

```

TTTTT RRRR   A   M   M           f
  T   R   R   A   A   MM MM       f f   t
  T   R   R   A   A   M M M   sss   000   f   ttt
  T   RRRR   A   A   M M M   s   0   0   fff   t
  T   R R   AAAAA M   M   sss   0   0   f   t
  T   R R   A   A   M   M   s   0   0   f   t t
  T   R   R   A   A   M   M   ssss   000   f   t

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Ambühler & Müller

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*****
*
*
*   P a r a l l e l / F l o p p y - I n t e r f a c e
*
*   U s e r s   G u i d e
*
*
*****

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TRAMsoft Parallel/Floppy-Interface

Introduction

The TRAMsoft Parallel/Floppy-Interface can be used as

- 16 bit parallel-input/output interface (using port A & B)
- Interface to any printer with CENTRONICS-standard-interfcae (port B)
- Interface to up to 4 COMMODORE VC 1541 floppy-drives (port A)

It is possible to connect the printer and the floppy-drives at the same time.

*** Power Up - sequence ***

To prevent hardware distruction or data-loss, follow always this power up-sequence:

- 1) Make sure, that no peripheral-device is switched on
- 2) Switch on the SHARP PC-1500/PC-1500A
- 3) Switch on all peripheral-devices in any order

*** Power Off - sequence ***

For the same reason follow this power off - sequence:

- 1) Switch off all peripheral-devices in any order
- 2) Switch off the SHARP PC-1500/PC-1500A

Anti-Auto-Power-Off - Feature (AAP0)

If the SHARP PC-1500/PC-1500A is switched off by its auto-power-off-feature all its peripheral-devices MUST be switched off, before the PC-1500/A is switched on again. To prevent this uncomfortable situation, the TRAMsoft Parallel/Floppy-Interface has a anti-auto-power-off-feature which prevents the PC-1500/A to switch off by issuing interrupts. This feature is disabled after a CLOAD- or CSAVE-operation. To start it again, CALL &E107 must be performed. The following message NEW 0 ... or CHECK: .. can be ignored. POKE &79DA,0 disables the AAP0-feature.

PCON Port , Direction , Control-Signal-1 , Control-Signal-2

Controls the direction of the data-signals and the functions of the control-signals.

- Port: "A" or "B"
- Direction: "I" for input, "O" for output
- Control-Signal-1: "+", "-", "D" set flag if pulse pos., neg., disable flag
- Control-Signal-2: different use for port A and B

PFLAG Port

Represents the status of the control-signals (0 .. 3)

- Port: "A" or "B"

PGET (Port , Line) or PGET\$ (Port , Line)

Represents the status of a certain line (0,1 or "L","H")

- Port: "A" or "B"
- Line: 0 .. 7

PREAD Port

Represents the status of the lines of one port or both ports together (0 .. 255 or 0 .. 65535).

- Port: "A" or "B" or "*"

PSET Port , Line , Value

Sets a certain line to the specified status.

- Port: "A" or "B"
- Line: 0 .. 7
- Value: 0 or 1

PWRITE Port , Value

Sets the line of one port or both ports together to the status specified by the value.

- Port: "A" or "B" or "*"
- Value: 0 .. 255 or 0 .. 65535

How to use the TRAMsoft Printer-Software

OPN Device-name

Specifies the device for LLIST and LPRINT commands (only necessary if more than one printer is connected, e.g. SHARP CE-150 and a printer via the TRAMsoft Parallel/Floppy-Interface).

- Device-name: "MGP" for CE-150, "PAR" for TRAMsoft Parallel/Floppy-Interf.

CONSOLE Length , Endcode-1 , Endcode-2 , Edge

Specifies the number of characters per line, the endcode and the edge of the printer-signal.

- Length: 16 .. 255, 0 for no endcode
- Endcode-1, Endcode-2: Characters to be sent to the printer at the end of the line; 0 for "Carriage Return" (&OD), 1 for "Line Feed" (&OA).
- Edge: 0 if the printer has a BUSY-signal, 1 if it has an ACKNOWLEDGE-signal. But always use pin 10 at the interface.

LLIST First line , Last line

Same function as LLIST of the CE-158 but always related to the "current module".

LPRINT Expression

Same function as CE-158.

PROGRAM Module-number or any label in the program-module

Sets the specified program-module as the "current module".

TAB / ZONE

Same function as CE-158.

How to use the TRAMsoft Floppy-Standard-Software

DCHAIN Program-name , Start

Loads a program from the floppy into memory and starts execution (same as the CHAIN operation of the CE-150).

DCMD Floppy-Command , Drive-number

Performs execution of a floppy-command (see VC 1541 manual)

- Floppy-Command: NEW, INITIALIZE, VALIDATE, COPY, RENAME, SCRATCH
- Drive-number: 8 .. 11 (default is 8)

DEFDISK Drive-number

Sets the specified floppy-drive to the default drive (drive-number 8). Applicable only if more then one floppy-drives are connected.

- Drive-number: 8 .. 10 (11 is used to swap the drive-numbers)

DFRE Drive-number

Represents the number of free blocks.

- Driver-number: 8 .. 11

DIR Drive-number

Lists the files on the disk. If there is no program in memory, the full directory is stored as a program in memory otherwise each entry is listed in the display. ENTER proceeds to the next entry (ENTER with autorepeat).

- Drive-number: 8 .. 11 (default 8)

DIR\$ Entry-number

Represents the specified entry of the directory as a character string.

- Entry-number: 0 .. number of files plus 1

How to use the TRAMsoft Floppy-Standard-Software (cont)

DLOAD / DLOAD I / DLOAD M / DLOAD P / DLOAD V

Performs LOAD operation.

- DLOAD: Same as CLOAD of the CE-150.
- DLOAD I: Same as CLOAD M of the CE-150, but for memory-bank with PV=1.
- DLOAD M: Same as CLOAD M of the CE-150.
- DLOAD P: Same as MERGE of the CE-150.
- DLOAD V: Same as INPUT # of the CE-150.

DSAVE / DSAVE I / DSAVE M / DSAVE P / DSAVE V

Performs SAVE operation.

- DSAVE: Same as CSAVE of the CE-150.
- DSAVE I: Same as CSAVE M of the CE-150, but for memory-bank with PV=1.
- DSAVE M: Same as CSAVE M of the CE-150.
- DSAVE P: Saves only the "current module", no equivalent instruction with the CE-150.
- DSAVE V: Same as PRINT # of the CE-150.

DSTAT\$ Drive-number

Represents the status of the specified floppy-drive as a string.

- Drive-number: 8 .. 11

DVERIFY / DVERIFY I / DVERIFY M / DVERIFY P / DVERIFY V

Compares data on disk with data in memory (same syntax as DLOAD).

How to use the TRAMsoft Floppy-Extension-Software

BACKUP Drive-number-1 TO Drive-number-2

Copies the contents of the disk in drive-1 to drive-2 (duration ca. 28 min.)

- Drive-number-1, Drive-number-2: 8 .. 11

CLOSE Log. File-number

Closes an opened channel.

- Log. File-number: 0 .. 9

DRECPOS Log. File-number , Record-number , Byte-number

Sets the read/write-pointer to the specified byte in the specified record of a relative file.

- Log. File-number: 0 .. 9
- Record-number: 1 .. 65535
- Byte-number: 1 .. 254

DSHOW\$ Log. File-number

Represents the contents of an OPEN-variable.

- Log. File-number: 0 .. 9

INPUT # - Device-number , Log. File-number , Variables-list

Loads data from disk into variables.

- Device-number: 15 for floppy-interface
- Log. File-number: 0 .. 9
- Variables-list: Variables where data is to be load into.