

SESSION PLAN

53MC5000 Process Control Station

TC 140

Hardware and Software Management

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Date:	5 January 2005
Revision:	0.0 – Draft Working Copy

Course Summary and Equipment Requirements

This is a Skills/Information Session.

The objective of this session is to enable Inlec tradespersons to load and backup the software required in a 53MC5000 controller. They will also be able to test faulty units and connect new and replacement units.

It is broken up into the following modules

Module 1	- Hardware description - Knowledge
Duration	- 10 minutes
Module 2	- Software Operations - Skill
Duration	- 30 minutes
Module 3	- Test Procedures - Skill
Duration	- 30 minutes
Module 4	- Front Panel Operations and Display Modes - Knowledge
Duration	- 15 minutes
Module 5	- Connections Diagrams and Spare Parts - Knowledge
Duration	- 10 minutes

The following equipment is required

- Item 1 – Laptop with DOS installed and the MicroDCI Program
- Item 2 – Communications lead
- Item 3 – MicroDCI 5000 and I/O Test board
- Item 4 – Training notes and module activity sheets

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1 Purpose Statement

At the end of the session the participants will be able to confidently work with the 53MC5000 controller in a maintenance or breakdown situation.

2 Introduction

2.1 Why the Participants have been Chosen

The participants of this course have been chosen because of the need to maintain and repair the 53MC5000 controller. These controllers are used widely in the Dams and control the dosing systems associated with Chlorine, Fluoride and pH.

2.2 Where This Course Fits in

This course is a stand-alone designed to cater for the training of new employees and to refresh the skills of existing tradespersons.

2.3 Objectives of the Course

- Module 1: At the end of this session you will be able to identify the different styles of hardware used to make up a 53MC5000 controller.
- Module 2: At the end of this session you will be able to upload and download the program and database from a 53MC5000 controller.
- Module 3: At the end of this session you will be able to test the 53MC5000 controllers inputs and outputs for correct operation.
- Module 4: At the end of this session you will be able to operate the front panel keys and negotiate through the page system.
- Module 5: At the end of this session you will be able to locate the correct part number and also the correct wiring configuration with the aid of the data sheets provided.

2.4 How the Session Will Run

This session is fully described in the training notes "UDCI5000.ppt".

Skills Session –

A Skills session requires the following Skills demonstration and practice sessions. If there are more than 5 to 7 steps in a description of a skill, the session may be divided up into smaller sessions that each repeats the following structure.

Demonstration Section

- Silent demonstration
- Explanation Demonstration
- Check Demonstration

Practice Section

- Controlled Practice
- Own Pace Practice
- Test

Knowledge Session –

A Knowledge session requires the following structure. If a given session becomes extended it can be divided up into smaller sessions. Half an hour for a whole EAR session is suggested.

Explanation

Activity

Revise

2.5 Motivation for the Participants

This session will enable the participants to confidently repair and interchange the 53MC5000 controller in any situation.

2.6 Prior Experience

Determine who has had prior experience.

Do they want to proceed directly to the test?

Would they be willing to demonstrate what they know as it is addressed in the course?

3 Test

The test for this session is

Module 1: No test is required.

Module 2: Download the workshop program to the 53MC5000 controller and place it into run mode.

Module 3: Test any I/O point given by the trainer and confirm for correct operation.

Module 4: Given a controller with a Fluoride dosing program, move to the acid strength page and change the value by 2%.

Module 5: No test is required, as it is only a reference module.

Note: test must be

- Valid to the material covered
- Quick to set and take
- Reliable – clear answers
- Cover a good sample of the course
- Discriminate between participants who now know the material and those who don't.

4 Summary

Help is available from the Process Control Training Centre staff, System Support Group members and other maintenance Inlecs.

What happens next

Participants are welcome to book an appointment at the PCTC to refresh their skills and clarify or discuss any issues arising from field experiences.