

SQM 500

INTERGRATED SCANNING DATA ACQUISITION AND COLOR GRAPHIC SYSTEM



TURN-KEY SYSTEM

The SQM 500 is a fully integrated 3-D color graphics data acquisition system. The standard SQM500 system includes a late model desk top computer, a motorized X-Y scanning stage, 2-Axis controller, Color Printer and an SQM200 Surface Quality Monitor. All scanning and data acquisition is controlled by PETSCAN™ software.

The system can be used to scan a flat sample surface and acquire data using any analog sensing device. It displays graphics in both color map and 3-D Topo map formats, with the ability to print out a color hard copy. The data can also be printed out, in a matrix format, listing the X-Y position and associated signal value.

SOFTWARE FEATURES DESCRIPTION SCANNING

Enables the user to scan any flat sample surface, acquire data and display a color map on the monitor. The user can define the number of data points to be collected in the X and Y directions, and the stepsize (the distance between each data point). These scan parameters are automatically

saved and recalled to scan additional parts or re-scan the same part after some surface treatment. This feature is helpful in visualizing the effect of any treatment/changes to the surface.

COLOR GRAPHICS DISPLAY

A seven-color interactive graphics mode allows rapid visual analysis of the data. In this mode, the user has the ability to PAN and ZOOM onto a portion of the color map. The ZOOM portion can also be saved as a file. Two color maps can be displayed simultaneously to visually compare the two scans. This enables the user to visually analyze the effect of any treatment or the variation in two parts. Another feature is the ability to normalize, i.e., subtract point-by-point, one file from another. The resultant file is displayed in a 3-D type format.

A 3-D Topo map of the data can also be displayed on the screen. In this display mode, the user has the ability to tilt and rotate the image and set the Z-scale factor to visually enhance differences in the surface characteristics.



SOFTWARE FEATURES DESCRIPTION (CONT'D.)

ANALOG TO DIGITAL CONVERSION

An analog input of 0-5 VDC is standard input for the system. Other ranges of DC signal can be accepted with a minor modification, done at no additional cost. The SQM 500 can accommodate any instrumentation that has an output which ranges within the standard or modified analog signal range.

REPORT GENERATION

Any graphic image displayed on the screen can be printed on the color printer, which comes complete with the system. All scan parameters are also printed automatically. It is possible to print a list of all sensor data values, along with their corresponding X - Y positions. The high, low, mean and standard deviation of the scan are also printed out.

DETAILED PRODUCT SPECIFICATION

X - Y Scanning Stage:

- 6" x 6" Travel Motorized X-Y Scanning Stage Sensor Holder with Sensor Clamp
- Manually operated micrometer for sensor height adjustment, 1" (25mm travel)

Desk Top Computer

- Late model mother board and processor, Hard Drive, 3 1/2" Floppy Drive,
- 17" Color Monitor
- Keyboard
- Stepping Motor Controller Card
- Analog to Digital Card
- Color Printer

PETSCAN SOFTWARE

- Scanning Routines for defining, the stepsize, and number of steps in the X & Y direction
- File saving and management routines
- Color Graphics Display routines with Pan & Zoom capability. Displays as a Color Map or Topographic Map
- Copy display to the printer
- Print detailed listing of scan data

CONTROLLER

- Two (2) Axis Stepping Motor Controller

MODEL SQM 200 SYSTEM

- Surface Quality Monitoring System

OPTIONS

- Larger X and/or Y travel available
- Replace SQM200 Surface Quality Monitoring System with other analog surface characterization sensors