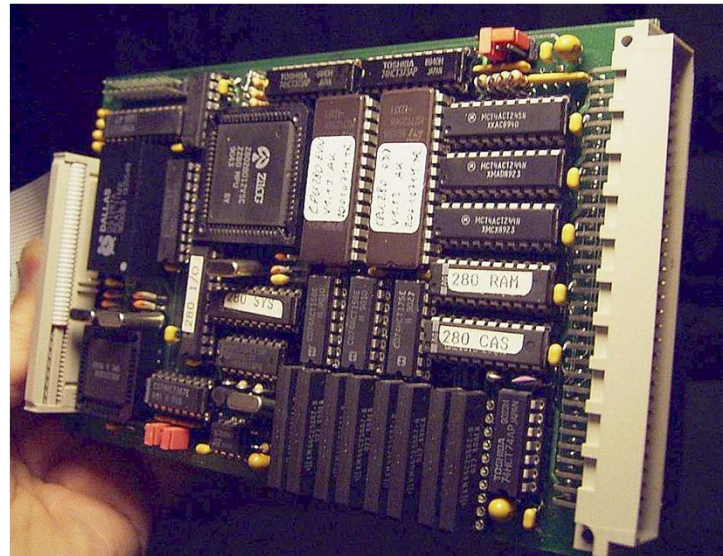


# The Concept of the REH CPU280

Lecture by Helmut Jungkunz © 2004



Hi-Tech ECB Bus Computer  
with a large fan community.

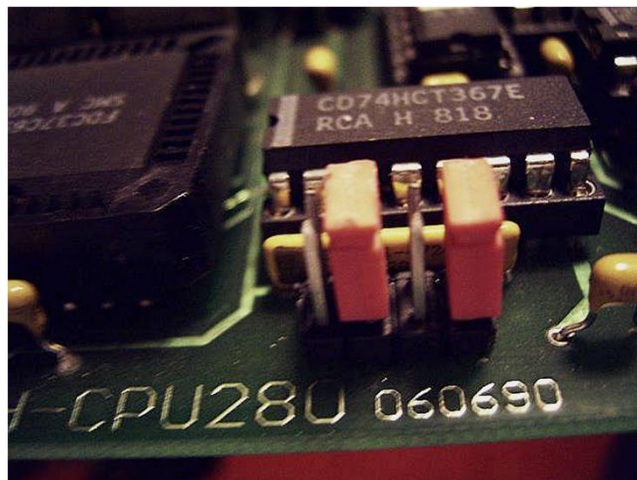
# Lecture on 1st May 2004 at Vintage Computer Festival Europe 5.0



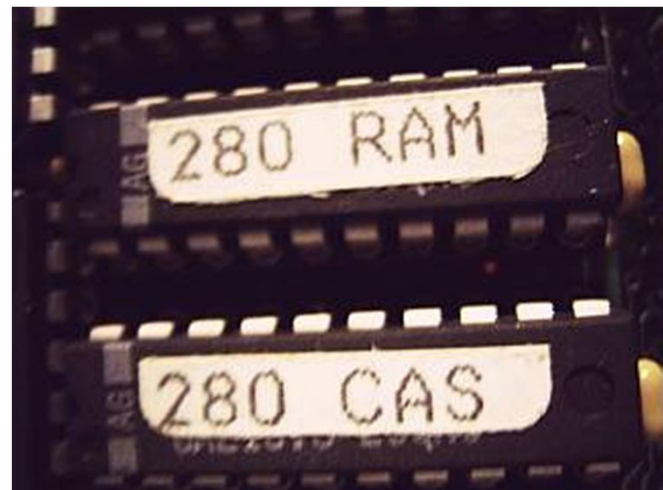
The Z280 – Heart and Brain



The versatile floppy controller



To bridge or not to bridge ...



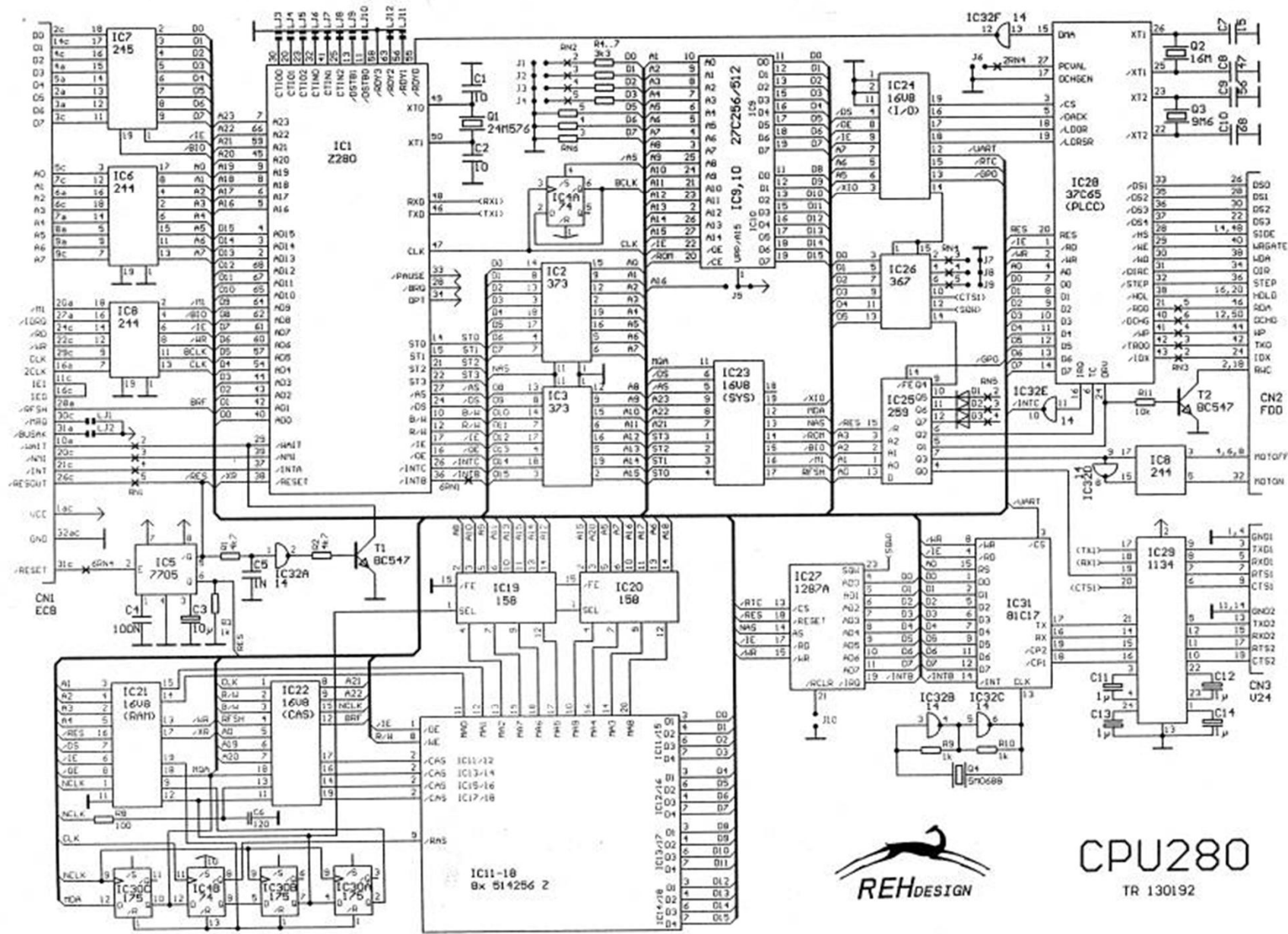
short-lived cycles go here

# The Motherboard



- A ZILOG Z280 CPU forms the heart
- Hardware Setup Data configurable
- FDC 37 C 65 Multimode Floppy Controller
- 2 serial RS-232 Com-Ports
- General Purpose I/O (GPIO)
- ZIP-RAMs upto 4MB usable
- 2 EPROMs and GALs for the BIOS

# CPU 280 Schematics



CPU280  
TR 130192

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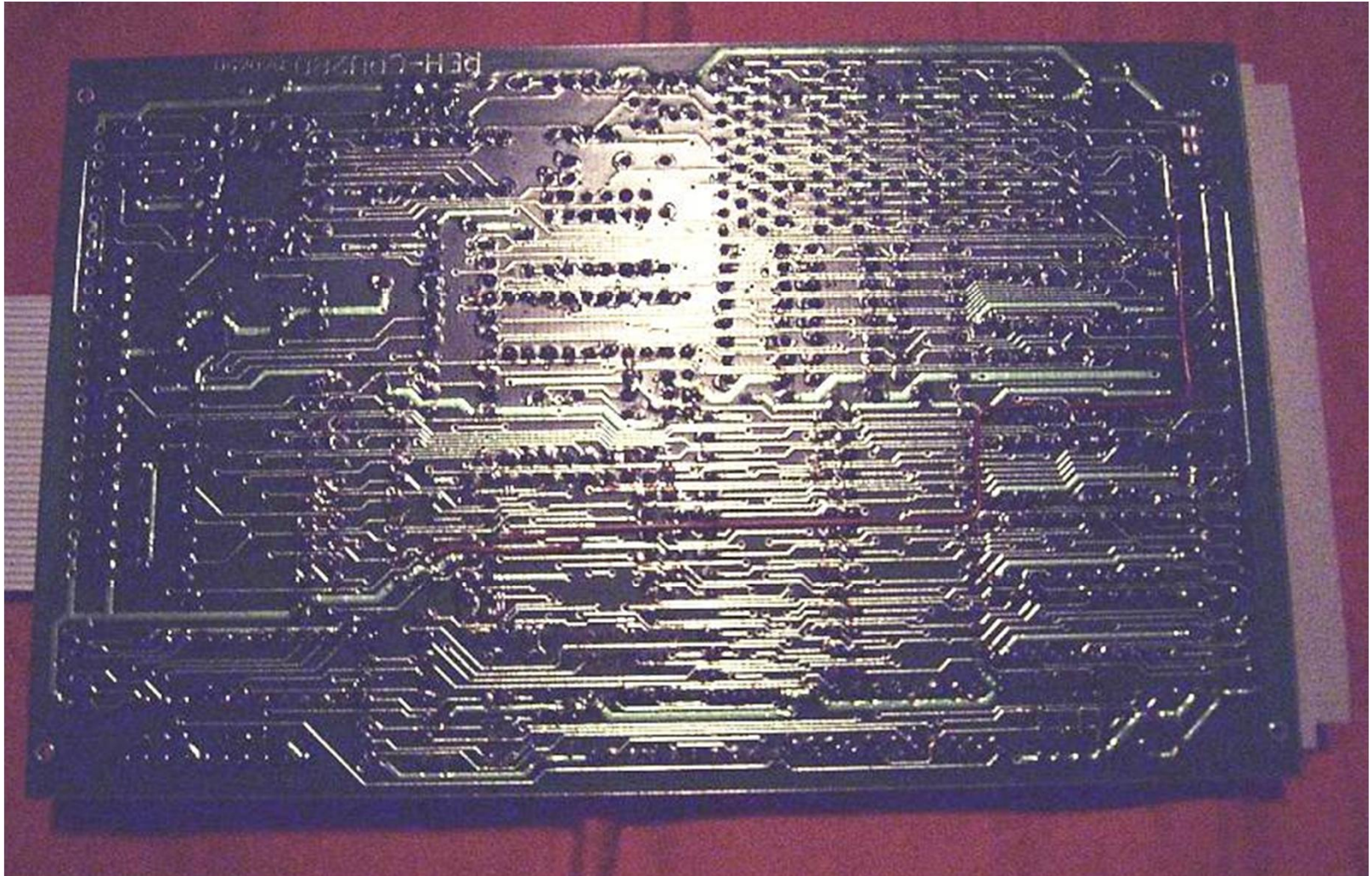


# Motherboard





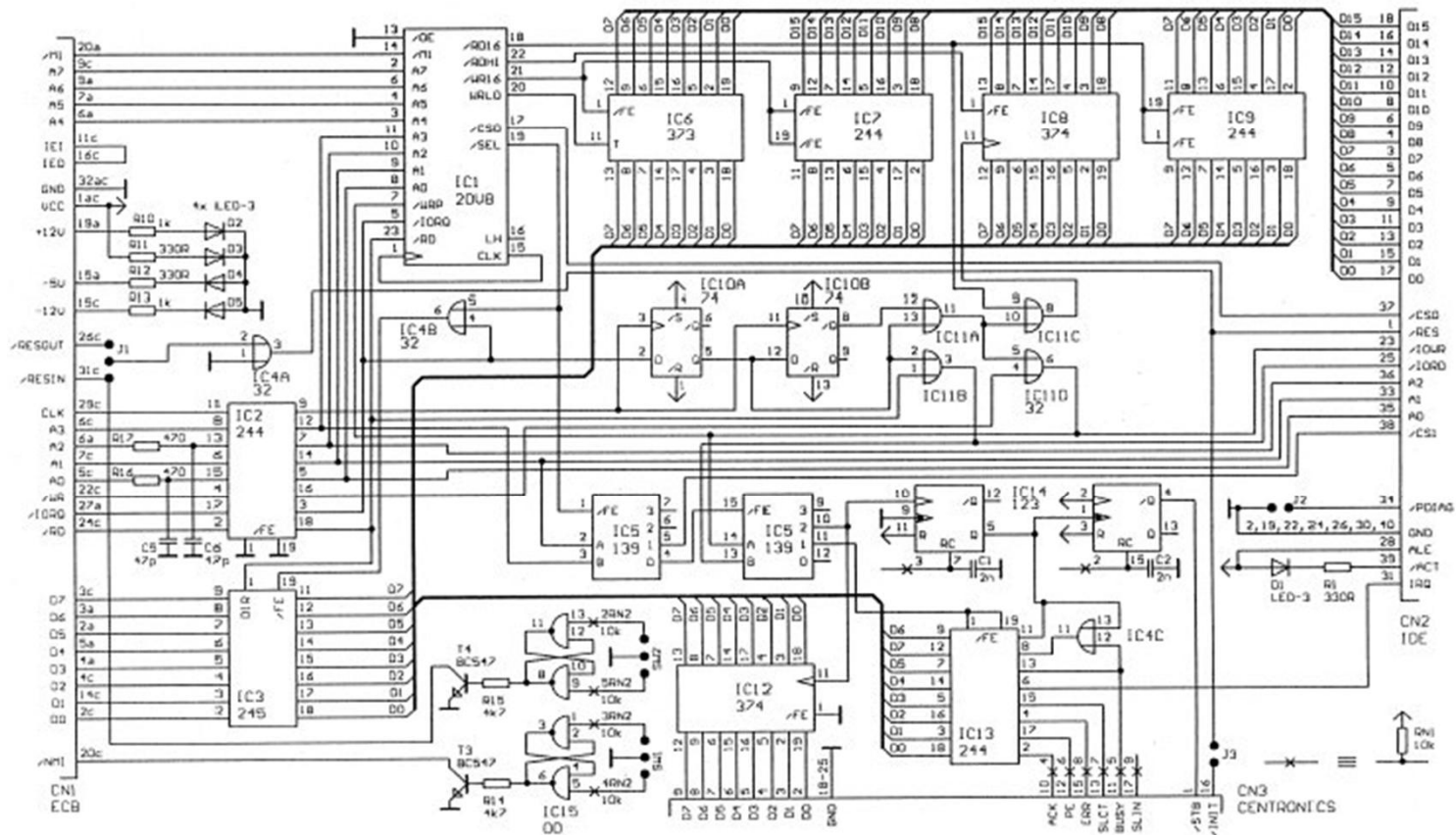
# Rearview PCB Layout



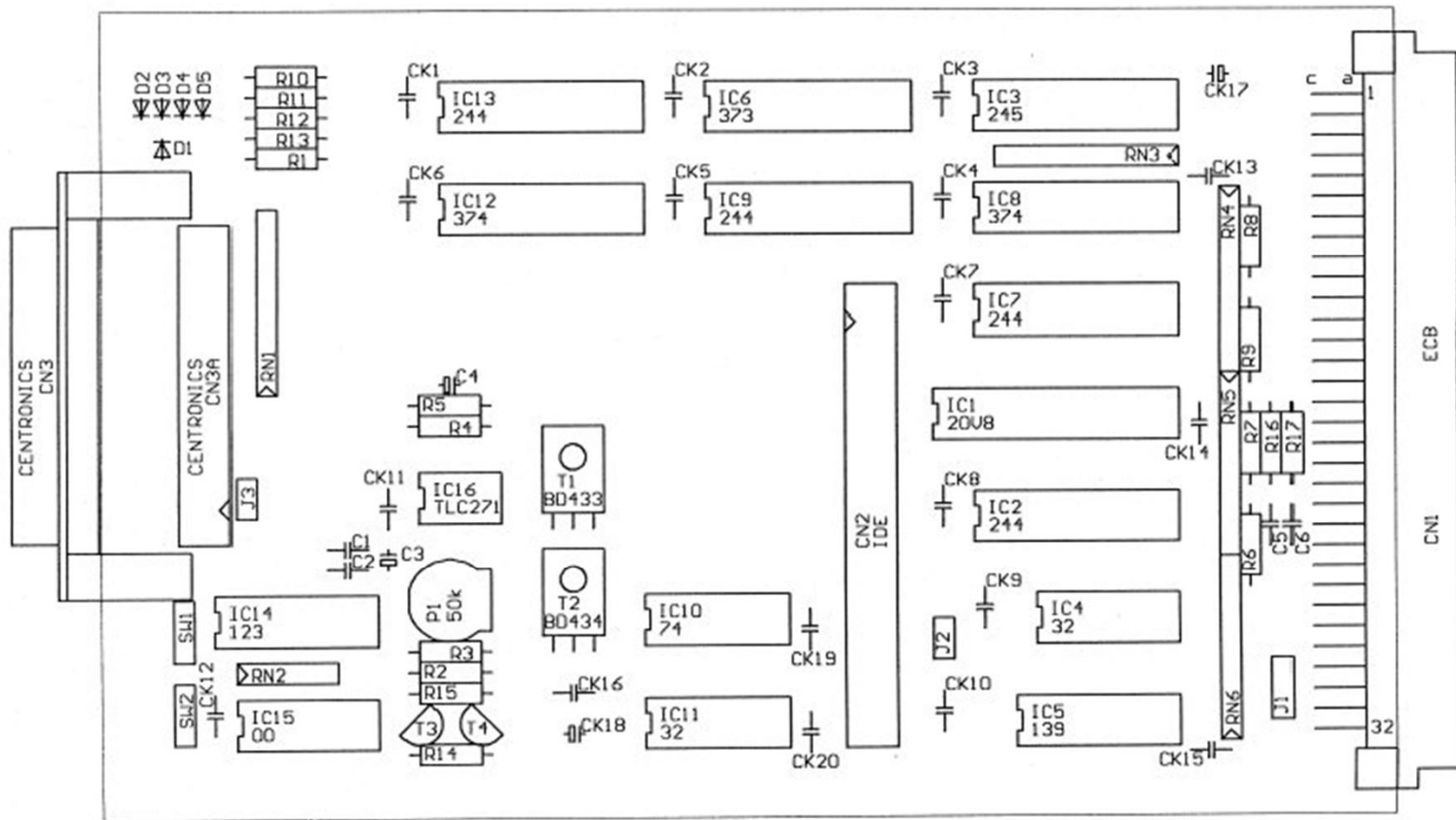
# The IDE board

- Standard IDE (PATA) HD can be used
- Standard Master / Slave Assignment
- also CDROM drives supported
- Standard CENTRONICS Printerport
- Complex Hardware - Simple Software
- Active termination
- Suitable also for other ECB-Bus devices





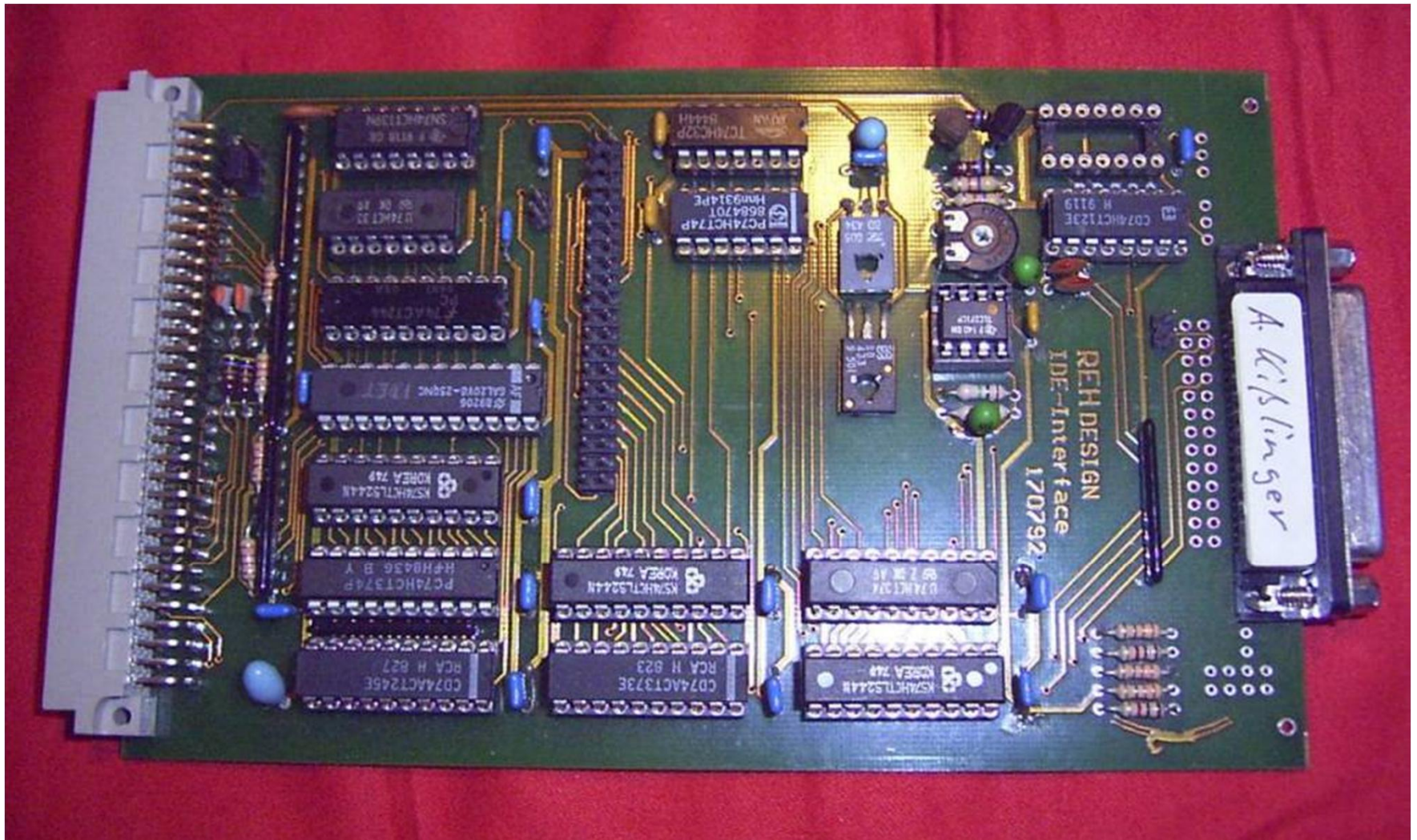
# Components of IDE Interface



IDF

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# IDE board

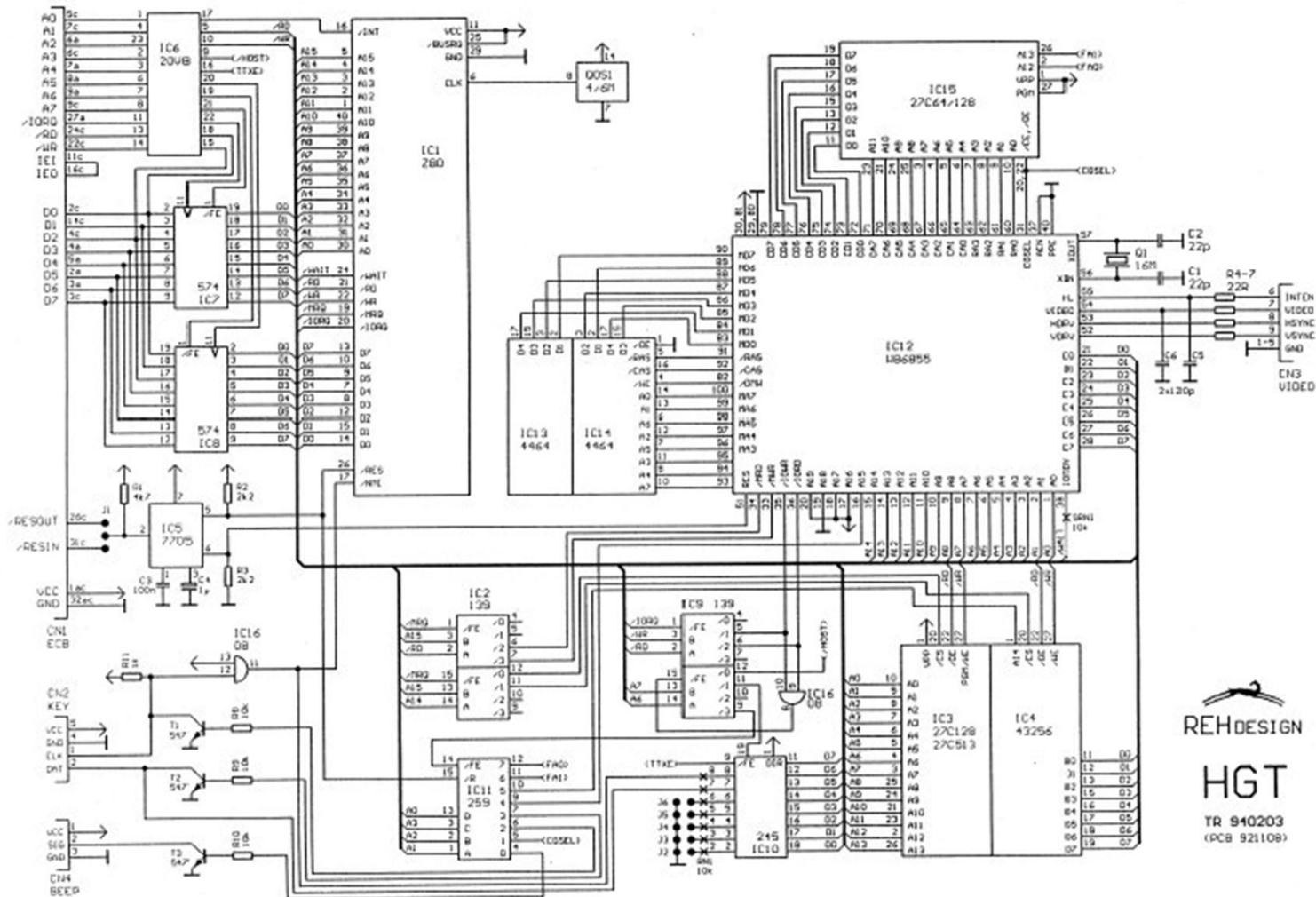




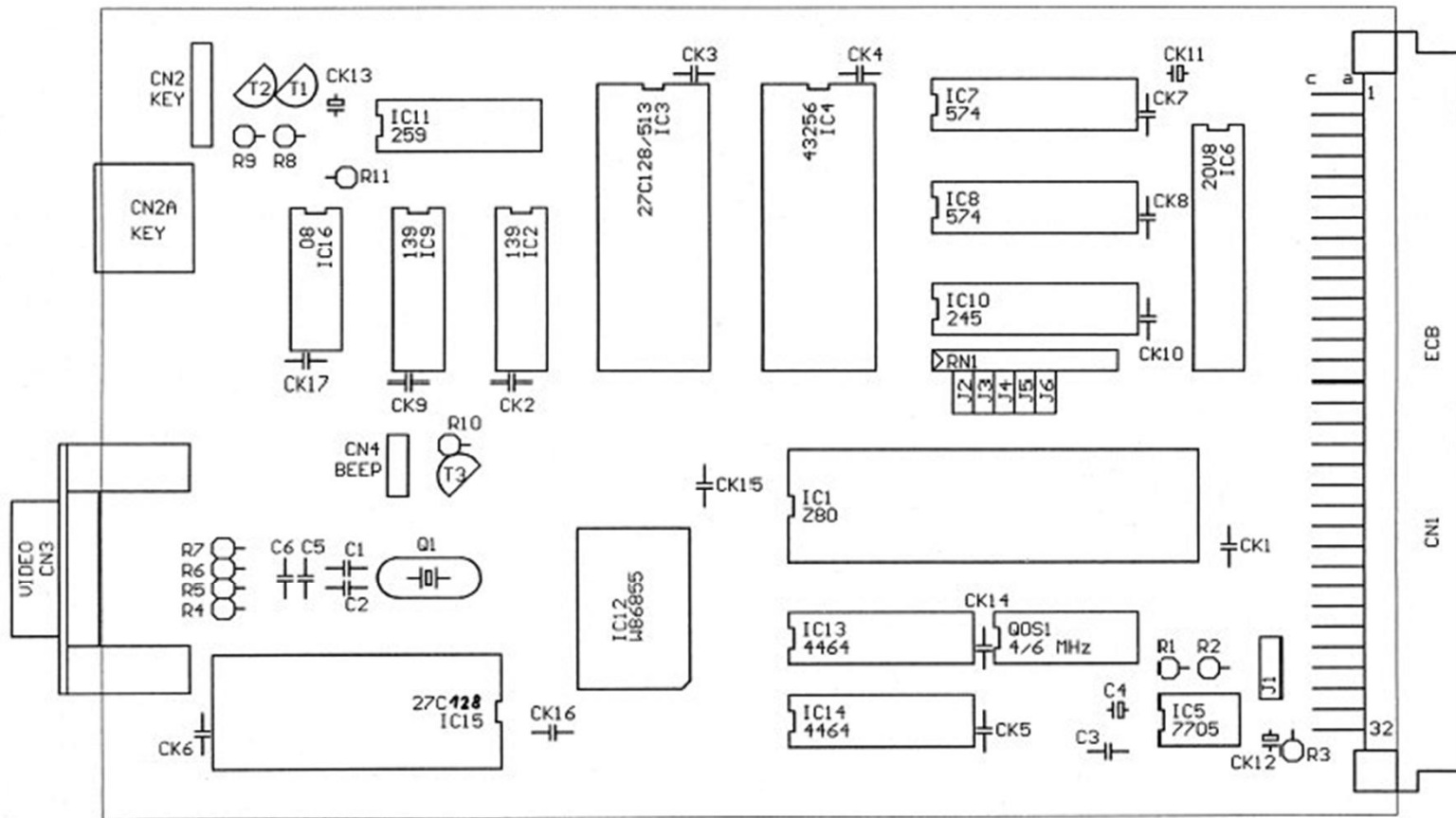
# Herkules Terminal Board

- Standard Herkules Graphics Board
- Standard Herkules Monitors to be used
- Complete Character Set available
- Even Graphic Symbols and IBM Set
- Simple Design and universal usability
- Wideranged Software available
- Custom ROM-Programming possible

# HGT Schematics



# Components HGT



HGT

8.11.1992 22:35:34



# Herkules Graphics Terminal



# OS Environment

- Boots from EPROM, Floppy or Harddisk
- Standard CP/M Plus with 256K addressing
- Custom intelligent format manager
- Numerous Disk formats read/write/format
- RealtimeClock on NV-RAM for parameters
- Remaining data as reset-proof RAM-Disk
- leaving a maximum of 3.8 MB RAM-Disk!

# OS Environment

- Harddisk usage with CP/M Plus
- „Large“ Partitions can be used
- Datestamps and Searchpaths
- Good Management of Disk parameters
- MSDOS-Formats fully available read/write
- Comprehensive Software available
- Easy Extension of OS by RSXes





# Conclusion

CPU280  
TR 130192

- The **REH CPU280** is probably the most advanced CP/M equipment of the last century
- Its design and the ideas of developer TILMANN REH has encouraged many to work on new hardware projects
- A concept that has proven to work and left little inputs for improvement...
- In a nutshell: a marvellous achievement!