FROBNICATE

ESSENTIAL FOR ALL THOSE ACORN TECHIE-TYPES OUT THERE...

- **ACORN MACHINES**
- **AMIGA USERS**
- **VCR CONTROLLER**
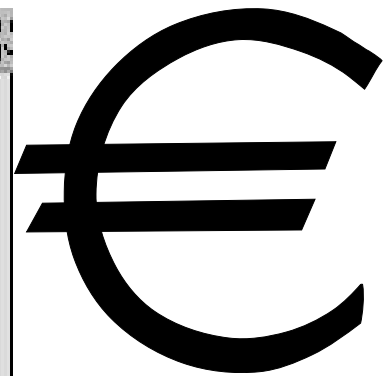- **STAR TREK SPOOF**
  & more!

Index:

Credits:

    Editor . . . . . Richard Murray.
    Contributors . . Richard Murray, Quintin Parker, Philip R.
                     Banks. Santa article posted by Geoff
                     Love. Java article posted by Stuart
                     Halliday.
    Graphics . . . . Richard Murray.

EDITORS PAGE

Welcome to a dozen issues of Frobnicate, and to a year and a half.

Can anybody remember where Frobnicate came from? Well, back in late 1994, a discussion began in the ARCHIMEDES echo about a magazine relating to Acorn computers, in some kind of 'techie' capacity. The two major players were myself and Ian Kershaw. The rest is, well, history.

I wonder what became of Ian. Those were the days when the ARCHIMEDES echo (Fidonet) was slacking if the daily message count dropped to two digits. Now, it seems as if three digits is pushing it for a year's worth of chat. The Internet seems to have claimed half of the players. The other seem to have grown up and just drifted off. I'm still wondering about Daniel Aston. After discussing a few hacks to his !YouWhat door (around Summer 1994?) he suddenly vanished.

Robin Abecasis I know about, but I somehow doubt he'll poll for Fidomail from hot and humid Singapore. In fact, a recent posting has stated he'll not be using his RiscPC. Something to do with the humidity causing it to fail. Sounds like the kind of weather I could do without. :-)

```
Oh shut up ya boring pratt...



Hiya! Demented hacker here.

I heard some of you were pining for
me whilst I was on vacation, so I
thought I'd come back and crash
this party. Where's the beer?

Right. Well, this totally excellent
maga-thing features a few truly
wicked articles. Take, for
instance, the list of Acorn
machines. I bet you ain't heard of
half of 'em. There's a bit about
the year 2000 (is that when Scully
and Mulder hit the sack together?)
and as if that isn't enough -
bounce to page six for a total
slagging of Amiga lusers. Best
thing if you ask me! For the geeks
out there, you can hook up your
video to the serial port. Die-hards
might even get this working on a
PC... Hahaha! And there is the
usual eclectic assortment of other
stuff.

Yo Rick. I don't want a video
wobbly thing. I want my Acorn
computer to be able to brew the
perfect beer... preferably from
recycled copies of Arch <hic> World
and other junkmail.

How about it, huh?



Here's a plea from me to you. Use
MTerm. ANSI is dead boring. I've
been hacking for yours and every
time it gets dowdier. Hehe... Just
like DOS!
```

Anyway. That's enough from me. I can see this absolutely gorgeous beaver walking by and my hormones are splitting the atom. Outta here!

Hmmm... Doesn't leave me enough room to sign off! Pah!
Well, until next issue...
            Richard (who *isn't* boring!!!)

REVIEW OF A *DOZEN*

Don't you give me no Buick
Son, you must take my word
If there's a God up in heaven
He's got a Silver Thunderbird

You can keep your El Dorados
And the foreign car's absurd

Me? I wanna go down...
...in a Silver Thunderbird.

Me? I wanna go down...
...in a Silver Thunderbird.

Sorry... Sidetracked slightly. :-)

This section will look back over the first ten issues and comment on various ideas, concepts and issues raised. Unlike the news at 10, I don't wish to report good articles with no follow–ups. So here is a look back over the last nine issues of Frobnicate, with follow–ups where applicable.

ISSUE ONE
Well, I'm still playing with telephony. A later article will detail have you can make a short-range listening device for a few quid. BABT approved? Get real!

No real follow–ups here.

ISSUE TWO
The DIY serial port was a nice one, but sadly we've not had much chance for DIY. A harddisc upgrade and this, the serial upgrade. No nifty stuff like building a 5th ROM or upclocking or custom–designed podules (though a dual 6522 I/O podule is in planning).

The serial blockdriver article has helped a few people. No updates to it as though we are on release 12 of the block drivers, there isn't much more to say. I may later cover getting them to work with C as it is, well, "non–trivial" to say the least.

Internet legislation rumours... Well, the Americans went ahead with the communications decency act. People are still reporting on sex and sleaze on–line. It's all a load of political spin–control if you ask me. In this issue we have a little article regarding the "standards". It revolves mainly around HTML, but if you take it as an abstract concept – it could apply to many many situations...

Tornado. Ah yes. Well, Niall Douglas has seen sense. He now programs in C on a RiscPC. No more hand–coded assembler under RiscOS 2. :-) Tornado itself appears to have been ported to Windows (NT?). Something about a thunking layer? I dunno.

The article on becoming a fidonet point is due to be updated, next issue?

ArmBBS? Well, I think we can say it has toppled ArcBBS. There are around 20–30 installations (not all paid for, mind you) and it offers LOADS of features. Hugo would have to do some serious coding to keep ArcBBS up to date. Will Hugo ever release the ArcBBS sources so we can update it? Probably not, but I can keep hoping. :-)

ISSUE THREE
Presented The Finishing Touch. A promising looking series of articles written by James Larcombe. Sadly, it appears that James has wandered off to bigger things, like the Internet.

ISSUE FOUR
More on Tornado. A guide to the SysOps of the Acorn world (as it was then) and a nice bit about copyright. Nava Whiteford presented ANTS which was a look into a kind of pseudo–intelligent "life".

A follow–up article in more depth is really what is needed here... Nava? Also a detailed breakdown of the Frobnicate readership. The readership itself has dropped due to a lack of text/graphics versions. I hope to post Steve Pursey a floppy with text/graphics versions on. I can't really afford to upload it everywhere any more. The last phone bill was *waaaaay* over budget and, well, if mom didn't love me <slush slush> then I'm sure I'd be six feet under around about now.

This issue also introduced the article "Qu'est–ce que c'est, ça?" where I can rant/rave/comment on all sorts of things. :-)

ISSUE FIVE

Sported a lovely picture raytraced by Emlyn Owen. Straight into the debate about BBSs and porn. Then a review of on–line games (which needs updating too) followed by quite a popular article, "The Invisible SysOp Debate".

The debate, started here and carried through in the next issue seems to have died a death. The person–with–no–name seems to now be doing a line in Internet junk–mail. The CyberCafé program apparently had a little piece on him, but at four in the morning I wasn't around to watch it. ARMsRace itself seems to have died down a bit. I'm sure the publicity was good, but I don't hear as much as I used to. In fact, I can't say I hear a lot about BBS doors any more. Everybody seems to be flocking to the Internet like Lemmings waiting to jump onto a surfboard on the Information Superhighway... only to get run down by a Mac truck carrying tonnes of crap, advertising, junk mail and Amiga user's homepages.

ISSUE SIX

Carried on the debate regarding invisible SysOps. This time, the person–with–no–name (who named himself) responded. No comments, read it and draw your own conclusions.

ISSUE SEVEN

Nothing much to update.

ISSUE EIGHT

featured my first foray into a world wide web... The gizmo responsible for all this "HTML" madness.
I, being me, went to look at America's most wanted. I dropped by Bill Clinton and then the X-Files. What a combo huh?

I recently wandered around "the web" and may even be setting up my own home page. More details later.

Issue eight also introduced us to the overly stereotyped student anarchist with a grossly cynical outlook on life. Yup, this is the demented hacker. Bizarely, it seems to have become a bit of a cult character insofar as the Frobnicate readership goes. He took Christmas off, and boy oh boy did I ever get a roasting for that. Okay, panic not. He is back and unlike previous instalments, our demented hacker is taking a lesson from The Simpsons and is highlighting a few of societies inadequacies in his ever–anarchic way.

Follow–up on the exclusive article (the one with all the bells)? Well, whoever said love was easy?

ISSUE NINE

Got into Econet in a big way, followed up with the Frobnicate awards. OvationPro was released around this time, and we ran a nice article on it. My own mom did a hard–hitting article about morals and advertising (or rather advertising and lack of morals). I look forward to another article from her keyboard. Yeah, I got mom to type this one on her computer. Mom's actually getting quite good at the Windows stuff, if you ask me... especially the patience game!

We carried on with our article on porting BASIC to C, but it wasn't rated very highly in the survey so...

Issue nine wrapped up with a nice detailed description of UUcode, so the *real techies* can now write UUcode directly in !Edit. :-)

ISSUES TEN AND ELEVEN

Not enough time has passed to allow a reasonable follow–up.

AMIGA OWNERS

You know the type. They try to put down a Pentium Pro, StrongARM or DEC Alpha on the basis of it being too slow. They then tell you how wonderful their 68000 series processor is and that the Apple Mac uses them. They get annoyed when you point out that Apple did, but doesn't now, that Amigas are dead and buried and that your old GQ–3500 printer has a 68000 series processor in it. They dream of the new RISC Amiga (which was profiled in a French Amiga magazine and currently seems little more than vapourware). They use expressions like "kewl" and "l8r m8" ("cool" and "later mate") and EvEn EnJoY TyPiNg LiKe ThIs CoZ ThEy SaW It In ThE HaCkEr HaNdBoOk...

Yes, if you meet a regular pratt on–line, he's either an AOL user or an Amiga user... Or worse, both. Are all Amiga users that bad? I'd say no. I'm friends with several. Though they seem to have a misguided belief in how much better their system is compared to everything else... which is nothing new in computer terms. Whole wars have evolved around whether Berkeley Unix is better or worse than AT&T Unix. The most stunning thing, though, is their blunt refusal to accept that nobody wants Amiga. Escom bought it and then sold it off. Somebody else bought it and has apparently sat on it. I hear rumours of a new RISC Amiga will enter the marker at £300 or so and feature a multiGb harddisc and a 500MHz+ processor. Ummm... Yeah, right.

Anyhow, over to Quintin Parker for the definitive guide to hating Amiga owners...

This is available on the Internet. Sadly, pratt-features (that's me!) has forgotten the URL. It hangs off of the Werewolf site, so try: "http://www.werewlf.demon.co.uk/quintin/".

★MP☻WP♥   The Amiga Owner Pogrom Page!

`Listen to the fool's reproach! It is a kingly title!'
-- The Marriage of Heaven and Hell, William Blake

YES! Welcome to THE page to come to for all of us who can't put up with those wheedling, immature, arrogant little puppy dogs who are the scum at the bottom of the barrel of the computer world! They infiltrate the bulletin boards and cover everybody with their scud! They pass you in the street every day with their falsetto voices and layers of foundation, soiling the pavement with their very footsteps as they go! Can we put up with this any more ? We've got to stop them! NOW! Here is the definitive guide to all of those annoying teeny piddles of pre-pubescent yobs. If *you* have any experiences or example you'd like to share, feel free to contact me - see right at the end of the article!

You don't agree?

I hear two cries from everybody when I do this page. `Surely not only Amiga owners?' and `But you can't tar everybody with the same brush!' are the more polite ways of putting them. :) I'll deal with the first in a moment. The second, yes. I know there are many Amiga owners who are extremely nice people, I can think of quite a few. The thing is, there are always exceptions to every rule. Amiga users are generally immature and arrogant, and there's no getting away from this. Unless you have actually met enough of them to decide this for yourself, there is no way of convincing you.

If on the other hand, you disagree because you *do* own an Amiga, then sod off.

But why just Amiga owners?

But of course it's not just Amiga owners. Here I'm only using `Amiga owner' to describe the whole section of computerland that gets on everybody's nerves ; .netters like you (I'm not a .netter) probably use the term `AOL user' to convey your undying hatred (although AOL users are normally just notorious for being utterly hopeless, not stuck-up with it). The reason why I do call people Amiga owners because the phenomenon originated on the Amiga. The Amiga was marketed as a games machine, and thus attracted a lot of 10 and 11 year olds whose parents wanted to keep quiet for a little while. The offspring of richer parents, or the more beleaguered ones, demanded all sorts of add-ons, the modem being one of them. It is in this way that `Amiga owner' culture spread, and when many original Amiga owners metaphorically grew up and got a PC, they carried this on. Now that the Amiga's heyday is over, you'd more likely find the aforementioned beleaguered parents buying their beloved children PCs, and so it all continues.

Like I say, you can really only generalise, and I'm only going by what I've seen myself. If anybody else has any other theories as to why the little annoying prats around cyberspace seem to invariably be ex-Amiga owners or actually have them, please let me know. I'd like to encourage debate on here, so I'd like to know your views (read sentence at top of last section)

A brief history of the Amiga

I really can't be bothered to do the research here. Perhaps some other time. :)

What's so bad about the Amiga?

The tragic thing is, nothing major. It could have been quite a neat little computer if it wasn't dragged into the cesspit by the majority of its users, even though, and I am grateful to Richard Murray for this information, some Amigas were marketed with song lyrics by B-52 imprinted on their PCBs.. love shack baby! :) As I said before, it was marketed as a games machine, which lead to piracy and was part of its downfall. The only slightly suspect things about the Amiga that I can think of, are Workbench (a sad parody of a WIMP interface), and the infamous Guru Meditation Errors that appeared in earlier models. Now, apparently, while the Amiga was being developed, it ran a program in hardware that was connected to an external brainwave monitor, that checked to see if the person in front of the computer was relaxed before using it, and if not it would pop up an error box. The problem was that that piece of code wasn't actually

taken out in the first Amigas, and of course the monitor wasn't there, so you kept on getting spurious errors. Oh dear!

How to spot an Amiga owner

This really is a piece of cake. You'll usually find them posting spurious messages on the net or on bulletin boards, or hanging about Amiga BBSs and, naturally, piracy boards. On systems like Fidonet, you can spot an Amiga owner instantly if they post with a program called `Spot`, a great program title for adolescents if there ever was one.

If you're not entirely sure, look at the writing style. Amiga owners started up their very own, which originally was peculiar to them alone but appears to have spread like a malignant cancer to PC and, to a lesser extent, Mac users. Amiga users always like 2 change words in 2 numbers and letters and u will always know them by there bad grammer and, punctuation some times u c them even writing in 1 long sentence like this bec0s they think that 2 behave in this way and 2 use daft spellings is kewl Miggy usrs have there own words like *lamer* and u wIlL ofTen fiND tHEm miXinG CApital + l0WeR CaSE leTTErs lIKE tHIS iF U Take All ThIs iN2 aCC0uNT iT iS Relly eEze 2 TeLL Just WHo iS a MiGgY 0wnR + Wh0 IsN'T.

How to deal with Amiga owners

When you meet an Amiga user in the street, or even on a board or the .net, the cardinal rule is to **stay calm.** This is obviously easier to do if you've come across one through mail, but still important to remember. Because these people are generally all the same, there are all sorts of ways of dealing with them, and you probably have your own ideas. But, here are a few general points to bear in mind.

- Unless you are being deliberately and purposely attacked, try not to provoke them. This is probably akin to belabouring a thick but extremely fierce rhinoceros around the head with a club ; it might be very easy to put them down, but it is wiser not to annoy them until you know exactly with whom you are dealing.
- Try not to descend to their level. This is tricky to do at first, and in some ways is linked to the concept of staying calm, but if you reply to a flame like `u R sAd + UrE mUMs a Wh0Re' with a comment like `tell your mum to close her legs, the fish keep dropping out', you aren't thinking up anything new or original and you are playing a game that is familiar to them. At the very very least think up new flames, or take a different tack, for example I had a screenful of insults from one Amiga user and I just quoted it all back and typed a :-) onto the end. Although it is probably less likely one would be able to spot one in the street and unlikelier still that you'd attempt conversation with them, this idea still applies. What I usually do is say or do something surreal or bizarre, and while they're off their guard, go in for the kill.
- Never forget that their age range is likely to be around 12 to 15 - or even if you know for a fact that the Amiga user in question is older then you can treat them as such, because of course, they're about that mature. Because of this, if they absolutely get on your nerves, you can always threaten to get their parents involved ; there is nothing more annoying for an early teenager than to be reminded of the existence of their parents (believe me, I've been there, and you might have been too), and it is more possible than not that their parents have exactly the same opinion of their angelic offspring as you do.

These, as I say, are a guide. Base your own technique for dealing with these pests on those points, but don't copy them verbatim - it is important to keep them guessing as to what their adversaries are about to do next.

Comments and Feedback

So, you've heard what I think! But am I the only person to think this way?? By no means. Because this page is relatively new there's very few people who've heard about it, so please get scribbling about any funny or annoying experiences you have had and they'll be put up here. If any Amiga owners should choose to write here, then their messages shall be put up here and duly ridiculed. But, meanwhile, here's a selection, most recent first.

From : Martin Donlon, *martyd@hotmail.com*, 1/11/96

My next door neighbour bought an Amoeba about two years ago, with the intention of helping him with his homework and helping his mother with her accounting job. So, the first day he got it, I went to his house to have a look - only to find that he had the RF cable plugged into the wrong socket and was calling the shop he had bought it from because `The joystick port at the back is too big'. He had of course, like any sensible Amoeba owner, tried to plug the two joysticks into the 25-pin serial port. How he failed to notice the joystick ports on the side, I'll never know. Anyway - what the hell was he doing with two joysticks anyway (self bought, they didn't come free) when he was going to be using the Amoeba for educational use?

From : John Langfield, *john@arcticbb.demon.co.uk*, 28/10/96

A friend at work has an Amiga. He has been having problems with the hard disc. It keeps giving error messages. So, I sent a message in the Fidonet Amiga echo stating what the error message was and asked for help - and I only got one reply and it said, `Amigas can not run hard discs.' I have seen the one with the fault and it has two hard discs on it. So, I sent a message stating that I have seen it and it does have two hard discs. The reply to this message was that the computer must be an Archimedes or an Atari. And that I must have read the name wrong. This went on for 6 other messages making a total of 7 messages. He still thinks that you can not have hard discs on an Amiga. He must be totally thick!

Contacting the author

If you have any comments and stories, you can email me, Quintin Parker, at *quintin@digibank.demon.co.uk*. One word of warning. If some of you out there are tempted to mail bomb me, bear in mind that this is a BBS account, which does not accept long mails and bounces them back at you. Plus, I get to find out the email address of the perpetrator, and I have a nice Unix core dump here which I've been looking for a use for. Your address will also be published up here, so people can mailbomb you too. Don't try it.

Who's standard?

In the world, there are groups of people who have the purpose of creating things called *standards*.

This means that every television in the UK can handle the broadcasts from UK transmitters.

This means that a brake shoe of the correct type bought from a bike shop will fit on your bike.

This means that the floppy disc in front of you will accept compatible floppy discs. Not just the size, but the speed of rotation and encoding methods.

This means that your modem talked to TelCo which in turn talked to the modem at a BBS many miles away which in turn talked back to your modem, via TelCo so that the end result was you downloading this file onto your harddisc – which was probably a standard issue IDE or SCSI disc hooked up to your Acorn.

One standard, we shall be looking at today is that of the HTML standard. A group of people have the task of laying down a standard to ensure that *every* WWW browser will be able to make sense out of *every* page it comes across.

However, in what is appearing to be a power struggle, two entities are flaunting these rules. The first in MicroSoft Internet Explorer (referred to here as "MSIE") and the second is NetScape. NetScape is long known for tacking its own bits on to the HTML standard, and it has even gained various nicknames such as "NetScrape", and others which are not printable here. :-)

But... Is it a good idea to give proprietary and non–standard additions to HTML?

As soon as you do so, you are limiting correct reception of the page to those who have compatible software. Take "frames" as an example. Adding these cuts out the Acorn market pretty well. Likewise if an Acorn browser was to support drawfiles for object–based graphics (no worse than a PC browser supporting AVI) then it would cut out many other browsers. And we'll end up with a messy my–browser–is–better–than–your–browser type of rubbish.

Many many people seem to treat HTML as rudimentary DTP. They should be shot.

YES, HTML will allow you to exercise control over the rough format of your page... But that is about it. You say a picture at the top, followed by a separator line, followed by some text with hyper links in it, followed by another ruler and a signoff message.

You should *not* specify the point size of your text or the exact font required or the link colours. These things are determined by the user. The user can set up to have 14pt text, to which all HTML–given sizes are relative.

HTML is *not* DTP.

Something to bear in mind is a HTML browser called Lynx. It is a terminal based (ie, no graphics) browser available for Unix. If your page falls over because of some special little point, then it does give the world the opinion that you are a narrow–minded pratt. By all means add nice graphical widgets, but don't forget the "alt" text for non–graphical users.

Oh, and try to avoid making horrible mistakes. One of the funniest I've come across is black text crossing a dark blue frame. Take a look yourself, it is an information page about a local town and is at "*http://www.bretagne.com/english/doc/villes/guerche/*". You *will* need a frame–compatible browser for best effects.
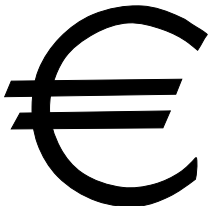
€ CURRENCY

Firstly, I'd just like to state that I shall refer to the currency as the "Ecu". The correct name for it as the "Euro", but that – to me – sounds like a really daft name selected by a "House Party" phone–poll.

If you don't like "Ecu", then feel free to buy some Tipp–Ex and a biro and change every occurrence.

Ecu Ecu Ecu Ecu Ecu Ecu Ecu Ecu Ecu Ecu...

This article is written liberally and with as much hearsay as fact. It may offend some readers, particularly the Germans.

There, at the top of the page, is the proposed logo. Something that will annoy computer users around the globe because they have nothing in their fonts. Also all sorts of machines will need reprogramming... Or will they?

There are people in this world that swap a "£" for a "#" – some printers even have trouble getting it right. So expect to see "€" which is basically "C" backspace "=".

Hey, it even looks kinda like an "e" rather than a deformed cent.

It is a good idea to have a single currency. You can move around Europe and use the same grossly coloured glow–in–the–dark cash in England, France, Spain... No need to worry about exchange rates and being ripped off by commission.

On the other hand, every single till in England will need to be adjusted for the new currency. All the BR automatic ticket machines will need reprogramming and most importantly of all, *YOU* will need reprogramming. Let's say I give you ten Ecus and send you to the local shop. How many cans of Dr. Pepper would that buy? Do you know? I sure don't. I *think* the exchange rate is an Ecu is about £0.82. But I could be horribly wrong (and

probably am).

If we do enter the Ecu region, we had better introduce it bit by bit and slowly phase out the pound. There is absolutely no way we can just jump in. After all, if the Ecu is so great – why aren't the Europeans introducing it into their own countries?

Well, probably because nobody really wants it. All the politicians are pro–Europe because it is a good selling point. The people, however, want to keep those stinking foreigners out. The French are probably too nationalistic to lose their currency. The British are too bizarre to even agree to a photograph on a driving license. And the Germans? Well, they seem to be a driving force in this. If you can't rule the world in two wars – take the subtle approach and introduce a currency that some have remarked as being rather close to the DM.

The French still have the residency permit thing in the way. You can't just take a EuroStar to France and start a new life. And what about EuroStar or the ferries? We'll skip the details of exploding trains to cut directly to a point. It seems as if Europe's sole purpose in life is to provide a local Disney and a few hundred outlets of cheap booze.

Well? At the end of that, and just before I set into my asbestos clothes, I'll ask you to assist me in a little poll. There are two questions. Please reply in the usual way.

1. DO WE NEED EUROPE?
    Does Europe offer us benefits or does it stunt England's growth in the world? Would we be better off to "go it alone" or is joining a united federation the best solution?
2. DO WE NEED THE ECU?
    Is this Euro currency a good idea or is it a load of old crap trying to cover severe social problems like "will people ever be able to move as freely as the money might"?

Please reply!

VCR CONTROLLER

Wow! Intense! Finally, a hardware project! :-)

We are going to start off simple... And this issue sees the development of a VCR controller that *you* can build for under a fiver. If you have some spare electronics bits lying around (as I did) then this should cost you nothing.

The circuit in place, switching on to record "Real Genius".

My Betamax doesn't seem to like to do timer recordings. I guess the battery–capacitor thing in the clock has died. Never mind, a little ingenuity will come in handy here.

The principle is to get the RTS line of the serial port to place the VCR into RECORD mode. The easiest way to achieve this is to tap off the record line from the SysCon board. Never VCRs probably multiplex the front panel signals so you'll need to solder two wires to the reverse of the RECORD button. My Betamax, luckily, doesn't so I was able to hook two wires to the PCB header where the panel functions connect. Also luckily was the "Camera" socket. Apparently the old–style video cameras had no inbuilt video recorder. They plugged in to a big thing that was strapped to you... or into a mains powered device like my SL–C9UB.

With the record lines brought out to the camera connector, I was able to set the thing going by shorting the two with a piece of solder.

Now replace the solder with an A5000 and you have one heck of an expensive timer. :-)

I decided upon using the parallel port as driving it is a piece of cake. Also, every computer (except unexpanded A3000's) have a serial port. For development, I used port 0 of my sp_dual. I figured it would be easier to replace that than the motherboard. The same warning applies to you. TAKE CARE. If necessary, expand this project to a darlington or even opto-isolation. However for most VCRs, the project shown here will work. It'll also work with my Super8 ciné camera for time–lapse photography.

The circuit is simple. Hook the RTS line into the base of an NPN transistor. Get this transistor to switch 9V into a relay. The relay then shorts the video (or whatever) control lines to fake a button press. Then unlatch the relay.

The circuit, as shown here, will switch on when the computer is powered up. If you don't like this, move the control switch from the normally open contacts to the normally closed contacts and reverse the software so it switches RTS *off* to switch the output on. I only hook up my battery when using the circuit, so this little 'feature' has no effect for me. Blame Acorn for resetting the serial port to a sensible state. :-)

Try to ensure that the relay is capable of being switched by a PP3. Several 12V ones are not.

This circuit has no 'protection'. If you are paranoid, add a few diodes to ensure it won't die if, say, you manage to hook up the battery incorrectly. :-)
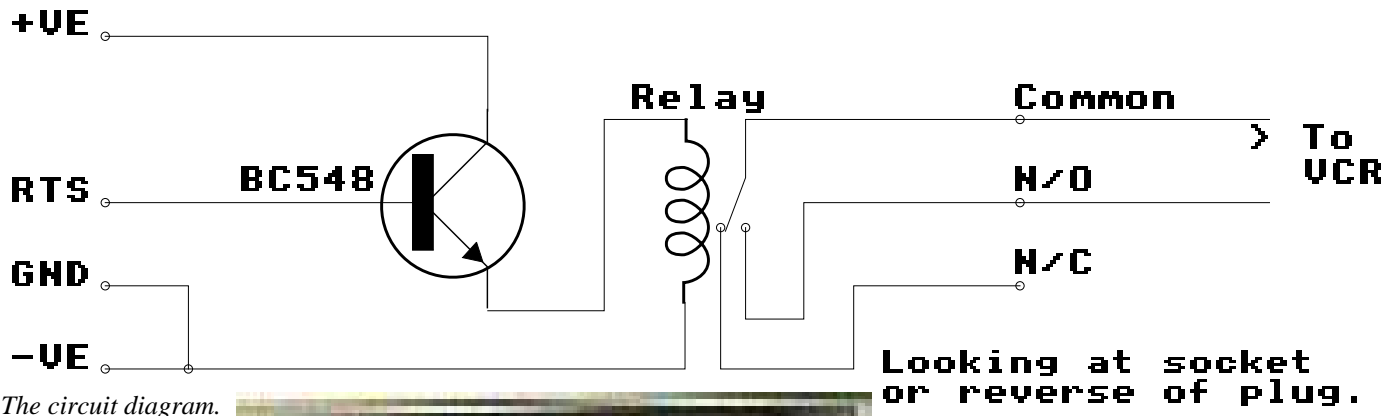
The circuit diagram.

Looking at socket or reverse of plug.

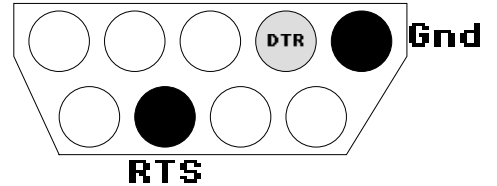*Pin–outs of the serial port. The DTR line, also marked, is another output. You could use this to, say, stop the VCR.*
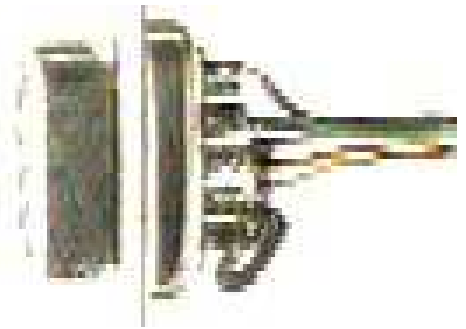

How it is all connected to the video recorder. The circuit, in the front, has been assembled onto a piece of plastic in 'wire–wrap' style. I couldn't find a spare bit of stripboard...

Serial port control lines

The serial blockdrivers are used, to make life easier.

Call the blockdriver with:
    R0   8
    R1   Port number
    R2   Control lines

Set R2 to -1 to read them, otherwise they are set.

    Bit 0 DTR
    Bit 1 RTS

Example software (singletasking) is provided in the Fronicate archive. Read the REMs for further details.

Ingredients

1   Relay capable of being operated with a PP3.
1   NPN transistor, I used a BC548. Maybe a BC108?
1   PP3 (9V rectangular battery)
1   PP3 connector
1   Serial plug
1   Length of wire, two core or more, as needed.
1   Piece of stripboard or something to mount the circuit on.

Wire/plugs as needed to connect to the VCR.
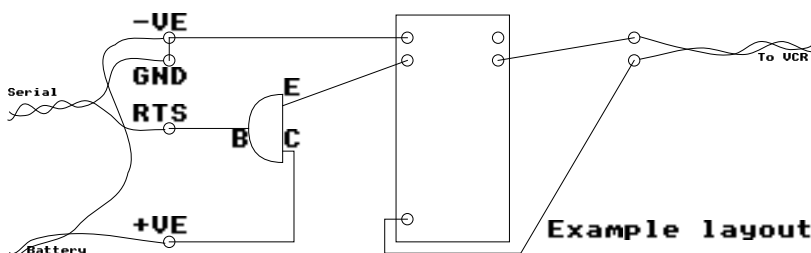
ACORN MACHINES

We all know the modern line–up, like the A3010, A3020, A4000, RiscPC, A7000 etc etc.

But what happened in the old days? Acorn made a lot of machines that you may not know about.

This list was created by Philip R. Banks in 1993, tweaked by Richard Murray.

There is a diverse range of Acorn machines basically classifiable into two ranges. Older 8 bit machines and the newer 32 bit machines. Each entry in the list is organised, after the textual blurb, in terms of :

> *Default memory.*
> *Default filing system(s).*
> *Default processor.*
> *Default RAM speed.*
> *Size of OS when first released.*
> *Approximate performance in MIPS.*

For a series of models, all models are listed in succession after the textual blurb with the first line indicating the model number. Please note all MIPS speeds are estimates, are in terms of the processor's speeds and are **not** converted to Vax MIPS.

Acorn System 1 - the earliest of the Acorn machines. Powered by a 6502 CPU it had a staggering 1k of memory and a 512 byte monitor program. Described as a `pig to use` it marked the beginning of Acorns long association with the 6502 chip. Released in 1979.

> *1k Memory*
> *Cassette interface.*
> *6502 processor*
> *1 MHz RAM (I think).*
> *512 bytes Monitor in ROM.*
> *~0.09 MIPS (at a guess....)*

Acorn System 2,3,4,5 - A eurocard rack system with a combination of cards including 6502 cpu, 6809 cpu, 32k ram, 32k battery backed CMOS RAM, disc interface, versatile interface adaptor, lab interface, econet, analogue interface, VDU interface and a 6502 ICE (In Circuit Emulation I am told).

> *32k Memory.*
> *Disc interface.*
> *Variable Processor.*
> *1 MHz RAM (I think)*
> *Unknown ~0.09 MIPS (at a guess....)*

Acorn Atom - this was powered by a 6502 chip and had 4k of memory. A bit of a rarity these days to see a working model. It had an integer only BASIC   supplied in ROM as well as the

OS. Via an extension ROM, floating point operations could be added to the BASIC. Released early 1980 (I think).

> *4k Memory. (Expandable to 12k)*
> *Unknown. I believe it was tape.*
> *6502 processor.*
> *1 MHz RAM (I think).*
> *8k OS in ROM (I think).*
> *~0.09 MIPS*

Acorn Proton - early version of the BBC Model A. Capabilities presumably very similar to the Model A. Apparently never commercially released.

> *16k Memory*
> *Tape filing system by default.*
> *6502 processor.*
> *2 MHz RAM.*
> *16k of OS in ROM.*
> *~0.17 MIPS*

BBC Model A - cut down version of the very popular BBC Model B. Powered by a 6502 chip, it featured 16k of memory. Released November 1981.

> *16k Memory*
> *Tape filing system by default.*
> *6502 processor.*
> *2 MHz RAM.*
> *16k of OS in ROM.*
> *~0.17 MIPS*

BBC Model B - the `full` version of the Model A. This machine became one of the most popular eight bit machines in Britain. It also ran on a 6502 chip and had 32k of memory, along with a facility to easily include anywhere from 4-16 `sideways` ROM expansions. By default the machine was only capable of taking 4 ROMs - with two slots taken by BBC BASIC (either versions I or II) and the other usually taken up by a Disc Filing System.   (The machine was released without the DFS to begin with.) Released November 1981 - early 1982. It appears that there was also released an American/Canadian version of the Model B that had several differences - namely that econet and speech systems were built in and that the machine was set up for American monitors by default requiring a *UK to enable it to run most software.

> *32k Memory*
> *Tape filing system by default.*
> *6502 processor.*
> *2 MHz RAM.*
> *16k of OS in ROM.*
> *~0.17 MIPS*

BBC Model B+ - this machine was the predecessor to the BBC Master range of machines and came in two models. The default model was equipped with 64k of memory and a D.F.S. by default. It was the first of the Acorn machines to come with a double density disc system as default. It had a lot of the annoying `glitches` of the model B cured and was also

powered by a 6502 chip. Released early 1984, it was quickly superseded by the Master range of machines and Acorn drew loud criticism for releasing the machines so close together.

> *64k Memory*
> *Double Density Filing system by default.*
> *(included tape as well)*
> *6502 processor.*
> *2 MHz RAM.*
> *16k of OS in ROM.*
> *~0.17 MIPS*

Reuters board - Effectively a BBC Model B+ on a big eurocard for rack mounting.

> *64k Memory*
> *Unknown*
> *6502 processor.*
> *2 MHz RAM.*
> *16k of OS in ROM.*
> *~0.17 MIPS*

Acorn Business Computer - Acorns first attempt at entering the business market and it was not a great success. It consisted of a BBC Model B+ with a variety of second processors all packaged in a new case with an integral monitor and separate keyboard. Second processors included a 32016 running Panos, 80186 running DOS & a Z80 running CPM. These machines were and are very rare, indeed I have yet to hear from someone who has actually used one of these machines. They consisted of eight models and were released late 1984.

Acorn Business Computer Model PA

(Personal Assistant)
> *64k Memory*
> *Disc Filing System by default.*
> *6502 processor.*
> *2 MHz RAM.*
> *32k of OS in ROM with ViewSheet.*
> *~0.17 MIPS*

Acorn Business Computer Model Terminal.

> *64k Memory*
> *No filing system by default.*
> *6502 processor.*
> *2 MHz RAM.*
> *32k of OS in ROM with a VT100 emulator in ROM.*
> *~0.17 MIPS*

Acorn Business Computer Model 100.

> *64k Memory*
> *Disc Filing system by default.*
> *Z80 processor. (6502 processor acting as host for parasite Z80)*
> *Unknown*
> *32k of OS in ROM. Largely unused being replaced with CP\M.*
> *~0.17 MIPS*

Acorn Business Computer Model 110.

> *64k Memory*
> *Disc Filing system by default. (10 Megabyte harddisc)*
> *Z80 processor. (6502 processor acting as host for parasite Z80)*

> *Unknown*
> *32k of OS in ROM. Largely unused being replaced with CP\M.*
> *~0.17 MIPS*

Acorn Business Computer Model 200.

> *512k Memory (Unknown exactly)*
> *Disc Filing system by default.*
> *32016 processor. (6502 processor acting as host for parasite 32016)*
> *Unknown*
> *32k of OS in ROM. Largely unused being replaced with Xenix.*
> *~0.17 MIPS*

Acorn Business Computer Model 210.

(Later known as the Cambridge Workstation)
> *512k Memory (Unknown exactly)*
> *Disc Filing system by default. (10 Megabyte harddisc)*
> *32016 processor. (6502 processor acting as host for parasite 32016)*
> *Unknown.*
> *32k of OS in ROM (PANOS). Largely unused being replaced with Xenix.*
> *~0.17 MIPS*

Acorn Business Computer Model 300.

> *1024k Memory*
> *Disc Filing system by default.*
> *80286 processor. (6502 processor acting as host for parasite 80286)*
> *Unknown.*
> *32k of OS in ROM. Largely unused being replaced with CP/M, MS-DOS or PC-DOS.*
> *~0.17 MIPS*

Acorn Business Computer Model 310.

> *1024k Memory*
> *Disc Filing system by default. (10 Megabyte harddisc)*
> *80286 processor. (6502 processor acting as host for parasite 80286)*
> *Unknown.*
> *32k of OS in ROM. Largely unused being replaced with CP/M, MS-DOS or PC-DOS.*
> *~0.17 MIPS*

Acorn Electron - this was Acorns `cut down` BBC Model B machine. Designed to be a cheap alternative to the model B it had a lot of design trade offs in order to keep it cheap. A feature of it was its series of expansion options that offered people the ability to upgrade it to almost the same specs as a Model B. It was slower than the Model B even though it was clocked at the same speed due to the fact that its screen refresh demands were not done asychronously to the CPU resulting in cycle stealing from the CPU especially in the higher resolution screen modes.

> *32k Memory*
> *Tape filing system by default.*
> *6502 processor.*
> *2 MHz RAM.*
> *16k of OS in ROM.*
> *~0.25 MIPS*

British Telecom M2105 - An Electron with an expansion box containing a speech synthesizer and modem. Designed as a `smart` comms terminal.

> *32k Memory*
> *Tape filing system by default.*
> *6502 processor.*
> *2 MHz RAM.*
> *16k of OS in ROM.*
> *~0.14 MIPS*

Communicator - A comms machine based on a 65816 processor with an on board modem, comms software and featured 32k of CMOS RAM.

> *512k (32k battery backed CMOS ram extra) Memory.*
>   *(Expandable to 1024k)*
> *CMOS RAM and NET filing systems by default.*
> *65816 processor.*
> *2 MHz RAM.*
> *256k of OS and bundled software in ROM.*
> *Unknown.*

Briefcase Communicator - Basically the same hardware as the communicator repackaged in a briefcase with an added ramcard interface. See *Acorn Communicator* - hardware functionally identical.

BBC Master range - this was the successor to the Model B range and came out as three close but different machines. Powered by a 65C02 chip it was slightly faster and had a lot of software improvements as well as hardware improvements that made it a large step forward. It came by default with a new and greatly improved Disc Filing System called ADFS (Advanced Disc Filing System) as well as 128k of memory as standard. Released late 1984-1985.

> *128k Memory*
> *ADFS filing system by default. (Also came with DFS*
>   *and tape)*
> *65C02 processor.*
> *2 MHz RAM.*
> *16k of OS in ROM. (bundled with 48k more other*
>   *ROM material)*
> *~0.18-0.19 MIPS*

Acorn M19 - Re-badged Olivetti M19 PC-clone. Based on an 8088 processor it also came with it's own monitor. (Indeed that's what powered it...)

> *256k Memory.*
> *DOS filing system.*
> *8088 processor.*
> *Unknown.*
> *Unknown.*
> *Unknown.*

A500 - never sold commercially this machine will be a little hard to find. It was the development machine for the A300/A400 series of machines. One of its major `idiosyncrasies` is that it uses the older VIDC1 chip which used different logic for sound output than all commercially released Arcs and thus most sound modules sound very odd on it...

> *4096k Memory.*
> *Advanced Disc Filing System by default.*

ARM 2 processor.
8 MHz RAM. (Occasional unit with 12MHz RAM.)
512k OS in ROM.
~4 MIPS

A3xx - the first of the Archimedes range of computers it was powered by a custom designed chip set based around the ARM a 32 bit RISC chip. The range started with half a Meg of memory up ran up to 1 Meg of memory. They came out with the Arthur Operating system that while it was more advanced than the 8 bit machines OS' it was not an OS doing justice to the hardware it was running on. Released around late 1987 they heralded the start of new shift in Acorn machines away from their previous 6502 only base.

A305
> *512k Memory.*
> *Advanced Disc Filing System by default.*
> *ARM 2 processor.*
> *8 MHz RAM.*
> *512k OS in ROM.*
> *~4 MIPS*

A310
> *1024k Memory*
> *Advanced Disc Filing System by default.*
> *ARM 2 processor.*
> *8 MHz RAM.*
> *512k OS in ROM.*
> *~4 MIPS*

A4xx - released at the same time as the 300 series of machines the 400 series features an in built ST506 hard drive controller and some models came equipped with hard drives built in as standard and the series also, by default, was capable of handling 4 expansion cards including a co-processor card unlike the 300 series.

A410
> *1024k Memory*
> *Advanced Disc Filing System by default.*
> *ST506 Hard Drive interface by default.*
> *ARM 2 processor.*
> *8 MHz RAM.*
> *512k OS in ROM.*
> *~4 MIPS*

A420
> *2048k Memory*
> *Advanced Disc Filing System by default.*
> *ST506 Hard Drive interface by default.*
> *ARM 2 processor.*
> *8 MHz RAM.*
> *512k OS in ROM.*
> *~4 MIPS*

A440
> *4096k Memory*
> *Advanced Disc Filing System by default.*
> *ST506 interface by default with 43Mb harddisc*
> *ARM 2 processor.*
> *8 MHz RAM.*

512k OS in ROM.
~4 MIPS

A680 - development machine for RISCiX. This is another development machine and again was never sold commercially, thus it is somewhat rare. It was different from most Arcs in the respect that it does not have RiscOS in ROM at all and can only use a high resolution monochrome monitor for display. It came with a 67 Meg SCSI drive by default.

8192k Memory.
SCSI by default. (67 Meg drive)
ARM 2 processor.
8 MHz RAM.
Unknown. (Runs RISCiX...)
~4 MIPS

R140 - Acorn's entry machine into the Unix market, it suffered problems due to the Archimedes chip set not being optimal for running Unix on. Functionally identical to an A440 machine it had 4 Meg of memory and was provided with an 52 Meg ST506 drive with RISCiX (Acorns brand of Unix) on it. Due to memory constraints and a large page size it did not fair terribly well as a Unix workstation.

4096k Memory
Advanced Disc Filing System by default.
ST506 interface by default with harddisc (53 Meg)
ARM 2 processor.
8 MHz RAM.
512k OS in ROM. RISCiX OS supplied on Hard Drive.
~4 MIPS

A3000 - this is the low end Arc. It was the first machine to be released with the newer and faster MEMC1a built in as standard as well as the newer Risc OS by default. Designed to be a cost effective cheap Arc it features only one full expansion port with a single internal `mini` expansion card slot limiting expansion somewhat. It also came by default without a serial port. This machine has proved very popular with schools as a cheap entry into the new Archimedes machines. It was the Editor's first RiscOS machine.

1024k Memory
Advanced Disc Filing System by default.
ARM 2 processor.
8 MHz RAM.
512k OS in ROM.
~4.7 MIPS

A4xx/I - this series was functionally identical to the 400 series but featured a newer memory controller the MEMC1a that gave it a slightly faster speed. It also came with a 53 Megabyte harddisc in the higher end models that came with HD's rather than the 400 series's 20 Meg one.

A420/I

2048k Memory
Advanced Disc Filing System by default.
ST506 interface by default.
ARM 2 processor.
8 MHz RAM.
512k OS in ROM.
~4.7 MIPS

A440/I

4096k Memory
Advanced Disc Filing System by default.
ST506 interface by default with harddisc. (53 Meg)
ARM 2 processor.
8 MHz RAM.
512k OS in ROM.
~4.7 MIPS

A540 - the current high end Archimedes machine this machine comes with 4 Meg of memory by default and an ARM 3 processor running at 26 MHz. It comes with a 100 Meg SCSI drive by default and a slightly newer version of Risc OS updated to cope with up to 16 Meg of memory and features for handling the ARM 3 processor. Although it is no longer the high end machine in terms of speed, the new A5000 (alpha variant) has supplanted the A540 in these stakes, it still is the high end old-style machine in terms of expandability...

4096k Memory
Advanced Disc Filing System by default.
SCSI Hard Drive interface by default with harddisc.
    (100 Meg)
ARM 3 processor. (26 MHz)
12 MHz RAM.
512k OS in ROM.
~13.5 MIPS (I am guessing here...)

R260 - functionally identical to the A540 the R260 comes with Unix (well RISCiX) by default and due to the increased power of the hardware runs it much better.

8192k Memory
Advanced Disc Filing System by default.
SCSI interface by default with harddisc. (100 Meg)
ARM 3 processor. (26 MHz)
12 MHz RAM.
512k OS in ROM. RISCiX OS supplied on harddisc.
~13.5 MIPS

R225 - A discless version of the R260 it was designed to be a cheap networked Unix station. Released at the same time as the R260.

4096k Memory
Advanced Disc Filing System by default.
ARM 3 processor. (26 MHz)
12 MHz RAM.
512k OS in ROM. RISCiX OS booted off from
    network connections.
~13.5 MIPS

A5000 - the A5000 is the first machine to feature high density (quad - 1.6 Meg formatted) floppy drives by default as well as the latest (at the time) version of Risc OS - version 3. It also features an inbuilt IDE harddisc (40 Meg) on it's higher end model. With the re-release of the series the basic harddisc size has been upgraded to 80 Meg. An A5000 is what Frobnicate is written upon.

Released late 1991.
1024k Memory
Advanced Disc Filing System by default with High
    Density drives.
IDE interface by default.
ARM 3 processor. (25 MHz)

12 MHz RAM.
2048k OS in ROM.
~13.5 MIPS.

A4 - Acorns first portable machine. The A4 is functionally an A5000 in portable form. Featuring power save modes, an LCD screen and software configuration of the power saving features it was released July 1992. It is called the A4 because it's footprint on a desk is apparently that of an A4 piece of paper.

It is interesting to note that the A4 is **not** an A5000 squeezed into portable form but rather the A5000 is the A4 in desktop form, whereby the A5000 design was largely a spin off from the design of the A4.

2048k Memory
Advanced Disc Filing System by default with High
Density drives.
ARM 3 processor. (24 MHz normally, 6 MHz in power
save mode.)
12 MHz RAM. (3 MHz in power save mode.)
2048k OS in ROM.
~13.25 MIPS.

A30x0 - Two models of this machine exist the A3010 and the A3020. Both are designed as low end 'family solution' machines. They are also among the first machines to feature the ARM250 processor offering improved performance over an ARM2 (but less than an ARM3) and are designed to supplement the A3000 machine as a low cost entry machine into the Acorn world. Its other main claim to fame is it is the first Archimedes series machine that features joystick ports. Launched August 27th 1992.

1024k Memory
Advanced Disc Filing System by default with High
Density drives.
IDE 60 Mb harddisc (only in A3020 with HD option).
ARM 250 processor
12 MHz RAM.
2048k OS in ROM.
~7.2 MIPS

A4000 - This is a higher end more expandable version of the A30x0 series machines and is in a three box format similar to the A5000. It also is driven by an ARM 250 processor however it features over the A30x0 machines optional Ethernet & Econet ports, a high density floppy drive and an 80Mb IDE harddisc by default. The aim of this machine is strongly towards the home office and more 'serious' applications than the A300x0 series. Launched August 27th 1992.

2048k Memory
Advanced Disc Filing System by default with High
Density drives.
IDE 80 Mb harddisc by default.
ARM 250 processor
12 MHz RAM.
2048k OS in ROM.
~7.2 MIPS

A5000 (alpha variant) - This is an improved variant on the A5000 featuring a considerably faster processor, 33 MHz, with the ability to have a similarly clocked FPA unit installed. It also features a considerably larger base harddisc size of 160

Mb on the 4 Mb model, the lower 2 Mb model still as an 80 Mb drive. Finally it has improved alterations to it allowing easy expansion of the machine to 8 Mb of memory by default. (IE without having to use third party solutions.) Released 10th September 1993.

2048k Memory
Advanced Disc Filing System by default with High
Density drives.
IDE interface by default.
ARM 3 processor. (33 MHz)
12 MHz RAM.
2048k OS in ROM.
~16.96 MIPS.

Since then we have had various RiscPCs, the A7000 and a StrongARM that lays waste to everything before (including many programs coded for earlier ARMs!).

Unfortunately, I am not sure of the exact order/dates/spec of these machines.

A BBC B, bought second-hand in 1987 was my very first Acorn. It didn't get much use, being tape only.

An A3000, bought in 1988, was my very first RiscOS machine and I bought AcornDTP to go with it. In 1989, at boarding school, my AcornDTP got nicked. After waiting ages for the insurance, I bought Ovation and saw what a *real* DTP package was about. :-)

1993 was when I bought this A5000 second-hand, and 1996 when when I got hold of a bottom-spec A310 w/o floppy for an amazing £2.

The A3000 is the network server. The A310 is a terminal and the A5000 is where *it all 'appens.....*

And what do YOU use?

MillenniuM

There seems to be an incredible amount of misconception surrounding this subject...

> *Crappy PCs will all crash at midnight on the 1st January 2000 wiping ALL your data*

or

> *Acorn computers are immune to the problem.*

Yes, it is apparently true that Windows 3.1 / Windows for Workgroups *will* fall over in a heap when 2000 comes. It is also likely that you will lose a lot of data. But we are not immune in our sheltered Acorn world.

Firstly, we'd better take a look at why the millennium is causing so much fuss.

Well, it all boils down to something blindingly simple. Many programs, such as dBase IV or FoxPro or multitudes of others will store dates. You are used to seeing 01/07/96 for things such as sell-by dates. You rarely see 01/07/1996 unless you are reading one of my written dates. A lot of code was conceived back in the 60s and 70s when memory was tight (years later people made money selling the ZX81 - a computer with a pitifully meagre amount of memory). So just knock off the "19" bit in the dates and *assume* it.

Now, many years later, this has caught up with us. Dates stored in the form YYMMDD (reversed to make date sorting easy) will all suddenly fail. My calendar might say I'll be 26. Then seconds later it'll freak as I'll be -73. From young adult to a pensioner in a matter of milliseconds.

RiscOS has been wisely designed to NOT suffer from this problem. For us, time runs out around 2045 (or maybe it is 2145?). I'm sure my A5000 won't be around then. As for me?

However because RiscOS won't suffer in no way implies that programs running under RiscOS will not suffer. If somebody wrote a program that stores the date as YYMMDD (or DDMMYY or any combination using only two digits for the year), it'll fail.

The fix is simple to think of and talk about. Simply take all the two–digit years and replace with full year handling. Patch the Unix programs that automatically reject a date before 1970 (when time 'began' in the world of Unix). Update all the data. Piece of cake.

Now take a reality check and count how many people *may* be affected.

Take a reality check and notice shops are *still* selling software that will cease to work in a little over two years time. Take a reality check and see how many people are burying their heads in the sand.

There's *no* way I'm gonna be in an airplane when 2000 ticks over. And I probably won't keep my money in a bank for the months before/after unless I get a legal mandate that they are on top of the problem and will accept any liability for screw-ups due to this (do you really see me getting that piece of paper?).

How to be sure it won't affect you...

Back up ALL your data. Set your RTC to some time after the millennium has occurred, and try out all your software. Restore the RTC and restore all wormholed files from backup. If you made it, rest easy otherwise consider panicking.

MTerm (A) r2v2

*Entering the BudgieSoft area with MTermRX.*
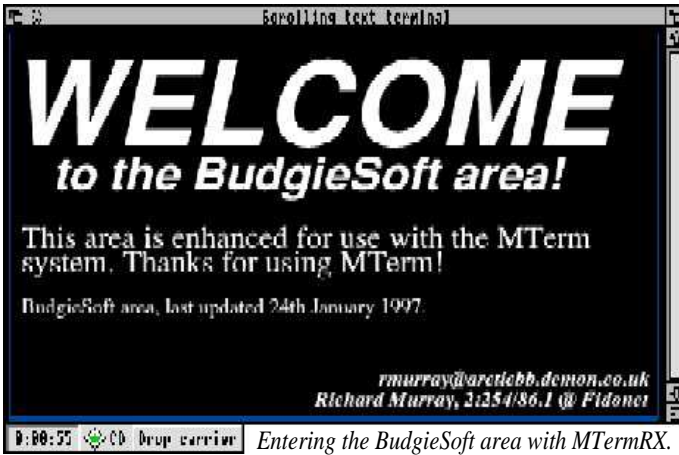
This screenshot was taken using a terminal viewer connected locally to ArcBBS. It's not ANSI.....it's an outline font!

So, how *do* they do *that*?

Simple. It's no ordinary terminal. It is a special terminal that can understand the MTerm script language. The current version of this script is part A, release 2, version 2 (hence the slightly obfuscated heading above). It allows BBS SysOps to design special screens which use the script language to draw pictures, start downloads, plot outline fonts... If I was nutty enough I could probably render an example Frobnicate page as I see it in Ovation. White background. Text. A few lines...

The *playground* is based upon MODE 12. The actual area is less, 1280 units by 768 units. The colours used are the Wimp palette (white, six greys, black, blue, yellow etc).

The diagram on the right explains this.
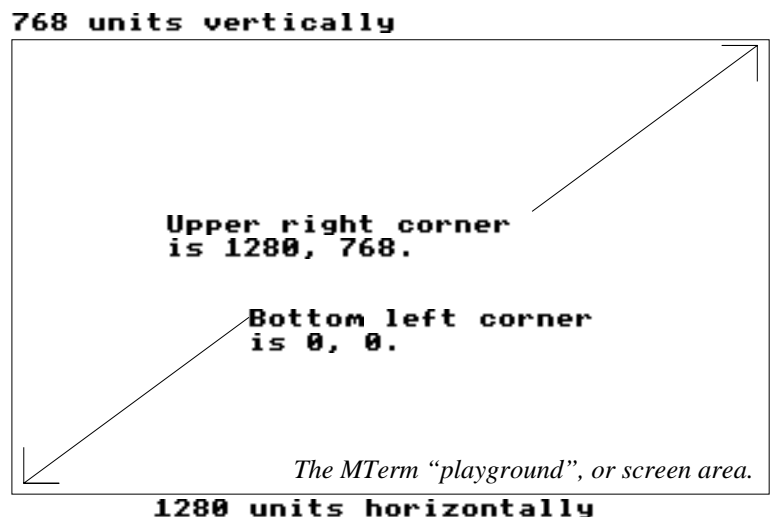
The MTerm script (A) involves the use of inline script commands, in the form ¤!M<command> [<parameter(s)>] which MTermRX (the terminal) will understand.

On a regular ANSI terminal, the user would see something like:

```
¤!MDRAW COLOUR 8
¤!MDRAW RECT 5, 15, 1260, 750
¤!MDRAW RECT 7, 17, 1260, 750
¤!MFONT LOAD 5 90 90
¤!MFONT DRAW 5 550 0 WELCOME
¤!MFONT LOAD 5 36 35
¤!MFONT DRAW 90 460 0 to the BudgieSoft area!
¤!MFONT LOAD 14 24 24
¤!MFONT DRAW 30 350 0 This area is enhanced for use
```

(though strictly speaking the "¤"s come out something like "ñ").

But on an MTerm terminal, you see all the fonts and everything.

Next time we'll look at the MTerm philosophy and the script *language*, and present a copy of MTermRX for you to use. If you can't wait until then, call ArcTic and look in the BudgieSoft file area.

768 units vertically

Upper right corner is 1280, 768.

Bottom left corner is 0, 0.

The MTerm "playground", or screen area.

1280 units horizontally

Santa?

We all have believed in Santa at one time in our lives... But now as we grow up we dismiss him as a childhood idealism. However we probably didn't consider the scientifics of Santa's achievement... until now. So here is the definitive Santa debunking article, posted on the Internet...

Is there a Santa?

1. No known species of reindeer can fly. But there ARE 300,000 species of living organisms yet to be classified, and while most of these are insects and germs, this does not completely rule out flying reindeer, which only Santa has seen.

2. There are 2 billion children (under 18) in the world. But since Santa doesn't appear to handle Muslim, Hindu, Buddhist and Jewish children, that reduces the workload to 15% of the total - 378 million or so. At an average rate of 3.5 children per household, that's 91.8 million homes. One presumes there's at least one good child in each.

3. Santa has 31 hours of Christmas to work with, thanks to time zones and the rotation of the earth, assuming he travels east to west. This works out to 822.6 visits per second. This is to say that for each Christian household with good children, Santa has 1/1000 th of a second to park, hop out of the sleigh, jump down the chimney, fill the stockings, distribute the remaining gifts under the tree, eat the snacks, get back up the chimney, get back in the sleigh, and move on to the next house. Assuming that each of these 91.8 million homes are distributed evenly (which we know to be false but for the sake of these calculations we will accept) we are now talking about .78 miles per household, a total trip of 75 1/2 million miles, not counting bathroom stops. This means that Santa`s sleigh is travelling at 650 miles per second, 3000 times the speed of sound. For comparison, the fastest man made vehicle, the Ulysses space probe moves at a poky 27.4 MPS; the average reindeer runs at 15 MPH.

4. The sleigh's payload adds another interesting element. Assuming that each child gets nothing more than a medium sized Lego set (2 pounds), the sleigh is carrying 321,300 tons not counting Santa who is invariably described as overweight. On land, conventional reindeer can pull no more than 300 pounds. Even granting that "flying reindeer" (see point one) could pull TEN TIMES the usual amount, we can not do the job with 8 or even 9. we need 214,000 reindeer. This increases the weight, not even counting the sleigh, to 353,430 tons. Again, for comparison this is 4 times the weight of the Queen Elizabeth 2.

5. 353,000 tons travelling at 650 miles per second creates enormous air resistance. This will heat the reindeer in the same manner as a spacecraft re-entering the earths atmosphere. The lead pair of reindeer will absorb 14.3 QUINTILLION joules of energy. Per second. Each. In short, they will burst into flame almost instantaneously, exposing the next pair of reindeer, and creating deafening sonic booms in their wake. The entire team will be vaporized within 4.26 thousands of a second. Santa, meanwhile, will be subjected to centrifugal forces 17,500.06 times the force of gravity. A 300 pound Santa would be pinned to the back of his sleigh by 4,315,015 pounds of force.

6. Conclusion: There was a Santa, but he's dead now.

But, like "Miracle on 34th St." says, we believe in God, so why not Santa. If God can make the universe in six days, surely Santa can withstand a pressure of around 4315015lbs and a further 14,300,000,000,000,000 joules (give or take a few zeros).

:-)

Does your Acorn User Voyager demo not want to go to 57600bps even on serial expansion cards?
Load *!Voyager.Resources.RegMsgs* and change "**s0**" and "**s1**" from "**19200**" to "**57600**". That **should** open up the faster options. Don't try using internal port at 57600bps!
BTW, the sp_dual is now apparently an Atomwide dual...

The 'Heard On The Net' News and Rumour pages are proud to announce an important step regarding the *JAVA* language and *RISC OS*.

Acorn has told the Cybervillage that *JAVA* will definitely be released for the *RISC OS* desktop machines later this year and an official announcement will be forthcoming shortly.

So to all those pessimists on the USENET newsgroups who said it would never happen, shame on you!

See
http://www.cybervillage.co.uk/acorn/hotnet/

Ster Trak? :-)

A little something I found *on the 'net...*
[note - formatted by the Editor]

[Fwd: The Borg Meet Bill Gates
 Date: Tue, 10 Dec 1996 12:47:05 -0700]

"Star Trek Lost Episodes" transcript.

Picard:
"Mr. LaForge, have you had any success with your attempts at finding a weakness in the Borg?
And Mr. Data, have you been able to access their command pathways?"

Geordi:
"Yes, Captain. In fact, we found the answer by searching through our archives on late
Twentieth-century computing technology."

(Geordi presses a key, and a logo appears on the computer screen.)

Riker: *(looks puzzled.)*
"What the hell is `Microsoft'?"

Data: *(turns to answer.)*
"Allow me to explain. We will send this program, for some reason called `Windows', through the Borg
command pathways. Once inside their root command unit, it will begin consuming system resources
at an unstoppable rate."

Picard:
"But the Borg have the ability to adapt. Won't they alter their processing systems to increase
their storage capacity?"

Data:
"Yes, Captain. But when `Windows' detects this, it creates a new version of itself known as an `upgrade'.
The use of resources increases exponentially with each iteration. The Borg will not be able to adapt
quickly enough. Eventually all of their processing ability will be taken over and none will be available
for their normal operational functions."

Picard:
"Excellent work. This is even better than that `unsolvable geometric shape' idea."

. . . 15 Minutes Later . . .

Data:
"Captain, we have successfully installed the `Windows' in the Borg's command unit. As expected, it
immediately consumed 85% of all available resources. However, we have not received any confirmation
of the expected `upgrade'."

Geordi:
"Our scanners have picked up an increase in Borg storage and CPU capacity, but we
still have no indication of an `upgrade' to compensate for their increase."

Picard:
"Data, scan the history banks again and determine if there is something we have missed."

Data:
"Sir, I believe there is a reason for the failure in the `upgrade'. Apparently the Borg
have circumvented that part of the plan by not sending in their registration cards."

Riker:
"Captain, we have no choice. Requesting permission to begin emergency escape sequence 3F ...."

Geordi: *(excited)*
"Wait, Captain! Their CPU capacity has suddenly dropped to 0% !"

Picard:
"Data, what do your scanners show?"

Data: *(studying displays)*
"Apparently the Borg have found the internal `Windows' module named `Solitaire',
and it has used up all available CPU capacity."

Picard:
"Let's wait and see how long this `Solitaire' can reduce their functionality."

. . . Two Hours Pass . . .

Riker:
"Geordi, what is the status of the Borg?"

Geordi:
"As expected, the Borg are attempting to re-engineer to compensate for increased CPU and storage demands,
but each time they successfully increase resources I have setup our closest deep space monitor beacon to
transmit more `Windows' modules from something called the `Microsoft Fun-pack'.

Picard:
"How much time will that buy us?"

Data:
"Current Borg solution rates allow me to predicate an interest time span of 6 more hours."

Geordi:
"Captain, another vessel has entered our sector."

Picard:
"Identify."

Data:
"It appears to have markings very similar to the 'Microsoft' logo..."

(Over the speakers:)
"THIS IS ADMIRAL BILL GATES OF THE MICROSOFT FLAGSHIP *MONOPOLY*. WE HAVE POSITIVE CONFIRMATION OF UNREGISTERED SOFTWARE IN THIS SECTOR. SURRENDER ALL ASSETS AND WE CAN AVOID ANY TROUBLE.
YOU HAVE 10 SECONDS TO COMPLY."

Data:
"The alien ship has just opened its forward hatches and released thousands of humanoid-shaped objects."

Picard:
"Magnify forward viewer on the alien craft!"

Riker:
"My God, captain! Those are human beings floating straight toward the Borg ship - with no life support suits! How can they survive the tortures of deep space?!"

Data:
"I don't believe that those are humans, sir. If you will look closer I believe you will see that they are carrying something recognized by twenty-first century man as doeskin leather briefcases, and wearing Armani suits."

Riker and Picard: *(together - horrified)*
"Lawyers!!"

Geordi:
"It can't be. All the Lawyers were rounded up and sent hurtling into the sun in 2017 during the Great Awakening."

Data:
"True, but apparently some must have survived."

Riker:
"They have surrounded the Borg ship and are covering it with all types of papers."

Data:
"I believe that is known in ancient vernacular as `red tape'. It often proves fatal."

Riker:
"They're tearing the Borg to pieces!"

Picard:
"Turn the monitors off, Data, I cant bear to watch. Even the Borg doesn't deserve such a gruesome death!"

THE END