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Title:

Application Program: TIM E

Rel. Binary Papertape RCSL: 43-GL 4925

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Abstract:

TIME is a program which after initialization handles real time clock interrupts and generates ASCII-strings containing date and time. This manual describes how to access date and time either by means of messages or by search-item.

This program handles after initialization real time clock interrupts thus generating strings containing date and time . Word address of an ASCII string containing the date in format YY.MM.DD is kept in process descriptor address - 2 (PDA-2). Word address of time in format HH.MM.SS is kept in PDA-1 and PDA-3 contains the word address of the last word of a 6 word counter area, where the first word contains the seconds, the next word the minutes and so on. PDA may be found by means of search item (time) in process chain.

In addition control, input and output messages are accepted.

Control message:

	message	answer
mess0	0	status
mess1	irr.	irr.
mess2	s	s
mess3	irr.	irr.

Time is adjusted with s seconds. If  $\text{mess2} < 0$  status = 1B6 is returned and time is unchanged.

Input message:

Two modes of input exists.

	message	answer
mess0	1	status
mess1	bytecount	18
mess2	byteaddress	irr.
mess3	irr.	irr.

Date and time are returned in a string of 18 bytes starting at the byte addressed by mess2. The string is an ASCII string with format

YY.MM.DD < 13 > < 10 > HH.MM.SS

If bytecount < 18 status = 1B6 is returned.

	message	answer
mess0	5	status
mess1	bytecount	12
mess2	byteaddress	irr.
mess3	irr.	irr.

The 6 words counter area is returned in a string starting at the byte addressed by mess2. The content is:

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word 1 : second
- 2 : minute
- 3 : hour
- 4 : day
- 5 : month
- 6 : year
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If bytecount < 12 status = 1B6 is returned.

Output message:

	message	answer
mess0	3	status
mess1	bytecount	bytecount
mess2	byteaddress	irr.
mess3	irr.	irr.

Date and time are initialized or changed to the date and time given in an ASCII string starting at "byteaddress". The format of this string must be

YY.MM.DDXZHH.MM.SS

where the values of X and Z are irrelevant. "Bytecount" is not checked. If the format of the string is wrong, status = 1B6 is returned and date and time are unchanged.

When loaded TIME can be initialized from tty or from an output message. Time is not counted until the first initialization has taken place, but after a break, TIME continues to count the time.

The following codeprocedures get date and time by sending input messages to TIME:

RCSL:43-GL4928 : P0 149

GETTIME(HH.MM.SS)

RCSL:43-GL4931 : P0 150

GETDATE(YY.MM.DD)

RCSL:43-GL4934 : P0 151

GETDATE(YYDDD<0>)