Two-By-Four 2.0 — Evaluation Copy
A Word for Windows 2.0 macro
To implement Duplex, Side-By-Side, 4-Up, Odd/Even and Booklet 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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The problems are by no means unique — 2 X 4 uses some fancy Word for Windows features that are still a bit primitive. There are explanations and work-arounds for (almost) all of the problems. Please. Read this document for all sorts of tips that may help — not just for 2 X 4, but for all your printing problems.

And if you don't have printing problems, well, sooner or later you will. Guaranteed!

2 X 4 is part of the Word for Windowsä Office POWER Packä — **WOPR** — the world's largest WinWord add-on. **WOPR** consists of the following files:

TBEDIT.EXE — **Toolbar Editor.** Now WinWord has the best icons in the business ... in color ... and you can draw your own!

ENVR.DOC — **Enveloper**. The fanciest, easiest envelopes ever! Logos, bar codes, custom envelope sizes, notes, multiple addresses, all fonts. Works on any printer.

2X4.DOC — **Two-by-Four**. Print duplex (front and back), squished side-by-side, squished duplex for *four pages on each sheet of paper*. Print booklets, even or odd pages only, forward, backward, multi-section documents, macro listings, and much more.

FILENEW.DOC — **FileNew**. Manage your documents; don't let them manage you! Keep track of templates, using full descriptions. Stick documents in the right directory, first time, every time.

WOPRLIB.DOC — **WOPR Library**. The largest collection of Word for Windows macro subroutines anywhere. Dozens of routines to make it easier to build your own, custom macros — and a nice cookie jar, chock full of ideas, if you're just starting at writing your own macros.

The **LittleWOPRs**. CHARVIEW.DOC, the **Character Viewer**, tells you what codes lie behind your inscrutable characters. CLOSEALL.DOC, to **Close All Files** with one click. FILEDEL.DOC, the most reliable **File Delete**. FILELIST.DOC, which **Lists Files** in a snap. INSERTIT.DOC **Inserts** "Page X of Y", file names, much more.

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SUPERSUB.DOC puts **Super and Subscripts** at your fingertips. CLOCK.DOC, our classic **WOPRClock** — the most-often-used WinWord macro anywhere — takes a lickin' and keeps on tickin'. COUNT.DOC **Counts Words and Characters**. COMPOSE.DOC, **Character Compose**, uses simple two-letter abbreviations to create characters like § © ® ¤ £ ¢ ä — and many more.

> All of these programs are to be distributed together, as one package, known as the
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> **§**
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> *If you are missing any of these files, you do not have the entire **WOPR2** package: contact the person or company that sent you the files, to ensure you receive any missing pieces.*

WOPR is Shareware, the "Try It Before You Buy It" kind of software that you can take through its paces *before* you write the check. You trust us to distribute the best Word for Windows add-on we can produce, in its entirety, with nothing held back. We trust you to buy WOPR if you use it.

Here's what you'll get when you register WOPR:

- **The Manual.** A fancy, bound, 144 page compendium of breathless prose, indexed, ready to help guide you through every nook and cranny.

- **The programs.** No nag screens. Ready to install over the top of the shareware versions. And we send you the whole enchilada — source code in most cases, too — so you can poke around and change anything you like.

- **30 minutes of free telephone support** (toll call), valid for 30 days.

- **More free support**, via mail or CompuServe. And 900-number support if you need help, like, right away, after your 30 minutes/30 days expires.

- Your very own **Enveloper Cheat Sheet.** Get the smudgies out of your laser-printed envelopes. A classic, suitable for framing.

- Since you'll be on our mailing list, you'll be the first one on your block to hear about improvements, new products, books from the Pinecliffe International PineNuts (including the Addison-Wesley hit, *Windows Programming for Mere Mortals,*available at a book store near you) and all sorts of other neat, innovative, time-saving stuff. You'll also get several great offers, including discounts on future WOPR upgrades and a free CompuServe sign-up.

- Most of all, you'll receive our sincere thanks for helping keep WOPR alive. Our registered users made WOPR 2 possible. Your registration will help us continue making innovative, useful products for WinWord in particular and Windows in general. We're counting on you; our families are counting on us.

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WOPR is $49.95 plus $4.50 shipping and handling, $9.50 outside North America. Site licenses (more than ten users) are available at considerable savings.

You can register right now by calling 800-OK-WINWORD (800-659-4696), or 314-965-5630. We take Mastercard or Visa, and try hard to ship within 24 hours. To register by mail, send a check (in U.S. dollars, please) to:
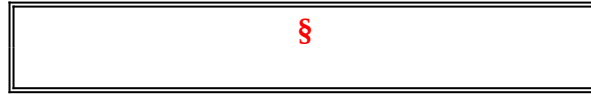
Pinecliffe International
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Des Peres, Missouri USA 63131

All Pinecliffe International products are backed by a 100% no-questions-asked lifetime money back guarantee. If WOPR ever fails to live up to your expectations, for any reason, let us know and we'll refund your money. Immediately. Period.

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

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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,

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 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.

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.

Acknowledgments

The original **2 X 4**, a slow and cranky program — but the first to crack the "print all even, then all odd pages" Gordian knot — retired with the appearance of Word for Windows 2.0. New WordBasic commands and a sudden change in paper handling made it possible to conceive of a new, better, faster, and more reliable **2 X 4**.

Eileen Wharmby wrote this sleek, new, versatile version of **2 X 4,** practially from scratch. The wondrous programming you see before you is a tribute to Eileen's skill ... and patience! She also wrote the fun parts of this document; if you read something witty, blame her. (Thanks, Eileen.)

And thanks to all the 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? Want to just print the even pages?

Most compelling: Ever wonder why the world's premier word processor has such a hard time formatting and printing Duplex and 4-Up documents and why they all claim you can't print Booklets?

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

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What Duzzit Do?

2 X 4 adds itself to your "Tools" pulldown menu, the one you can see right now in the middle of the top row of your screen. To use **2 X 4**, you need only click on "Tools", then "TwoByFour".
We've even added an even quicker way - click on the SmileyFace button **2 X 4** optionally adds to the ToolBar. **2 X 4** pops up with its main screen asking what kind of 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 document emerges -- duplex, 2-Up, 4-Up or booklet , 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 even smart enough to switch the printer into Duplex mode....

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 "2-Up 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....

2-Up 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.

After trying over and over to get WinWord to print booklets, we finally cracked the secret. It looked like it should be easy, once we got squished printing to work. 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.

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 **WOPR** 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. 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 folded into a booklet, 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.
OR you could try using the new save-and-edit feature explained in §

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), — 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. Several 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, 2-Up, 4-Up or as booklets, 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 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.

Most people could really use a way to print Duplex, 2-Up, 4-up documents and booklets 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. 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 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.

Think of all the paper you'll save by using **2 X 4**. You'll get perfectly formatted Duplex 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...

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, or Eileen Wharmby 71320,147. Woody, Eileen, 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....

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Features

2 X 4 2.0 has several features worth crowing about:

First, **2 X 4** is the only program we know about that'll reliably print even/odd pages in WinWord documents. Lots of programs claim to do it. But they all seem to get confused with complex multi-section documents. If you want it done right, **2 X 4** is *the* choice.

Second, **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.

Third, the Duplex print option of **2 X 4** produces a document that is *identical* to your original; 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 $49.95 package! (Well, yes, you *do* have to flip the paper over manually. But, really, for the $950.05 difference, you could *hire* somebody to do the flipping. And you would be getting the Toolbar Editor, Enveloper, FileNew, the WOPR Library and WOPRClock, and all the other WOPR programs free.)

Fourth, **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.

Fifth, **2 X 4** will work with any printer supported by WinWord. Duplex print is easy. 4-Up print is usually done in 8-point; 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 landscape print.

Sixth, **2 X 4** is smart enough to detect if you have macros attached to a WinWord document or template and 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.

Seventh, 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.

If you have anything you'd like to see in **2 X 4 3.0**, 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.

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?

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 3.0 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.

Windows 3.1's Print Manager solves the problem. We won't tell the boss if you won't.

A provision is made in the CUSTOMISATION option for amending this number should the limitation be removed in a later version of Windows. When you upgrade Windows or if you are running a different spooler without this limitation, simply rerun the Customiser and enter 1000 or whatever in the MaximumPages allowed box.

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 *still* 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.

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.

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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......

You'll find several other limitations — **2 X 4** won't pick up your existing headers or footers on squished documents; 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......

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Registration

All the details about registration are presented in the screens which appear — mercilessly! — each time you run the unregistered version of the shareware package. If you use **2 X 4**, please register **WOPR**.

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.

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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 to Pinecliffe International of just $49.95 (plus $4.50 s+h/$9.50 outside USA). Site licenses are available for ten or more users. Please write or call for details. The 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.

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"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 §.

"Anyone distributing **WOPR** for any kind of remuneration must first contact 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.

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Two-By-Four 2.0

Installation

You install and customize **2 X 4** by clicking up at the top of this document. The routine works by running a macro to copy the macros attached to this document into WinWord as global macros. Then the customiser macro is run to select your preferences and record them into WOPR.INI. 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 "Tools" 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 "Tools", and then on "TwoByFour" (or whatever you have renamed it.) Even more simple - click on the SmileyFace button **2x4** can add to your ToolBar. (anywhere you have a space) 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. If your preferences change simply rerun the customiser by clicking Customise on the **2 X 4** main menu.

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.

The **2 X 4** macros will be copied into your Normal.dot file — the place where all global macros live — and you will be presented with a CUSTOMISE screen where you can customise **2 X 4** to your own specifications. This screen is also callable from the Main Options Menu and you can change any setting at any time to suit your needs.

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 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....)

You also choose your unit of measurement (Inches or centimeters) and paper size (A4 or 8.5 by 11). There's a box here too for the maximum printjobs your spooler allows.

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2 X 4 now presents you with a screen showing proposed settings and gives you a chance to adjust them. Generally **2 X 4** makes a pretty good choice, based on your choices on the previous screen, 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. You can opt for a line down the middle if you wish. Booklets use a wider center column space.

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; in the Booklet option there is also a center tab for each half of the squished sheet. Try printing something 4-up with a header and you'll see how they come out.

If you like to experiment, you can adjust any of the proposed settings.

Finally, you get to change the name of the macro. 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 by writing all this information to WOPR.INI where it is stored without cluttering up your system. Any time you wish to change any of your settings simply hit the CUSTOMIZE button on the Main menu.

If you need help working through the selections, 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 -- unless you WANT to!

2 X 4 will take care of everything.

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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 and you aren't squishing, **2 X 4** doesn't need to make a copy of the document. Easy.

Next, you're presented with a menu of choices. You choose Duplex. (4-Up is discussed

in the next chapter.)

Then all hell used to break loose. The original **2 X 4** had to go through all these contortions — and would often make yet *another* copy of the document — to figure out which pages are odd and which are even. But now **2x4 2.0** no longer has to do any of this thanks to SelInfo(), EditGoTo, and some nifty juggling at print time. Now we can ignore the "odd page", "even page" and "restart page number" contortions and speed along much faster with no need for the old page map routine.

Finally (finally!) **2 X 4** is ready to go to work. If you wish, 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.

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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. **2 X 4** blithely assumes you've already formatted it with the fonts you want, and applies 8 point size.

When you pick 4-Up print, **2 X 4** asks if you want headers and presents a screen where you select your formatting. **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, for 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 custom headers (and footers for Booklets), put a box around them (not Booklets), that sort of thing.

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The incredible shrinking machine laid to rest, **2 X 4** prints your squished document, then deletes it.

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!

2-Up is essentially the same as 4-Up but only one side of each sheet is used.

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Booklet Printing

Essentially the same technique is used as for 4-Up printing except that **2 X 4** makes yet another copy of your document and the pages are pasted up in correct booklet order before the rotating and quishing operations take place. You then fold the whole stack down the middle, staple or stitch down the center, and presto, you have a half-size booklet.

2 X 4 now has a KeepCopy option so that you can edit and tweak things to your satisfaction before printing. There is also an option to print these saved formatted copies quicky for reprints and multiple runs. If you share a printer and need to stagger your time you can do it in three sessions: 1) Format and save it, 2) Print the first pass using the Odd/Even only option corresponding to the sequence order for your printer (as shown on the Customiser screen), and 3) come back later for the second pass.

With these two options together, **2 X 4** makes it easy to adjust complicated documents. You can even make a "hard cover" for your booklet by making a four-page booklet with a rough-out of where you want the title etc., maybe a graphic, and then adjust the sizing and placement on a kept copy before printing this on perhaps colored card. Another example; you can adjust those tiresome tables that insist on spilling all over the boundaries.

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Two-By-Four 2.0 ends here.
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Have fun!