display Features

- | 2.5-Inch Tall Numbers
- | Six 2-Digit Numbers
- | Up to Four Displays without Booster
- | High Brightness LEDs

The Model 9620 Display works with the Model 4060 Keypad. It shows six 2-digit numbers at a time. The numbers shown on the 4060 Keypad will be the same as the numbers shown on the 9620 Display. You may have a Model 9620, Model 920 and a Model 9320 all



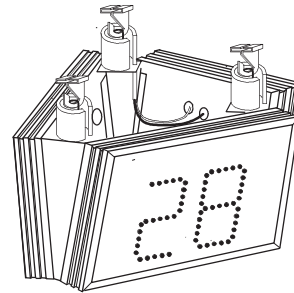
connected to the same Keypad, and each Remote Display will show all numbers in the system one screen at a time.

Model 920 Display Operation

Display Features

- | 5.5-Inch Tall Numbers
- | One 2-Digit Number
- | Up to Eleven Displays without Booster
- | High Brightness LEDs

The Model 920 Remote Display works with the Model 4060 Keypad. It shows one 2-digit number at a time while the 4060 is showing six 2-digit numbers at a time. This means that the numbers shown on the 4060 Keypad may not be at any given instant the same as the numbers on the 920 Remote Display. However, all numbers will be displayed in sequential order by the 920. Every three seconds (unless otherwise programmed by user) the next number will be



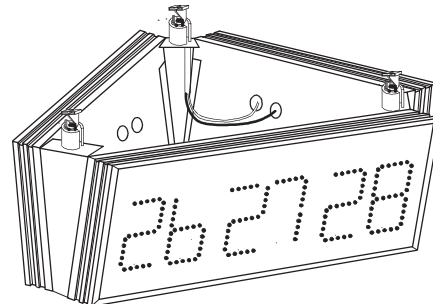
sent to the 920. You may have a Model 9620, Model 920 and a Model 9320 all connected to the same Keypad, and each Remote Display will show all numbers in the system one screen at a time.

Model 9320 Display Operation

Display Features

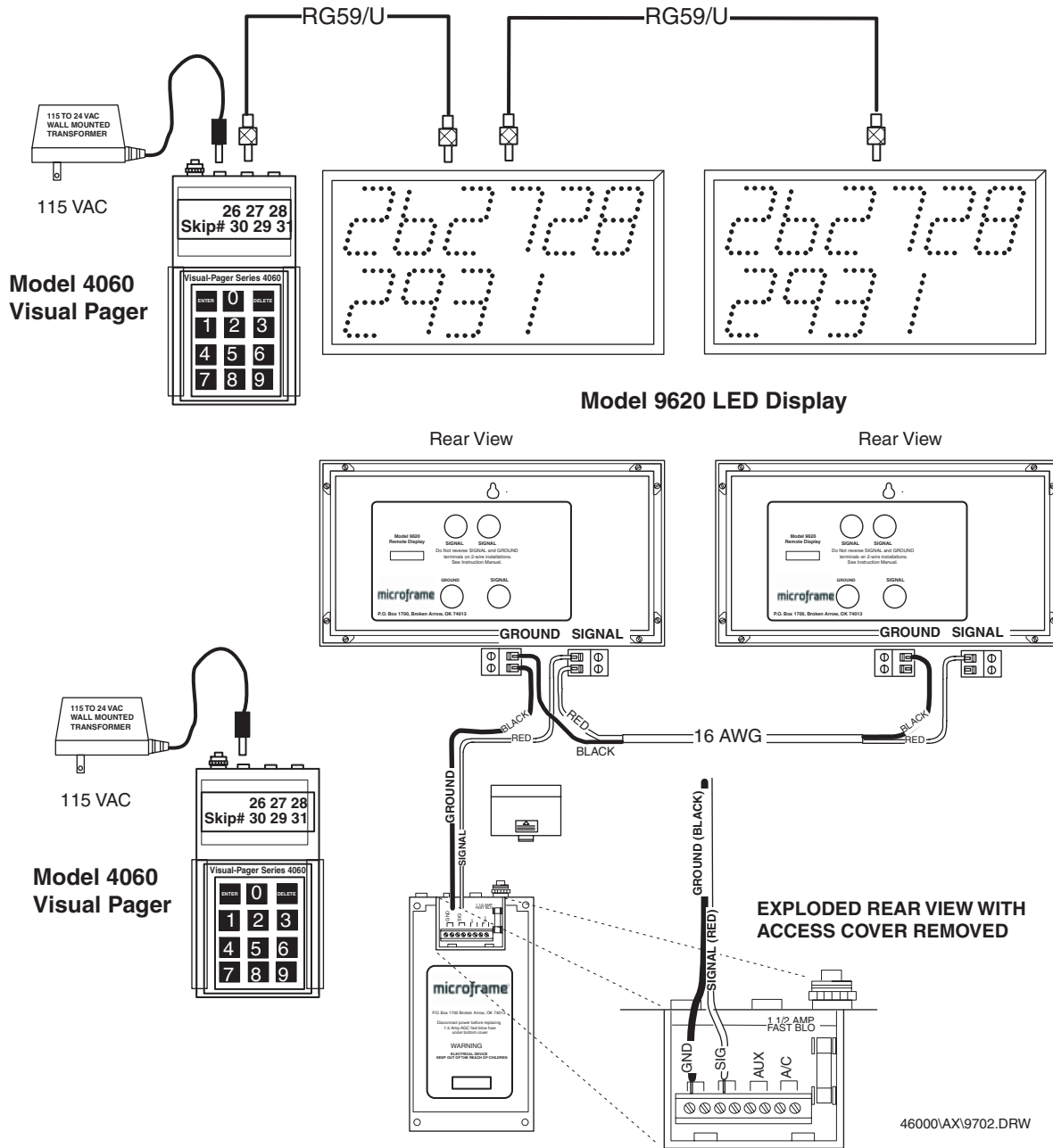
- | 5.5-Inch Tall Numbers
- | Three 2-Digit Numbers
- | Up to Four Displays without Booster
- | High Brightness LEDs

The Model 9320 Remote Display works with the Model 4060 Keypad. It will show three 2-digit numbers at a time while the 4060 is showing six 2-digit numbers at a time. This means that the numbers shown on the 4060 Keypad may not be at any given instant the same as the numbers on the 9320 Remote Displays. However, all numbers will be displayed in sequential order by the 9320. Every three seconds (unless otherwise programmed by user)



the next set of three numbers will be sent to the 9320. You may have a Model 9620, Model 920 and a Model 9320 all connected to the same Keypad, and each Remote Display will show all numbers in the system one screen at a time.

VISUAL-PAGER CONNECTION DIAGRAM



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The VISUAL-PAGER System is very easy to install if connected as shown above. One AC Power Adapter next to the Keypad powers the entire system. Extensions and additions can easily be made by using locally purchased 18 AWG wire. For cable distances over 200 feet refer to the **Cable Length Chart**. The system may be connected in other configurations. For example, the Keypad may be connected with a "Y" adapter and two cables if the Remote Displays are to be located on opposite sides of the Keypad.

4 PROGRAMMING INSTRUCTIONS

4.1 PROGRAMMING OPTIONS

The following user programmable options are available in the Model 4060 Keypad. (NOTE: If your system has more than one Keypad, you must program each Keypad when all other Keypads are turned off.)

- Option 13 changes display rotation time
from 0 to 9 seconds
- Option 14 automatically deletes numbers after a delay of 1 to 99 minutes
- Option 15enable skipped number
- Option 16set delay time for skipped number display before it shows
skipped number
- Option 17deletes Keypad sound
- Option 18enable quick delete
- Option 19resets to factory defaults
- Option 22idle character

4.2 PROGRAM MODE

To enter the Programming Mode, HOLD the ZERO key down when turning the Model 4060 ON. The Model 4060 will display the serial number and software revision number as follows: Release the ZERO key. You are now in the Programming Mode and your screen will appear as follows:

```
SERIAL #1234
REV #01
```

To change any of the factory selected defaults, select Program Area #1 and the Option Number listed below. Should the message **EE-PROM** appear at any time, return the system to the factory defaults (Program Area 1, Option Number 9) and start over.

4.3 DISPLAY ROTATION TIME (13)

This is the time each screen is shown before going to the next screen of numbers. The factory default is three seconds. To change this time, press 1 and the following screen will appear:

```
Program Area #1
```

Now Press 3 and the following screen will appear:

```
Program Area #1
Rollover 3
```

Factory default is three seconds. Now type in the number of seconds each screen is to be displayed, i.e. four seconds.

```
Program Area #1
Rollover 4
```

Now press ENTER, and your new Roll Over time of four seconds is saved. If you accidentally press another number, press DELETE. In either case your local display now shows:

```
SERIAL #1234
REV #01
```

The Keypad is ready for your next programming change, or you may press DELETE again to return to the normal operation of the Keypad.

4.4 AUTOMATIC DELETE (14)

Each number will automatically be deleted from the system after a user programmable time delay. Factory default is 30 minutes. You may program that number as follows. Press 1 to enter Program Area #1, then press 4 and your screen will show:

```
Program Area #1
Delete Time 00
```

You may now enter the number of minutes you wish each number to remain displayed on the system, i.e. 15. Your screen will now look like:

```
Program Area #1
Delete Time 15
```

Now press ENTER, and your new Delete Time of 15 minutes is saved. If you accidentally press another number, press DELETE. In either case your display now shows:

```
SERIAL #1234
REV #01
```

The Keypad is ready for your next programming change, or you may press DELETE again to return to the normal operation of the Keypad.

4.5 SKIPPED NUMBER ENABLE (15)

Once you start entering a series of numbers, it is sometimes important to know if you have skipped one of your customers. If you enable this option, the customer numbers that have

skipped appear on the lower part of the Keypad display. You may also enable the next option which delays the time between when a number is skipped and when it shows in the Keypad display as skipped. This allows you to service three or four customers simultaneously but not necessarily in order. This eliminates the need to display several numbers in the Skipped Number display.

The factory default is 1, or enabled. You may program Skipped Numbers to appear by the following. Press 1 to enter Program Area #1, then press 5 and your screen will show:

```
Program Area #1
Skip Enable 1
```

To disable the Skipped Number display press 0. To enable Skipped Number display press 1. You may now make your selection by pressing 1 (or 0). If you press 1 your screen will now look like:

```
Program Area #1
Skip Enable 0
```

Now press ENTER, and your selection to enable or disable the Skipped Number display is saved. If you accidentally press another number, press DELETE. In either case your display now shows:

```
SERIAL #1234
REV #01
```

The Keypad is ready for your next programming change, or you may press DELETE again to return to the normal operation of the Keypad.

4.6 SKIPPED NUMBER DELAY (16)

If you enable the Skipped Number display above, then you will want to program the time delay until the Skipped Numbers are displayed as follows: Select a time from 0 to 9 minutes. The factory default is five minutes.

You may program Skipped Number display time as follows: Press 1 to enter Program Area #1, then press 6 and your screen will show:

```
Program Area #1
Skip Time 5
```

You may now make your selection by pressing any number between 0 and 9. If you press 4 (for a 4-minute delay), your screen will now look like:

```
Program Area #1
Skip Time 4
```

Now press ENTER, and your selection of display delay time is saved. If you accidentally press another number, press DELETE. In either case your display now shows:

```
SERIAL #1234
REV #01
```

The Keypad is ready for your next programming change, or you may press DELETE again to return to the normal operation of the Keypad.

4.7 ENABLE KEYBOARD BEEP (17)

Each time you press a key on the 4060, you will hear a small beep to let you know the key has made contact. If you wish to disable this beep, you may do so after pressing 1 to enter Program Area #1, then press 7 and your screen will show:

```
Program Area #1
Beep Enable 1
```

To enable beep, press 1, to disable beep, press 0. You may now make your selection by pressing 1 (or 0). If you press 0 your screen will now look like:

```
Program Area #1
Beep Enable 0
```

Now press ENTER and your selection is saved. If you accidentally press another number, press DELETE. In either case your display now shows:

```
SERIAL #1234
REV #01
```

The Keypad is ready for your next programming change, or you may press DELETE again to return to the normal operation of the Keypad.

4.8 QUICK DELETE (18)

"Quick Delete" makes the 4060 automatically delete when two numbers are typed in rather than automatically enter the numbers. This is helpful for applications which have two Keypads (one for entering and one for deleting). To program this option, press #1 to get into Program Area #1 then press 8. Your screen will show:

```
Program Area #1
Quick Delete 0
```

To enable "Quick Delete," press 1 then ENTER; or to disable press 0 then ENTER. Your display now shows:

```
SERIAL #1234
REV #01
```

The Keypad is ready for your next programming change, or you may press DELETE again to return to the normal operation of the Keypad.

4.9 RESTORE FACTORY DEFAULTS (19)

You may restore all the factory defaults for programming by pressing 1 to enter Program Area #1 then press 9. Your system will be restored to the Factory Defaults and the screen will show:

```
SERIAL #1234  
REV #01
```

The Keypad is ready for your next programming change, or you may press DELETE again to return to the normal operation of the Keypad.

4.10 IDLE CHARACTER (22)

If the Remote Display is blank (not displaying any numbers), it's difficult to explain to customers where their number will be appearing. The Idle Character option allows a character to show on the Remote Display even when there aren't any numbers in the system. The choices of characters are:

0—No Idle Character (Display is blank when no numbers are in the system.)

1—Last Number deleted stays on Remote Display until a new number is entered.

2—00 shows on Remote Display when no numbers are in the system.

3—Bars show on display segments when no numbers are in the system.

To program this option, press 2 to get into Program Area #2 then press 2. Your screen will show:

```
Program Area #2  
Idle chrctr 1
```

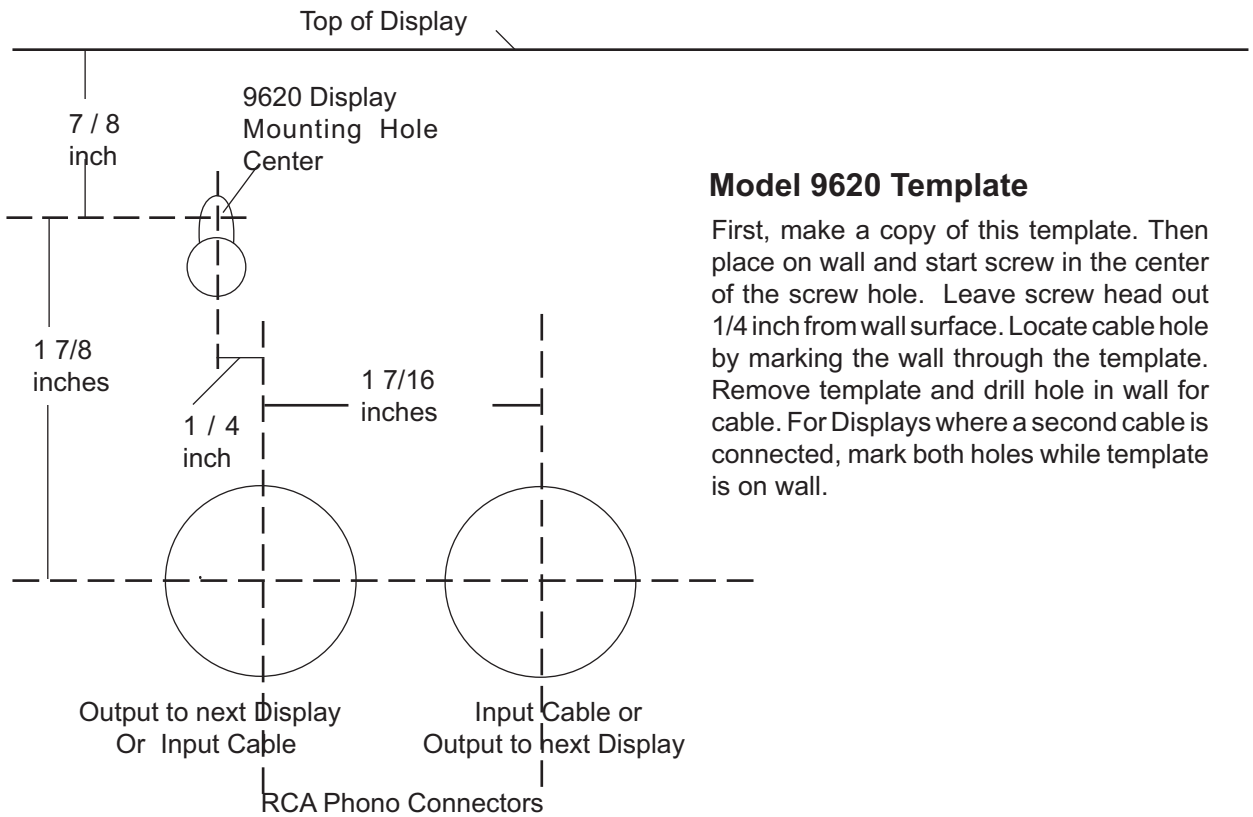
To choose the idle character press 0, 1, 2 or 3 for the character type. Then Press Enter. Your display now shows:

```
SERIAL #1234  
REV #01
```

The Keypad is ready for your next programming change, or you may press DELETE again to return to the normal operation of the Keypad.

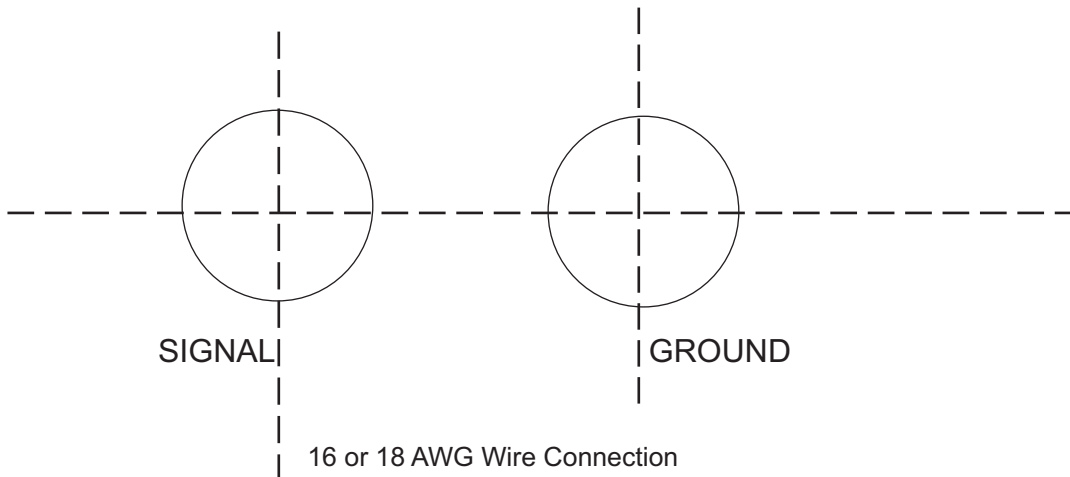
*To enter programming mode, see page 17.

9620 DISPLAY MOUNTING TEMPLATE



Model 9620 Template

First, make a copy of this template. Then place on wall and start screw in the center of the screw hole. Leave screw head out 1/4 inch from wall surface. Locate cable hole by marking the wall through the template. Remove template and drill hole in wall for cable. For Displays where a second cable is connected, mark both holes while template is on wall.



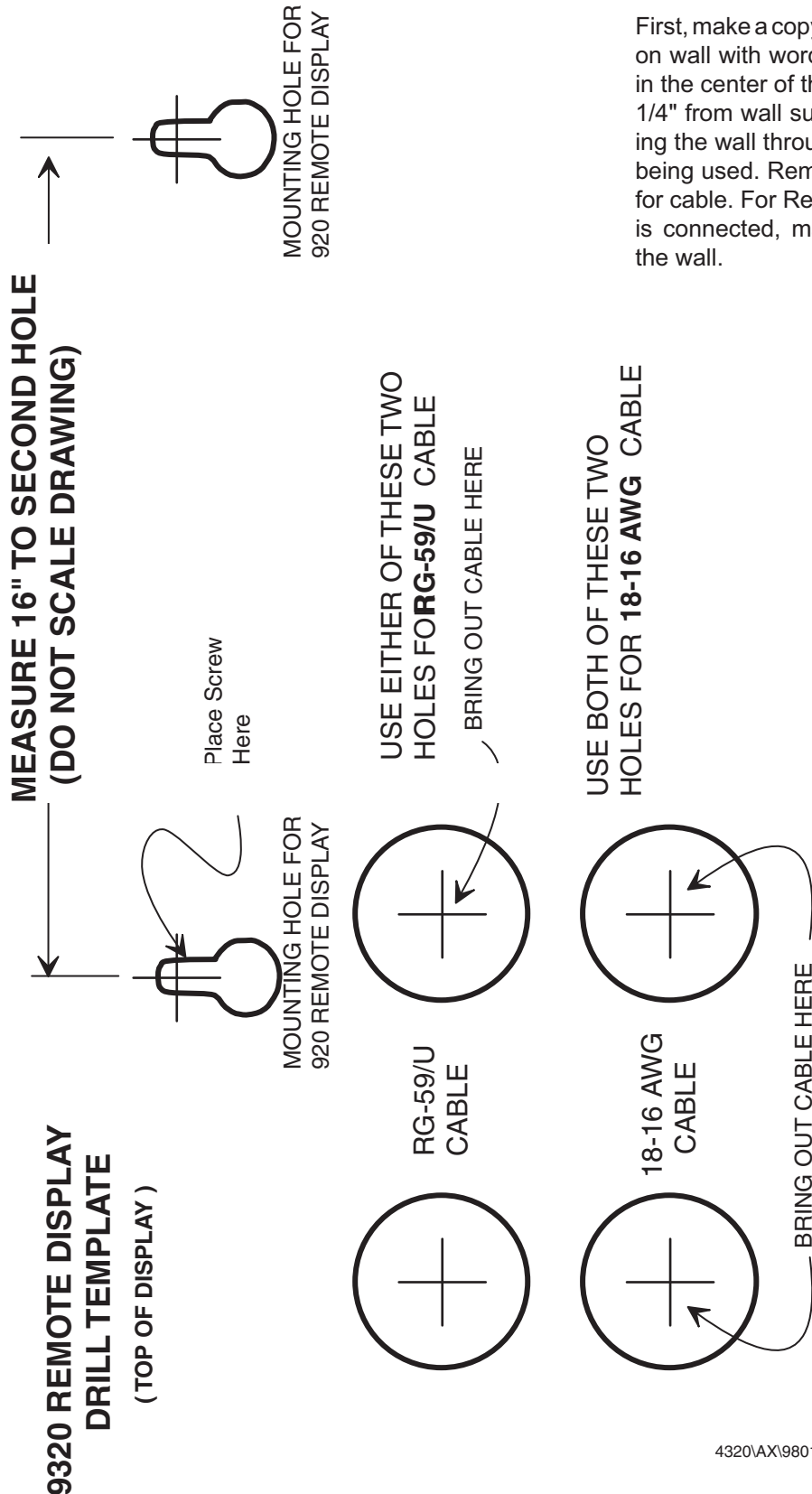
Technical Support Phone: 1-800-635-3811

Microframe Corporation | P.O. Box 1700 | Broken Arrow, OK 74013

9320 DISPLAY MOUNTING TEMPLATE

Model 9320 Template

First, make a copy of this template. Then place template on wall with words facing toward you and start screw in the center of the screw hole. Leave screw head out 1/4" from wall surface. Locate cable hole(s) by marking the wall through the template for the type of cable being used. Remove template and drill 1" hole in wall for cable. For Remote Displays where a second cable is connected, mark both holes while template is on the wall.



4320\AX\9801.drw

Technical Support Phone: 1-800-635-3811

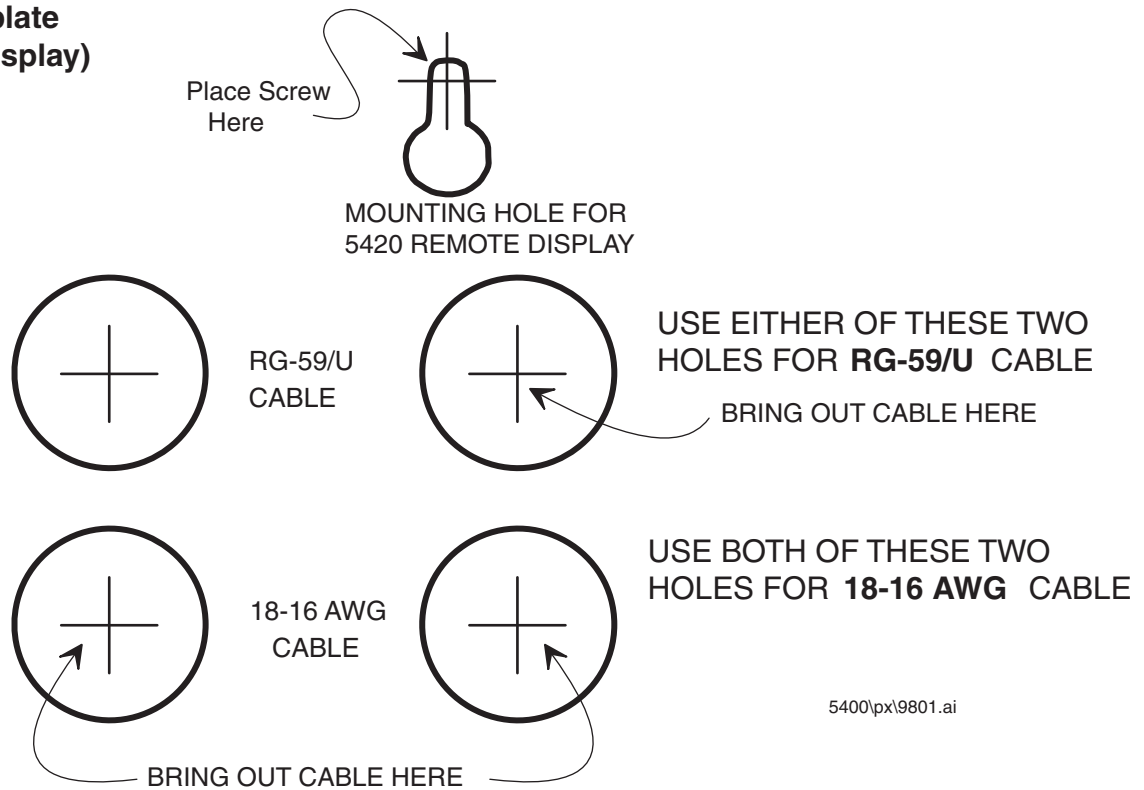
Microframe Corporation | P.O. Box 1700 | Broken Arrow, OK 74013

920 DISPLAY MOUNTING TEMPLATE

Model 920 Template

First, make a copy of this template. Then place template on wall with words facing toward you and start screw in the center of the screw hole. Leave screw head out 1/4" from wall surface. Locate cable hole(s) by marking the wall through the template for the type of cable being used. Remove template and drill 1" hole in wall for cable. For Remote Displays where a second cable is connected, mark both holes while

920 Remote Display Drill Template (Top of Display)



Technical Support Phone: 1-800-635-3811

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MAXIMUM CABLE LENGTH TABLE

The following chart shows the maximum number of Remote Displays that can be installed per cable length indicated. The cable length can be increased by simply putting fewer Remote Displays on EACH CABLE connected to the Model 4060 Keypad. However, if greater distance is required, simply use 16 AWG wire from the Keypad. The TOTAL CABLE LENGTH (Sum of length of all cables in the system) should not exceed 10,000 feet.

CABLE LENGTH CHART FOR 18 OR 16 AWG WIRE

Model 920		
One 2-Digit Number Display		
# of Displays	Distance	
	18 AWG	16 AWG
1	2000	2000
2	2000	2000
3	2000	2000
4	2000	2000
5	1500	2000
6	1100	1800
7	800	1300
8	600	1000
9	400	700
10	300	500
11	200	400
12	100	100

Model 9320		
Three 2-Digit Number Display		
# of Displays	Distance	
	18 AWG	16 AWG
1	2000	2000
2	1100	1800
3	400	700
4	100	100

Model 9620		
Six 2-Digit Number Display		
# of Displays	Distance	
	18 AWG	16 AWG
1	2000	2000
2	1200	2000
3	600	900
4	200	400

TROUBLESHOOTING CHART

SYMPTOM	POSSIBLE CAUSE	CURE
Keypad Display and Remote Display both blank.	Keypad is not connected to power. AC Power Adapter is bad or Keypad fuse blown.	Check AC wall connection or change to another wall outlet. Replace Model 4060 Keypad fuse.
Keypad Display works but Remote Display does not light up or Remote Display has erratic numbers.	Poor signal connection to Remote Display or no signal connection.	Check signal cable connections or move Remote Display close to the Model 4060 Keypad and test with a short cable to determine if the problem is in the Remote Display units or in the cable.
Keypad works but Remote Display does not work and Keypad Displays SHORT 3 .	Keypad or Display has failed.	Disconnect Keypad from Display. If message remains, then return Model 4060 Keypad to factory. If problem goes away, then call factory for help to isolate whether it is the cable or Display.
Model 4060 Keypad works until the cable is plugged in, then it displays SHORT 1 or 2 .	Shorted cable. SHORT 1 —short within 100 ft. of 4060. SHORT 2 —short over 100 ft. from 4060.	Check connectors for shorts. Repair or replace cable.
Keypad Display shows EEPROM .	Programming error.	Reset to Factory Defaults 19 (see Programming Instructions).

EXPLANATION OF ERROR CODES

There are four error conditions that will cause an Error Code to be illuminated in the Model 4060 Keypad local display. It will be of great assistance in troubleshooting your system if you will note what code is illuminated when you call the factory for assistance. Call 1-800-635-3811 for technical support.

ERROR MESSAGE	CAUSE
SHORT 1 Shorted Cable	The cable is shorted within 100 feet of the Model 4060 Keypad.
SHORT 2 Shorted Cable	The cable is shorted greater than 100 feet from the Keypad, probably at the Remote Display.
SHORT 3 No Signal Out	The output is shorted high and there are no numbers shown on the Remote Displays. See "Short 3" above.
EEPROM Programming Error	There is a programming error. Return Model 4060 Keypad to Factory Defaults by PRESSING 19 in the Programming Mode. (See Programming Instructions for more details.)



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