

ST APPLICATIONS

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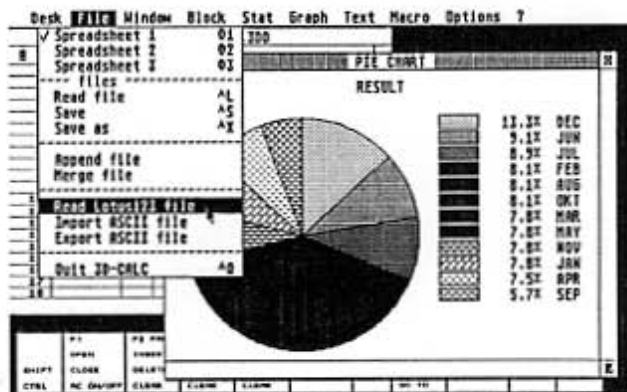
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Migraph Scanner Extras

Derryck Croker takes a look at some of the accessories available for Migraph hand scanners: a scanning tray that helps avoid the jaggedness and distortion caused by free-hand off-line scans, and a useful merging facility to knit two side-by-side scans together; plus a quick and easy program for collecting digitised output from the scanner and delivering it to disk.

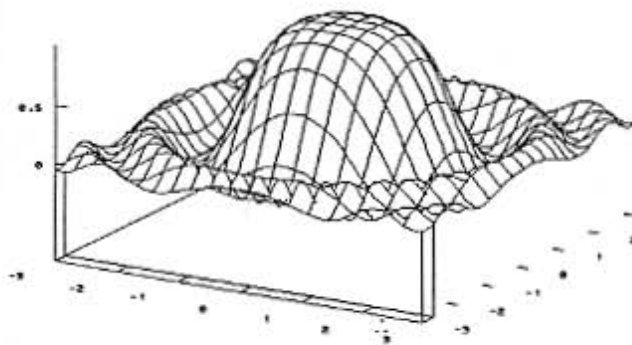
3D Calc Plus

If you need a friendly statistical analyst to produce eye-catching graphs and charts to liven up your reports or your school/college projects, then this new ST spreadsheet program may be just the thing. Not content with being a boring old spreadsheet with thousands of cells and maths functions galore, it also incorporates a variety of



presentation graphics features such as bar and line graphs, pie charts and multiple range graphs, in 3D if you want, all with definable shading and line styles. Reviewed by Peter Crush.

A Gnu Approach...



...to Graphing

Justin Read offers advice on getting started with the freeware plotting program GnuPlot, moving up from the basic commands to more complex equations, giving a step-by-step guide to building a text file, and providing some solutions to a few problems you might encounter.

3D Calc Plus

Review by Peter Crush

When all that raw numerical information seems too much to take in, you need a friendly statistical analyst to produce graphs and charts for you. Peter Crush checks out 3D Calc Plus, a new ST program that does all those Peter Snow-type things without waving its arms about to give the answers.

As any teacher, advertising guru or magazine editor will tell you, conventionally displayed facts and figures in columns and tables can seem just a boring jumble of numbers. But show the same information as a chart or illustration and suddenly everything becomes clearer. The trick nowadays is eye-catching presentation, and if you want people to read your stuff it just has to look good. The many reports, essays and papers we are all increasingly asked to produce nowadays can be quite dramatically improved if the text and numbers are broken up and peppered with graphics, so how about using those three-dimensional

graphs? These can convey information clearly and attractively, and it would be good if you could produce them easily on your ST, wouldn't it? Well now you can, using the latest version of 3D Calc Plus from FaST Club.

There are lots of PD utilities around that can produce spreadsheets and diagrams, and quite a few upmarket programs such as DA's Vector enable stunning 3D-type illustrations and charts to be made. Mid-priced commercial products of this nature for the ST are a little thin on the ground, but this gap in the market is now neatly plugged by this latest version of a low-cost graphing utility. You may remember seeing this program in a previous incarnation



when it was plain 3D Calc (without the "Plus") I think it appeared in HiSoft's catalogue at one time. The program is written by Frank Schoonjans of Belgium who is obviously a bit of a boffin when it comes to statistics. However, he's certainly made the program easy to use, and even a maths failure like me can use 3D Calc Plus. The program enables you to input numerical or financial figures, perform mathematical operations or statistical analysis if required, then immediately display the results in the form of a graph or chart of your choice from those

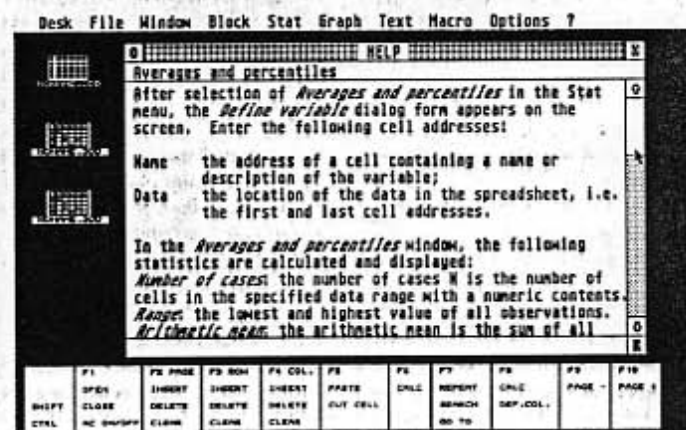
styles available. You can then print the chart or save it to disk for future reference, or even import the resulting pic into an art program for touching up and further embellishment! So how does it work?

Graphic detail

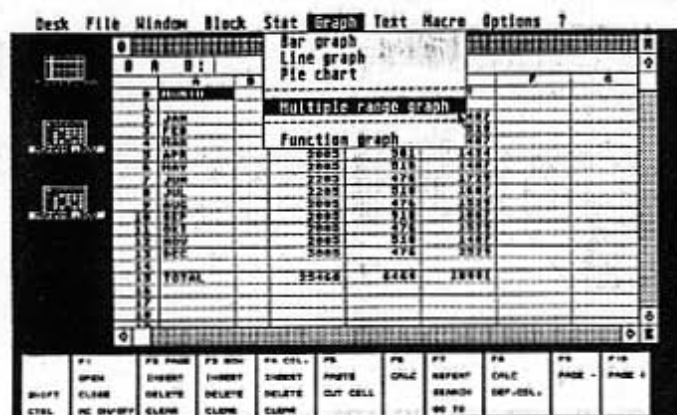
The Manual 3D Calc Plus comes on a double-sided disk and runs in medium or high resolution on any ST with a minimum 1MB of RAM. Also provided with the program is an A4 plastic comb-bound manual which runs to 80 pages. It's a rather well-written book,



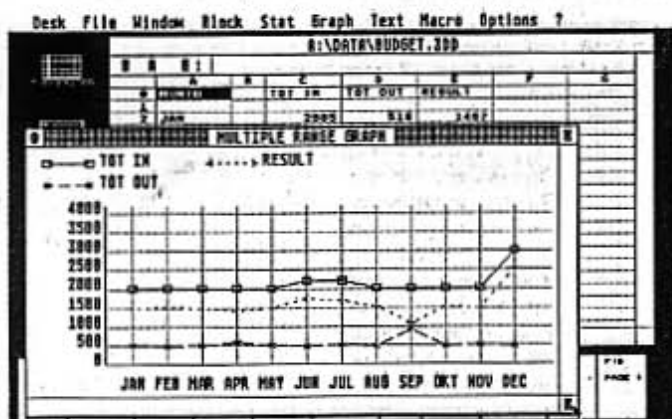
3D Calc Plus has a practical Help feature. At any time you can click on the "?" at the top of the menu bar and a GEM window appears complete with an alphabetical list of topics.



Say you want to know about Averages and percentiles — just click on that topic and a whole load of info appears. You can scroll through the text in the usual manner.



This is how your data looks in its spreadsheet form, quite neat and tidy but not very eye-catching. So, pulling down the "Graph" menu, let's see what we could do with it.



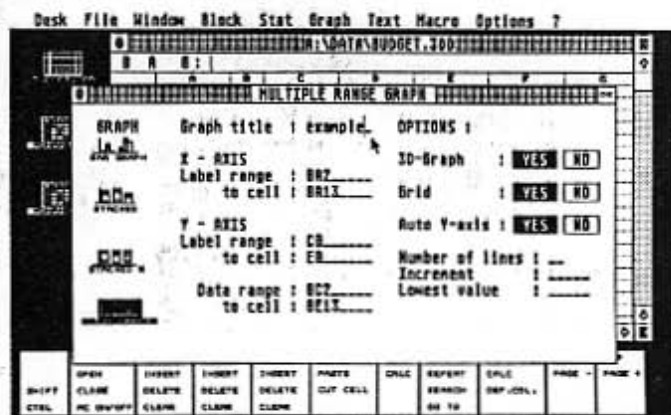
Here's the result, and if you resize the window the contents are resized in proportion too, handy if you want to view a number of different versions of graph at once.

and its comprehensive indexing speeds up the process of mastering the features you want to operate. The layout of the handbook more or less follows the layout of the program's menus, which is the logical way to do it. The style is very straightforward: it tells you succinctly and clearly how to carry out each operation, and with plenty of screenshots in the text you can see exactly what to do. You can install 3D Calc Plus on to a hard drive if you have one, but it also works quite satisfactorily from your ST's floppy drive. The software is fully GEM based, and you can control operations via icons, dropdown menus, function keys, or a combination of all of these. When you run the program you will see a desktop (which looks like the ST's standard Desktop) which has three little Spreadsheet icons on it. You can actually handle three different spreadsheets in memory at the same time, should you possess the requisite multi-tasking type of mind, but most users will no doubt

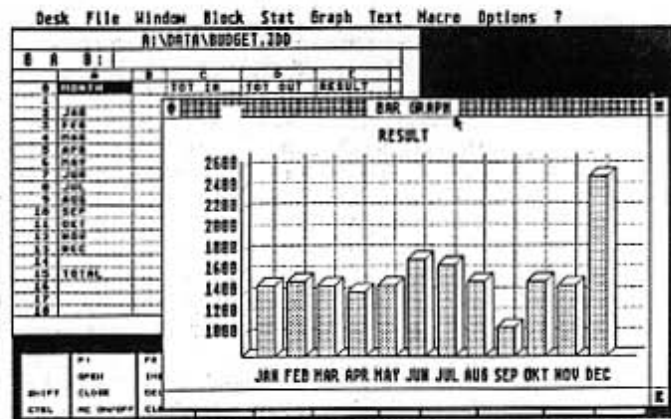
content themselves with one at a time. Before you can produce a graph or chart you have to enter (or load data from disk) into the spreadsheet. Double-clicking on a spreadsheet opens it and enables data and text to be input or edited. Up to three windows can be open for each spreadsheet, and as these are all GEM windows, you can set their size and position on screen just how you want them, and scroll the sheet to display the bit of it you're interested in. This is pretty useful with a large sheet, as you can type data in at one end of it and watch the calculated results emerge in a second or third window situated at another part of the spreadsheet.

Mapping out your chart

Before you can get any graphical results out, you have to put your details in. Your figures are entered into the spreadsheet — just type them into the matrix of "cells" or little boxes provided. There's plenty of room: there are up to 256 columns by 2,048 rows avail-



Hmm, I wonder what a Multiple Range graph looks like? First set your requirements in this dialog — it's very straightforward, and if you have any doubts, just use the defaults.

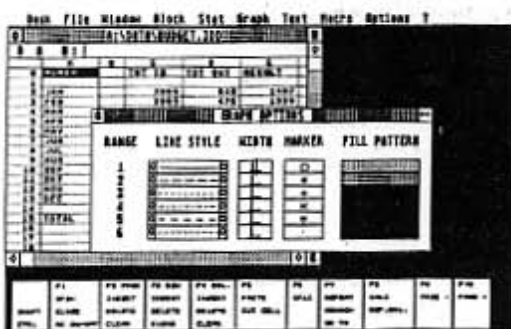


This is the same information presented as a bar graph instead. There are assorted styles available for each kind of chart, all very easily set from the dialogs.

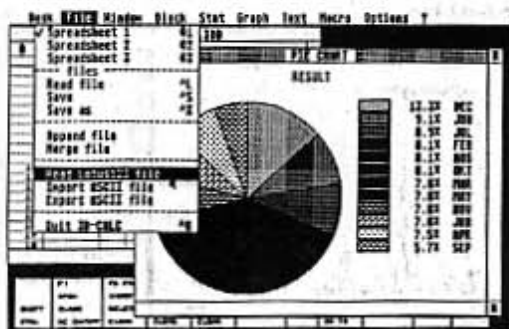
Importing Data

There is more than one way of getting your data into 3D Calc Plus—you're certainly not limited to typing it in manually. In the File menu there is the opportunity to import data in a variety of fashions:

- 1) "Read File" enables you to load a previously saved 3D Calc Plus file into your spreadsheet—just use the standard Atari or alternative file selector. 3D Calc files are upwardly compatible, so you can utilise those created with earlier versions of the program. It's also possible to Append and Merge files, thus loading data into a spreadsheet that's already open in a number of different ways.
- 2) "Read Lotus123 File" lets you import data in the WKS format, as used by the MS-DOS programs Lotus123 and Symphony. There are a few restrictions here though, as not all the Lotus123 functions are implemented in 3D Calc Plus, and whereas Lotus supports 8,182 rows, 3D Calc "only" has 2,048! For general practical purposes though, these drawbacks shouldn't present any real problems.
- 3) "Import ASCII File" is another useful method to get your data in. This feature uses the familiar delimited ASCII file format, and in such files discrete units of data are separated with commas, text is placed between single or double quotation marks, and every line ends with a carriage return (ASCII code 13). Many database and WP programs can produce data in this format, and the manual advises on how to utilize this feature.



Among the many options available for you to play with is a way of adjusting the appearance of the lines and fill patterns used in the charts created on screen.



The File menu shows all the ways of reading your facts into the spreadsheet, and underneath is a pie chart representing the very same set of facts used in the other charts.

able, giving you 524,288 cells in all. As with all spreadsheets, you can define formulae and connections between the figures inserted. For instance, if you have, say, twelve monthly expenditure figures you can set up any other cell to do an automatic addition and display a yearly total. Much more complicated types of calculation can be done of course, and there are about a hundred different formulae which you can use. With all your data safely entered you now decide which method is used to display it. You can have a bar graph, a line graph, a pie chart or multiple range graph, and some of these can be given a three dimensional look. Not only are the graphs you can produce "3D", the actual spreadsheet is too! In addition to the sheet you can see, there are another twelve sheets "underneath" it. Any cell in each successive layer can be linked with any other cell, enabling some very complex calculations to be set up in the 6,815,744 total cells available. That should be enough for most mortals!

There are other options too, such as what shading or line styles you want your chart to have. A dialog box enables you to very simply select all these various options by just clicking with your mouse pointer. Once they have been set, the graph is drawn almost instantly in a GEM window on screen. Now you can save your spreadsheet and graph data to disk, and thus recall it later for a judicious bit of adjustment or fiddling! You can also export your graph into an art program for further enhancement — just save it as a Degas or IMG file then load it into your drawing software. In this way you can add text, graphics or other embellishments to your charts and resize them to suit. Of course you don't have to use the graphing capabilities of 3D

Calc Plus, and there's nothing to stop you merely using the program as a straight spreadsheet.

3D Calc Plus in use

So how does it measure up? The program is actually great fun and dead easy to use, although judging from its specification you would be forgiven for thinking it was a rather difficult and academic piece of work. This isn't the case though, and you really can't go wrong when carrying out any of its functions. Who might want to use it? Well, not just financial or scientific types; I would suggest most students could find a good use for 3D Calc Plus. It brings the most boring of facts to life, making them look quite interesting and important! Bung a few charts in your next essay or project and you could be heading for a Grade A. If you are into maths, stats or financial number-crunching, the program should be really useful, and as the Manual includes details of the programming language used, you can make the program do some very clever things if that's your bent. The software works well on all levels, is most intuitive to operate, and it didn't ever hang up on me. In fact the more you experiment with it, the more you like it, and I could even get over my old fear and loathing of maths, it all seems rather understandable and easy now!

Conclusion

3D Calc Plus certainly has a lot going for it, it's more than powerful enough for the average user, yet is very easy to use. The manual is very good, clearly setting out all the program's many features in a straightforward manner, and the on-line Help feature is excellent. The software itself is attractive looking and pleasing to operate, it works fast, and is very stable with no apparent bugs or problems. It's a

standard GEM application, and works fine with Desk Accessories and alternative file selectors, etc. The modest cost of 3D Calc Plus makes the package quite a bargain — apart from some PD stuff there is really nothing else so cheaply priced. Looking for something to moan about, it's a shame the program doesn't make more use of colour. It will run on a Falcon but only in ST resolutions, although you can export graphs into Art software and add colour that way. Realistically, most folk don't own a Falcon and are mainly wanting to produce black and white output on their trusty STs. So the pro-

gram is ideal for mono hi-res graphs, which is what it was really designed for, and you'll love the easy way it delivers smart-looking charts. If you're searching for a professional spreadsheet and/or graphing program, you definitely can't go wrong with this one, and as the advert says, it's more than just a spreadsheet.

Points for:

- ✓ Well documented
- ✓ Good user interface
- ✓ Enough features for most purposes

Points against:

- ✗ Doesn't exploit colour
- ✗ Limited printing facilities
- ✗ Screen resolution graphic output
- ✗ Spells October as OKTI

Product: 3D Calc Plus
 Version: v3.20
 Price: £24.95
 Upgrade: Return master disk plus £14.95
 Manifest: one d/s disk plus 80-page A4 manual
 Supplier: FaST Club
 Telephone: 0602 455250

Smooth Numerical and Logical Operator

Crikey you chaps, look at all those fantastic formulae! The mathematicalness is terrific! Long division was enough of a puzzle for me at school, but even my clever old Maths master has been surprised by the capabilities built into 3D Calc Plus. Actually there are far too many to list, but to give an idea of the power at your disposal here are just some of the functions available.

Arithmetic operators: The usual Addition, Subtraction, Multiplication, Division, Negation and Exponentiation are there for the simpler sums.

Relational operators: Equity, Inequality, Less than, Greater than, Less than or equal to and Greater than or equal to are all treated with relative equality (more or less!).

Mathematical functions: From A for ABS(x) to T for TAN(x) which starts as an Absolute value then goes off at a Tangent, there are umpteen mathematical features, such as Arcs of cosines and Factorial functions and Logs and Random numbers—it's enough to make your head spin.

Financial functions: Want to work out your Compounding periods, or Double-declining depreciation? It's not double-dutch with 3D Calc Plus, in fact it's all you need to sort out all your mortgage and interest payment problems, and calculate when to buy a Falcon.

Statistical functions: This is why most people take those soft, Arts courses, but someone has to know all this statistical stuff. If you really need to calculate things like the Arithmetic mean of range, Correlation, Standard deviation and Paired Wilcoxon tests, you will understand why these and others such functions are provided.

Plus: enough other features and functions to keep you functioning for hours; there are Logical operators, Constants, Variables, String functions, Date and Time functions, Hexadecimal and Special functions, and Database and Database Statistical functions.

If you want to check out the full line-up of mathematical, financial and statistical features, etc. see the editor's advert in this magazine.