

General Guidelines

- **Safety**

- When installing the Switchbox or any other device connected to the mains supply there is a **RISK OF ELECTRIC SHOCK unless the supply has been switched off and/or disconnected.**
- If you are not qualified electrician do not attempt to configure this unit or any other device connected to the mains supply. Seek qualified assistance.
- The Switchbox must NOT be connected to the mains power supply when making any changes to the jumpers or any power connections.
- **Always** power off the PC Bus Converter before connecting or disconnecting any units, devices or sensors from the InfoControl wiring bus. Failure to power off the PC Bus Converter may result in damage to the processor.

- **Power Cabling**

Standard power cabling. No earth is necessary unless explicitly specified on the individual appliances.

The power supply for Modules and **all** Switchboxes **must be** :

- Single Phase
- Protected by a single fuse or circuit breaker

All Switchboxes should be connected to a **single** power supply point via a breaker.

It is important that all **Switchboxes** are powered on/off at the same time.

- **Control Bus Cabling**

6 core with 3 twisted pair, unshielded, Pairs 1/2 3/4 5/6. Solid copper core (not strands)

It is recommended that you purchase directly from Infobyte as special specification is used to provide optimum performance for the control bus.

If this is not possible, the following guidelines are suggested :

- The cable resistance must be 65 Ohm/km
- Solid copper core
- Connector is standard RJ12 6 contacts
- Indoor use only.

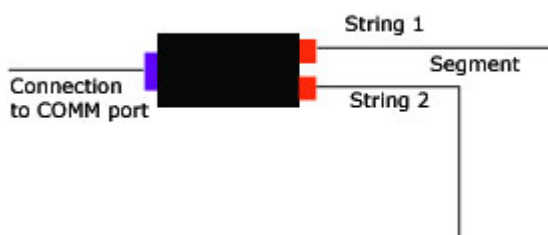
Connectivity Limits

For this version of the InfoControl system, the following limits apply:

- A single PC Bus Converter can manage and control a maximum of 256 modules.
 - Switchbox
 - Wall Switch Module
 - Multifunction Sensor
 - Repeater
 - PC Bus Converter
 - Infrared Module
 - Radar Module
- A PC Bus Converter must be attached to its own dedicated COM port on the PC
- If more than 256 modules are installed, 2 or more additional PC Bus Converters must be present, each connected to a dedicated COM port on the PC.
- A PC Bus Converter can have a 1 or two strings attached.
- The maximum number of modules on a single string is 32
- For example , a single converter with no repeaters, and two strings attached, can have a maximum of 64 modules (32 on each string). The figure of 32 is derived from the maximum current consumption allowed on the string.
- Cable distances also have an effect on the maximum number of modules that can be connected. You may require repeaters to be installed. See **Distances and Limitations** below for a full definition
- If one or more repeaters are used, a string can be expanded by a factor of 32 for each repeater, up to a maximum of 256

Segments and Strings

- Each PC Bus converter can control a single **segment** of cable which has a maximum length of 1000 meters
- A **segment** can consist of 1 or 2 **strings**
- Each PC Bus converter has two RJ12 cable sockets which are used to connect 1 or 2 strings
- A segment can consist of 1 or 2 strings, the total combined length of the two strings cannot exceed 1000 meters
- If the segment consists of a single string, the maximum length of the single string is 1000 meters



Distance Limitations

The longer a segment is, the less modules can be attached due to electrical constraints.

The table below indicates the maximum number of modules that can be attached relative to the length of the string or segment. Distances shown are in meters.

String length (m)	100	200	300	400	500	600	700	800	900	1000
Modules	32	25	17	12	10	8	7	6	5	5

How to deploy repeaters is covered below.

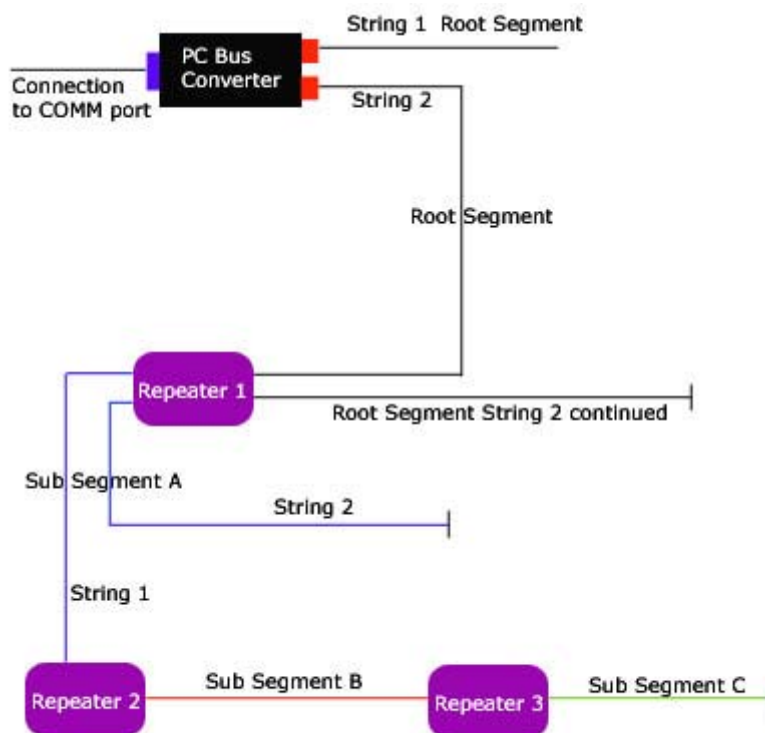
Using Repeaters

An installation will require one or more repeaters if connection of modules will exceed the cable connectivity limits as noted above.

A Repeater Unit can be used to extend an existing Bus segment by providing one or more subsegments

The Repeater also allows you to cascade devices on a segment or subsegment by providing the capability to connect a second string

The diagram below shows an example topology.





Notes

The total length of **any segment** cannot exceed 1km. This is the sum of all the strings in the segment.

'Root Segment String 2 continued' in the diagram above is an example of a **cascaded string**.

Isolating Devices

Always ensure the PC Bus Converter and / or repeaters are powered off before connecting or disconnecting any units, devices or sensors from the InfoControl wiring bus or the segment you are working on. This may require the supply to the PC Bus Converter or any preceding repeater to be disconnected.

Failure to remove power from the control bus segment may result in damage to the Bus processor.

Never connect new devices or disconnect the bus RJ12 connectors to an active segment.

Termination Jumpers

The last module on a string or segment must be fitted with Termination Jumpers. Fitting termination jumpers to a module that IS NOT the last module on a segment or string will result in any subsequent modules not being visible to InfoControl.

InfoControl Online Help

The InfoControl software has extensive online help topics that describe in great detail how to install modules and cabling, some of which is included in this document.

You are recommended to refer to the online help, and where necessary you may wish to print some of the topics to assist you with the installation.

In addition, as you install the modules and control bus, you can check for integrity using the test functions available in the software.