

# Microframe Corporation

## Model 190 TV Interface



# Operating Manual

A0190-7010





## **SERIES 190**

### **INSTALLATION & SPECIFICATION GUIDE**

**ITEM NO: A0190-7010**  
**REVISION DATE: 01/03**

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## 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 power supply. 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](mailto:support@microframecorp.com).

## Safety

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

## Warning

All power transformers, 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.

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# MODEL 190 SPECIFICATIONS

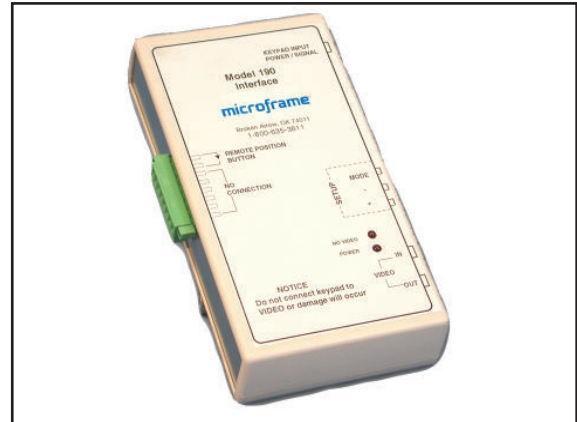
## Interface

### Features

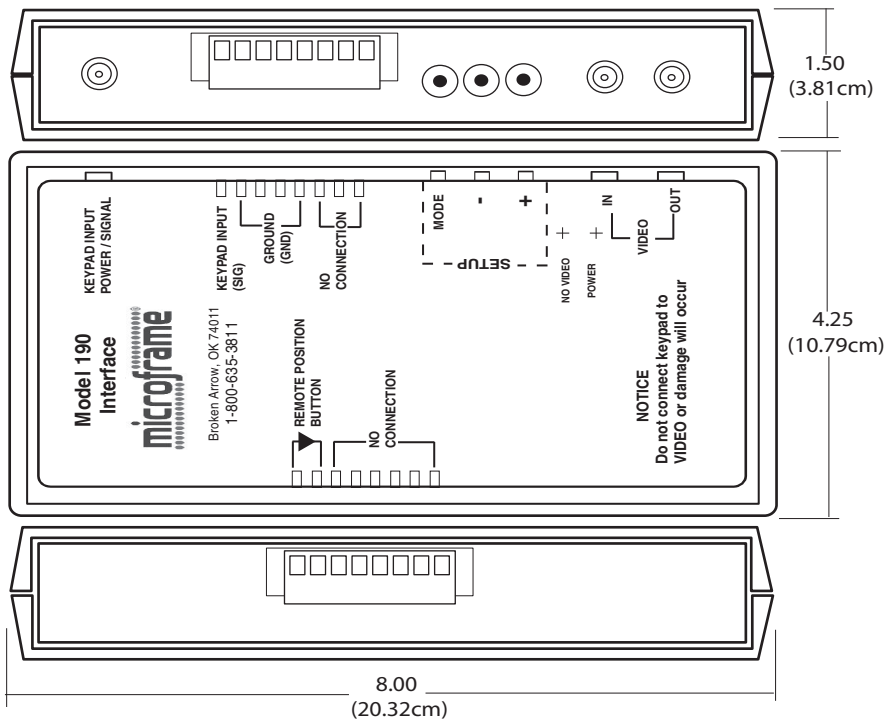
The Model 190 Interface overlays numbers onto a video signal. It operates with the 904 or 906 Keypads. The Interface accepts up to six digit numbers from the keypads and displays them on a TV. The Model 190 Interface has optional Ethernet or RS232 interfaces. A remote push button is available to move the displaying numbers to different corners.

### Operation

Once a number is entered into the Keypad, the number is sent immediately both to the Display and the TV.



Microframe® Model 190 Interface



A0190\AX\9700.ai

### Model 190 Specifications

Local LED's .....	"Power On", "No Video In Connected"
Push Button .....	External Dry Contact for Number Position
Number Height .....	.052 x screen size
Max Inupt Voltage on Keypad Input..	32 Vac
Max Input on Video IN .....	+2 Volts -3 Volts
Maximum Number of Digits .....	Depends on Keypad Digits
Power Input Requirements .....	24VAC .3A supplied by keypad or external Transformer which requires 115 Volts AC @ 20va
Weight .....	.075 lb (0.4 kg) with transformer 2.25 lb (1.0 kg)

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 tion**  
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 com**

## PRE-INSTALLATION PROCEDURES

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

### 1.1 INSTRUCTIONS FOR USE

Once connected, the unit will operate without further user intervention. It is recommended to test each unit before permanent installation by following the instructions below.

### 1.2 TEST UNIT PROCESSOR

Connect the power/signal cable from the keypad to the power input on the top right of the unit. Turn on the keypad power. The power light on the model 190 should begin to flash. The video light should be lit (to indicate no video signal).

### 1.3 TEST UNIT VIDEO PROCESSOR

Connect a RCA cable from the video out jack to the video in of a TV. You should see a blue screen. Enter some numbers into the keypad. The numbers should display in one corner of the screen.

### 1.4 TEST EXTERNAL VIDEO SIGNAL

Connect an unmodulated video signal to the video in jack. If no video appears on the TV, make sure a proper signal is supplied. If video can be seen but the numbers jump on the screen, the video signal is weak. A weak signal can be boosted by a video amplifier. Note a typical vcr tends to boost and stabilize a weak video signal.

### 1.4 TEST EXTERNAL BUTTON

Connect a doorbell button to the top two inputs of the auxiliary input terminal (located on the left of the unit). Pressing the button should cause the number position to move to one of the four corners of the screen.

## INSTALLATION PROCEDURES

### 2.1 UNIT INSTALLATION

#### 2.2 TV Signal

Connect an RCA cable from the **video out** connector, located on the bottom right of the unit, to the video in of your TV. Use another RCA cable to connect the **video in** connector, located next to the video out connector, to a standard unmodulated video signal. One common example of this is the video output of a VCR.

#### 2.3 Power/ Keypad signal

The RCA cable from your keypad or display carries both power and signals. It is imperative that it is only connected to the power input. Connection of the power cable to either video input will likely destroy the unit. Connect the 9x0 power/signal cable to the **power input** on the top right of the unit.

#### 2.4 Power-up

Once power is applied to the unit (by turning on the keypad driver) it will generate a video output. If no signal is present at the video input, it will generate a blue screen. Otherwise it will pass the video through to the TV.

#### 2.5 Configuration

The mode button allows the user to adjust the horizontal and vertical offset of the numbers on the screen. This is done by pressing the mode button, then using the plus and minus buttons to adjust the setting. When done press the mode button until the display is cleared.

## OPERATION

### 3.1 Changing the Number Position

As a convenience to the viewer, an auxiliary input button is provided. This allows the viewer to move the number position to any of the four corners of the screen. Thus if the number is covering a football score, it can be moved to another part of the screen by pressing the included button. Using additional cable, this button can be run to a convenient location in the establishment.

### 3.2 Changing the Number Offset

The distance of the number from the edge of the screen can be adjusted using the mode button. Press the mode button once to activate the horizontal position adjustment. Use the plus '+' and minus '-' buttons to adjust the position. Press the mode button again to adjust the vertical position. Press the mode button a third time to return to normal operation.

### 3.3 Status Lights

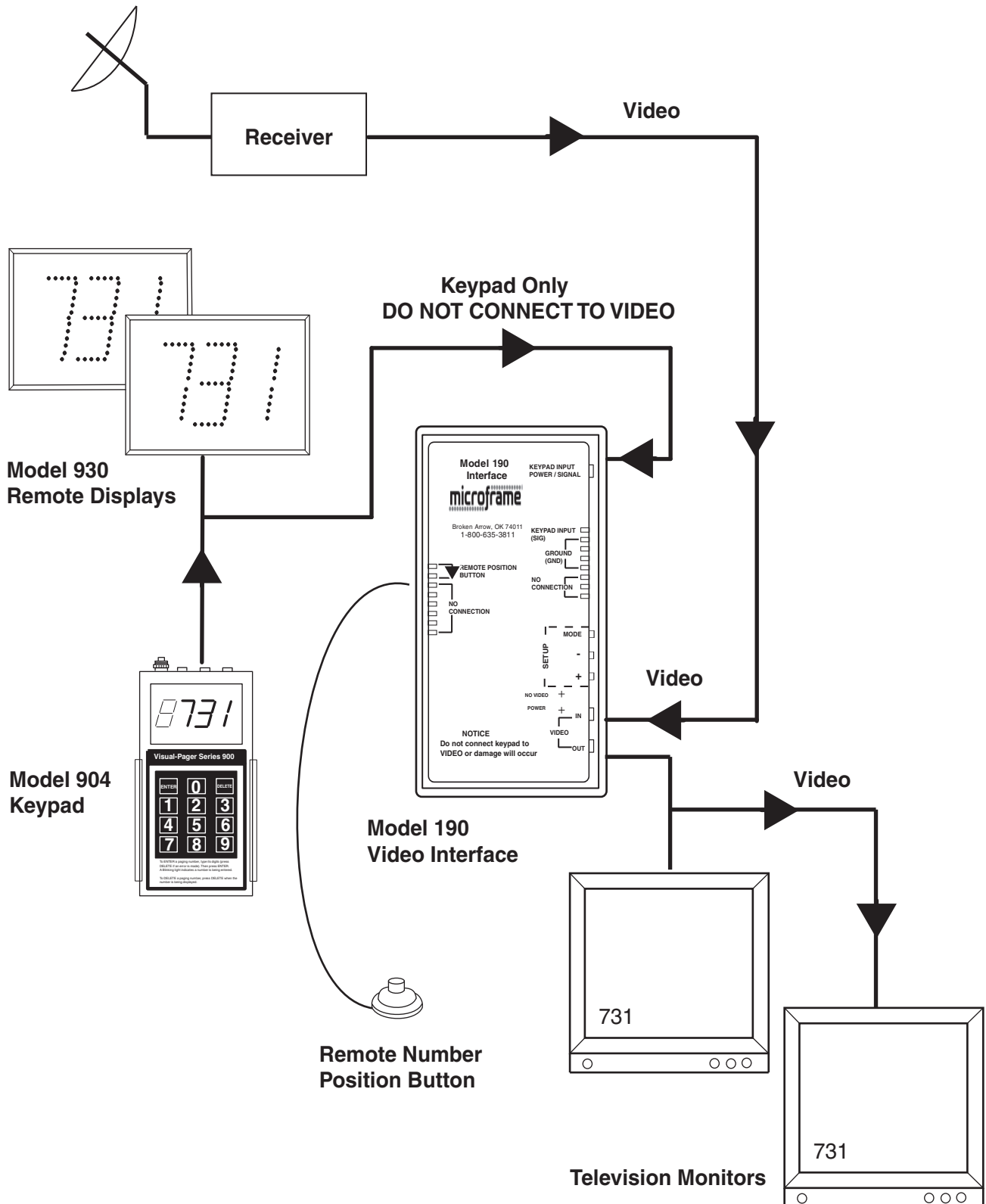
There are two lights visible on the top of the case. The video signal indicator lights when there is no video signal detected. The power light flashes under normal operation.

## FAQ's

Q: Why can't I use just one unit for all my TV's?

A: The Model 190 does not have a built in tuner. It requires an unmodulated video signal, such as the video out from a VCR. Since the video signal is tuned to one channel before being fed to the unit, it can only operate on that particular video feed. Thus, a unit is required for every video feed to a TV or bank of TV's.

# INTERFACE CONNECTION



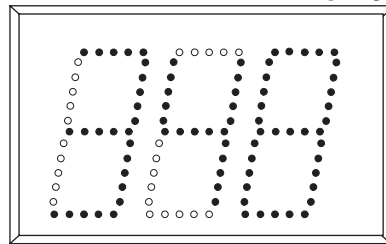


# VISUAL-PAGER CONNECTION DIAGRAM

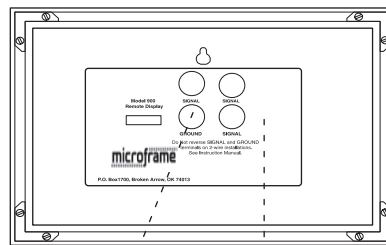
## Using 16 or 18 AWG Paired Wire

The VISUAL-PAGER may be connected with common 16 or 18 AWG paired wire utilizing the terminal blocks located at the back of the remote displays and under the small slide-on cover of the Model 904 Keypad.

**Model 930 Remote Display**

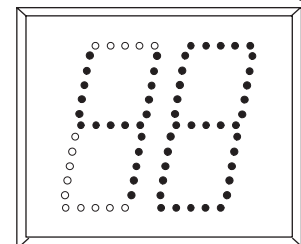


REAR VIEW

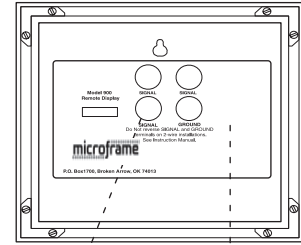


GROUND SIGNAL

**Model 920 Remote Display**

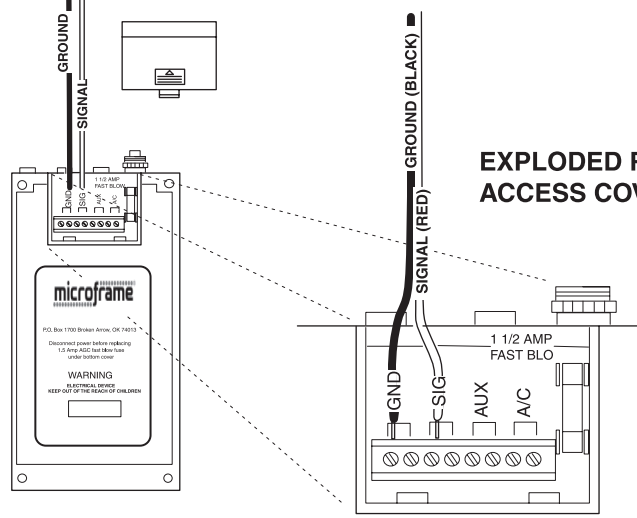
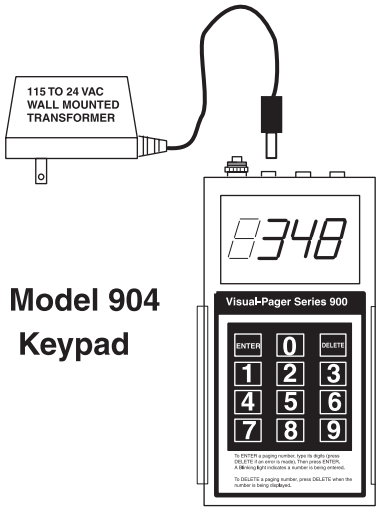


REAR VIEW



GROUND SIGNAL

SEE NOTE



**NOTE: THE MODEL 920 SIGNAL AND GROUND CONNECTIONS ARE REVERSED FROM THE**

# DETAILED VISUAL-PAGER CONNECTION

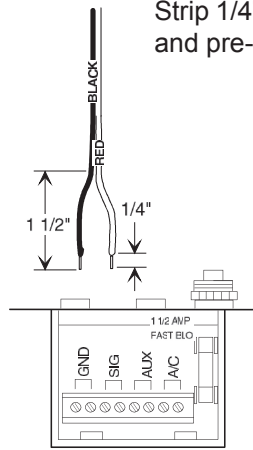
## STEP 1:

Remove slide-on cover.

## STEP 2:

Remove 1.5" insulation from cable jacket and separate wires.

Strip 1/4" insulation from each wire and pre-form wires as shown.



## STEP 3:

Insert Black Wire in one of the terminals marked GND.

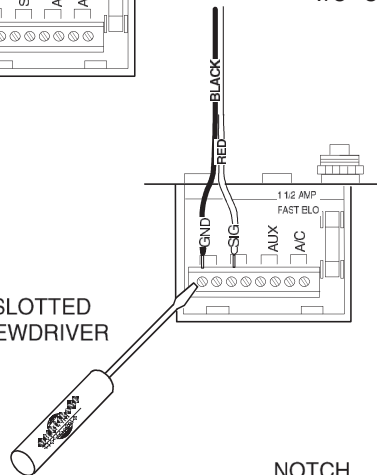
Insert Red Wire in one of the terminals marked SIG.

Tighten terminal screws using a 1/8" slotted screwdriver.

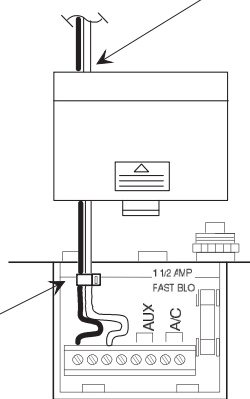
## STEP 4 (If required):

If a second set of wires are required at the Keypad, repeat Step 3 being careful not to reverse the SIG and GND connections.

1/8" SLOTTED SCREWDRIVER



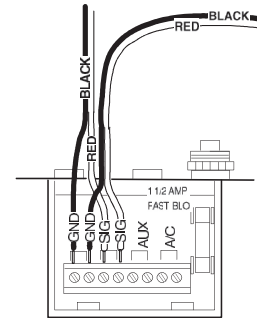
NOTCH



## STEP 5:

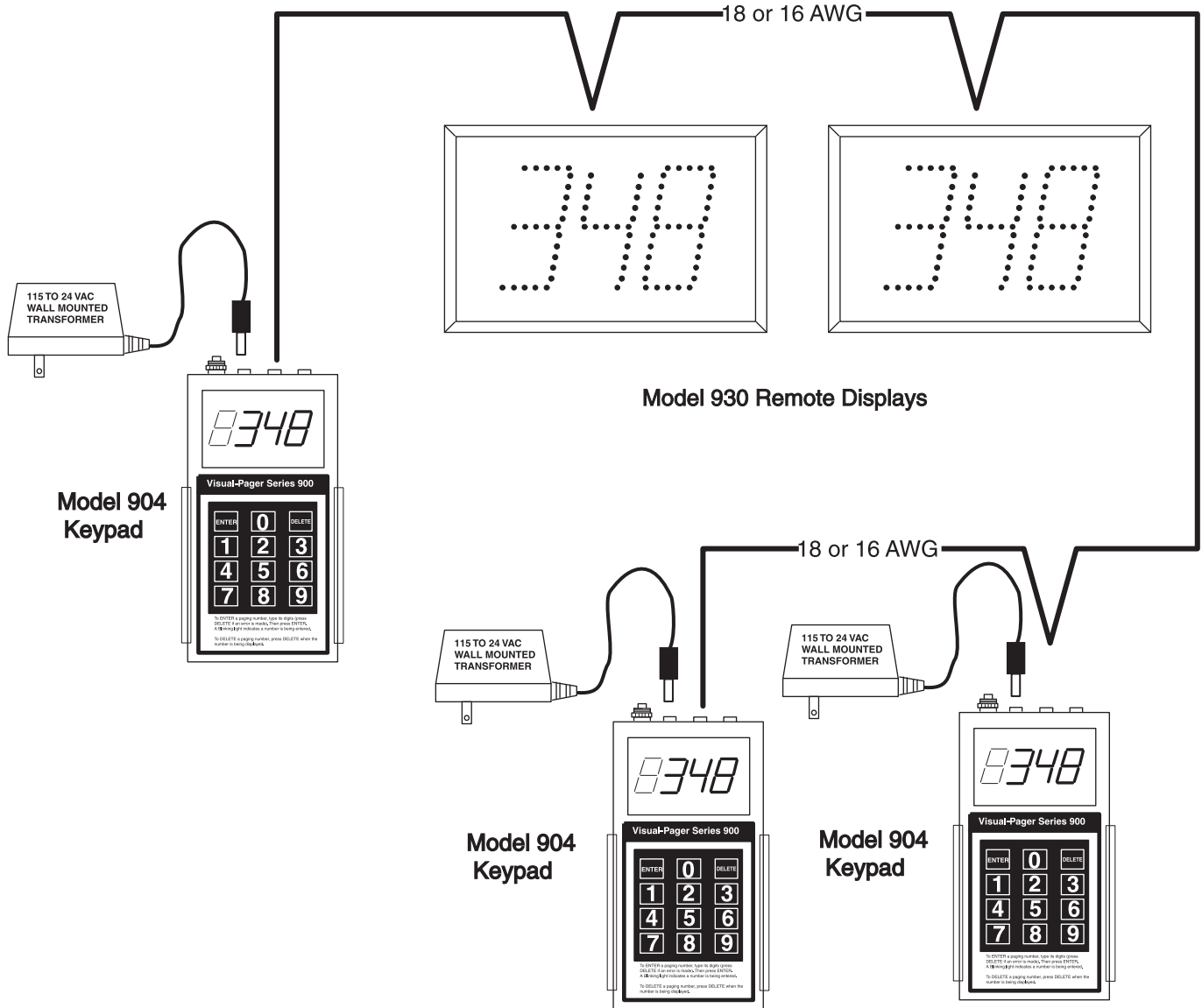
Install slide-on cover being careful to first form wires so the Ty-wrap is inside the case as shown. The slide-on cover has a notch for the wires to

Ty-Wrap



# MULTIPLE KEYPAD CONNECTION

You may connect your second Keypad as shown in the examples below:



904\ax\9701.DRW

Model 904 Keypads may be connected at any point along the signal cable. The 900 Series VISUAL-PAGER will work as long as one of the Model 904 Keypads is turned on. Other Model 904 Keypads may be turned on at any time; however, they should not be turned OFF as long as numbers are being displayed. (Refer to the Maximum Cable Length Chart for proper cable selection.) The system may be connected in many other configurations provided they are all hooked together and the **SIGNAL/ GROUND** polarity is maintained (see Visual-Pager Connection Diagrams).

## TROUBLESHOOTING CHART

SYMPTOM	POSSIBLE CAUSE	CURE
The unit's power and video LED's don't light.	Unit is not connected to power/signal cable of keypad.	Check to make sure a cable is connected from the keypad to the power input of the unit. Turn keypad power on.
Keypad shows numbers, but no numbers show on the monitor. The unit's power light is flashing.	Monitor's video signal not connected properly or not set to video input.	Check connections from unit's video out to the monitor. Make sure the display is set to the video input used.
Numbers are visible on the display, but no video. The video LED is lit on the unit.	There is no video to the unit or the video format is invalid.	Check connections to the video input of the unit. The video light will go out when a video signal is detected. Video should be unmodulated; i.e., video out of a VCR.
Numbers jitter on screen when video is used.	Video signal is weak or unstable.	Shorten video cable runs. Use a video amplifier.
	All TVs overscan to some degree.	Adjust the number position using the mode, '+' and '-' buttons. See