

# Microframe Corporation

Model 3700 WebTran:  
Browser Based Paging



## Operating Manual

B3700-7011





**Model 3700  
WebTran**

**INSTALLATION & SPECIFICATION GUIDE**

**ITEM NO: B3700-7011  
REVISION DATE: 07/07**

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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 correct 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 adapter.
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 tech will gladly assist you.

## Assistance

For any product assistance or maintenance help, contact Microframe by 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.

## 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 anyone 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,

## Disclaimer

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

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# WEBTRAN SPECS

## Browser Based Paging

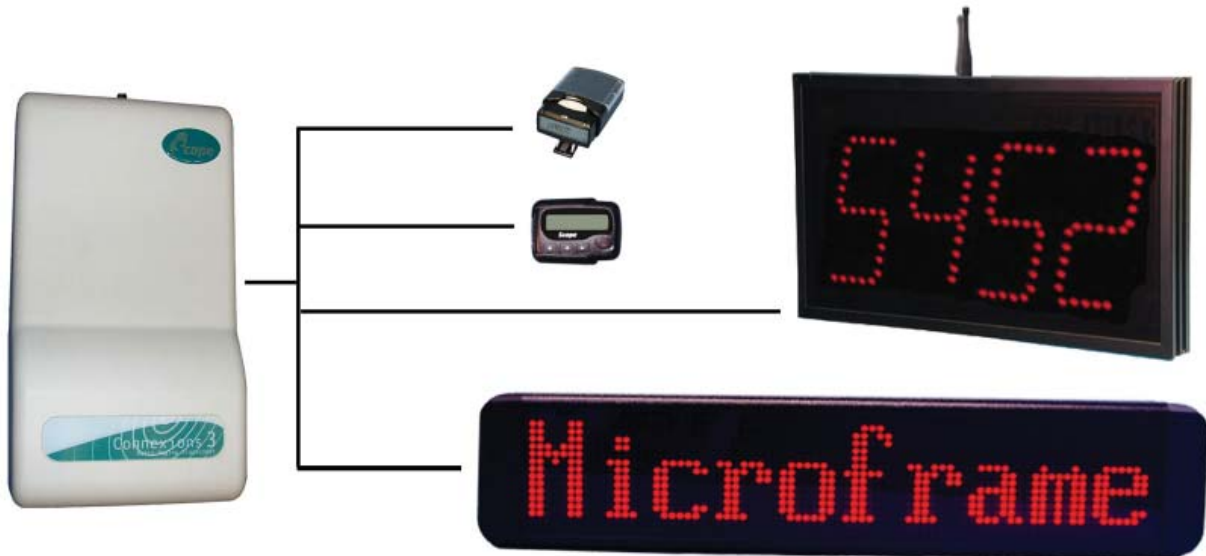
### Features

The B3700 brings the power of on-premise paging to the user's desk. The browser based paging system eliminates the need to install client software.

This product has been customized to work with Scope pagers, Series B3500 Wireless Numeric Displays, and Models B3724/B3748 Wireless Alpha Displays.



WebTran Transmitter



### DigiLink Specifications

Frequency.....	457.550 or 457.575 MHz
TX Baud Rate.....	512 or 1200
Coverage Area.....	1/4 to 1/2 mile indoors; up to 1 mile outdoors
FCC ID.....	JRNUSASERILINK
Input Power .....	110VAC, 60Hz, 10W max
TX Output Power .....	500mW
Serial Input .....	9600 baud, 8 bits, no parity, 1 stop bit
Ethernet Input.....	RJ-45 connector, 10Base-T interface
IP Address .....	DHCP assigned or static IP
Mounting.....	Wall mounted via 4 keyholes
Footprint (inches).....	12.91 (L) x 7.48 (W) x 2.95 (D)

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# 1 SYSTEM OVERVIEW

## 1.1 DESCRIPTION

The B3700 is a 110V AC powered radio paging system. It can be used to transmit both text and numeric messages to pagers and wireless displays. The unit provides ethernet and serial interfaces.

The ethernet interface allows for browser-based control of the transmitter from any computer on a LAN. A special "socket connection" allows third party applications to integrate control of the transmitter via the network. Please contact Microframe for details.

The serial interface allows direct control of the transmitter from a computer. Most users elect off-the-shelf software, such as the PageConnect software (sold separately). Alternately, users may develop their own custom paging application. Please contact Microframe for details.

## 1.2 RANGE EXPANSION

The range and performance of this equipment can be improved by the addition of more efficient antennas.\*These are connected to the transmitter with 50 OHM coaxial cable.

NOTE: High frequencies can equate to high power losses. Always use quality cable. RG58 is only acceptable on cable runs of up to 5 meters. We recommend RG213, or equivalent, on greater lengths. If in doubt consult your dealer.

*\*Subject to license conditions. Specifically, mounting height and Effective Radiated Power (ERP).*

## 1.3 IMPORTANT INFORMATION

It is the purchaser's responsibility to determine the suitability of this equipment and its derivatives for any given application.

Good working practice dictates that a suitable system installation log must be generated, together with a record of the dates when the system has been manually checked, (with the aid of signal strength meters, etc.) enabling the system performance to be compared with the original installation data.

## 1.4 SAFETY INFORMATION

These products are designed to operate safely when installed and used according to general safety practices. The following requirements should be observed at all times:

Do NOT subject this equipment to:

- Mechanical shock
- Excessive humidity or moisture
- Extremes of temperature
- Corrosive liquids

This equipment is designed for indoor use, unless expressly stated otherwise, and must not be used in classified

hazardous areas, including areas containing explosive or flammable vapors, unless express authorization has been given in writing by the manufacturer. If in doubt, consult Microframe for further information.

Do not obstruct any slots or openings in the product. These are provided for ventilation to ensure reliable operation of the product and to protect it from overheating.

## 1.5 CARING FOR YOUR TRANSMITTER

Only use a damp cloth for cleaning (not liquid or aerosol-based cleaners), and ensure that any power is removed from the unit prior to beginning the cleaning operation.

Removal of covers from the equipment should only be undertaken by authorized service personnel, who must ensure power is isolated prior to removal.

## 1.6 LIABILITY

Scope and Microframe do not accept liability for any damage or injury caused as the result of misuse of this equipment. It is the responsibility of the user to ensure that the equipment is operated in the manner for which it was intended and that it is the correct item of equipment for the required task.

## 1.7 WARRANTY INVALIDATION

Alteration or modification to any part of this equipment, without the prior written consent of the manufacturer, will invalidate all manufacturer approvals and warranties. No adjustments can be undertaken except by qualified and licensed persons as defined by the FCC Rules and Regulations. Operation of altered equipment can result in fines, imprisonment, and/or confiscation of such equipment.

## 2 INSTALLATION PROCEDURES

The information contained in this section is intended for use by system installers only. Unqualified personnel should not undertake installation of this equipment under any circumstances whatsoever.

### 2.1 PRECAUTIONS

1. Never install antennas near or adjacent to telephone, public address or data communication lines or overhead power cables.

2. Avoid, wherever possible, running antenna coax alongside other cables.

3. Avoid mounting the transmitter in the immediate vicinity of telephone exchanges or computer equipment.

4. Always use 50 ohm coaxial cable between the antenna and the transmitter. If cable runs exceed 5 meters (16.4 ft), always use low loss 50 ohm cable such as RG213 or UR67.

Coaxial cable intended for TV, Satellite or CCTV installations is normally 75 OHM, and therefore totally unsuitable for any transmitter installation manufactured by Scope.

5. Also remember that the performance of the system will be affected by the type of material the unit is mounted on and its surroundings.

The following is a list of materials that the transmitter will adversely affect if mounted on or if mounted in close proximity to:

- a) Foil back wallboard.
- b) Metal mesh or wire reinforced glass.
- c) Metal sheeting, large mirrors or suspended ceilings.
- d) Elevator shafts.

All of the above can reflect radio waves and thereby reduce the capability of the transmitter to perform its desired functions.

6. The circuit boards within this equipment may be harmed by Electrostatic Discharge (ESD). Installers should avoid touching the circuitry wherever possible, and should ensure that adequate anti-static procedures are adhered to at all times.

7. **Warning:** Never transmit without an antenna attached to the transmitter.

8. **Warning:** Carefully check the Installation section in this manual covering terminal connections prior to installation. Damage caused by incorrect connection is the responsibility of the installer!

### 2.2 LOCATION OF HARDWARE

Before locating the hardware in any given location, it is important to take into account the range of operation that you require to obtain from your system. The standard transmitter can quite easily provide ranges of up to a mile or more and will provide excellent coverage on most industrial sites, with just a BNC terminated quarter wave antenna.

For coverage of very large sites, or where exceptionally difficult operating conditions exist, it may be advantageous to install an external antenna. Installing the transmitter on the second or third floor of a building will more often than not boost overall range. However, horizontal range is not always required as much as vertical coverage through a multi-story building. Here it may be more useful to use a small external antenna mounted outside the building at half the building height. Sometimes range is required more in one direction than in the other: moving the aerial to one side of the building can provide a bias in the required direction, which may overcome the range difficulties.

Important: Coaxial feeds which are longer than 5 meters (16.4 feet) must employ low loss 50 ohm coax. We normally do not recommend feeds of more than 15 meters (49.2 feet) for standard applications. However, we suggest you contact our technical department where other considerations may prove this to be impractical.

RS232 cables are limited to a maximum length of 15 meters. These cables should be screened/shielded and must be kept clear of sources of induced magnetic or electrical noise. For distances over 15 meters, additional drivers/amplifiers must be installed at both ends of the data link.

### 2.3 INSTALLING THE TRANSMITTER

The following procedure must be adhered to when installing the paging system. Ensure you have taken into consideration all of the above information before selecting the location for your

transmitter. If in doubt, please contact Microframe Corporation.

1. Remove the cover from the ConneXions transmitter by loosening the four screws located at the top and bottom ends of the unit.

2. Carefully lift off the cover and set aside.

3. The transmitter should be affixed to an even wall surface using suitable screws fitted through the holes provided in the chassis plate. Hold the chassis up to the chosen location and with the aid of a pencil, mark the position of the mounting holes.

**Warning:** Do not use the chassis plate as a template for drilling the holes into the wall. Hammer drills vibrating through the chassis may irreparably damage the quartz crystals on the printed circuit boards.

4. Place the transmitter over the mounting holes and secure the unit with suitable screws. Check that the chassis plate does not bend and that the screws do not snag or pinch any of the internal cables.

5. Replace the cover and re-tighten the four retaining screws.

6. Connect the antenna to the unit via the BNC connector located at the top of the housing. If the antenna is an external antenna, or an antenna which is separate from the transmitter unit itself, ensure that the previous criteria covered under the section "Location of Hardware," has been strictly adhered to.

7. Plug an Ethernet cable into the LAN port. Connect the other end to your LAN network. You may also connect a null-modem serial cable into COM1. The other end of the serial cable plugs into a COM port on your computer. Both interfaces may be used if desired.

**Caution:** Do not apply power to this unit until the antenna is connected. Your transmitter will likely suffer damage if it transmits without the antenna.

8. Connect the 110V plug to the 3 pin power connector. Plug the other end into an electrical outlet.

9. Immediately you will see a red LED turn on near the bottom of the base of the unit. A

secondary red LED is visible near the top. Within 10 seconds it will start to blink slowly, indicating normal operation.

10. The system is now ready to accept commands from the Ethernet and serial ports. When a call is transmitted, the green LED on the base of the unit will light momentarily.

The Transcoder PCB contains static sensitive components. Care should be taken to avoid contact wherever possible and anti-static precautions should be observed during installation.

**Figure 1**



## 3 OPERATION

### 3.1 FIND THE TRANSMITTER IP ADDRESS

Make sure the transmitter is installed and powered. Run the shortcut "RunPing2K" on the CD that came with your system. It will return the IPs of all the transmitters found on the network. Write down this IP address, as you will use it to access the transmitter. [Figure 2]

The transmitter gets its IP address from a DHCP server on your LAN network. We recommend that your IT network administrator set a reserved IP address, so that the IP address of the transmitter does not change.

If the transmitter does not find a DHCP server, it will use the fallback address of 192.168.0.100.

### 3.2 SETTING UP THE TRANSMITTER

Type the transmitter's IP address into the address bar of your web browser [Figure 3].

Pagers, displays, and alpha displays each have unique settings. These settings can be changed using the "Options" button under each section. Note the options are password protected.

The network setting allows the user to specify a static IP address, if desired. This section is password protected.

The manage unit section allows you to do three things. 1) Reset settings to the factory default 2) Reboot: do a software reset 3) Change the unit's login password. This section is password protected.

To set up a password, click on manage unit. At the security prompt, enter "admin" for both the username and password. Type in the new username and password. Save your changes by pressing the "change login" button.

### 3.3 USING THE SERIAL PORT INPUT

The serial port can be used as well as or in place of the Ethernet interface. Use a null-modem cable (sold separately) to connect to a computer. The serial port accepts standard Scope protocol. It works with popular paging software, such as the CompPage PageConnect software.

The serial port can also be controlled by third party applications. Please contact Microframe for more information.

### 3.4 CONTROLLING THE TRANSMITTER FROM A THIRD PARTY APPLICATION

This product makes a TCP socket available for control by third party applications. Please contact Microframe for more information.

Figure 2

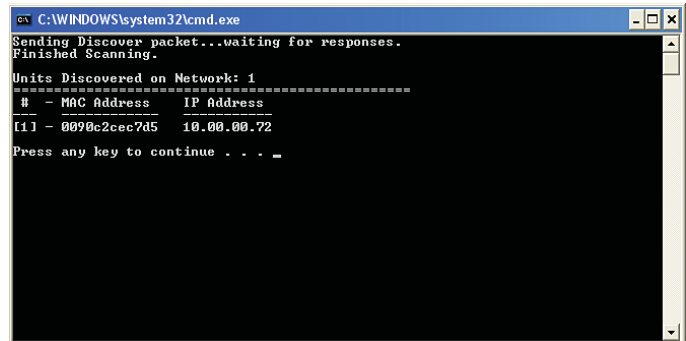


Figure 3



### 3.5 FACTORY RESET

If the login password is lost or network settings are configured incorrectly, it may not be possible to access the web interface. In this case, a hardware reset must be performed.

Press and hold the factory reset button (10 seconds) until the status light flickers quickly. All settings will be restored to the factory defaults.

## 3 OPERATION - WEB-BASED PAGING

### 3.6 PAGERS

#### General Operation

Here you may page numeric or alpha pagers. Numeric pagers allow characters '0' to '9' as well as spaces and dashes. Alpha pagers allow any text you wish to send. This transmitter will allow up to 60 characters, though not all pagers will display this many characters.

On this page you may:

- Enter a pager number [1-9999]
- Select a beep type [A/B/C/D]
- Enter a message [60 chars max]
- Temporarily change the pager type
- Temporarily change the baud rate

For those using Pocket Pagers, the turn off command has been simplified to a one button click.

#### Pager Options

Here you can specify the default pager type, base id, and baud rate. Note these options must match the settings of your pagers for them to work.

If you have a pager or coaster system that uses "out of range" detection, then you can activate the "in range transmit" option. This will send a transmission every X seconds, depending on the value you set as the "transmit time." This repeat window can be from 10-45 seconds.

Figure 4



Figure 5



# 3 OPERATION - WEB-BASED PAGING

## 3.7 NUMERIC DISPLAYS

### General Operation

Here you may page numeric displays, such as our series 3500 Wireless Displays. Numeric displays allow for any number from 0 to 999,999. The transmitter remembers the numbers that you insert, allowing them to be easily deleted.

To add a number, type it in and click "add."

To remove a number, select the number and click "delete."

### Display Options

Here you can specify the current display id, base id, and baud rate. It is okay to change these settings, but don't forget to resynchronize the display with the transmitter.

For more on these display options, please see display manual.

Figure 6



Figure 7



# 3 OPERATION - WEB-BASED PAGING

## 3.8 ALPHANUMERIC DISPLAYS

### General Operation

Here you may page alphanumeric displays, such as the 3724 Wireless Alpha Display. You may specify the message [60 char max] and the beep type.

### Display Options

Here you can specify the display id, base id, and baud rate. We do not recommend changing these settings, as the display settings can only be changed at the factory.

For more on these display options, please see display manual.

Figure 8



Figure 9



## TROUBLESHOOTING CHART

SYMPTOM	POSSIBLE CAUSE	CURE
Cannot find the unit using the automatic discovery utility (section 3.1).	No power to the unit.	Plug power cord into 110V outlet. Verify that the status lights on the transmitter are normal.
	No connection to the network	Plug Ethernet cable into the transmitter and network. Check that switch/router/hub is working.
	[Large companies] Transmitter is on a different Ethernet subnet than the user.	Move the transmitter to the same subnet as the user, or use port forwarding.
The discovery utility returns an IP, but that IP will not come up in the browser.	[Using Static IP] Transmitter is on a different IP address range than the user.	User must be on the same IP address range as the transmitter, unless port forwarding techniques are used. The factory default is 192.168.0.x, with a netmask of 255.255.255.0.
Lost password	The administrative password has been lost.	Perform a hardware factory reset. See Section 3.5.
Cannot access web page after changing network settings.	Invalid network settings.	Perform a hardware factory reset. See Section 3.5.

# MINI DIPOLE ANTENNA MOUNTING

## Optional Range Extender

For optimum operation, the dipole radiators must be positioned **vertically**, with the "E" symbol facing downward toward the ground.

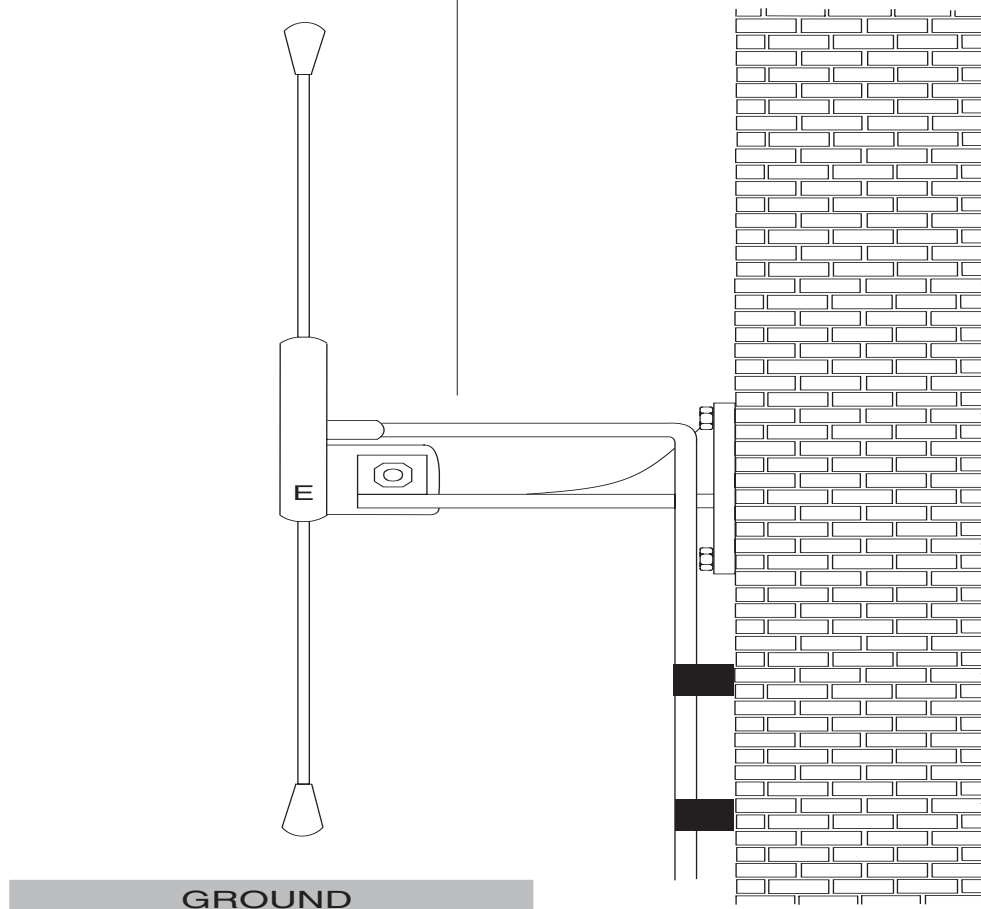
Avoid mounting the dipole on or near any metal girders, pillars or other metallic obstructions.

The dipole should preferably be mounted at a height which avoids potential snagging with any movable objects that might be used in the vicinity, e.g. ladders.

Ensure that the bracket is firmly bolted to a solid surface and that the feeder cable is adequately clamped along the entire run between the dipole and the transmitter/receiver.

### LUHFDP

The center-fed half wave dipole, measuring approximately 12 inches from tip to tip, will provide excellent all around local signalling. It is a light duty antenna suitable for sheltered environments/internal installation. It includes a 15 foot cable.



B3100\AX\9700

**microframe<sup>®</sup>**

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