



WORKSHEET 6-1

Analog and Digital Signals

Worksheet Objectives

When you have completed this worksheet, you will be able to:

- Distinguish between analog and digital signals
- Describe the applications of input and output signals in automotive circuits
- List the characteristics of analog and digital signals

Tools and Equipment

For this exercise you will need the following:

- Technician's Handbook
- EWD

Exercise 1: Input and Output Signals

Complete the following statements by filling in the blanks:

1. _____ signals provide information about operating conditions.
2. _____ signals cause an electrical or electronic device to operate.
3. Electronic control units (ECUs) typically receive both _____ signals and _____ signals.
4. An analog signal is a continuously variable _____.
5. A throttle position sensor is a _____ resistor and produces an _____ signal.
6. In a typical automotive electronic circuit, a digital signal is either _____ or _____.

Exercise 2: Signal Characteristics

List the characteristics of a digital signal that can be used to convey information:

1. _____
2. _____
3. _____
4. _____

List four sensors in the engine control system:

1. _____
2. _____
3. _____
4. _____

List four devices controlled by output signals from an ECU:

1. _____
2. _____
3. _____
4. _____

Exercise 3: Oscilloscopes

Complete the following statements by filling in the blank spaces.

1. An oscilloscope shows _____ on the horizontal axis.
2. An oscilloscope shows _____ on the vertical axis.
3. An oscilloscope display provides a record of _____ over time.

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Name: _____ Date: _____

Review this sheet as you are doing the Analog and Digital Signals worksheet. Check each category after viewing the instructor’s presentation and completing the worksheet. Ask the instructor if you have questions regarding the topics provided below. Additional space is provided under topic for you to list any other concerns that you would like you instructor to address. The comments section is provided for your personal comments, information, questions, etc.

I have questions

I know I can

Topic	Comment		
Distinguish between Input and Output Signals			
Digital and Analog Signals			
Signal Characteristics			
Oscilloscopes			



Notes