The iDevice Module enables the wheelchair user to control their iPad, iPod or iPhone using any R-net Input device e.g. a Joystick Module or an Omni. Deflecting the joystick forward, backwards, left and right navigates and selects icons or menu items. The set-up procedure is intuitive and no specialist software is required to be installed on the iDevice.

The iDevice Module enables control of the functions of an iDevice using the built-in Accessibility options of Switch Control or VoiceOver.

**Switch Control**

iOS 7 based devices have a built-in Accessibility feature called Switch Control. Turning Switch Control on enables external switches to be assigned to a list of iDevice functions, therefore R-net commands for Forward, Reverse, Left, Right, External Switch 1, External Switch 2, Speed Up and Speed Down are seen as switch commands and can be assigned to commonly used functions, such as Select, Home, Previous or Next. Switch Control works by highlighting sections within the open application window and sequentially scrolling through the available options in the screen. Importantly, even with Switch Control turned On, the normal operation and navigation of the iDevice is unaffected, meaning normal touch screen operation is still active.

The iDevice Module’s default operation is Switch Control mode, so making initial set-up possible without using a programming device.
VoiceOver

iOS7 based devices have another built-in feature called VoiceOver. This facility is typically used to give audible feedback to users that may have difficulty viewing the application window of an iDevice. However, VoiceOver also provides a screen navigation method that the iDevice Module can control. This method differs from Switch Control, in that rather than grouping the options into sections each individual option is navigated to. With VoiceOver active, the touch screen operation of the iDevice is modified.

Programmable user preferences

The R-net PC programmer can be used to set whether the iDevice module will operate in Switch Control or VoiceOver mode.

When operating in VoiceOver mode, iDevice commands can be assigned to R-net Input Device commands. The iDevice commands available include common functions such as Home, Select, Cursor Left or Cursor Right.

A total of twenty individual R-net commands can be used to control a connected iDevice. This is achieved using programmable Nudge Times which are applied to all four Input Device directions and switch functions. The Nudge Time parameters apply when using Switch Control or VoiceOver, giving a high degree of flexibility to cater for individual users' abilities. Additionally, the Speed Up and Speed Down buttons can be used as further control options.

As well as the programming options available through R-net, there are multiple Accessibility options available on the iDevice that can further enhance the user experience.

Simple set-up

The Bluetooth pairing procedure between the iDevice Module and the iDevice is intuitive and makes for an initial easy set-up. The iDevice Module can be fitted in conjunction with existing R-net Bluetooth Modules, in order to allow one system to control iDevices, Android Smart Devices or Windows PCs.

Connect-and-Go

Continuing with the philosophy of Connect-and-Go, the iDevice Module has been designed to work with all existing R-net modules and can be operated by any R-net Input Device. No firmware upgrades to existing modules are required.

Notes:

- Not all Apps will function with VoiceOver turned on
- Switch Control was introduced in iOS V7
- Tested using iPad 3, iPhone 5 running iOS V7.1.2
- Maximum operating range 5m
- R-net Bluetooth Modules Technical Manual SK79614