

“Inovonics” Comms Task Format

The Model 3000 / Access 4000 can be connected directly to an Inovonics FA-400 Wireless receiver via the IR400 Inovonics interface board. Part No: 995008

Note: The Inovonics Comms Task can only be used in Type 2 (CE) Control Module Hardware and V4.00 Firmware or later.

The IR400 Inovonics interface is connected to the Serial Port of the FA-400 Receiver and to a UART Port on the Model 3000/Access 4000 Control Module. Ensure that the UART Expander board fitted to the Control Module has a suitable number of Ports to provide connection to the IR400 Inovonics interface as well as any other devices required. e.g. PC, Securitel STU, GSM modem, Printer, etc. On sites where the range offered by the FA-400 and the Wireless transmitters is not adequate, Inovonics offers Repeaters to extend the range.

The FA-400 Receiver and IR400 interface are both powered by a 12V supply that is best sourced from a separate battery-backed 12V Power Supply giving longer battery backup times and a high level of Power Supply integrity. (The units may be powered from the Control Module “DET+” supply, however, if a short in the detector cabling, etc, causes the “DET” fuse to blow, power to the units will be lost)

This interface allows all zone information from Inovonics wireless transmitters to be interpreted as Model 3000 / Access 4000 Zone Inputs. The Inovonics system is viewed by the 3000/4000 as a **virtual** LAN Module called a Wireless Network Module (Nxx). Each group of 16 zones is allocated a virtual Wireless Network Module number and can share 4 System Inputs. There can be a maximum of 13 of these virtual Wireless Network Modules, allowing up to 208 Inovonics wireless transmitters to be individually monitored (13x16=208 Zone Inputs).

The following events can be actioned via inputs allocated to areas:

- Each transmitter “zone” (Nxx:Z01 to Nxx:Z16) can report seal, alarm or tamper individually.
- Separate Low Battery system alarm for each group of 16 transmitters.
- Separate No Poll system alarm for each group of 16 transmitters.
- The IR400 status can be monitored via an assigned Zone Input.
- The FA-400 status can be monitored via an assigned Zone Input.

Optional review of the following items can aid in commissioning and trouble-shooting:

- Review of individual transmitter “no poll” timeouts.
- Review of individual transmitter low battery.
- Review of individual transmitter signal and noise levels.
- Review of communication problems with FA-400 receiver, or IR400 interface board.

All zone transmitters can be named continuing the Model 3000/4000 tradition of “user friendly” operation.

Zone Mapping

A Wireless Network Module handles 16 Inovonics transmitters and uses the prefix “N”. The Inovonics Transmitter ID is two hexadecimal digits where:

-The 1st digit corresponds to a Wireless Network module no., with 0 mapping to Module 1, 1 mapping to Module 2, etc.

-The 2nd digit corresponds to the Zone Input no., with 0 mapping to Zone 1, 1 mapping to Zone 2, etc.

i.e. The mapping corresponds one-to-one with an offset of 1.

For example;

-An Inovonics Transmitter ID of \$34 would map to Module 4, Zone 5. i.e. “N04:Z05” within the 3000/4000 system.

-An Inovonics Transmitter ID of \$85 would map to Module 9, Zone 6. i.e. “N09:Z06” within the 3000/4000 system.

-An Inovonics Transmitter ID of \$CA would map to Module 13, Zone 11. i.e. “N13:Z11”, within the 3000/4000 system.

These inputs can now be used in any context where 3000/4000 inputs can be specified such as Areas, Function zones, etc, and are programmed in exactly the same manner as normal physical Zone Inputs, thereby offering all the usual functionality offered by the system.

There are 4 System Inputs per Module:

S01 Timeout

This input is put into alarm whenever any one of the 16 zone transmitters for this module fails to report in the nominated poll time. The input will only be re-sealed at the low priority time check if all modules have reported in, or by re-starting the Comms Task.

(The details of the actual transmitter with the timeout condition is saved to Review if the "Timeout" option is set to Yes in the Review options)

Poll Times. Two poll rates, a high priority rate and a low priority rate can be programmed for the Inovonics Comms Task. The poll rates determine when the system will check that the transmitters have reported in. All transmitters are checked when the low priority poll timer expires. Only nominated "high priority" transmitters are checked when the high priority poll timer expires.

Note: Poll times should be set in accordance with the Inovonics equipment manufacturers recommendations.

S02 Low Battery

This input is put into alarm whenever any one of the 16 zone transmitters for this module reports a low battery condition. The input can only be re-sealed by restarting the Comms Task. (The details of the actual transmitter with the low battery condition is saved to Review)

S03 Spare

Spare for future development. Set to "n".

S04 Spare

Spare for future development. Set to "n".

Important Note: Some communication formats are unable to report individual Inovonics Zones or are limited as to what they can report on each Zone. See the Tables section at the rear of this manual for Zone mapping details.

Inovonics Options

**CT002 Idle ->
Inovonics**

Options are reached by pressing HELP, "9" at the Active/Idle screen. Options are divided into common options and less common or Special options. For the Inovonics Comms Task, both Common and Special options will need to be programmed.

Special options are reached by pressing HELP, "9" *twice* at the Active/Idle screen.

**CT002 Port ->
to use: 1**

This screen allows the Installer to define the UART Port to which the IR400 interface will be connected. Depending on the version of UART Expander fitted to the Control Module, a Port number from 1 to 4 may be used. The Port number is selected by scrolling through the available options using the right arrow key.

**CT002 Baud ->
Rate: 9600**

This screen allows selection of the Baud Rate (Data speed) at which the UART will communicate with the Inovonics receiver. The Baud Rate is selected by scrolling through the available options using the right arrow key. **A setting of 9600 Baud is mandatory for Inovonics.**

See "Comms Task Baud Rates" in Comms Task Programming [MENU 7,3,1] for further details.

Inovonics - Special Options

Special options are reached by pressing HELP, “9” *twice* at the Active/Idle screen or by pressing HELP, “9” from any common options screen. HELP “0” will take you back to the common options when special options is complete.

CT002 App ID
000

This screen sets the Application ID to be used for this Inovonics installation. It may be set from 000 to 255. See the Inovonics literature for more information.
(Note that changes may take up to 1 minute to be recognised by the FA-400)

CT002 Sys ID
000

This screen sets the System ID to be used for this installation. It may be set from 000 to 255. See Inovonics literature for more information.

CT002 High Poll
Rate: 000min

This screen sets the High Priority Poll Rate. This is the rate at which all High Priority transmitters will be checked to see that they have reported in.
The rate is programmable from 1 to 255 minutes in 1 minute increments.
See Inovonics literature for more information regarding poll rates.

CT002 Low Poll
000 x HighPoll

This screen sets the Low Priority Poll Rate. This is the rate at which all Low Priority transmitters will be checked to see that they have reported in.
The rate is programmable from 1 to 255 as a multiple of the High Poll rate.
e.g. If the High Poll rate is set to 15 minutes, and the Low Poll count is 16, Low Priority transmitters will be polled every 4 hours. (16 x 15 = 240 minutes)
See Inovonics literature for more information regarding poll rates.

CT002 IR400 OK
Zone: C01:Z01

These screens allow any unused Zone Inputs in the 3000/Access 4000 system to be used to indicate changes in the status of the Inovonics communications.
-The IR400 OK Zone will go into alarm if communications to the IR400 fails and will restore when communications is re-established.

CT002 FA400 OK
Zone: C01:Z01

-The FA400 OK Zone will go into alarm if no supervisory messages are received from the FA-400 for 90 seconds and will restore when a supervisory poll is received.

These Zone Inputs can then be programmed in the same manner as normal Zone Inputs to generate the type of messages and/or alarms required.

If a Zone Input is assigned, the “I”gnore Physical Zone option must be set to Yes in the programming options for that Zone Input.
See “Input programming”. MENU 7, 0.

CT002 ACTM....
Opts -> nnnnnnnn

This screen allows Review options to be selected for this Comms Task:

- | | | |
|----------|---------------------|--|
| A | Always allow | This option allows all transmitter activity to be saved to Review, including transmitter signal and noise level figures. |
| C | Changes | This option allows transmitter activity to only be saved when a change in input status has occurred. |
| T | Timeouts | Timeouts allows all transmitters which exceed the poll timeout to be saved to review to allow individual transmitter identification. |
| M | Mismatch | This option allows any transmitter activity with an “Application ID” &/or “System ID” mismatch to be saved to Review. |
| . | Spare | Spare for future development. Set to “n”. |

CT001 12345678
N01Poll nnnnnnnn

These screens allow the Installer to specify which transmitters will be checked to ensure that a poll has occurred within the correct time.

CT001 90123456
N01Poll nnnnnnnn

CT001 12345678
N13Poll nnnnnnnn

CT001 90123456
N13Poll nnnnnnnn

CT001 12345678
N01High nnnnnnnn

These screens allow the Installer to nominate from which transmitters a poll will be expected at the high priority rate as programmed earlier. If transmitters are not nominated as high priority, they will be checked at the low poll rate.

CT001 90123456
N01High nnnnnnnn

CT001 12345678
N13High nnnnnnnn

CT001 90123456
N13High nnnnnnnn

CT001 . . R.
Status -> nnnn

Diagnostics

Pressing the ON Key whilst the Active/Idle screen is displayed will display the UART Port status screen. This screen can be cleared when desired by pressing the OFF Key. The following table explains the flags:

R Retry

A "Y" under this flag means the receive fifo (16 bytes) has overflowed and at least one character has been lost. This will normally cause a retry of some kind.

. Spare

Spare for future development.

The "R" flag may be monitored after communications via this port. In the event that the system places a "Y" flag under the "R", the Status screen should be reset and monitored further. Should a "Y" flag appear under the "R" with some regularity, a potential cause would be the baud rate at which the port is attempting to communicate.

Multiple Receivers

Although multiple receivers may be connected, only 13 groups of 16 Zones may ever be received. If multiple receivers are used, transmitters must be specific to one receiver only. If a transmitter reports to multiple receivers, multiple activations will occur for every transmission and a comms fail will be generated if the transmitter goes out of range of any one receiver.

e.g. A separate "Application ID" and "System ID" must be used for each receiver and the transmitter must be programmed accordingly.