

The Complete Amiga 1200 User Guide

by Peter Hutchison © 2006



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Introduction

Welcome to the Commodore Amiga A1200, one of the most popular Amiga models of its time. It was affordable and easy to use. It had a wide range of software, in particular, games which Jay Minor, the creator of the Amiga, had designed it for.

The Amiga A1200 is based on the Motorola 68020 14MHz Processor with 2MbRAM, a single 880K floppy drive with support for three more floppy drives, a Custom Chipset that provides the Sound and Graphics.

The Amiga runs the Operating System called AmigaOS which consists of the Kickstart ROM which contains some essential libraries and devices needed to load Workbench which is the desktop:

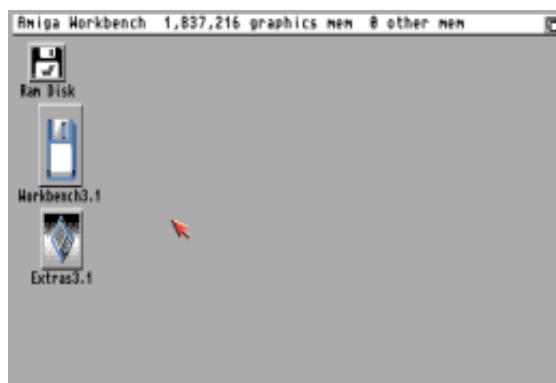


Figure 1

You can see a white menu bar at the top and all the disks mounted on the right hand of the screen. The Ram Disk is a special one which is a disk in memory basically. More on Workbench will be explained later.

Setting up the Amiga for First Time

Before setting up the Amiga make sure you have the following items ready:

- Amiga A1200
- Monitor or TV Set
- Mouse
- Power Supply
- Joystick (optional)
- Speakers (optional)
- External Disk drives (optional)

With the Amiga facing you, first plug the square end of the Power Supply cable to the Power socket on the top left hand at the back of the Amiga. Plug the other end into a power socket but DO NOT switch on yet.

If you have a monitor, plug the monitor cable into the Video socket, if you have a TV Set then plug it into the RF or Composite socket and also plug the power cable into a power socket.

Next plug the Mouse into Port 1 of the D shaped sockets on the right-hand side at the back. Plug any Joystick onto Port 2 next to it.

The stereo speakers can be plugged into the Left and Right speaker sockets in the middle at the back. The speakers can be either stand-alone ones or part of the monitor so if necessary, plug the other ends into the Left/Right sockets on the monitor. Plug in to power supply as necessary.

Finally if you have any external floppy disk drives plug them in to the External Drive socket on the back of the Amiga. Further drives can be added to other drives. If you have an external hard disk, remove the cover from the Expansion port on the left-hand side of the Amiga and slot in the drive.

Now switch on the power and press the power switch located on the Power Supply for the Amiga and switch on the monitor.

If you do not have disks inserted you will see the Insert Disk screen below:

Figure 2



You can then insert either a Workbench disk or any other bootable disk such as a game into the floppy drive on the right-hand side of the Amiga (called DF0: - Disk Floppy Zero).

Insert your Original Workbench disk and wait for the workbench screen to appear. Before continuing, I recommend that you make one or more copies of your original Workbench disks to use rather than the Original as that can become damaged over time and you may need to make other copies later.

To make a copy, get hold of a blank 880K double-density disk ready, then move the white arrow (called a pointer) with the mouse over the Workbench 3.0 disk and click the left mouse button once (this will select the disk), then move the pointer to the top left of the screen and click and HOLD the right-hand mouse button and a menu appear, make sure the Icons menu is selected, move the mouse down the menu and select Copy

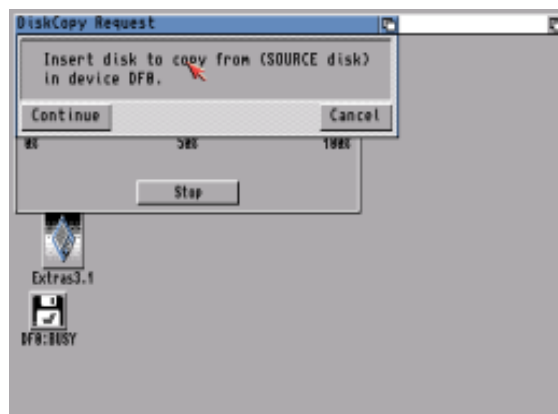


Figure 3

It will say 'Put the SOURCE disk (FROM disk) in drive DF0:', remove the disk from the floppy drive, and make sure it is your original Workbench disk, at the top there is a hole, make sure it is covered with the black tab to protect the disk during this operation. Reinsert the disk, and with the left mouse button click once on Continue.

Once the read operation is complete, it will ask you to insert the DESTINATION (TO disk) in drive DF0:. Press the eject button to remove your original Workbench disk, and insert your Blank disk. Click on Continue to write the information to your new disk.

You may need to repeat the disk swap a couple of times more until the operation is completed. Now you will have a disk called 'copy of Workbench', you can rename this by selecting the disk, then select Rename from the Workbench menu and change it to just 'Workbench'. You should put your original disk somewhere safe and then use your copy of Workbench from now on. Reboot with your new Workbench disk in DF0.
Guide to Workbench 3.0

Contents

1. The Menus
2. The Mouse
3. WB Programs
4. AmigaDOS
5. Common Problems

1. The Menus

At the top of the screen, there are three menus which are accessible when you move the pointer to the top of the screen and click the Right Mouse Button. (RMB).

1.1 Workbench menu

1.1.1 Backdrop

Turns the backdrop window on or off which surrounds the desktop.

1.1.2 Execute Command

This displays an input box where you can enter any AmigaDOS command or launch any Workbench program by entering its name. For example, typing NewShell will open a Command Shell window.

1.1.3 Redraw All

This redraws all the icons on the desktop.

1.1.4 Update All

Reload all the icons and redraw them.

1.1.5 Last Message

Display the last error or information message on the title bar.

1.1.6 About

Display Kickstart and Workbench versions and Copyright information.

1.1.7 Quit

Exit Workbench, this will quit workbench and leave the workbench screen open. You should open a command window before quitting otherwise a reboot is required.

1.2 Window menu

1.2.1 New Drawer

Create a new drawer (or directory or folder) in the current window.

1.2.2 Open Parent

Open the parent window of the current window.

1.2.3 Close

Close the current window

1.2.4 Update

Update icons in the current window.

1.2.5 Select Contents

Select all the icons in the current window.

1.2.6 Clean Up

Tidy up the icons into a standard left to right and top to bottom layout.

1.2.7 Snapshot

1.2.7.1 Window

Save the current window size and position in icon information

1.2.7.2 All

Save the window and all icon size and position information in their respective icon files.

1.2.8 Show

1.2.8.1 Only Icons

Displays files that have an icon file and hides all other files.

1.2.8.2 All Files

Display all files in window whether or not they have an icon file or not.

1.2.9 View By

1.2.9.1 Icon

Display files using Icons only.

1.2.9.2 Name

Display files using Name and displays protection flags, size and date and time last changed.

1.2.9.3 Date

Display files in date order using same format as Name with the newest files at the top.

1.2.9.4 Size

Display files in size order using same format as Name with the smallest files at the top.

1.3 Icons

1.3.1. Open

This opens or runs the currently selected file or drawer.

1.3.2 Copy

Copies one or more files and prefixes file(s) with Copy_of_ e.g. Copy_of_MyFile

1.3.3 Rename

Changes the name of the file. A Rename dialogue box appears with the current name

1.3.4 Information

Displays information about the file, drawer or disk. Includes information about the icon, type, size, comment and protection flags.

1.3.5 Snapshot

Saves the current position of file within window.

1.3.6 Unsnapshot

Removes positioning saved information from a file.

1.3.7 Leave Out

Places the file on the desktop but the file is still located in its original location. A backdrop file contains a list of files left out.

1.3.8 Put Away

Returns a file left off the desktop back to its original location.

1.3.9 Delete

This deletes a file or drawer permanently. It does not use the Trashcan.

1.3.10 Format Disk

Formats or prepares a disk to be used to store files and drawers.

1.3.11 Empty Trash

Empties the content of the Trashcan folder on the boot disk.

1.4 Tools

1.4.1 ResetWB

Reloads Workbench and redraws the screen

2. The Mouse

On the Amiga mouse there are two buttons: the Left Mouse Button (LMB) and the Right Mouse Button (RMB). Moving the mouse will move the arrow or pointer on the screen.

2.1 Using the Right Mouse Button

To use the menus, press down the RMB and move the pointer to the title bar at the top of the screen. Move the pointer over one of the menu names and some menu items will appear. Now, still with the RMB pressed, move the pointer down to the selected menu item and release the RMB to select that item.

2.2 Using the Left Mouse Button

This button is mainly used to select and move icons around and click on gadgets (or buttons).

2.2.1 Clicking

To select an icon, move the pointer over the desired icon and then click the LMB once. The icon will change to a reverse or an alternative image to indicate it has been selected.

When using gadgets such as those on windows (there are four gadgets on a window: Close, Window-to-Front, Window-to-Back and Resize) move the pointer over the desired gadget and click once to use that gadget. The gadget will change briefly and also change the window.

2.2.2 Double-Clicking

This is sometimes a tricky technique to use and requires a steady hand. This method is used to open disks, drawers and files or run programs. To do this, move the pointer over the desired icon and in quick succession (without moving the pointer) click on the LMB twice. This should open the icon.

2.2.3 Dragging

This technique allows you to move objects such as icons around the screen or resizing windows. Select an icon with a single click, now keep the LMB down and move the pointer, the icon will now be dragged with the pointer. If you let go of the pointer the icon will be dropped into it's new position.

2.2.4 Multiple selection

You can select more than one icon at a time. To do this, click on the first icon, press the SHIFT key down (either one) and then click on the second, third, fourth icons etc. to select multiple icons

You can also select a whole group of icons by pressing the LMB at the top left of the icons and while keeping the LMB down moving the pointer towards the bottom right. An expanding box will appear and the icons in it will be selected.

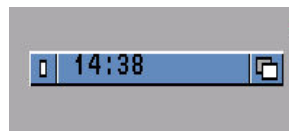
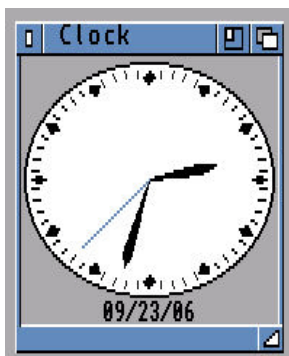
3. The Programs

Here I will give a brief explanation of the programs provided with Workbench 1.3.

3.1 Workbench Disk

3.1.1 Utilities Drawer

3.1.1.1 Clock



This displays an analogue or digital clock showing the present time and/or date. From the menu you can select Analog, Digital 1 or Digital 2 (difference being is that one displays time in a window, the other displays time in the window bar). You can also set the mode (12 or 24

hour), display seconds or not, the date and whether to set an alarm for something.

3.1.1.2 Multiview

This program can view pictures, animations, sound and other documents using Workbench's Datatype library which can be expanded to any number of file formats from basic ILBM, 8SVX, AmigaGuide, FTXT, ANIM and CDXL to modern types such as GIF, JPEG, PNG, BMP, Wave, Mpeg and other formats. Datatypes can be downloaded from the internet and installed.

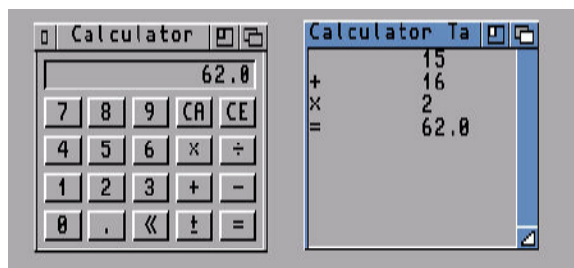
You can run the program and then open a file from the file dialogue box, if the file has an Icon file you can set its Default Tool to use Multiview to open and view the file automatically or you can click on the file, press shift and double click on Multiview to view the file with Multiview.

3.1.1.3 More

This program can be used from the command line to view text files with page breaks between screen's worth of text.

3.2 Tools Drawer

3.2.1 Calculator



Here is a simple calculator, you can press the buttons to enter values or use the keypad. The symbols are CA (Cancel All), CE (Cancel Entry), * (Multiply), / (Divide), + (Add), - (Subtract), . (Decimal point), <- (Backspace), +/- (Change sign), = (Equals)

The Calculator Tape window can display equations as you enter them, useful for long calculations.

3.2.2 CMD

The CMD program is useful if you wish to redirect printing to a file. Run this program before printing and any output will be sent to RAM:cmd_file. Additional options can be set in the Tool types including:

DEVICE = parallel or serial

FILE = location of file output

SKIP = skip flag

MULTIPLE = store multiple prints

NOTIFY = notify flag

3.2.3 GraphicDump

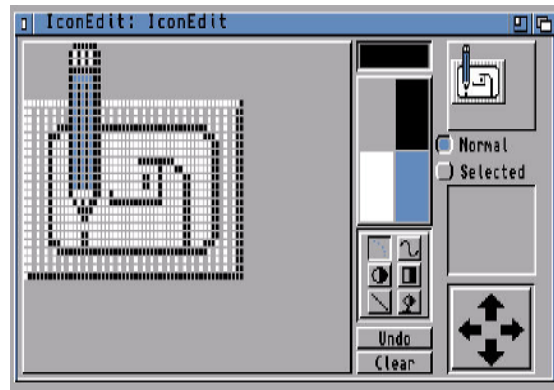
GraphicDump can be used to print pictures to a printer. This is mainly for IFF ILBM pictures, use Multiview for other formats. Picture size can be set using SIZE Tool Type.

3.2.4 IconEdit

IconEdit is used to modify file icon or .info files on the Amiga. Most Workbench 3.x icons are 4 colour icons but can be expanded to multicolour icons via the Extras, Color Palette menu. You have the main drawing area on the left. In the middle you have the currently selected Colour (black in this case), the colour palette below and the drawing tools: freehand drawing, curves, circles (outline or filled),

rectangles (outlined or filled), straight lines and the fill tool.

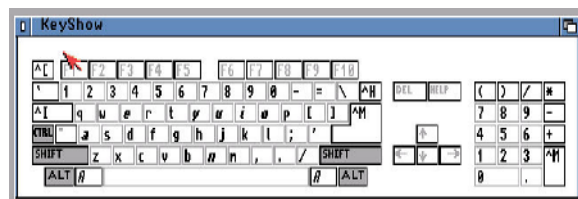
Each icon has two images, normal and selected, selected icons are used when a user selects an icon, and it usually displays a depressed icon rather than a raised icon (the shadow around the edge makes the difference).



3.2.5 KeyShow

This displays a the keyboard on the that each key when Ctrl, Shift or Alt is pressed. Pressing any of the keys does not enter characters in to applications unfortunately.

graphical representation of screen with the characters represents including those



3.2.6 InitPrinter

This will initialise any printer's initialisation currently selected driver in the Printer preferences.

attached printer with the command using the

3.2.7 Lacer

This program will toggle between interlaced and non-interlaced screen modes. Used primarily for video recording and genlocking.

3.2.8 Printfiles

This program allows you to print text files from Workbench. To use it to select the files you wish to print (use Shift key when selecting multiple files), then hold down shift and click Printfiles to print them. Use the tool type `FLAGS=formfeed` or `FORMFEED=true` if you want files to start on a new page.

3.2.9 Prepcard

This tool is used to prepare PCMCIA memory cards as static RAM cards or system memory. A Ram Card can hold files like a normal disk and is accessed via the device `CC0:`, cards prepared as system memory is added to both Chip and Fast memory, you need to reboot before you can use that memory.

3.3.0 Memacs

Memacs or MicroEmacs is a full screen text editor which allows you to write short documents, script files and program files if necessary.

The figure below shows Memacs with `s:startup-sequence` file loaded for editing.

```

MicroEMACS V2.1
; $VER: startup-sequence 39.9 (9.0.92)
; Cloanto © Amiga Forever Edition

C:SetPatch QUIET
C:Version >NIL:
C:AddBuffers >NIL: DF0: 15
FailAt 21

C:MakeDir RAM:T RAM:Clipboards RAM:ENV RAM:ENV/Sys
C:Copy >NIL: ENVARC: RAM:ENV ALL NOREQ

Resident >NIL: C:Assign PURE
Resident >NIL: C:Execute PURE

Assign >NIL: ENV: RAM:ENV
Assign >NIL: T: RAM:T
Assign >NIL: CLIPS: RAM:Clipboards
Assign >NIL: REXX: S:
Assign >NIL: PRINTERS: DEVS:Printers
Assign >NIL: KEYMAPS: DEVS:Keymaps
Assign >NIL: LOCALE: SYS:Locale
Assign >NIL: LIBS: SYS:Classes ADD
Assign >NIL: HELP: LOCALE:Help DEFER

IF NOT EXISTS SYS:Fonts
-- MicroEMACS -- main -- File: s:startup-sequence -----
[Read 61 lines]

```

system configuration about your

3.3.1 ShowConfig

This program displays Amiga including:

- a) Processor make and model
- b) Custom Chip set versions
- c) RAM type and sizes
- d) Expansion boards

3.3 Commodities Drawer

3.3.1 Exchange

This program lists the commodity programs in memory and can control commodities by displaying commodity options, end a commodity and so on.

3.3.2 ClickToFront

This allows users to click anywhere in a window and click to bring it to the front of other windows without having to use the window gadgets. By default the ALT key needs to be pressed before clicking a window (this can be changed). Move it to the Startup drawer to autorun it on boot up.

3.3.3 MouseBlanker

This will blank the mouse pointer if not in use.

3.3.4 AutoPoint

This allows you to select a window by just moving the mouse pointer over it and does not require a click to activate it.

3.3.5 Fkey

This program assigns text strings to function keys and it is useful for Shell users. Up to 20 possible macros can be programmed. Special characters can be used:

- \n Return
- \r Return
- \t Tab
- \0 Zero
- <key> Key combination eg Shift+Letter

3.3.6 NoCapsLock

This disables the Caps Lock key so you will need to use Shift for Capital letters.

3.3.7 Blanker

This program will blank the screen after 60 seconds of inactivity.

3.3.8 CrossDos

This is part of the PC Disk driver and this commodity controls text file options for Text Filtering and Text Translation. The DosDrivers for PC0 and PC1 need to be loaded.

3.4 Prefs

Workbench can be programs in the Prefs save changes and clicking Use will save will be lost on next

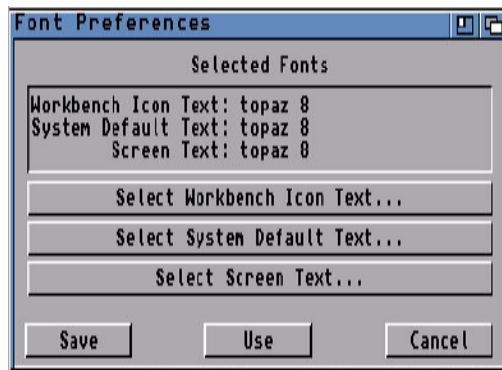


customised using Preference drawer. You can select Save to will be loaded when rebooted or preferences in memory only and reboot.

3.4.1 Font

This selects the Text, System default text and Screen text.

default fonts for Workbench Icon



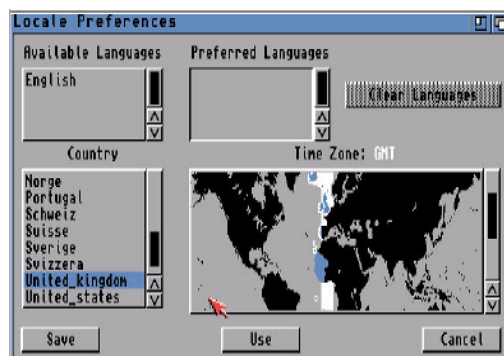
3.4.2 Locale

This sets the current information.

language, country and time zone

3.4.3 Pointer

This preference can be mouse pointer. The Res pointer depending the click point is, by default it is at the top left.



used to change the shape of the Pointer can be a Low Res or High on screen resolution. The 'Set determines where in the image

3.4.4 PrinterPS

This preference set the options for PostScript printers.

Driver Mode: Postscript, Pass Through

Copies: 1 to 99

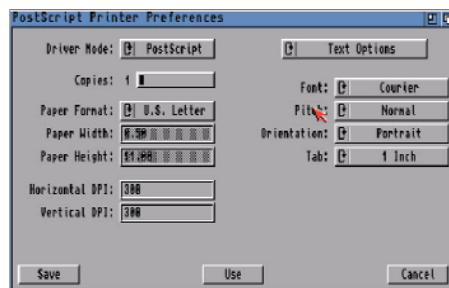
Paper Format: US Letter, US Legal, DIN A4, Custom

Text Options: Font, Pitch, Orientation, Tab

Text Dimensions: Margins, Point Size, Leading, LPI, LPP

Graphics Options: Margins, Image, Shading, Dithering

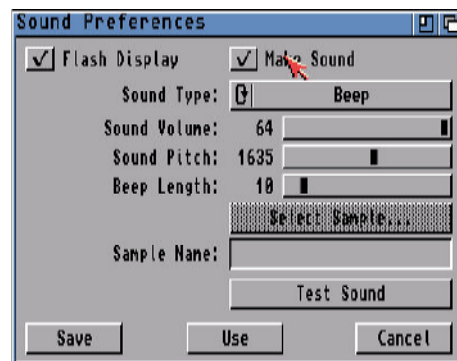
Graphics Scaling: Aspect, Scaling, Centering,



3.4.5 Sound

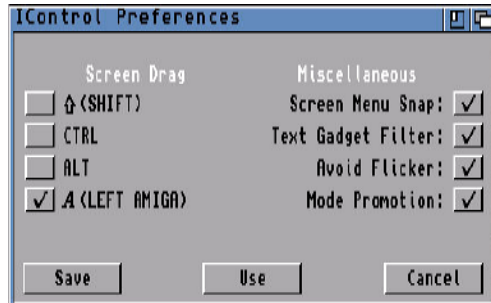
This preference can Workbench has an the Display (ideal for those hard of hearing), or creating a sound either with a Beep or a Sampled Sound.

change preference for sounds when error. You have the option of Flashing



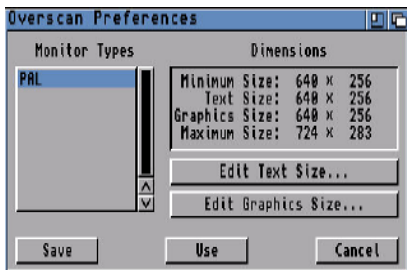
3.4.5 Icontrol
Intuition control
Window Drag and
Text Gadget Filter,

specifies preferences for key to use for enable options for Screen Menu Snap, Avoid Flicker and Mode Promotion.



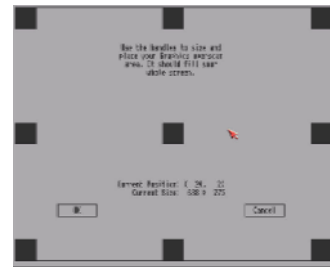
3.4.6 Overscan

Overscan sets the physical screen size, the monitor driver is loaded on the left and list of dimensions are shown and two buttons which can be used to resize the display for Text or Graphic displays by dragging one or more of nine handles to the desired size.



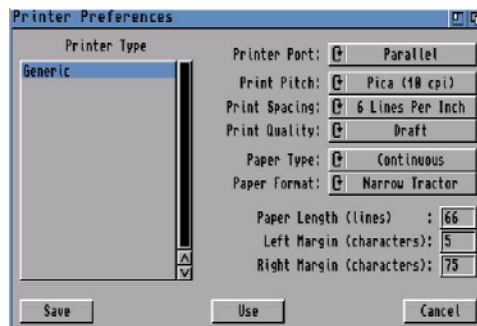
3.4.7 Printer

The Printer preference printer driver (from rs) and sets other



selects the Devs:Printe options:

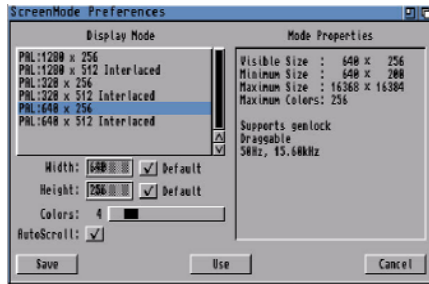
Printer Port: Parallel, Serial
 Print Pitch: Pica, Elite, Fine.
 Print Spacing: 6, 8 LPI
 Print Quality: Draft, Letter
 Paper Type: Continuous, Single
 Paper Format: Narrow tractor, Wide tractor, Custom, DIN A4, US Letter, US Legal
 Paper Length
 Left and Right Margins



3.4.8 ScreenMode

This preference sets the and colours depth for the

monitor driver and resolution Workbench screen.



3.4.9 Time

This sets the current date and time and saves in a battery-backed clock (if provided) and in memory.



3.4.10 Input

Input controls certain aspects of the keyboard and the Mouse:

Mouse Speed - How fast the pointer moves around the screen.

Acceleration - Boosts mouse speed when you move it around.

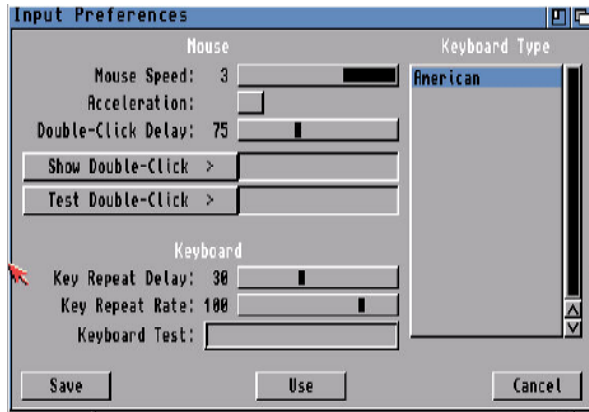
Double-click delay - Delay between clicks before it's accepted as a double click. You can use the Show and Test double-click buttons below to check in.

Key Repeat Delay - Delay before a pressed key becomes repeated again.

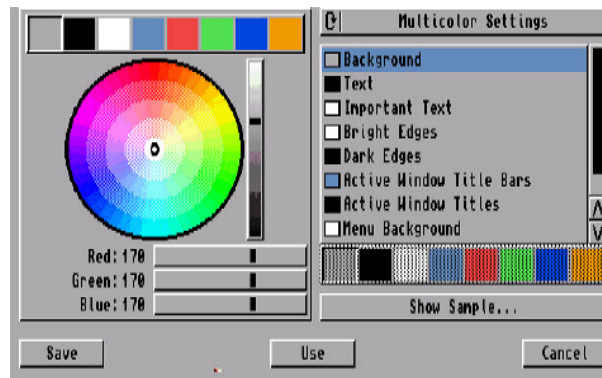
Key Repeat Rate - Determines how often a key is repeated on the screen.

Keyboard test - Test repeat settings.

Keyboard Type - Shows which keyboard mapping is used. Can be changed using SetKeyboard command in startup files.

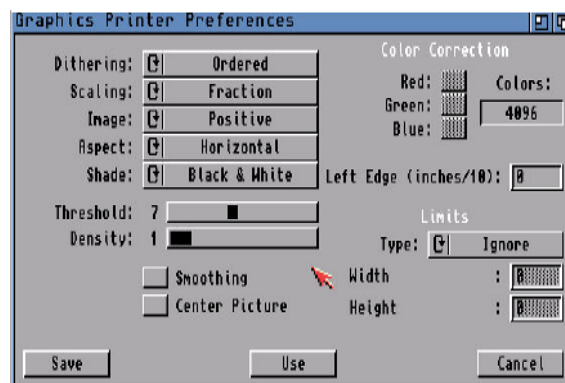


3.4.11 Palette



This preference allows you to change the default colours (shown at the top left) with new colours using either the colour wheel or the RGB sliders underneath for more fine control. The list of entries on the right determines which colour is used for what purpose, so you could use Blue or Green for text instead of Black. The Show Sample button brings up a demo window with the new colours in use before you are ready to Save or Use them.

3.4.12 PrinterGfx



Printer Graphics preference sets options for when printing pictures or diagrams using a printer (See Printer preferences).

Dithering: Ordered, Halftone, Floyd-Steinburg

Scaling: Fraction, Integer

Image: Positive, Negative

Aspect: Horizontal, Vertical

Share: Black & Write, Grey Scale 1 or 2, Colour

Threshold: Determines the colours on the screen are printed as black and white.

Density: Determines the resolution in DPI of the output

Collor Correction: Corrects colour by reducing number of colours available to correct RGB imbalances

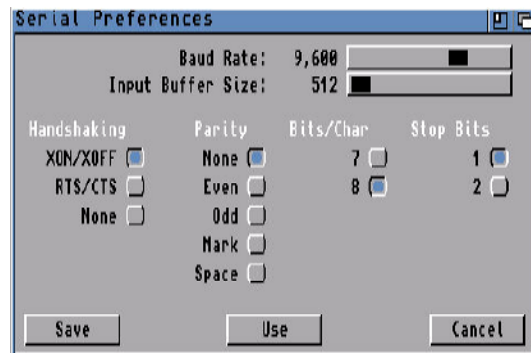
Left Edge: How far from the left edge the output starts

Limits: Determines paper edge limits. Can be Ignore, Bounded, Absolute, Pixels, Multiply

Smoothing: Smooths diagonal lines by certain dithering techniques (except Floyd-Steinburg)

Center Picture: Centres picture in the middle of the page.

3.4.13 Serial



The Serial preferences control communications through the serial port with the following settings:

Input Buffer Size: Size of the buffer in bytes to store data

Baud Rate: Speed of communication in bites/sec.

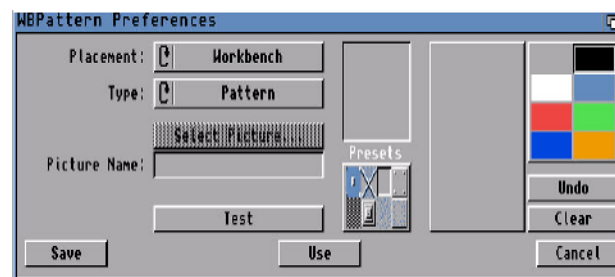
Handshaking: XON/XOFF (Software), RTS/CTS (Hardware) or None

Parity: Number or type of bits used for error checking

Bits/Char: Number of bits used for data

Stop bits: Number of bits used at the end of data

3.4.14 WBPatten



Workbench pattern preferences can display specific patterns or pictures to customize your Workbench desktop.

Placement: Workbench, Windows, Screen

Type: Pattern, Picture

Select Picture: Select a picture to use on the workbench

Presets: Predetermined patterns to use. You can create your own patterns in the empty box on the right and select which colours to use.

Test: Tests your pattern or picture.

Beyond Workbench 3.0

Workbench has been upgraded three times since 3.0: 3.1, 3.5 and 3.9. Workbench 3.5 and 3.9 have enhanced Workbench a lot and come on CD, they include:

- Multimedia Programs
- Web browser i.e Aweb
- Genesis for Internet and network access
- Amidock for program start bar
- Warp OS 5.0 for PowerPc support
- Iomega Tools for Zip and Jaz disks
- New Powerful shell
- Automatic datatype recognition
- Integrated unpacker (unarc)
- Fast search for files
- New picture datatype
- Many more tools
- HTML documentation

If Workbench is too limiting, you can replace the entire workbench with a replacement such as Directory Opus 6 which has a feature rich interface with more customisation than before and much easier to use.

There are many more libraries and programs too numerous to mention which can enhance the Workbench experience. Check out <http://www.aminet.com> for them.

Adding more Memory to the A1200

The Amiga memory is split into Chip RAM (memory used by the custom chipset to store graphics and sound) and Fast RAM (memory which is used only by the Processor).

The Amiga A1200 comes with 2MB of Chip memory.

You can increase RAM by adding memory via a new memory board into the expansion slot underneath the Amiga behind a trapdoor or via the PCMCIA slot using a memory card on the left hand side although this is slower than main memory due to 16bit memory bandwidth.

Additionally, memory can be added via a processor accelerator card, typically up to 32MB of Fast memory.

See documentation with a board or device on how to install extra memory.

Upgrading the Processor

The standard 68020 14MHz processor in the Amiga A1200 is quite slow compared to more recent processors and cannot cope with bigger applications and games. The processor is slotted on the main mother board.

For faster processors such as the 68030, 68040 or 68060 then a new expansion board needs to be purchased and inserted via the trapdoor expansion slot underneath the Amiga.

Typical boards include:

1. 68020 Accelerators

Blizzard 1204 or 1220/4

Has a 28MHz 68020 processor with optional FPU and Up to 8MB RAM.

M-Tec T1230/28 RTC

Has a 28MHz 68020 processor with 1 SIMM Slot, optional FPU and SCSI-II card.

2. 68030 Accelerators

Apollo 68030

Has a 25, 33 or 50MHz 68030 processor and room for a FPU. One SIMM slot for Up to 64MB of Memory.

Blizzard 1230-II

Has a 68030 40 or 50MHz processor, optional FPU, Up to 64MB RAM in 2 SIMM slots and optional SCSI-II card.

Blizzard 1230-IV

Has a 50MHz 68030 processor and room for a FPU. One SIMM slot for Up to 128MB of Memory. Inbuilt MMU. Optional SCSI II card with 2nd SIMM slot.

CSA 12-Gauge

Includes a 68030 50MHz processor with max of 32MB of RAM. Optional non-DMA SCSI card.

GVP 1230-II

Uses a 40/50MHz 68030 with 2 SIMM slots for GVP RAM only, 32MB RAM. Optional SCSI card.

Magnum 68030

Has a 40MHz 68030 processor and room for FPU. Up to 32MB of RAM can be added and there is an optional SCSI II card.

Microbotics MBX1230

Has a 33MHz 68030 processor with one SIMM slot for Up to 128MB RAM, optional SCSI card. (Not auto-configuring)

Paravision MBX

Uses a 28/33/50MHz 68030 with one SIMM slot for Up to 32MB RAM. SCSI option. (Not auto-configuring)

Typhoon 030

Uses a 40MHz 68030, optional FPU and optional SCSI. Comes with 8MB Fast RAM, up gradable to 64Mb using SIMMs. Has battery backed clock and 50 pin SCSI connector. The 'Lite' version does not include FPU or SCSI port.

Viper MkII

Has a 40MHz 68030 EC processor and room for a FPU. One or two SIMM slots for Up to 64MB of Memory. No MMU.

3. 68040 Accelerators

Apollo 68040

Has a 28,33 or 40MHz 68040 processor. One SIMM slot for Up to 32MB RAM. Optional 2nd SIMM (32MB) in a tower unit only and optional SCSI II card.

Blizzard 1240D

Desktop 1240 card. Uses 40Mhz 040, Up to 128Mb RAM and optional SCSI-2 controller.

Blizzard 1240/TERC

Has a 68040 but due to heat problems it was designed for Towered A1200s.

DKB 1240 Cobra

Has a 40MHz 68040 with one SIMM slot for Up to 128MB RAM. Optional SCSI-II card.

Magnum 68040

Has a 25 or 40Mhz 68040 processor. Up to 32MB of RAM and optional SCSI II card.

4. 68060 Accelerators

Apollo 1260

Uses a 50/66/75Mhz 68060.

Blizzard 1260

Uses a 50Mhz 68060. Optional SCSI interface with 2nd SIMM slot (same SCSI interface as the one for the Blizzard 1230-IV).

Magnum 68060.

Has a 50/66Mhz 68060. Upto 32MB of RAM. Optional SCSI-II interface.

5. PowerPC Accelerators

All of these are dual-processor boards and come with 68040 or 68060 to run the OS functions.

Blizzard 603e PPC

Includes PowerPC 603e at 160/200/240MHz. No SCSI. Upto 128MB of RAM per slot with two SIMM slots. The plus (+) version includes SCSI interface.

Upgrading Expansion on the A1200

The A1200 comes with a single slot in the trapdoor. This can be used to expand the A1200 much further due to its Zorro II 32 bit type expansion. This has lead to adding memory or accelerator cards and Zorro/PCI bus boards which allow even more cards to be added if the A1200 was fitted into a tower case.

The bus board allows users to use industry standard PCI cards with their A1200 such as graphics cards, network cards, SCSI and USB cards as long as an AmigaOS driver is available.

Elbox Mediator PCI 1200 SX
A bus board with six PCI slots

Elbox Mediator PCI 1200 LT4
A bus board with four PCI slots

Elbox Mediator PCI 1200 ZIV
A bus board with four PCI slots and Zorro bus board.

DCE G-Rex 1200 PCI
A bus board which supports six PCI slots. This requires a PPC accelerator.

Micronik PCI A1200
A bus board that supports five ZorroII slots, two ISA slots and two PCI slots.

Upgrading the Kickstart and Workbench

The Amiga A1200 can be upgraded to latest Kickstart and Workbench as follows:

From	To	Requirements
Workbench 3.0	Workbench 3.1	Kickstart 3.1
Workbench 3.0 or 3.1	Workbench 3.5 / 3.9	Kickstart 3.1, 6M RAM, 68020 processor, Hard Disk, CD ROM

In most cases a new Kickstart ROM Chip set needs to be installed.

You can also replace the old OCS chips with ECS (Enhanced Chip Set) but you cannot install AGA Chip Set.

Instructions

1. Place the A1200 unit upside down on a flat surface.
2. Use a screwdriver to remove the five case screws.
3. Turn the unit to normal, face front position. Do carefully flip backwards the top cover and then the keyboard assembly.
IMPORTANT: Take care not to damage the cables to the top cover or the ribbon cables to the keyboard assembly.
4. The main printed circuit board - protected by a shield - is now in full view.
5. The operating system ROM ICs are labelled and located at position U6A (under) and U6B (upper), just at the blank of the shield. The old ROM chips should be marked: @1992 V3.0 39.106
6. Note the orientation of the old operating system ROMs, then remove them from the socket.
7. IMPORTANT: You should be aware of the fact that there are spare pins at the sockets. You have to align the ROM ICs to the right side of the sockets so that there are spare pins at the left of the ROM ICs.
8. Align the 3.1 ROMs with socket U6A and U6B, and press firmly into place. Be cautious not to bend pins.
9. Installation is now complete.

The Motherboard

The Amiga 1200 has had several revisions including 1A, 1B, 1D1, 1D3, 1D4, 2B. A Picture of the A1200 1D4 motherboard is shown below.



From the top:

PCMCIA slot for 16 bit memory cards and Network cards.

IDE connector - Supports 2.5" Hard drives natively but can support larger 3.5" drives with a converter

ALICE chip - Supports 2MB of Chip RAM, the Blitter and 25 DMA channels (large left hand chip)

GAYLE chip - IDE controller chip (large middle chip)

LISA chip - Supports AGA chipset, 256 colours, HAM8, Sprites etc (large right hand chip).

BUDGET chip - Supports DRAM and Bus Controller (Center of board with VLSI on it)

Keyboard MPU - The keyboard controller ship

Motorola 68EC020 - Main Central Processor (surprisingly one of the smallest chips)

Kickstart ROM Chips - The A1200 had two 256K ROM chips that held part of AmigaOS and allow the Amiga to boot from Floppy or Hard disk_

DRAM Chips - 2MB of Chip RAM included from NEC

Keyboard connector slot - The white slot on the right

CIA Chip (391078) - Controls ports such as Serial, Parallel and Mouse ports

PAULA (391077) - Controls the sound and the floppy drive

CIA Chip (391078) - Second CIA chip for controlling ports

Floppy drive connector

Trapdoor connector

Backward Compatibility

Compatibility with older software can be done in two ways: Hardware and Software.

Hardware:

a) Install a Kickstart ROM Switcher to allow you to switch between Kickstart 1.3 and later Kickstart

Software:

a) Use a SoftKicker program to load old Kickstart into memory e.g Skick

b) Use Disk to Hard disk programs such as JST and WHDLoad to copy the games to hard disk and emulate the older system.

C) Use the CPU command to turn off features such as Caches on processors such as the 68020 or later.

d) Use the Kickstart Startup screen (press both mouse buttons at startup) to select which Chipset to use.

Adding a Hard Disk to A1200

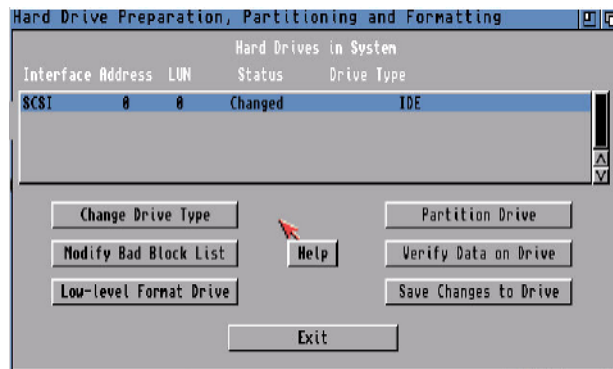
The Amiga 1200 supports IDE Hard disks, there is space for a 2.5" drive but if you plan to towerise your A1200 it can take the cheaper 3.5" drives. Workbench 3.0 or 3.1 can use upto 4GB Hard disks, due to limitations of the 32 bit filesystem and the scsi.device that controls hard disks.

You can use larger Hard disks if you switch to a modern Filesystem such as SFS (Smart File System) or PFS (Professional File System) or upgrade to Workbench 3.5 or 3.9 which has a newer FFS (Fast File System).

Warning: If you use a large drive on Workbench 3.0 you must not partition the drive beyond the 4GB limit otherwise when you write data to the drive, it may overwrite the start of the drive!

To use your hard disk, you need to prepare the disk using HDTtoolbox, the program will create a partition for use by AmigaOS. The program can be found on the Install disk in the HDTools drawer, if you do not have HDTtoolbox, you can download HDInstTools from Aminet instead.

When you run the program, you may get something like this screen:



It should display entry(s) for all hard disks found. If no entries are shown then you need to change the device name for the SCSI_DEVICE_NAME in the Tooltypes in the Icon Information for HDTtoolbox.

Change Drive Type - This is used to read the correct drive configuration from the hard disk including, heads, cylinders, block size and so on. If the drive is Unknown, use this to confirm the correct size of your hard disk before partitioning it.

Modify Bad Block List - A hard disk can develop unusable areas on the surface on the Hard disk called Bad Blocks, you can add new ones found using this option.

Low-level Format Drive - Use with caution! This wipes the entire drive of data and partition information. Most modern drives do NOT require a low level format and may ignore this.

Partition Drive - Used to create partitions on your hard disk so that you can store data and programs.

Verify Data on Drive - This will check the entire disk for any bad blocks and maps them out for you.

Save Changes to Disk - Use this option to save disk configuration and partition changes to disk.

Help - A brief help window on how to use HDTtoolbox.

Click on Partition Drive and you should get a screen something like this:



Click on New Partition to create a new partition in the empty space at the top of the screen. You can resize it using the blue arrow by dragging it across the screen. If the partition will have Workbench installed, you can make it bootable by ticking Bootable. The default File System is shown, you can switch to another filesystem using Change or you can Add or Update a filesystem using the Add/Update button for things like SFS or PFS. The Default Setup will set up two partitions of equal size for you, if you wish. The Advanced Options will display the actual Cylinder numbers for you for each partition (useful in case of disaster recovery and want to create partitions exactly as before). Click OK when done.

When satisfied that your partitions are set up, click on 'Save Changes to Drive' which will write the configuration to an RDB (Rigid Disk Block) on the drive which is read when you boot up.

Reboot the Amiga and boot off Install disk again, you should get one or more new disk icons on the Workbench, select the icon and use Format Disk from the Icons menu to prepare the disk for use.

Warning! If the disk is larger than 4GB do not use the Format program supplied with Workbench 3.0 or 3.1 but use a new version which supports larger disks. Try the one supplied with a new filesystem or from Aminet.

Installing Workbench onto a Hard Disk

Boot off the Install disk and open the Install script for your language, the following languages are supported on Workbench 3.1:

English, French, Italian, German, Denmark, Netherlands, Portuguese, Norwegian, Swedish.

If you do not have an Install disk, you can manually install Workbench, by opening a Shell window, insert the workbench disk on DF0: and type:

```
COPY DF0: TO DH0: ALL CLONE QUIET
```

This will copy all the folders and files (including the important hidden drawers) from your Workbench floppy disk to your Hard disk (HD0: in this case).

You can copy the contents of the other disks as well using the same copy command, for Fonts, make sure you create a Fonts drawer on the hard disk first, and copy the fonts disk contents into that folder.