Pick-to-Light DXM700

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Quick Start Guide

The Pick-to-Light DXM700 Quick Start Guide allows the DXM700 Controller to manage all aspects of the PICK-IQ™ network and device level logic. A user can easily direct the logic through the local registers of the DXM controller to perform numerous processes via common connection protocols. Basic functions allow for:

Initialization
The adding, moving, and changing of the physical devices, adding a single or multiple device IDs, or entering a test mode.

Control Strategy
Access fixed or unique recipes, run once or repeat, recipe storage, and methods of teach.

Device Pass-Through
A method of changing single or bulk parameters without affecting operation.

Operation Mode
A method that allows for either a batch pick of the entire list or a sequential pick of single items.

Initialization

Assigning Multiple Device IDs

1. Write the beginning device ID to Register 2 (cannot be a value of 1).
2. Write the ending device ID to Register 3.
3. Write a two (2) to Register 1.
   A device ID subroutine begins, which writes an ID to the Pick-to-Light modules after the Touch Button is pressed, and then advances to the next one until complete. Device ID one (1) is reserved for the Main Controller.

Assigning Single Device ID

1. Write the device ID to Register 2 (cannot be a value of 1).
2. Write a one (1) to Register 1.
   A single device ID subroutine begins and writes an ID to the PTL module touched. If that ID was already assigned, the existing one is set to factory default (1) if a different unit is touched.

Note: When this command is executed, devices that are connected to the DXM are locked out and the address cannot be changed. If adding or changing the address on a single device, it must first be removed from the string, and then connected after the value of one (1) has been written to Register 1.

Note: Both functions for assigning device IDs are required to be completed to exit the function.

Test Mode

1. Write a three (3) to Register 1 to enter a test mode.
   The indicator of the unit in Register 2 turns on and off. It then adds a one (1) to the value and turns the indicator on and off once more until the value in Register 3 is written. It then returns to the beginning and continues.
2. Write a zero (0) to Register 1 to exit the test mode.

Control Strategy

Fixed Recipes

The SD Card inside the controller stores 250 pre-programmed recipes that give the user the ability to recall a recipe by writing the recipe number to a local register and then triggering the process.

Online Teaching

1. Write a one (1) to Register 5.
   a. Online teaching begins when a Pick-to-Light device is touched. The Touch Button increases the displayed integer, and the sensor decreases the integer.
2. Write a zero (0) to Register 5.
   a. The recipe saves to the SD Card under **Referencing the Recipe Number** in Register 10.

Register Teaching

1. Write the device IDs and displayed numbers to Register 11+ for a recipe.
   a. Load a set of zeroes (0) after the last set.
2. Write a five (5) to Register 5.
   a. The recipe saves to the SD card under **Referencing the Recipe Number** in Register 10.

Note: A third method of writing a .csv file through Notebook is discussed in the Solution Kit Manual.

Unique Recipes

If the system control calls for each recipe to be dynamic, then a string of callouts can send single or multiple device number(s) and display message(s).

Write a zero (0) to the two registers following the last set to tell the controller when to stop.

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Local Register 6: 0 = SD Card 1 = Run off Register 11+

Run Once or Repeat

Run Once: This runs the recipe once, and then returns Register 5 to a zero (0) to signal that the pick is complete.

Repeat: This runs the recipe until complete, and then repeats the same recipe until Register 5 is set to a zero (0) to signal that the operation is complete.

Local Register 8: 0 = Repeat 1 = Run Once

Registers 6 and 8 default to zero on start-up. If either values are required to be one, set the registers in the xml file to be constant value = 1 with the DXM Configuration Tool V4.

Device Pass-Through

The Device Pass-Through function gives the user the method to read or write register(s) of the individual Pick-to-Light units.

1. To Read:
   a) Write a zero (0) to Register 701.
   b) Write the desired register to be read from to Register 702.
   c) Write the number of registers to be read from to Register 703.

   Note: A maximum of 10 registers can be written to at once.

   d) Write the device ID to register 700.
   When complete, Register 700 returns to a zero (0), and the data requested will be in Registers 714-723.
2. To Write:
   a) Write a one (1) to Register 701.
   b) Write the desired register to be read from to Register 702.
   c) Write the number of registers to be read from to Register 703.

   Note: A maximum of 10 registers can be written to at once.

   d) Write the data to Registers 704-713.
   The operation occurs after the device ID is written to Register 700. To broadcast to all devices, use address 4096 in Register 700.
   When complete Register 700 returns to a zero (0).

To obtain a list of the register map, go to *www.bannerengineering.com* for PTL110S Pick-to-Light Device Register Map, original document 209995.

Operation Mode

The Operation Mode function runs the logic of a pick event.

1. To call up a taught recipe from the SD card:
   a) Verify that Register 8 is zero (0) and that the recipe number is in Register 10.
   b) Write a two (2) or three (3) to Register 5 to begin the pick.
   A two runs a step-by-step sequence pick, and a three runs a batch pick.
2. To run a recipe from Registers 11+:
   a) Verify that Register 8 is one (1).
   b) Write the IDs and quantities to Registers 11 and up (followed by zeroes (0) after the last one).
   c) Write a two (2) or three (3) to Register 5.
   A two runs a step-by-step sequence pick, and a three runs a batch pick.

- If the recipe is running once, Register 5 returns to a zero (0) after completion.
- If the recipe is running in repeat mode, the pick recipe repeats until Register 5 is returned to zero (0) to signal completion.

The pick recipe must be finished to end the function.

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