

Portable data collection system

New conception in data collection!!

This recently developed portable data collection machine includes all possibilities of the manual and automatic data collection. The system has been developed by using the most up-to-date high-tech results to minimize the data collection failures.

The PREFIX-2000 is a portable, hand-held, small size machine, which replaces writing documents especially at off-bureau applications and also replaces paperwise data collection from electronic instruments placed at workshops, laboratories, or external environments. It saves essentially the document entry procedures to computer by storing the data directly in computing form.

The PREFIX-2000 design is modular and configurable depending on the application requirements.

Data may be collected from keyboard or barcode reader and also from many different ANALOG- and DIGITAL sources.

The PREFIX-2000 can be connected for data collecting purposes to many different electronic instruments or probes, even with making simple control functions.

The INTEGRATED SOFTWARE --with the help of the economically designed hardware-- takes care of the connected instruments and handles the high accuracy data collection, i.e.:

- data entry from the integrated keyboard
- or bar code reader
- data reading from measuring instruments or probes
- simple programmable measuring controls
- automatic --preprogrammed-- data collection from measuring instruments or probes
- data communication with personal computers.

The INTEGRATED SOFTWARE makes possible the application-oriented programming by a menu-oriented system.

The programming is very simple and as a matter of fact it describes the data to be collecting, together with their sources and the access methods of the input devices.

Many such data collection program can be stored in the machine, which are held in the battery backed-up

CMOS memories.

Switching on the machine the desired program can be chosen from the menu. Time to time you may change from one program to another and also turn back again or even write and use new programs.

The high level INTEGRATED SOFTWARE handles the data belonging to different program as data segments for each. All data segments belonging to the same program will be collected and sent together to the main personal computer by the help of the communication function.

Built-in utility programs will take care of the segmented data storage.

The stored data rereadable, verifyable under the control of the data verify program.

A memory dump also available by a special built-in utility program.

A special programming function makes possible storing texts and messages for memo or other instruction purposes. These texts can also be sent to PC.

The communication function controls the data transfer to the processing computer under the standard data communication formats and speeds.

The INTEGRATED SOFTWARE contains built-in utility programs to make the PREFIX-2000 even more versatile:

- real-time clock
- pulse generator
- frequency generator
- pattern generator
- inter-communicator

The information function helps the user to remember what is in the machine: all the necessary information about the stored programs, the data segments, the configuration, etc.

Also part of the INTEGRATED SOFTWARE a program which runs on the data processing computer (an IBM compatible PC) to receive the data from PREFIX-2000 and to preprocessing it to a standard file.

ENTRY	VERIFY	COMM	PROGRAM	UTIL	INFO
(filename)	(filename)	(filename)	(filename)	(name)	(user name)
-keyboard	-search	-RS232	-file	-data delete	-configuration
-barcode	-read any	-TTL	name type format	-memory reorder	-file contents
-programmed manual control	-read next		-data desc. type format	-external program	-directory list
-automatic	-replace		-input channel time next	-time generator	-messages
-free form manual				-pattern generator	-etc.
-message				-etc.	

S P E C I F I C A T I O N of the PREFIX-2000:

Size:	170x90x25mm
Weigth:	400 gramm
Environment:	working temp. :-10C +50C storage temp. :-20C +60C humidity :95% max. dripping water- and dust proof
Power:	built-in accumulator (tip.200 hours working) lithium battery (tip. 2 years life) external : 220V/110V or car adapter
Display:	2x16 characters alphanumeric LCD full ASCII + special codes + optional codes(max.8)
Keyboard:	32 keys, alphanumeric basic: 0-9 A-Z space . - + * / optional: () , < > user defined layout available
Signalling:	built-in piezorezonator -at each received key entry -programmable at automatic data entry
Timer:	adjustable real-time-clock (day, hour, minute, second) (clock) or adjustable working time counter
Data memory:	basic 40 KB optional 120 KB
Program memory:	16 KB (RAM, EPROM)
CPU(master):	low power HCMOS 6MHz
CPU(slaves):	low power HCMOS maskprogrammed Input/Output:
-ANALOG inputs	(6 channels) . 0-2V / 1mV accuracy

P R E F I X - 2 0 0 0

- . max. 250 measure/sec
- . automatic scale correction
- . overflow
- . input resistance: >1Gohm

- DIGITAL inputs (TTL, LSTTL, HCMOS)
 - . max. 6 channels
 - . frequency max. 250 kHz
 - . pulse width
 - . bar code
 - . states
 - . 8 bits shift register mode (500 kbit/sec)
 - . 8 or 9 bits UART mode

- DIGITAL outputs (TTL, LSTTL, HCMOS)
 - . max. 4 channels
 - . period
 - . frequency (max. 250 kHz)
 - . programmable pattern generator (8 bits to 250 kbit)
 - . states
 - . 8 bits shift register mode (500 kbit/sec)
 - . 8 or 9 bits UART mode

- RS232C
 - . full duplex
 - . optional parity- and stop bit

- with optional plug-in unit all of the I/O ports will be protected against static charge or electric field

- with optional plug-in unit (contains comparators, amplifiers, dividers, etc.) different probes may be connected (temperature, light, tensile, transducers, higher voltages, currents, periods, etc.) directly.

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EXAMPLE LISTING OF THE OPERATING SYSTEM

```

SUBTITLE      PREPARATION FOR KEY ENTRY          VER:01.00      81.09.04
                PAGE
                LIST ON
;*****
;* THIS ROUTINE PREPARES SYSTEM FOR KEYBOARD ENTRY:          *
;* -FILL UP KEY ENTRY FIELD WITH SPACES                      *
;* -SETS CURSOR TO SHIFT STATE                               *
;* -SETS KEYIN POINTER & COUNTER                             *
;*****
                ORG          $
;
; *****
; * HOW TO CALL:                                             *
; *   MOV          R3,LENGTH OF #KEYIN                       *
; *   MOV          R1,#KEYIN                                 *
; *   SET/CLR     SHIFT                                       *
; *   CALL        KEYPREP                                     *
; * REGISTER CONVENTION:                                     *
; * -R1 (R0) : #KEYIN                                       *
; * -R3 (R7) : LENGTH OF KEYIN                               *
; * -R4       : 0                                           *
; *****
EXTERNAL      KBSHIFT1
GLOBAL       KEYPREP
KEYPREP      MOV          07,R3                               07=R7!!!
              INC          R7
              MOV          00,R1                             00=R1!!!
              MOV          A,#20H
CYCLE        MOV          @R0,A
              INC          R0
              DJNZ        R7,CYCLE
              CALL        KBSHIFT1
              MOV          R4,#0
              RET
              END
    
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