

ASSIGNMENT #1

DUE: At the beginning of your recitation section, August 29 – 31, 2006.

This assignment is to be completed individually. You are not permitted to seek or receive assistance from anyone other than Dr. Callen or your recitation instructor.

Recitation #2 will focus on the use of Quality Function Deployment (QFD) as a method for relating customer needs/desires to engineering attributes for a product. In preparation for this recitation, do the following:

- 1) Develop a list of 5 or 6 key customer needs for the product being analyzed. In your write-up, briefly explain why you believe these are among the most important factors contributing to customer satisfaction. Your assigned product, based on your recitation section, is as follows:
 - Tuesday recitations – Lasar speed detector, such as used by law enforcement personnel
 - Thursday recitations – Consumer Global Positioning Satellite (GPS) receiver for a car, boat, etc.
- 2) Develop a list of 5 or 6 key technical characteristics for the assigned product. These should correspond to high-level “design requirements” or “engineering options,” e.g., “amount of memory” or “processor speed.” In your write-up briefly explain why you believe these are among the most important characteristics contributing to the technical success of the product.
- 3) Construct a Quality Function Deployment (QFD) diagram relating the list of customer needs to product characteristics. Use the format and labeling conventions from the August 24 lecture, as follows:
 - A) Label the rows with the customer needs and the columns with the technical characteristics.
 - B) If appropriate, mark each technical characteristic with a “+” (“-“) to indicate that it is generally desirable to increase (decrease) the value of that characteristic.
 - C) Complete the rectangular matrix, using “+” and “-“ to indicate relationships between customer needs and technical characteristics.
 - D) Complete the triangular “roof,” using “+” and “-“ to indicate correlations among the technical characteristics.
- 4) Based on your QFD analysis, which technical characteristic is probably the most important in determining overall success in satisfying customer needs? Briefly justify your choice and explain how the value chosen for this characteristic will affect other aspects of the design.

Write your name and recitation section at the top of your write-up. Your total write-up should be a maximum of one page, plus the QFD diagram. Bring a second copy of the QFD diagram with you to recitation, since you will need it during the recitation activities.