HarnWare
Training Agenda
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Scope

This training agenda gives a guide to the structure of the HarnWare course and indicates the amount of time spent on each section. In addition to the major topics given in the agenda instruction will be given in all other HarnWare functions:

- Wire size advice
- Harness systems advice
- HarnWare Help, web links, product data sheets
- Export options
- Drawing translation
- Printing options
- Harness drawing tools
Day 1
Introduction

8:30 – 8:50 (20mins) Introduction
Welcome to HarnWare Training.
Introduction of Trainer.
Health and Safety statement.
Overview of coming 3 days including breaks, refreshments etc.

8:50 – 9:30 (40mins) Basic Microsoft Visio functions and commands used with Harnware
Open and Save files.
Templates, Stencils and drawings.
Short Cut Keys

Example 1 - Point to Point Cable - Unshielded

9:30-10:15 (45mins) Introduces material systems, wire and tube selection. Material System 10.
Basic Visio using HarnWare stencils and shapes
Creating a harness without connectors to explain the basics of HarnWare
Using primary wire with a common gauge
Produce standard cable lays
Wire Routing
Creating a Parts List and itemising drawing
Labour Estimating

Break - 15 Mins

Example 2 - Point to Point Cable - Unshielded

10:30 - 11:00 (30mins) Similar to Example 1, allows trainee to practise. Material System 100.
Creating a harness without connectors
Using primary wire with a common gauge
Produce standard cable lays
Wire Routing
Creating a Parts List and itemising drawing
Labour Estimating
Example 3 - Branched Harness - Unshielded

11:00 - 12:00 (60mins)
Introduces moulded parts and adhesives. Material System 25.
Creating a 3 legged Y branch harness without connectors, adding more basic
Using primary wire with the same gauge
Produce standard cable lays
Wire Routing
Creating a Parts List and itemising drawing

Lunch - 45 Mins

12:45 - 13:00 (15mins)
Review morning Tasks and Questions

Example 4 - Branched Harness - Shielded

13:00 - 14:00 (60mins)
Introduces shielding products and processes. Material system 25.
Creating a 3 legged Y branch harness without connectors, using more HarnWare tools
Using mixed wire types
Create complex cable lays
Wire Routing
Select overlap shield termination method
Creating a Parts List and itemising drawing

Example 5 - Branched Harness - Shielded

14:00 – 15:00 (60mins)
Similar to Example 4, allows trainee to practise. Material System 25.
Creating a 3 legged T branch harness without connectors, using more HarnWare tools
Using mixed wire types
Create complex cable lays
Wire Routing
Select Braid Tape shield termination method
Creating a Parts List and itemising drawing

Labour Estimating
TE Connectivity

Break – 15 mins

Example 6 – Converting Example 1 to a Harness

| 15:15 – 16:45 (90mins) | Introduces connectors, adaptors, marker sleeves, adhesives and more moulded parts.  
|                         | Converting Example 1 from a cable to a harness  
|                         | Wire Routing  
|                         | Creating a Parts List and itemising drawing  
|                         | Labour Estimating  
|                         | Adding non Tyco components  
|                         | Use design checker  
|                         | Add marker page  
|                         | Generate a wiring schematic  
|                         | Add COP Listing  
|                         | Weight Estimates  
|                         | Drawing Borders  
|                         | Dimension line  
|                         | Keyway symbol  
|                         | Export Parts List  

| 16:45 - 17:00 (15mins) | Review of Day 1 Tasks and Questions  

Day 2

Introduction
8:30 - 8:45 Recap on Day 1 Tasks and Questions.
(15mins)
Overview of Day 2 tasks

Example 7 – Converting Example 2 to a Harness
8:45 - 10:15 Introduces more connectors, adaptors, marker sleeves, adhesives and moulded parts.
(90mins) Converting Example 2 from a harness with flying leads to a harness with connectors.
Creating a Parts List and itemising drawing
Labour Estimating
Adding non Tyco components
Use design checker
Add marker page
Generate a wiring schematic and schedule
Weight Estimate
Add COP Listing
Export parts list

Break - 15 Mins

Example 8 – Adding Connectors to Example 4
10:30 – 12:00 Introduces more connectors, adaptors, marker sleeves, adhesives and moulded parts.
(90mins) Converting Example 4 from a harness with flying leads to a harness with connectors.
Wire Routing
Creating a Parts List and itemising drawing
Labour Estimating
Adding non Tyco components
Use design checker
Add Materials and Equipment Listing
Generate a wiring schematic
Generate RoHS Listing
TE Connectivity

Lunch – 45 mins
12:45 - 13:00
(15mins)
Review morning Tasks and Questions

Example 10 - Splicing
13:00 – 14:00
(60mins)
Introduces crimp splicing and connectors with pre-installed adaptors.
Wire Routing
Creating a Parts List and itemising drawing
Generate a wiring schematic

Example 11 – RF Harness
14:00 – 15:00
(60mins)
Introduces RF connectors with non TE cable.
Wire Routing
Creating a Parts List and itemising drawing
Generate a wiring schematic

Break - 15 mins

Cable Lays – Standalone Examples
15:15 – 16:15
(60mins)
Introduces use of HarnWare to select cable lays as standalone function.
Using Braid and Tube Form to create cable lays

Examples 12, 13 and 14 - Converting to Machine Built Cables
16:15 – 17:00
(45mins)
Introduces the multicore cable database and converting hand lay constructions to multicore cables. Also introduces the multicore cable analyser.
Convert Example 6 to Multicore Cable
Convert Example 7 to Multicore Cable
Convert Example 3 to Multicore Cable

17:00 - 17:15
(15mins)
Review of Day 2 Tasks and Questions
Day 3

Introduction

8:30 - 8:45 Recap on Day 2 Tasks and Questions.
(15mins) Overview of Day 3 tasks

Example 9 - Adding Connectors to Example 5

8:45 – 10.30 Introduces more connectors, adaptors, marker
(90mins) sleeves, adhesives and moulded parts. Allows
trainees to practice what they have learnt on
day 1 and 2.
Converting Example 4 from a harness with flying
leads to a harness with connectors
Wire Routing
Creating a Parts List and itemising drawing
Labour Estimating
Use design checker
Generate a wiring schematic
Weigh the harness

Break - 15 Mins

Example 9 - Continued

10:45 – 11.15 Introduces more connectors, adaptors, marker
(30mins) sleeves, adhesives and moulded parts. Allows
trainees to practice what they have learnt on
day 1 and 2.

Example 15 – Converting Example 8 Using Multi-Outlet Shapes

(60mins) Converting Example 8 from a hand laid branched
harness to a multi-outlet design using multi-outlet
shapes
Wire Routing
Creating a Parts List and itemising drawing
Labour Estimating
Weigh the harness

Lunch – 45 mins
13:00 - 13:15 (15mins)
Review morning Tasks and Questions

Composite Parts List
13:15 – 13:45 (30mins)
Introduces the composite parts listing tool.
Create a composite parts list and export.

Standalone HarnWare
13:45 – 14:00 (30mins)
Introduces HarnWare standalone for selecting harness components and designing cable lays.
Selection of Parts
Links to SCD’s
Overview of Help section links
Product catalogue

Microsoft Visio Shapes and Templates
14:00 – 15:00 (60mins)
Introduces creation of Microsoft Visio Shape and Template.
Create simple connector shape
Create a simple drawing Template

Break – 15 mins
15:15 - 16:15 (60mins)
Review of 3 Days and Questions
Address outstanding issues
Hand out Course Evaluation Form
Hand out HarnWare Software, certificates etc.

Finish