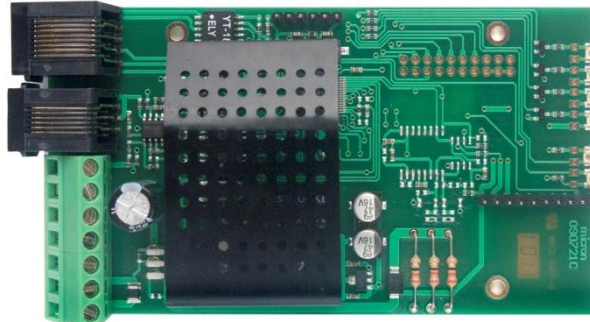


EC-2

Ethernet Converter

Contact ID

PSTN to TCP or UDP Converter



Installation and Operations Manual

Version 7.0.0 XML

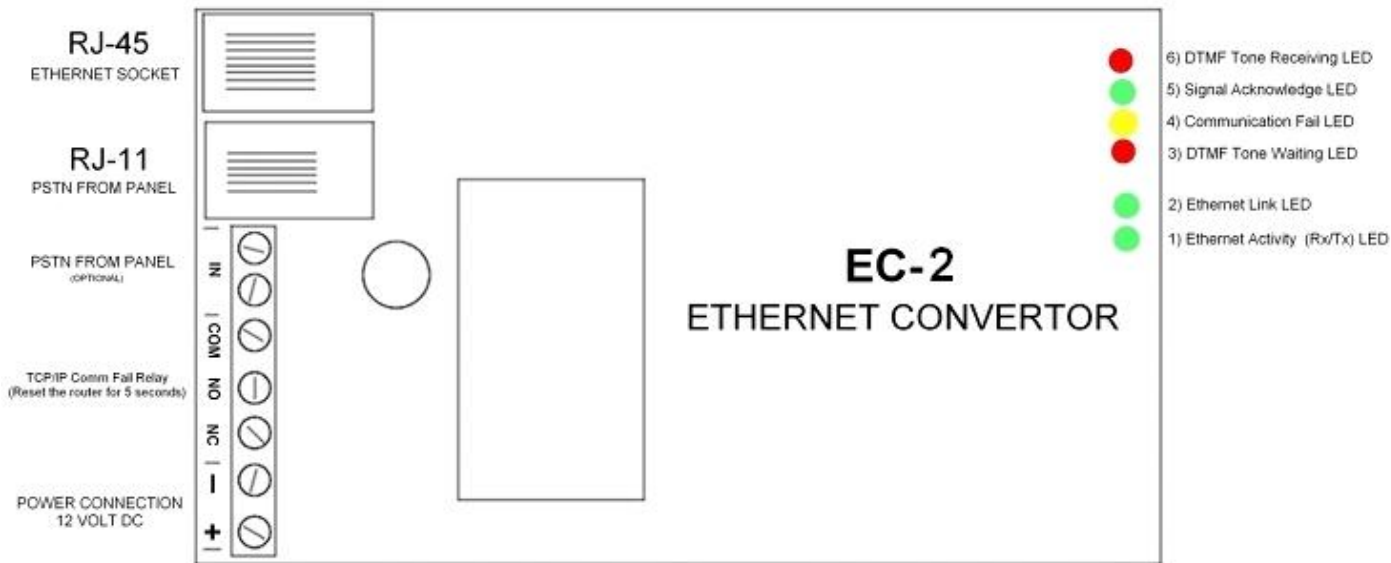
Micron Security Products Ltd

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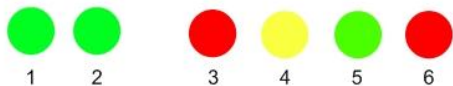
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Circuit Board Layout



EC-2 Ethernet Converter LED Status Explanation



1. **Ethernet Activity (RX/TX) LED:** Indicates ethernet activity on the attached network.
2. **Ethernet Link LED:** Indicates the ethernet cable is physically connected to the port. When the ethernet cable is connected, the green LED is permanently on.
3. **DTMF Waiting LED:** Flashes on/off when waiting for DTMF tones and is on solid when receiving DTMF tones from the PSTN panel.
4. **Communication Fail LED:** Turns on when TCP/IP communication fails.
5. **Signal Acknowledge LED:** Indicates hand shake and kiss off transmission.
6. **DTMF Receiving LED:** Flashes to indicate DTMF tones being received.

EC-2 Ethernet Converter

The EC-2 converts **PSTN Contact ID signals in CSV Format to TCP or UDP** and transmits this data over the internet (or private network) to **TCP/IP or UDP receiver software at a central monitoring station.**

The EC-2's **factory IP address** is **192.168.1.28**

EC-2 has one output with a relay. (Used to reset the router)

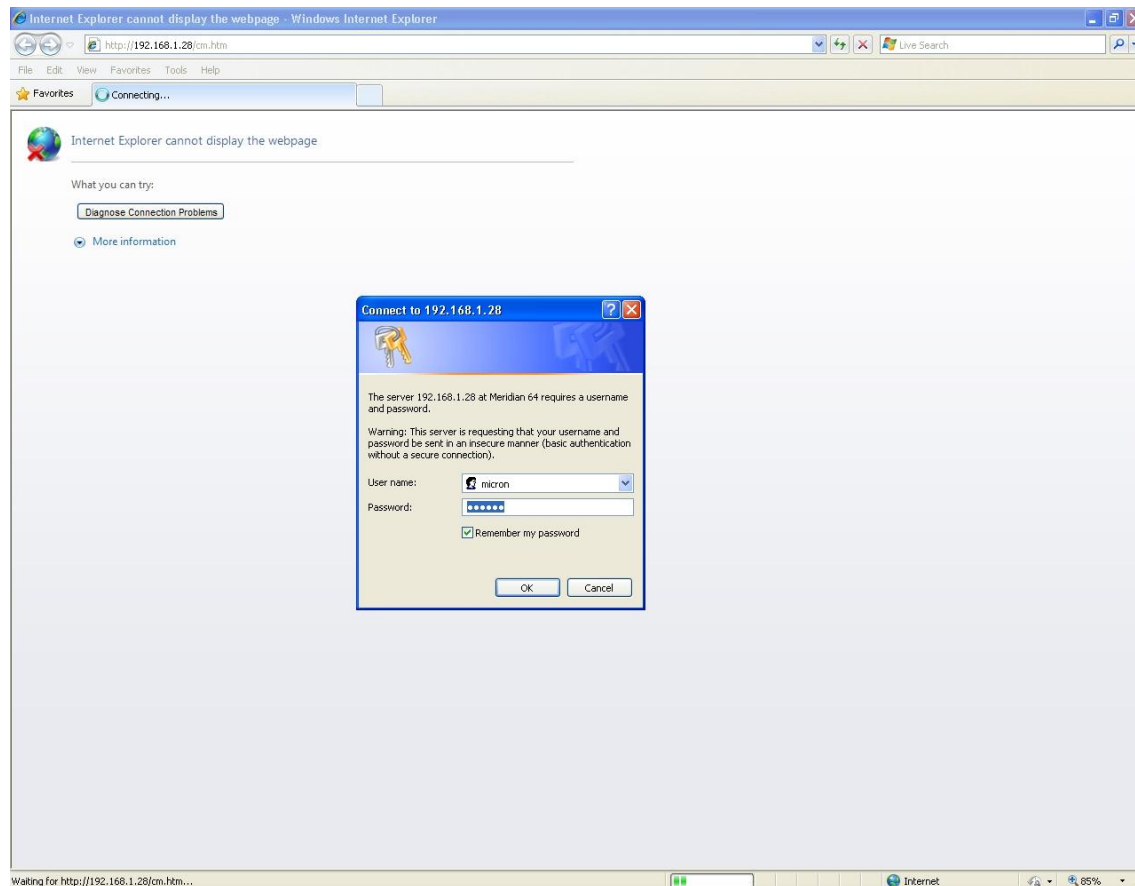
EC-2 Initial Setup

Connect the EC-2 to your ONT, hub/switch or ADSL router or with a crossover cable directly to a computer.

The network or computer connecting to the EC-2 must be in the IP address range of 192.168.1.XXX

**To enable external remote access to the EC-2, the customer's router must be "port forwarded".
The forwarded port of the router must match the web server port of the EC-2 to allow external remote access to the EC-2. Refer to the customer's IT specialist if necessary.**

EC-2 Initial Connection



Enter the EC-2's IP address (eg: <http://192.168.1.28>) or a valid DNS address in any compatible browser (**Internet Explorer, Google Chrome, Firefox or Safari**) on any computer or smart phone with internet connection capability. Enter a **Username** and **Password** in the security login screen of the EC-2, if this is different than the factory default (username: **micron**, password: **micron**).

You may need to refer to your IT specialist or the IP monitoring station to obtain the correct TCP/IP parameters to complete these fields.

Click on **OK** and the Ethernet connection will be established with the EC-2.

CID Tab

Click on the **CID Events** tab to see the account number and poll signal details.

ci - Windows Internet Explorer

http://192.168.1.28/ci.htm

File Edit View Favorites Tools Help

ci

Micron Security Products: EC-2 Version 7.00.000

SaveCIDNetwork

CID Events

Panel Account Number0000

EC2 Account Number0000

		Gateway 1	Gateway 2		
Reset	305	1	0		
Panel Messages		1	0		
Communication Failed	354	1	0		
Remote	412	1	0		
Periodic Test (1)	602	1	0	Test Period	00000060
Periodic Test (2)	603	1	0	Test Period	00000060

DTMF Parameters

Wait for Dialling010

After Dialling Blank002

Usernamemicron

Passwordmicron

CID Events

Panel Account Number

If the account number is set to **0000**, the EC-2 will transmit the PSTN panel’s account number for panel events. If an EC-2 periodic test is selected enter an account number **other than 0000**.

If the account number for the EC-2 is set as the same account number as the PSTN panel, the EC-2 will use this account number to transmit panel events and EC-2 periodic tests.

Alphanumeric account numbers can also be used.

EC-2 Account Number

Internal events, such as a reset or periodic tests, will transmit with this account number.

Priority Explained:

		Gateway 1	Gateway 2		
Reset	305	1	0		
Panel Messages		1	0		
Communication Failed	354	1	0		
Remote	412	1	0		
Periodic Test (1)	602	1	0	Test Period	00000060
Periodic Test (2)	603	1	0	Test Period	00000060

For each event enter the CID event code to transmit to a monitoring station.

The EC-2 can be connected to two internet routers simultaneously. To establish the CID event reporting priority by enter **1** or **2** in the **Gateway 1** and **Gateway 2** columns. A **1** establishes first priority, **2** a secondary priority. If **zero** (0) is selected there will be no transmission of this event via this pathway.

For example, if an event has **1** entered in the **Gateway 1** column and **2** in the **Gateway 2** column, then this event will be communicated via the **Gateway 1** internet router. If the **Gateway 1** communication fails the alternate **Gateway 2** internet router pathway will be attempted.

If an event has **1** entered in the **Gateway 1** column and **1** in the **Gateway 2** column then this event will be communicated via both pathways simultaneously.

If an event has **1, 2** entered, in any order then this event will be communicated via pathways in this order of priority until a successful acknowledgement has been received from the central monitoring station. If a successful acknowledgement is received from the first pathway (**1**) then no further communications are attempted.

Reset Sent to the central station each time the Meridian 64 is powered on.
This event transmits the firmware version of the panel as **Area 01** with the **Zone** denoting the main firmware version eg 7.
.
Event 305 (Reset Event)
Area Zone
01 7 (firmware version)

Panel Messages Panel message priority.

Communication Failed Sent to the central station when a communication fail event has occurred.
This event transmits the communication failures of the panel as an **Area** and a **Zone**, defined as follows:

Event 354 (Communication Failed)

Area Zone
01 16 Ethernet Cable
01 01 G1 IP1/IP2 Failed
02 02 G2 IP3/IP4 Failed

Remote Sent to the central station when EC-2 is accessed for programming or operational control.

Periodic Test 1 Sent to the central station when a periodic system test occurs for the selected path(s)

Periodic Test 2 Sent to the central station when a periodic system test occurs for the selected path(s)

Test (Poll) Period EC-2 will send a communication test to a monitoring station after this defined period.
Enter the EC-2 test signal period in seconds.

We recommend a poll not less than 10 seconds to allow a remote connection back into the EC-2 if required.

DTMF Parameters

Wait for Dialling No Change Required. Factory default

After Dialling Blank No Change Required. Factory default

Installer User Name Installer’s login name for connecting to the EC-2, no commas or spaces allowed

Installer Password Installer’s password for connecting to the EC-2, no commas or spaces allowed

Click **Save** to register any changes that have been made

Network Tab

Click on the **Network** tab to setup the TCP/IP parameters.

The screenshot shows the 'Network' configuration page of the Micron Security Products EC-2. The page has a 'Save' button and tabs for 'CID' and 'Network'. The 'Network' tab is active, showing fields for MAC Address (00 01 02 03 04 67), IP Address (192 168 001 028), Subnet (255 255 255 000), DNS Server (008 008 008 008), Gateway(1) (192 168 001 001), IP Destination 1 (192 168 001 011), DNS Address 1 (), Destination Port 1 (00012), IP Destination 2 (192 168 001 011), DNS Address 2 (), Destination Port 2 (00013), Gateway(2) (192 168 001 001), IP Destination 3 (192 168 001 011), DNS Address 3 (), Destination Port 3 (00012), IP Destination 4 (192 168 001 011), DNS Address 4 (), Destination Port 4 (00013), Remote Port (00080), Gateway 1 Sync (00060), Max Resets (005 within 00001), Gateway 2 Sync (00060), Max Resets (005 within 00001), Time Out (002), DHCP (), Auto-Increment (), Battery Saving (), CID CheckSum (), Encryption (), UDP (), IP1 First (), Tx Identification (TX_IDT yo_from_micron), Reboot, Backup, Browse..., and Restore buttons.

- Mac Address

The MAC address is the unique identifier assigned to the EC-2. (Enter hexadecimal data).
No action required (change only when a network MAC address conflict occurs)
- IP Address

The network administrator must assign a fixed IP address. This is the logical IP address of the EC-2 in the local network. If DHCP is ticked this section is disabled.
- Local Port

No action required
- Gateway 1

Only available when DHCP is not ticked. The network administrator must assign a gateway address if DHCP is not ticked. A gateway is a network point that acts as an entry to the internet, usually the local router address.
- Gateway 2

Only available when DHCP is not ticked. The network administrator must assign a gateway address if DHCP is not ticked. A secondary gateway is a network point that acts as a secondary entry to the internet, usually an alternate local router address.

If Gateway 2 is established in your network then this will be used in the event that communications on Gateway 1 fail.
- Subnet

Only appears when DHCP is not ticked. The network administrator must assign a subnet mask address if DHCP is not ticked.
- DNS Server

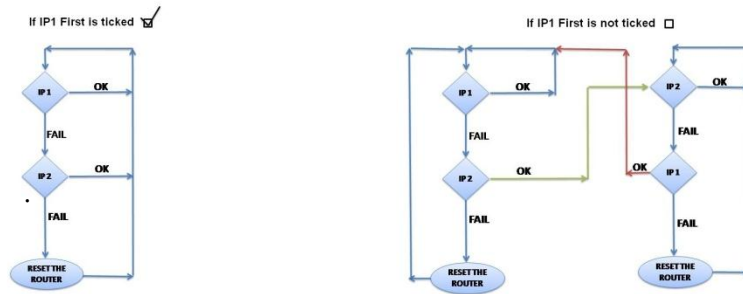
This address is obtained from the customer’s IT specialist or the IP monitoring station. **
A DNS server is a server that stores the DNS records
- IP Destination 1
or DNS Address 1

IP address of the central station receiver or DNS address**

The **Internet Protocol** (IP) address is a numerical label that is assigned to devices participating in a network utilizing the Internet Protocol for communication between its nodes.
Domain Name System (DNS) serves as the phone book for the Internet by translating computer host names into IP addresses. For example, www.centralstation.com translates to 203.114.129.9

Destination Port IP1	Port identifier of the central station receiver application** A number assigned to EC-2 sessions and central station receiver applications in an IP network.
IP Destination 2 or DNS Address 2	IP address of a 2 nd central station receiver or DNS address **
Destination Port IP2	Port identifier of the 2nd central station receiver application**
Remote Port	Web server port. This must match the forwarding port of the router to allow remote access to the EC-2.
Gateway 1 Sync	In the event an internet router communication fails within the parameters defined and the internet router is connected to the EC-2's communication fail relay (see page 12) then after EC-2 resets the router this is the time in seconds to allow the router to fully synchronise, " adsl.isp... " before the EC-2 makes further transmission attempts. Typically an ADSL router will require 60 - 120 seconds to synchronise.
Max Resets....Within	This is the number of router resets allowed 'within' this period in seconds. After the number of resets within the period has been reached, the EC-2 will continue to try to communicate but without further attempting to reset the router.
Gateway 2 Sync	In the event an internet router communication fails within the parameters defined and the internet router is connected to the EC-2's communication fail relay (see page 12) then after EC-2 resets the router this is the time in seconds to allow the router to fully synchronise, " adsl.isp... " before the EC-2 makes further transmission attempts. Typically an ADSL router will require 60 - 120 seconds to synchronise.
Max Resets....Within	This is the number of router resets allowed 'within' this period in seconds. After the number of resets within the period has been reached, the EC-2 will continue to try to communicate but without further attempting to reset the router.
TimeOut	Maximum TCP/IP propagation delay before attempting the next IP address
DHCP	If the network router is set to DHCP then this must be ticked. The IP address will be automatically allocated by the router. If the network router is not set to DHCP then a unique IP address must be entered for the EC-2. ** DHCP is a protocol used to dynamically distribute the IP address to the EC-2. ** This data is supplied by the central monitoring station
Auto-Increment	Default is ticked. The local port identifier is incremented with each transmission. If not ticked then the Local Port count is not incremented.
Battery Saving	Battery saving is not available on the EC-2. Please do not select this setting.
CID Checksum	Contact ID Checksum will be transmitted in the CSV format to the central station with each transmission if ticked. Default is ticked.
Encryption	If ticked the EC-2 sends encrypted data to the monitoring station.
UDP	If UDP is ticked, the system will transmit UDP over Internet Protocol instead of TCP/IP.
IP1 First	If IP1 First is ticked, the system will transmit the signal to destination IP1. If the transmission is successful, IP1 will be used for subsequent transmissions. If the IP1 transmission fails, IP2 will be used to send the transmission. Subsequent transmissions will revert back to IP1. Should this transmission fail again, the router will be reset and IP1 retried.

If **IP1 First** is not ticked, the system will transmit the signal to destination IP1. If the transmission is successful, IP1 will be used for all subsequent transmissions. If the IP1 transmission fails, IP2 will be used to send the transmission. Subsequent transmissions will continue on IP2 until a failed transmission occurs. Transmission will then revert to IP1 and remain on IP1. If transmission attempts to both IP1 and IP2 fail, the router will be reset and the system will return to the last communication cycle.



Tx Identification

Message identification for the central station**

Reboot

Reset the system.

Backup

Backup the latest changes on the EC-2 in XML format to your computer storage.

Restore

Restore a previously backed up XML file to the EC-2.
First click on the browse button to locate the saved XML file then click on Restore.

**** This data is supplied by the central monitoring station.**

Now click on the **Save** button to save this data.

EC-2 Receiver Self Test Software

This software displays EC-2 communications on a local or remote personal computer when the EC-2 has been connected and setup on your network. Ensure that the computer running the Receiver Software is set to the IP address (192.168.1.7) that has been set as the destination address in the EC-2. The receiver is listening on Port 12 by default.

Start the **Receiver V6-00-00.exe** software in the **Receiver V6-00-00.zip** file and the following screen will appear.

Trigger zones to view communications



- RS232

Every message is forwarded in Ademco 685 format when selected.
- Log File

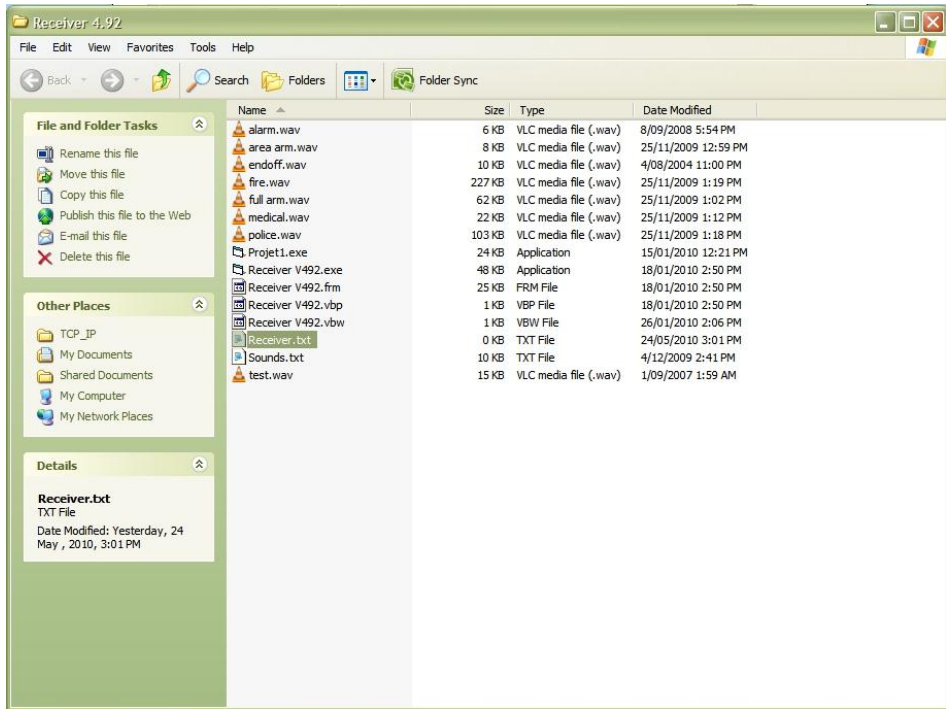
A receiver log file is saved as a text file to the computer hard drive for future reference.
Files are saved in this date and time format: **2011317120 Receiver History.log**

Download Firmware Upgrade

Firmware upgrades can be downloaded to the EC-2 using this receiver software.

Download the Firmware Upgrade Guide from micron’s secure website.

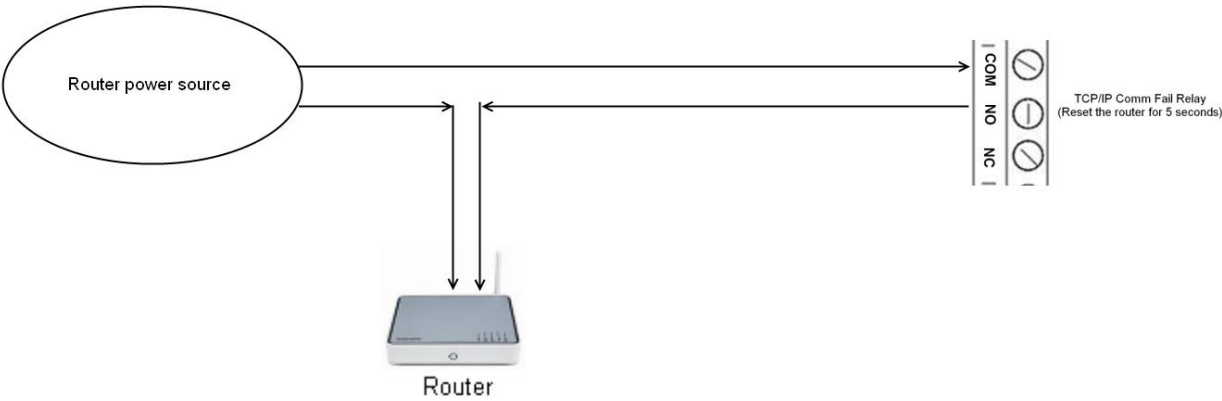
Explanation of .txt files



Receiver.txt Events will be saved in this file by the receiver software for each session. Events can be saved and labelled manually for future reference.

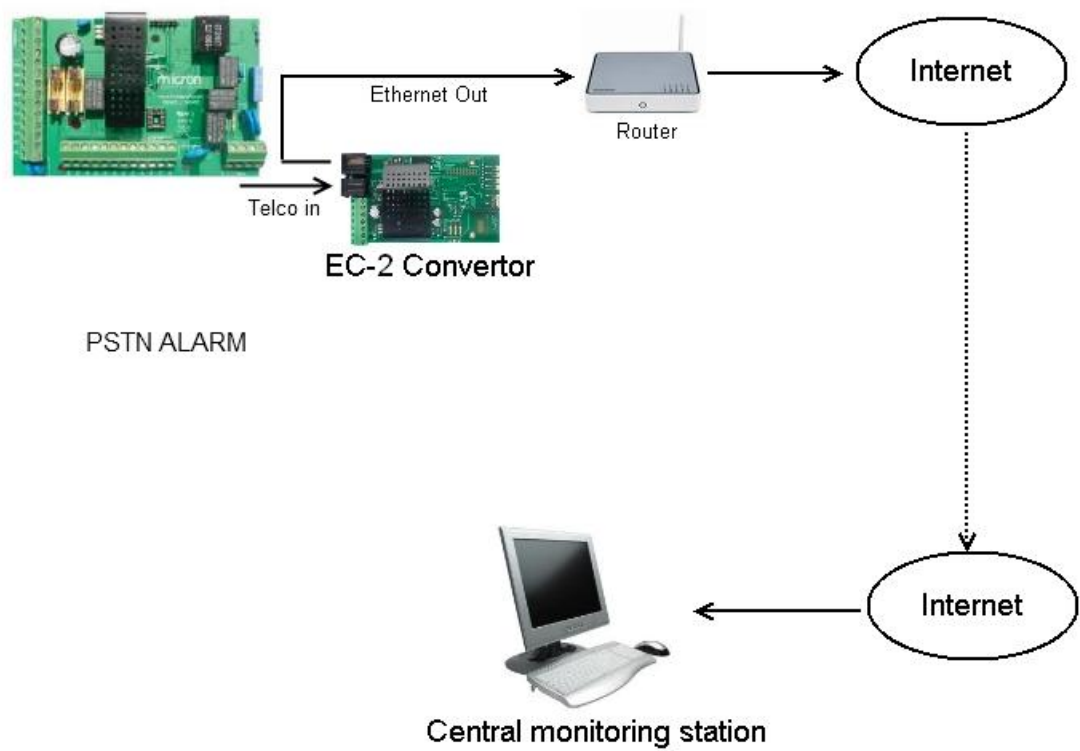
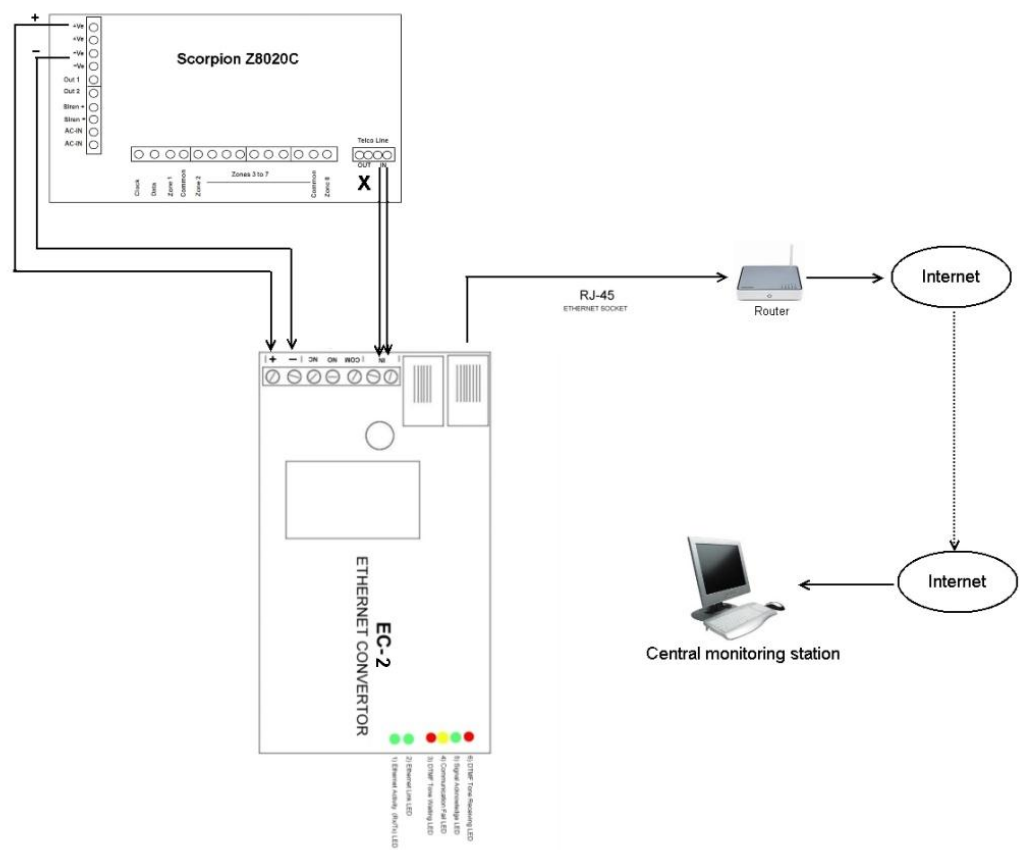
Sounds.txt Each Contact ID event sound can be changed in this text file. Save the **.wav** file in the same folder as the receiver software (for example **panic.wav**) and align it with the corresponding Contact ID code to trigger the sound. When an event is triggered the appropriate sound is played by the computer attached to the EC-2.

Router Reset Example



This power setup will enable the router to be reset in the event of a communication failure. See Gateway Sync on page 8.

EC-2 Connections



WARRANTY

1. Subject to clause 2 below, micron warrants this product against defects in materials and workmanship for a period of 24 months from the date of delivery to the purchaser as follows:
 - (a) Micron will repair or replace free of charge any goods or part thereof found to be defective by reason of faulty material or workmanship.
 - (b) The purchaser must give micron notice of the alleged defect within 14 days of it becoming apparent and must return the defective goods or part thereof to micron.
2. This warranty does not apply or extend to:
 - (a) Any product altered or repaired by any person other than micron so as in Micron's sole judgement to adversely affect the product.
 - (b) Damage, malfunction or failure arising from accident, misuse or misapplication, neglect, modifications, use of unauthorised replacement parts or accessories, exceeding the specific ratings, improper voltage or connection of any wire to any part of the circuit board other than the terminal block.
 - (c) Any product where the rating label or serial number is removed or altered.
 - (d) Any consequential or indirect loss.

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Should any error or inconsistency be found, please notify us.

Micron Security Products Ltd reserves the right to make changes to features and specifications at any time, without notification, in the interest of ongoing product development and improvement.

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