ATI FlexDesk Control Panel

Use the ATI FlexDesk Control Panel to control the display driver's operating modes and parameters. The main panel lets you set the Screen Resolution and Color Depth. Other panels can be accessed from the main panel to control Advanced Features, Crystal Fonts, and Display Power Management.

Main Panel

The main panel contains controls for setting Screen Resolution and Color Depth.

You can set the Screen Resolution to 640x480, 800x600 1024x768 or 1280x1024.   The Desktop Size is automatically adjusted to be at least as large as your selected Screen Resolution.

You can select Color Depths of 16 colors or 256 colors.   These determine the number of colors that may be simultaneously displayed on your screen.

Not all combinations of Screen Resolution and Color Depth are possible.   See Available Modes for more information.

See also:

Buttons
Main Menu
Command Line Options

Available Modes

Screen Resolution and Color Depth are limited by the amount of <u>display memory</u> on your <u>graphics card</u>.   The higher the Screen Resolution, the fewer Color Depths are available, and vice-versa.

Screen resolutions will appear grayed out if they are unavailable.   This may be due to insufficient memory (see table below) or non-installed modes.   To correct the latter situation, run the Mach Install program to install the required modes.

The following table shows the availability of modes according to the display memory on your graphics card.

1MB Display Memory

Resolution	Colors
1280 x 1024	16
1024 x 768	16 / 256
800 x 600	16 / 256
640 x 480	16 / 256

512<u>KB</u> Display Memory

Resolution	Colors
1280 x 1024	Not available
1024 x 768	16
800 x 600	16 / 256
640 x 480	16 / 256

Main Menu

The Main Panel menu contains File, Features, and Help sub-menus.

The File sub-menu contains Open, Save, and Save As menu items.   These selections are used in the same way as in other Windows applications, but in this case, the files you create and edit are settings files.The File Exit menu item is the same as the OK button.

The Features sub-menu allows access to features that are also available from buttons on the Main Panel and Advanced Panel.

The Help sub-menu allows access to help for the FlexDesk Control Panel and the Multimedia Video Acceleration Driver.   It also gives access to the 'About box', which displays product version information.

See also:

Working With Settings Files

Working With Settings Files

Settings files are used to save a particular set of options for quick recall.   For example, if your favorite image editor works best in 256 color mode, but you usually work in 16 color mode, you could save two settings files: NORMAL.FLX, and IMAGE.FLX.   To switch between these settings, you would open the FlexDesk Control Panel, use File Open to open NORMAL.FLX or IMAGE.FLX, and then click the OK button for the changes to take effect.

NOTE: When you have no settings file opened explicitly, you are actually editing the settings in your WIN.INI file.

NOTE: The Open, Save, and Save As items are unavailable in Windows 3.0.

See also:

Command Line Options

Command Line Options

An easy way to switch between settings is to use <u>command line</u> options.   To do this in Program Manager, first create a new program item from the FlexDesk Control Panel icon, by using <u>CTRL+Drag</u> to copy the icon.

NOTE: Take care to make a COPY of the FlexDesk icon before modifying the properties.

Then, with the new icon selected (click on it once), use Program Manager's File Properties command to edit the Command Line for the program, and add a <u>settings file</u> to the end of the command line (include the full pathname if the file is not in the Windows directory).   For example:

        C:\WINDOWS\MXXPANEL.EXE   MYSETUP.FLX

You might also want to change the program's description, as appropriate for the settings.

Double-clicking the new icon will bring up the FlexDesk Control Panel, with the settings from MYSETUP.FLX.

See also:

<u>Command Line Switches</u>

Command Line Switches

There are two <u>switches</u> you can add to the FlexDesk Control Panel command line. The "/restart" switch instructs the FlexDesk Control Panel that you wish to <u>restart Windows</u> after loading the settings from the settings file (if given). You will receive a warning message that Windows is about to be restarted, which you can cancel.   If you don't want the warning message, you can also add the "/nowarning" switch.   Thus, the fastest way to switch settings would be the following command line:

        C:\WINDOWS\MXXPANEL.EXE   MYSETUP.FLX   /restart   /nowarning

This will load the MYSETUP.FLX settings and immediately restart Windows. You will still receive warning messages from any applications that have unsaved changes.

FlexDesk Advanced Settings Panel

The Advanced Settings Panel controls the advanced and maintenance features of FlexDesk.   Note that some features and options may be unavailable (displayed grayed out), depending on the Screen Resolution and Color Depth selected in the Main Panel, or the combination of settings selected in the Advanced Panel.

> Environment
> 256 Color Palette
> Dithering
> DPMS

Advanced Panel: Environment

Use this to specify your display's <u>Logical Dots Per Inch</u> (LDPI).   The available settings are Small Font (96 LDPI, VGA Standard), Large Font (120 LDPI, 8514/A Standard), and DTP for Desktop Publishing (128 LDPI).   In general, use Small Font for 640x480 and 800x600 resolutions, and Large Font for all other resolutions.

You may wish to change this setting in certain situations, since by adjusting this setting, you can make screen objects (such as text) appear larger or smaller than their actual physical size.

For example, if you find small fonts difficult to read, use Large Font or DTP settings, even at lower screen resolutions.   Or, if you need to see more text on the screen at one time, use Small Font even at high resolutions.   But be aware that fonts will not be displayed actual size when you are not using a setting that corresponds to the display's LDPI.

See also:

<u>A Note for Japanese Windows Users</u>

A Note for Japanese Windows Users

If you are using Japanese Windows, the Advanced Panel: Environment option will have 4 or 5 possible settings values, depending on whether you are using Microsoft or IBM Windows.

For Microsoft Windows users, the 4 available options are:

Extra Small Font (12 point, aspect=100,72,72)
Small Font   (16 point, aspect=100,96,96)
Large Font   (20 point, aspect=100,120,120)
Extra Large Font (24 point, aspect=100,144,144)

For IBM Windows users, the 5 available options are:

Extra Small Font (9 point, aspect=100,72,72)
Small Font   (10 point, aspect=100,96,96)
Large Font   (12 point, aspect=100,120,120)
Medium Large Font   (12 point, aspect=100,121,121)
Extra Large Font (14 point, aspect=100,144,144)

Advanced Panel: 256 Color Palette

This option is only available when you select 256 color mode from the main panel. When set to Off, the hardware color <u>palette</u> is fixed. When set to On, the palette can be modified by application programs. Most 256 color drivers allow palette modification (On). This allows palette cycling and optimization to occur. With 256 Color Palette set Off, no color shifts will occur on the screen when multiple 256 color images are being displayed.

Advanced Panel: Dithering

The Mach driver normally uses an optimized <u>dithering technique</u> when running in 16 and 256 color modes. However, the technique used may result in some unattractive colors. When using 256 color mode with 256 Color Palette set to On, this control can be used to select VGA Standard dithering. This is a slower technique that may result in more attractive colors.

FlexDesk Crystal Tune Panel

Crystal Fonts are <u>anti-aliased</u> fonts.   The Crystal Fonts feature is available in 256 color mode only. If you have ATI GSFONTS, these fonts are used.   If GSFONTS are not available, Crystal Fonts will work with any TrueType fonts that you have installed on your system.

Note that Crystal Fonts is available only when 256 color mode is selected in the Main Panel.

Crystal

Activates the Crystal Fonts feature. If your application has compatibility problems with Crystal Fonts, then turn this feature off.

Character Contrast

When Crystal Fonts is active, this slider can be used to adjust the darkness of the characters.

VESA Display Power Management (DPMS)

If you have a <u>VESA</u> <u>DPMS</u>-compliant monitor, you can use the DPMS feature to provide auto-shutdown of your monitor, in three separate stages, to reduce power consumption.   Auto-shutdown only occurs after definable periods of keyboard and mouse inactivity.   *Moving* the mouse or *pressing* a key on the keyboard (even the Ctrl, Alt, or Shift keys) turns the monitor back on.

The three shutdown stages are Standby, Suspend, and Off.   Each monitor manufacturer defines the meaning of these states for its monitors.   For example, a flat panel display might turn off its backlight in Standby mode. However, in all cases it will be true that power consumption decreases in each state, from normal 'on', through Standby, Suspend, and finally the Off state, where power consumption is minimal.   See your monitor's manual for full details.

See also:

<u>DPMS Setup</u>

DPMS Setup

To set up your DPMS parameters, go to the DPMS Panel.   This may be accessed from the Features sub-menu of the Main Panel, or via the DPMS button in the Advanced Panel.

NOTE: In some configurations, the DPMS sub-menu and button will not be present.

Enter <u>time values</u> into the Standby, Suspend, and Off boxes (or use the Defaults button to reset to standard defaults).   The time values represent the duration of inactivity *before* each stage is entered.   For example, assume the following settings:

Standby	15
Suspend	30
Off	60

The monitor will be placed into Standby mode after 15 minutes of inactivity; into Suspend mode after 30 minutes of inactivity; and into Off mode after 60 minutes of inactivity.

DPMS can be disabled by leaving the DPMS Enabled box un-checked.   You may want to turn DPMS off during lengthy presentation playbacks where you will not be using the mouse or keyboard for some time.   Remember to re-enable DPMS afterwards.

If you omit a time from any of the boxes, that mode will never be entered. Leaving all boxes blank is the same as leaving the DPMS Enabled box un-checked.

When you confirm the DPMS Panel with the OK button, the new settings take effect right away (even before closing the FlexDesk Control Panel).

NOTE: Your Windows DPMS settings will <u>not</u> be in effect in while you are in a full-screen DOS box.

NOTE: Certain DPMS configurations may not allow arbitrary time values for the DPMS settings.   In these cases, your entered values will be rounded up to the nearest acceptable value.

Buttons

OK

Accept any changes to the settings, and exit. When you press OK on the main panel, the changes are saved to WIN.INI, and also to the settings file (if any) you were editing.

If the changes require a restart of Windows, another dialog will be displayed allowing you to <u>restart Windows</u> now, or continue in the current session. Note, however, that the changes have already been saved, and will be in effect the next time you start Windows.

Cancel

Exit without saving changes.

Defaults

Select default settings. This provides a convenient way to return to factory settings.

Help

Brings up the FlexDesk Control Panel help index.

Anti-Aliasing
A technique of displaying characters in which sharp black-to-white edges are smoothed using shades of gray.   This improves readability of the characters.

Color Depth
Also known as bits per pixel, or 'bpp'.   A color depth of 4 bpp gives 16 colors; 8 bpp gives 256 colors; 16 bpp gives 65K colors; and 24 bpp gives 16.7M colors.

Command Line
Every program run under Windows has a 'command line'.   This consists of the full pathname
of the program to be run, plus any parameters, such as the filename to edit, or any <u>switches</u>
that the program understands.

CTRL+Drag
This is a technique in Program Manager in which a program icon can be copied to make a new program icon.   Press the Ctrl key, then drag (click and hold) the icon to the desired new location, then release the mouse button.   The new icon will initially have all the same properties as the original icon.

Desktop / Virtual Desktop
The Windows work area is known as the Desktop.   When the Desktop is larger than the
Screen Resolution, it is known as a Virtual Desktop.   With a Virtual Desktop, only a portion of
the Desktop is visible on the screen at one time.

Display Memory
The memory on your graphics card.   You may have 512K, 1M, or 2M bytes of display memory.

Dithering
This is a technique in which colors that cannot be displayed exactly are simulated by patterned mixtures of other colors.

DPMS
Display Power Management Signalling - an industry standard for reduction of energy usage
by video monitors.

Graphics Card
The card (or 'board') within your computer that controls your monitor.   Different cards have different capabilities.   Graphics accelerators specialize in speeding up graphical environments, such as Windows.

K
K = thousand

KB
KB = kilobyte (1,024 bytes)

Key Sequence
A set of one or more keys that are to be pressed at the same time to activate a function.
The special keys Ctrl, Alt, and Shift may be combined with any of Left Arrow, Right Arrow, Up
Arrow, Down Arrow, Home, End, F1 through F24, A through Z, 0 through 9, Space, or Del to
define a key sequence.

Logical Dots Per Inch (LDPI)

Applications use Logical Dots Per Inch to calculate the size of objects that must be an exact physical size on the display. For example, if an application needs to display a box one inch high, and the Logical Dots Per Inch is 120, then the box is drawn 120 pixels high.

M
M = million

MB
MB = megabyte (1,048,576 bytes)

Multimedia Video Acceleration Driver
A component of the Mach driver that accelerates Microsoft Video for Windows playback.

Palette
In 256 color mode, a 'palette' is required to define the actual color that appears on screen for each of the 256 possible <u>pixel</u> bit combinations.   Some applications require the ability to change the entries in the palette, for example to display realistic images.

Pan

The Pan feature is enabled only when there is a Virtual Desktop.   To view portions of the virtual desktop not visible on the screen, you 'pan' them into view by moving the cursor to the edge of the screen in the direction you wish to view.   Keyboard keys may also be assigned to the functions of panning left, right, up, and down.

Pixel
A pixel is one 'dot' on your display.   Each pixel can be a different color - the number of possible colors is determined by Color Depth.

Restart
Restarting Windows means that all applications will be closed, Windows will go away and then automatically come back.   If there are un-saved changes in any of the applications that you currently have open, the applications will prompt you as to whether you want to save the changes.   If you cancel any of these prompts, Windows will not be restarted.

RGB Mode
When in 65K color mode, colors are represented by 16 bits per <u>pixel</u>.   RGB Mode refers to the allotment of these 16 bits to each of the three colors: red, green, and blue.   The notation used is a number in the form R/G/B, where R represents the number of bits for red; G the number of bits for green; and B the number of bits of blue.

Screen Resolution
Screen Resolution is the number of <u>pixels</u> displayed on your screen, expressed as a number in the form WxH, where W is the number of pixels displayed horizontally (width) and H is the number of pixels displayed vertically (height).

Settings Files
Settings files are files with the extension '.FLX'.   They contain FlexDesk Control Panel settings, saved with File Save or File Save As.   Settings files are used for quick setting changes.

Switches
Some programs accept command line parameters known as switches, which usually start with '/' or '-'.

Time Values
Time values are entered in minutes (e.g. 5 for five minutes) or minutes and seconds (e.g. 2:30 for two and a half minutes).

VESA
Video Electronics Standards Association - developers of the DPMS standard.

WIN.INI
The Windows initialization file (usually in \WINDOWS).   The [Mach] section of WIN.INI
contains the FlexDesk Control Panel settings.

Zoom
The Zoom feature allows dynamic changes to screen resolution, so that you can see more or less of the Virtual Desktop on the screen at one time.   When Zoomed Out, you can see *more* of the Virtual Desktop, so characters appear *smaller*.   When Zoomed In, you see *less* of the Virtual Desktop, but the characters appear *larger*.

Mach Driver Extra Options

The Extra Options panel displays a number of switches that the Mach driver recognizes in the [Mach] section of WIN.INI.   The Extra Options panel provides a convenient way of setting these switches on or off.   (This may also be done by manually editing WIN.INI.)

Most of the Extra Options switches are used to disable advanced features of the driver, which may be necessary if you experience problems with certain applications.   In general, if a switch is 'on' (box is checked), the advanced feature is enabled, giving better performance.   However, some advanced features are incompatible with some applications - display corruption or inaccuracies are a likely result.

The switches are:

BGR
BlockWrite
CacheCharacters
Circle
DeviceBitmap
DeviceBitmapDraw
Dithering
EngineBlt
EngineDib
ErrorFatal
MemMapRegs
NewBlt
Pixel
Polygon
PolyLine
ScanLine
ScanLR
StretchBlt
StyledLines
VADEngine
VAD
VGADAC
VGAShared
WIFE

BGR   **= on | off**   **Default: dependent on DAC**

When on, forces BGR 24 bit mode. This is selected automatically by detection on DAC type.

BlockWrite   **= on | off**   **Default: on**

When on, and the hardware supports it, VRAM Block Write is enabled to accelerate performance.

CacheCharacters   **= on | off**   **Default: on**

Allow for cacheing characters into the off-screen memory area.

Circle   **= on | off**   **Default: on**

When on, circles are accelerated by the drawing engine.

DeviceBitmap   **= on | off**   **Default: off**

Device Bitmaps is a technique used by the Mach driver to gain more display speed.   However, it is incompatible with some applications.   If you have application problems using the Mach driver, try setting this Off.

DeviceBitmapDraw = on | off   **Default: off**

Allow the *mach32* draw engine to draw into realized bitmaps. DeviceBitmap=on must be set for this to have any effect.

Dithering   **= on | off**   **Default: on**

Allow for disabling color dithering. This results in faster performance, at the expense of color fidelity.

EngineBlt   **= on | off**   **Default: on**

Use the *mach32* blit engine.

EngineDib   = **on | off**   **Default: on**

When on, the drawing engine is used to accelerate Dibs (device independent bitmaps).

ErrorFatal   **= on | off**   **Default: on**

When set on, all startup errors are treated as fatal, and will result in returning to the DOS prompt. When set to off, a message is displayed and the user is invited to press <D> to return to the DOS prompt, or <I> to ignore the error and continue.

MemMapRegs = on | off **Default: on**

When on, and the hardware supports it, Memory Mapped Registers are used to improve performance.

NewBlt   **= on | off**   **Default: on**

When on, enables faster code for bitblts with the *mach32* blt engine.

Pixel   **= on | off**   **Default: on**

When on, get and put pixel are accelerated by the drawing engine. This only applies is VADEngine is enabled.

Polygon   **= on | off**   **Default: on**

When set on, Polygons are accelerated by the drawing engine.

PolyLine   **= on | off**   **Default: on**

When set on, PolyLines are accelerated by the drawing engine.

ScanLine   **= on | off**   **Default: on**

Use the *mach32* engine to assist in scanline drawing.

ScanLR   **= on | off**   **Default: off**

Accelerates screen scans. This switch only applies if VADEngine is enabled.

StretchBlt   **= on | off**   **Default: on**

Enable driver StretchBlt when on. If set to off, GDI StretchBlt will be used instead.

StyledLines   **= on | off**   **Default: on**

Enable driver accelerated styled (patterned) lines when on. If set to off, GDI draws styled lines.

VADEngine = on | off **Default: off**

Forces Virtual Aperture to use the BLT engine to transfer data, rather than the VGA area. Selected automatically if necessary.

VAD   **= on | off**   **Default: off**

Forces Virtual Aperture when set to on. When set to off, Virtual Aperture is enabled automatically when the Physical Aperture is disabled (through INSTALL).

VGADAC   **= on | off**   **Default: on**

Program VGA DAC in synch with 8514/A DAC registers.

VGAShared   **= on | off**   **Default: on**

Share the video board memory between VGA and Accelerator, or maintain separate memory spaces. When running with Virtual Aperture (Physical Aperture disabled, or VAD=on), VGAShared has no effect (it is forced on).

WIFE   **= on | off**   **Default: off**

Support Windows International Font Extensions (DBCS). This allows FlexDesk to be used with Asian Windows versions. Do not turn this switch on with North American Windows. WIFE will just slow down your system.