

FOR USERS OF THE EINSTEIN (AND OTHER GOLDEN OLDIES MICROS)

PUBLISHED BY THE STEAM COMPUTER SOCIETY  
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(OPINIONS HEREIN ARE NOT NECESSARILY THOSE OF THE PUBLISHER)  
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APOLOGIES FOR THE LATE ARRIVAL OF THIS ISSUE  
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By this time last year, Graham had abandoned all user group activities apart from the magazine and the software library, (which was run by Jim Ellacott) due to overwhelming demands on his time and energy which had built up since Mike had departed for Wales.

This had resulted in an erratically-issued and "padded" magazine with few contributors, an escalating rate of non-renewals, and a subscription list far below the economic print run for a conventionally-printed magazine.

Having exhausted all the reserves of cash (built up in the good years) by keeping the magazine going with print bills that constantly exceeded the shrinking subscription income, he lost heart and gave up the struggle, and "All Micro News" became part of the network of clubs, societies and interest groups of which Yours Truly is organiser and secretary.

With 35 years experience of running all sorts of voluntary organisations, it was clear that the magazine had no future except as the focus of a revived and rebuilt user group, in a format appropriate to its circulation. This strategy has been vigorously pursued -- with extremely valuable active support from a small minority of you, plus the good wishes and moral encouragement of all of you.

However, the resulting workload does largely fall on one pair of shoulders, and it makes no provision for accident, illness or disruptions, preparing for and attending the twice-yearly Stafford Show, for social activities, or for the needs of the group's sister clubs, societies and groups.

CONTINUES >>>>>>>>>

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In fact, the Spring Stafford Show this year was followed by major health problems, resulting in a two-month backlog of membership and general correspondence. This has now been cleared, but the magazine has got way behind in the process.

We inherited things in this state a year ago, so there would be no real problem apart from two factors:-

1. The death of Labour leader John Smith reminds us how foolish it is to have everything run by one person, with no assistance (or provision for anyone else to take over and keep things running smoothly) in the event of accident (or worse!) befalling Yours Truly.

2. The network of which the user group is now a part enjoys the use of space and facilities in several buildings in two counties rent-free in return for maintenance and repair of those buildings. All are now in need of some attention, the most urgent being an oak-framed half-timbered Wealden farmhouse dating back to about the time of the Civil War. This has had structural problems in the past, and the repairs carried out then demonstrate vividly that "jerry-builders" are no new phenomenon, but go back at least to the days of the Pharaohs!

Major structural work on this building simply cannot now be put off any longer. As usual, there is zilch in the kitty, and what little cash can be scraped together will have to go on materials, the labour being provided by enthusiastic volunteers. However, it is imperative that they operate ONLY under the supervision of someone with knowledge and skill of these medieval buildings -- and medieval craftsmen are in short supply! As usual, Yours Truly has landed up with the job, and thus is not going to be able to give more than the bare minimum of attention to the Einstein group and its routine activities for the next 18 months or so.

Fortunately reconstruction and rebuilding of the Einstein group has now reached the point where most of the routine day-to-day administration can readily be delegated to other Einstein enthusiasts. This is rather fortunate -- since otherwise the group would be forced to go into a state of suspended animation, from which it might not have recovered!

A number of specific areas of responsibility have been identified, some of which could conveniently be handled by an individual member, but as a matter of policy it is preferred that two or three members share each of these responsibilities -- so that the workload remains a pleasure and not a burden, so that mutual assistance and encouragement is forthcoming in case of problems or non-availability, and so that EVERYONE is able to

participate in organising and running the group if they wish, whatever their level of skill, experience or ability.

This "project group" system of organising has been one of the great strengths of railway preservation (as it builds skilled and experienced craftsmen from raw volunteers), and it is only fair that Einstein users should be offered the same opportunity to participate in activities that expand and enlarge on their existing skills and abilities.

YOU -- yes, YOU!! -- are therefore invited to volunteer to help fill one of these vacancies. If more than one appeals to you, and you can spare the time and energy to participate in more than one of these management teams, then by all means please do say so.

Yours Truly knew little or nothing about the Einstein a year ago, but has increased his ignorance since by leaps and bounds(!) as a result of sitting in the driving seat. Thus a complete lack of knowledge about every single aspect of the Einstein is very little handicap if you have enthusiasm instead. Not actually owning an Einstein might just reduce the opportunities to participate to some extent though!

IF YOU HAVE ALREADY VOLUNTEERED -- please DO remind us what you've already offered to do. Yours Truly may well be getting the hang of being without fault or blemish, but being totally infallible is just that little bit harder to achieve without a little help from his friends. Well, rather a lot, actually!

It's very noticeable in other societies, that the more people there are sharing the workload, the better the society serves its members, the more it thrives, and the more the officers enjoy their tasks and find them a pleasure rather than a burden. It also makes life much easier when holidays, illness, accidents, marriage etc. strike, if these tasks are shared between two or more people, or if a trained assistant can step in and "hold the fort" for a while (even if the task doesn't seem to really warrant more than one person in itself).

Our first priority is to keep the members we do have. Our second priority is to increase the services we offer to members -- and increase the opportunities for members to participate and interact with each other as Einsteiners -- so that membership becomes imperative for any Einstein owner. Thus our third priority is to take effective steps to ensure that EVERY Einstein owner knows what we have to offer

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From this it follows that the first area of concern that needs to be filled is that of the magazine production team. Primarily this is a contribution encouragement, selection, editing and copy-fitting task, but regular contributors (and occasionals too) should really be counted as part of this team as well. It needs all ranges of skill, experience, hardware and software, and just about everyone has something useful to contribute, whether as part of the regular production team or just now and again.

This task normally is complete -- ready for the next issue to be started on! -- when the final copy is output as the master printing sheets. Long-term we are hoping to solve some persistent printing problems by overhauling one of our Steam Printing Society's offset-litho printers (and printing in-house), but for now the fact that only a low proportion of Einstein owners know that we exist (and that we are worth belonging to) results in a print run that cannot justify the cost of this overhaul -- or even of purchasing a second-hand photocopier to print the magazine, membership forms, & etc.

Having lost our "friend-of-a-friend" printing facility we have to negotiate the best rate we can get for D-I-Y photocopying, and are constantly at risk of being gazumped. The incremental cost of printing this way is infinitesimal if you have a business that pays for the purchase -- and the servicing!!! -- of the machine, just as the run-on cost of printing three hundred extra copies of the mag on an offset-litho machine may be no more than the cost of the first thirty. If you have access to a copier dirt cheap, do let us know. It might be the answer until we can get the print run back up to a level where "real" printing makes sense again.

At present we fall down REALLY BADLY at being visible to potential members. For the past year, ads for Einsteins have been running at about two a week in Micro Mart and PC Mart. Following up many of these revealed that most buyers (AND SELLERS!) had never heard of us, but were keen to join if we offered anything worth having in exchange for their subs. Several of you did offer to help by putting free ads in these two mags, but for some strange reason most of you thought it wouldn't be effective unless you had a monopoly on helping the group this way -- and enthusiasm for this ESSENTIAL activity now seems to have fizzled out altogether.

The group's survival depends CRUCIALLY on attracting new members to at least replace our losses, and clearly we need a PUBLICITY TEAM to organise this properly. Taking full advantage of the constant opportunities of free ads and letters in national (and local) computer (and other)

magazines (and newspapers) -- and actively encouraging all members to do likewise -- is at the heart of this function.

The other main contact point for new members over the past year has been the Stafford show. Now that Yours Truly isn't going to be able to be there, it is VITALLY IMPORTANT that we organise a SHOWS CO-ORDINATOR/ORGANISER TEAM to ensure our successful presence at Stafford (and other shows?) This will involve close co-operation with the other management teams -- for whom this provides a showcase and also an opportunity to meet other members (and potential members) in person. It also offers the opportunity to make our stand at the show a twice-yearly meeting-place, where members can get together & chat, as well as hunt bargains.

As other societies have found -- especially in railway and steam preservation circles -- a SHOW TEAM offers many opportunities to meet each other -- and also to meet lots of other fascinating people -- and to build this into a regular pattern at different events and venues throughout the year. Properly organised, with "useful" and "souvenir" wares for sale, such a team can not only easily cover its costs, but can also generate funds for the group which enable projects and improvements to be undertaken that would be impossible without the subscriptions and sales income they generate.

At the Spring show an experiment was tried of offering half-price library software -- and also a small selection of half-price "commercial" software -- as an inducement to Einstein owners to join then and there. This was very successful -- and is a useful indication of how to persuade non-members to join us if we can make contact with them -- but much of the software library is hardly what you'd call "novice-user-friendly", and a SOFTWARE LIBRARY TEAM is needed to check the content out, mend what's broke, provide some simple on-disk documentation where it's needed, and sort out disk contents where there's neither rhyme nor reason for the crazy mixed-up content -- except that someone could only afford to buy one 8" disk at a time in 1982(!) -- and put a consistent user-friendly front-end on the disks.

Similarly we now have distribution rights to a fair bit of abandoned commercial software, which needs to be re-packaged with consistent user-friendly documentation and user-friendly front-end, and made available as a service to members, as an inducement to membership, and also as a useful additional source of group income to enable projects to be funded. There is some overlap of content between this software and the library content, and we also have some "shareware" or "user supported" software in the pipeline, so close co-operation between the two teams is a must. >>>>



Of course, this list of areas where YOUR help is needed is not written in tablets of stone. Members have suggested other areas in which we might usefully extend our scope, and YOUR ideas and suggestions are welcome too -- especially if you are putting yourself forward to make them a reality!

One idea put forward has been that we distribute the magazine on disk. There could be some advantages, but it couldn't entirely replace a paper-based magazine, and there would be substantial snags and disadvantages too.

Yours Truly will, of course, give every possible assistance to you in making a success of this transition to a team-based everyone-can-join-in style of management and organisation, and will continue to look after the membership database and magazine mailings, and will continue to act as the contact point and "clearing house" for communications.

You certainly don't want to have to wait as long for the next magazine as you would have done already if you'd been so foolish as to send B&H a subscription to their Einstein User magazine instead of to ours -- is it really THREE YEARS since their last "quarterly" issue? -- so let's have an avalanche of letters in the very next post from each and every one of you -- yes YOU! -- begging and pleading for a place on at least one of these teams, if not on all of them!

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#### MORE DELAYS - MORE APOLOGIES

The building work just wouldn't wait, and in handling scrap timber (needed for the temporary works), Yours Truly tripped and sprained his wrist badly as he landed on a timber baulk with big rusty nails sticking out. These promptly embedded themselves deep into his arm. This was a most interesting experience, but not really one to be recommended. Naturally, it was Yours Truly's keyboard-bashing wrist and arm, and hence this issue is even later than we'd originally feared.

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#### My View of The Spring All Micro Show - Andrew McRobbie

The envelope containing the March magazine also included a plea for help at the show. I hadn't made any plans to venture South, as there was an Atari show in Glasgow the same weekend. On checking the S.A.M.S. flyer, however, I realised that Atari ST User would be attending Stafford also. I had never been to an All Micro Show before so this was a golden opportunity (despite the 568 mile round trip). With this in mind -- plus a planned shopping excursion for my wife and family -- we all set off for Bingley Hall on Friday afternoon, stopping overnight at a Cheflodge so we would be fresh for the next day's activities.

Despite the apparent confusion at the Steam Computer / Einstein Stand when I first arrived -- Graham Bettany had only just dumped a pile of Einstein stuff on the stand for us to sell for him without any warning -- I could appreciate that a lot of work had been done at the preparation stage. Large posters and banners were in abundance. No excuse here for not being noticed. As it turned out, even people not connected with the Einstein stopped to read all about us!

What was very enjoyable was meeting fellow Einsteiners -- both members and non-members -- till they were persuaded otherwise! -- & putting faces to the familiar names which have contributed to the magazine in the past.

At one of our busiest periods, a very enthusiastic young couple came up to the stand and offered to help out so that we could have some lunch. As it happened, they stayed till the hall closed. I am ashamed to say I didn't catch their names, but a big thanks anyway. It made things a lot easier. I wouldn't say that we were exactly rushed off our feet, but more helpers still would have been very useful, as we had a continuous stream of people asking questions, with many coming back again for a second (or even third) helping.

I did manage a quick dash round the hall while I was looking for the canteen, mentally noting the stands I wanted to return to before the show finished.

There were several Einsteins for sale, ideal for a backup, or even to upgrade a single drive Einstein to a double drive machine. One of them also had the original monitor with it.

There were also hard drives aplenty for PC compats, and even complete motherboards for the Spectrum +2.

The flyer from B&H advertised a 3.5" second drive plus cables for £75. This seems more than a trifle expensive, as 360/720K drives were on sale for £6 at an Amstrad stall!

Replacement Einstein keyboards were £5. Repairing one is tricky if you haven't the proper equipment, so this was a good bargain, and I had intended buying one. However my return to these stalls was mis-timed, and I arrived just in time to see them being packed up. My watch said 3.57pm.

I trundled back home without any bargains, but, very happy that I'd met so many nice people.

Finally, to the lady who bought a daisy wheel serial printer at the stand behind ours, what you have to do is remove the socket (easiest to cut the cable) and fit a 5 PIN DOMINO PLUG so that you can connect it to the Einstein - Maplin Part No. RK64U. (providing it is a serial printer) If the printer is a parallel type, you require a 2x17 DIL IDC socket, Maplin Part No. FG86T. I hope you were given a printer manual!

ED:- Many thanks, Andy, for this review of the



show "as seen from behind the counter", and also for your Stirling(!) efforts. Andy FAY was your anonymous colleague -- he dashed up from Plymouth in case we needed help. Yours Truly was there too, from his lair on the South Kent coast.

It made a tremendous difference having experienced Einstein users on the stand -- and it's an ideal way of persuading users to join the group. A couple more people on the stand next time would be useful though. Any offers?

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GRAPHIC ARM / MOUSE - CONCLUSION -- Dave ARTS

Well we're at an end now, for those of you who have followed the articles on the Mouse and the Graphic Arm and have patiently built the units and entered all the software. We now come to the final chapter which shows how we can integrate the tools, and provides the Software which allows us to interchange from each device.

Enter the following LOADER program, which I've called "COMBI". It should be noted that it must be saved onto the same side of the disk as contains:

"UTILITY.OBJ"  
"MOUSE.OBJ"  
"DATH.OBJ"

```
5 REM:COMBINATION <COMBI>
10 CLEAR&8000:LOAD"UTILITY.OBJ"
20 CLEAR&9000:LOAD"MOUSE.OBJ"
30 CLEAR&A100:LOAD"DATH.OBJ"
40 LOAD"GEOM4"
```

Next enter the utility programme which I've called "GEOM4", and save this to the same disk side too.

```
5 REM"GEOM4"
10 BCOL7 :GCOL4, 7:TCOL4, 7:CLS
20 DRAW0,0TO0,191 TO255,191 TO255,0 TO0,0
30 POKE&8059,4:CALL&8048:LETA%=PEEK(&8080)
40 POKE&8059,5:CALL&8048:LETC%=PEEK(&8080)
50 LETCO=(C%-55)/2.65
60 LETAO=(A%-78)/2.55
70 LETZ=2*(305*305)-2*(305*305)*COS(RAD(CO))
80 C=SQR(Z)
90 LETBO=(180-CO)/2
100 XX=C*SIN(RAD(BO-AO))
110 YY=C*COS(RAD(BO-AO))
120 LETX=XX-50
130 LETY=241-YY
140 PLOTX,Y:PLOTX,Y-1
150 IF ADC(1)=0 THEN GOSUB310
```

```
155 IF ADC(0)=0 THEN GOSUB600:GOTO700
160 GOTO30
310 IFADC(1)<>0THEN RETURN
320 GOTO310
505 REM:MOUSE
510 CALL&8025
550 CALL&9000
560 GOSUB600
570 GOTO700
600 REM:SAVE TO HIMEM +DISC
610 CALL&8000
620 CLS:INPUT"FILENAME PLEASE? ";I$
630 SAVEI$,&B000,&C7FF
640 RETURN
700 INPUT "GRAFARM <G> OR MOUSE <M> ";A$
710 IFA$="G" THEN GOTO 805
720 IFA$="M" THEN GOTO 505
730 GOTO700
805 REM:NEW OR EXISTING
810 INPUT"NEW <N> OR EXISTING <E> ";A$
820 IF A$="N" THEN GOTO20
830 IF A$="E" THEN CALL&8025:GOTO20
1000 FORN=0TO255STEP8
1001 DRAWN,OTON,191
1002 NEXTN
1003 FORN=0TO191STEP8
1004 DRAW0,NT0255,N
1005 NEXTN
```

We now have a suite of programs which can be called up from a cold start by typing RUN "COMBI" and then RUN <ENTER>. The Software will draw a border and set the foreground and background colours, then go into GRAPHIC ARM mode. Once we have drawn our map or created our design, we then press PB1 Red Top push-button on the ARM and this will save our design to high memory. A prompt will then appear on the screen:

<FILENAME PLEASE> Enter your filename in the form NAME.OBJ. Obviously, the name can be anything you like, but it must be followed by a full stop and OBJ. HOWEVER, we DON'T need to place quotes here, as the software saves this as string variable I\$.

On pressing ENTER the programme then saves this design to Disk. Remember it is still in high memory too.

A further prompt will then appear on the screen below the first:

GRAFARM <G> OR MOUSE <M> You can either further use the Graphic Arm on your Design, or you can use the mouse to edit and delete errors. By pressing <M> enter you bring your graphic design NAME.OBJ back on the screen for further work.



Remember, though, the mouse's origin is at the LOWER LEFT corner of the screen, and you will have to keep the LH button of the mouse depressed until you are at the part of the design you wish to modify. Pressing the RH button on the mouse again saves the design to high memory as before. At this point you have a choice; you can OVERWRITE your existing file on Disk by giving your modified design the same name, OR you can create a new file on disk by renaming it.

Say we wish to Overwrite, we just type NAME.OBJ (no quotes) Enter and the modified design is now on disk under that filename. Again the prompt appears:

GRAFARM <G> or MOUSE <M> and we can go on ad infinitum to continually refine the design.

If at this point you press <G> The programme will ask you if you want to start again with a new design, or if you simply want to modify your existing design, <N> or <E>. By pressing <E> your design will appear on the screen together with the calculated position of the Graphic Arm. Typing <N> enables you to create a New design which you can use to Overwrite your last design if it all went pear shaped. (Just use the same filename).

If from a cold start you wish to read in an existing design you had created earlier, simply type in the little programme below I've called "INITIAL" and RUN it, then RUN "COMBI", then type RUN 505 enter. You will then be in the mouse edit routine.

```
10 REM INITIAL
20 BCOL7:GCOL4,7:TCOL4,7:CLS
30 CLEAR &B000
40 LOAD "NAME.OBJ"
```

Remember NAME is your design name

If you are better at BASIC than I am, you could include this latter routine as an option in the main programme.

I hope you have enjoyed following these articles as much as I have enjoyed writing them. I sincerely hope one or two of you have built the arm, and I would like to share any comments -- through the Mag of course -- that you may have.

HAPPY COMPUTING!!

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ALL FORMATS COMPUTER SHOW. Vouchers are ALSO valid for:-  
NORTH EAST:23 July,24 Sept,22 Oct. WEST MIDS:18 Sept,30 Oct.  
GLASGOW:24 July,25 Sept,23 Oct,26 Nov.BELFAST:16 Oct,11 Dec.  
HAYDOCK PK: 17 Sept, 29 Oct, 19 Nov, 03 Dec. TOLWORTH:09 Oct.  
STONELEIGH: 02 Oct, 20 Nov, 04 Dec. BRENTWOOD: 05 Nov.  
BRISTOL: 06 Nov. CARDIFF: 13 Nov.

ALL GENUINE WHEELCHAIR USERS: FREE ENTRY

### PRESENTING YOUR ACCOUNTS -- David Williams

While patiently waiting to be served at the bar of my local, I was asked by one of the regulars if I would be prepared to comment on a program he had written to monitor the accounts of a small club. Having an interest in other people's programs -- and having accepted his refreshment -- I agreed to at least have a look. The next day he laid on a very convincing demonstration that he could identify the information necessary to ensure the continuing health/wealth of the club: Profit & loss, Depreciation, Seasonal trends, Periodic comparisons, and more. The program was well planned and I was sure it could prove to become a useful asset to the club. What a pity, however, that the presentation on screen was not matched to the rest of its performance.

Many of the programs in current use are actioned by a wide variety of operators, most of whom are required to interrogate the results, draw conclusions, then make decisions based on the results they have observed. The club accounts program was no exception to this, as it was likely to be used (and interpreted) by any one of the members of the committee. In the interests of providing for a high level of confidence in any resulting decision process, these programs must be easy to interrogate, be clear and unambiguous in their presentation, and - ideally - be capable of ignoring any inputs that might be alien to their intended performance. There is more than an element of truth in the saying "Garbage in - Garbage out".

To illustrate the above, let us try out some examples taken from the club accounts program, and see why changes were made, what they were, and how they influenced performance. At this point, it must be said that the solutions offered are not the only ones that will overcome the problems identified, but they do work. Feel free to use them in your own programs if you wish.

Example 1: Starting off with the simplest first, type in the few lines of Fig 1 then RUN the program and respond by keying in a sum of money, say 5.24 pounds.

```
10 RST
20 INPUT"MONEY IN: £";M
30 PRINT"RECEIVED: £";M
Fig 1:- The space invasion.
```

No, you haven't made a mistake. A leading space has been printed between the £ sign and the 5.24 that you typed in. However, as we were taught that this could be open to



interpretation, or even invitation to fraud, we will remove it. Try adding the IOM command to line 10 of your program like this:

```
10 RST:IOM5,0
```

Run the program again and see that your 5.24 pounds has now closed right up to the £ sign. Having qualified as a space evader, you may now proceed to the next example.

Example 2: Here we have the basis of many good accounts-type programs. This works very well, but is used here to illustrate what is meant by the terms "clarity" and "presentation". Type in Fig 2, noting your familiarity with the first two lines.

```
10 RST:IOM5,0
20 INPUT"MONEY IN: £";M
30 T=T+M
40 PRINT@30,A;M
50 A=A+1:IF A<3 THEN 20
60 A$="TOTAL = £"
70 PRINT@20,4;A$;T
```

Fig 2. Simple accounts demonstration.

Now RUN the program and respond by keying in amounts of money as you did with Fig 1. Each of the three values you enter should appear one below the other in the right-hand area of the screen. Below these you have their sum total which will be correct for either credits or debits, a debit being a minus value. If only these amounts were lined up in columns, like a bank statement, then how much neater and clearer this would be. Let us modify our program to accord with Fig 3 below and see what can be achieved.

```
10 RST:IOM5,0
20 INPUT"MONEY IN: £";M
30 T=T+M:IF M=>0 THEN X=-1
40 GOSUB 90:X=0
50 A=A+1:IF A<3 THEN 20
60 GOSUB 70:END
70 A$="TOTAL = £"
80 A=4:X=8:M=T:IF M<0 THEN X=9
90 FMT0,0:L=LEN(STR$(INT(ABS(M))))
100 IF L>6THEN L=6
110 FMTL,2:PRINT@30-L-X,A;A$;M
120 RETURN
```

Fig 3. Accounting in columns.

I hope you now have a presentation that is the equal of, or better than, your own bank statement. The part of the

program responsible for lining up the amounts in their respective columns is contained as a subroutine in lines 70 to 120. Basically, it works by counting the number of integer characters in each value entered. This number is then used within a print statement which refers it to a given column on the screen of the display. Before each value is printed, it is formatted to a maximum of two characters after the decimal point to make it consistent with our currency. A brief description of the operation of each line of Fig 3 is as follows:

- 10 - Clears screen and instructs on removal of leading spaces from numeric values.
- 20 - Waits for input value to be keyed.
- 30 - Sums each input value.
- 40 - Passes input to subroutine for format and display.
- 50 - Determines number of input cycles entered.
- 60 - Passes sum total to subroutine for format and display.
- 70 - Allocates a string value to total text.
- 80 - Initialise subroutine for total output.
- 90 - Calculates number of integer characters in value to be displayed.
- 100 - Fixes maximum length of integer format.
- 110 - Formats, positions and displays value.
- 120 - Returns to END statement of line 60.

There is one more thing we have to do now and that is to contain what are often called 'Mug Traps' which prevent any response from the program to an erroneous input.

Example 3: To convince ourselves of the desirability of containing some form of 'mug-trap', let us see what kind of response we get when we make errors in the values we key in. Try say, 50.64 when we really meant 50.64. Note how easy it is to mistake the letter O for the number 0 and yet the computer accepts it and gives an answer. Not the answer we should have had, but it could well have been one that caused us to draw the wrong conclusions and might also have resulted in our making a very questionable decision. Now make an input error of your own, observe the results, then consider the likely effects on any decision/s you might have made. I don't think it will be long before you become convinced of the necessity for containing an effective method of trapping errors in your own programs.

On the assumption that you are convinced, consider only the valid characters that you can operate with. For our type of program, the variety of characters likely to be contained in any valid input cycle will have complied with the following rules:

1. Numbers: Characters used will be in the range 0



- to 9 any one of which is to be repeatable.
2. Decimal point: Used if and when required, but no more than one to be selectable.
  3. Minus sign: Selectable only when requested as the first character of an input.

Including SHIFT, we have identified a total of thirteen keys required to form a valid numeric input. A routine responding only to these keys and which can be called up from within your present program, is contained at Fig 4. To call this routine, amend line 20 of your program to read as follows:  
20 GOSUB 130

Now append the sub-routine shown in Fig 4 below to your program. When run, you should have an error free ride.

```
130 PRINT@4,20;"Press DEL key to delete entries"
140 PRINT@11,A;MUL$(" ",40)
150 PRINT@0,A;"MONEY IN: £";A$;
160 M$=INCH$:M=ASC(M$)
170 IF M=13 AND A$<>" " THEN 230
180 IF M=25 THEN A$="":GOTO 140
190 IF M=45 AND A$<>" " THEN 150
200 IF M=46 THEN V=V+1:IF V>1 THEN 150
210 IF M=47 OR M<45 OR M>57 THEN 150
220 A$=A$+M$:GOTO 150
230 M=VAL(A$):A$="":V=0
240 RETURN
```

Fig 4. Error trapping routine.

A brief description of the operation of each line of Fig 4 is as follows:

- 130 - Screen instruction for delete method.
- 140 - Deletes input when instructed.
- 150 - Screen instruction for input.
- 160 - Waits for input to be entered.
- 170 - Completes entry when ENTER is keyed.
- 180 - Instructs line 140 to delete input.
- 190 - Accepts - sign as first character.
- 200 - Accepts one decimal point only.
- 210 - Rejects unwanted inputs.
- 220 - Sums character strings.
- 230 - Converts string to numerical value.
- 240 - Passes control to line 30.

You have now completed the major changes to the club accounts program. I hope you followed me through the demonstrations and are pleased with the results. As a matter of interest, the fully modified program is in regular use and has contributed to a decision to increase the number of bar staff for next year. Perhaps I'll join them, and test my patience again.

## SOFTWARE CORNER

There isn't space in this issue to continue the software library listing, but it does form part of software library volume EIN334. A volume equates to ONE SIDE of a 3" disk -- beware of multi-part volumes (!) -- and the current price is £8 for one disk (£7 ea for 2 or more) including disk & p+p., CURRENT PAID-UP GROUP MEMBERS GET 50% DISCOUNT on the price!

COMMERCIAL-QUALITY SOFTWARE:- We made a start on introducing this at the Stafford Show to gauge the response.

Available now is the former Surrey Software wordprocessor with manual -- the best wordprocessor we've met for 80-column use -- with the original 40-column version on the other side of the disk. The price for the set is £20 (inc.p+p), WITH THE USUAL 50% DISCOUNT TO CURRENT PAID-UP GROUP MEMBERS.

We can also supply AEGOS -- Alternative Einstein Games Of Skill (originally put together by the Bedford Einstein user group) -- including the latest version of the famous GOLF game by Ted Cawkwell -- with a manual. Price for this one is £10 (inc.p+p), WITH THE USUAL 50% DISCOUNT TO MEMBERS

There are lots more games and "serious" programs in the pipeline, just as soon as we can get matters properly organised.

We also have an original copy of the Infocom classic text adventure SPELLBREAKER for the Einstein (brand new and still in original shrink-wrap) if this sort of thing appeals to you. The full price on this is £15. Graham Bettany -- who supplied it -- wants a pot of gold for it, so we can't let you have the usual 50% off for members, but we CAN let you have it for TEN POUNDS -- IF YOU'RE A FULLY PAID-UP MEMBER.

Stan Gibbs needs a replacement for his copy of the user instructions for SSSPELL -- better give your dog something of less value to chew on in future Stan! -- but the master copy we received from Surrey Software seems to be lurking down a Black Hole somewhere. If you have a copy in pristine (or just plain readable) condition, can we borrow it for a short while please? If you don't already have a copy of the Surrey Software wordprocessor we'll bribe you with a copy of that for your pains (if you remind us!).

\*\*\*\*\*  
BRITISH PRINTING SOCIETY (50 YEARS OLD THIS YEAR) OPEN DAYS:  
Solent Branch - 10 Sept 94 - 10am to 4pm - (0252) 870695  
at All Saints School, St.Catherines Rd, Winchester, Hants.  
ALSO Cornwall & Devon Branches - 01 Oct 94 - 10.30a to 3.30p  
at St. Pauls Church Hall, Yelverton, Devon (ample parking nearby).  
Bill Rundle (0752) 665418



GETTING FUNCTIONAL HELP -- Ted Cawkwell  
~~~~~

I have been using this program for so long that I had almost forgotten about it, but having remembered, I thought that it would be of interest to new users of the Einstein.

When I boot up the System disk this short routine which I call FKEY automatically RUNs and sets the function keys F0 to F7 and shift F0 to F7 to characters or commands I find I use a lot when writing XBAS programs. The idea is to economise in the keystrokes needed and may be changed according to one's own ideas.

Simply type in the following program and save it to your working copy of the disk you use to boot XBAS. From DOS just type XBAS FKEY and press ENTER.

```
3 KEY0,CHR$(&22)
4 KEY1,"$"
5 KEY2,"*"
6 KEY3,"PRINT "
7 KEY4,"("
8 KEY5,")"
9 KEY6,"+"
10 KEY7,"-"
11 KEY8,"CLS\"
12 KEY9,"LIST0,10\"
13 KEY10,"RUN\"
14 KEY11,"PRINT@"
15 KEY12,"INPUT"
16 KEY13," THEN "
17 KEY14,"GOTO "
18 KEY15,"GOSUB "
19 PRINT "Bytes free:-";SIZE+307
20 PRINT@11,4;"F-keys programmed"
21 NEW
```

Notes on entering:

- Line 3 is ASCII for the ". You can't enter a quote between quotes - it confuses Einie!
- Lines 11-13 The strange character at the end of the line is the carriage return symbol obtained by holding down GRAPH and pressing ENTER.
- Lines 19-21 The program is 307 bytes long so SIZE is wrong after the NEW in line 21, this is corrected and the information printed to screen.

I put spaces around keywords to suit my own needs.

If you have an AUTOBOOT program (there is one in the Einstein Compendium) you can make the whole procedure automatic straight from boot up, but if you have several forms of F/key set-ups, then you'll need to do it from DOS, as explained previously.

The final touch is to use a strip of thin card under the hinged plastic cover just above the keys to give a visual reminder of what is where. These strips have a tendency to get lost so I keep mine in a little drawer in a shallow box between micro and monitor, which also contains a 3.5" drive and the switch for 40/80 columns when using the 80 col. attachment. This box also lifts the monitor to a more comfortable height.

\*\*\*\*\*

HELP OFFERED  
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The members shown below have offered to help with your problems if they can. Please be considerate if phoning, and enclose adequate return postage or S.A.E. if writing. And if your name should be here and isn't, please tell us!

THERE IS A BIG PROBLEM WITH HELPING YOU THIS WAY if it means that questions and answers no longer get printed in the magazine, so that EVERYONE benefits.

THEREFORE, whether you write or phone to the helper(s) listed, please ALSO use your word-processor to send us details of your problem on 3" disk (which we'll return to you), plus a print-out (if you have a printer).

HELPERS please do the same with your replies, as we want to be able to print answers as well as problems !!!

Need leads, switches, joystick adapters, RS232 or printer cables? Need any EPROMS blown? Member 228, Stuart MARSHALL, is our very own expert at making these up for you. Contact him at 25 CARLCROFT, STONYDELPH, TAMWORTH. B77 4DL, or phone him on 0827 897 920. Stuart has also set up a laser printer to work with Albert, with no problem, if you are rich enough to be thinking of installing one of these expensive beasts.

dBASE, SuperCalc, WordStar problems? Ray EDMUNDS will try and help if he can, and is also interested in linking control of (model?) railways to Albert. 60 NAILERS DRIVE, BURNTWOOD, WALSALL, W.MIDS. WS7 0ER. phone 0543 683 008.

Les MORGAN will try to help with your Supercalc, WordStar, or WP-80 problems, BY POST ONLY please. "ALDOURAN", NETHER COMPTON, SHERBORNE, DORSET. DT9 4PZ

EINSTEIN REFERENCE CARD. We have a few photocopies of this available. If you need one, send 2 \* 2nd class stamps.

If you need info from the Technical Data books for the TI TMS 9129 or Yamaha 9939 video display processors, Ron Stephenson has a copy, and may be able to help. "GLENESK", CREAKE RD, SCULTHORPE, FAKENHAM, NORFOLK. NR21 9NQ

Andrew McRobbie describes himself as a "Jack-of-all-trades" rather than an expert on anything, but he admits to a fascination with getting computers to talk to each other. 80 HAYFIELD TERRACE, DENNY, STIRLINGSHIRE. FK6 5LA. phone 0324 814 424 (6-9pm ONLY please.) ANY MORE HELPERS?



## HELP WANTED

\*I would like some information on using the PSION 3 with the Einstein. Also I have Powerdraw, which I can't make work. Could you provide an idiot's guide on how to use it?

T. BOYD-MEANNEY, UKEUG 1603. Any offers?

\*Wanted: "Hitch Hiker's Guide to The Galaxy" adventure for Einstein. Steve MARSHALL, UKEUG 1740. phone 031 228 6496.

\* "I GOT THE GSX MANUAL FROM GRAHAM BETTANY, & PART OF THE GSX DRIVER FROM B&H (BUT THIS WAS ATTACHED AT ASSEMBLY TIME, NOT AS A SEPARATE MODULE). SO IF ANYBODY CAN HELP WITH:-

A) GSX.SYS AND GENCOM FOR EINY

B) DDSCREEN.PRL FOR EINY

C) SOME PROGRAMME TO USE A DS 80T DRIVE UNDER CP/M ON EINY (720K 5 1/4") "

Ken WATERS, UKEUG 1616, phone 0293 774 187

Got any educational software on 40/80 track BBC disk suitable for 9-year-old with mental age of 5-6? Paul HERBER has equipped this chap with a BBC Master, but needs software for him to learn with. phone 0494 440 283 if you can help.

\*\*\*\*\*

## EARLIER QUERIES - FOLLOW-UP

\*VIDEO TITLING = Stan GIBBS: We are reminded that this was dealt with in Einstein User 2/4 31; EM 1/4 13; EM 1/12 33 and EM 2/4 13. There may be other references too, but we don't have a note of them.

\*SPARE ROM SOCKET = Les FOSKETT: Rejoined member Ernie BOTT says his holds a chip that runs a Silicon Disk, giving a 256Kb external RAM-disk, and a vast increase in speed. He also has a MOS chip (see ad in EM 2/4 9) that uses it and programs the function keys. (Is this the same upgrade that the Bedford Einstein User Group used to sell?) Other members suggest that Tatung had other upgrades planned for this socket, but that they never actually materialised.

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MY EINSTEIN -- John LUTHER

I feel it must be time for me to add my two-pennorth to the other veterans who still use Einsteins. Like Les & Ted I go back to the days of the crystal set and "Hush! Your dad's listening!". I too had experience of electrical circuits etc, in the RAF, and our son carried on with the same theme but emigrated to Queensland with their Telecoms. It is nearly ten years since we last visited him in South Australia, but during our time there I was able to have several 'goes' on his 'portable' (?) computer, an Osborne 1.

This was a very different proposition from the portable computers of the present day, but I was hooked and determined to get one for myself. The upshot was that within six months I had an Einstein from Tatung at Telford. With

the machine I got the TMO1 monitor and WDPRO & Home Budget, later to acquire WordStar and the associated programs of DataStar and ReportStar, & later still Cracker and dBaseII.

In February 1986 I received a letter from Keith Stokes, inviting me to join the U.K. EINSTEIN USER GROUP, and I still have what was then called the NEWSLETTER, from No.1.(Nov 1985). Appropriately, this Edition carried a program to calculate mortgages (to help save for the purchase of the expensive EINSTEIN!). The name was later changed to EINSTEIN MONTHLY in July 87 (Vol 1 No 1).

My motivation was to explore this new thing and provide an easier typewriter, but also to facilitate my records of the history of our family which I had been researching (with some breaks due to my 'peregrinations' around the country) since 1946. Getting a copy of EXPLORE (from the Software Library) enabled me to make a skeleton list of the whole of the family including the "Cousins and the aunts" etc. The 3.5" drive made it possible to hold all records on one disk, together with details of individuals. This gave me the overview to keep the relationships in mind.

Originally I had maintained the family lists in EASIDATA, which was good enough to begin with -- but later proved restrictive -- so I changed to DATASTAR for my family records, and for lists of sundry information extracted from parish and other records with local or family interest. I record Census information with a WordStar program (except for 1861, which is still in WdPro). I have programs for printing Stamp album pages and for keeping lists of stamps, also for printing my family trees, and of course I use WordStar for correspondence, CRACKER for Income Tax, Grocery lists, Church accounts, etc., and I keep my lists of disks with MAST.CAT.

For some time I have been thinking I would get along much quicker with a PC, but I look at all the effort that would be needed to recover and transfer my present data -- and to learn the new codes and language to operate in the changed environment -- and I go back and think again!. That doesn't stop me casting envious eyes at the shop windows and Magazines though! One thing I definitely do need to do is to "rationalise" -- i.e. have a good sort-out of all the files I have accumulated over the years!!.

ED:- All these memoirs about crystal sets remind me that there was a fascinating TV programme last November about Leon THEREMIN, who demonstrated at New York's Carnegie Hall in 1928 a working closed-circuit COLOUR TV -- plus a valve-based electronic musical instrument (working on the same principle as a modern proximity-alarm), before he was kidnapped by the KGB and spirited back to Russia. As well as this THEREMIN, there was a TERPSITONE upgrade, both much used for alien musical effects in science-fiction movies.



## BACKPAGE INFO

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Membership of the user group is now down to £10 per year, with discounted rates of £18 for 2 years or £27 for 3 years. Members residing outside the UK pay slightly more to cover extra postage costs.

Please make all BANK DRAFTS, CHEQUES, POSTAL ORDERS, etc., payable to EINSTEIN USER GROUP.

An information pack -- including details of our EINSTEIN SOFTWARE LIBRARY -- will be sent on receipt of large S.A.E.

The magazine and user group are run in their spare time by unpaid enthusiasts on a VERY tight budget. If you require a reply PLEASE INCLUDE A S.A.E. -- OR WE MAY NOT BE ABLE TO AFFORD TO PAY THE POSTAGE BEFORE MAILING YOUR REPLY!

MAGAZINE BACK NUMBERS are available at £2 each for single copies (or £10 for 6) incl.p+p. BUT 50% OFF TO MEMBERS!!!

The following are currently available:-

EINSTEIN MONTHLY volume 1: 5,6,7,8,9,10,11,12

EINSTEIN MONTHLY volume 2: 1,2,3,4,5,6,7,8,9,10,11,12

EINSTEIN MONTHLY volume 3: 1,2

ALTERNATIVE MICRO NEWS volume 1: 1,2,3,4,5

ALL MICRO NEWS volume 1: 1,2,3,4,5,6,7,8,9,10,11,12

ALL MICRO NEWS volume 2: 1

ALL MICRO MAGAZINE: #65,#66,#67,#68,#69

EINSTEIN USER MAGAZINE: B&H Computers of Halifax still claim to be the publishers of this "quarterly" magazine, but all the subscribers have received for several years now is excuses. It seems odd that the Consumer Protection people haven't taken action -- has no-one complained? If you have an Einstein 256 they will take £25 (plus cartage both ways) off you to fit a replacement rubber band to your disk drive. It might be more sensible to fit an external 3.5" or 5.25" drive and disconnect the built-in one. Disks for p, not £!  
However, all Einstein owners should have their catalog and be on their mailing list. Contact them on 0422-330408/352905

OTHER COMMERCIAL SUPPORT: Sharward Services of Ipswich, 0473-272002, organise the All Micro Show (next one 12Nov94) They've belatedly decided they DO support Einstein hardware!