AccessionIndex: TCD-SCSS-T.20141120.005
Accession Date: 20-Nov-2014
Accession By: Dr.Brian Coghlan
Object name: Ramtek 6200A
Vintage: c.1979
Synopsis: Rackmounted graphics display system. S/N: 960242.

Description:
An early rackmounted raster graphics display system, made by Ramtek Corporation, Sunnyvale, California, USA.

This is a first-generation raster graphics system, so much of the logic is hardwired, with numerous fast custom mask-programmed ROMs, including for text character generation. A four-slot 19" card cage has a proprietary Ramtek bus, with three boards for processor/comms, memory/video, and text/disk, and four side fans to carry away the considerable heat generated. The graphics memory (on the memory/video board) is separate from the text memory (on the text/disc board).

A Zilog Z80 microprocessor supports a Ramtek-proprietary graphics command set. Typically this would be issued by higher-level graphics software running on a host computer. The specification, including the command set, can be seen in the brochure at the end of this document.

In TCD Computer Science the host was the departmental VAX11/780 and the graphics commands were typically issued by the Core79 3-d graphics library written by Dr.Brian Coghlan, which itself was either called by the CUPID 3-d wire-frame modelling software or CIFED VLSI mask editor written by the same, or by the PADL 3-d solid modelling software from Georgetown University, USA.
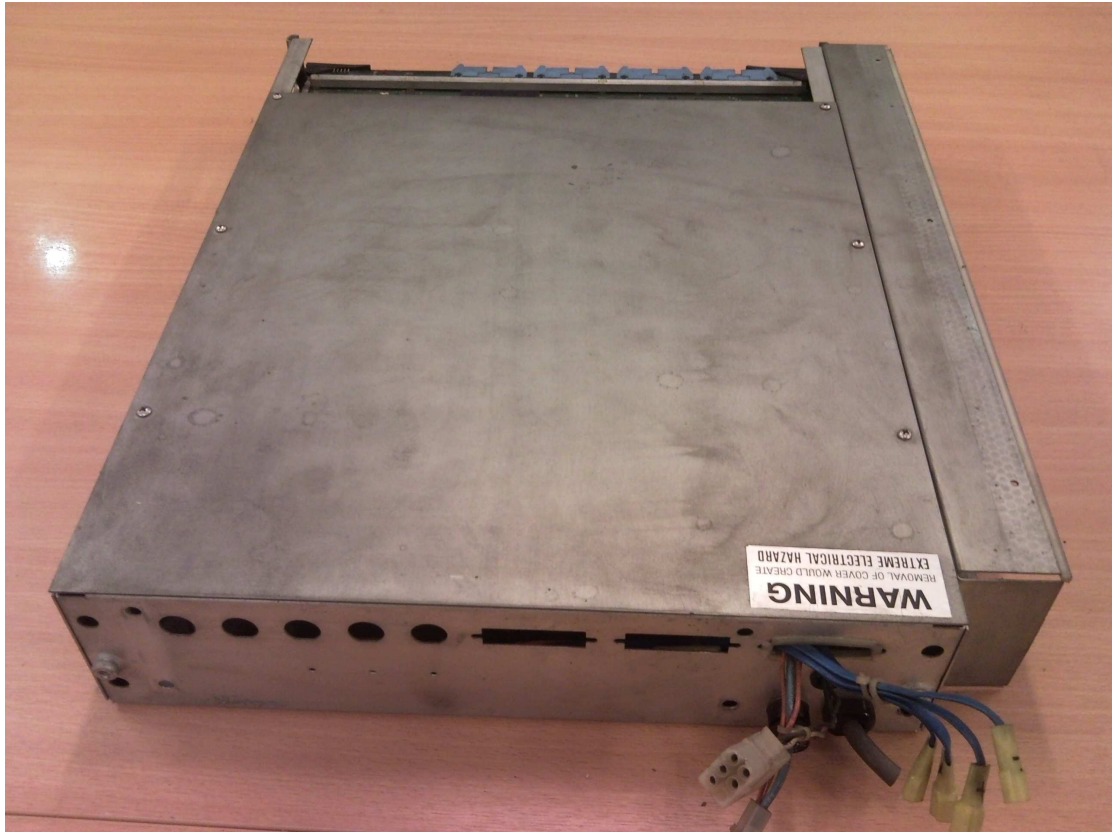
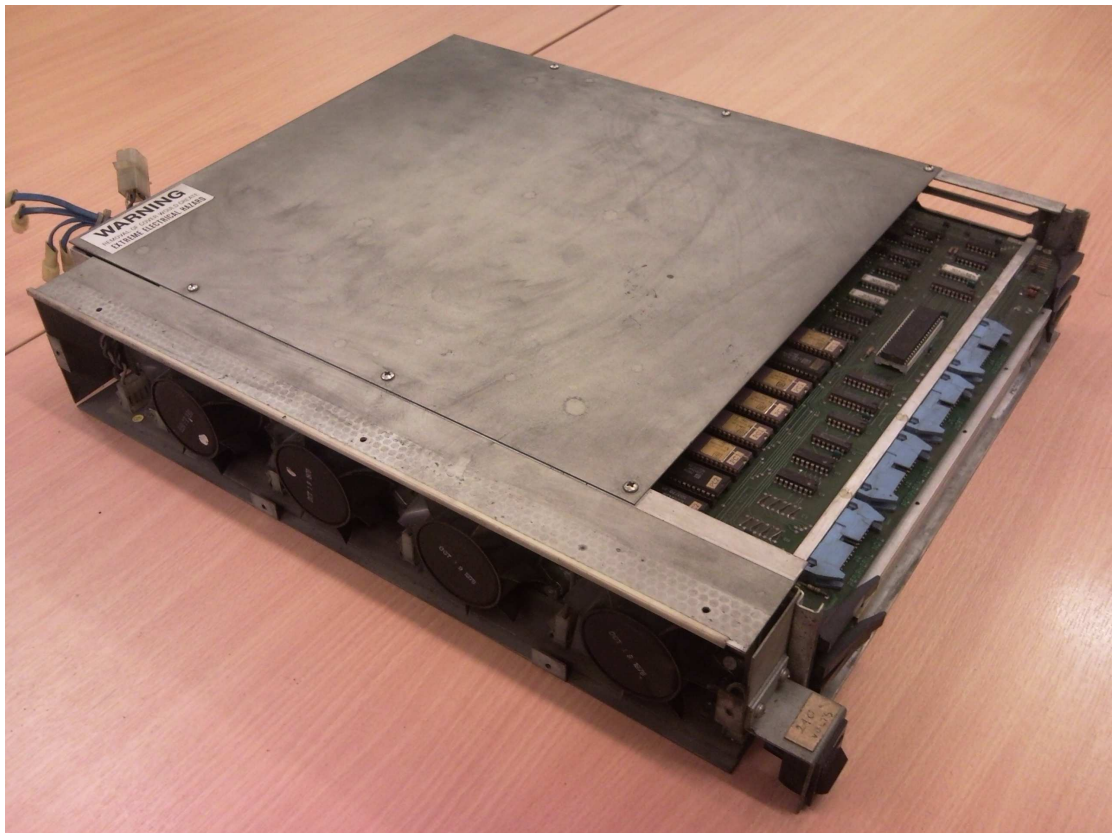| Accession Index	Object with Identification
TCD-SCSS-T.20141120.005.01	Ramtek 6200A Rackmount Chassis. S/N: 960242, Assy: 504207 02B, Made in USA, 1979

TCD-SCSS-T.20141120.005.02	Ramtek Processor/Communications board.
	Includes:
	  1 x Zilog Z80-4 CPU
	  8 x NEC uPD4160 DRAM
	  3 x NEC D8251C
	  EA503770-2A PC2 ROM
	  EA503771-2B PC2 ROM
	  EA503772-2C PC1 ROM
	  EA503773-2D PC1 ROM
	  EA503774-2E PC1 ROM
	  EA503775-2F PC1 ROM
	  EA503776-2G PC1 ROM
	  EA503777-2H PC1 ROM
	  EA503778-3A PC2 ROM
	  EA503779-3B PC1 ROM
	  EA503780-3C PC1 ROM
	  EA503781-3D PC1 ROM
	  EA503782-3E PC1 ROM
	  EA503783-3F PC3 ROM
	S/N: 801278, Assy: 503097 504190-01A

TCD-SCSS-T.20141120.005.03	Ramtek Menory/Video board. Includes: 96 x Motorola MCM4027AC4T DRAMs S/N: 801221, Assy: 504192-01A

TCD-SCSS-T.20141120.005.04	Ramtek Text/Disc board.
	Includes:
	  Ramtek 504362 ROM Video Char. 00-1F
	  Ramtek 504363 ROM Video Char. 20-3F
	  Ramtek 504364 ROM Video Char. 40-5F
	  Ramtek 504365 ROM Video Char. 60-7F
	  32 x Fairchild F3542DC RAMs
	S/N: 801429, Assy: 503104E, Jun 1979

Figure 1: Ramtek 6200A three-quarter view

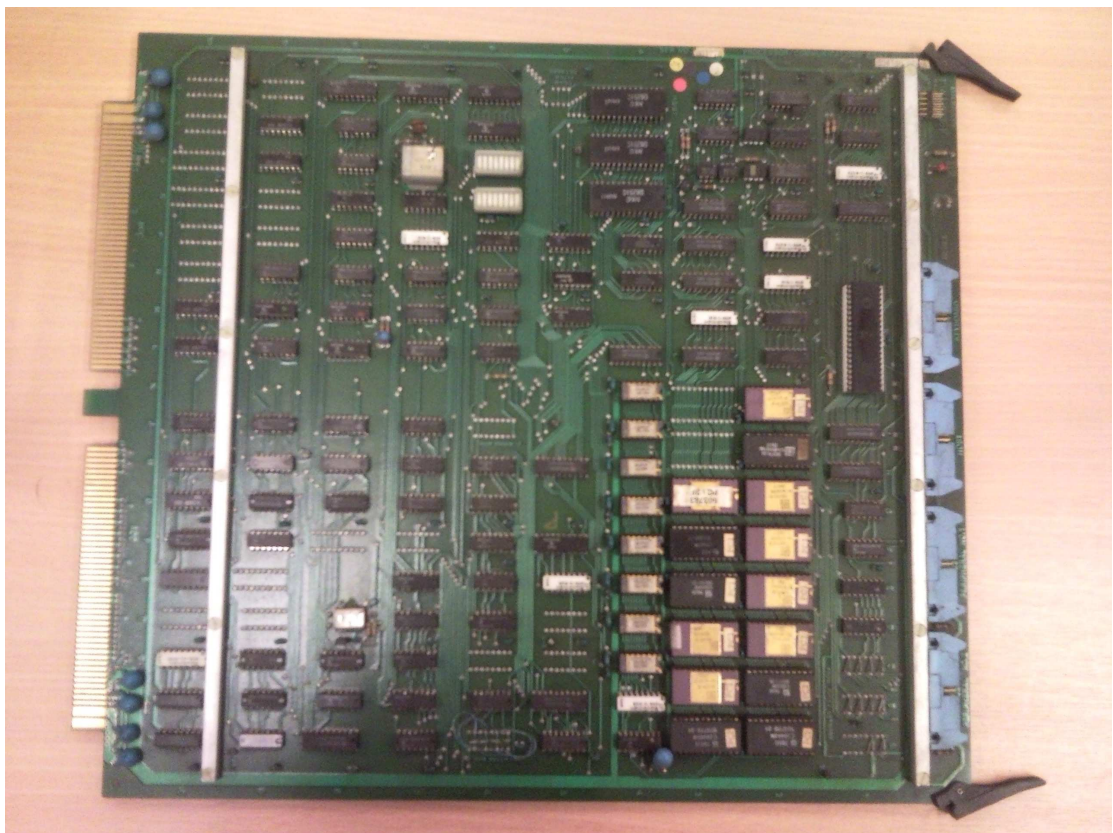*Figure 2: Ramtek 6200A front view*

Figure 3: Ramtek 6200A rear view

Figure 4: Ramtek 6200A left side view

Figure 5: Ramtek 6200A right side view

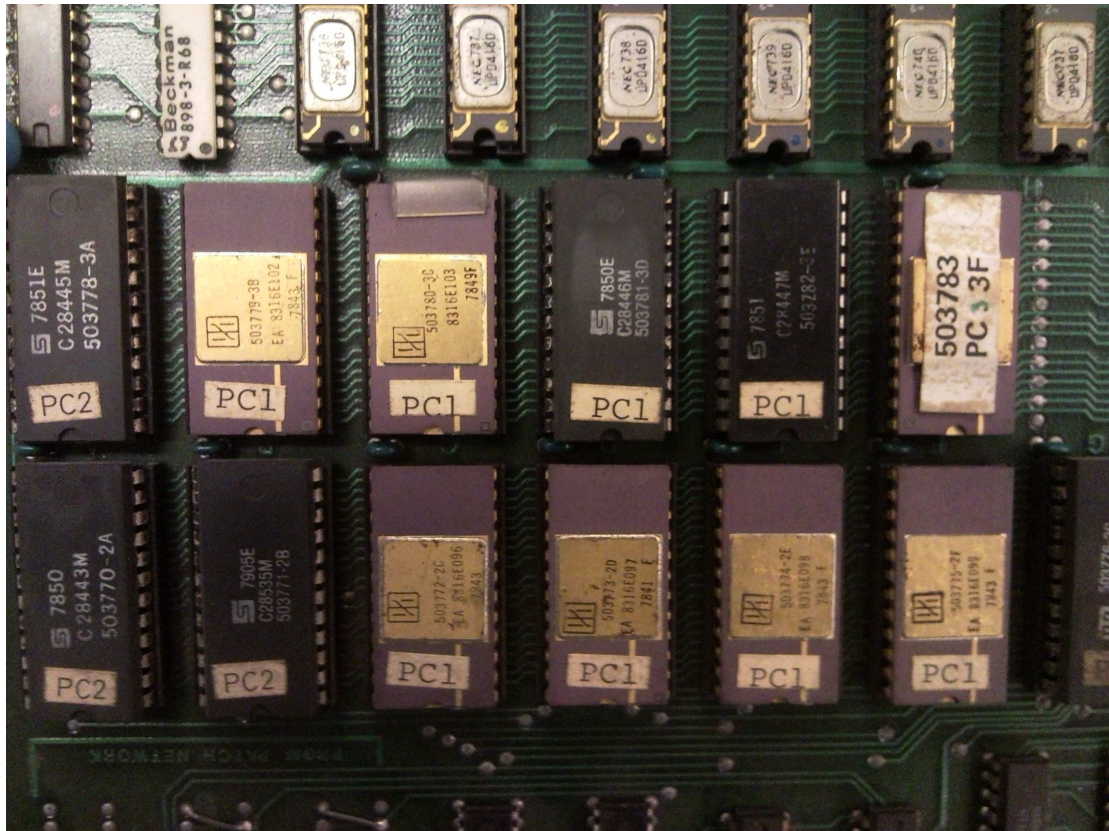*Figure 6: Ramtek 6200A Processor/Communications board*

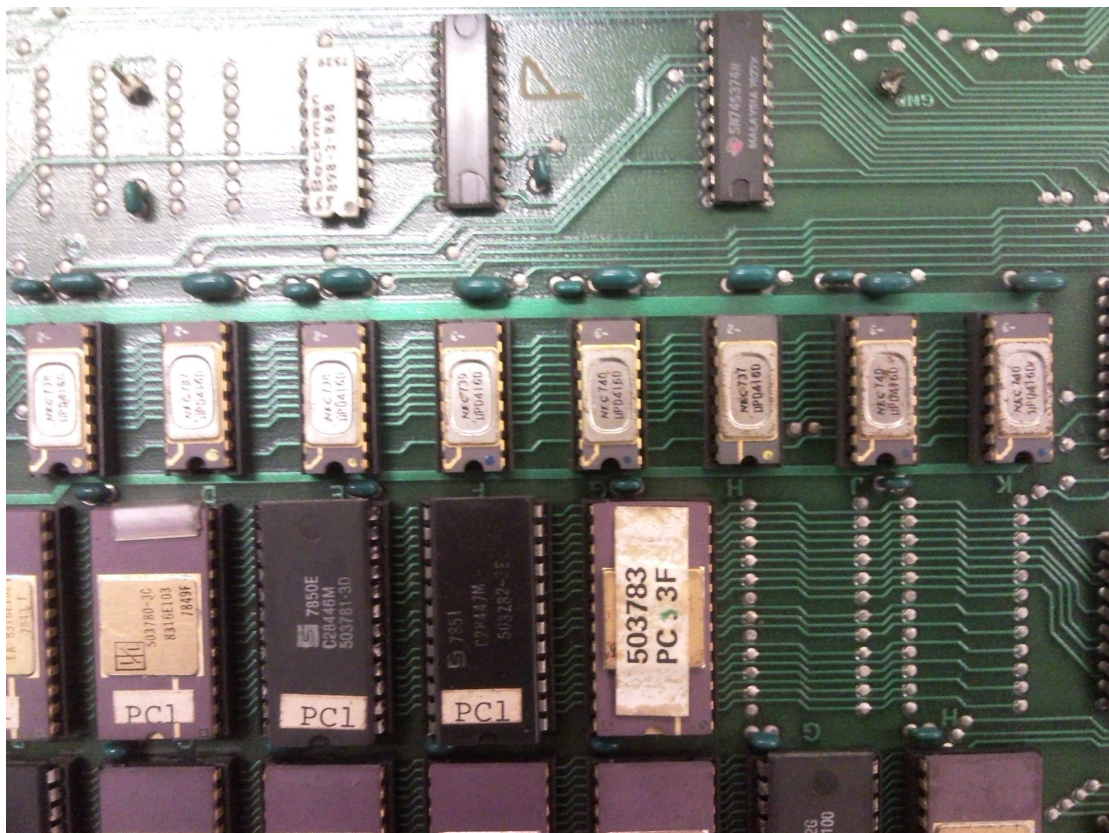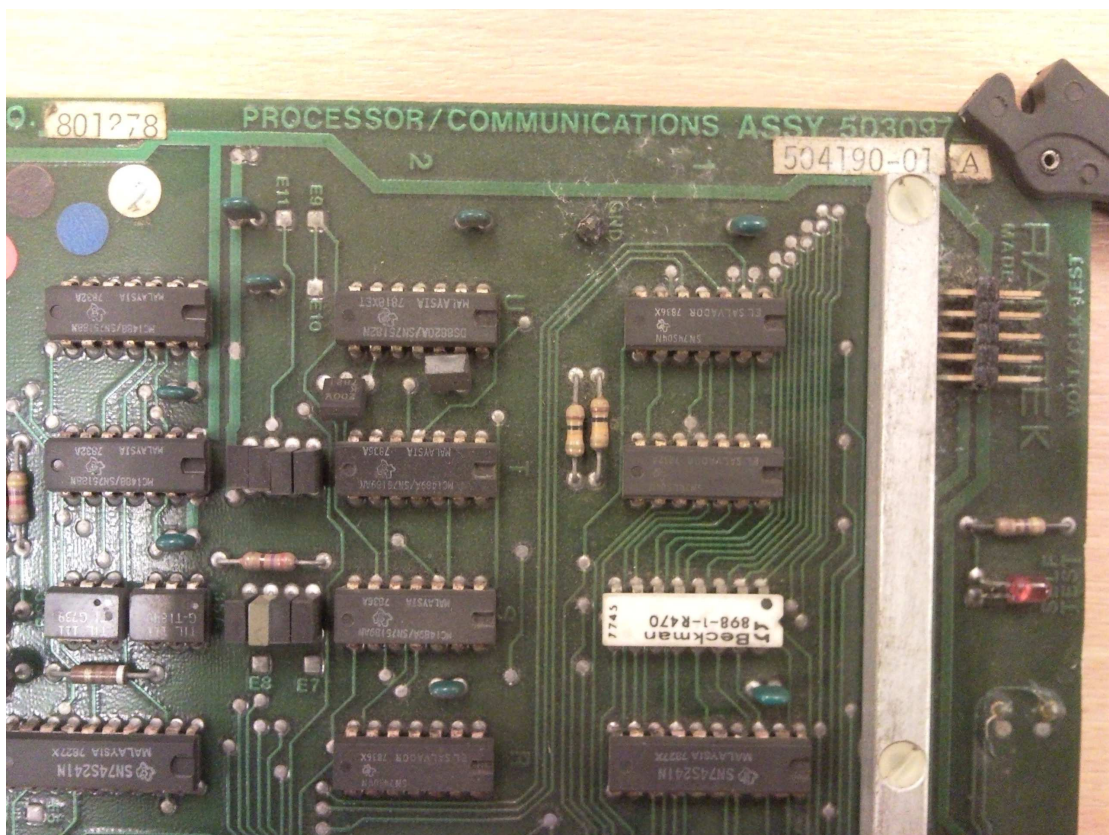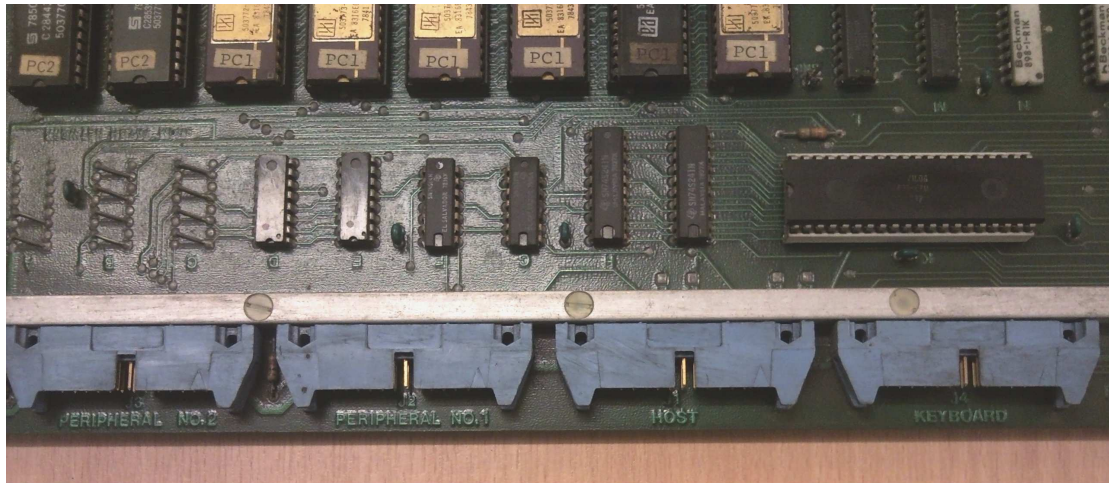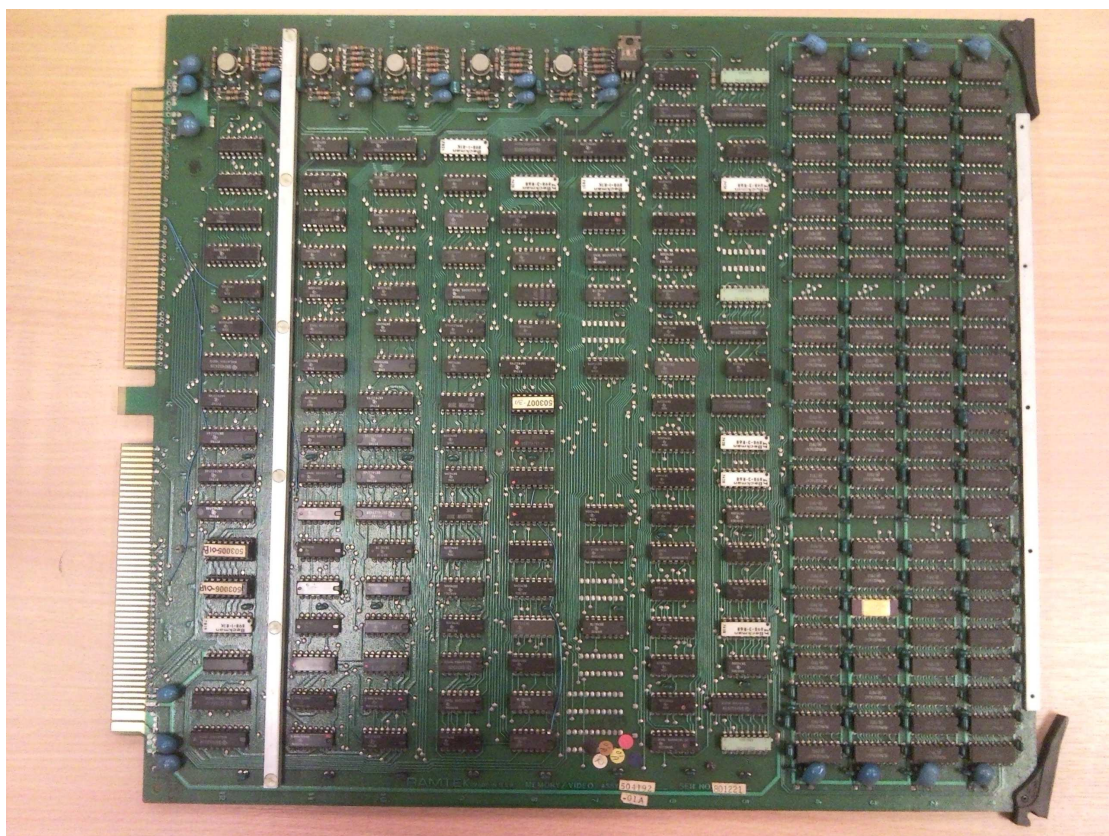*Figure 7: Ramtek 6200A Processor/Communications board custom ROMs*

Figure 8: Ramtek 6200A Processor/Communications board local DRAM memory

Figure 9: Ramtek 6200A Processor/Communications board serial number 801278

Figure 10: Ramtek 6200A Processor/Communications board assy no. 504190-01A

Figure 11: Ramtek 6200A Processor/Communications board I/O ports
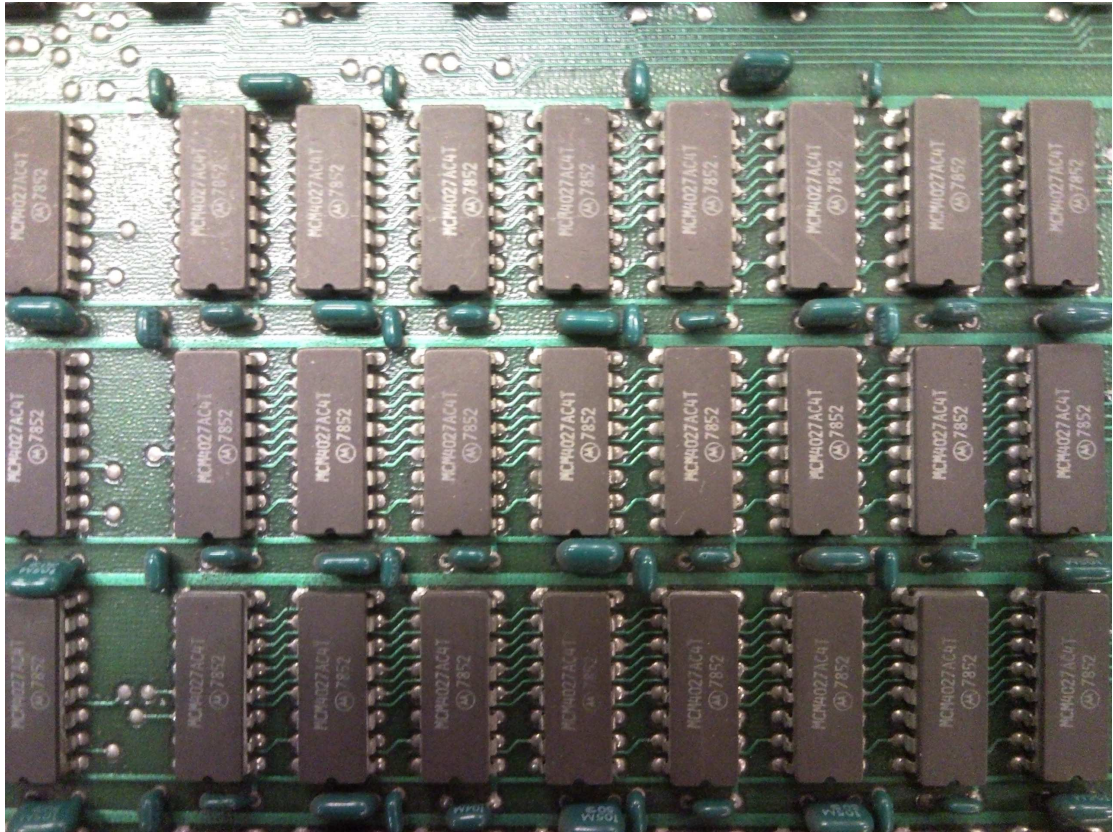

Figure 12: Ramtek 6200A Memory/Video board

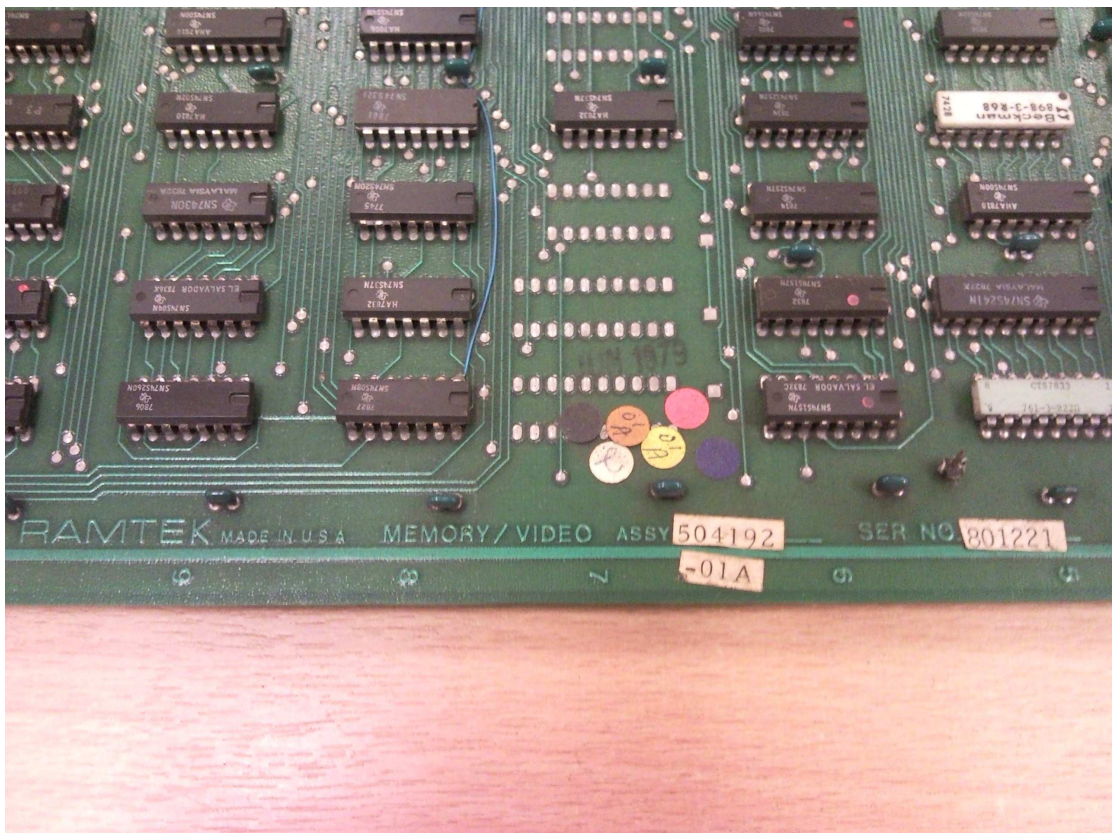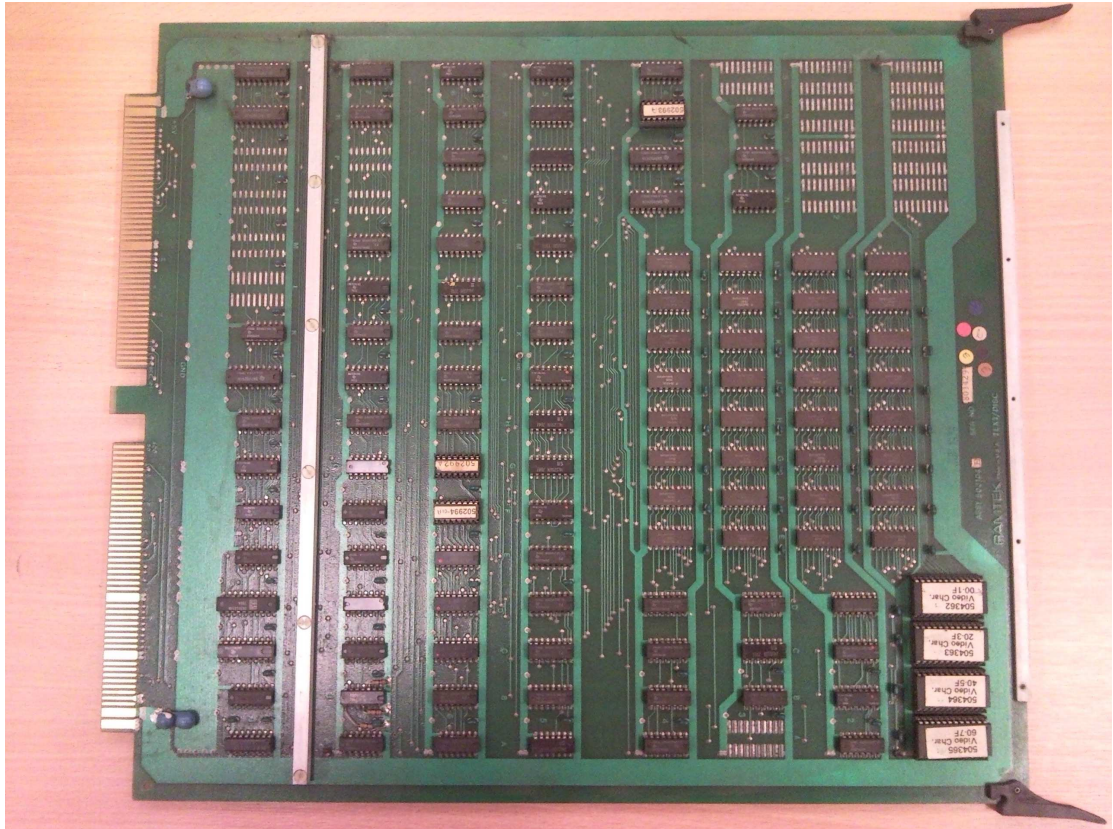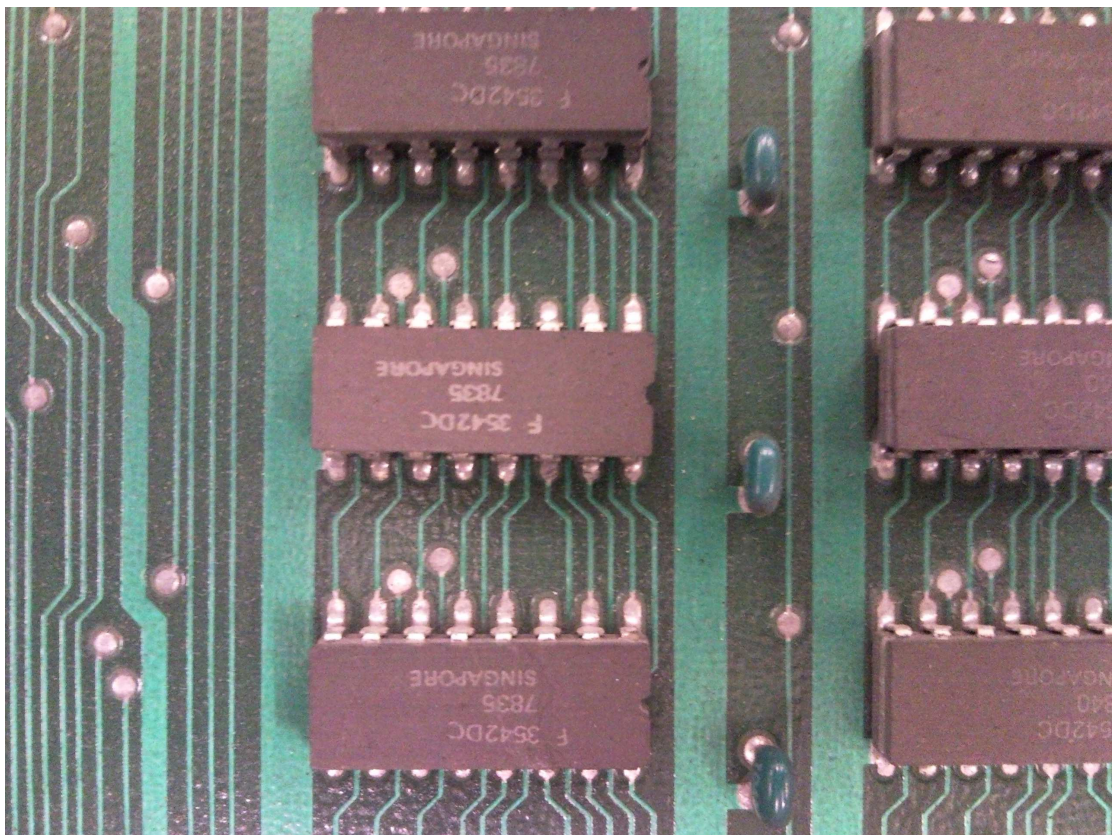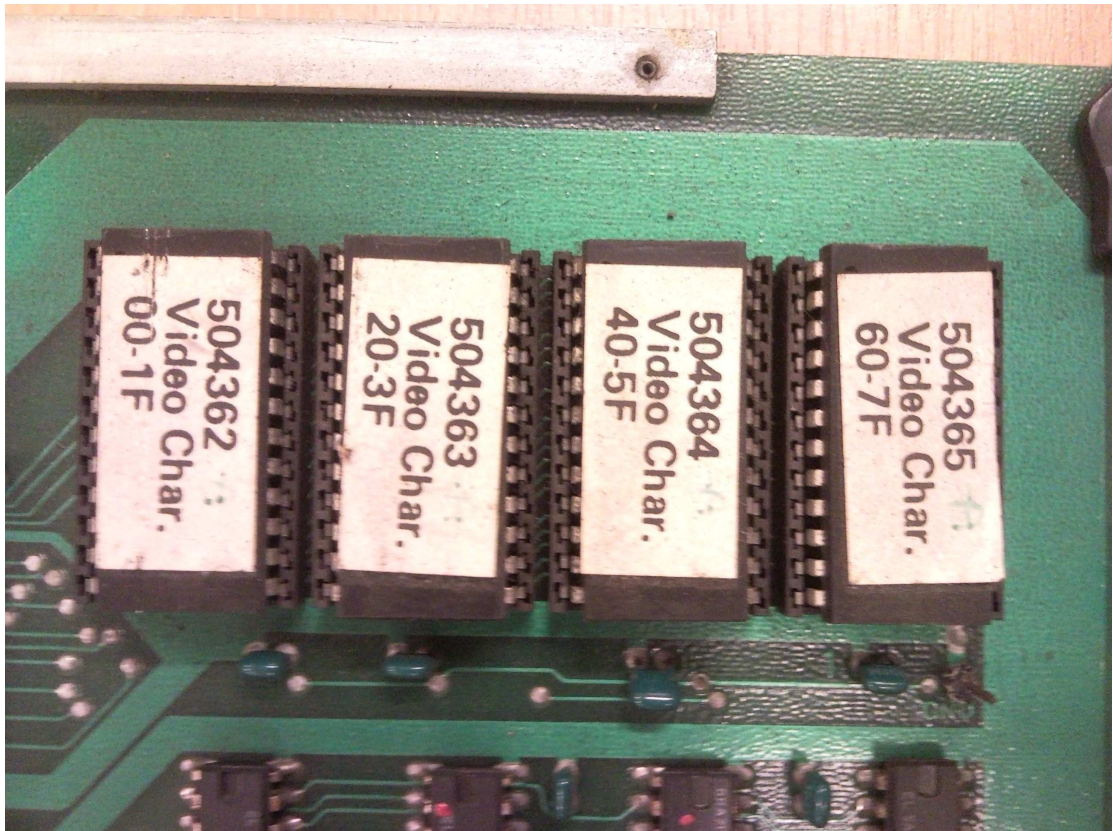*Figure 13: Ramtek 6200A Memory/Video board DRAM graphics memory*

Figure 14: Ramtek 6200A Memory/Video board serial number 801221
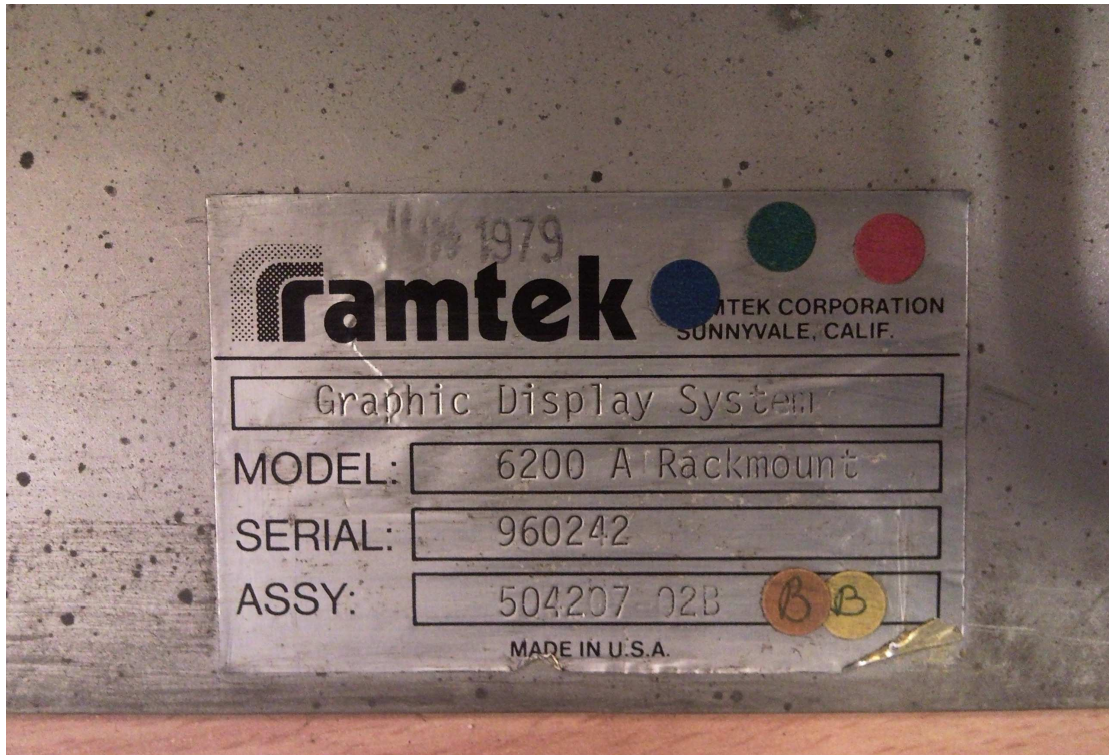
Figure 15: Ramtek 6200A Text/Disc board

Figure 16: Ramtek 6200A Text/Disc board text memory

Figure 17: Ramtek 6200A Text/Disc board text character ROMs

Figure 18: Ramtek 6200A Text/Disc board serial number 801429

Figure 19: Ramtek 6200A manufacturing label
Model: 6200A Rackmount, S/N: 960242, Assy: 504207 02B, Made in USA, 1979.