



SYMBOS

Installation and user manual for SymbOS 3.0
Z80 based multitasking operating system



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SYMBOS

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"Connects Z80ties together forever"

SYMBOS



SYMBOS

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SymbOS is a multitasking operating system with a graphical user interface for Z80 based home computers. It provides a Windows like GUI and is build around a micro kernel with preemptive multitasking. It supports up to 1024KB Ram for data and code execution and includes a FAT12/16/32 filesystem implementation for accessing data storages of up to 2 Terabytes. Since version 3.0 SymbOS is fully network enabled.



I.1 Supported hardware

If you are planning to install SymbOS on your home computer it is a good idea to check if your hardware is supported by the operating system.

I.1.1 Supported Z80/R800 models:

MSX models	Amstrad CPC	Amstrad PCW	Enterprise
MSX 1 (v9990)			
MSX 2	CPC6128	PCW 8256	Enterprise 64
MSX 2+	CPC6128+	PCW 8512	Enterprise 128
TURBO-R	CPC 464	PCW 9256	
OCM	CPC 664	PCW 9512	
	CPC TREX	PCW 10	
128 Kb minimal	128 Kb minimal	256 Kb minimal	128 Kb minimal
1024 Kb maximal	1024 Kb maximal	1024 Kb maximal	1024 Kb maximal

* On MSX models only one memory mapper is used. When 2 memory mappers are inserted the biggest is used. (by default). On turbo-r systems only the internal memory can be used.





I.1.2 Storage devices:

MSX	Amstrad CPC	Amstrad PCW	Enterprise
<ul style="list-style-type: none"> - Sunrise IDE - Sunrise CF/IDE - MegaFlashRom SCC+SD - GR8NET SD* - OCM SD 	<ul style="list-style-type: none"> - CPC-IDE - SYMBiFACE II - X-MASS - M4 SD card - HxC direct SD access 		<ul style="list-style-type: none"> -SD EP Premium
<ul style="list-style-type: none"> - Microsol FDC - National (MB8877A) FDC - Toshiba (Panasonic) FDC - Philips (WD2793) FDC - SVI (WD1793) FDC 	<ul style="list-style-type: none"> - NEC FDC 765 - HxC FDC 	<ul style="list-style-type: none"> -NEC FDC 765 	<ul style="list-style-type: none"> - WD1770 FDC



* By default the GR8NET does not boot Nextor. If you want to use GR8NET as your primary storage device you need to activate the (24,1) mapper mode. When Nextor is active on the GR8NET you can use nextor to boot SymbOS. The GR8NET acts like a slot expander in mapper mode. The storage device is always in sub slot 0 (on GR8NET.) So it will be I-0 or 2-0. On the MSX sub slots are numbered from 0 till 3. (4 in total per primary slot)

This can be done by the following commands. In MSX basic :

Set the mapper mode:

CALL NETSETMAP (24,1) [SET THE MAPPER IN NEXTOR MODE WITH 512k MEMORY]

CALL NETSETMAP (16) [SET THE MAPPER BACK IN STANDARD MODE, WITHOUT NEXTOR]

To save the mapper mode to flash give the following commands. After this it will be start by default.

CALL NETTGTMAP (24,1) [SET THE DEFAULT MAPPER MODE, (24,1) or (16)]

CALL NETSAVE [SAVE 'USER DEFAULT' MODE TO GR8NET FLASH RAM]

To remove mapper mode set the mapper to 0

Introduction to SymbOS



1.1.3 Supported SymbOS screenmodes:





MSX models	Amstrad CPC	Amstrad PCW	Enterprise
Screen 5,6,7 Screen 8,9,10,11	Screen 1,2	Screen 0	Screen 1,2



1.1.4 SymbOS screenmodes:

Screen	Resolution	Color support
0	768 x 255	2
1	320 x 200	4
2	640 x 200	2
3		
4		
5	256 x 212	16
6	512 x 212	4
7	512 x 212	16
8	384 x 240	16
9	512 x 212	16
10	768 x 240	16
11	1024 x 212	16


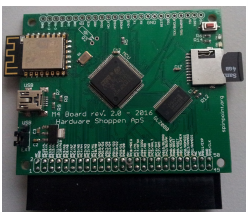
1.1.5 Supported sound devices:

MSX models	Amstrad CPC	Amstrad PCW	Enterprise
AY-3-8910  Sunrise MP3 decoder SE-One (FM+MP3) 	AY-3-8910  Play City (6 AY) 	none	Dave sound chip

1.1.6 Supported input devices:

MSX models	Amstrad CPC	Amstrad PCW	Enterprise
MSX standard mouse PS/2 mouse adapter by Nyyrikki Joystick Rookie USB mouse driver	"joystick compatible" (AMX Mouse, Reissware Mouse) Albireo USB mouse SYMBiFACE II compatible PS/2 adapter MultiPlay (Amiga mouse)	Kempston Mouse Interface AMX Mouse Interface	Boxsoft Mouse Interface Joystick Entermice

1.1.7 Supported network interfaces

MSX models	Amstrad CPC	Amstrad PCW	Enterprise
-Sunrise Denyonet (W5100) -GR8NET (W5100)	-M4Wifi Card (ESP8266)		
			

With Network support you can connect SymbOS worldwide!



Important / WARNING note: Backing up your old files


Most SymbOS setups are easy and trouble-free: however, any time you update your home-computer's operating system, it is possible that errors could occur (such as system failure due to incompatible hardware, or a power failure) that may temporarily or permanently prevent access to data. Before you set up SymbOS, you might want to back up certain files!!

We could not be responsible to harm your home computer or yourself in any way !!!

Important note: Make sure your partition-table / file system meets the standards

Some users reported bugs in partition-sizes. Some early Nextor versions (MSX) created wrong partitions sizes. This is fixed in later versions of Nextor, however it could be that your partition setup was created wrong in the past. SymbOS will fail to read such partitions. Please be sure that your partition table is correctly setup according Microsoft FAT standards!!!

I.1.8 Supported additional graphics cards

MSX models	Amstrad CPC	Amstrad PCW	Enterprise
<ul style="list-style-type: none"> - Sunrise GFX9000 - Techobytes V9990 	-	-	-

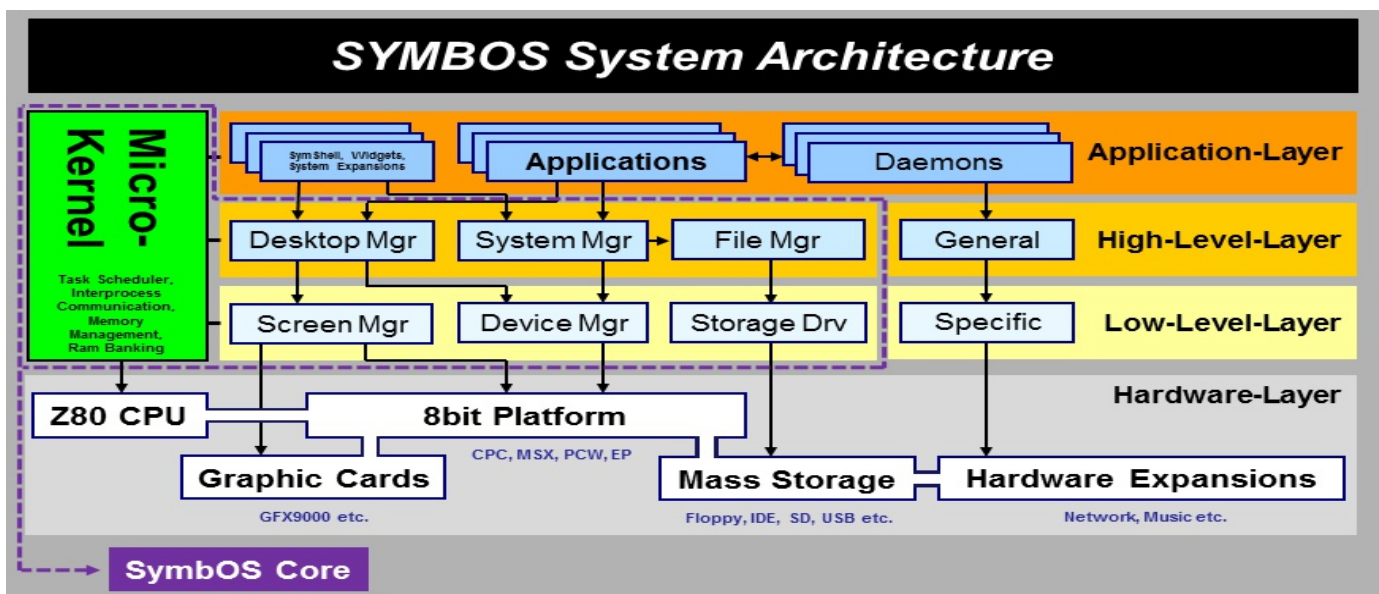
The SymbOS GFX9000/V9990 version supports high resolutions and virtual wide screens. (also called virtual dual-screens). Supported screens are 8,9,10 and 11.



1.2 SymbOS Features

The following diagram shows the internal system-architecture of SymbOS. As you can see, SymbOS consists of three different layers. Only the low-level-layer communicates directly with the Z80 based hardware.

Micro kernel	Power	System manager	Power
Maximum amount of supported RAM	1024 KB	Maximum number of applications	24
Maximum number of processes	32	Maximum application core size	63k
Number of different process priorities	9		
Maximum number of timers	32		
Maximum number of open messages	64		
Desktop manager	Power	File manager	Power
Maximum number of active windows	32	Maximum hard disc size	2 TB
Maximum number controls in window	1000	Maximum file size	2 GB
Maximum possible screen resolution (32.000x 32.000 pixels)		Maximum number of devices	8
		Maximum number of open files	7



SymbOS supports preemptive multitasking. Preemptive multitasking allows the computer system to more reliably guarantee each process a regular "slice" of operating time. It also allows the system to rapidly deal with important external events like incoming data, which might require the immediate attention of one or another process.



2 How can i install SymbOS ?



2.1 Installation on MSX based machines

To boot or install SymbOS on your MSX based machine you need to boot your MSX within a MSXDOS1/MSXDOS 2 or NEXTOR configuration. Please refer to the corresponding manual about booting your MSX in DOS mode. SET EXPERT ON could be needed in some situations. For MSXDOS2 installation use COMMAND v2.42. or lower.

When using a large storage device on your MSX normally MSX-DOS2 or NEXTOR is recommended. When you have a standard MSX2, without large storage device and only floppy drives, you probably will use MSX-DOS1 to install/start SymbOS.

After booting SymbOS the MSX-DOS kernel is removed from memory and the SymbOS kernel takes over control of your machine. Before you start your installation please download the latest SymbOS version from our website. Depending on your situation, copy the installation files (SYMSETUP.COM and SYMSETUP.DAT) to your floppy drive or your large storage device.

If you have an old version of SymbOS already installed remove it as 3.0 has a complete new file structure. Remove also symbos.ini from your root drive if exists.

STEP 1: Boot your MSX and start MSX-DOS and start SYMSETUP.COM

```
MSX-DOS version 1.03
Copyright 1984 by Microsoft

COMMAND version 1.11

A>dir
SYMSETUP COM      15678  30-08-14  0:25p
SYMSETUP DAT     344756  30-08-14  0:25p
MSXDOS  SYS       2432  30-08-14  0:28p
COMMAND  COM       6656  30-08-14  0:28p
      4 files  358400 bytes free
A>symsetup.com
```



STEP 2: Press [1] if you want to install or upgrade SymbOS



STEP 5: Detection of storage devices



SymbOS will automatically detect your storage devices. (which are currently supported by SymbOS.)

Choose the drivers you want to load for SymbOS.

Choose **[1]** till **[4]** to enable or disable the device driver. Press **[S]** to save your configuration.

You can load a maximum of 2 storage device drivers in SymbOS. Each storage device could contain multiple partitions or drives which can be mounted to driver letters in SymbOS.

Primary partitions (first 4) and unpartitioned media are supported by SymbOS with a maximum of 8 (4 slave, 4 master) for each device driver. You can have a total of 8 drive letters in SymbOS. Extended partitions are not supported.

If you change the device hardware configuration (to another slot) in your MSX you have to update the SymbOS configuration again. This will be detected by SymbOS during startup.

(But needs to be changed manually by starting SYMSETUP from the SymbOS directory)



How can i install SymbOS ?



STEP 6: Set your boot drive



Because SymbOS is an operating system it will not use the MSX-bios or MSX-DOS after SymbOS boots. Because of this you need to define the location for SymbOS. (In the first step of the setup procedure we set the installation path "Destination path"). Please select on which storage device the destination path is created. Press **[1]** or **[2]** This will be the boot device of SymbOS



If the destination path is on a large storage device please select on which IDE channel **[M]** master or **[S]** slave the destination path is created. This will be the boot drive for SymbOS.



If the destination path is on a large storage device please select the (primary partition or unpartitioned media) for the destination drive. Most of the time this is **[1]**(nextor) or **[4]** (sunrise) when the destination drive is A in MSXDOS. Note that sunrise IDE partitions are mixed up compared to the Microsoft FAT standard. You could also use MSXDOS A: drive as C: in SymbOS which is more standard.

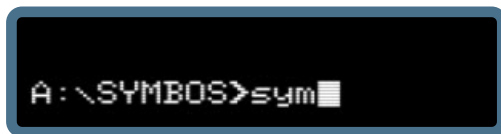


STEP 7 : Please review your settings and save when it is correct. **[Y]** yes to save.

How can i install SymbOS ?



SymbOS will now save all your settings. When **SYMSETUP.COM** is finished you can start SymbOS by going to the destination path and type **SYM** (or **SYMG9K** (GFX9000 VERSION))



2.2 Installation on MSX based machines (Change Settings)



When SymbOS is detecting a hardware change while booting it will abort the boot process and goes back to MSX-DOS. If this is the case you have to re-run **SYMSETUP.COM** which is located in the SymbOS directory. (Do not use the one from the initial installation that is not in the SymbOS path)

Choose **[2]** Change settings to change the existing driver configuration:





In this screen you can change your devices settings.

You can load 2 drivers for device storage. **SYMSETUP.COM** will detect the available Mass Storage Devices. You have to select manually the devices you want to use it for SymbOS.

Press **[D]** devices to select 1 or 2 devices.



- Select the driver place you want to use **[1]** or **[2]**
- Select the device that is detected by SymbOS **[1],[2],[3]** or **[4]**
- Select the driver that you want to use for the device. Use the arrow keys to select.
- Select an other driver if need (You can load max. 2)

How can i install SymbOS ?



- Select **[B]** to set the boot location
- Select the correct driver you want to use as BOOT DEVICE. **[1]** or **[2]**
- Select the correct drive mapping you want to use **[A]** till **[Z]**
- Select the correct partion you want to use **[0]** till **[4]**.
(Note: Sunrise IDE has number 4 as the first partition in MSXDOS, 3 as second.. etc.)
- Select if the device supports 'Removable option' Press **[N]** when you not sure.



If everything is correct **[S]** save the configuration and start SymbOS again with the new drivers active.

2.3 Installation on CPC based machines



INSTALLING AND BOOTING CPC

SymbOS can be booted from disc or from ROM. There are some small differences between the disc and the ROM version:

- you can insert the application disc directly before the booting process
- with an IDE device, the ROM version is able to boot completely disc-less, as it searches on the

harddisc/CF card for the configuration file at first. All files, which are needed during the booting process (background picture, screensaver etc.) can be loaded directly from IDE.

- booting SymbOS from ROM of course is much faster (about 3 seconds)

If you own a ROM box or use an emulator, this way of starting SymbOS is recommended.

If you want to boot SymbOS from disc, you can choose between the fast boot loader version and the slow raw Amsdos loader version. The first one boots SymbOS in only 11 seconds, while the second one uses for compatibility reasons Amsdos or another installed OS to load the SymbOS binaries.



How can i install SymbOS ?



Using the ROM version

The ROM version consists of the files **SYM-ROMA.ROM**, **SYM-ROMB.ROM**, **SYM-ROMC.ROM** and **SYM-ROMD.ROM**, so you need 64K ROM memory. The first ROM (**SYM-ROMA.ROM**) needs to be placed at any slot between 1 and 15. All other ROMs can be placed everywhere between 1 and 63 in no special order. After installing the ROMs you should get a message when switching on your CPC.

Type in **|SYM [+return]** to boot SymbOS.

With the ROM version a disc is not needed to start SymbOS, but if you don't have a harddisc, too, only the default configuration will be present after the booting process. So you should connect a harddisc or insert a disc which contains at least your configuration (**SYMBOS.INI**) and (if installed) the desktop background graphic and the screen saver. It is recommended, that you copy these files on your application disc and insert this one, before you boot SymbOS from ROM. In this case the correct configuration will be loaded, and you can start working with SymbOS at once.



Using the disc version

As mentioned before there are two different disc versions, the fast boot loader version and the slow raw Amsdos loader version. The only difference is again the booting speed. If possible you should use the boot loader

For both versions insert the disc and type: **RUN"SYM [+return]** to boot SymbOS.

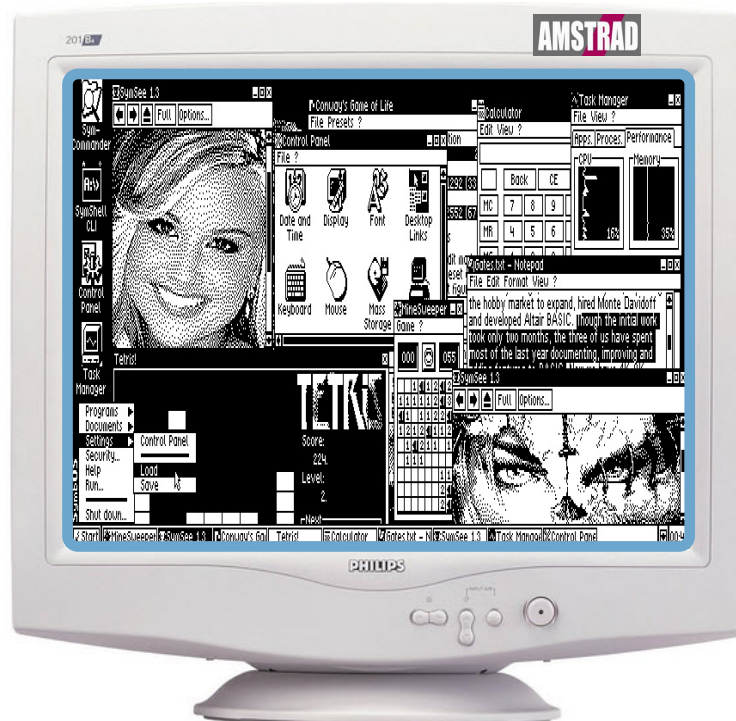
SymbOS starts, reads the configuration file (**SYMBOS.INI**) and loads (if installed) the desktop background graphic and the screen saver. They need to be present on the boot disc or on another present device. After this you can remove the boot disc and insert the application disc. Of course this is not needed, if your applications are located on another present device like a IDE drive or a second disc drive.

After loading SymbOS you can configure the system path and other system settings. See 3.0

2.4 Installation on PCW based machines



Copy the files to the floppy. Boot CP/M and start SymbOS by typing: `symbos.com`



After loading SymbOS you can configure the system path and other system settings. See 3.0

2.5 Installation on ENTERPRISE based machines



Copy the files to your storage device and start SymbOS by typing: `LOAD "SYM"`



After loading SymbOS you can configure the system path and other system settings. See 3.0

3.0 Troubelshooting after booting




3.1 Symbos SYSTEM PATH not correct

After successfully installing SymbOS on your system it could happen that you running in some troubles when opening system applications. This could happen when you did not set the SYSTEM PATH correctly during the installation. To check the system path do the following steps:



If you got an error “FILE NOT FOUND:THE FILE OR THE PATH DON’T EXITS” while trying to run a program from the desktop or from the start menu it makes sense to check the SYSTEM PATH. The SYSTEM PATH is the default path that SymbOS uses to find its internal programs, like the Task Manager.

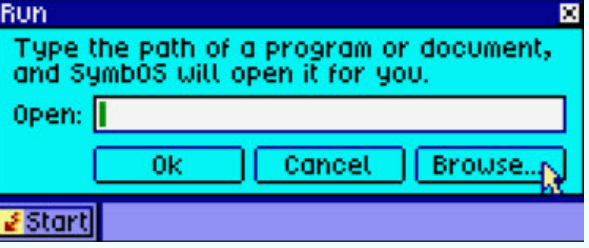
1



Open the START menu, using the mouse or keyboard shortcut [CTRL+ ESC]

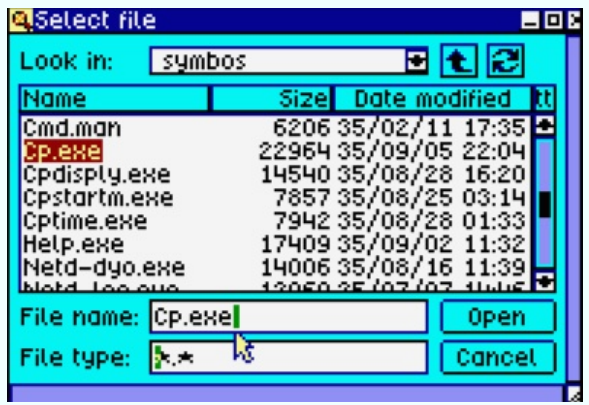
Browse to 'RUN' using the mouse or the arrow keys [UP/DOWN] and press [SPACE]

2



Browse to the button [BROWSE] using the mouse or keyboard 3x [TAB] + [SPACE]

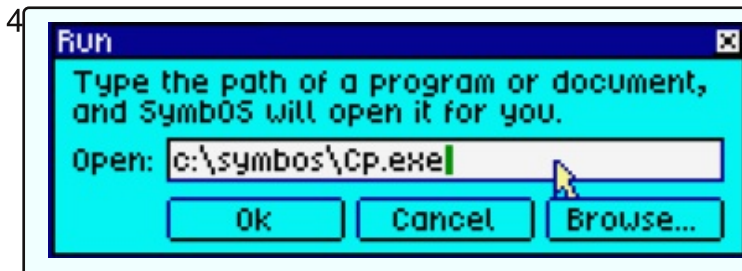
3



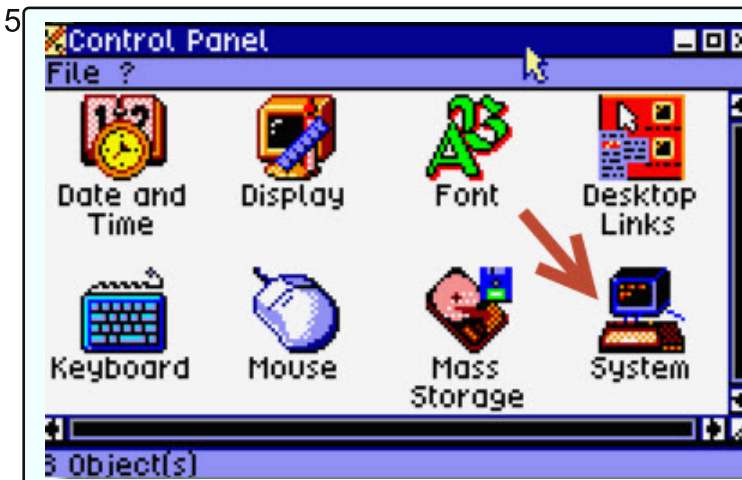
Name	Size	Date modified
Cmd.man	6206	35/02/11 17:35
Cp.exe	22964	35/09/05 22:04
Cpdisply.exe	14540	35/08/28 16:20
Cpstartm.exe	7857	35/08/25 03:14
Cptime.exe	7942	35/08/28 01:33
Help.exe	17409	35/09/02 11:32
Netd-dyo.exe	14006	35/08/16 11:39
Netd-tee.exe	13050	35/07/07 11:05

Browse to the button [BROWSE] using the mouse or keyboard 3x [TAB] + [SPACE]

If you can NOT browse your file system your device drivers for storage are not successfully loaded. Please review your SymbOS installation again. (See 3.2 for error codes) If you can access your file system browse to your SymbOS directory and find the file CP.EXE (SymbOS Control Panel) and open it.

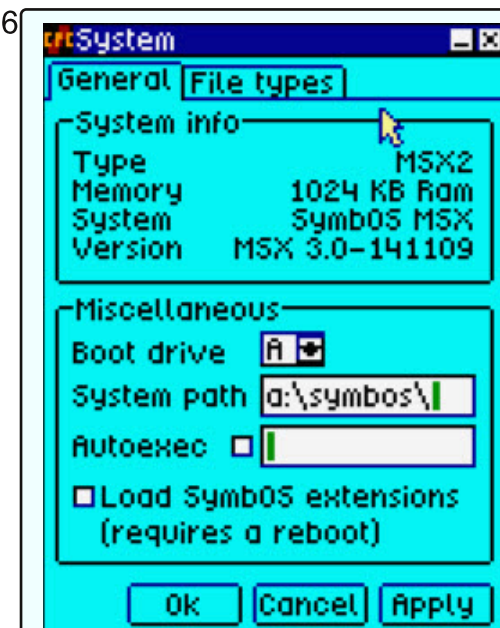


Browse to 'OK' using the mouse or the arrow keys [UP/DOWN] and press [SPACE] or [ENTER]
This will execute the Control Panel



Browse to 'SYSTEM' program using the mouse or the arrow keys [UP/DOWN] and press [SPACE] or [ENTER]

This will open the System configuration



Change the SYSTEM PATH to the correct one. Check your Mass Storage drive mapping for the correct drive and path.

In this example it's set to "A:\SYMBOS"
Be sure you have a \ at the end of the path

Press [OK]



Save your settings in the control panel menu or in the startmenu [SETTINGS] [SAVE]

A new SYMBOS.INI will be created in the root folder of your system drive.

3.2 Errors while booting or when accesing drives

If you got an error after booting SymbOS your file system is probably not accessible. Probably you did not load the correct device driver or selected the wrong partition during the setup procedure. Review the error in the list below. On the MSX you can use SYMSETUP.COM to setup your settings again.

Error Code	Description
000	Device does not exist
002	Device not initialised
003	Media is damaged
004	Partition does not exist
005	Unsupported media or partition
006	Error while sector read/write
007	Error while positioning
008	Abort while volume access
009	Unknown volume error
010	No free filehandler
011	Device does not exist
012	Path does not exist
013	File does not exist
014	Access is forbidden
015	Invalid path or filename
016	Filehandler does not exist
017	Device slot already occupied
018	Error in file organisation
019	Invalid destination name
020	File/path already exist
021	Wrong sub command code
022	Wrong attribute
023	Directory full
024	Media full
025	Media is write protected
026	Device is not ready
027	Directory is not empty
028	Invalid destination device
029	Not supported by file system
030	Unsupported device
031	File is read only
032	Device channel not available
033	Destination is no directory
034	Destination is no file
255	Undefined Error

3.3 SymbOS is not starting with full color support and Advanced desktop

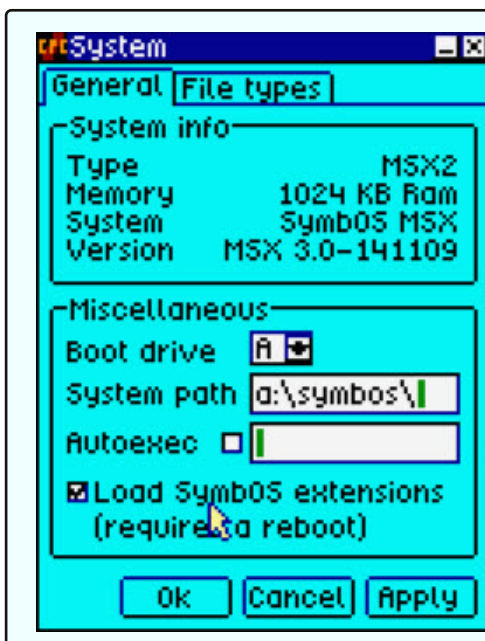
If SymbOS is not started with the advanced desktop feature or without full color support (for icons) than SymbOS extensions is not loaded. The SymbOS advanced desktop feature need more memory to load. If your system does not have enough memory the advanced desktop will be disabled. More then 128KB is needed to load the advanged desktop feature. If you want to use the advanged desktop change the setting in the control panel (System Settings). SAVE your settings and reboot your system. This feature is enabled by default when you system have enough memory during installation.



System running without "Advanged Desktop"



System running with "Advanced Desktop"



Open the Control panel:

Browse to 'SYSTEM'

Enable the SymbOS extensions.
[SAVE] settings and restart SymbOS.

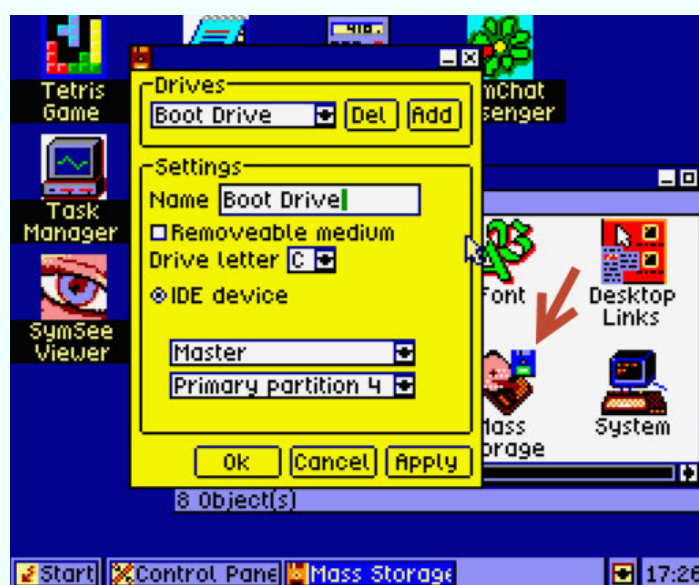
3.4 Change driverletters in SymbOS

There is a possibility to change your drive letters in SymbOS. A mapped drive letter means that you map your partition or storage media, like a floppy disk to a drive letter.

In SymbOS you could choose drive [A] till [Z].

If you change your SymbOS BOOT drive (letter) be aware that need to change the SYSTEM PATH also. Drive letters can be changed in the control panel.

This screen look different depending of your configuration (loaded storage drivers):



Open the Control panel:
Browse to 'Mass Storage'
Change settings and 'Save' your settings in the control panel window or using the start menu [SAVE] settings option.



You can change the label and drive letter or add/remove new mappings. Depending of loaded drivers you can find here floppy settings or mass storage settings or both.

Change the settings and [SAVE] the configuration. A restart is not needed.

Some applications, like SymCommander, needs to be re-configured as well.

4.0 How to use SymbOS



4.1 Move the mouse or use the keyboard



SymbOS is an OS with a graphical user interface (GUI). Like Microsoft Windows, SymbOS uses a mouse device to operate the OS. Proper care and use of your mouse mainly requires common sense. Use your mouse on a clean, smooth surface. Make sure you have adequate desktop space to manipulate your mouse, so you don't have to constantly pick up and reposition it. Don't hold the mouse by its cord, or let the body of the mouse hang off the table. A mouse don't react well to being dropped. The mouse features a ball on the underside that is rolled upon a flat surface to manipulate the onscreen activity, and two fire buttons. What you can actually do with your mouse depends on the software program you use it with. You can select icons, draw pictures, move a cursors or play games --- just about anything you need a controller for. The left fire button is the button which is usually active. The right fire button may also be functional, depending on the application that is started. Plug the mouse into either of the JOYSTICK CONTROL PORTS exactly as you would plug in a joystick.



Other Key combinations you can use:

- CTRL+ENTER (Toggle fullscreen)
- CTRL+ESC (Open startmenu)
- ARROW keys (To browse controls)

- MSX: GRAPH+SELECT (Rescan joystick ports)

A mouse is the perverted way to have control over your SymbOS home-computer, however there is support for the keyboard as well if you don't have a pointing device. You can move your mouse pointer by using your mouse device or press the function key and use the arrow keys on the keyboard to move your mouse pointer. Depending on your computer the function (ALT) key can be found as:

Left Click

- CPC = COPY KEY
- MSX = GRAPH KEY
- PCW = ALT
- EP = ALT

Righth Click

- CPC = SMALL Enter KEY
- MSX = Code KEY
- PCW = ALT
- EP = ALT

Press [SPACE] or [ENTER] for selecting the item (mouse single/double click)

4.2 Getting Started! What is SymbOS ?

SymbOS is a program that makes it easy for you to tell your home- computer what to do. Instead of memorizing commands and typing them at a prompt, you tell the computer what to do by selecting buttons, pictures (called "icons"), and commands from menus. Most of the time, you use your home-computer's mouse to make the selections; choosing a command is as easy as pointing at an option and clicking a button on the mouse. SymbOS is designed to be easy to learn and easy to use.

With SymbOS, you can run more than one application at a time. Each application you run, such as Notepad, Calculator, or Telnet, appears in a separate window, as if you had several computer screens but just one monitor. By learning to manage the different windows, you can easily work on several different programs at the same time. The way you work with these windows is very consistent, so you can apply what you learn here to any applications you run in SymbOS.

Different Strokes for Different Folks!

One major feature of SymbOS is its flexibility. You can do a task in several different ways, and we'll show you one or two of the options. In addition, each user can set up SymbOS in a unique way to make getting to particular applications and files easier. This means you have tremendous flexibility, but it also means that what you see on your computer and what you see in this document will likely be different.

What You See When You Start SymbOS

When you turn on a home- computer with SymbOS installed, you first see a screen called the desktop. Each window you open sits on this desktop. Sometimes windows are so large you can't see the desktop behind them, but it's always there. The desktop is just like your own desk: you can keep it as orderly or as messy as you like. SymbOS does give you a tool that makes it easier to keep things tidy as you move from task to task: the Taskbar at the bottom of the window:



When you run different programs, the program icons show up on the Taskbar, making it easy for you to switch between programs. You'll see more about this later. At the far left side of the Taskbar is the button for the Start menu. The Start menu is, as the name implies, the place you generally go to start any programs. You can also shut down your computer from this menu.



4.3 Using the Mouse to tell your home- computer What to DO!

You'll use your mouse to make selections and tell the computer what to do with those selections. For example, you might use your mouse to select a file you want to open, or a button to close a window, or a graphic you want to move to another location. How do you use your mouse to make these selections? The first step is to point to what you want.

Begin with the mouse on a flat surface, such as a mousepad sitting on a desk or table. When you move the mouse with your hand on the mousepad, you move a pointer on the computer screen at the same time. If you pick the mouse up in the air and move it, the pointer doesn't move at all. Knowing this can help you move the pointer around comfortably on the screen; if your mouse doesn't have room to run on your mousepad, simply pick it up, reposition it, and start again.

You have two mouse buttons; when the "tail" of the mouse, that is, the mouse's cord, points away from you at 12 o'clock, one mouse button is on the left and one is on the right. You'll use your left mouse button most of the time. (Note to left-handers: You may want to make the right mouse button your "primary" button; you can change mouse settings from the Control Panels.

Select with the Left Mouse Button (Point and Click slow twice)



You'll point and click with your left mouse button to select buttons, menus, commands, and other items. To make a selection with your left mouse button, just point at the item, hold you mouse still, and click once. For example, try clicking on one of the icons to select it. After you select something, you can tell the computer to act on it in some way. For now, we'll leave the icons alone, and look at the Start menu instead.

Wanna Drag?

You can click and drag to perform many tasks, including these:

- Moving windows, icons, graphics, and other objects from one place to another
- Resizing windows and other objects
- Copying and moving files from one directory to another
- Creating Program and document "Shortcuts"
- Moving graphics or Videos



The key to clicking and dragging is to keep your mouse button pressed down until you've completed the action. Specifically, to click and drag, point at an object, hold down the left mouse button, and move the mouse on the mousepad. Try it with one of the icons on the desktop. When the icon is in the position you want, release the mouse button, and the icon appears in a new location. By the way, clicking and dragging is also called "dragging and dropping" in various contexts.

4.4 Ready to START ?

Click on Start. Your Start menu probably includes the following choices:

Programs:

You can set up this menu to show applications, such as Games and SymCommander, that you frequently use.



Documents:

This menu lists up to 5 of the last documents you've worked on, so you can get to them quickly. It's a bit quirky: it doesn't list documents you open from within programs. For example, if you open a document while you're using Notepad, it doesn't show up in this menu.



Settings:

Select options from this menu to change different settings on your computer. For example, you can control your diskdrives from here, or change the pattern on your desktop.



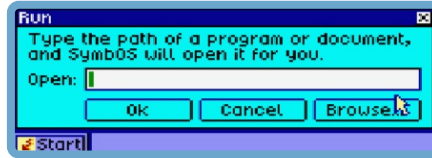
Help:

Use this option to find information about SymbOS. Individual applications have their own Help menus.



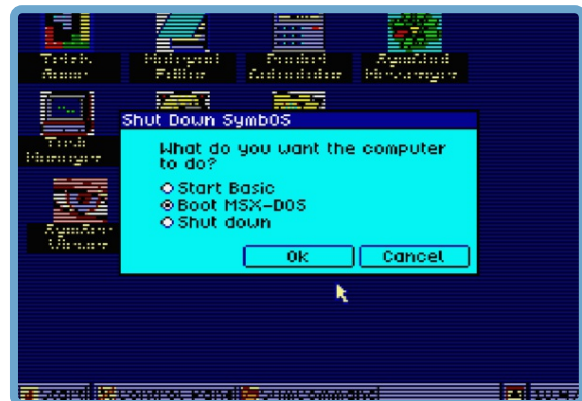
Run:

Use this application to run applications that aren't listed in your Programs menu. You can type the command line for the program or click Browse ... to look for the program icon and select it.



Shut Down:

Choose this option to begin shutting down SymbOS



Notice that some of the options in the Start menu, such as Programs, have arrows next to them.



When you move your pointer to those options, another list of options displays. You're working now with nested menus or folders, with one folder tucked inside another. When you get to an option that doesn't have a black arrow, you've actually found a file, not a folder. If you click on one of these options, you run the program or open the document.

If you don't find anything in the Start menu that you like, just click outside the menu without selecting anything. The menu closes.

Basic Window Structure and Function

The windows you see in SymbOS have many essential features in common. We'll use the Control Panel window to show examples of the following features:

Title Bar:



A title bar does more than display the name of the window. To move a window, click on the title bar and drag. To close the window, double-click on the icon in the left corner of the title bar.

Minimize Button:



Click on this button to shrink the window so you can see other items on your desktop. A button for the minimized window now appears in the Taskbar. To work with the window again, just click on its button on the Taskbar.

Maximize Button:



Clicking on this button enlarges the window so that it fills the entire screen.

Restore Button:



This button only appears when a window is maximized. Goldilocks would have liked this button: to make a window not too big, not too small, but just right, click on the Restore button.

Close Button:



Clicking on this button closes the window. If you're running a program, it closes the program. If you'd rather pause in your work than exit the program, use the minimize button instead.

Resizing Border:

The border appears all around a window. You'll have trouble seeing it if a window is maximized. Resize the window by clicking on the border and dragging. When you move the pointer arrow over the border, it changes shape to a double-headed arrow. Click and drag to change the shape and size of the window.

Scroll Bars:

When a window is too small to show everything in it, scroll bars appear along the right edge or the bottom edge of the window or both. When you click on the arrows at either end of the scroll bar, you scroll through the window, and the scroll bar moves. You can also drag the scroll bar to move quickly through a window; this is especially handy when you're working with long documents.

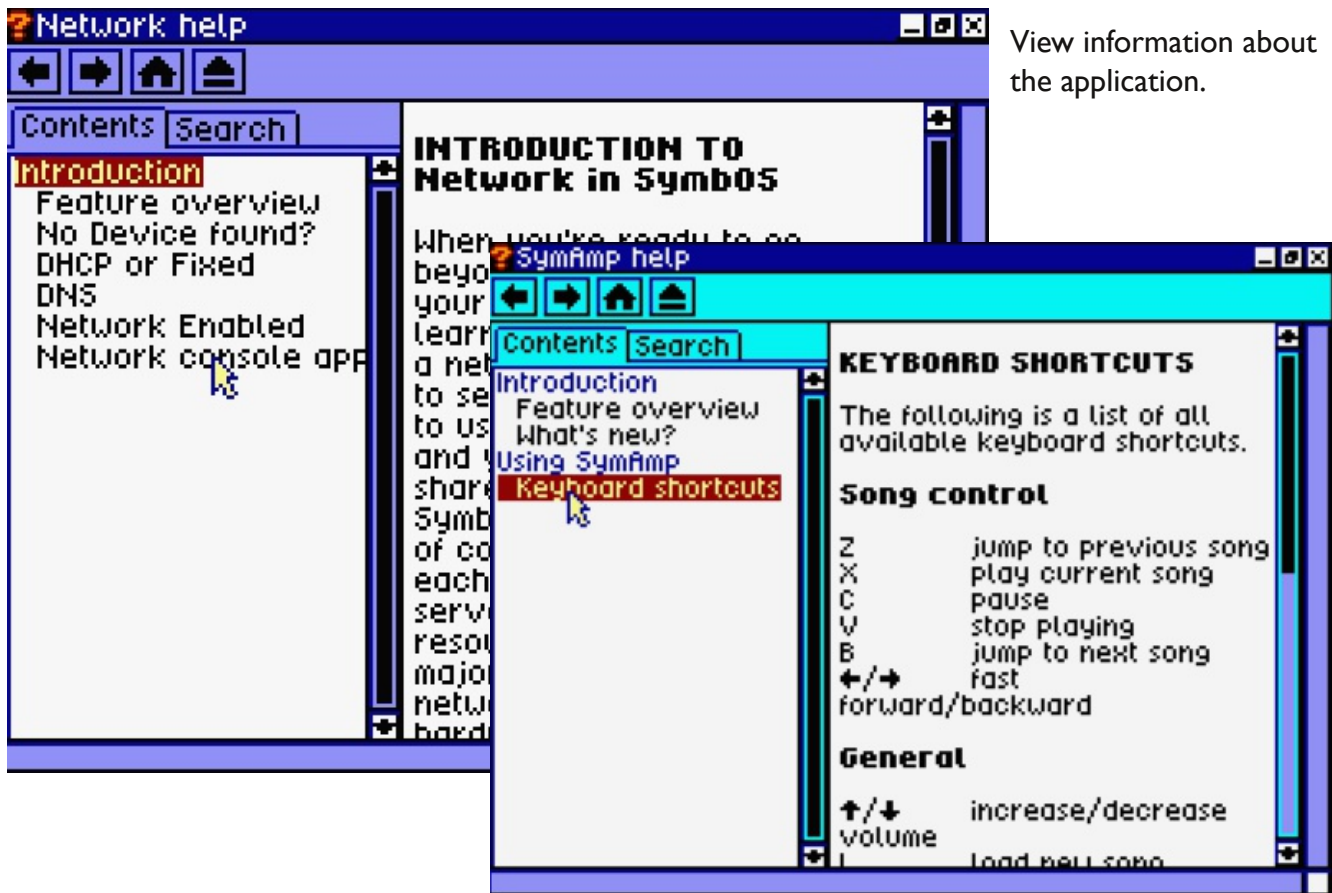


4.4.1 Need Online Help in Applications ??

Most SymbOS application do have an in build help function. This help feature is very usefully when you want to have more information about the application. itself. The help function is a HTML based help browser which allow you to search in HTML based help files.



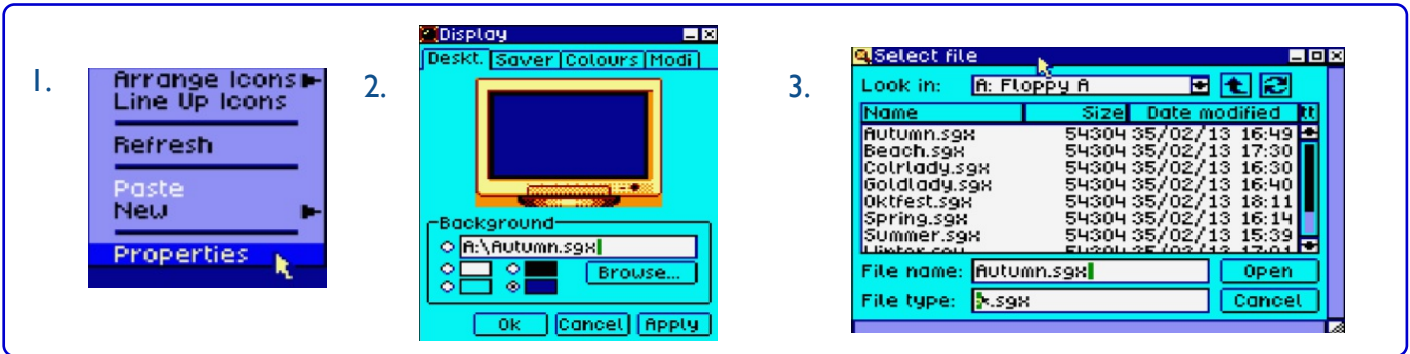
Go to the Help function in the application to get more info about the application.



View information about the application.

4.5 Change your desktop background

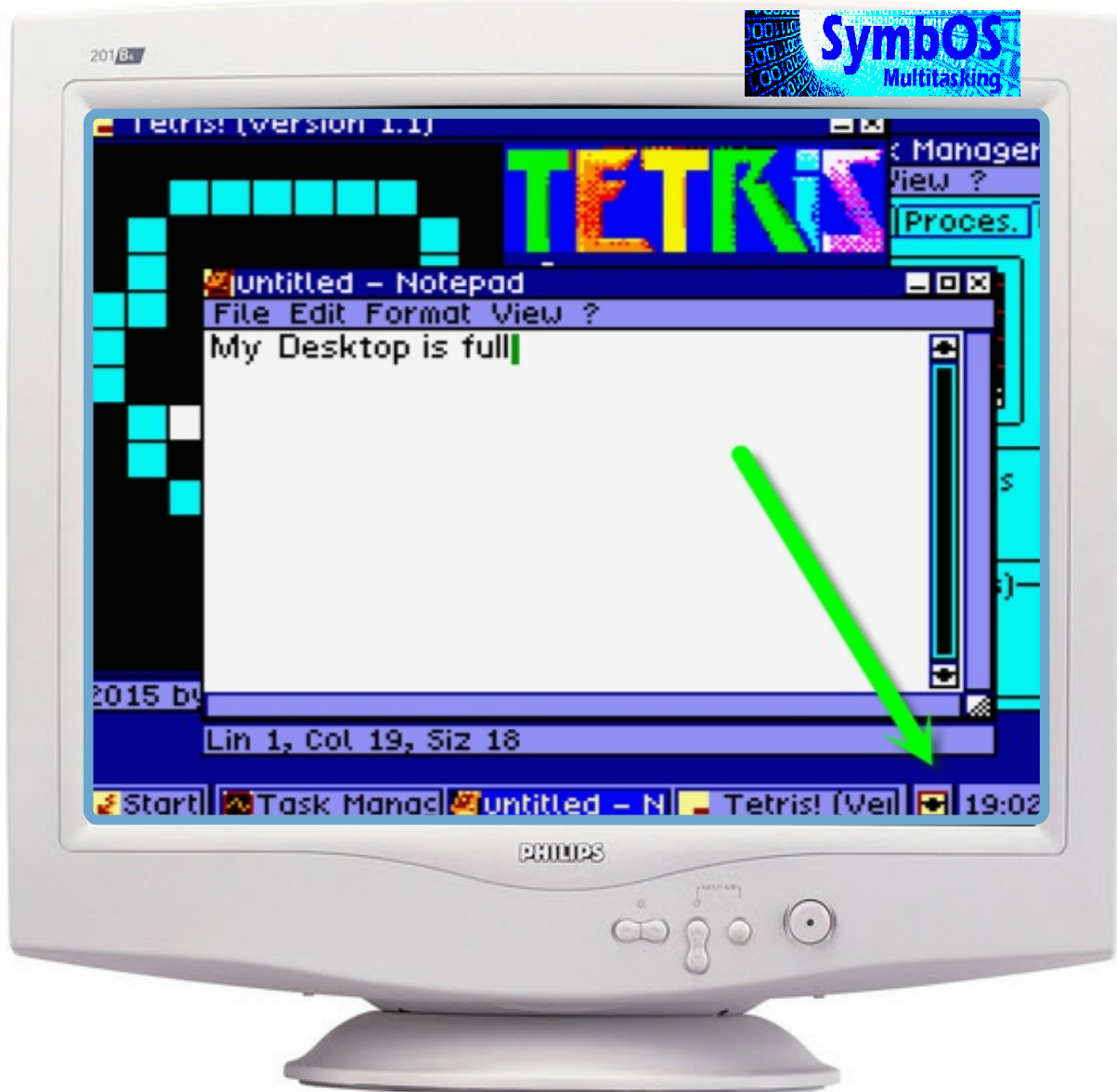
In SymbOS you can simply change your background picture. Desktop backgrounds only work when you have enough memory free available. 1. Click right on the desktop and go to properties, 2. Go to the desk. tab and click browse. Use the file dialog to select a background (SGX file). If you want to know how to use the file dialog please see (3.1)



5.3 Examples of desktop backgrounds



		<p>Save your settings in the control panel menu or in the startmenu [SETTINGS] [SAVE]</p> <p>A new SYMBOS.INI will be created in the root folder of your system drive.</p>
--	--	--



Help! I Can't Find My Desktop!

It's easy to lose sight of your desktop under stacks of windows. Let's say, for instance, that you're working with a notepad, a File-processing program, and the Control Panel window. To tidy things up, first pull up a shortcut menu for the Taskbar to minimize all the windows by choosing Minimize All icon. You'll probably be able to see your desktop now. (Note: dialog boxes don't close when you choose Minimize All Windows.)

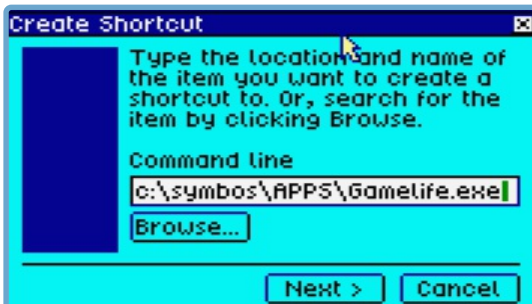
4.6 Putting a Shortcut on the Desktop

Shortcuts provide easy access to the documents and programs you use most often. For example, suppose you keep track of your activities in a text document called Daily Log. You can place a shortcut to Daily Log on the SymbOS desktop. You can then open the text document without having to find it first, by double-clicking the shortcut icon. A shortcut does not change a file's location; it just lets you open the file quickly. You can create a shortcut to any program.

To create a new shortcut do the following: (Using SymbOS extensions)



Click with the mouse right on a empty place on the desktop. Choose New -> Shortcut



Insert the path to the location of the file or use the browse button to browse to the system path.

Click 'Next' to continue



Insert the name of the shortcut. You can define your own name and you can use two text lines of it.

Click 'Next' to continue



Select a new icon using the 'Select Icon Button' or keep the default file icon.

Click 'Finish' to create your shortcut.

4.7 Change a Shortcut on the Desktop

To change an existing shortcut do the following:



Click with the mouse right button on a shortcut icon on the desktop. Choose 'Properties'

If you only want to change the name of the shortcut simply click slow on the text or choose rename in the properties windows.



In the general tab you can see the properties of the icon.

Click 'Shortcut ' to change the values



In the shortcut tab you can define the path of the target and the icon. Change your data and press OK to save it.

Click 'OK'

4.8 Change a Shortcut on the Desktop (Using the classic startmenu and desktop)

If you are not using the advanced start menu/desktop because of SymbOS extensions is disabled you still can define your desktop icons and start menu items using the control panel icon. However without running SymbOS extensions the amount of items is limited and there is no 16 color support for desktop icons. SymbOS extensions need additional memory to load. By disabling SymbOS extensions SymbOS can still run on home computer with less memory.

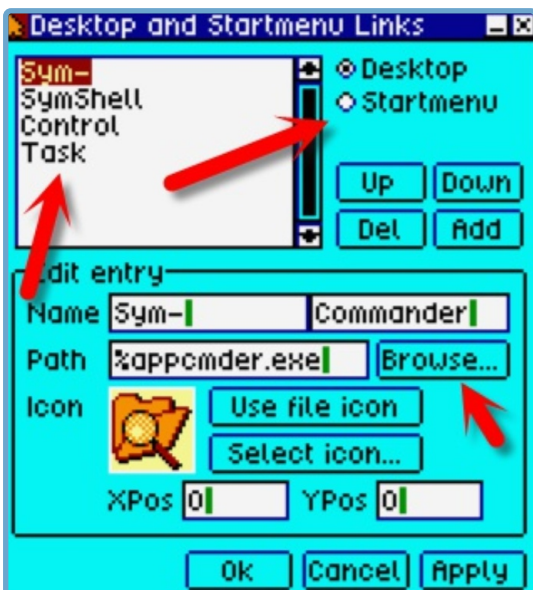
To modify your icons/startmenu do the following:



Use START and then Control Panel



In the control panel start "DESKTOP LINKS"



-You can switch between desktop and startmenu mode using the radio items

- Type ADD to create a new item depending of the mode this is a icon or a startmenu item

- Click the new item you want to change or click a item that you want to change.

- In the Edit entry change the name of the item and use the browse button to browse to the executable file.

-Press Apply to make it visible on the desktop or startmetnu. Be aware that you have to save the settings using the control panel or the save option in the startmenu. Without saving your setting it is lost after a reboot. You can also use the Autosave function in the contol panel.

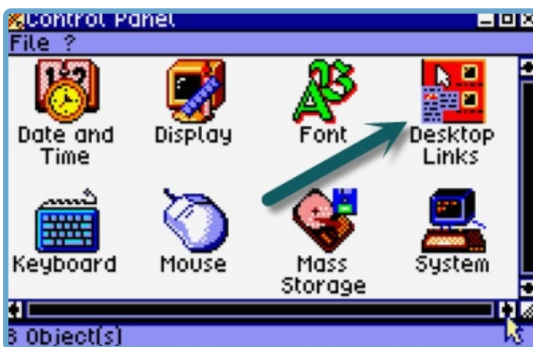
4.9 Change a Shortcut on the Desktop (Using the Advanced startmenu and desktop)

If you are using the advanced start menu/desktop because of SymbOS extensions is enabled you can define your desktop icons and start menu items using the control panel icon. You can make a max. of 40 icons and 100 startmenu items when SymbOS extensions is enabled.

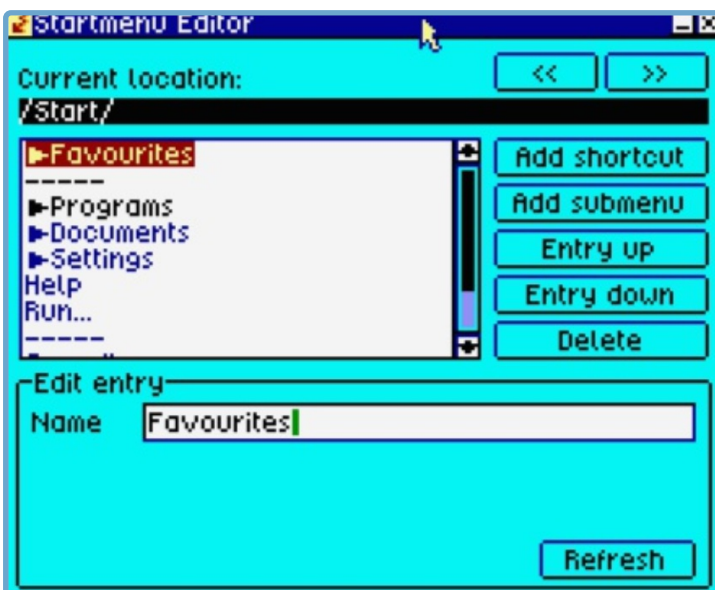
To modify your startmenu do the following: (for icons see 4.4)



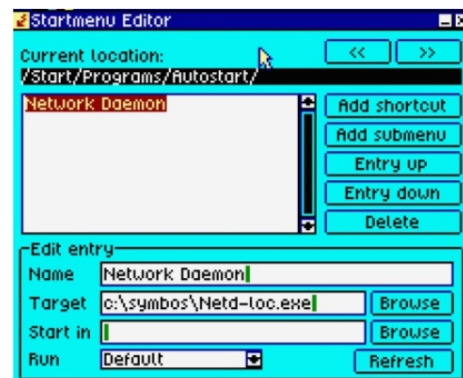
Use START and then Control Panel



In the control panel start "DESKTOP LINKS"



SymbOS will display the “Advanced” Start Menu editor. You can define shortcuts and submenus by using the ADD shortcut/submenu buttons. Use the << and >> buttons to browse to the Start Menu structure. Blue Items are “Read only” and cannot be changed. Shortcuts placed in the “Autostart” folder are programs that will be started automatically when SymbOS boots. For example you can use the Network Daemon to start automatically.



4.10 Using widgets in SymbOS 3.0

When SymbOS extentions is active (see 3.3 how to activate SymbOS extentions) you can use widget applications in SymbOS. Widget applications are small programs that are embedded into the desktop's background. You can use max. 8 widgets.



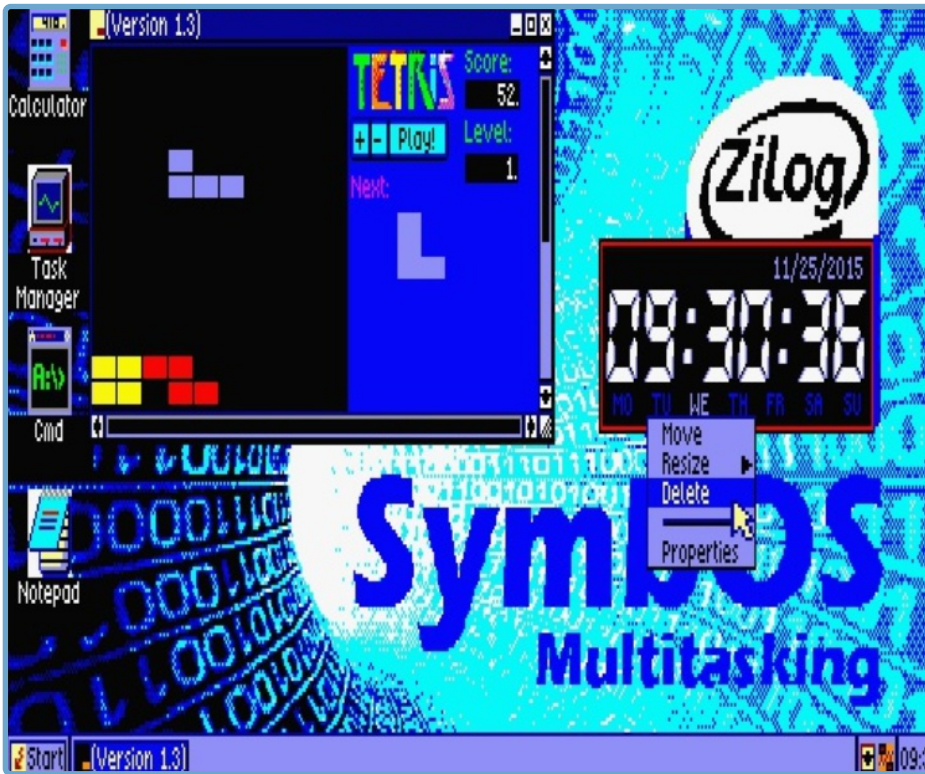
Use 'Right Click' on a empty point on the desktop and choose NEW -> Widget



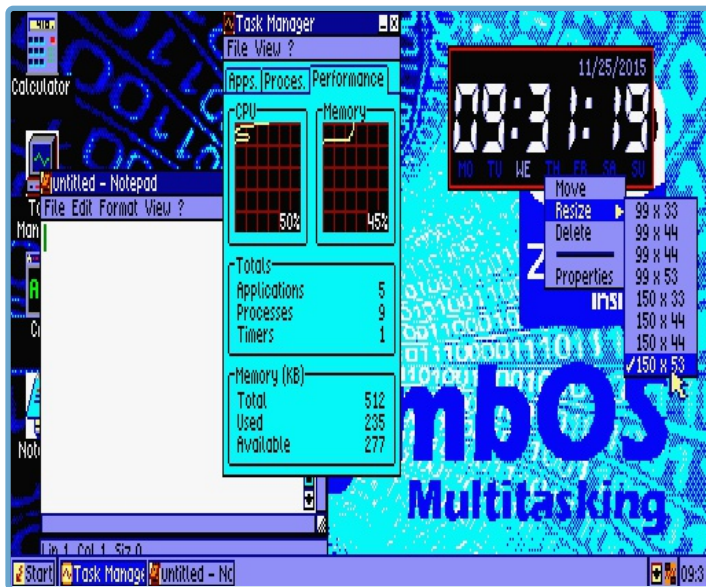
The create new Widget wizzard will start. Use the browse button to browse to the widget application that you want to start/load.



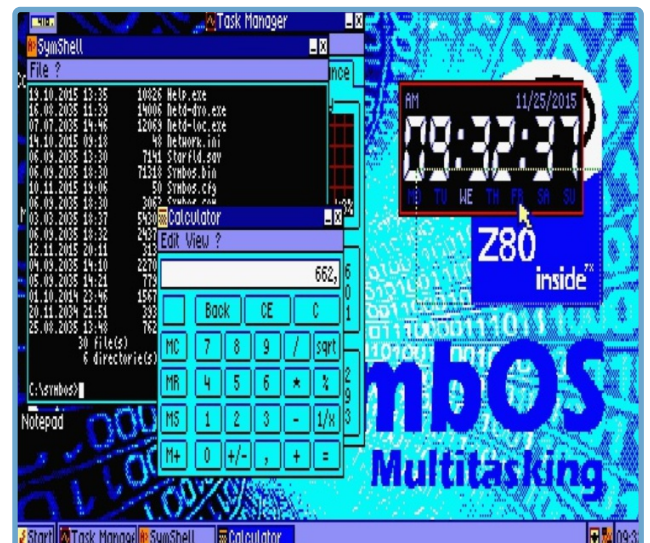
Select the Widget application. Widget applications can be find as WDG applications.



Use 'Right Click' on the Widget, to delete, move, resize it.



Depending on which widget you load it can have different sizes and display options. You can move your widget where you want by using the mouse. Don't forget to save the settings using the start-menu.



Task Manager [TASKMGR.EXE]

With the task manager you can have a view about the utilization of the system, memory uses and process and applications. There is also the possibility to start are stop applications or processes.

Control Panel (Date and Time) [CPTIME.EXE]

You can setup the date and time in the control panel or by clicking on the time bottom right in the taskbar.

Control Panel (Mouse settings) [CPEXE]

In the control panel you can change the mouse and joystick speed settings. Press OK and then [SAVE] SymbOS settings in the control panel or start menu.

Control Panel (Display Settings) [CPDISPLY.EXE]

In the display section you can change the background, screensave, content colors and resolution. Depending on your hardware different colors and resolutions are possible. See supported SymbOS resolutions. Press OK and then [SAVE] SymbOS settings in the control panel or start menu.

Control Panel (Keyboard settings) [CPEXE]

In the keyboard section you can map keys to characters. Each system comes with different layouts. Press OK and then [SAVE] SymbOS settings in the control panel or start menu to apply the settings. You can also load and save keyboards. There are already some standard layouts which you can load.

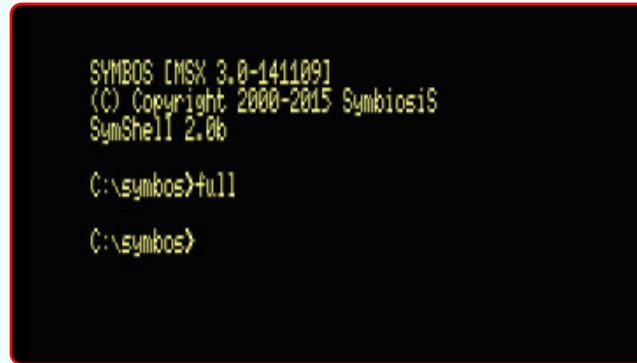
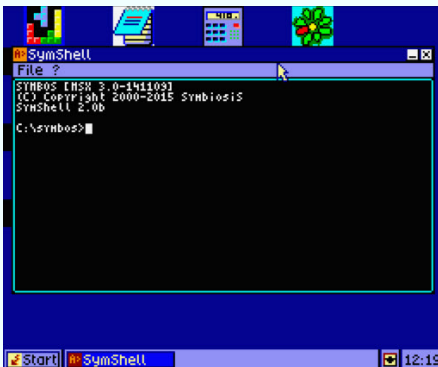
Control Panel (Font settings) [CPEXE]

In the control panel you can change the font. There are several font available for SymbOS. Load you font by browsing to the font file and click [LOAD] Press OK and then [SAVE] SymbOS settings in the control panel or Start Menu.

6.0 SymbOS Shell

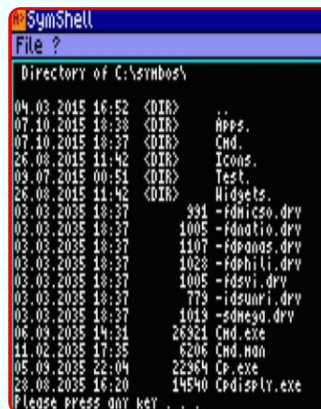
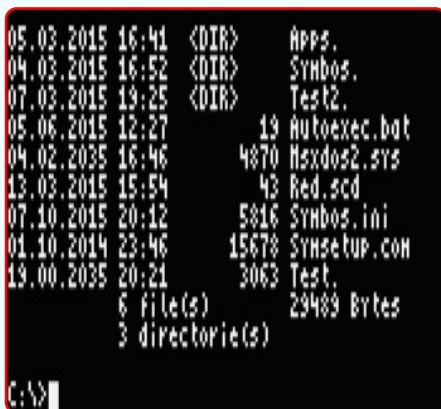


SymbOS SHELL [CMD.EXE]



SYMSHELL is a DOS based commandline shell. Which can be run in a window or full screen. Type [FULL] + [ENTER] to switch between fullscreen or window mode (or GRAPH+ENTER on MSX) [TAB] to autofill [HELP] to display help [HELP COMMAND] to display help about a command or [COMMAND %?] to display help about a command

SymbOS SHELL [CMD.EXE] (Browsing files and directories)



- [DIR] display files
- [DIR %h] display hidden files
- [DIR %s] display system files
- [DIR %f] calculate free disk space
- [DIR %p] pause
- [DIR *.exe] wildcards filters
- [DIR fi*.ex*] wildcards filters
- [CD] display directory
- [CD \] browse to root
- directory
- [CD ..] go one directory back
- [CD folder] browse to folder
- [CLS] clear screen


SymbOS SHELL [CMD.EXE] (deleting files and directories, Add directory)



- [DEL filename.ext] delete file
- [DEL *.ext] delete with filter
- [DEL fil*.ex*] delete with filter
- [rmdir directory] delete empty directory
- [mkdir directory] make new directory

SymbOS SHELL [CMD.EXE] (date and time)

<pre>20.11.2034 21:51 3938 SYMVER.exe 25.08.2035 13:48 7622 TaskMgr.exe 29 file(s) 356571 Bytes 6 directorie(s) C:\symbos>DATE Current date is Wed 2015-10-14 Enter new date (YY-MM-dd):</pre>	[DATE]	display or set date
<pre>20.11.2034 21:51 3938 SYMVER.exe 25.08.2035 13:48 7622 TaskMgr.exe 29 file(s) 356571 Bytes 6 directorie(s) C:\symbos>TIME Current time is 18:10:22 Enter new time:</pre>	[TIME]	display or set time



(Date and time can also be changed by double click on the time in the taskbar)

SymbOS SHELL [CMD.EXE] (Rename, attrib)

<pre>20.11.2034 21:51 3938 SYMVER.exe 25.08.2035 13:48 7622 TaskMgr.exe 29 file(s) 356571 Bytes 6 directorie(s) C:\symbos>REN *.EXE *.BCH</pre>	[REN filename newname] [REN *.TXT *.BAK]	Rename files or directories rename files with wildcards
<pre>20.11.2034 21:51 3938 SYMVER.exe 25.08.2035 13:48 7622 TaskMgr.exe 29 file(s) 356571 Bytes 6 directorie(s) C:\symbos>ATTRIB FILENAME /R /+H</pre>	[ATTRIB] filename (Display current settings) [ATTRIB] filename %R, %+R, %-H, %+H, %-S, %+S	

Add[%+] or Remove [%-] file attributes

H	=	Hidden
S	=	System
R	=	Read only

SymbOS SHELL [CMD.EXE] (copy, move files)

<pre>20.11.2034 21:51 3938 SYMVER.exe 25.08.2035 13:48 7622 TaskMgr.exe 29 file(s) 356571 Bytes 6 directorie(s) C:\symbos>COPY C:\TEST*.EXE C:\TEST2\</pre>	[COPY source destination] [COPY source.* destination.*]	copy files copy files using wildcards
<pre>20.11.2034 21:51 3938 SYMVER.exe 25.08.2035 13:48 7622 TaskMgr.exe 29 file(s) 356571 Bytes 6 directorie(s) C:\symbos>MOVE C:\TEST*.EXE C:\TEST2\</pre>	[MOVE source destination] [MOVE source.* destination.*]	move files move files using wildcards

SymbOS SHELL [UNZIP.COM (Extract ZIP or GZ files)]

```

C:\symbos>cd cmd
C:\symbos\cmd>unzip
UNZIP 1.0 for SymbOS (c)oded 2015 by Prodatron / Symbiosis
  based on ideas & code by Grauw and Mouter
Missing parameter(s)
At least a command and the archive has to be specified.
Please type UNZIP H for help
C:\symbos\cmd>

```

With UNZIP.COM you can extract ZIP or GZ files with SymbOS.

TYPE: UNZIP H to display the commandline options and switches.

UNZIP e ZIPNAME will extract the ZIPPED archive.

Notepad

```

<Commands>
e Extract <files> from <archive> (without using director
y names)
l List <files> of <archive>
t Test integrity of <files> in <archive>
x extract <files> from <archive> with full paths
i display detailed <files> Information
h show Help
<Switches>
%o:<file>
Concatenate output(s) to <file>
%f Fast mode (no CRC check)
%o Overwrite existing files
%ls Short list (file names only)
%t adopt timestamps

```

An archive can be a Gzip (*.GZ) or a Zip (e.g. *.ZIP) file.

C:\symbos\cmd>

```

C:\symbos\cmd>UNZIP e BACK.ZIP
C:\symbos\cmd>
UNZIP 1.0 for SymbOS (c)oded 2015 by Prodatron / Symbiosis
  based on ideas & code by Grauw and Mouter
Processing archive: BACK.ZIP
Extracting Z80.SGX [53K, OK]
Extracting SYMBOS.SGX [53K, OK]
Extracting WINBACK1.SGX [53K, OK]

Extracted: 3 (Size: 162912, Compressed: 42373)
Skipped: 0
Corrupt: 0

C:\symbos\cmd>

```

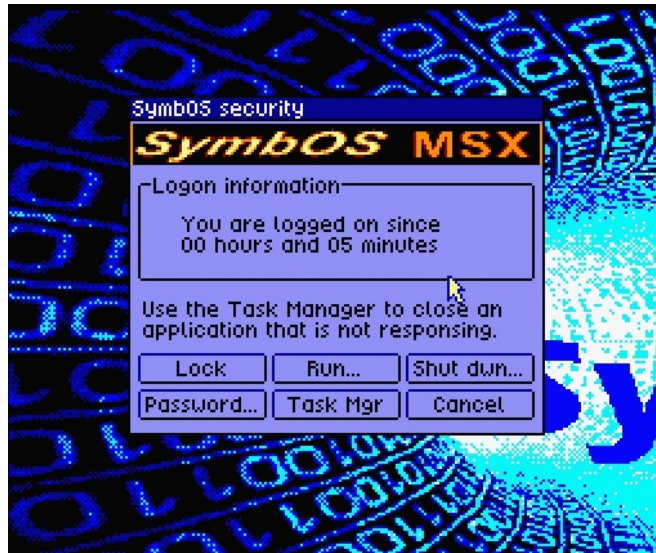
Security "Lock your screen"



SymbOS user desktop may be locked for security reasons by manually choosing to lock the computer. Once the computer screen lock is invoked, access to the computer will only be allowed to the SymbOS user whose account is currently an authorized administrator. To lock your screen do the following:



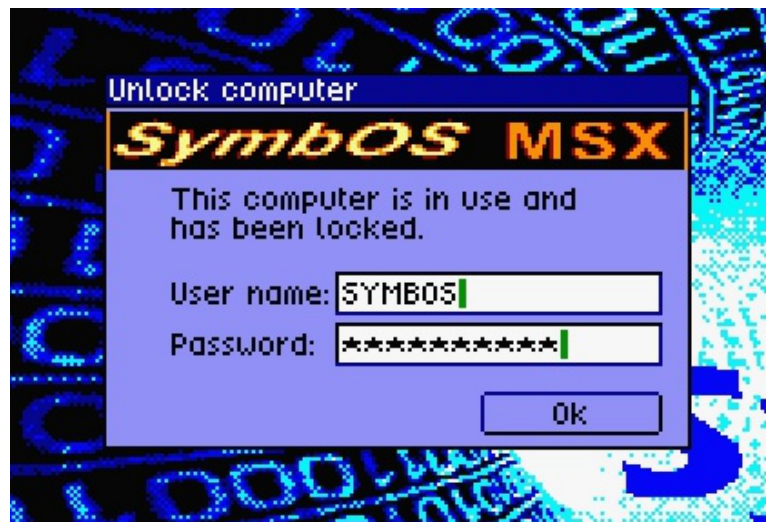
Open the start menu and choose "security". This feature can only be used if the extended desktop is loaded.



If this is the first time, or if you want to change your password, choose the password option in the lock screen.



For the SYMBOS (administrator user) choose a new password. By default the password is blank.



To unlock your SymbOS workstation, enter your password. If you forgot your password consult the system administrator ;)



7.0 Enable Network support



When you're ready to go beyond the home- computer on your desk, use this chapter to learn the basics of working on a network. You will learn how to set up your home- computer to use a network, and how you and your co-workers can share bits on the network using SymbOS. A network is a group of computers connected to each other or to a central server so they can share resources.

There are two major steps in setting up a network: setting up your hardware and setting up your software. Before setting up the software, be sure your network hardware is correctly installed. This includes the network adapter and cables.

TCP/IP is one of the most common networking protocols in use and is required for telnet, ftp, web access, and a number of other networked operations.



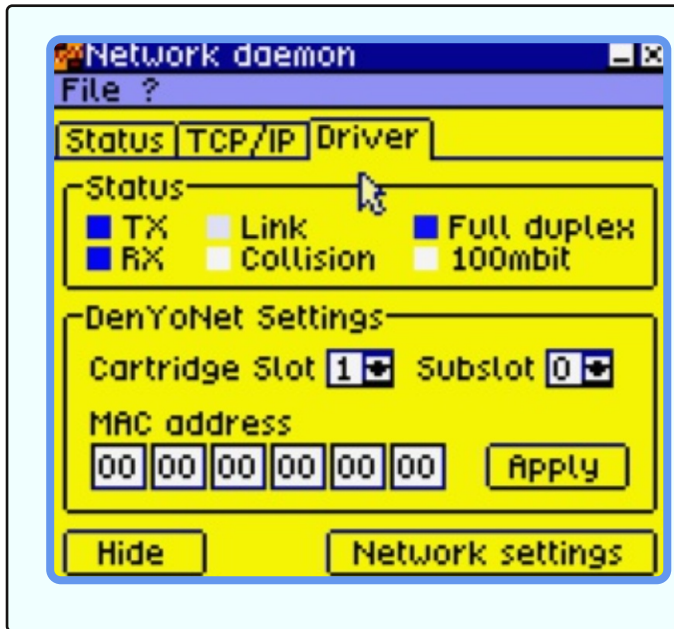


If you want to setup networking in SymbOS be sure your home- computer is running SymbOS network daemon.

Start the network daemon (netd-dyo.exe) if it is not started automatically during SymbOS startup. Please check the status of your network.

This could be for example:

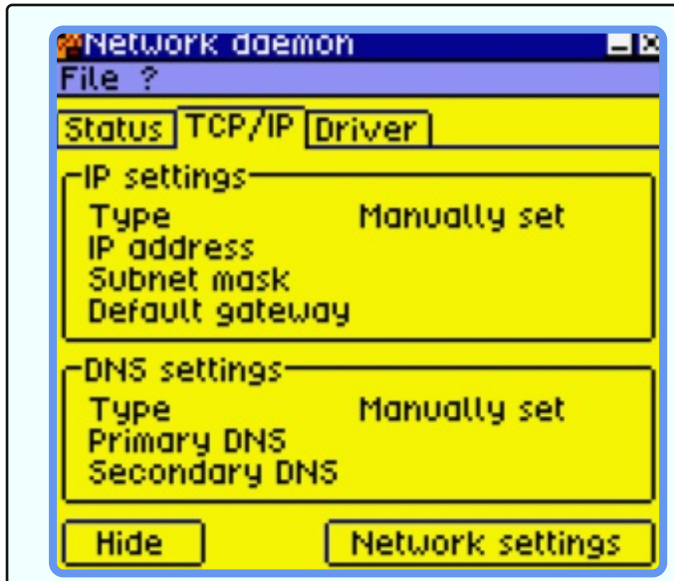
- Not detected
- No device
- No IP Setup
- Connected



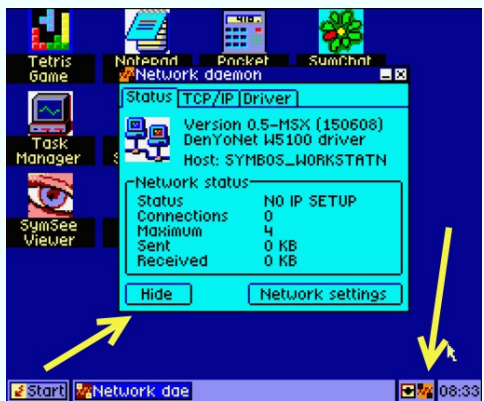
If the status is 'No Device' go to the driver tab and set the correct settings for your device. Depending on which hardware is installed choose the correct settings for your network hardware.

When using a MSX model select the correct SLOT number where your network adapter is plugged in. If you are using a slot expander you have to define the SUBSLOT as well. After selecting the correct SLOT/SUBSLOT press the Apply button. The network daemon will try to communicate with the hardware.

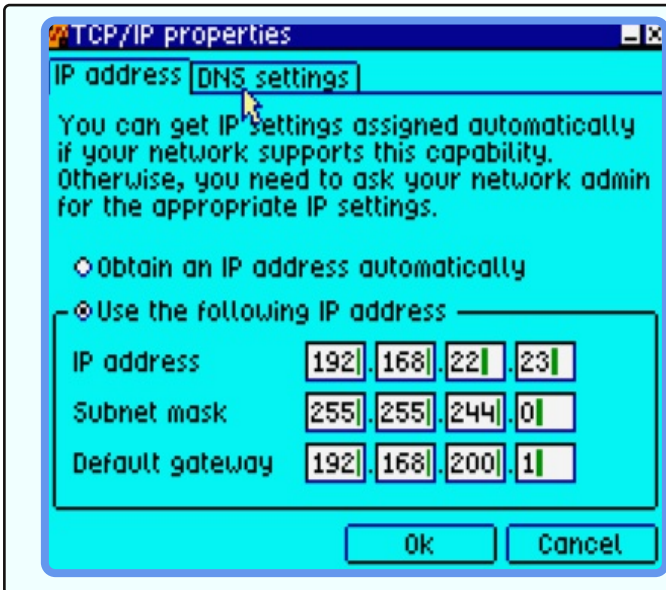
When successfully the MAC address is obtained from the ROM (when defined in the ROM). The status of the network daemon will change afterwards in the Status TAB.



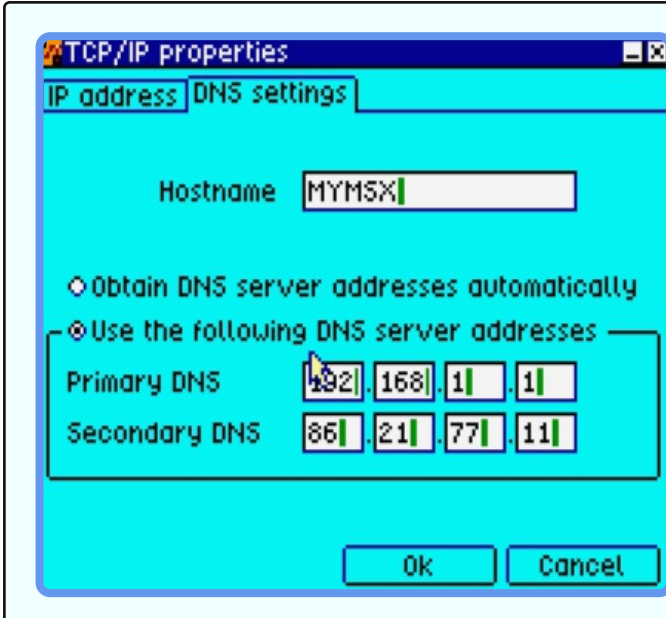
If the IP number is not correctly setup go to the TCP/IP tab and define a IP number using the Network settings button.



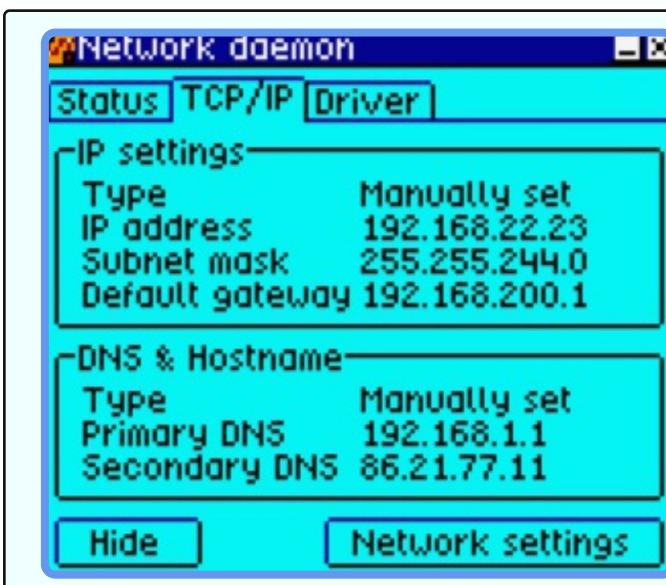
Use the HIDE button to hide the network daemon to the network icon in the taskbar. To open it again click the icon.



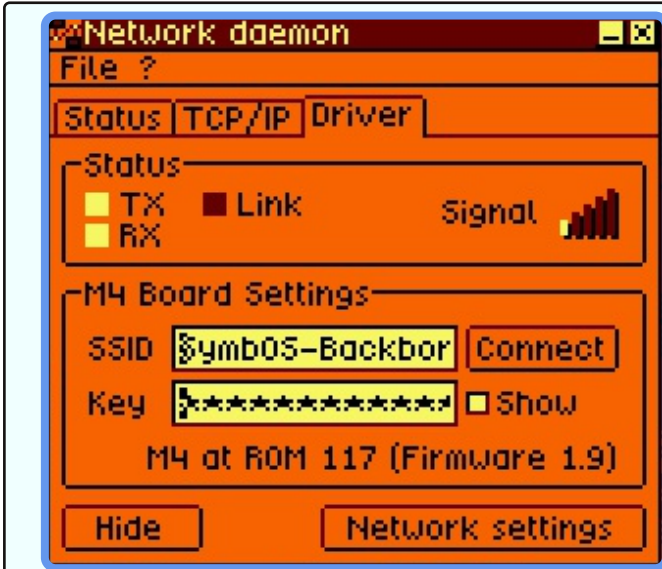
There are 2 options to setup an IP address. You can get IP settings assigned automatically if your network supports DHCP capability or you need to define a static IP. You need to ask your network administrator for the appropriate IP settings. Beware that you need a default gateway if you want to connect to systems outside your own network (also called subnet broadcast domain)



A DNS (Dynamic Name Server) is needed to translate hostnames to IP addresses. You can choose to obtain a DNS server addresses automatically or to use a static DNS server. Most of the time the DNS server is the same IP as your gateway. You need to ask your network administrator for the appropriate IP settings if you are not sure. You can define a max of 2 domain name servers.



If the IP number is correctly it will be displayed in the TCP/IP tab. If everything is correct you are connected to your local network or to the internet. with your Z80 home computer! If you not have a network hardware device and you want to play around with networking in SymbOS you could load a localhost driver. This localhost driver allows communication with applications using the network daemon. With the localhost driver loaded you can only connect/communicate to application that are loaded on your local machine.



When using a Wifi adapter you have to provide the SSID of your network and the password of your security mode. SymbOS shows you the signal strength of your connection. Be sure you are using the last Firmware provide for the M4



If your Wifi is connected you get an Online in the status.



8.0 Use Network applications



After successfully enabled the network daemon in SymbOS you are able to use the TCP network applications with your home- computer like SYMTEL (telnet) or play a network game like Battle Ship. SymbOS can handle multiple connections (up to 4). Unify, (SymbOS IDE development Studio for Microsoft Windows), which is developed by Trebmint, supports network as well. Now everyone can make network applications/games with less knowledge about networking using Unify.



* Network daemon running on a MSX machine. (On real hardware as there is currently no network support for emulators.) There are 3 connections open. (3 telnet connections). SymbOS makes full advantage of multitasking in this case. With netstat.com you can see the open TCP connections.

```

SymShell
File ?
A:\>netsat

Active Connections

Proto Local Address Foreign Address State
TCP localhost:49152 59.83.32.182:23 ESTABLISHED
TCP localhost:49153 142.34.181.241:23 ESTABLISHED
TCP localhost:49155 13.64.230.139:23 ESTABLISHED
A:\>
    
```

Type NETSTAT.COM in symshell to see the active network connections and status.

```

SymShell
File ?
SymShell 2.0beta
C:\symbos>cd cmd
C:\symbos\cmd>telnet
SYNTEL 1.0 TELNET FOR SYMBOS
-----
Written in 2007,2015 by Prodatron (c)Symbiosis
Type SYNTEL Zh for command line parameter help

Current settings:
(P)ort : 23 (E)cho : off
(T)erminal : ANSI (L)ogfile : off
Line(F)eed : CR+LF

Please enter host IP or domain (CTRL+C quits at any time)
or press RETURN to change current settings
SYNTEL>bbs.hispamsx.org
    
```

With TELNET.COM (telnet client) you can connect to every telnet server you want. Type [telnet domain name or IP] to connect directly to the destination.

By default TCP port 23 is used. If you start SYMTEL without a domain name or IP you go to the SYMTEL console. In the SYMTEL console you can change settings like port number, echo settings, terminal type etc. by pressing the config key and Enter.

If you want to connect to a host just type the IP or DNS name and press enter to connect. Be aware that the network daemon must run in the background.

```

Synchronet BBS for Linux Version 3.16 Copyright 2014 Rob Swindell
CLIENT CONN: Telnet
ADDR: p19f5f526.dip0.t-ipconnect.de [217.245.245.38]
SERVER NAME: hispamsx BBS
ADDR: bbs.hispamsx.org
NODE: 1 (of 4)
TIME: Sun Mar 29 2015 14:23:07 UTC+1:00
ADMIN: Karloch

If you are a new user to the system, type "New" now.
Otherwise, enter your user name or number now.

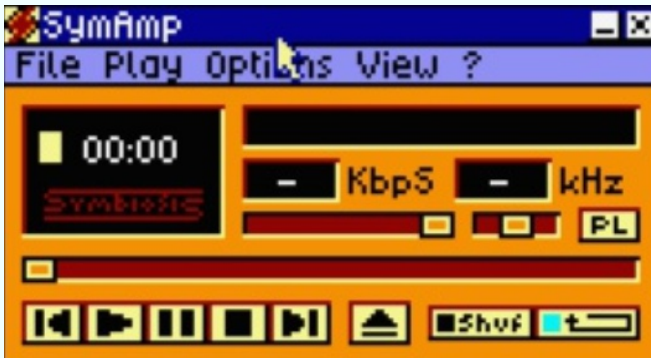
Enter User Name or Number or 'New' or 'Guest'
Login: New
Starting the new user registration process...
[Q] Use automatic terminal type detection? No
[Q] Does your terminal support ANSI? No
[Q] Does your terminal support IBM extended ASCII? No
[Q] Enter your full name or alias: Prodatron
[Q] Enter your full real name: Jo
    
```

To disconnect press CTRL-C or logoff in the remote system. Press CTRL-C also if you want to exit SYMTEL.

If you want to toggle between full screen mode and windowed mode press GRAP+ENTER. In full screen mode the performance is higher than in a windowed screen.

In this example we connect to bbs.hispamsx.org (telnet server) which is 24 hours online!

SymAmp (Music Player)



SymAmp is a music player for SymbOS, which currently supports compiled Starkos modules (SKM, this is the compiled version), Soundtracker 128 modules (ST2, this also is the compiled version of *.128 files), PT3 modules (ZX Spectrum Protracker, Vortex Tracker) and MP3 files (MSX with MP3MSX decoder card required). SymAmp provides a playlist with a full featured editor. Songs can also be played in random order. When the end of a song has been reached, the next one will be loaded and played automatically.

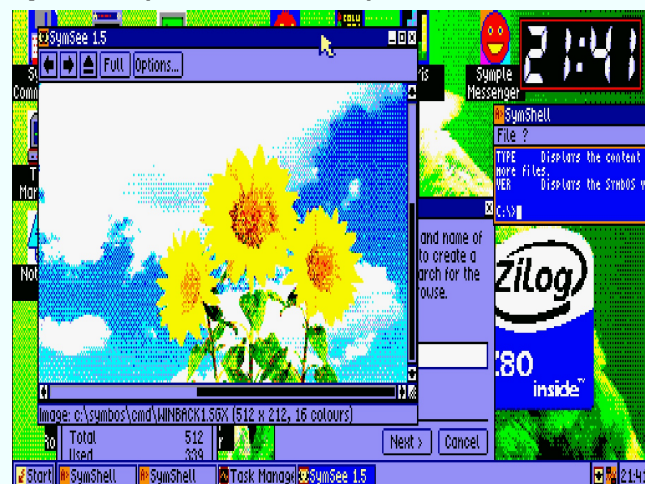
SymPlay (Video Player)



SymPlay is the first and only CPC application, which allows you to play videos from your hard disc or compact flash card. It supports any kind of resolution and data rate (frames per second). As it is completely independent from the hardware, it behaves on a 12MHz TREX like on an original 4MHz CPC - just with different playback quality. You can download "VID" video files playable with SymPlay and live videos, showing SymPlay in action, in the download area on www.symbos.de

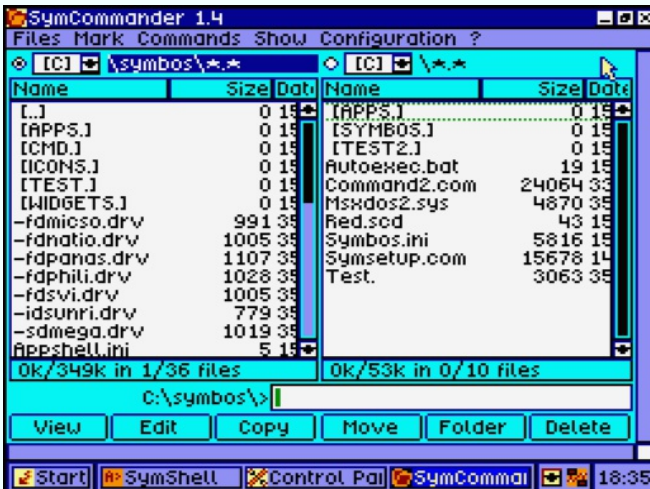
To produce your own SymPlay videos, please download SymStudio, which is the Windows XP tool for creating applications and videos for SymbOS.

SymSee (Picture viewer)



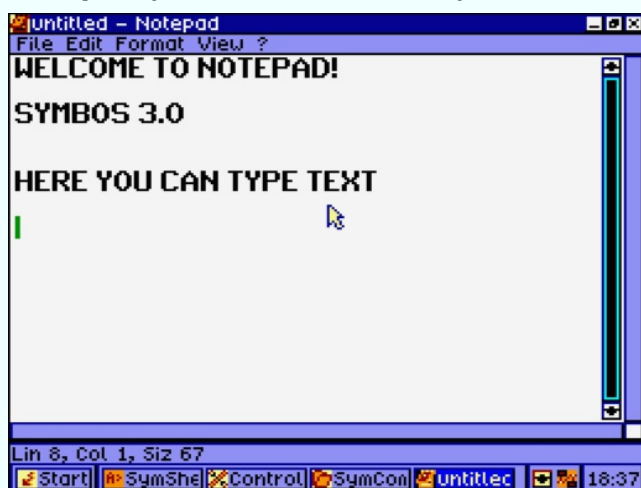
SymSee is a picture viewer for SymbOS, which allows you to watch your complete image library in a very comfortable way. You can step through your gallery with one mouse or keyboard click for each picture. Pictures can be viewed in window or (more or less) fullscreen mode. Raw 16K CPC files, OCP Art Studio (compressed or uncompressed) screens and SymbOS SGX files of any resolutions in 4 or 16 colours are supported. SymSee supports a slide show feature, where the pictures will change automatically after a special time. Even a random order is possible. 320x200 (CPC) and 512x212 (MSX) standard SymbOS SGX files can be used as desktop pictures directly from SymSee.

SymCommander (File Manager)



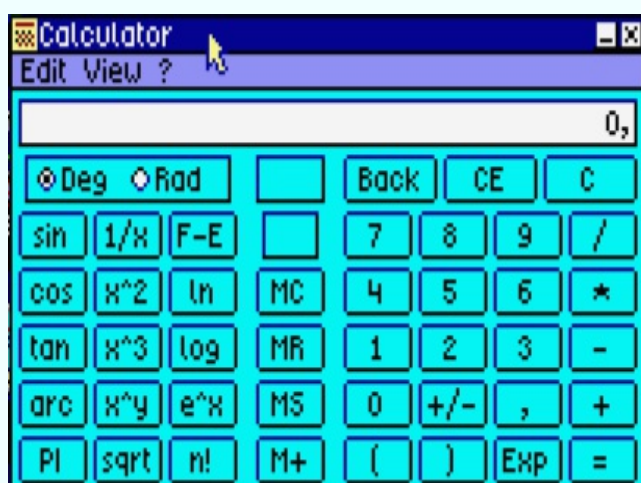
SymCommander is designed like the windows clone of the good old Norton Commander. Because of its huge keyboard support it's a very comfortable and fast to use tool for managing your files on floppy and hard disc. With the function keys or a mouse click on the buttons or menu entries you can reach all important file management features.

Notepad (Multiline text editor)



Notepad is a multiline textinput control. It is the most complex control of the desktop manager has the functionality of a small text editor and is an exact copy of modern textedit-boxes. It supports features like auto-word-wrapping, support of any proportional fonts and colours, unlimited line length, text marking, copy & paste etc.

Calculator



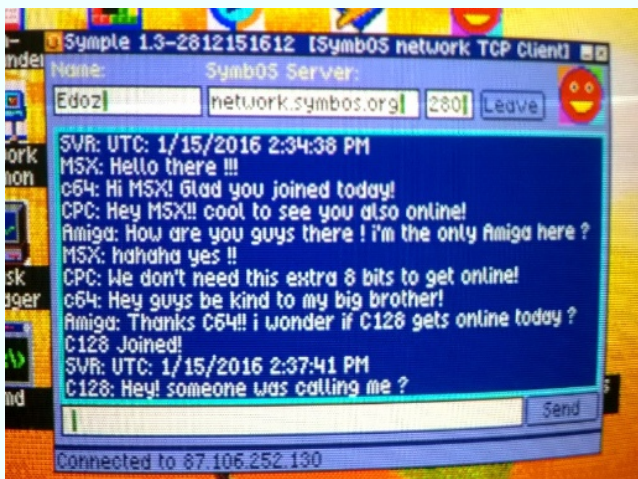
The pocket calculator was the first application available for SymbOS and has been rewritten after two years.

SymZilla (Web/DOX browser)



SymZilla is a simple web- browser that supports DOX files. DOX files are compiled documents that can contain text and images. SymZilla is still in beta and networks support / pure HTML are not supported at this time.

Symple (Network Chat Client)



Symple web chat client for SymbOS. Symple needs a network connection and the network daemon to run.

SymbOS chat server is hosted on: network.symbos.org on port 280

There is also a Windows, SymbOS chat client for modern computers.

Battleship (SymbOS first NETWORK game)



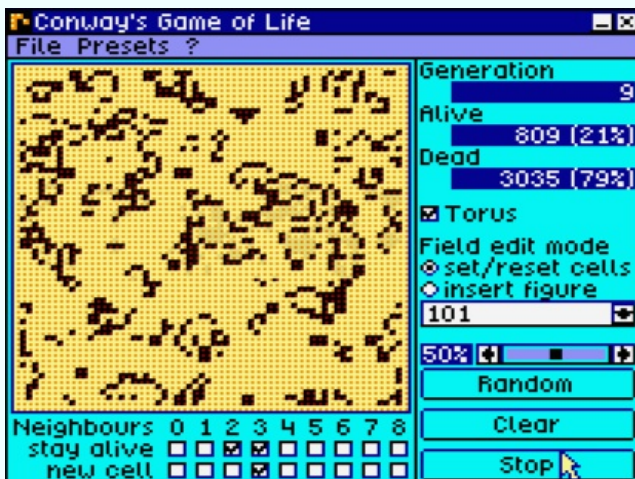
The BattleShip game, which is the first network game for SymbOS, and probably the first ethernet-based network game for the MSX/CPC/Enterprise as well. It contains network-realtime-elements and an in-game chat! You need the network daemon as well.

MineSweeper



This MineSweeper clone is nearly 100% identical to its windows pendant. The size of the mine field is freely adjustable. Two field sizes are predefined, the "beginner" and the "advanced" game mode.

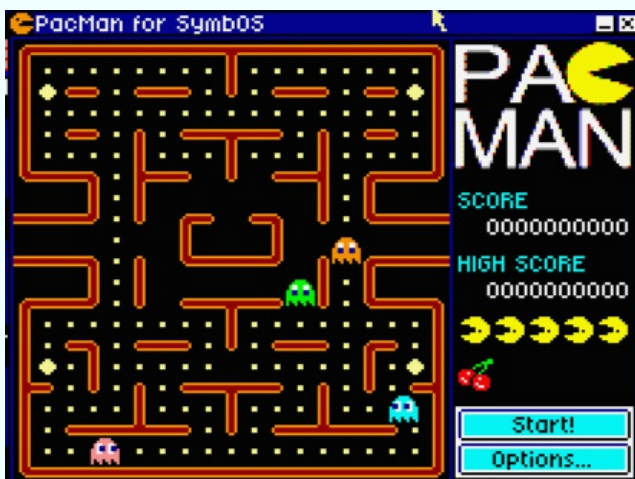
Conway's Game of Life



This application was mainly developed to demonstrate the multi threading ability in the multitasking environment of SymbOS. It also contains a library with hundreds of objects and supports all combinations of alternative cell rules.

The cool part is that this "game" runs on a lower priority thread. That means it takes 100% of the CPU without slowing down other applications with a higher or normal priority. This was a huge step in the SymbOS multitasking environment.

Pacman



Pac-Man for SymbOS is a complete clone of the original from 1980. It uses 16 colour sprites, which will be downrendered automatically on the CPC. The game supports keyboard and joystick control, multilevel and different speeds.

Tetris



Simple version of Tetris. This game was developed with Unify.

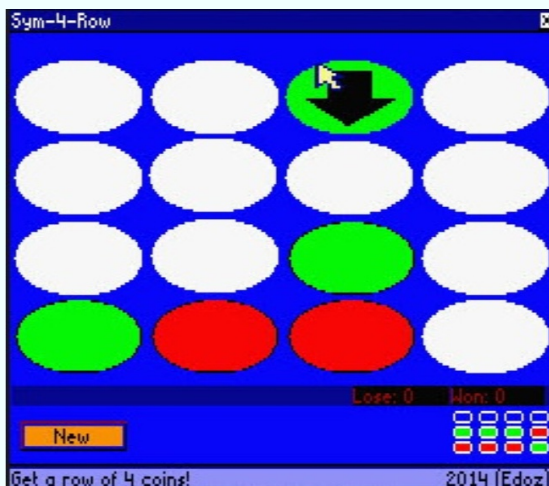
Tetris is the first game that has a scalable mode. This means it will choose the best 1:1 size in different resolutions, in a window or in fullscreen.

Sega Columns remake



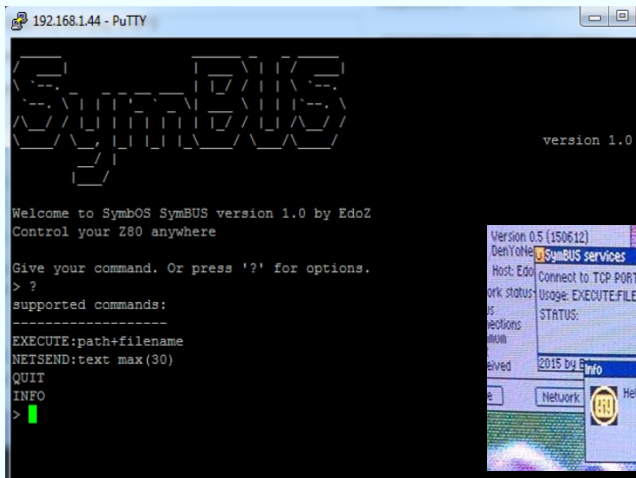
Simple version of Columns. This game was developed with Unify. The original was created by SEGA. This clone is not perfect but it shows what can be done with Unify.

4 on a row

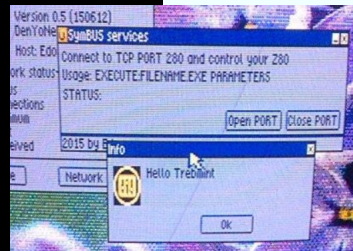


The first official released SymStudio/Unify application that has been developed. It is the well known game "4-in-a-row". It is a very simple version as this was the first game test game application written in SymStudio. You can use the right mouse button to drop the coins.

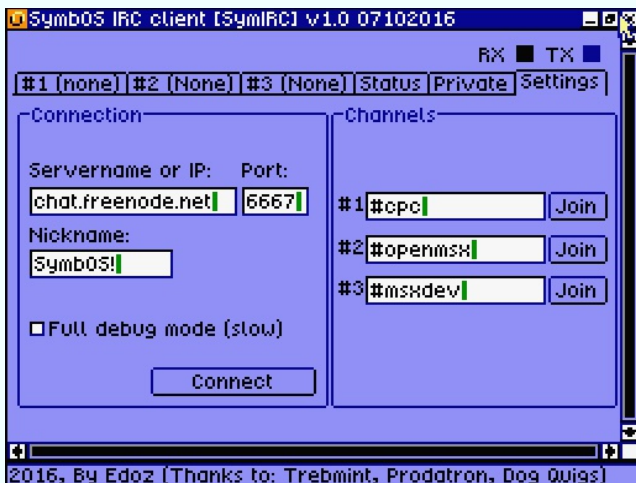
SymbUS



SymbUS can be used to remote control your z80 system. You have to start it on your SymbOS workstation and enable the remote port. After that you can use putty or telnet to connect to the port and do some remote tasks.

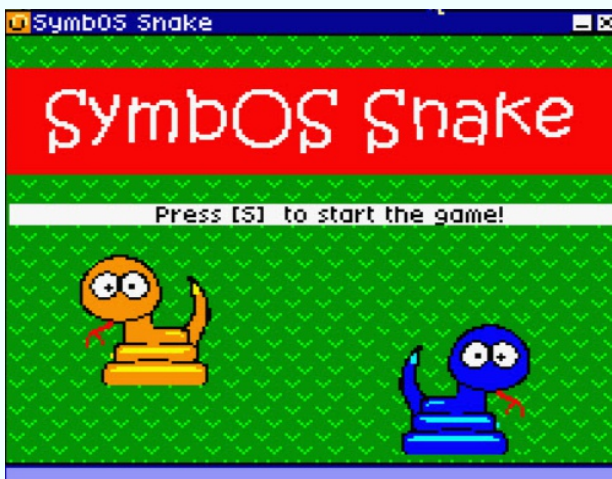


SymIRC



SymIRC is a IRC client which can be used against a IRC server. The login of the server could take some time. This because the server is sending sometimes a lot of information which had to be processed by the client.

Snake Multiplayer



Snake is a multiplayer network game but can be played in single player mode as well. This network is a realtime network game and could be a bit slow on slow systems. If you have a faster z80 it is recommended

Perfmon

Component	What is rated	Subscore	Base Score
Processor:	Calc. per sec.	7,9	3
Graphics:	Desktop perf.	3,9	
Primary disk:	Disk data transfer	2,9	

Perfmon can be used to compare your performance against other z80 machines.

Dimon

```
C:\SYMBOS\cmd>dimon
DiMon 0.1 - SymShell DiscMonitor for SymbOS
Device (0-7):2
Sectornumber:0
000 EB 58 90 4D 53 44 4F 53 35 2E 30 00 02 10 96 1E SYMSDOS5.0
010 02 00 00 00 00 00 00 00 00 00 00 00 00 00 98 3A
020 00 00 06 01 B5 20 00 00 00 00 00 00 02 00 00 00
030 01 00 06 00 00 00 00 00 00 00 00 00 00 00 00 00
040 80 00 29 A4 F9 0F CA 4E 4F 20 4E 41 4D 45 20 20
050 20 20 46 41 54 33 32 20 20 20 33 C9 8E D1 BC F4 FAT32 3
060 7B 8E C1 8E D9 BD 00 7C 88 4E 02 8A 56 40 B4 41
070 BB AA 55 CD 13 72 10 81 FB 55 AA 75 0A F6 C1 01
080 74 05 FE 46 02 EB 2D 8A 56 40 B4 08 CD 13 73 05
090 B9 FF FF 8A F1 66 0F B6 C6 40 66 0F B6 D1 80 E2
0A0 3F F7 E2 86 CD C0 ED 06 41 66 0F B7 C9 66 F7 E1
0B0 66 89 46 F8 83 7E 16 00 75 38 83 7E 2A 00 77 32
0C0 66 8B 46 1C 66 83 C0 0C BB 00 80 B9 01 00 E8 2B
0D0 00 E9 2C 03 A0 FA 7D B4 7D 8B F0 AC 84 C0 74 17
0E0 3C FF 74 09 B4 0E BB 07 00 CD 10 EB EE A0 FB 7D
0F0 EB E5 A0 F9 7D EB E0 98 CD 16 CD 19 66 60 80 7E
```

Commandline disc monitor to view the disks in Hexidecimal output.

WGET.COM

```
C:\apps>wget http://local:23/test.htm
WGET 1.0 for SymbOS (c)oded 2015 by Prodatron
Resolving local... 127.0.0.1
Connecting to local[127.0.0.1:23]... connected.
HTTP request send, awaiting response... 200 OK
Length: 733 (KB) [text/html]
100% [=====] 733
'test.htm' saved
C:\apps>
```

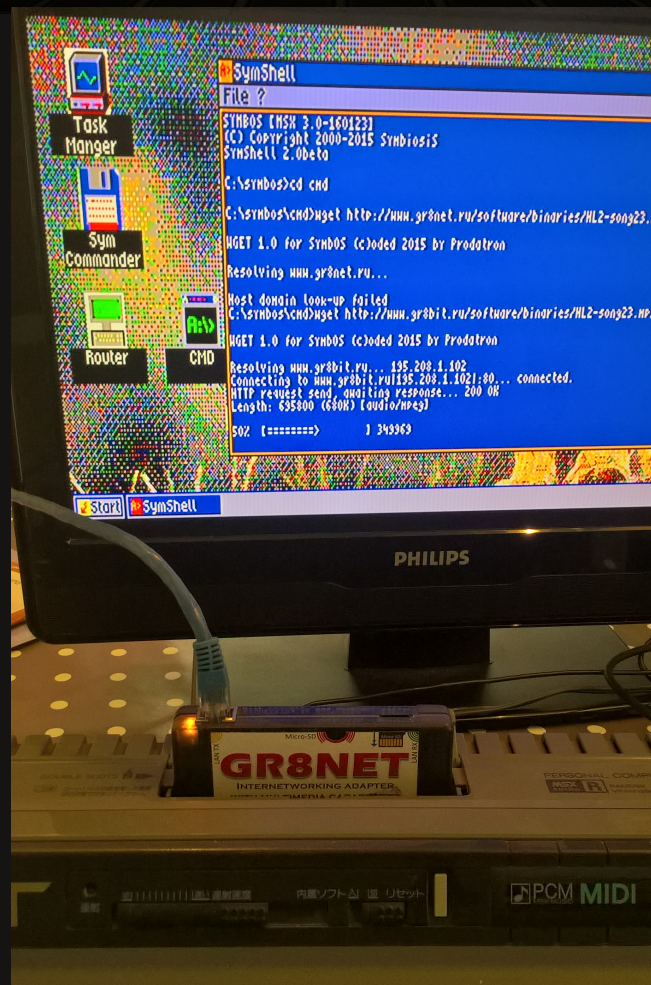
Commandline wget.com application to download files over HTTP protocol, using network daemon.

WWW.SYMBOS.ORG

.. SY.mbiosis M.ultitasking B.ased O.perating S.ystem ..

"Connects Z80ties together forever"

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