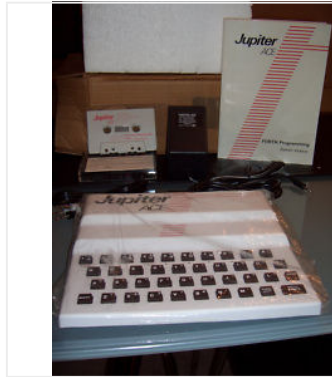




Listed in category: Computing > Vintage Computing

Item: 320677747877



Jupiter Ace Computer VINTAGE 1982 computer NEWcondition

BOXED - STILL IN WRAPPING - PRISTINE WHITE CONDITION

gixerboyz (140 ★)

Item condition: **Used**

Sale date: 10 Apr, 2011 20:03:58 BST

Bid history: 37 bids

Winning bid: **£821.23**



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Postage and packaging

Item location: Scarborough, North Yorkshire, United Kingdom

Postage to: United Kingdom

Postage and packaging	To	Service	Estimated delivery*
£10.00	United Kingdom	Standard Delivery (Parcelforce 48)	Within 4-5 working days
Free local pick up	United Kingdom	Collection in Person	

* Estimated delivery dates include seller's dispatch time, and will depend on postal service selected and receipt of cleared payment . Delivery times may vary, especially during peak periods.

Domestic dispatch time

Will usually dispatch within 3 working days of receiving cleared payment .

Return policy

The seller will not accept returns for this item.

Sellers may be required to accept returns for items that are not as described. [Learn more about your rights as a buyer.](#)

Payment details

Payment method

Preferred/Accepted



Accepted

Seller's description

**Jupiter ACE --Vintage 1982 Computer--
working, boxed, New Condition..**

NO RESERVE !!

Rare, boxed and NEW Condition are rare as Hens teeth only 8000 made between 1982 - 1984, but how many are in New Condition now?.

Whats included:

- Jupiter ACE computer (New Condition) wrapped, Boxed
- Power supply, wrapped
- FORTH book on Programming (by Steven Vickers)
- TV lead
- Tape recorder Leads
- **No tapedeck supplied**

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This is the specification that describes the Computer, found on the internet..

The Jupiter ACE is often compared with ZX81 due to its similar size, low cost, and similar form factor ^[who?], although internally it is an independent design. The ZX81 used 75% of its Z80 CPU time to drive the video. In ACE the Z80 CPU was fully used for running programs. The ACE used dedicated video memory of 2 KB, leaving the 1 KB main memory free for user programming.

The Jupiter-Ace was new to the market and the designers couldn't afford to use an uncommitted logic array (ULA), which were common in other computers (such as the ZX 81) to reduce component count, because these weren't economical in small quantities. Instead they reduced the number of chips required via clever design.

Like the Spectrum, the Ace used black rubber keys. Audio capabilities were CPU controlled with programmable frequency and duration. Sound output was through a small built-in speaker. A television was needed as a display - which was in black and white only.

Programs and data storage was by means of a common cassette tape, which was typical of home computers of the time.

Specifications

- Processor: Zilog Z80A clocked at 3.25 MHz.^[7]
- Memory: 1 KB, expandable up to 49 KB (Video SRAM excluded).
- Video: Independent sub-system using dedicated 2 banks of 1 KB making a total of 2 KB of extra SRAM.
- Sound: Internal Speaker.
- Keyboard : 40 keys.
- Expansion: 2 connectors: One CPU related similar to the one in the ZX-81, the other connecting to the Video sub-system.

References to the ACE RAM usually include the separate 2 KB video memory, which is not available for user programs, thus leading to some confusion.

Hardware

Video

One 1K bank allowed redefinition of most of its 128 characters ASCII based characters in 8x8 pixel bitmap format. The other 1K bank stored the full screen display of 24 rows x 32 columns of characters in black and white. So while the Ace had only one text video mode, redefinition of the character shapes could provide graphics in a low resolution of 64x48, and a higher resolution mode of 256x192 graphics, limited by the 128 available (definable) 8x8 chars. Both graphics and text could be displayed at the same time.

The font of the character set is identical to that of the Spectrum, but the display is white on black whereas the Spectrum has colour hardware. Although a colour graphics board was designed^[8] none was ever produced commercially.

Sound

An internal speaker was directly controlled by the CPU in single task mode, with control of sound frequency and its duration in milliseconds.

External Storage

Storage was through a cassette tape interface at 1500 baud.

Add-ons

Originally developed to receive ZX-81 add-ons, with a compatible expansion slot, it was actually delivered in a different configuration. A simple rewiring adapter could be used, but not very effectively due to power losses. Dedicated add-ons were needed and built by external companies, after the initial 16 KB by Jupiter Cantab.

RAM

1. Pack 16 KB by Jupiter Cantab.
2. Pace 16 KB and 32 KB by Stonechip Electronics.
3. Pack 48 KB by Boldfield (new Jupiter ACE owner after Jupiter Cantab).

Keyboard

- Memotech Keyboard, by Memotech.

Sound

- SoundBoard (1983) by Essex Micro Electronics,

Storage

1. Jet-Disc Disc Drive System (1983) by MPE (control up to four 3", 5", or 8" drives).
2. "Deep Thought" Disc interface with a 4K AceDOS in an EPROM (1986) by J Shepherd & S Leask.

Printer Adapters

- ADS Centronics Interface Machine (1983), by Advanced Digital Systems,
- RS232 & Centronics PrinterCard (1984) by Essex Micro Electronics.

Graphics Card

1. Gray Scale card - 4 shades of gray by S Leask (1986)

Firmware

The ACE had an 8 KB ROM containing the Forth kernel and operating system, and the predefined dictionary of Forth words in about 5KB. The remaining 3KB of ROM were used for tape control, floating point numbers library and character definitions table. Some of the ROM was written in Z80 machine code, but some was also coded in Forth.

The next 8 KB were split in 2 blocks of 4KB each. The video subsystem access allowing two different priorities by the user to the 2KB VRAM, *Regular* or *Overriding* video. The 1 KB of user RAM was only partially decoded, so it echoed to fill the next 4 kB block. So a 16 KB space was used for ROM, VIDEO, and USER, leaving free a 16 KB space for RAM extension plus 32KB space free for all possible usages.

Forth



ACE's Forth Vocabulary

The major visible difference from previous introductory computers, was Forth as its default programming language. Forth was considered well adapted to microcomputers with small memory and relatively low-performance processors. Forth allowed control structures to be nested to any level, limited only by available memory. Forth allowed implementation of machine code routines, if needed for a particular task. Forth also allowed recursive programming, if desired. On the downside, the usage of a data stack and the associated Reverse Polish notation were as unfamiliar as was structured programming.

ACE's Forth, maybe more correctly named as Jupiter Forth, was based mostly on Forth-79, with some relevant differences Runtime error checking could be turned off to raise speed by 25% to 50%. A few extra words were named similar to known BASIC sound, video and tape commands, as behavior was the same. The implementation lacked less frequently used Forth words, but these were easily implemented if needed.

The ACE's dialect of FORTH introduced several innovations. It simplified usual Forth definer and compiler words creation, with the CREATE .. DOES>, creation pair with:

1. DEFINER DOES> : Create new Defining words, usually used to define and build data data structures,(Examples: Arrays, Records, ...).
2. COMPILER .. RUNS> : Create new Compiling words, less frequently used to extend the language with new control structures.(Examples: Case, Infinite-Loop, ...).

As an operating system, it was adapted to Tape usage, saving/loading user vocabularies instead of the usual numbered programming blocks used in diskette systems.

The ACE's Forth could decompile its programs, unlike usual Forth systems. This decompiling ability had several advantages as a solution to the absence of the more flexible disk system used by Forth. It did not store the text of a Forth program, instead it compiled the code after editing and stored it in ready-to-run format. While this saved computer memory it also saved time in reading and writing programs from cassette tape. This tape-friendly and RAM-saving solution was unique to the Jupiter ACE Forth.

Commercial

Though Forth delivered several advantages over the interpreted BASIC used on all other contemporary home computers, the weak box and small initial memory kept the sales low despite technical interest.

Models



Jupiter ACE 4000

1982 - Original Jupiter ACE in a yogurt-pot type of case - Reported 8000 units built.

1983 - Jupiter ACE 4000 on stronger injection moulded case - Reported 800 units built.

Sales

Sales of the machine were never very large; as of the early 2000s, surviving machines are quite uncommon, fetching high prices as collector's items. One main reason for low sales seems to have been the need to buy an extra 16 KB RAM-extension which almost doubled the ACE's price. It happened that the designed 4 KB of base RAM was not built in favour of the less costly 1 KB delivered. The absence of colour kept the ACE squarely in a niche market of programming enthusiasts.

On 31-Mar-11 at 22:04:45 BST, seller added the following information:

**5 Game Tape Included
(pictured)....*sorry forgot to mention
what was on the tape.....***

On 31-Mar-11 at 22:12:27 BST, seller added the following information:

**Tested, and can confirm
that it is in perfect working
order...**

On 03-Apr-11 at 21:41:04 BST, seller added the following information:

Delivery to UK Mainland ONLY....

On 05-Apr-11 at 09:46:02 BST, seller added the following information:

Believe it or not this was unopened until last week, it was a sealed boxed unit in its original wrapping, it was bought as a batch of Computers from a School, I have another Jupiter Ace but is a used unit so used the PSU off that to test this unit so the cables are untouched and the PSU unused.



Questions and answers about this item

Q: hi there.would you end the auction early for 950.00.thanks,steve

A: Thank you for the offer but as there has been bids on the Jupiter Ace I will let the auction run to the end.. Regards, David

05 Apr, 2011

Questions and answers about this item

Q: Hi. Are all the plastic bags and packaging entirely original? Thanks. Alan

05 Apr, 2011

A: Believe it or not this was unopened until last week, it was a sealed boxed unit in its original wrapping, it was bought as a batch of Computers from a School, I have another Jupiter Ace but is a used unit so used the PSU off that to test this unit so the cables are untouched and the PSU unused. Regards, David

Q: Hello, if I bid and win this item, is it please possible to send you the payment via paypal on the 22nd of this month? Thank you.

03 Apr, 2011

A: Sorry, but payment must be within two days of the end of the Auction due to non paying buyers in the past.. Regards, David

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