ESI RP Programming Example – Calibrating Motor Controllers

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Introduction:

ESI's motor controllers and RQ-embedded motors fully support their RP family of input devices. This includes keypads, remote controls, sun/wind inputs, contact-closure switch interfaces, RS-232 via the R2D7, and more. To program the RP options of the controllers or motors, you will need to use a 24-channel keypad or remote control. This article will walk you through one of the most common RP programming steps, calibrating a motor controller. The layout of the keypad/remote control and initiating programming are explained in separate articles.

Requirements:

- 24-channel ESI Keypad (ESIK24ST or ESIK24STRF433) **or** 24-channel ESI Remote Control (ESIT24S or ESIT24SDUAL433)
- IR or RF receiver for the above items, as appropriate
- ESI RP60/RQ60 motor controllers or RQ-motors
- RP Programming Summary which is appropriate for the controller(s) or motor(s) you will be programming. These can be found on ESI's website or are available through Worthington Distribution.

Procedure:

If you are replacing an ESI controller in an existing system, you will need to calibrate the controller to the existing motor to enable intermediate stops.

To begin, open the RP Programming Summary and find the table entry labeled "Calibrate the travel time." Then simply follow the steps in order from left to right.

Controller Calibration Instructions

Program this functionality:		1	2	3	4	5
Calibrate the travel time [3]		STOP+7+7	OPEN #	CLOSE 10	OPEN 10	[13]

Follow the steps in order from left to right:

1. Press STOP, O7, and C7 simultaneously.
2. Press O# (default is channel 1).
3. Press C10.
4. Press O10.
5. The treatment will move to its upper and lower limits several times and then stop.

For example, if I was calibrating the controller which responds to channel 9 on the customer's remote control, I would follow these steps:

1. Press STOP, Open 7, and Close 7 simultaneously. The LED on the keypad/remote will begin blinking.
2. Press Open 9. The LED on the controller will light solid red and the LED on the keypad/remote will stop blinking.
3. Press Close 10. The LED on the controller will blink off once.
4. Press Open 10. The LED on the controller will blink off once.
5. The treatment will run to its upper an lower limits several times and will then stop. The controller will then exit programming mode automatically.

Results:

The controller has now learned the upper and lower limits of the motor it is connected to. This can be confirmed by setting intermediate positions in RP programming or by sending it move-to position commands via RQ.

This article was uploaded by John Zitzelman on 4/28/16