

Operation /Technical Course Syllabus



Solaris Laser printers

Course Syllabus

Class Hours: 8:30 – 4:30

Lunch: 12:00 - 1:00

Instructor Office hours: 8:00 - 8:30 & 4:30 - 5:00

Instructor: Matthews Intl.
Technical Training Instructor
Matthews International Corporation
Marking Products Division
6515 Penn Avenue
Office Phone: 412-665-2500

A. DESCRIPTION

This course will enable the student to properly enter and adjust the parameters of a message to be printed with the Laser unit. The student will be able to perform daily maintenance to the unit. This course will enable the student to properly install the printers and adjust the parameters of a message to be printed with the unit. The student will be able to perform daily maintenance, troubleshooting and repair to the units.

B. ORGANIZATION

This is a lecture-lab course in which the instructor presents discussion topics. Labs will be presented by the instructor and performed by the student. All labs are designed to reinforce the lecture portion of the course. This course is a prerequisite for the Solaris Laser unit Level 2 course.

C. COURSE OBJECTIVES

1. To introduce students to the operation of the unit, and to acceptable procedures of Laser technology.
2. Upon completion of this course the student shall be able to properly enter and print a message using the unit.
3. Upon completion of this course the student shall be able to perform routine maintenance on the unit.
4. To introduce students to the installation and setup of the unit, and to acceptable procedures of in depth Laser technology.
5. Upon completion of this course the student shall be able to properly install and adjust the parameters of a message to be printed with the unit.
6. Upon completion of this course the student shall be able to perform routine daily maintenance, troubleshooting and repair to the unit.

D. COURSE TOPICS

The course will cover the following topics:

- 1. Introduction**
 - a. Safety (Matthews)
 - b. Facilities (Matthews)
- 2. Welcome to Matthews Marking Products**
- 3. Laser Theory & Operation**
 - a. Show of a mark (only viewing)
 - b. Technology – Laser explained (How the mark is made)
- 4. Overview**
 - a. System Description
 - i. Control Module
 - ii. Laser scanning Head
 - iii. Mounting frame
 - b. Specifications
 - i. Power requirements
 - ii. Extraction requirements
- 5. Learning the Basics**
 - a. General adjustments for
 - i. Power configuration for 110-220VAC applications
 - ii. Mounting framework adjustments
 - b. Tutorial
 - i. Explanation of how to load a message into the controller and send to the marking head and apply to the product **VISUAL** only
- 6. Operator Training**
 - a. Turning on the printer/ booting up
 - b. Explanation of icons
 - i. Print go/stop, message list and main menu
 - c. Selecting a message to print
 - d. Actuating a printout.
 - i. What actuates the printout
 - ii. Physical sensor and on-screen TEST button.
 - e. Lab
 - i. Change message
 - ii. Simple text editing of message on screen
 - iii. Start/stop print
 - iv. Print message
- 7. Maintenance (Daily/Monthly)**
 - a. Cleaning the print head (moving the unit for access) /Acetone/ lint free wipes
 - b. Cleaning the Focal lens.
 - c. Inspect position of Marking head (parallel and distance) to product
 - d. cleaning/ Air vents
 - e. Check Fume extractor filters, hose and electrical plug.
 - f. Photocell inspection (if used) –cleaning of lens/ position correctly
 - g. Encoder, if used checking the contact of the wheel, and electrical to unit.
- 8. Technical Parameters/ Settings**
 - a. Explanation of Parameters/ Screen Menus
 - b. Explanation of machine Technical Control (Mirror speed, power and frequency)
 - c. Explain connections- Electrical/ triggering, encoder and I/O
 - d. Focal point, other settings

9. Maintenance

- a. Focal lens
- b. Air vents
- c. Electrical connections
- d. Issues must be considered about Scanning head
- e. Other maintenance items for consideration (pc connections, mounting stand)
- f. Inspection of marking area. Clear from traffic and materials

10. Troubleshooting (per the manual)

- a. Print Quality
- b. Printer
- c. Print samples

11. Programming (software-Solmark II Operation)

- a. Creating, Saving and Transferring Templates
- b. Ethernet connection

12. Procedures

- a. How to contact Tech support
- b. Matthews in house repairs (RMA#-how to obtain)
- c. Recommended spare parts
- d. Warranty
- e. Q&A session

F. GRADING PLAN

ATTENDANCE:

Attendance is mandatory for the entire length of course. Any failure to attend all classroom lectures and labs will result in failure of class by the student and employer will be notified.

GENERAL: Upon successful completion of the class, the student will be awarded a certificate of completion.

G. CLASSROOM RULES OF CONDUCT

1. As a courtesy to all students/staff, cell phones must be turned off while in class.
2. Laptops are only permitted for designated training purposes.
3. Recording devices are not allowed in the classroom.
4. Food is not permitted in the classroom.
5. Beverages are allowed only on the student's desk, not equipment benches.
6. Class lab time is expected to be spent in lab work. Lab time is not free time. Attendance and concerted work on assignments are required.
7. Breaks shall be given at the discretion of the instructor.

H. YOUR IDEAS, EVALUATIONS, ETC.

Students are encouraged to complete a course evaluation at the completion of the class. In general, your ideas, comments, suggestions, questions, etc. are welcome. Your discretion in these matters is expected, however.