Two-By-Four 1.0
A Word for Windows 1.1 macro
To implement Duplex, Side-By-Side and 4-Up Printing

To
~~2 X 4 can be very frustrating at times – printer paper jams, your cursor may turn into an hourglass, your machine may appear to "freeze", maybe your printer memory will overflow.~~
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~~There are explanations and work-~~
~~arounds for (almost) all of these~~
~~problems. Please. Read the~~
~~documentation for all sorts of tips~~
~~that may help – with 2 X 4 and other~~
~~WinWord mysteries!~~

2 X 4 is part of a collection of macros known as the Word for Windowsä Office POWER Packä (yeah, we're gonna go legit and claim a Trademark). **WOPR,** pronounced "Whopper", consists of 17 documents / files / macros / programs – with WinWord it's hard to tell the difference! Here's the packing list, with filenames listed in blue, if you have a color monitor:

- Þ   ~~**WOPR.DOC**~~, which contains seven useful Little**WOPR**s:
    - ·   WOPRClock 1.1 – WinWord's answer to Big Ben
    - ·   LABELIT 1.0 – No-hassle three-at-a-time (3.3 x 4.0 inch) labels
      Labelit has one associated file, ~~AV5164.LAB~~
    - ·   VIEWER 1.0 – View the ASCII characters that correspond to what's on your screen
    - ·   COPY LIBRARY – Canned WordBASIC commands and routines, ready-to-use
    - ·   FANCY KEYS 1.0 – Pick and choose predefined power-user key assignments
    - ·   KILLER 1.0 – Yep, you can finally do a File Delete
    - ·   WORD COUNTER 1.0 – Counts words in a document, or just the ones you select
- Þ   ~~**2X4.DOC**~~, Two-by-Four 1.0 – save paper squeezing 2 or 4 pages on one sheet
- Þ   ~~**FILENEW.DOC**~~, Replaces WinWord's old FileNew. Makes template management a breeze. From Lee Hudspeth & Associates and Plan B Consulting (a joint venture).
- Þ   ~~**TREASURE.DOC**~~, A Treasure Hunt for new, useful menu assignments and macros you can use every day. From Ellen Nagler and ENDuser Systems, Boston.
- Þ   ~~**ENVR32.DOC**~~, Enveloper 3.2 – print envelopes on LaserJets, DeskJets, compatibles. Enveloper has four associated files:
    - ·   ~~DEMODNLD.EXE~~ and ~~DEMOUNLD.EXE~~, demo's of Neil Taylor's Download
    - ·   ~~YOUR.PCL~~ and ~~DONTBEND.PCL~~, two sample logos to try on your printer
- Þ   ~~**PSENVR32.DOC**~~, PostScript Enveloper 3.2 – PostScript envelopes, from Vince Chen! PS Enveloper has five associated files:
    - ·   ~~FONTDIR.EXE~~, ~~.PIF~~, and ~~.TXT~~, Vince Chen's PostScript font routines
    - ·   ~~&LOGO.PFB~~ and ~~FONTLIST.PS~~, which are used by FONTDIR
- Þ   ~~**DNGR20.DOC**~~, Dinger 2.0 – insert any character from any font into your documents, which includes ENDuser Systems' QwikSymbol

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All of these 17 files are to be distributed together, as one package, known as the
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The files are often grouped as a pair of self-extracting files called
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*If you are missing any of these files, you do not have the entire **WOPR** package: contact the person or company that sent you the files, to ensure you receive any missing pieces.*

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An important disclaimer:

Lest there be any confusion: Microsoft® and Word for Windowsä are Registered Trademarks of Microsoft Corporation,
a big, innovative company based in Redmond, Washington.
WOPR is from Pinecliffe International, a tiny, innovative outfit atop the Colorado Rockies.
We like the folks at Microsoft – and we love their products – but please don't think for a moment that we PineNutsä work for Microsoft, or that **WOPR** is a Microsoft product!

When you register **WOPR** – a mere $49 for individuals, less for organizations – you will receive **all** of the following:

·   A diskette with the ~~latest versions~~ of **WOPR, 2 X 4, FileNew, Treasure, Enveloper, PS Enveloper,** and **Dinger** including bug fixes, the latest tips and tricks, and notices about everything else we're working on;

·   A fancy, printed, perfect-bound **Enveloper** ~~manual~~, with a very helpful index (it really comes in handy during installation, when you're curious about a specific feature, and it's a real pain to interrupt the installation and flip through the Enveloper document);

·   Your very own **Enveloper** ~~Cheat Sheet~~ to reduce smudging on your envelopes – a true collector's item, suitable for framing, in genuine 67 lb. Vellum Bristol-Cover;

·   ~~Unlimited free support~~ via mail or CompuServe for 90 days;

·   Notification and ~~guaranteed lowest prices~~ on new Pinecliffe International products, some of which may surprise you (heck, the way things are going right now, some of 'em may surprise *us!*);

·   Access to our trusty friends at Advanced Support Group via their ~~900 number~~, where expert help costs $2/minute;

·   ~~Free~~ sign-up to ~~CompuServe~~, with a free $15 usage credit; ~~Discounts~~ on subscriptions to Shareware Magazine;

·   ~~Discounts~~ on future Pinecliffe International WinWord macros; and,

·   Most importantly – Our sincere ~~thanks~~ for making all of this possible.

In addition, you'll be placed on our ~~mailing list~~ for early notification about upgrades and special offers. If you like **WOPR, 2 X 4, FileNew, Treasure Hunt, Enveloper, PS Enveloper,** and the rest, we think you'll really like the other goodies comin' down the pike.

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Registration is easy, on-line, off-line, by mail or phone, day or night, with a check or a credit card, money order, cash, negotiable Treasury Certificates, Bearer Bonds, Travelers Checks, whatever. We (try to) make a living from your registration fees: they are important; they keep us going!

~~Double-click~~

So much for the commercials. On to the main program.

You may scan through this **2 X 4** documentation "normally" (i.e., sequentially), but if you know which section you want to read, or if you just want to pop around a bit to get more comfortable with **2 X 4**, double-click on one of the boxes, sections or functions below. Be sure you take a good look at Section 2's discussion of limitations, and ways to work around them....

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DocCruiser

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~~DocCruiser,~~

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Function
Function

If you have a color monitor, you will soon discover that DocCruiser lets you double-click on any word or phrase that appears §, to let you cycle through related topics that happen to be strung throughout the documentation. (Take **that**, HyperCard!)

DocCruiser is even smart enough to let you go back whence you came. Try clicking around a bit. Hop to a topic, hop back, and then jump back again. Keep in mind that you're doing this inside a word processor! (Well, not an *everyday* word processor....)

Your assurance of quality

Pinecliffe International is proud to belong to the ~~§~~. ASP protects you, the Shareware consumer, with one of the best guarantees in the business. Here are the details:

This program is produced by a member of the Association of Shareware Professionals (ASP). ASP wants to make sure that the shareware principle works for you. If you are unable to resolve a shareware-related problem with an ASP member by contacting the member directly, ASP may
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be able to help. The ASP Ombudsman can help you resolve a dispute or problem with an ASP member, but does not provide technical support for members' products. Please write to the ASP Ombudsman at 545 Grover Road, Muskegon MI 49442-9427 or send a CompuServe message via Easyplex (also known as "CompuServe Mail") to ASP Ombudsman 70007,3536

This ASP service is *in addition to* Pinecliffe International's solid-gold no-questions-asked lifetime money-back guarantee. Look in § for details.

The ASP mark is your assurance of quality, backed by a group that cares about Shareware and the people who use it. Look for the ASP logo wherever you go searching for software.

Acknowledgements

2 X 4 started as a conversation on CompuServe's MSAPP forum between Mike O'Reilly and Woody Leonhard. The original macro – a simple twelve-line program to print odd and then even pages – evolved into a Duplex-printing macro (i.e., one that would automatically print odd and even pages on the front and back of each sheet of paper). Then it suddenly became apparent that four-up printing was possible ... and **2 X 4** was born.

Thanks, Mike!

In a typical CompuServe MSAPP free-for-all, several wordsmythes attempted to come up with a good name for this package. We started with Pager, but that seemed a bit ... Prosaic. Then came 4Upper – and the fear that people would think it did nothing more than convert documents to uppercase. Finally, Ian Wright proposed **2 X 4**, pronounced "**Two-by-Four**". Bingo! Thanks, Ian.

And thanks to all the other beta testers for their patience and kind assistance.

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Overview: Why 2 X 4?

Tired of wasting all that paper on stuff that simply *must* be printed – but will probably spend most of its life sitting on a shelf, gathering dust? Too stingy to spring for a fancy LaserJet IID or IIID printer, but want to print "Duplex" (i.e., on both sides of each sheet of paper) anyway? Ticked off because 4Print and other 4-Up print routines won't work on your WinWord documents?

Most compelling: Ever wonder why the world's premier word processor has such a hard time formatting and printing Duplex and 4-Up documents?

Well, your questions have just been answered. Your life just got a little bit easier. 2-Up
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"Duplex" printing, even 4-Up printing – on any printer – is now a mouse-click away. Really.

Welcome to **2 X 4**, a key component of Pinecliffe International's new **WinWord Office POWER Pack**.

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What Duzzit Do?

2 X 4 adds itself to your "File" pulldown menu, the one you can see right now in the upper left corner of your screen. To use **2 X 4**, you need only click on "File", then "Print Duplex or 4-Up". **2 X 4** pops up with a simple screen asking what kind of 2-Up or 4-Up print you want. You choose from among several options, and click "OK".

Your printer will print one side of all the sheets. You pull the pages out of the output bin (or tear them off the tractor if you have a dot matrix printer), turn 'em over, stick them back in the "in" side of the printer, click "OK", and try to keep from grinning as your 2-Up or 4-Up document emerges, properly collated, in the output tray of your printer.

Those who have Duplex printers (LaserJet IID or IIID, or compatibles) can print 4-Up without ever touching the printer. **2 X 4** is smart enough to put it all together....

That's all there is to it!

TERMINOLOGY

There doesn't appear to be much uniformity in terminology surrounding multi-page printing. In fact, the problem is so great, it's tough to describe **2 X 4** in a few comprehensible sentences. So let's take a second here, right up front, to get the words straightened out.

When we say "Duplex printing", we just mean printing on the front and back of each sheet of paper. None of the printing is squished, rotated, or changed in any way. You just use half the amount of paper – and have a chance to see what your document would look like if it were bound like a regular book. Hewlett Packard calls this kind of printing "Duplex", and charges fancy prices for fancy printers that do "Duplex" printing. **2 X 4** gives you the same effect, except you get to flip the paper over all by yourself. Not a bad way to save a thousand bucks.

2 X 4 prints "Duplex" documents exactly as they appear in the original: the program just prints odd pages on the front of each sheet, even pages on the back, and gets the sequencing right so your document comes off the printer properly collated, ready to rush to the boss. (As far as we know, **2 X 4** is the first Word for Windows macro to ever accomplish this seemingly simple "print all odd pages, pause, then print all even pages" task. It may *look* simple, but hoooo-boy!)

When we say "4-up printing" or "Squished printing", though, it's a horse of a different color. 4-up printing crams four pages on a single sheet of paper. Pages 1 and 2 appear side-by-side, with the paper in landscape mode (long side on the top; what some people call "horizontal"). Then pages 3 and 4 appear on the back of that same sheet of paper. Pages 5 and 6 are on the front of the next sheet of paper, 7 and 8 on the back, and so on....

Squished printing is the same as 4-up, except it doesn't print on the back of each sheet. It's an important option if your printer has a bad habit of eating paper that's been fed through twice.

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We tried over and over to get WinWord to print booklets. It looked like it should be easy, once we got squished printing to work. Alas, no such luck! The hard part of printing booklets with WinWord isn't the page-number sequence (that came as a shock) – the hard part is "pasting" a page and its headers and footers onto half a sheet of landscape paper. If you can figure out how to do the pasting – well, we need to talk.....

Printing 4-up isn't quite as straightforward as Duplex printing, from WinWord's point of view – although **2 X 4** makes it just as easy, from your point of view. **2 X 4** has to smash things around quite a bit to get the necessary size reduction so four pages will fit on one sheet of paper. Rest assured, though, that your original document won't be touched. As with all **WinWord Office POWER Pack** programs, that goes without saying.... **2 X 4** does its thing on a temporary copy of your document, leaving your original pristine.

4-up printing does *not* match the formatting of your original. It's close (in most cases), but not exact. All fonts are set to the same point size, typically 8-point. Lines will break in slightly different places. Pages won't break exactly the same way as the original. Fixed-position formatted paragraphs and big pictures and tables have trouble. (Fancy newsletters, for example, usually end up looking like the bottom of a well-used bird cage.) But if you have a reasonably normal document, and can put up with these inconsistencies, **2 X 4** will almost always give you four perfectly legible "pages" on each sheet of paper, reasonably close to the original formatting, delivered to you collated, ready to be punched, stapled, or comb-bound.

If you can't put up with the 4-Up formatting inconsistencies – if your paper-saving printout simply *must* match the original exactly – then avoid 4-up or squished printing: just use Duplex printing.

Because of these formatting inconsistencies, 4-Up print isn't really suitable for multi-column or multi-section documents, documents with big tables or pictures, or paragraphs positioned using absolute coordinates. But for everyday correspondence, manuals (like this one), straight text files (often called "ASCII files"), Windows Write files – in fact any file you can bring into WinWord – 4-Up print often looks amazingly good. And it sure is easy!

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Do You *really* need 2 X 4?

Probably. Many of the **WOPR** macros have good substitutes, particularly if your needs are rather modest, or if you're willing to write a macro or two. But if you want to print WinWord documents Duplex or 4-Up, you'll probably find that **2 X 4** is a whole bunch easier than trying to do it yourself.

None of the commercial products out there – 4Print being the best-known – can handle WinWord documents. **2 X 4** not only handles WinWord documents, it'll take a good run at any document that can be imported into WinWord: WordPerfect, Windows Write, plain old ASCII character documents, DOSWord, you name it. If you can get it into WinWord, you can probably get it printed with **2 X 4**.

Be forewarned, though: if you're looking for a *fast* method of printing documents, you're probably better off with 4Print. **2 X 4** makes up for its sluggishness by automatically melting into the background, so you can go do something worthwhile (Solitaire, anybody?) while it's formatting and printing. But **2 X 4** is no speed demon. No way.

It's not difficult to write a WordBASIC macro to print all the odd-numbered pages in a document, pause, and then print all the even-numbered pages. If that's all you need, and you only have a one-section document of 40 or fewer pages, try this:

Most people, though, could really use a way to print Duplex and 4-up documents automatically, with just a couple of mouse clicks. A program that makes all the sorting and collating a "no-brainer". A program that will print macro listings just as easily as regular WinWord documents – not to mention the odd user manual, database dump, or spreadsheet print-file in straight ASCII text or Windows Write format. A program, in short, just like **2 X 4**.

Aside from saving paper, Duplex printing (on both sides of each sheet) gives you a chance to exploit side-by-side layouts. That's an important capability! It won't turn an unsightly report into a snappy one, but it can turn a good presentation into a real eye-catcher.

And when it comes to 4-Up printing, conserving paper is the name of the game. A 120 page
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behemoth prints on just 30 sheets of paper. If you print documentation, big DOS "print to file" printouts, on-disk documentation, long WinWord documents – or even WordBASIC macro listings – you'll save all sorts of paper. All it takes is **2 X 4** and a couple of clicks.

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This version of **2 X 4** has been tested on a wide array of computers, Windows setups, fonts, etc., and it seems to work quite well with all of them. However, sometimes there are strange things that happen, and documentation is never complete. Please, if you encounter a problem – no matter how major or minor – let us know!

Don't get discouraged, as a solution to your problem may only take a few minutes. You can contact us via CompuServe in the MSAPP forum, or in CompuServe Mail, by leaving a message for Woody Leonhard 74730,1734. Woody or one of the gang tries to check CompuServe every day, 365 days a year.

You can send us a letter from MCI Mail or any of the other major E-Mail services by routing your message to CompuServe i.d. 74730,1734 (the exact method for doing so varies on each network, so ask!). On Internet, just route to 74730,1734@compuserve.com. If all else fails, the U.S. Mail still delivers letters to us, occasionally, at: Pinecliffe International, P.O. Drawer 7337, Coal Creek Canyon, Golden, Colorado 80403-0100.

If you have a spare nickel in your pocket, you can get telephone support. Call 1-900-88-HELP-8 between 8:00 a.m. and 5:00 p.m., Central time. The folks at Advanced Support Group have taken on the **WOPR** suite; they're most helpful and knowledgeable – and you get an answer right now! The call costs $2 per minute – and note that this service is *in addition to* our free support via CompuServe, Internet or the mail.

When you get in touch, tell us exactly which printer you're using, and describe your problem as precisely as possible. That way, you'll not only get your problem solved, but you may solve many others' problems as well....

Think of all the paper you'll save by using **2 X 4**. You'll get perfectly formatted 2-Up prints, as easy as normal printing. (Well, OK, you *do* have to turn the paper over.) And there's a potentially huge reduction in the size and weight of 4-Up printouts. Imagine storing all of your correspondence in one-quarter the space! Imagine how much you'll save on paper – not to mention toner, binders, file folders, and on and on...

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Features

2 X 4 1.0 has several features worth crowing about:

First, **2 X 4** never touches your document. If it needs to re-format something, **2 X 4** will make a temporary copy of your original, shuffle it around, and then delete the copy when everything has been printed. No muss. No fuss.

Second, the Duplex print option of **2 X 4** produces a document that is *identical* to your original (except for one teensy-tiny change: see §-for details); it's just printed on both sides of each sheet of paper. Some companies pay a thousand bucks extra for a fancy Duplex printer, just to get that effect. You'll get it as part of a $49 package! (Well, yes, you *do* have to flip the paper over manually. But, really, for the $951 difference, you could *hire* somebody to do the flipping. And you would be getting **Enveloper**, **Dinger**, **FileNew, Treasure, Labelit, WOPRClock**, and all the others free!)

Third, **2 X 4** is sensitive to the type of printer you use. If you are accustomed to flipping out the output rack on your LaserJet to accommodate the idiosyncrasies of certain print programs (and we won't mention 4Print by name), well, **2 X 4** won't put you through that anymore. Everything comes out collated and stacked, ready to use.

Fourth, **2 X 4** will work with any printer supported by WinWord. Duplex print is easy. 4-Up print is usually done in 8-point (the actual size is an install-time option); you can use any font that your printer can handle in landscape mode. Even dot-matrix printers can use the 4-Up routines, though the quality of what you'll get is entirely dependent upon your printer's ability to render legible 8-point (or similarly small) landscape print.

Fifth, **2 X 4** is smart enough to detect if you have macros attached to a WinWord document or template. If you ask to print the document 4-Up, **2 X 4** will also let you attach listings of all the macros – with just one click. It's a huge time-saver for those who need to save hardcopy listings of macros.

Sixth, the **2 X 4** macro installs with just a few mouse clicks, using a technique pioneered in **Enveloper**. The installer takes a while to build the necessary macro, but that's not such a big deal because you only install once – and the installation process on a color monitor will give you quite a light show to boot, at no additional charge....

If you have anything you'd like to see in **2 X 4 2.0**, just drop a line. Don't be bashful.

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Limitations

2 X 4 isn't perfect. (But what is?) We hope to add to **2 X 4**'s abilities as we all gain experience with this kind of printing in the WinWord environment – in other words, we're all blazing some new ground here, so don't be too surprised if something doesn't work the way you think it should!

Here are some of the known limitations and problems, and a few suggestions for making things work better (yeah, three pages of "Limitations" is pretty daunting, but you're gonna get the straight scoop, no sugar coating):

Physical Limitations: On a LaserJet or compatible printer, with the default margin settings and using the built-in LinePrinter font at 8.5 point, **2 X 4** can print up to 66 "squished" lines on each page (four pages per sheet), each line containing up to 84 characters. That's pretty impressive! On a dot matrix printer, using Tms Rmn 8 point, you will get up to 64 lines on each page, 80 characters per line. Results on your printer may vary, of course: if you decide to install with 0.25-inch margins on an LJ III, for example, you can get several more characters on each line, and at least two more lines per page.

2 X 4 ships with the ability to print a 1,000-page document in Duplex mode, or a 2,000-page document in 4-up. If that's not big enough for you, drop a line and we'll send you instructions so you can make **2 X 4** handle documents five or ten times that large. Heaven help ya!

Because of the way **2 X 4** handles page breaks in 4-up printing (and a ... ahem ... "design feature" of WinWord), you may start having problems printing "squished" documents with more than 1,000-1,500 or so hard page breaks. The easy workaround here is to simply remove the hard page breaks yourself, using Edit Replace (several times!). You may want to replace them with Section breaks. If you have trouble, again, drop a line.

Printer Limitations: This may be the first time you blow your LaserJet's memory. Watch out! If you are printing with a soft font, there's an enormous quantity of data sent to your laser printer (each itty-bitty dot – it's a process called "rasterizing", and man is it s-l-o-w.....). If you have less than 1 MB of printer memory, don't be too surprised if you hit a "Printer Memory Overload". The reason is simple – and frustrating. A full page of graphics (and a soft font squished ten ways from Tuesday *is* a full page of graphics!) can occupy more than 1 MB of printer memory.

Fortunately there are a couple of things you can do. Simplest is to re-format your document to use one of your printer's "hard" (built-in) fonts. If you can't bring yourself to do that, add a bunch of white space to the document. White space doesn't get sent to the printer (there are no itty-bitty dots to send). The ultimate solution, of course, is to buy more memory: it isn't as expensive as it used to be – Peripheral Outlet 800-332-6581, for example, is advertising 2 MB LJ upgrades for $135, and it'll be cheaper by the time you read this.

If you start printing full-page graphics, in WinWord, CorelDRAW, or whatever, you're going to want more than 1 MB sooner or later. May as well be sooner, eh?
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On a different note, some laser printers have a nasty habit of "eating" paper that's been fed through more than once. If your printer gets the munchies, you can do a couple of things. First, try using a slightly heavier paper – 24 lb instead of 20 lb, for example. Second, wait for the paper to cool between runs. Don't know why that works, but it does. Third, try curling the paper back to "normal" after it's been through once, and fan it with the rest of the stack. (If all else fails, you can try playing Grateful Dead at full volume, but so far that only seems to work on *humans* with the munchies...... we'll keep experimenting for ya, though.)

If you come up with any tips on curing the printer munchies, let us know!

PrintManager Limitations: No matter how hard you try, Windows' Print Manager won't print more than 20 "jobs" at a time. Alas and alack – the only way to print odd and even pages in WinWord is to print each page as a separate job! That means that **2 X 4** has to slow down and wait for PrintManager every time it cranks out 20 pages. (Heh heh heh! How often do *you* get to blame your slow program on the operating system? "Honest, boss. It won't go any faster, no matter what I do... says so right here.....") You have to intervene to start the printing back up again: it's only a click on an OK button, but it's a PITA-OK button, in our book. From your point of view, it means that any 4-up document that's over 80 pages long will require a totally gratuitous OK button click for every 40 pages. Any Duplex doc over 40 pages will take a click per 20 pages. Yecch.

Oh yes. We've complained to Microsoft about it. This is a limitation of Windows itself – not WinWord – so we've had a chance to take jabs at an entirely new group of WinFolk. But, hey, if you're printing a 160-page document on 40 sheets of paper, shucks, four extra OK clicks ain't all that bad. Think of all the time you'll get in on WinWheel or Reversi.

Windows Priority Limitations: This is probably the most frustrating part of using **2 X 4**. We've figured out how to toss **2 X 4** into the background, so it can go play by itself in the corner while you do "real work" like Solitaire. Unfortunately, we haven't found a good way to tell **2 X 4** to let go. That means you'll probably sit there clicking away at Windows icons or Solitaire cards, wondering why your favorite programs won't pop immediately to life. (Sometimes Windows won't even warn you by turning the cursor into an hourglass!)

The problem is in the time-slicing. **2 X 4** is a greedy sucker: it grabs onto all the computer time it can get, your mouse clicks notwithstanding. We're trying to find a workaround, but nothing seems to work just yet. In the meantime, rest assured that the computer stores up all your mouse clicks and then replays them when it decides it's good and ready – typically when **2 X 4** starts spooling things to the printer.

You can help improve WinWord printing for **2 X 4** – and WinWord printing in general – by going into Print Manager, clicking on "Options", and setting the print priority to "Low". That lets you get the most out of your computer while it hassles the slow print times all by itself, way back in the background where a good print manager belongs.

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Along the same lines, we haven't found a way (yet) to have WinWord notify you when it needs your assistance – flipping over the paper in the output bin, for example, or clicking to let the next twenty "jobs" go into PrintManager. Ideally, WinWord would toss a big dialog box up in the middle of your ... uh ... executive Klondike game ... and tell you to stop flipping cards and hop-to. That's what PrintManager does, for example, when it discovers that you've run out of paper.

WinWord doesn't seem to work that way. If you have another application maximized (i.e., hogging the whole screen), WinWord demurely sits in the background and waits for you to summon it. Ho-hum. You only have two choices: keep checking the WinWord icon, and click on it when it starts blinking (WinWord's way of saying "Feed Me!"); or keep an eye on your printer, and resuscitate WinWord with a double-click when the printer stops.

Actually, all in all, that isn't too bad. It gives you a chance to concentrate on your game......

WinWord Limitations: There are two big WinWord limitations that will affect your printing large text/ASCII documents, whether you use **2 X 4** or not. First is the limitation on the number of Edit Replaces WinWord will perform before it gives up. If you use Edit Replace to get rid of extra carriage returns at the end of each line on a text file, you'll find this limitation very quickly. There's nothing you can do but follow the prompts, save the file, and start again where you left off. But before you get too frustrated, try doing a File Open on the text/ASCII file, and specify "Text + Breaks" or "Text + Layout" where WinWord gives you the chance. (You may need to upgrade to WinWord version 1.10a to get the latest filters. Just call 800-426-9400 and have your credit card handy; it costs $10.) Using the built-in WinWord filters instead of your own hand-written carriage return obliterator could save your sanity on a giant file!

Which leads us to the second limitation: "Text + Layout". Be wary of this filter. If it starts giving you negative paragraph indents, it's going to confuse **2 X 4** – and it'll probably confuse you, too! If "Text + Layout" gives you very odd results, pick a weird paragraph and click on Format Paragraph. Negative indents? Strange line before/line after settings? Well, we warned ya......

Character Set Limitation: If you print a text/ASCII file with **2 X 4** you'll probably encounter at least a few characters that don't look right: characters 179 to 218, which are usually employed to print boxes and borders, for example, turn into a menagerie of Ä, É, Î, Õ and Üs. That's a limitation ("design feature"?) of the Windows character set. For a more complete discussion of this pesky sleight-of-hand, look in the Dinger documentation, file DNGR20.DOC.

Woody Limitations: Nope, **2 X 4** doesn't print booklets. Hey, we tried forever to get 'em to work and they just won't. A booklet looks a lot like "squished" 4-up printing, except the pages have to be printed in the right order – so you can fold the printed sheets in half, staple 'em in the middle, and read the whole thing from page 1 to the end. It always seemed that the tough part would be figuring out which page goes where. Fortunately/unfortunately that was the easy part!

We're stumped on how to physically paste a WinWord page onto a half-sheet of paper, landscape mode, and bring the headers and footers along with the page, proper page numbers and all.
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There has to be a solution. We're looking at one workaround that prints each sheet of paper four times, but it seems like an awful lot of trouble. Do you have any ideas? Want to submit something for **Son of WOPR**? We're very, very interested!

You'll find several other limitations – **2 X 4** won't pick up your existing headers or footers on squished documents; it won't print footers at all, squished; it ignores some section breaks; it doesn't check to see if your fixed-position-formatted paragraphs get thrown out of the printable region, etc. Most of these limitations exist because we couldn't find a way around them, short of scanning every character in your document, and the speed penalty was just too great!

The general solution to most of these problems is to print in Duplex mode. Perhaps in a future version of **2 X 4** and **WOPR** we'll be able to iron out the shortcomings without doubling or tripling the print times. In the meantime, let us know what you *don't* like: that's how we learn what you'll put up with......

§

Registration

If you use **2 X 4**, § register **WOPR**! It's a sad-but-true fact that it costs money to develop and support a package like this. Think of it as voting for more software of this caliber with your checkbook. Or your company's checkbook. Or both!

In return, Pinecliffe International will give you this solid-gold guarantee: If **2 X 4, WOPR,** *or any Pinecliffe International product*, ever fails to live up to your expectations, for whatever reason, just drop us a line and we'll send you a full and complete refund, by return mail, no questions asked. No problem.

2 X 4 is not "cripple-ware". You have the entire, fully-functional package in front of you, embedded in this file, 2X4R10.DOC. (You even have the source code, if you want to play with it.) We haven't held anything back. **2 X 4** has no run-time "pester screens" begging you to register, no delay loops to infuriate you, no hidden code or missing documentation. We've decided not to work that way, but instead to give you the best we've got. And all we've got. Up front.

In fact, it's Pinecliffe International's policy to try to support **2 X 4** users, by mail or via CompuServe, *before* they register. Don't believe it? Give us a try!

Please help us continue this distinctly '60s-style support policy for our distinctive '90s-style software by registering **2 X 4** if you use it. We're counting on you. Our families are counting on us!

2 X 4 is part of **WOPR**. Register **WOPR**, and you automatically register **Enveloper**, **Dinger**, **Treasure**, **2 X 4**, **FileNew**, **WOPRClock**, and all the other little **WOPR**s, all at the same time. Although it is possible to register Enveloper 3.2 and Dinger 2.0 separately, **2 X 4** and all subsequent versions of **Enveloper** and **Dinger** will only be available in **WOPR**.

When you register, you will receive:

·   A diskette with the ~~latest versions~~ of **WOPR, 2 X 4, FileNew, Treasure, Enveloper, PS Enveloper,** and **Dinger** including bug fixes, the latest tips and tricks, and notices about everything else we're working on;

·   A fancy, printed, perfect-bound **Enveloper** ~~manual~~, with a very helpful index (it really comes in handy during installation, when you're curious about a specific feature, and it's a real pain to interrupt the installation and flip through the Enveloper document);

·   Your very own **Enveloper** ~~Cheat Sheet~~ to reduce smudging on your envelopes – a true collector's item, suitable for framing, in genuine 67 lb. Vellum Bristol-Cover;

·   ~~Unlimited free support~~ via mail or CompuServe for 90 days;

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·   Notification and ~~guaranteed lowest prices~~ on new Pinecliffe International products, some of which may surprise you (heck, the way things are going right now, some of 'em may surprise *us!*);

·   Access to our trusty friends at Advanced Support Group via their ~~900-number~~, where expert help costs $2/minute;

·   ~~Free~~ sign-up to ~~CompuServe~~, with a free $15 usage credit; ~~Discounts~~ on subscriptions to Shareware Magazine;

·   ~~Discounts~~ on future Pinecliffe International WinWord macros; and,

In addition, you'll be placed on our ~~mailing list~~ for early notification about upgrades and special offers. If you like **WOPR, 2 X 4, FileNew, Treasure, Enveloper**, and the rest, we think you'll really like the other goodies comin' down the pike.

Those are the tangible benefits of registration.

Most of all, though, registration entitles you to a hearty pat on the back for helping us keep **2 X 4**, **Dinger**, **Enveloper**, and other Pinecliffe International WinWord titles alive and thriving. We *do* appreciate it! Thanks to you, more great macros are just around the corner.....

WOPR 1.0 registration is $49 for individuals. Companies and organizations pay $45 per user for two to ten users. Site licenses (more than ten users) run $250, plus $25 per user. Sites with more than 100 WinWord users should contact us for details. And if you want to get a break for your educational or non-profit organization, drop us a line.

Enveloper 3.0, 3.1, 3.2 and **Dinger** 2.0 users who registered before July 15, 1991 qualify for big discounts. If you overlooked the upgrade notice sent to you – or don't remember the details – just let us know.

~~To~~

New! Credit Card Registration

Lots of you asked for it. We're trying hard to make registration as easy as can be....

Pinecliffe International now takes MasterCard and Visa, by phone, CompuServe, Internet, UPS, Federal Express, Airborne Courier, DHL, private messenger, 20-yak-team, or even (if all else fails) the mail!

To register by phone, get your credit card ready and call ~~1-800-OK-WINWORD~~. We'll take it from there. Absolutely painless. From overseas, dial the U.S. access code (if any), and then ~~303-642-0604~~.
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To register on-line, send a CompuServe Mail (Easyplex), or "private" message on the MSAPP forum to Woody Leonhard, 74730,1734. (Make sure it's a private message, or one sent by Easyplex, unless you want your credit card number posted to all those MSAPP crazies!) On Internet, just send a message to 74730.1734@compuserve.com.

We'll need the following information:

Your name, as it appears on the credit card

Whether your card is a MasterCard or Visa

The account number

The expiration date

In addition, we would like to know:

Your mailing address

Your CompuServe i.d. number (if you have one)

Where you got your copy of **WOPR**

That's all there is to it. CompuServe mail is reasonably secure; it's extremely unlikely anyone will be able to "crack" it and get your credit card number. Ditto for the MSAPP forum's **PRIVATE** messages. Internet, similarly, has a reputation for being quite secure for personal messages.

To register by mail with a credit card, simply fill out the form that is at the end of this document. (It's the same document that prints if you click on any of those sentences that say: "~~To~~")−There's a space on the registration form for your credit card information.

Viri

Copies of **WOPR** distributed by CompuServe, most Bulletin Boards, and all Shareware distribution companies, are checked for viruses. (In fact, as of this writing, you are more likely to encounter a virus in a commercial product than a CompuServe program!) When you register, the copy of **WOPR** you will receive in the mail will be a direct copy from a double-scanned master, straight off the developer's desk.

§
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WOPR is distributed as Shareware, i.e., you are encouraged to disseminate **WOPR** far and wide, providing it is distributed in its entirety and without charge (except for reimbursement of media and mailing costs, if applicable); further details on commercial distribution are in accordance with ASP guidelines, and are detailed in the next section.

Pinecliffe International and the other Copyright holders expressly reserve the right to change these distribution restrictions in future versions. **WOPR** 1.0 is distributed without warranty, either expressed or implied, and without guarantee as to its suitability for a particular task. (That's why **WOPR** is Shareware: you get to decide for yourself if it is right for you. But we'll bet you're gonna like it!)

§

Association of Shareware Professionals

Pinecliffe International is proud to be a member of the Association of Shareware Professionals. If the concept of Shareware is new to you, please take a few minutes to read this section.

The following was written by Paul Mayer – President of the ASP and author of GRAB Plus – and edited slightly to apply specifically to **WOPR**. (If you have clients or friends who haven't yet learned of the wonders of WinWord and **Enveloper**, you might recommend GRAB Plus to them: it's a top-notch envelope printing utility, and one of the most successful Shareware products around.) Take it away, Paul....

"Shareware distribution gives users a chance to try software before buying it. If you try a Shareware program and continue using it, you are expected to register...

"Copyright laws apply to both Shareware and commercial software, and the copyright holder retains all rights, with a few specific exceptions as stated below. Shareware authors are accomplished programmers, just like commercial authors, and the programs are of comparable quality. (In both cases, there are good programs and bad ones!) The main difference is in the method of distribution. The author specifically grants the right to copy and distribute the software, either to all and sundry or to a specific group. [**WOPR** falls into the "all and sundry" category]

"Shareware is a distribution method, not a type of software. You should find software that suits your needs and pocketbook, whether it's commercial or Shareware. The Shareware system makes fitting your needs easier, because you can try before you buy. And because the overhead is low, prices are low also. Shareware has the ultimate money-back guarantee – if you don't use the product, you don't pay for it.

"**WOPR** is a "shareware program" and is provided at no charge to the user for evaluation. Feel free to share it with your friends, but please do not give it away altered or as part of another system. The essence of "user-supported" software is to provide personal computer users with quality software without high prices, and yet to provide incentive for programmers to continue to develop new products. If you find this program useful and find that you are using **WOPR** and continue to use **WOPR** after a reasonable trial period, you must make a registration payment of $49 ($45 a head for groups of two to ten) to Pinecliffe International. The $49 (or $45, if appropriate) registration fee will license one copy for use on any one computer at any one time.

"You must treat this software much as you would a book. For example, this software may be used by any number of people and may be freely moved from one computer location to another, so long as there is no possibility of it being used at one location while it's being used at another – just as a book cannot be read by two different people at the same time.

"Commercial users of **WOPR** must register and pay for their copies of **WOPR** within 30 days of first use or their license is withdrawn. Site-License arrangements may be made by contacting §.

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"Anyone distributing **WOPR** for any kind of remuneration must first contact the author (Pinecliffe International, P.O. Drawer 7337, Coal Creek Canyon, Golden, Colorado 80403-0100) for authorization. This authorization will be automatically granted to distributors recognized by the ASP as adhering to its guidelines for shareware distributors, and such distributors may begin offering **WOPR** immediately. However, Pinecliffe International must still be advised so that the distributor can be kept up-to-date with the latest version of **WOPR**.

"You are encouraged to pass a copy of **WOPR** along to your friends for evaluation. Please encourage them to register their copy if they find that they can use it. All registered users will receive a copy of the latest version of **WOPR**."

.....Thanks, Paul. Couldn't have said it better ourselves.

§

Installation

You customize and install **2 X 4** by clicking up at the top of this document. The routine works by running macros attached to this document and copying a customized macro into WinWord as a global macro. If you don't understand this stuff, don't worry. Just click and stand back!

2 X 4 adds itself to the end of your "File" pull-down menu (the one you can see right now on the second line of your screen), if it isn't already there. Once installation is complete, you run **2 X 4** by simply clicking on "File", then "Print 2-Up or 4-Up". That's as complicated as it gets...

If you clobber the "TwoByFour" macro – just re-install. It take a few minutes, but **2 X 4** is smart enough to get everything squared away, and clean up after itself.

The installation process will zap out your Clipboard (although it does leave a friendly message in its wake); all your other settings should remain intact. When printing 4-Up, **2 X 4** takes great care to flip you in and out of landscape mode without your intervention. None of your other setting are changed.

2 X 4 adds about 14K bytes to your NORMAL.DOT file – which wouldn't be a big deal, except for one, uh, minor detail. Once NORMAL.DOT grows to a certain size, it takes absolutely forever to save. You can sit and watch the status bar say, "Saving NORMAL.DOT, 0% complete", and watch your hard disk's red light blink on and off for two, three, four minutes – even longer on a sluggish 286. The Berlin Wall was torn down in less time than it takes to save a large NORMAL.DOT and exit WinWord. When it first happens to you, you'll be tempted to jab that big red Reset button, but resist the urge! This is considered normal behavior...

2 X 4 may push your NORMAL.DOT over the limit. If it does, please accept our apologies. Be patient, but rest assured: it happens to everybody sooner or later!

Installation Sequence and Settings

Now let's step through the installation process, one screen at a time.

You start installing **2 X 4** by double-clicking on the box up at the top of this document. So far, so good.

2 X 4 asks you about the type of printer you use. Your response is used to figure out how to tell *you* to turn the pages around (!), what minimum margins your printer can handle, and to decide which sequence of printing will result in a stack of pages sitting in your output hopper, properly collated and ready for stapling, punching or binding. The important distinction among the printer choices is the way in which they handle paper – not fonts or built-in "emulation modes" or anything fancy like that. Pick the printer that matches the way your printer handles paper. If you've jury-rigged your ancient LaserJet + so paper always comes out upside-down and in order, choose the LJ II setting. Or if you always run your LJ III with the back paper-catcher flipped
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out, and your paper is always deposited face-up and in reverse order, pick the LJ setting. (Ever wonder what people mean when they say their printer "flipped out"? Now you know the rest of the story....)

And, sorry, but if you switch your LJ IID or IIID back and forth between Duplex and non-Duplex (simplex?) mode, you'll have to install different copies of **2 X 4**, and use the copy that corresponds to whatever mode your LJ is using at the moment you print. Fortunately, that's pretty easy: there's a box at the end of installation that lets you change **2 X 4**'s name, so two copies of **2 X 4** are a piece of cake.

The next few screens are the toughest part of using **2 X 4**. They tell **2 X 4** how to switch back and forth between Portrait orientation (the normal way of looking at a sheet of paper, with the short edge on top) and Landscape orientation (where the paper is on its side, the long edge on top). They are necessary because no two Printer Setup routines are the same.

If you need help working through the screens, drop us a line and we'll try things with your print driver, and give you instructions in excruciating detail. If it's any consolation, you can breathe a little easier when you're done: once you've slogged through these screens, you'll never have to go through this hassle again. **2 X 4** will take care of everything.

Once you've told **2 X 4** how to get back and forth between Portrait and Landscape mode, **2 X 4** gives you a chance to change all of the settings that have to do with printing. Generally **2 X 4** makes a pretty good choice, based on the type of printer you own, but once you become accustomed to **2 X 4** you may want to change things around. No sweat. Here's a description of the settings, and an explanation for why they are initially set the way they are:

Top, Bottom, Left and Right Margins are the numbers WinWord uses for Format Document settings. The initial settings have been chosen to maximize the amount of print on a page, yet fall within your printer's "printable area", and to leave a tiny bit of room left over for punching, binding or stapling. All printers get at least 0.50 inch on top, to make room for headers that won't be zapped by a three-hole punch. Original LaserJets get 0.50 inch all around. LJ IIs and later get 0.35 inch on the sides and bottom (we hit some problems with the LJ II at 0.25 inch, the nominal printable area setting; feel free to decrease your setting to 0.25 inch and see what happens on your printer). DeskJets and dot matrix printers get 0.55 inch all around, to just squeak past the common 0.50 inch printable area restriction.

Default document Tabs are set at 0.25 inch for all printers, in an attempt to strike a balance between legibility and consumed space.

The Center Column setting – in WinWord's Format Section – is initially set to 0.20 inch on all printers. Anything less than that gets visually confusing; more than that wastes space.

2 X 4 will usually print at 8 point. You can override that choice here. If you have a laser printer and don't mind using a magnifying glass, you can go down to 6 point or lower. And, after it's installed, if you click on File then Print Duplex of 4-Up, and tell **2 X 4** the you have a text/ASCII
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file, you'll be able to change the font and the point size on the fly. Be careful if your printer doesn't support landscape fonts (sideways printing) in all point sizes: LJ II and earlier printers have this problem, unless they're run with Adobe Type Manager, Bitstream Facelift, or a good cartridge.

Header Tabs are proposed to correspond to the margins. **2 X 4** supports three tab stops in the header: the first is right-aligned, the second is left-aligned and the third is right-aligned. Try printing something 4-up with a header and you'll see how they come out.

The Macro Name indent is an obscure setting that's only included to let the most diehard **2 X 4** nut twiddle with every conceivable variable. It's the Format Paragraph indentation used when printing macro names. If you don't print macros, you don't even need to waste a nanosecond over it. If you *do* print macros – well, you've probably already hacked **2 X 4** anyway, but at least we wanted you to know we were thinkin' of ya!

Finally, you get to change the name of the macro. This may come in handy if you have multiple printers of different types hooked up to your computer, or if your systems administrator is the kind of person who switches the Duplex feature of your LJ IIID on and off every odd-numbered day. By and large, though, you should just leave **2 X 4**'s name alone: if you do, every time you re-install **2 X 4** it will clean up after itself.

The rest of the installation goes along nicely. Sit back a few seconds, and **2 X 4** will take care of everything.

That's all it takes.

§

Duplex Printing

Many ol' hacks (and some young'ns!) claim to have done it – heck, we thought *we'd* done it, too, a dozen times – but as far as we know, **2 X 4** is the very first macro to ever correctly (fingers crossed, knock on wood!) implement Duplex printing. The idea is simple: print all odd-numbered pages in a WinWord document, pause to flip the paper over and put it back in the hopper, and then print all the even-numbered pages. What you'll get is a document that looks like it was printed on an expensive LaserJet IID, IIID, or IIISi, i.e., a document printed on the front and back of each sheet of paper. With **2 X 4** you'll get Duplex on "normal" LaserJets, DeskJets, dot matrix printers, PostScript printers – far as we know, on *any* printer that works with WinWord.

The printed document is exactly like your original, odd pages on the front, even pages on the back. And it's delivered to you collated and ready to use, whether your printer normally prints things in the right order or not. You don't have to shuffle anything!

Except..... Ah, yes, there is one itsy-bitsy exception, one way in which your printed document will differ from the original (at least only one we know about right now!). Inevitable, perhaps. In order to accomplish its magic, **2 X 4** builds a copy of your original document and gives it a name ending in ".2X4". Thus, your carefully crafted "MYDOC.DOC", say, will be copied and transformed into "MYDOC.2X4". And that one bit of hocus-pocus means that one WinWord field – {filename} – will come up differently in **2 X 4** than it does in the original. If you've never heard of {filename}, well, you don't have to worry about a thing. If you use {filename} all the time, though, you'll fall victim to the ".2X4" switch. Life's a beach, no?

If you only knew how much smashing and grinding and mutilating mayhem was performed on the .2X4 document, you'd know why **2 X 4** doesn't have the gall to touch your original! That one little inconsistency, {filename}, is the price you pay to get your original document back untouched.

That one warning out of the way, let's take a look at how **2 X 4** Duplex printing works.

2 X 4 starts by poking around your document, trying to figure out what it is. If you're printing a macro, **2 X 4** will prompt you for character formatting (macros haven't any formatting of their own – usually). Your macro is copied into a document and a reasonable header and footer are slapped on.

If you're printing a WinWord document with attached macros, **2 X 4** asks you if you want to print the macros, too. Say yes and you'll go through the steps of creating and formatting a new document, a copy of the old one with the macros tacked onto the end.

And if there aren't any macros involved, **2 X 4** just makes a copy of the document. Easy.

Next, you're asked if you want to print Duplex or 4-Up. You choose Duplex. (4-Up is discussed in the next chapter.)

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Then all hell breaks loose. **2 X 4** has to go through all these contortions – and will often make yet *another* copy of the document – to figure out which pages are odd and which are even. It isn't easy, when you stop to think about all those "Format Section Odd Page" and "Edit Headers On Even But Not Odd Pages" and "Edit Footer With New Starting Page Number But No Associated Header, Thank You" options. There's a built-in bypass routine if you've managed to keep your document down to one section, but anything more than one section kicks **2 X 4** into a page-by-page journey that can take a considerable amount of time. And so it goes.....

Seventh-circle programming, at least, on the Dante scale of 1 to 9.

Oh – we tried to make **2 X 4** shrink into the background before doing all this work, and discovered that it just didn't help: no matter what we did, **2 X 4** wouldn't let anything else run. That's why you get to watch while **2 X 4** does all of its formatting. Think of it as the antithesis of a screen blanker, a light show to prove that **2 X 4** is doing its thing. Concrete fishes, indeed......

Finally (finally!) **2 X 4** is ready to print. It shrinks into the background and only surfaces when you need to help with the paper. You may have problems getting **2 X 4** (and WinWord) to let go of your cursor while it's in the background. Be sure you read §for all sorts of warnings and suggestions for getting things done while **2 X 4** is soakin' up computer cycles in the background.

§

4-Up Printing

4-Up printing in WinWord is a strange combination of guesses, approximations, and trade-offs. There's a lot going on beneath the surface, so forgive us if we go into some great detail.

The first part of 4-Up processing is identical to Duplex; you should read the preceding section to get a good idea of how **2 X 4** treats macros and the like. The difference comes when you tell WinWord that you're printing 4-Up instead of Duplex, and when you specify whether you have a WinWord document or a plain text/ASCII file. The only difference in the way **2 X 4** handles a plain text/ASCII file is one additional step where you can specify fonts and point-sizes. If you are printing a WinWord document, **2 X 4** blithely assumes you've already formatted it with the fonts you want, and applies the point size you picked when you installed **2 X 4**.

When you pick 4-Up print, **2 X 4** immediately executes its pirouette – rotating to landscape mode. It then unleashes its incorrigible squishing machine, reformatting the document with all the margins and tab settings you specified when you installed **2 X 4**, and adding the correct character formatting. It goes one step further, forcing tight line spacing by giving the entire document a fixed "Format Paragraph" setting equal to the point size. (For example, if you choose 8 point, **2 X 4** forces a "Format Paragraph" Line setting of minus 8.) Superscripts and subscripts get short shrift in this scheme, but it adds a few lines of print to each page, and it keeps the lines from drifting closer together and farther apart, a very distracting visual effect.

Next comes the most controversial part of **2 X 4**. An earlier beta test version of **2 X 4** gingerly stepped through each section in the document and tried to compensate for all the different header and footer settings, page breaks, section page numbering shifts, and so on. Well, that version was a dog, pure and simple. It spent so much time flim-flamming around – and so little time doing anything useful – that we canned it altogether. Lucky you: even on a souped-up 8 meg 486/33, working on a RAMdisk, this small part of the old, experimental **2 X 4** could take ten minutes or more to format a complex 100-page document. *Blecch!*

Hey, if you wanted "perfect", you'd be printing in Duplex, not 4-Up, right?

Right or not, that's what we figured, so we took the much faster road, dropped some of the subtleties, and concentrated on squeezing as much as we could onto each sheet of paper. What you see in **2 X 4** is the best we got......

Which is all by way of explaining that **2 X 4** blasts the living daylights out of your document ... er ... a *copy* of your document <heh, heh>. It runs through and deletes all the hard page breaks, replacing them with column breaks. It converts section breaks to column breaks, too. And it tosses your precious headers and footers into the bottomless bit bucket, never to be seen again.

To partially compensate for this rudeness, **2 X 4** does let you construct a custom header, put a box around it, that sort of thing – but, in the spirit of maximizing print and minimizing white space, it doesn't let you print a footer.

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The incredible shrinking machine laid to rest, **2 X 4** prints your squished document, then deletes it. Worth noting: because the constructed ".2X4" document contains only one section, the hellacious ladder-stepping routine that matches pages to odd and even page numbers isn't necessary. That's why 4-Up print goes faster than Duplex, usually, once WinWord has shrunk into the background.

If your original document is primarily composed of soft fonts (i.e., fonts that are not native to your printer or its cartridges), WinWord has to generate an enormous amount of data to print just one 8-point landscape page – this page, for example, when printing 4-Up, takes about 200K bytes of data with a hard font, and about 500K bytes of data in an Adobe Type Manager soft font. That's a lot of dots. And a lot of calculating!

Some day, some drivers (we won't mention ATM by name) may support the built-in scalability of the LaserJet III, IIIP, IIID, and IIISi. Until that time, though, soft font print data – even on these scalable printers – is generated one dot at a time. It's very, very slow.

You can speed things up nicely, though, if you try to format your original document with any hard font that your printer (or its cartridges) can handle in 8-point landscape. If you have an LJ III or IIID, try CG Times or Univers; on other printers, Courier may do the trick. Those fancy soft fonts look nice, but you'll sure pay the price in processing time!

Besides, at 8-point, you may find that the differences between a "pedestrian" font and a really fancy one just isn't all that great. You have the choice. Choose wisely!

What? A Blank Page? Be forewarned: 2 X 4 will often spit out a blank page at the very beginning. That's intentional! 2 X 4 will print on the *back* of that sheet. We used to ignore that extra sheet, but changed things around when we discovered that the curling can make a difference in how sheets are fed. Just a little touch to show you that we care about your printer jams. (And *our* printer jams, too!)

EuroNote: We've had some reports of dropped lines when a document originally formatted in non-metric is "squished" onto an A4 page. If this happens to you, please send us a copy of the offending document, and a copy of your installed global macro. Let us know if you need assistance. And thanks!

§

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Two-By-Four 1.0 ends here.
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Post Office Drawer 7337
Coal Creek Canyon

Pinecliffe International

~~Golden, Colorado USA 80403-0100~~

~~, Have fun! ,~~

A Handy Registration Form

Woody Leonhard, President
Pinecliffe International (w10)
Post Office Drawer 7337
Coal Creek Canyon
Golden, Colorado USA 80403

Dear Woody:

Enclosed is my registration fee for **WOPR** 1.0.

I would like to register as (check one):

Name and Address:

Contact Person (if appropriate):

CompuServe i.d. number (if available):

[ ] I've enclosed a check (in U.S. Dollars, drawn on a U.S. bank) or postal money order payable
to "Pinecliffe International" in the amount of: $

[ ] Please charge my [ ] MasterCard   [ ] Visa, Account:
Expiration Date: For the amount of: $

REGISTER BY PHONE! CALL 1-800-OK-WINWORD, have your credit card handy

I got my copy of **WOPR** 1.0 from: (No, we aren't checking up
on people! We're trying to see which bulletin boards, Shareware vendors, etc., are best for
WOPR. If you got the package from a friend, just say "a friend", if you like – we don't need a
name.)
Pinecliffe International

Sincerely,

P.S. Things I would like to see in the next **WOPR**:

* We count users the same way as Microsoft, i.e., you should register one copy of WOPR for each copy of WinWord.

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