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# Perform Lighting Control Point-to- Point Tests

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# CERTIFIED COMMISSIONING TECHNICIAN CXT REFRESHER

Point-to-point testing is a crucial procedure in lighting control systems that verifies the functionality and integrity of control and communication pathways between components. It involves checking the electrical and communication connections between individual components, such as dimmers, sensors, control panels, and fixtures. System component calibration is essential for achieving accurate readings and effective system performance.

# Learning Objectives

- Course Overview and Introduction
- CxT's Technical, Communication, and Commissioning Skills
- HVAC Systems - Why is CxA of buildings necessary?
- Basics of field TAB , HVAC systems - Trained on jobsite safety and PPE
- CxT Responsibilities - Post Acceptance
- Perform installation pre-functional tests
- Perform lighting control point-to-point tests
- Verify TAB pre-functional tests and CxT responsibilities



## INTRODUCTION

### Introduction to Point-to-Point Testing

- Verifies the functionality and integrity of control and communication pathways between components of the lighting system.
- Involves checking the electrical and communication connections between individual components.

### System Component Calibration

- Configuring an instrument or system to provide a result for a sample within an acceptable range.
- Essential for achieving accurate readings and effective system performance.
- Calibration is crucial for interpreting the control signal accurately.

# PROPER LOCATION OF SYSTEM COMPONENTS



- Impacts performance by ensuring effective communication, optimal sensor readings, and overall system efficiency.
- Factors influencing placement include proximity to electrical sources, environmental conditions, and physical obstructions.

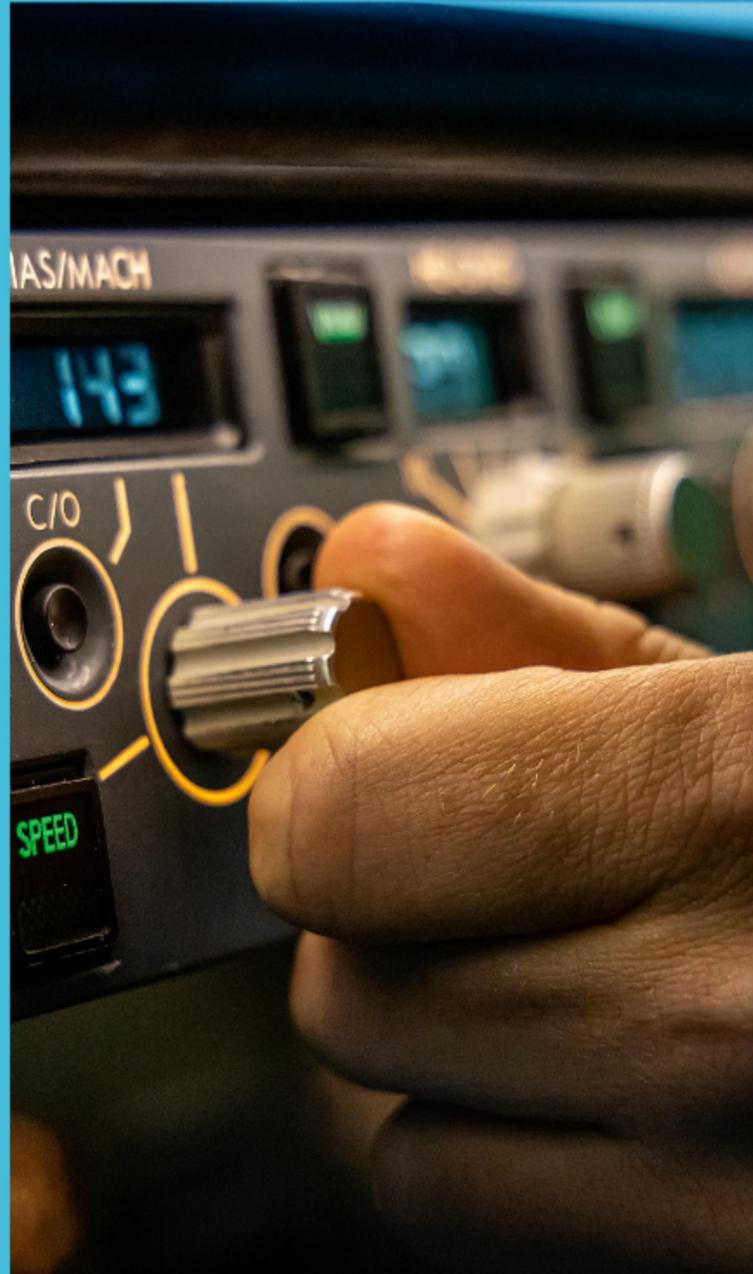
# PROPER INSTALLATION METHODS

- Ensuring safety and functionality through secure mounting, appropriate wiring techniques, and compliance with local electrical codes.
- Secure mounting: Installing components like control panels and sensors at a height accessible to users.
- Wiring techniques: Using twisted-pair cables for data communication to minimize electromagnetic interference.
- Compliance with Electrical Codes: Rating all wiring for the appropriate voltage and current levels, and using junction boxes where necessary.



# CONDUCTING POINT-TO-POINT TESTS

- Preparation: Gathering all necessary tools, ensuring the system is power-down to avoid electrical shocks.
- Establishing a Testing Protocol: Identifying all components, deciding on a logical sequence for testing.
- Performing Continuity Tests: Checking for continuity between each component.
- Functional Testing: Powering up the system and observing the responses from each component.
- Documenting Results: Recording all test results, including any anomalies or failures.





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