

# Datamyte 900

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The Datamyte 900 solid-state, hand-held data collector is described.

The Datamyte 900 was developed to provide an easy, efficient means for the behavioral researcher to collect observed data and transmit that data directly to the computer for immediate analysis.

## HISTORY

The history of the Datamyte began in 1967, at Electro/General Corporation, Minnetonka, Minnesota, with the introduction of a hand entry unit with five pushbuttons, called the Datapack. Electronic digital signals were recorded onto a cassette tape recorder. A special converter was required to convert the recorded signals to a computer-compatible format during data transmission.

The Datapack was replaced by the DAK-7, then by the DAK-8 models. The DAK-7 and DAK-8 models were merely improvements and refinements of the original Datapack unit; the same basic cassette tape technology was employed.

The Datamyte 900 all-electronic series was developed in early 1976. The Datamyte 900 is a hand-held, solid-state data collector using the most modern microprocessor technology available. A tape recorder is no longer used.

Richard E. Sykes, PhD, Department of Sociology, University of Minnesota, conceived the original Datapack and contributed many ideas toward the development of succeeding Datamyte models. He also tested them in research projects. "MIDCARS," a paper by Sykes and Fraine E. Whitney, describes the Datapack and the DAK-7 for interaction data coding and reduction for several applications. The DAK-8 was used to collect data for "A comparative quantitative analysis of police encounters." A prototype of the Datamyte 900 was used for a group formation study conducted for the Office of Naval Research.

## DESCRIPTION

The Datamyte 900 uses an integrated circuit memory that stores from 16,000 to 32,000 characters. Data are recorded in computer code, ready for immediate transmission. The system transmits ASCII, a code compatible with most computer terminals. Depressing

XMIT transmits the stored data to the terminal (for printout, or for recording on cassette tape or paper tape), or to the computer for storage on a file.

The Datamyte 900 has 14 character keys, 10 numerical (0-9) and 4 alpha (C, F, H, \*), that provide great flexibility for generating coding schemes. There are four switch-selectable input modes:

**Mode 1 (ENTER with Time).** Depressing a combination of the 14 character keys causes the characters to be displayed. Depressing ENTER records the displayed characters plus elapsed time.

**Mode 2 (One-Character Autotime).** Depressing any of the 14 character keys instantly records the character plus elapsed time.

**Mode 3 (Two-Character Autotime).** Depressing any of the 14 character keys displays the character. Depressing a second key instantly records the two characters plus elapsed time.

**Mode 4 (ENTER).** Depressing a combination of the 14 character keys causes the characters to be displayed. Depressing ENTER records the displayed characters.

The internal clock is crystal controlled for accuracy and reads in hundredths of minutes. A built-in rechargeable battery permits 8 h use between charges. The Datamyte 900 is 10 x 12 x 2 in. and weighs 4 lb. It is priced from \$2,490 (16K memory) to \$3,090 (32K memory).

## SOFTWARE

Most Datamyte 900 users have designed and written their own computer programs to satisfy individual needs. The following software systems are available commercially or from users: REDUCE, Jack Ward, Illinois State University, Department of Biological Sciences, Normal, Illinois 61761. CRESCAT, Kenneth Kaye, University of Chicago, Department of Education, Chicago, Illinois 60637. SAS (Statistical Analysis System), SAS Institute, Inc., P.O. Box 10066, Raleigh, North Carolina 27605. SPSS (Statistical Package for the Social Sciences), McGraw-Hill Book Company, 1211 Avenue of the Americas, New York, New York 10020. DATA ANALYZING PROCEDURES (Technical Report 2), Roger Bakeman, Georgia State University, Atlanta, Georgia 30303.

### BEHAVIORAL STUDIES

Input Modes 2 and 3 (Autotime) permit rapidly changing behaviors of one or two subjects to be tracked. Time records automatically to the nearest .01 min, along with a one- or two-digit behavior code.

Multiple subject interactive behavior can be studied by multiple passes of videotaped or filmed scenes, selecting a different focal subject for each pass, or by using multiple observers, each with a Datamyte 900. The data are merged by the computer to provide a very comprehensive data base for behavioral analysis.

Complex behavioral codes (subject, activity, recipient, location, etc.) can be entered by using Mode 1. Time is recorded automatically each time the ENTER button is pressed. Up to 12 characters can be displayed at one time.

Data taken on a sampling basis (e.g., every 30 sec) can be recorded using Mode 4. A built-in interval timer "beeps" in an earphone at switch-selectable intervals of .5, 1, 1.5, 2, 3, 4, 5, 10, 16, or 32 min to signal sampling periods.

Remote entries, from observers or from subjects, can be recorded via an accessory, the Model 935 Remote Input Module. The Remote Input Module permits switch closures, such as microswitches, relay contacts, transistors, gates, or photocells, to operate the Datamyte 900.

From May 1976 through June 1977, 143 Datamyte 900s have been purchased for the following research studies: mother-infant, teacher-student, retardate, group interaction, child aggression, social interaction, nonhuman primate, small animal, fish, bird, plant, and industrial time studies. Many research departments in psychology, psychiatry, sociology, zoology, education, home economics, anthropology, horticulture, and industrial engineering are using the Datamyte 900.

### REFERENCES

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