ccReels Controller, product code ACSIRD

What is the ccReels Controller?

The ccReels Remote cctalk Intelligent reel Controller, product code ACSIRD from Aardvark Embedded Solutions Ltd. (AES) is a fully- featured AWP reel controller that is driven via a cctalk communications line.

The compact controller card carries a powerful, high-speed, RISC microcontroller, connected to a cctalk communications line, that shoulders all responsibility for the low-level control of the reel set.

Its compact size allows it to be physically mounted adjacent to (or a part of) the reel assembly.

A game manufacturer can then consider the reel assembly as a single field-replaceable unit, attached to the host via a wiring harness of only to 4 wires and driving up to 8 reels.

Since (typically) 60 wires would be needed for a 4-reel system or 120 for an 8-reel system, real cost savings and reliability improvements are possible.

How is this achieved over cctalk?

AES believe that the industry-standard cctalk protocol is a powerful and simple interface ideally-suited for the control of a range of machinery in addition to the obvious money peripherals.

The AES approach is to remove the need for high-speed control from the cctalk link and to implement that control locally by means of a sophisticated microcontroller running on the reel controller board itself.

The reel controller "understands" *high level* commands from the host machine such "spin the reels to positions 1,14,7 and 3."

Under entirely local control, the reels would then be spun to those positions without further input from the host machine.

So do I have to use your reels?

No! The reel controller can be programmed "off-line" to handle a wide variety of reel widths, steps, symbols per reel and so forth.

This enables a field replaceable module to be constructed, where **you** can program the mechanical description of the reels into the AES controller. (AES provides PC utilities that simplify the preparation and download of this information.)

This programming is achieved via the cctalk, which, of course, means that it's also possible for your host controller to load them should you so wish.

And if the game has specific requirements regarding the relative timing of the spinning and stopping of the reels, then these are included as a normal part of the "spin" command.

Spinning is easy! What about nudging and shaking?

Naturally, the reel controller has all the facilities required to intelligently handle nudging one or more reels, both in the "up" and "down" directions.

Complex, synchronised "nudge" control is achieved via a small set of simple commands.

These make all the normal nudge skill features possible using simple commands issued by the host.

And shaking is supported too. Shake parameters form a part of the standard mechanical description of the reel.

Duration of a shake feature is a simple part of a "shake" command.

So how does this help me?

The cctalk reel controllers are, of course, priced to compete keenly with standard reel controllers.

The most obvious advantage to use of the cctalk reel controller is one of cost, not least in complexity of wiring of the game cabinets.

Using the cctalk "fly-by-wire" approach to controlling the reels within your game, you can have a simple, four-wire (ground, two power and data) loom to a controller board mounted with the reels.

Even if you do not take advantage of this to provide a complete field replaceable unit, this still reduces the cost and complexity of the looms, together with wiring times at manufacture time.

PC Connectivity - Milan Interface Compatible

And, of course, the AES reel controller board is part of a large family of peripherals supported directly by the Milan interface board.

This AES plug and play board, currently marketed by Money Controls, allows for a wide variety of peripherals to be easily interfaced to a PC, with minimal input from the software engineers responsible for writing the games.

Coin acceptors, bill acceptors, hoppers, lamps, switches, meters and reels can all be effortlessly interfaced to a standard PC.

Bulb Control

Full control of the lamps within the reels is provided.

The host can illuminate and extinguish bulbs using simple cctalk commands.

Bulb "features" are also provided locally by the reel controller.

These include fading bulb brightness up and down, as well as running attract or skill sequences on the bulbs.

Specifications

The cctalk Reel Controller board is available in two variants, able to control up to four reels and up to eight reels respectively.

Industry-standard reels are supported, both 12 and 24 volt.

The controller board itself needs 12 volts, ground and a cctalk data line for communications.

12 volts or 24 volts is also required to drive the reel motors and bulbs.