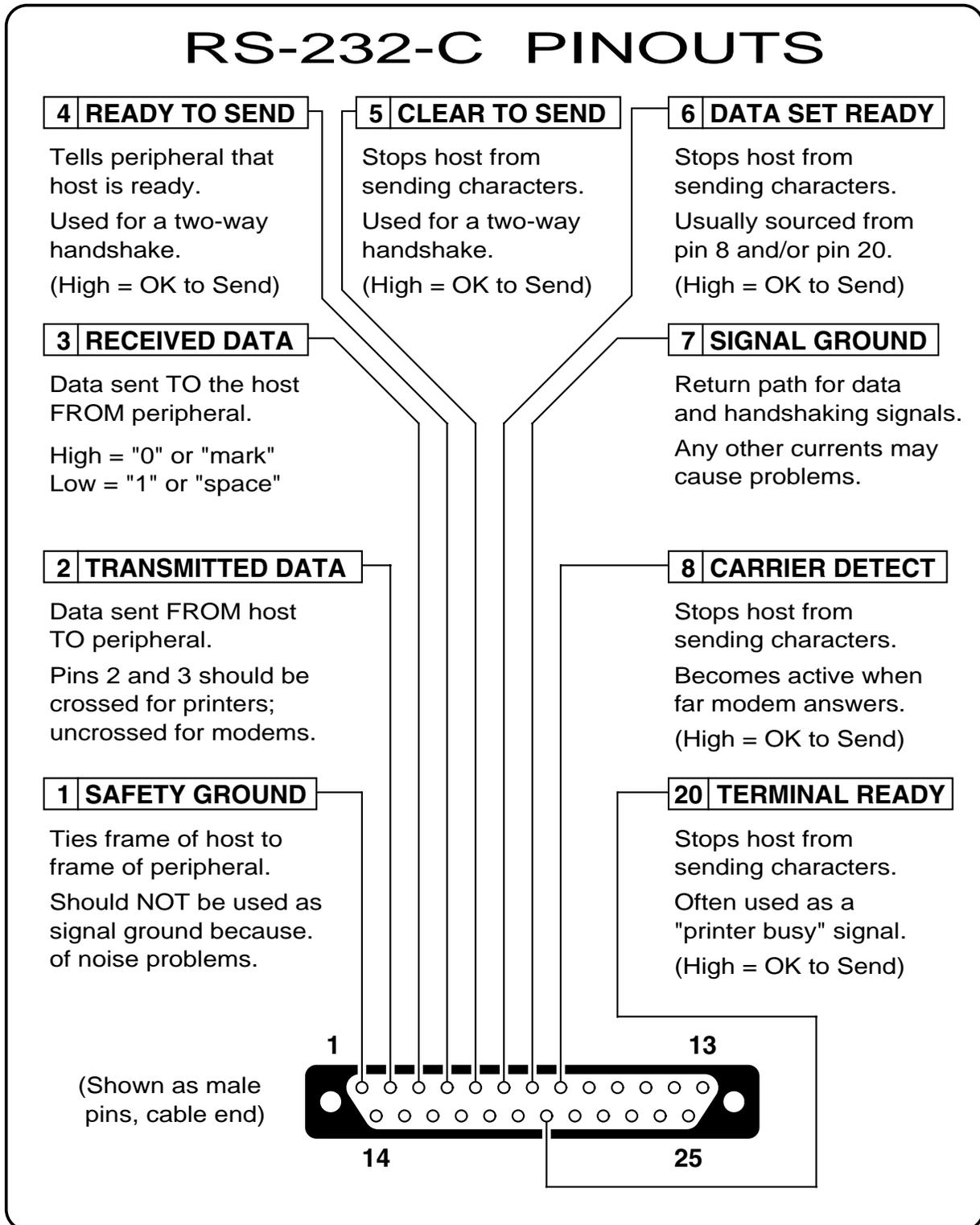




Example one --

Here is a Postscript "puss de resistance", done by linking a custom curve tracing program to Postscript's powerful cubic spline routines. What you see is pure Postscript. No digitizers or scanners of any type were used.

Note the outstanding grays.



Example two --

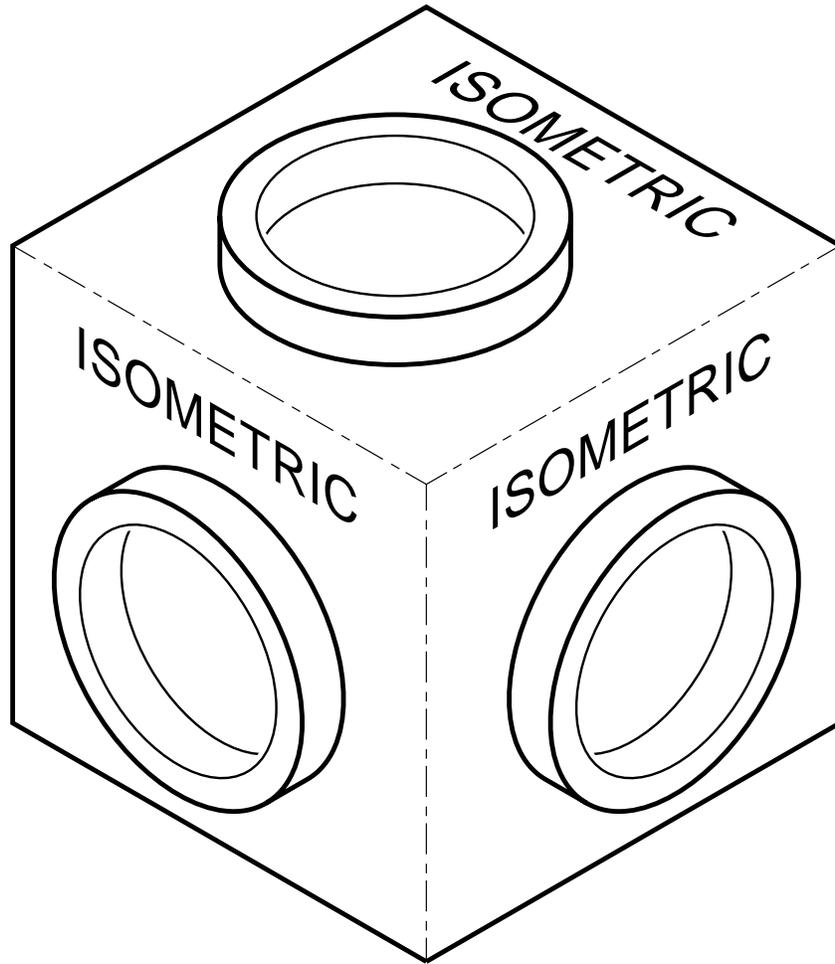
This page from an instruction manual done entirely in Postscript shows how easy it is to integrate text and graphics to explain complex technical subjects.



Example three --

Trademarks and logos are a natural for Postscript. This particular image was done as an early project by a beginning Postscript programmer.

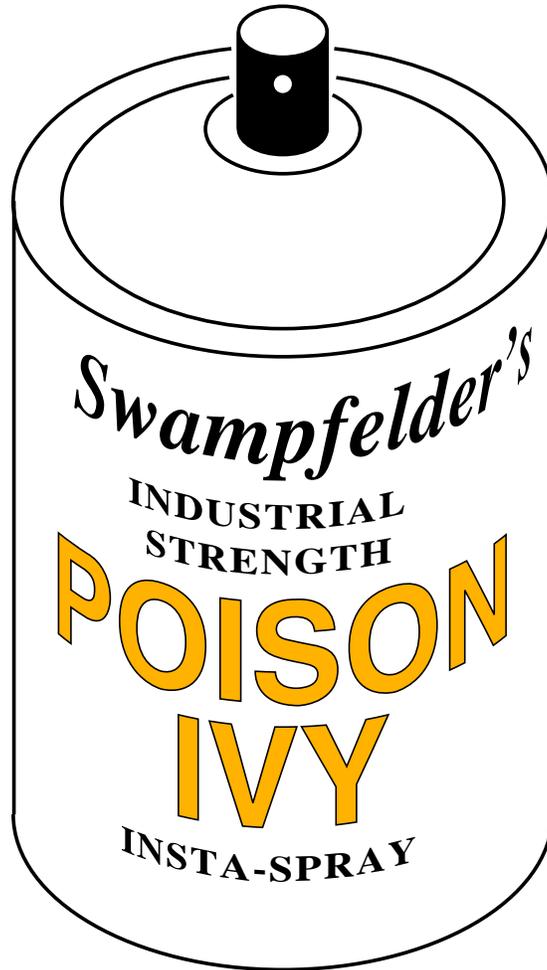
While it is very easy to learn and use, Postscript tends to become extremely addictive.



Example four --

Isometric projection is one popular way of showing "3-D" drawings for data sheets, user manuals, and such. Postscript can rapidly produce isometric drawings, even including the "slanty" lettering and the automatic line breaks shown here.

Postscript also easily creates dimetric, trimetric, and even 3-D images in true perspective.



Example five --

Postscript is ideal for new product artwork, particularly for such essential goods and services as the one shown here.

Note that the lettering is actually wrapped around an isometric cylinder. By using a pixel line remapping technique, any message can be placed on virtually any surface.

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Example six --

You just might be an instant cash winner when you haul your PostScript printer off to a fair, mall, swap meet, or trade show. Big sellers are custom while-you-wait letterheads, bumperstickers, badges, business cards, and window decals.

Other proven winners that sell well in a small town typesetting environment are resumes, menus, discount coupons, machinery labels, wedding and/or birth announcements, car decals, point-of-sale signs, instruction booklets, tickets, stick-ons, newsletters, charts and graphs, greeting cards, invoices, legal forms, certificates and awards, logos, and, yes, even chain letters and controversial religious tracts.

Thanks again,

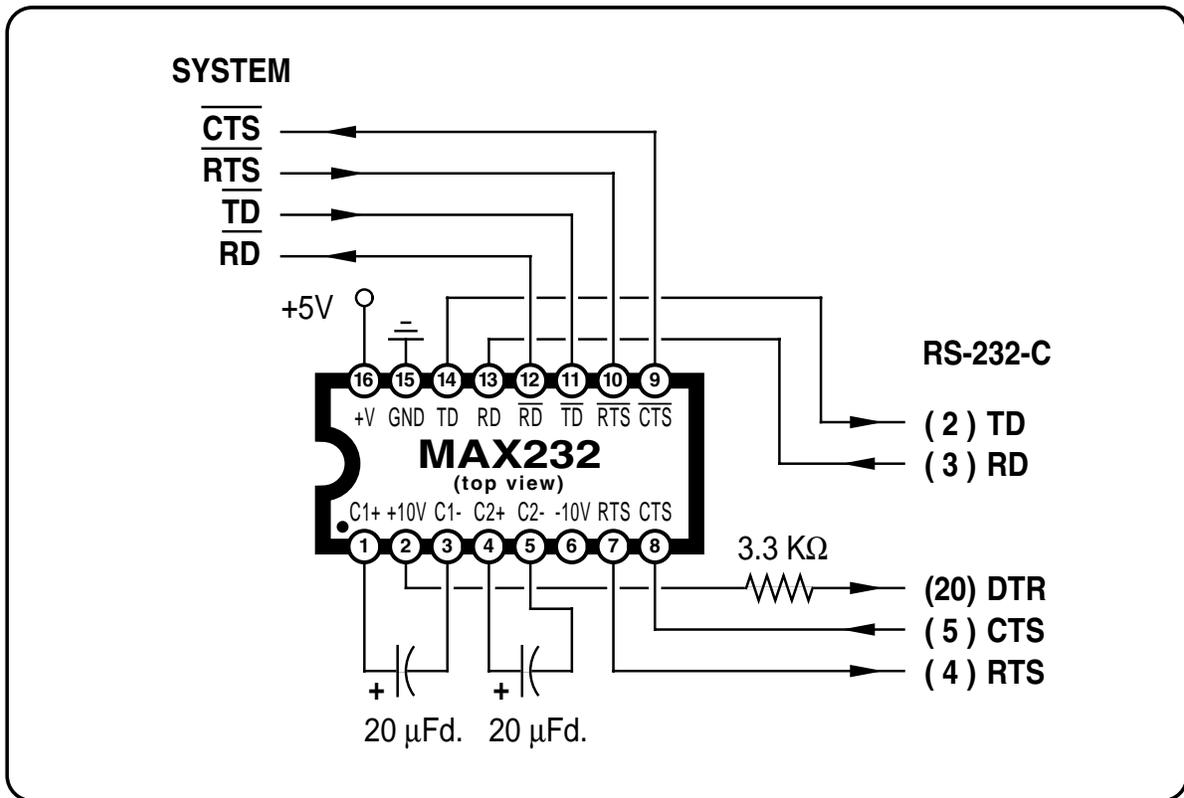
A handwritten signature in black ink that reads "Don Lancaster". The signature is fluid and cursive, with a large initial "D" and "L".

Don Lancaster
SYNERGETICS

Example seven --

Postscript is particularly adept at handling signatures. With practice, a signature can be coded in less than twenty minutes using nothing but a safety pin!

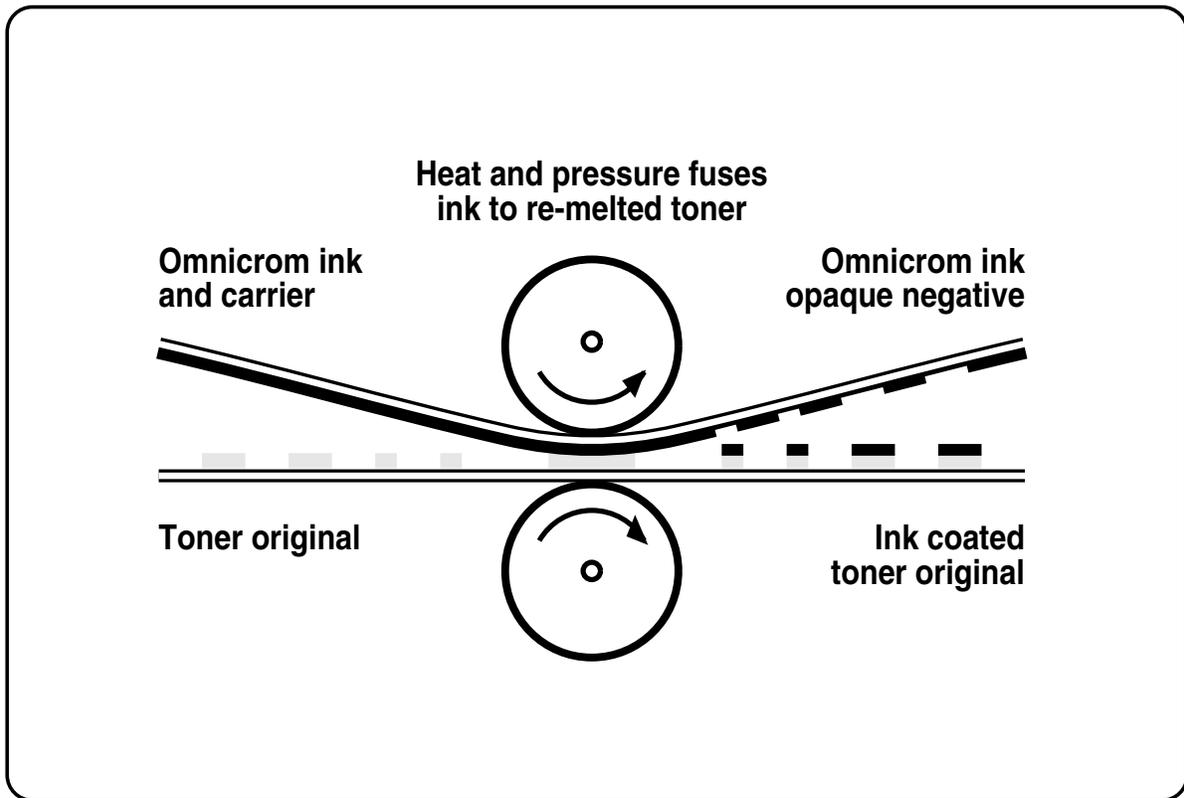
Signed form letters can be processed very quickly by Postscript, since the form letter need be sent to the printer only once. Just the new name and address need changing for each successive letter.



Example nine --

Here is another electronic schematic diagram, only this time it is of a digital circuit that uses an innovative new serial interface chip.

Thanks to Postscript's powerful dictionaries, it is a simple matter to call up any integrated circuit pictorial with astonishingly few keystrokes.

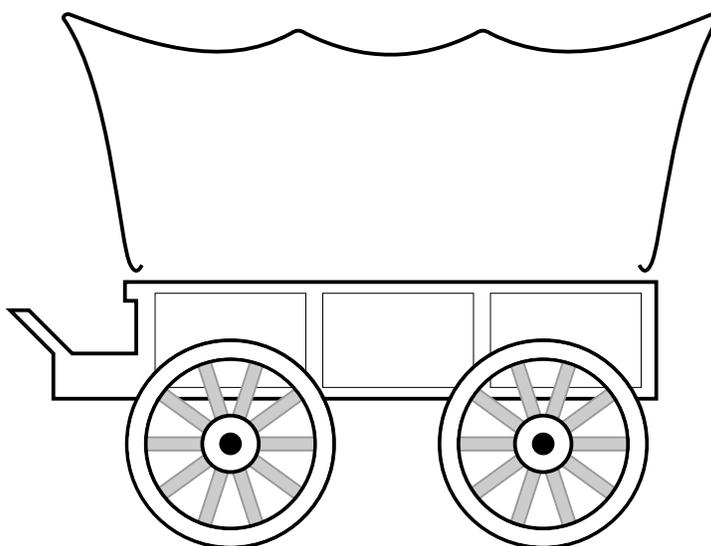


Example ten --

What appears here as a mild-mannered Postscript technical illustration is really the secret of full color laser printing.

Omnicroton sheets are real ink applied to a carrier. You place the sheet in contact with your toner image and then run it back through the fusion rollers a second time. The ink gets fused over the toner.

1987 PIONEER DAY AWARD

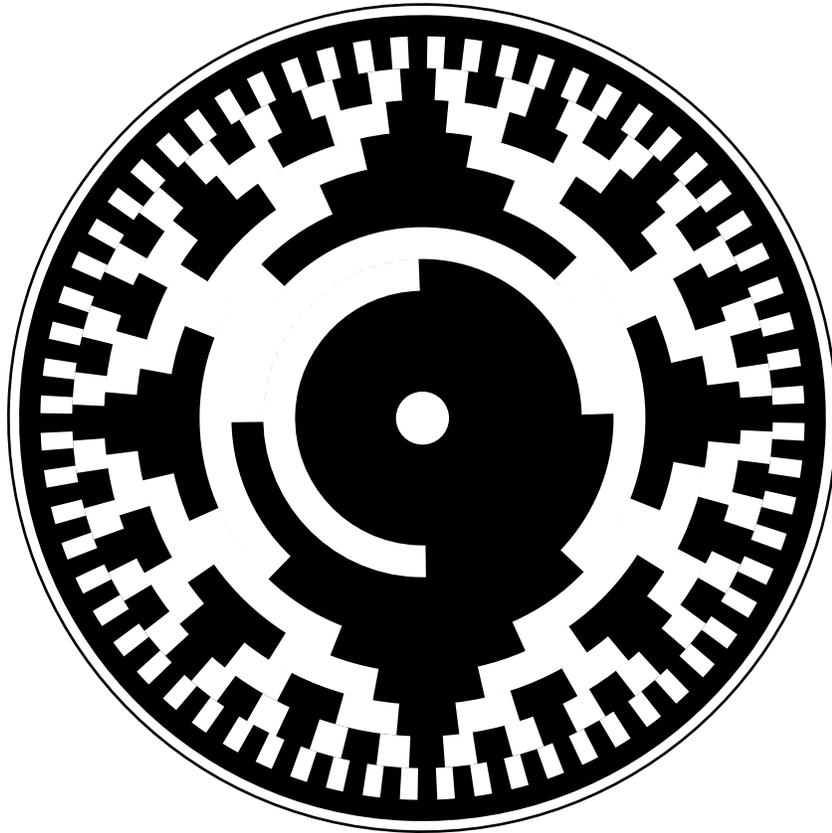


BEST LIGHTING
Horace T. Knockwurst

Example eleven --

Certificates and awards are a natural for Postscript's inherent ability to mix text, graphics, and calligraphy together. This one looks especially good on antique parchment.

There's lots of subtlety here. Note the fine border detail, the kerning of "AWARD", and, of course, the Zapf calligraphy.



Example twelve --

In this robotics application, Postscript is used to generate the artwork for an absolute shaft encoder positioning wheel. Postscript does the job in 1/50th the time at 1/50th the usual cost.

The state-of-the-art Gray encoding shown is remarkably similar to a Mimbres black-on-white Mongollon pottery style dating from the thirteenth century.

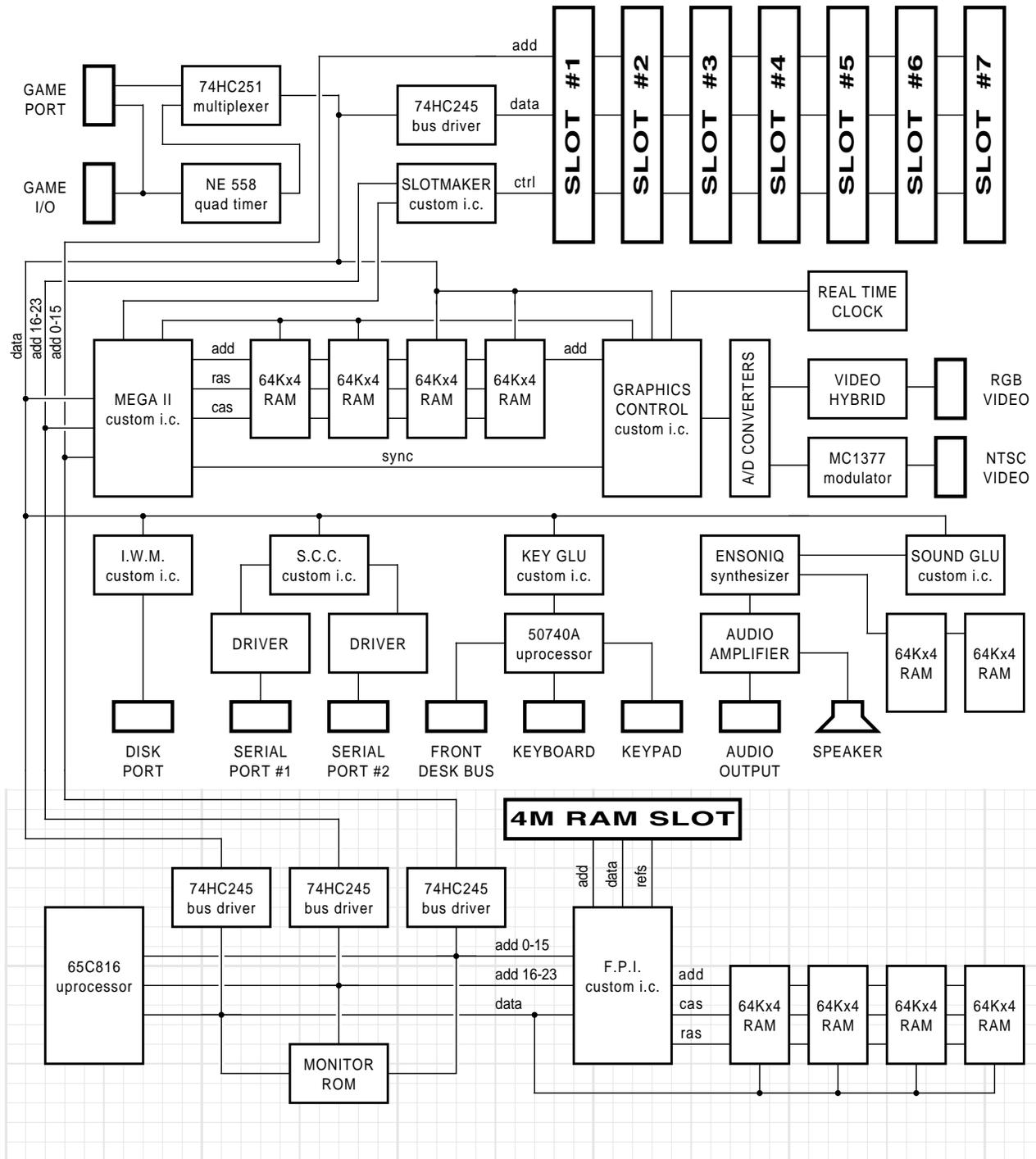
191	198	205	212
190	197	204	211
189	196	203	210
188	195	202	209
187	194	201	208
186	193	200	207
185	192	199	206

Example thirteen --

Powerful step-and-repeat routines are easily handled by Postscript, as these sequentially numbered labels show us.

Other important step-and-repeat uses include business cards, numbered tickets, bumperstickers, reader service cards, badges, and decals.

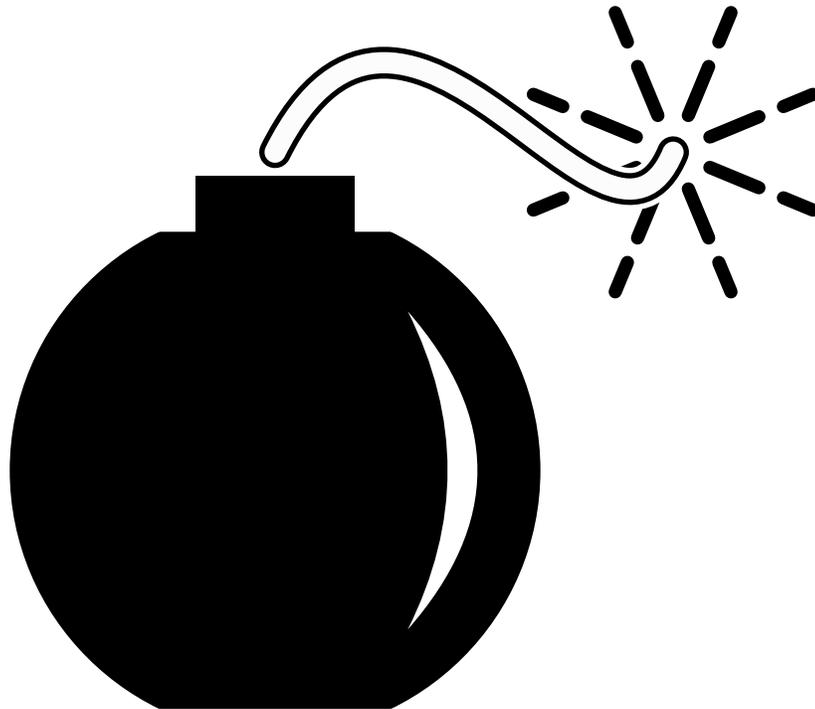
Lancaster, Postscript Show & Tell, Example #14



Example fourteen --

A sometimes invisible "rubber grid" is the secret to Postscript technical block diagrams, organizational charts, invoices, and such.

During creation, the grid appears as a fine gray background. The grid is then dropped out on the final production copies. Only a portion of the grid is shown here.



Example fifteen --

Thanks to the magic of Postscript, this most popular and far and away most often used Macintosh graphic image can now be made available on virtually any operating system on just about any personal computer.

Powerful cubic splines are used to greatly simplify both the fuse and the highlight.



Example sixteen --

No postscript show and tell could possibly be complete without a grand piano!

This is done in the highly conservative art style of a "printer's tradesman cut" and might be used for custom business cards.

Don Lancaster's

Hardware Hacker

October, 1988

Patents and patenting
The LAN of the eighties
Hacking the handicapped
A new pressure transducer
Pressure measurement basics

Several helpline callers have asked just how you can go about accurately measuring the cryogenic temperatures involved with superconductor experiments. Ordinary thermometers will obviously not work.

A plain old silicon diode could be used, provided you can find one with a package that can safely handle the liquid nitrogen temperatures without cracking. Since the forward drop of a silicon diode at a constant current is a measurable function of the temperature, you can read the voltage across the diode with a digital voltmeter to get the temperature.

Silicon cryogenic temperature sensors are also available. One source is *Omega*. These folks also have an outstanding collection of data books and catalogs on such products as sensors for temperature, pressure, pH, humidity, strain, conductivity, and related tech books and software.

But do note that most of Omega's products are premium ones that command premium prices.

Several of the other sources of low temperature sensors do advertise regularly in that *Measurements and Control* trade journal. This is a great source for sensor and transducer info.

Let's start off with a look at . . .

Patents and Patenting

I have received several calls and letters this week that drive home the expensive, energy wasting, and time-consuming misconceptions that many hackers now have over patents and patenting. We'll start off with the one word bottom line involving any patents for hardware hackers *1 don't!* Don't even think about it. Ever.

Three different helpline callers are apparently in the process of getting patents on three ideas that each have a century of totally obvious prior art involved with them. They are all also readily available as off-the-shelf products. One is a fluorescent lamp, the second an electrolytic level, and the third is a capacitance microphone.

If a Las Vegas casino manager had

the gross effrontery to offer the same odds the patent office does, he would get run out of town on a rail. Your state lottery is a far better investment than a patent.

Fact: Not one single patent in one hundred will *ever* show *any* positive cash flow. Many studies verify this.

Fact: Not one single patent in one thousand is solid enough that it cannot either be invalidated or severely reduced in value through a diligent enough search for prior art in obscure enough places.

Fact: A patent does not in any way prevent others from stealing your ideas. All it does is give you the right to sue someone. Once patented, any

individual anywhere in the world can get a copy of your ideas simply by reading your patent.

Fact: In patent litigation cases, the side with the most resources will almost invariably win. Even with a totally bulletproof patent, the legal process can be made so drawn out and so expensive that the winner will lose, and vice versa.

The conventional wisdom goes something like this: First, get an idea. Second, patent it. Third, sell the idea to a large company. Well, in the real world, each one of these three concepts is "patently" absurd.

I would like to be able to report to you that ideas are still worth a dime a

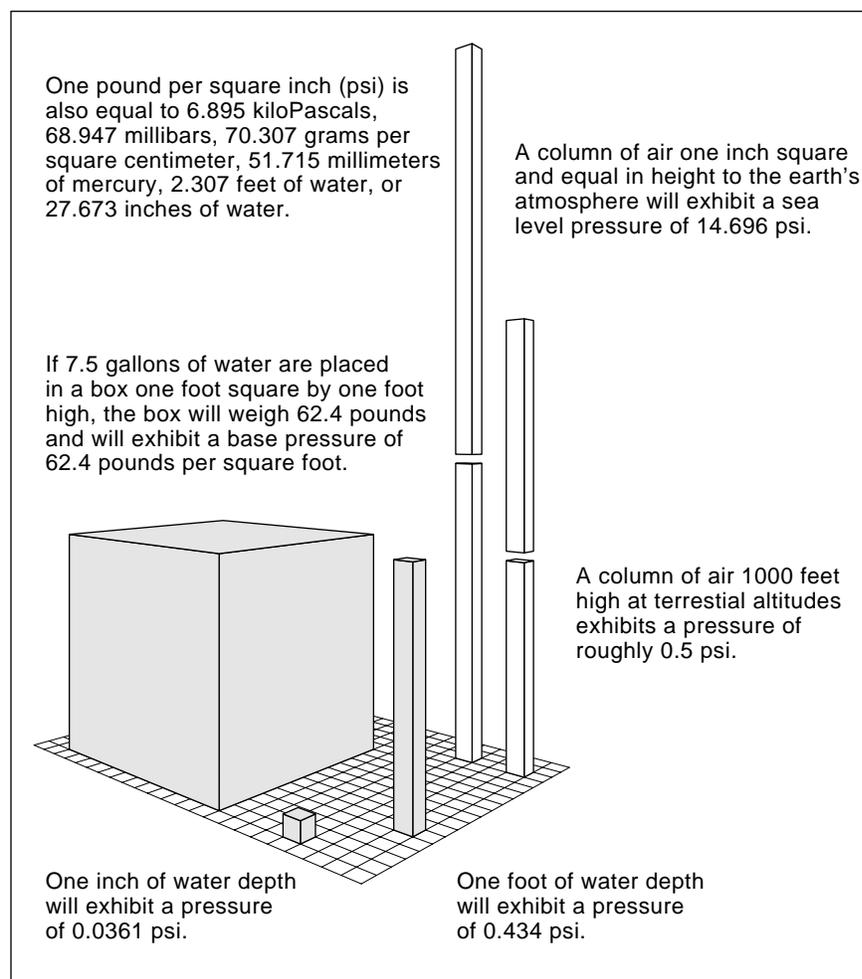
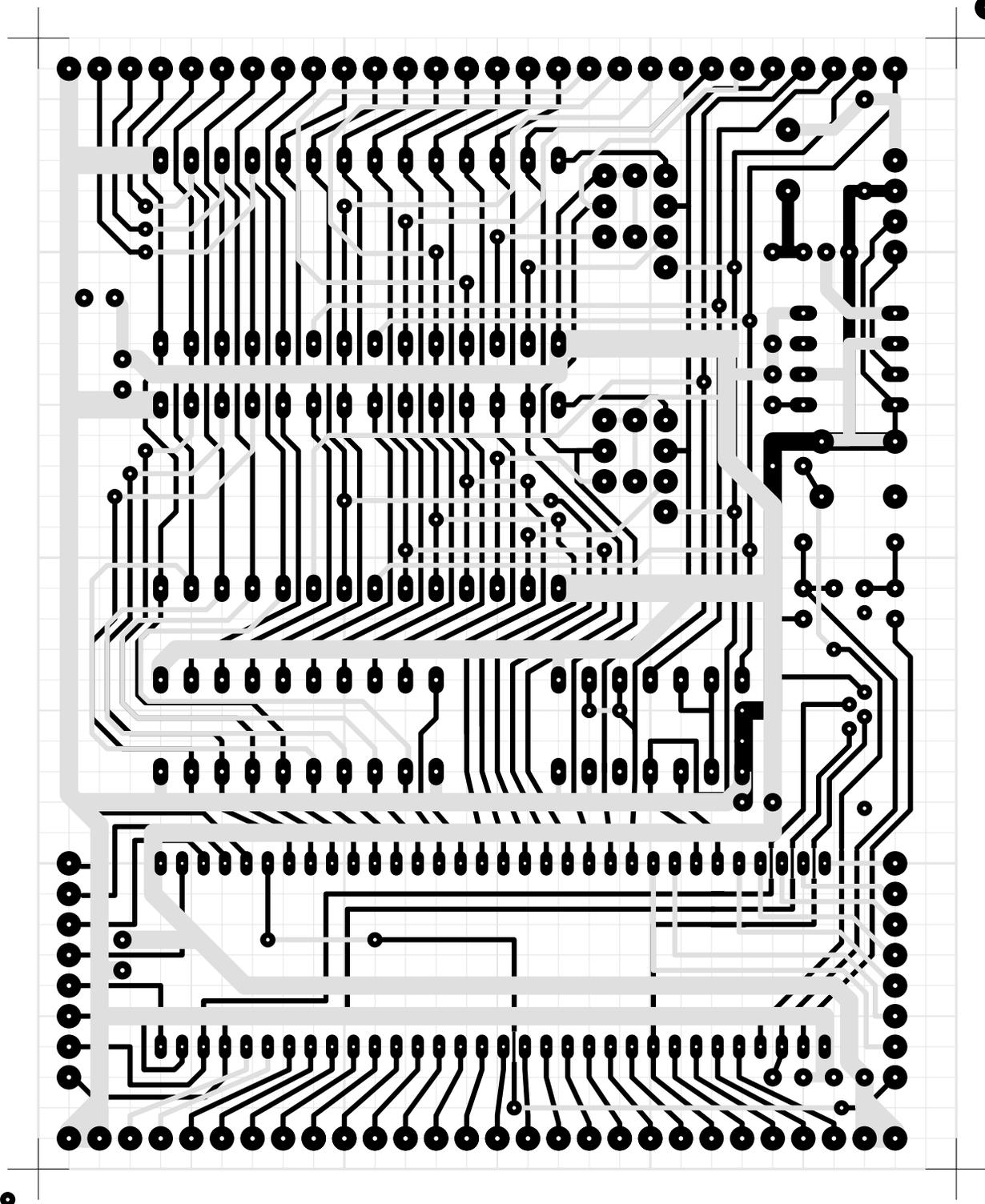


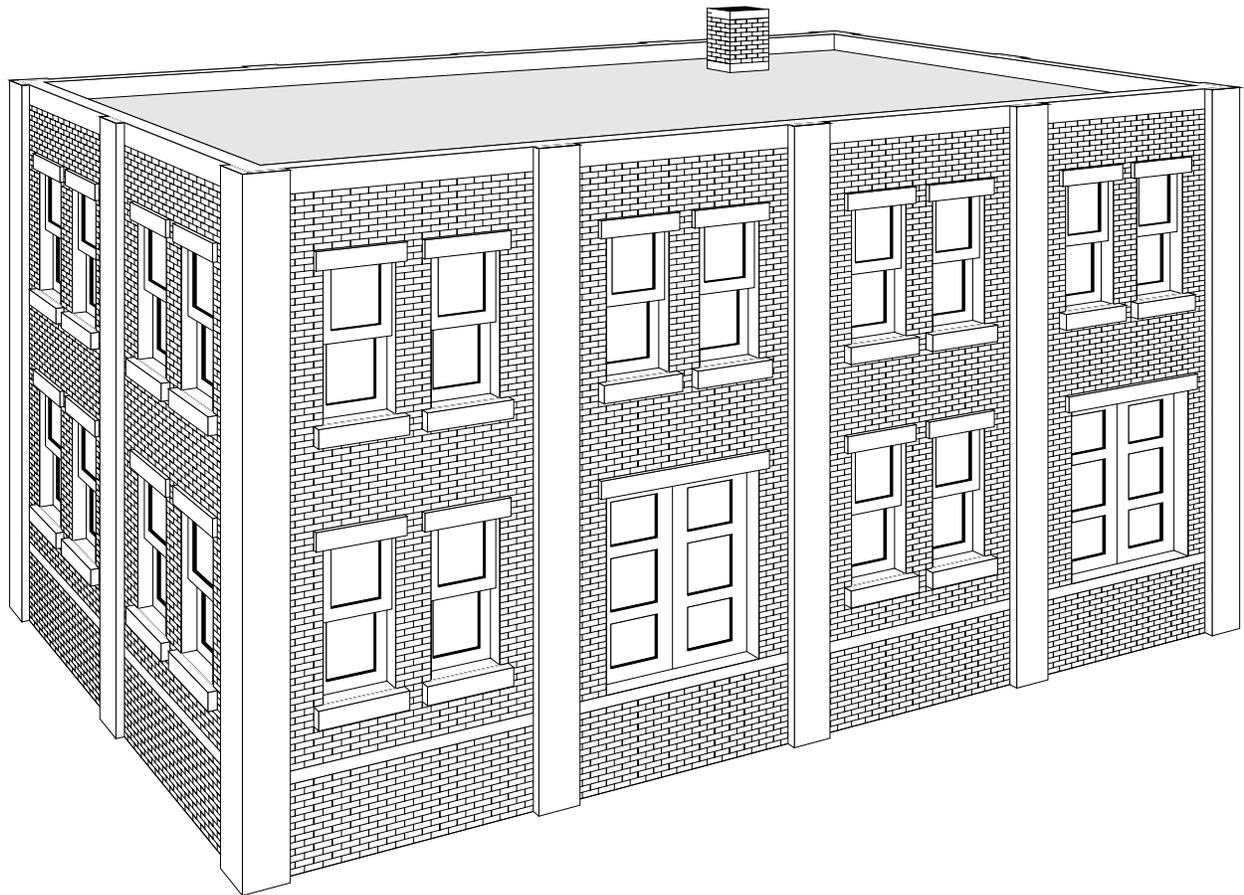
Fig. 1 – Here are some of the fundamentals behind pressure measurement.



Example eighteen --

Printed circuit layouts are extremely easy to do when using the PostScript language.

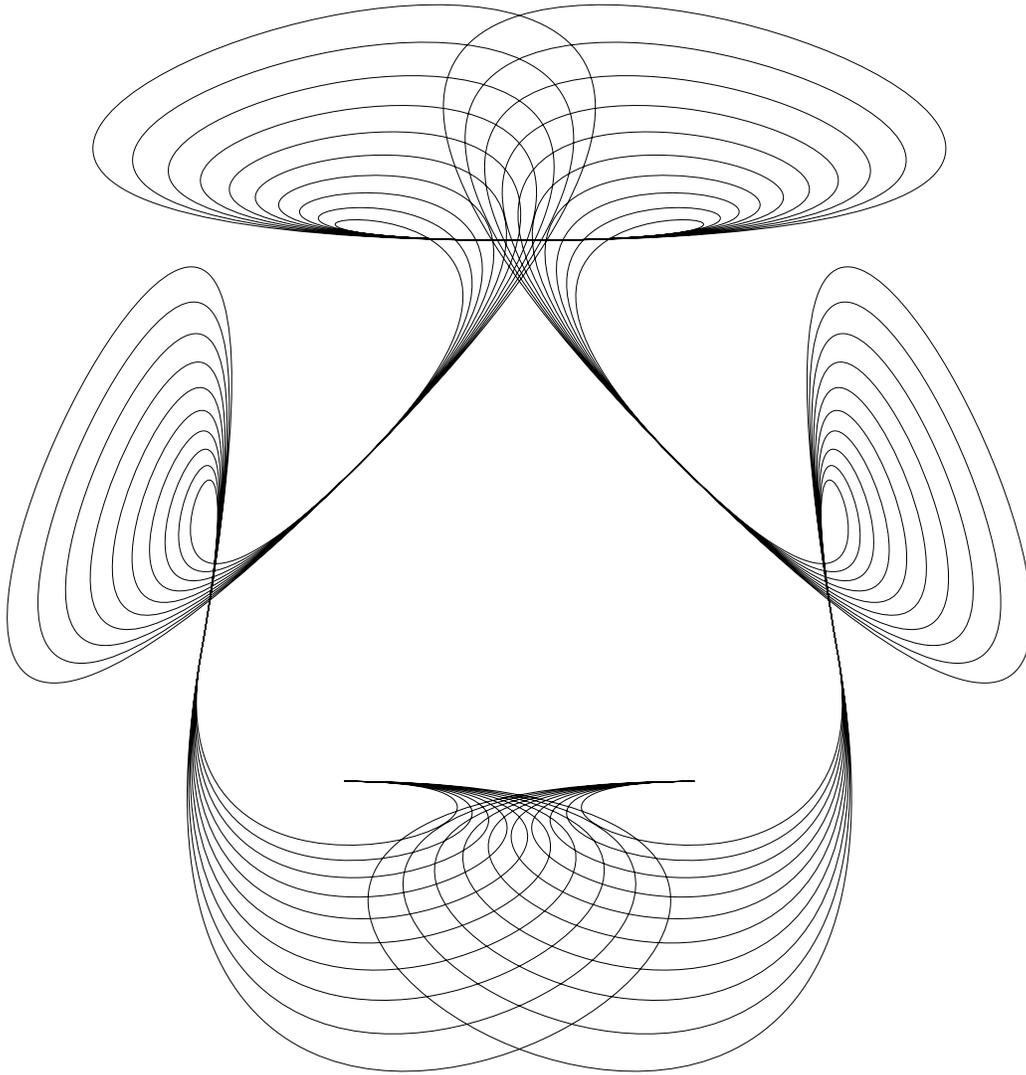
This positive 2X artwork example is for a small control computer. Shown are a gray overlay grid, the top side foil in gray, and the bottom side foil in black



Example nineteen --

Two point perspective drawings are often needed for architectural uses. PostScript utilities are easily created that can let you do most any type of three dimensional drawing.

Each of the 4,752 bricks are individually and correctly shown in true perspective, as is the lettering. Yes, circles and arcs are also easily handled. Yes, the building can be rotated over a wide range, and the "outsets" and "insets" will correctly track.



Example twenty --

Purely abstract designs are simply and elegantly handled by PostScript, using its powerful internal cubic spline and curve tracing abilities.

Only seven data points and several dozen keystrokes were needed to create this figure.