

in

M.Tebbutt

COLLABORATORS

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REVISION HISTORY

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Chapter 1

in

1.1 main

Print Server -version 1.00-

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YOU MUST READ ALL OF THIS DOCUMENTATION AS I WILL NOT BE LIABLE FOR
ANY DAMAGE WHATSOEVER. SEE THE DISCLAIMER FOR MORE INFORMATION.

Introduction

Requirements

Installation

SHAREWARE

Limits of the Unregistered version

Why use PrintServer?

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For Registered Users Only: Installing the code

1.2 intro

One day in school in the Electronics department, I was forced to use Windoze (18)95 on their 486 DX4 100 Fileserver. I almost burst into laughter at the "advanced" OS of theirs - with its irritating methods, legarthic screen redraws and over-animated requesters that drank CPU time. This sounds really bad, doesn't it? Believe me, it was!

In fact, the only thing that impressed me was the PeeCee method of printing - it was mildly efficient! Firstly all the data would be spooled to Hard Disk by the OS into a file, and then this file copied to the parallel port for the printer. The speed was remarkable! It made Wordworth 5 printing to my Citizen ABC 24 look pathetic, so I started thinking. Armed with a copy of Blitz Basic 2.1 I started to experiment, the experiments grew, and, here I am - writing the documentation for my program! Anyway, enough rambling - go and learn how to use it!

1.3 req

The following specifications are required as a minimum:-

- 68000 processor
- Kickstart 2.0
- Workbench 2.0
- CMD - This is the Commodore program "Change Main Device". It's an integral part of my program. Needs to be in a drawer called "Tools" on your boot disk/partition.
- Some RAM ;)

Workbench 2.0 is required for the GadTools interface.

You should have these if you have WB2.0 (don't go deleting stuff - get a Hard Drive or a bigger drive!):-

- The commands "Run", "Assign", and "Copy" in the "C" drawer of your boot disk
- A "Ram Disk" mounted (i.e. on the Workbench)

Unfortunately, if you just about meet those specs, then you may be slightly disappointed. Buy an A1200 and save us all a lot of trouble.

NOTE: Don't quote me on these! I don't know anyone with this low a spec, so I can't Beta test on it. If it doesn't work, then sorry. What can I say?

It works on my machine!

The recommended specification is as follows:-

- A 68020 processor to increase the transfer rate of data to PAR:/SER:
- 4 Mb RAM - Once printing, you'll find that your redirection files grow extremely quickly! [This IS NOT my fault!]
- A Hard Disk - It helps to have all programs in one place, especially with this and, say, Wordworth...

Graphics cards should be supported because PrintServer just opens on the Workbench screen. It comes up on all modes (and scan-rates) that I can throw out with AGA and an M1438S monitor...

1.4 install

Installing PrintServer is reasonably easy for everyone...

1) Just to be safe, you MUST back up the program (that's all of it, including config files, etc)...

2) Either add the file called "PS" to your user-startup (for the more experienced users only), or double-click on it every time you want to start PrintServer (i.e. - run PS then PrintServer).

3) Put the program, documentation and PS (if not in your startup sequence) wherever you wish. Done!

Remember to read all the other sections of the guide first!

1.5 shareware

PRINTSERVER IS SHAREWARE: PLEASE SUPPORT SHAREWARE AUTHORS!

For the small fee of £5 sterling you can have the full, unrestricted version of PrintServer! This means no delay in printing, and no limit to the size of document that you are printing!

You can pay by cheque or cash (sorry, but my bank isn't that wonderful!), the cheque being most preferable for obvious reasons! Please make cheques payable to Mark Tebbutt.

Along with the cheque will you please send a self-addressed envelope so I can send you the necessary stuff. NO STAMP IS REQUIRED. The registration fee will cover postage costs. Please feel free to send me letters outlining what you think of PrintServer, but you musn't expect a reply as I am currently doing GCSEs and will than be following A Level courses.

Please print out (you MUST be able to do this for obvious reasons!) and fill in the form/file "PS_Registration".

So, you must send:-

- A cheque for £5 Sterling or a £5 banknote (cheques payable to Mark Tebbutt, please)
- A Self-Addressed Envelope (no stamp)
- The registration form

You can also send these if you wish:-

- Letters, comments, etc
- Extra money :)
- Ideas for the next version

Please send your registrations to:-

Mark Tebbutt
12 Grenville Avenue
Rhuddlan
Denbighshire
North Wales
UK
LL18 5PN

You will receive a piece of paper with some instructions on. Then read the section of this AmigaGuide called "For Registered Users Only: Installing the code"...

Sorry, but I can't transfer stuff to you over the Internet because I'm not on it! Snail-Mail only, then!

1.6 demo

The restrictions in place in the demo mode version of PrintServer are as follows:-

- A 15 second (on PAL machines, slightly less on NTSC) delay will be put in place before printing commences.
- CMD creates a file in the directory RAM:PrintServer/ called "CMD_File". If the size of this file exceeds 400Kb then your document will not be printed.

All the more reason to register and remove the restrictions!

1.7 ops

If the file "PS" has not been added to your user-startup sequence ←
, then
double-click on it. This must be done every time before operating the Server. If it won't run, then try EXECUTE (very important) from the CLI or Shell (Surely you must know how to do this? If not, see your manual and assign yourself to the Dunces' corner!! Perhaps you could also see the end of this section...)

The GUI (Graphical User Interface for beginners) that appears when you double-click on PrintServer is quite easy to operate. There are two options to configure and two buttons along the bottom. Sorry about the lack of a font-sensitive interface - Gadtools looks OK anyway, for now.

There is a read-only text box at the top of the window below the drag bar. Ignore it - it just looks nice. Next down is a cycle gadget saying "Port to Print to..." - choose either PAR: if you have a printer connected to the standard printer port on your Amiga or SER: if it's on the serial port (Do they really exist, serial printers? I've never seen one before - if they do then PrintServer should work but hasn't been tested!).

There is a nice little check box below the status box with the question "Confirm before printing?" to the left of it. If you turn this option on then PrintServer will ask you if you want to print after the CMD redirection file is complete. Like a second-chance cancel button, really. The buttons that appear in the "Confirm" window should be self-explanatory.

There is a box labelled "Server Status:" - it will show you if you are registered or not, so you can see if the restrictions are in place. Handy for those checking that they've got everything right after installing the code after registering. Anyway, a nice little number box has "Copies" to its left. Automatically set to the quantity in your Tooltypes, you can also change it temporarily from here (don't keep it empty for very long when editing the number, though, as you'll end up with an error).

Next down is a read-only gadget labelled "Default Number of copies" and it just shows you the quantity specified in your Tooltypes. It cannot be changed unless you edit the Tooltypes. Almost there. There is another read-only box below the one just mentioned called "Time for last Print" - it shows the time that it took to wait for the CMD file to be completed and then send it to the printer (value is in seconds).

Finally, there are two buttons at the bottom of the window. The "About" button brings up a window with a little info about PrintServer and "Quit" quite obviously quits PrintServer. A little warning: When a window of PrintServer's apart from the main GUI is open then don't go clicking buttons all over the place - you'll confuse your Amiga as I had to use some unorthodox (but still OS-Legal) methods to get the GUI to work. Also, once PrintServer has quit CMD may be still active - check before you go printing again! NEW NOTE: The GUI should now close when the program is doing something, so there shouldn't be any problems...

Also see

Tooltypes

IF YOU CAN'T GET "PS" TO RUN BY DOUBLE-CLICKING...

I don't think pre-Workbench 3.0 users can just double click on the icon "PS" and make it work. If not, just open a CLI and type:-

```
Execute DRIVE:DIRECTORY-WHERE-"PS"-IS/PS
  |           |           |           |
Command      |           e.g-PrintServer   | File
              |           |                 | name
              |           |                 |
              e.g-DF0
```


or DH1

 TO EDITORS OF "PS": The assign SERVER: is to put the CMD file in. The "mkdir" is only for that script. Be careful!

LAST MINUTE NOTE: There is another file called "PS_DH0" - it assigns the directory SERVER: to a drawer called "PrintServer" that it creates there. It is set to run using the device name "DH0" at the moment, but if you have a differently named drive then change the two mentions of "DH0" in the script to that of your drive using ED or something. Only useful for Hard drive owners (anything else will slow system performance down to C64-on-sedatives speed!)... Please note that this was only added at the last minute!

1.8 faq

Q: Sometimes the buttons in the GUI respond to my presses in no time, but ←

at others they take ages to respond. Is there something wrong with my system?

A: No. It's just that PrintServer only checks the GUI and the directory SERVER: every few seconds. This means that it takes up far less CPU time than normal by just letting the operating system call it every 3 seconds. Don't worry at all.

Q: When I use the program, it quits all over a sudden without warning. What is going on?

A: A "funny" error has occurred. These are all theoretically impossible and should never occur. These include the CMD file shrinking, the CMD file has become impossible to delete or the interrupt system has failed. Sorry, but you have a very strange computer and I wouldn't know how to solve problem. Hardware toasted, perhaps?

Q: The program says my file is too large to print because the program is in Demo mode. What is wrong?

A: Oh dear! This one's pretty obvious - it's a restriction of the program when it isn't registered. Just send off your registration to remove the restrictions and solve your problem.

Q: A "Bad Configuration" error occurred. What do I do?

A: I hope you made a backup of PrintServer! You, your computer, or a virus has trashed the Tooltypes. Just replace the file with your backup.

Q: Why does PrintServer say my printer is not connected/is off line when it isn't ←
 ?

A: Hmm...Blame Blitz's PRT: routines, but just to be sure check your printer is connected via a cable. If it isn't, CONNECT IT WHEN BOTH THE AMIGA AND PRINTER ARE OFF!

Q: What are all those Tool Types?

A: Aarrgghh!! Go and READ the rest of this guide - and no there aren't any pretty pictures to look at!

Q: PrintServer just locks up or Gurus whenever I run it. Help!

A: Nasty. Very nasty. Write to me with the specs of your machine if you want and I will try to help out, but I can't really control the code that Blitz creates through its compiler - it may be "its" fault.

Q: I clicked on the confirm option, and when I printed I got a window up asking "OK to Print?". What does it mean?

A: Fairly obvious, but who knows? If you have printed from your application and then suddenly decided after "No - I don't want to print!" then click on cancel. If you do want to print click on Confirm. Easy as that.

Q: What do all those options do?

A: Read the
Operations
section of this guide!

Q: Why have you written this guide in such simple terms. It's patronising to an experienced user like myself!

A: For the more inexperienced user! If it really bugs you, just skim through!

Q: You lying git! PrintServer SLOWS DOWN my printer. What's going on?

A: Poor you. Your computer isn't making that CMD file fast enough, a task is eating up CPU time so parallel transfer rates are down, or your printer simply goes as fast as it can already (a bit slow, if it can't keep up with standard Amiga parallel data transfer rates). You don't have to use PrintServer anyway, but, just to persuade you, see the other advantages listed in

Why use PrintServer?

Q: PrintServer won't run on my 266MHz Pentium II with 64Mb RAM ←
and 3.2Gb Hard

Disk. Do I need to upgrade my system like I need to do with Windows 95?

A: Yes. You do. Get an Amiga and dump that heap to find out what computing really means - never mind the BBC's latest "Computers Don't Bite" drivel. They do bite if they're PCs or Macs (just as a little note, the only mention of Amiga I could find in the magazine for the BBC series was in the interview with Adam Woodyatt from EastEnders. Fair enough, he said about doing a newsletter on his Amiga but how the treacherous git "upgraded" to a PeeCee in 1991 I'll never know...EastEnders is crap anyway!).

For more solutions please write to me. My address is in the
Shareware
section of this guide (hint, hint).

1.9 author

As you may have noticed by now, my name is Mark Tebbutt and I am 16 years old. I love to play games on, use, look at, read about, talk about, program and generally work with my Amiga 1200 which I have owned since 1993 (and I had a Commodore 64 before that). My current system is quite powerful with 8Mb Fast RAM, 2Mb Chip RAM, a 28Mhz 68030, 250Mb Hard Disk, 2 floppy drives, M1438S monitor, Double speed CD-ROM and Citizen ABC 24 pin printer.

I have released one title into the public domain before called "TRTWW" (short for "The Road To World War") which was an AmigaGuide file about how the Second World War began and what its origins were. Version 2 is (slowly) on its way!

Anyway, thats enough about me - please go and thoroughly read the rest of this document (we don't want any accidents, do we?).

1.10 history

Version 1.0 - First Public Release (basically v0.9 with some attempts to cut down the executable size)

***** ALL BELOW HERE WERE FOR PERSONAL USE ONLY *****

Version 0.9 - Ironed out bugs and put in "Time for Last print..."

Version 0.8 - Got lost under a mountain of bugs

Version 0.7 - Copies selectable from GUI!

Version 0.6 - GadTools and Tooltypes arrive at last

Version 0.5 - Efficiency drive - performance up 20%

Version 0.4 - What's this? A GUI! Even if it is WB1.3 based...

Version 0.3 - GUI-less mess with development problems like loops that crash the machine

Version 0.2 - Experimental - grown to 10Kb compiled

Version 0.1 - Experimental - only 8Kb in length when compiled!

1.11 bugs

None are known to me so far apart from the GUI's slow update. Just wait for now and if you find any other bugs (make sure they are bugs first) send details to me, please. My address is in the Shareware section.

1.12 todo

From the next version, PrintServer will become much more useful to use as this version is primarily a test to see what is possible. So, I have some suggestions for what I could do in a later version of PrintServer, so here they are:-

- A SysOp override feature where a suitably high rating user could cancel print-outs whenever they wanted to
 - A backup system where CMD files could be stored on disk for future usage
 - A Queue system where multiple print-outs could be sent (this proved too
-

irritating to implement this time)

- A priority system where applications or users with high priorities get their print-outs first
- Font sensitivity for the GUI, not just messages
- Better message windows with "Okay" buttons in rather than timeouts such as "This window will close in 10 seconds".

Bear in mind that these could prove too difficult to implement and may never appear. This will be especially true if I get as many registrations as I did for another publication of mine - "The Road To World War" (NONE WHATSOEVER - this was extremely annoying after all the work I put in).

1.13 copyright

PrintServer's code, documentation and all associated files are:-

(C)copyright 1997 Mark Tebbutt

Please support Shareware and remember that piracy is theft.

I also acknowledge the various copyrighted names in this file.

1.14 distribution

This program may be distributed in any way you like, provided that it remains intact including all documentation and original files. It may not be modified in any way apart from archiving (compression).

Inclusions on magazine coverdisks, magazine cover CDs, compilation CDs and FTP sites are welcome (especially Aminet). Do not distribute this as your own work just because you have included it on something such as a CD! PD & Shareware libraries may also distribute this.

You DO NOT have to send me a copy of the CD/Disk you are distributing, but it would be nice(!). So, you don't have to if you don't want to...

1.15 credits

Thanks to...

- Commodore for designing the A1200 :) <--- For the uninitiated this is a "smiley". You get the idea...
- Acid for Blitz Basic
- Amiga Format and CU Amiga for helping my computing interest (I thought I would mention both as they always insult each other but they are equal overall - each magazine has its strengths and weaknesses)

- Commodore Format (are they still going?) for providing me with info on the C64 scene when I was younger and developing my knowledge of BASIC (even if it was Commodore terrible-but-it-works interpreted BASIC)
- David Banks, a friend of mine who let me use the Windoze 1895 printing system so I could get ideas
- All the anon Beta testers (see, you did get a mention, Mark!:))
- My parents
- And to you for using (or at least trying) PrintServer

Good luck to Amiga International under the new Gateway 2000 administration!
(The latest people to buy Amiga Technologies at the time of writing...)

1.16 disclaimer

This software is provided "as is". You use it completely at your own risk. The author shall not be liable for any direct or indirect damage arising in any way from the usage of this software, even if advised of the possibility of such damage.

1.17 code

Thank you for registering! Here is how to install the code:-

```
*** Pirates and Shareware Dodgers look no further and go and ***  
*** leave every programmer's code alone ***
```

- 1) Click on the icon for PrintServer ONCE and then go to the "Icons" menu and select "Information...". A window will appear. In it there a box labelled "Tool Types:" - click on the item in it called "CONFIG". There is a long string of numbers after it.
- 2) What you just clicked on will appear in a text gadget below. Delete the long string of numbers so that just "CONFIG=" is left. Now type in the sequence of numbers that was sent to you on the piece of paper after you had registered (through the post).
- 3) Press Return once you have finished. The text you had originally clicked on will have now changed to what you have just typed in. Click on the "Save" button in the bottom left hand corner.
- 4) Finished! You can now run PrintServer as normal, but with all demo restrictions removed! Thank you for registering - I hope you enjoy my program!

1.18 dw

If PrintServer refuses to work at all, if you have tried everything you can think of and read all the necessary docs, then you can write to me and I will try and help you. My address is the the section titled "Shareware" in this guide.

1.19 benchmarks

Here are some results from my own tests using my setup with a ←
Citizen

ABC 24 pin Dot Matrix printer. My setup is:-

- Commodore Amiga A1200
- Viper 2 68030 accelerator running at 28MHz (with MMU)
- 8Mb 70ns 32bit Fast RAM
- Internal 2.5" 250Mb Hard Disk
- Amiga Technologies M1438S monitor

These were the only peripherals, apart from the printer of course, connected during testing and my CPU was set with the following:-

- Instruction cache, Burst mode
- Data cache, No Burst mode
- No Fast ROM mode

!!
!!

STOP PRESS! READ THIS PIECE NOW!!

The results below the line of asterisks (look further down the page) were taken a while before I added this "STOP PRESS" bit. I didn't want you to see those rather misleading results first. I tried again with a different document - this time containing some paragraphs, not just pictures. The results I gained then were much better ('cos of all the HD access I think). Anyway, now I can be safe in the knowledge that you won't immediately delete PrintServer after seeing the results below. Thank you for listening!

!!
!!

Some results can be rather misleading. I printed an average-sized picture from Wordworth 5 (Copyright Digita International) and got the following disappointing results...

	EpsonQ driver, Density 2	

	TIME ELAPSED	

With PrintServer	4 Minutes 34 Seconds	

Without PrintServer	4 Minutes 00 Seconds	

I put this mostly down to the delay between scans of SERVER: and the

selection of the "Confirm" option in place at the time. Still bad results, though - but think about it. Wordworth 5 was locked out of my reach for the entire duration of the print, but with PrintServer running I could access my document again in 48 seconds (I timed it). Also, under PrintServer my printer consumed less power - very green. This is because of the reduced time that it was "active" for, as all printers consume less power in standby than they do printing...

Next, I tried a larger document. An A4 page full of pictures from Wordworth 5 - results were much better...

	EpsonQ driver, Density 2	

	TIME ELAPSED	

With PrintServer	9 Minutes 02 Seconds	

Without PrintServer	8 Minutes 44 Seconds	

As you can see, on my system at least, the gap is closing. An even larger test showed both methods to be equal at 12 Minutes print time. If you have an Inkjet or something then these print times must seem like an age, but in Dot Matrix terms this is quick! The times SHOULD come out quicker with the Server running on your system, but I can't test any other configurations other than my own and a friend's nearly identical set-up. Hope it works well for you, anyway.

Also, when printing multiple copies you can use the COPIES Tooltype to make PrintServer seem blistering... Besides, haven't you got enough reasons to use PrintServer in

Why
?

1.20 why?

There are a number of reasons why PrintServer should be useful to you, and here they are:-

- 1) On long print runs, such as a couple of sheets of A4, using PrintServer is quicker. (Well, it's quicker on my system...)
- 2) It's handy to have your application freed up from printing more quickly. Although the Amiga multitasks between programs, it doesn't INSIDE programs, so you can now get back to editing a printing document quicker...
- 3) It's greener. Printers consume more power when active than in standby mode. PrintServer means that not only your application is freed up quicker, but so is your printer - and in doing so you save the world's energy.
- 4) It's nice to have something smarter to control your printer - especially if you're competing against a PC/Mac owning friend!

Happy printing!

1.21 tooltypes

Here is a brief explanation of the Tooltypes available when you bring up the "Icon Information" from Workbench (and some insults to the Hackers, Pirates, etc of the world):-

CONFIRM=: Either TRUE or FALSE. It controls the status of the tick box in the GUI.

PORT=: Either PARALLEL or SERIAL. Controls the state of the Cycle gadget in the GUI so that you can tell PrintServer which port your printer connects to.

CONFIG=: This long string of numbers is the way in which PrintServer determines which mode (DEMO or REGISTERED) it uses. Register, and you can change it to remove demo restrictions. If you change it from that to anything but the correct combination, then PrintServer will not start up (you might be a PIRATE/HACKER/SHAREWARE DODGER - if so, THEN GET OFF MY WORK IMMEDIATELY AND MAKE SURE YOU LEAVE EVERY PROGRAMMER'S CODE ALONE). It's such a shame that the Amiga put up with Piracy and the like for so long - and the majority of it was performed by my generation, I'm sorry to say - but I'm firmly against it and hopefully we'll leave this legacy behind during the move to PowerPC.

COPIES=: Determines how many times the CMD file will be sent to the printer so you can select "1" in your application but between 1 and 999999 (no more will fit in the gadget - also watch out for overflows if there are too many copies). Frees up your application exceptionally quickly if you're used to printing a few copies of everything...

See operations for more information on what each option does. Note that each Tooltype MUST exist and be set correctly to any of the available options, or PrintServer will not start up.

There are LOADS of instructions in your manuals on how to change Tooltypes if you don't know how, so go and read them!