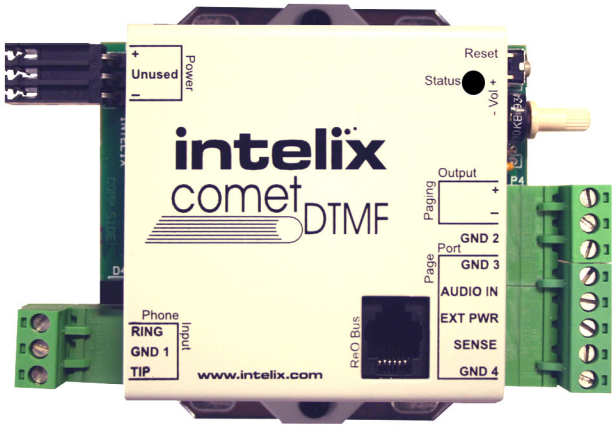
# Intelix Comet-DTMF Phone Interface Module
# User Manual




**Revision: 05/06**

## Product Description

The Intelix Comet-DTMF provides a means to conduct zone paging through a PBX (Private Branch Exchange) phone system or an analog phone system. This enables touchtone phones to control and page through the Intelix MZP system to overhead speakers throughout a facility.

Operationally, the Intelix Comet-DTMF serves as an input and output device for the MZP system. It interprets telephone DTMF tones and routes the audio according to the zone assignments done in the MZP software. Zones may be assigned one, two, three, or four digits for routing pages. In addition, predefined *clear* and *send* keys (typically * and #) provide additional user control. Complete custom functionality is assigned in Intelix MZP Designer Software.

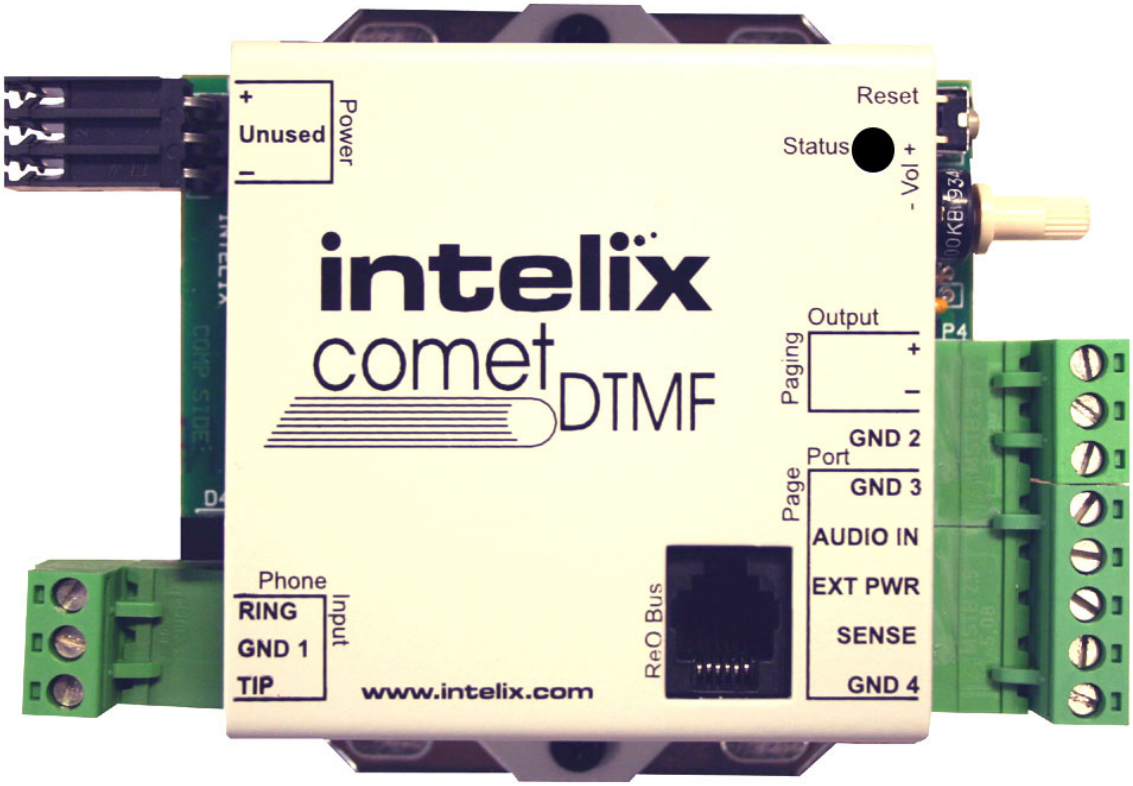
The Comet-DTMF has a built-in line timeout which is activated whenever the line is active and the user does not enter a digit within 6 seconds. After 6 seconds, a warning tone is generated for 6 more seconds after which the Comet-DTMF hangs up the line. If the remote receives an input, the timeout is reset.

The Comet-DTMF has an on-board, single-ended input to balanced output amplifier stage with up to 19 dB of gain, which provides a line level output in the range of 0-10 dBu into the matrix mixer. The Comet-DTMF is *not* a speaker amp.

## Features:

- Directly interfaces the Intelix MZP Paging and Program Distribution System with touchtone phone systems
- Analog phone line and PBX page port compatible
- Telephone zoned paging to up to 128 custom user defined zones
- Bidirectional signaling
- Paging zone status feedback
- Intuitive software setup with custom zone assignment
- Compact and durable chassis
- On-board amplifier provides 19 dB of gain, single-ended input to balanced output conversion
- FCC Part 68 electrical isolation specifications for telecom equipment compliant

## Product Image



## Wiring Instructions

When wiring the Intelix Comet-DTMF, please follow the steps below:

1) Connect the POTS (plain old telephone service) line to the RING, GND1, and TIP terminal connector.
2) Wire the ReO bus connector. Do **not** connect the ReO bus connector to the Intelix MZP matrix. For the ReO Bus connector pin-out, please refer to the MZP user manual – *ReO Bus Wiring*.
3) Connect the audio between the Comet-DTMF Paging Output (+, -, and GND2) and the input on the MZP matrix programmed as the phone page audio input.
4) Prepare the power connector. Do **not** power on the Intelix Comet-DTMF.

Once the above steps are accomplished, the Comet-DTMF must be discovered in the Intelix software. During software discovery, the ReO bus and power connections will be completed.

## Software Discovery

The Intelix Comet-DTMF should be discovered in the Intelix MZP Designer Software only after the device has been wired (see *Wiring Instructions*). Once Comet-DTMF wiring has been completed, please follow the steps below:

1) Open Intelix MZP Designer Software (Intelix MZP Designer Software is provided with all MZP matrix orders; it can also be downloaded from www.intelix.com) on a PC.
2) Connect the PC to the Intelix MZP matrix via a straight through 9-pin serial cable or via a network TCP/IP over ethernet link.
3) Load the MZP Designer Software file for your system into the MZP program. If the file is not available, extract the MZP matrix mixer's program by selecting *Read Device* in the MZP software under the Installation menu. Or, if a program file has not been created, the file can be created live to the MZP matrix in real-time.
4) After loading the MZP Designer Software file, open the *Diagnostics Unassigned* screen. Next open the *Configuration ReO Paging Stations* screen. Place these two windows next to each other on your Windows desktop; this will allow you to drag-and-drop while programming the Intelix Comet-DTMF.
5) In the *Diagnostics Unassigned* screen, select *Discovery Mode* in the ReO bus options box.
6) Connect power to the physical Intelix Comet-DTMF. Verify the Comet-DTMF status LED is blinking once per second.
7) Connect the ReO bus wiring between the Intelix MZP matrix and the Comet-DTMF. Verify the Comet-DTMF LED is now blinking twice per second.
8) On the Comet-DTMF, press the *Reset* switch. The status LED should illuminate solid and the Comet-DTMF should appear in the Intelix MZP Designer Software *Diagnostics Unassigned* screen.
9) In the *Diagnostics Unassigned* screen, place your curser over the Comet DTMF image labeled Responding, click and hold down. Now drag it into the *Configuration ReO Paging Stations* screen. Drop it on the virtual Comet-DTMF in your program file.
10) The software will now ask you to name the new device. Enter a name for the Comet DTMF device and select *OK*. Some systems have multiple Comet DTMFs, in this case naming is critical for future service.
11) The Intelix Comet-DTMF hardware has now been assigned to the MZP matrix program.
12) In the Unassigned screen, change the Mode from Discovery to Run. Close the Unassigned screen and Paging Station.
13) Finally, go to Configuration in the DTMF Setup. In this screen a number of variables will need to be set up including the number of digits assigned to each phone extension and the extensions that need to be assigned to each zone. For further information, please consult the MZP manual or software help files.

## User Operation

To operate the Intelix Comet-DTMF, please follow the steps below:

1) First, dial the Comet-DTMF at the predetermined phone extension. The Comet-DTMF will pick up the line and beep once when it answers.
2) Next, dial the DTMF zone extension you wish to page into. The Comet-DTMF will beep twice to signify that zone is available.
3) Begin your page.
4) Hang up to complete page.

Note: The send key may be used to shorten paging zones. For example, in a four digit system zone 1 can be dialed as "0001" or "1#".

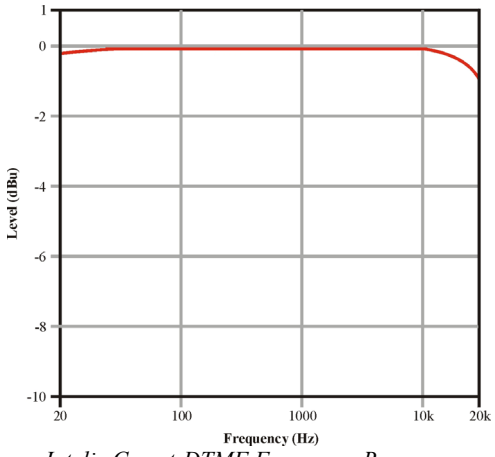
Note: To page emergency override dial * before the zone number. For example, emergency page to zone 3 is "*0003" in a four digit system.

Note: The cancel key may be used if an error was made while dialing or to end a page and dial another zone. For example, in a four digit system zone 1 is dialed but 2 is hit by mistake "002#0001". After the page is complete "#" may be hit again and then "0002" can be dialed to page zone 2 without hanging up. The Comet-DTMF will beep to give the user feedback.

Note: If the user hears a busy signal when attempting to call the Intelix Comet-DTMF, the zone is busy. If the user hears a solid tone, an error was made.

## Technical Specifications

| | |
|---|---|
| **Audio Output Frequency Response** | +/- 1 dB from 20 Hz to 20 kHz |
| **Audio Output Impedance** | 220 ohms unbalanced<br>440 ohms balanced |
| **Audio Output Level** | 0 dBm nominal |
| **Input Voltage Requirements** | 12 VAC |
| **Current Draw** | 100 mA |
| **Data Connector** | 6 pin – RJ12 |
| **Maximum Data Cable Length** | 6000 feet |
| **Recommended Data Bus Cabling** | Standard Cat 5 |
| **Power Connector** | 3 pin-IDC, phase tolerant |
| **Recommended Power Cable** | 2 conductor stranded, 18 AWG |
| **Phone Input Requirements** | CO line, PBX analog line configured for line disconnect signaling |
| **PBX Page Port Input** | Accepts PBX page port output |
| **Audio Nominal Input Levels** | 0 dBm |
| **Audio Nominal Source Input** | less than or equal to 600 ohms |
| **Audio Input Impedance** | ~ 5 kOhms |
| **Contact Closure Input** | Accepts SPST-N.O. dry contact closure |
| **Dimensions** | 2.63” x 1.25” x 4.75” |
| **Shipping Weight** | 1 lb. |
| **Intelix Part Number** | Comet-DTMF |




*Intelix Comet-DTMF Frequency Response*

Thank you for your purchase. If you should require any technical service or support, please do not hesitate to contact Intelix directly:

**Intelix LLC**
2222 Pleasant View Road
Suite 1
Middleton, WI 53562

Phone: 608-831-0880
Fax: 608-831-1833
Toll-Free: 866-4-MATMIX

www.intelix.com
intelix@intelix.com