Course 108

Introduction and Overview to Control Panels

INSTRUCTOR GUIDE

SIGNALS TRAINING CONSORTIUM

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Course Preparation

Checklist for Instruction

✓	Confirm the training dates, location, and number of participants.
	Ensure you have all materials listed in the section **Materials for Instruction**.
	Ensure you have all that is listed in the section **Supplies, Audio-Visual Equipment,** and **Internet Access.**
	Have an attendance sign-in sheet printed for each day of class.
	Read and study the Instructor Guide, PowerPoint presentation, and any State or local documentation pertaining to the local environment.
	If using case studies, review the case studies ahead of time and, where applicable, select the most appropriate cases studies for your audience.
	Familiarize yourself with the Participant Guide.
	Collaborate with local host/coordinator to determine who will print the Certificate of Completion for each participant.

Supplies, Audio-Visual Equipment, Internet Access

The following is important for the adequate delivery of this course:

✓	LCD projector compatible with a notebook computer and cables for proper connection.
	Computer with software to run Microsoft PowerPoint.
	Electronic remote device to advance slides in PowerPoint presentation, if available.
	Projection screen (at least 6' x 6').
	Pointer (preferably laser type).
	Twenty-foot or longer extension cord.
	Dry erase board with dry erase markers and eraser.
	Flip chart with markers.
	Supplies such as pencils, note pads, markers, highlighters.
	Access to a lab, signals maintenance facility, lab, etc.
	Internet access.
	Room audio.
	All equipment should be placed and tested in the room. The instructor should check at least one hour prior to the first day of the course.

## Supplies, Audio-Visual Equipment, Internet Access (continued)

The following is important for the adequate delivery of this course:

✓	LCD projector compatible with a notebook computer and cables for proper connection.
	Location specific example of a local control panel
	Location specific GUI/HMI
	Location specific local control panel, picture and/or diagram
	Location specific status control panel, picture and/or diagram
	Location specific maintainer control panel, picture and/or diagram
	Location specific test control panel, picture and/or diagram
	Location specific wiring example
	Wafer Switch
	Toggle Switch

Best Practices for Delivering Training

1. Read through this entire Instructor Guide. Make your own notes as necessary.

2. Preview the PowerPoint presentation that comes with this course and practice what you will say and do during each slide. Note the ways that you will customize how each slide will be delivered to the participants. For example, you may have comments to add, additional take-aways, and other ways you can enhance learning.

3. When presenting, use PowerPoint's **Presenter View option** which makes you see your notes as you present while the participants see only the slides. When your computer is connected to the projector and you start the slide show, Presenter View appears on your computer's screen, while only the slides appear on the projector screen.
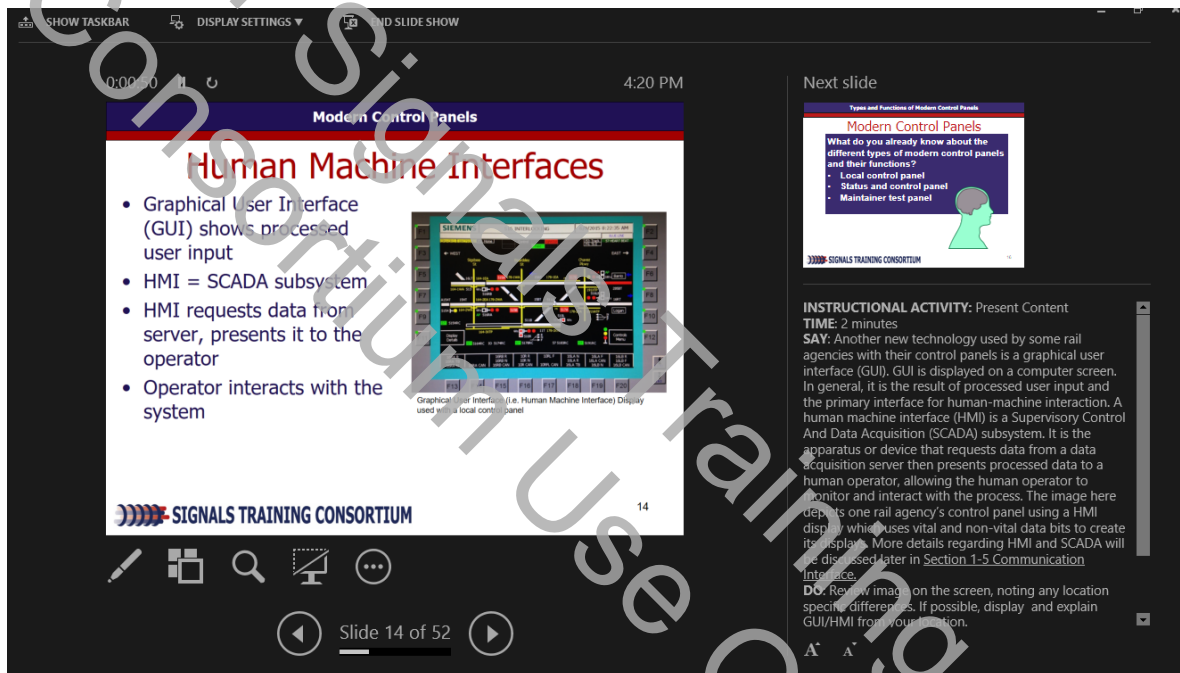
4. Make sure that embedded links to videos work.

5. Arrive at least an hour early on class day. Give yourself plenty of time to get organized before the participants arrive.

6. Circulate the Attendance Sign-in Sheet each day and make sure that all participants sign into the class to mark their attendance.

7. Start on time and stay on track. Always start on time, even if only one participant is in the room. Keep exercises within the time limit written in the Power Point presentation.

8. End discussions when they cease to be productive to the learning objectives of the module. Lead participants away from digressions and tangents and focus

their attention back to the lesson.

9. Be available for questions during breaks, after class, and during the lab or hands-on learning activities.

10. Mentor participants during each Module activity. Walk amongst the groups in class and during the labs as participants work on activities, and answer questions and offer guidance as appropriate. Ensure that participants are on track as they work. Give constructive feedback during the presentations and participant activities.

11. Review Questions: Review the content of each lesson throughout the course to reinforce the learning outcomes for that lesson and connect the upcoming material. Avoid YES or NO questions and try to use open-ended questions to draw participants into the material. Sample the review questions that are available in the Instructor's Guide and feel free to develop additional questions, as appropriate. Make sure that all questions directly relate to and support the learning outcomes for the Module.

12. Learning Objectives: At the beginning of each Module, review that Module's learning outcomes. Make sure participants are fully aware of the topics in the Module. At the end of each Module, review the outcomes again and use the review questions or an activity/exercise to ensure the outcomes were met.

For more on Training Best Practices, consider attending a Train-the-Trainer session by the Transportation Learning Center. For more information, contact info@transportcenter.org or read the fact sheet on our website: http://www.transportcenter.org/images/uploads/publications/Train_the_Trainer_flyer.pdf

Course Description

This 3 hour course presents an overview of the principles of friction brakes for the new maintenance worker. The class focuses on types of control panels, their functions and their associated components. Participants engage in a series of activities that help them prepare to work on control panels. Content is supplemented with examples to support participants' successful application of the course content to their work.

This course is only one module. Within that module there may be several learning application activities and demonstrations. Before starting the module instruction, participants are expected to complete a **pre-course assessment** to assess their knowledge of the subject. Similarly, after instruction of all the modules, participants will complete a **post-course assessment** as well as a course evaluation.

A breakdown of course components with approximate times are:

Pre-course (0.5 hours)

1. Introduction and Overview to Control Panels (3 hours

Post-course (0.75 hours)

Course Materials

At least one week before class, the instructor should download, review, and print the materials for instructor and class participants. The following materials are available on www.transittraining.net.

START

Pre-course
- For instructor:
  - SM108 Instructor Guide
  - SM108 Pre-Course Assessment Answers
- For each participant:
  - SM108 Participant Guide
  - SM108 Pre-course Assessment

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Module 1: General Principles and Terminology
- For instructor:
  - SM108 Slides with IG Notes
  - SM108 Quiz Answers
- For each participant:
  - SM108 Participant Quiz

END

Post-course
- For instructor:
  - SM108 Post-Course Assessment Answers
  - SM108 Instructor Post-Course Survey
- For each participant:
  - SM108 Post-Course Assessment
  - SM108 Participant Post-Course Survey

How to Download Course Materials

All materials can be downloaded from www.transittraining.net. Click this link.

- Click on the **Resource Library** tab.
- In lower right under **Useful & Helpful Links** click on **Courseware.**
- Under **Quick Links** click on **Rail Courseware**.
- Click on **Signals Maintenance**.
- Scroll down to **Course 108: Introduction and Overview to Control Panels**
- Follow relevant links to download files.

Course Delivery

START **Pre-course**

🕐 Duration: 30 minutes

1. Welcome participants to this course. Facilitate introductions, review agency safety procedures, learning expectations, and other requirements.

2. Each participant should complete a Pre-course Assessment.

3. Allow participants 20 minutes to complete the written assessment.

4. After 20 minutes call time. If more time is needed, allow another 5 or 10 minutes.

5. Gather all Pre-Course Assessments. Store these in a binder and wait to score them when you have time during or after the course.

6. Give each participant a copy of the Participant Guide.

Your Notes

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