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StreetDeck User Manual

Chapter 1: Introduction

Welcome

StreetDeck is the first all-in-one "front end" for mobile computing applications. Access to a variety of functions is provided through an intuitive touch screen interface that can also be customized to suit the needs of any user. Digital music, GPS navigation, satellite radio, on board diagnostics, vehicle input and output control and camera interfaces are just some of the supported features of StreetDeck.

The highly flexible user interface and modularity of the application provides long term adaptability to new interfaces and capabilities that will emerge over time. We hope that you will be extremely satisfied with the capabilities of StreetDeck as we have worked hard to understand the needs of the user base for this application and feel that we have provided the best solution on the market to meet these needs.
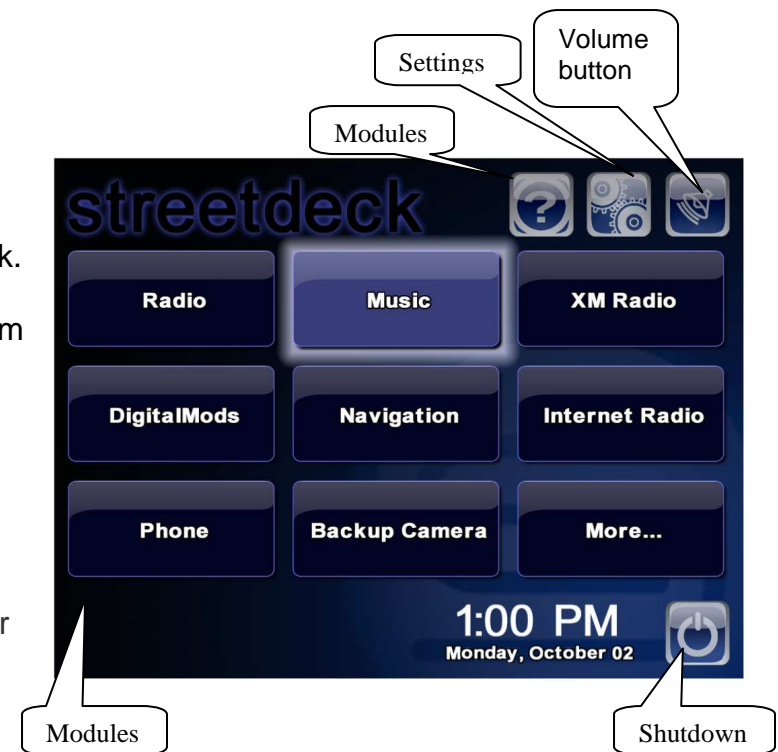
It is the responsibility of the user to insure that the vehicle in which StreetDeck is installed is operated safely within the laws, rules and regulations for the locality that the vehicle is operated. Mp3Car and the developers of StreetDeck do not warrant or represent that StreetDeck will operate in all conditions. No degree of accuracy or efficiency is guaranteed or implied for any navigational services provided.

Running StreetDeck

Running StreetDeck is typical of any Windows based application: simply double click the application in the **<drive>:\Program Files\streetdeck** directory or from the start menu. Several options are available on the command line of StreetDeck.

Several of these options have been preconfigured as Start icons (e.g. developer mode) in the StreetDeck Start menu when StreetDeck is first installed. Command line options are listed in the appendix. You may choose to auto-run StreetDeck at Windows boot time by placing a shortcut to StreetDeck in the 'startup' folder.

In normal operation, the PC will be left in either a hibernation or standby state when the ignition is turned off. StreetDeck should be optimally configured for most PCs out of the box; however, some command line switches may be useful for tuning the installation environment and for troubleshooting purposes.

The Home Module

The main module within StreetDeck is the **Home Module**. StreetDeck is designed for touch screen installations. Buttons, Sliders, and other interactive elements are all large enough to be easily visible and accessible from a typical touch screen while the vehicle is in operation.

The **Home Module** contains direct links to all the program's primary modules. Simply touching one of the buttons on the screen takes you to that particular module. At the top right of the home module are 3 buttons that allow for change to access the general program properties. At the bottom left is the shutdown button that by default will show the shutdown module and offer options for closing StreetDeck or shutting down the entire system.

Displays StreetDeck's built in help module.

Displays StreetDeck's settings module that allows the program to be configured and hardware setup.

Shows the volume overlay that allows you to change the master volume of the system.

Shutdown StreetDeck and the system it is running on.

> **i**   **NOTE:** If you don't like the layout of any of the modules, the developer mode (run StreetDeck –d) allows you to customize the layout 'to your hearts content!' You can then move buttons, rename them, add them, delete them, and even change the images that make them up.

Shutting Down StreetDeck

StreetDeck takes over shutting down your computer for you when it detects the power button on the computer is pressed and automatically begins its shutdown sequence. StreetDeck supersedes the Windows settings and takes 'ownership' of how the PC will process the power button being pressed (or more typically sequenced by the power supply).

Most car installations have the power button (a 2-pin jumper on the motherboard) connected up directly to a power supply that will sequence through the power down process – for instance, delaying powering down the car PC by some period of time to allow the user to stop the car (turn off the ignition) at a gas station without the car PC shutting down. However, this manual will not cover all of the possible topologies for power supplies and motherboards.

StreetDeck will process shutdown as configured in the **Shutdown Settings Module** (Figure 8). Note that a delay can be configured to allow other housekeeping events to happen such as when parking the car in your garage you might desire to have StreetDeck sync with a media server in your house to download any new MP3's. You can set StreetDeck to delay powering down by the appropriate number of minutes needed.

It is recommended that you set your Windows power management to go into hibernation for when the power button is pushed, but this is not a strict requirement. The easiest way to set this is to click on the **START** menu – **SETTINGS** – **CONTROL PANEL** – **POWER OPTIONS**. On the Advanced tab is a setting for 'When I press the power button on my computer' that allows you to select Hibernation as one of the options. Some older PC's may not allow this, but generally any PC capable of running StreetDeck should have this mode as an option. You may have to 'allow' this on the Hibernation tab.

Note again, that StreetDeck (when running) takes over the management of the shutdown sequence independent of how Windows is set.
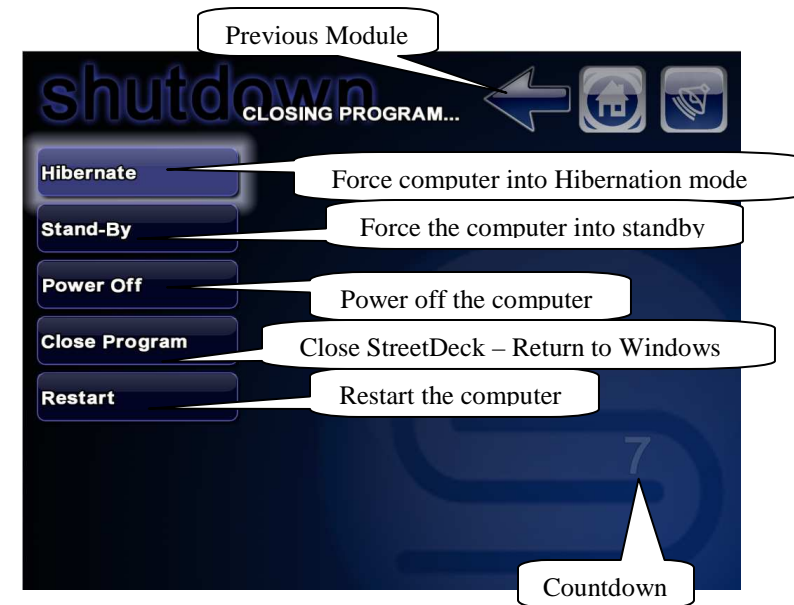

Previous Module

Force computer into Hibernation mode

Force the computer into standby

Power off the computer

Close StreetDeck – Return to Windows

Restart the computer

Countdown

Figure 3

Manually Shutting Down StreetDeck

You can manually begin a shutdown sequence by pressing the shutdown button in the Home Module. Figure 6 shows the options available when the shutdown button is pressed.

If no option is selected within the timeout, the default option is used, which can be configured in the Shutdown Settings Module (Settings / General / Shutdown Options). The default mode and default timeout are selected in that screen, which is shown in this manual in   Figure 8.

The Help Module

The **Help Options Module** (Figure 2) provides access to a number of wizards (if you would like to rerun them at any time) as well as static images of the available gestures and functions.

Key Tip: Each module shows a **Home Module** button, which takes you to the Home Module, a **Volume** button, which displays a volume control overlay, and **Scroll** buttons if necessary, to scroll through module options. See
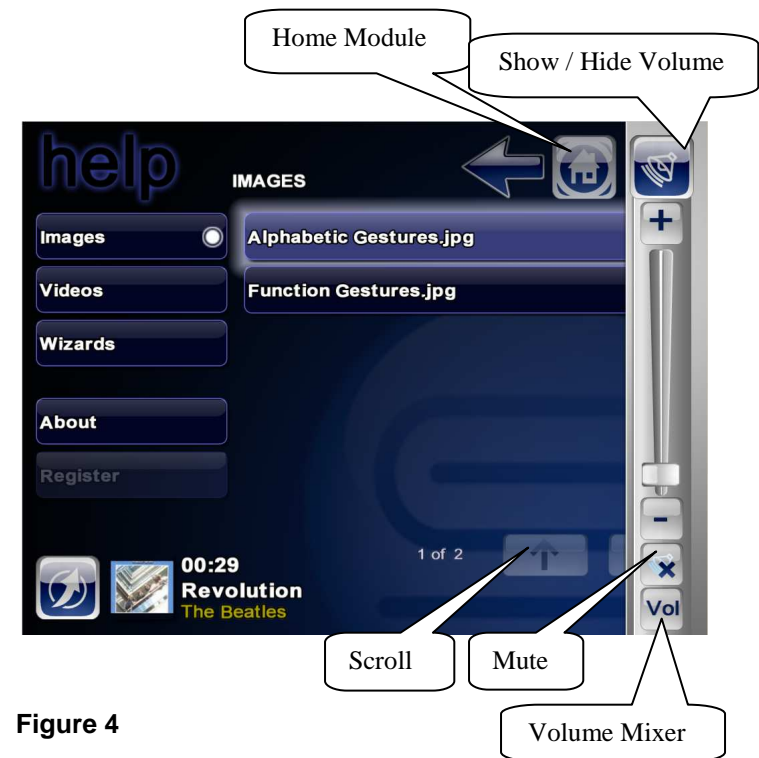 for an example of these features in the HELP Options Module.

Figure 4

Gestures

Gesturing is a key feature of StreetDeck. The key things that you are likely to want to do without having to hit a specific button are available (and configurable) within StreetDeck. On any screen, applying a gesture (best done with your fingernail tip) will apply the mapped function. For instance, you can skip to the **Next** song while in the **Navigation Module** by applying a left to right gesture on the touch screen. Similar you can jump to a specific module by applying the mapped letter (e.g. draw an 'S' to jump to the **Satellite Radio Module** from anywhere within StreetDeck. Refer to the online forum at http://www.mp3car.com where there is a video blog forum that includes a tutorial on gesturing.

The Help Module includes maps (**Error! Reference source not found.**) for touch screen gesture operation of StreetDeck and wizards to aid in setting up the various modules. In addition to the visible controls on the screen, many of the program's primary functions can be controlled by Gesturing. Gesturing turns a specific movement on the screen into a program command or a letter. For example, gesturing the letter 'M' launches the music module. These maps can be found in the images list in the **Help Module**.

Long Button Press Actions

In several modules, how the user interacts with the touch screen can cause a different action if the button is held for a longer pause of roughly a second. These press and hold actions allow the user to perform certain relevant functions in a short hand manner. Generally, press and holding an item deletes or removes the item from the list that it is in or will toggle the setting of an item.

MUSIC PLAYLIST
Press and hold any song in the playlist to delete the song from the playlist. Whether it is deleted from the file system or just the playlist is controlled by an option in the music settings module.

KEYBOARD SETTINGS
Press and hold will clear the bound keyboard key

NAVIGATION RECENT DESTINATIONS / FAVORITES LIST
Press and hold a destination will remove it from the list

XM RADIO STATION LIST
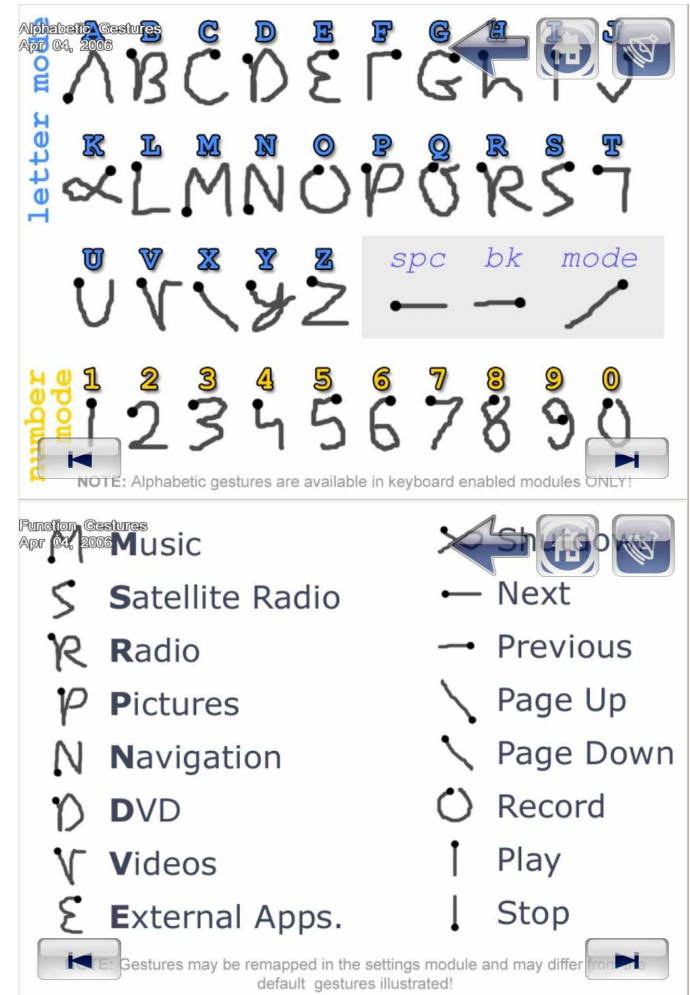Press and hold a station to set or remove a radio preset

Figure 5

FM RADIO
Press and hold any number on the radio overlay to set that number to the current radio station. To remove the station, press and hold the station in the list.

EXTERNAL APPLICATIONS
Press and hold any external application to add / remove a preset for it. To call an external application preset, it has to be bound to a keyboard / gesture / other input option as there are no pre-selected inputs bound to the application preset functions.

LAUNCHCAST STATION GUIDE
Press and hold an item to set / remove a preset.

Help Wizards

The **Wizards** found in the **Help Module** (Figure 4) aid in configuring various aspects of StreetDeck. When StreetDeck is first executed after installation, several of these wizards are run to help configure the system. To tune the system at a later time, you can rerun the wizards as needed.

Guide for setting up a satellite radio component → COM port, sound card settings, recording capability

Run (or rerun) the original registration wizard for accessing the Hardware Code and entering the registration code

Figure 6

Several options for tuning StreetDeck including screen size and video frame rate

Options to set the time and date within StreetDeck

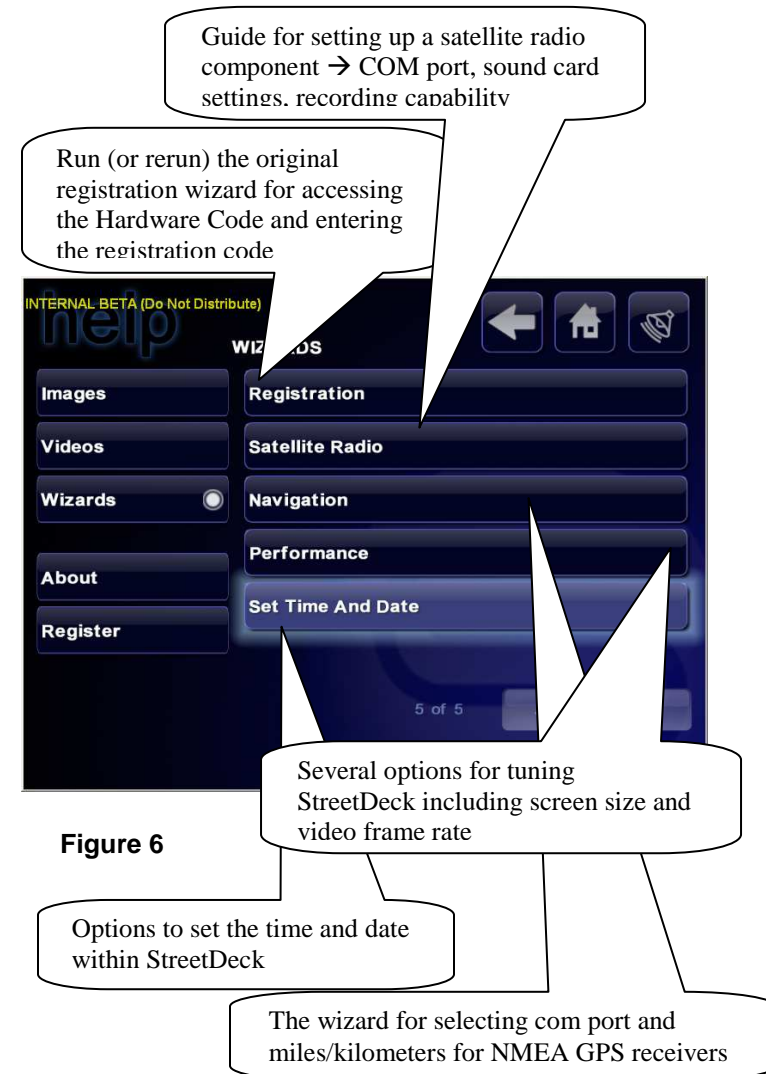The wizard for selecting com port and miles/kilometers for NMEA GPS receivers

Settings Module

The settings button in the Home Module takes you to the Settings Module. This module gives you complete control over how StreetDeck works. Everything from changing the way music plays to how navigation routes are created can be customized to your tastes and needs.

The follow pages contain a tree diagram of the settings contained in the **Settings Modules.**

Settings
        Adjust application colors and background
                User interface colors
                Background colors
                Use static wallpaper
                        Defaults
        Save settings to harddrive now
        Synchronize removable media
        Scan removable media for program updates
        System information
                Renew IP address
        Toggle night mode
        Toggle fullscreen
General
        Startup options
                Select the window state that the program should start in
                Select the window state that the program should start in
                Play the last media item on startup
        Shutdown options
                Kill shutdown tasks after:
                Default shutdown mode
                Show shutdown options for:
                Autosave settings every (for instant off HORM support):
                Shutdown immediately when the power button is pressed, don't show timeout screen
                Show the shutdown screen when battery mode is detected (LAPTOPS ONLY)

Allows the user to adjust the colors of the StreetDeck interface

Choose source to sync with StreetDeck

Figure 7

Toggling night mode makes StreetDeck easier to use in low light conditions.

System information including free hard drive space, IP and MAC address

Switches StreetDeck between full screen and windowed display
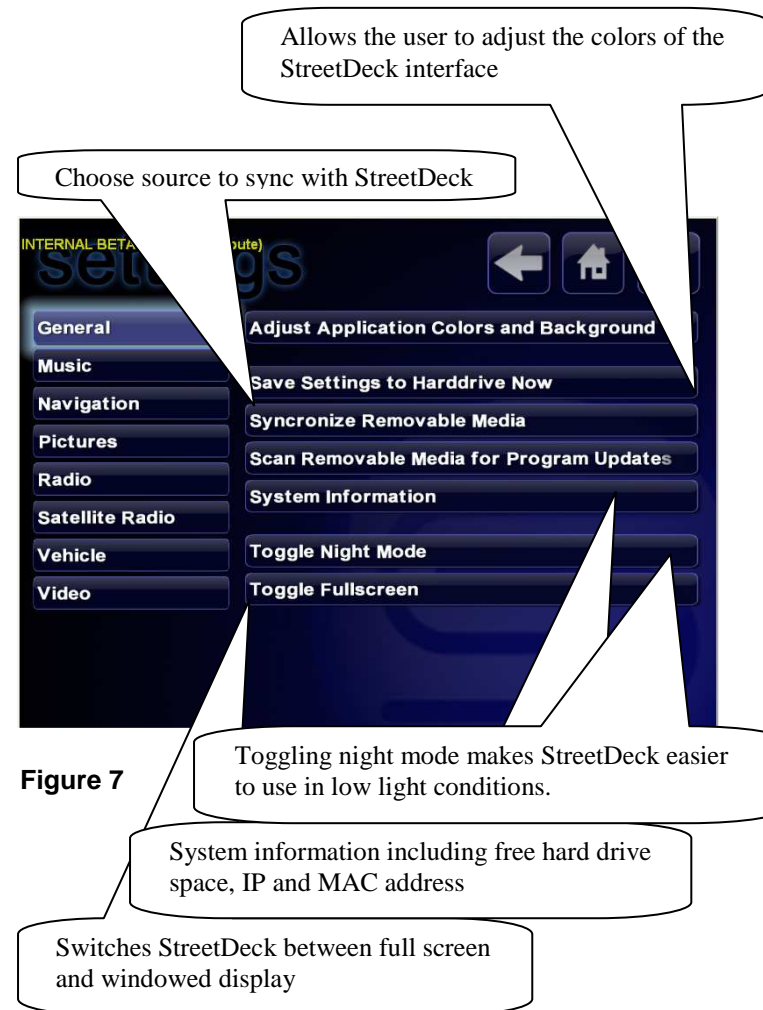
This screen is shown in Figure 8

Display Options
    Limit frame rate to:
    Display format
    Enable Alpha Blending
    Restrict the cursor in full screen mode
    Hide the cursor in fullscreen mode
        Adjust Size
        Multiple monitor
            Enable multi-monitor mode
            Select the sound card to be used with the front screen
            Select the sound card to be used with the rear screen
Input Options
    Options
        Mouse scroll wheel controls volume
        Automatically switch from numbers to letters on address entry
        Highlight the panel that has the keyboard / remote control focus
    Keyboard
        Click a function to bind a new key
            Load Defaults
            Clear all keys
    Gesturing
        Show function names on gesture recognition
            Load Defaults
    Input Plugins
        Show function names on mapped girder events
    Voice Interface
        Recognize words with low accuracy
            Train microphone
Ripping Options
    Select the WMA bit rate to compress WAV of CD audio files at when copying
    Overwrite duplicate existing media with media from the external source drive
    Eject CD from drive after all files have completed copying
Skin Options
    Choose a Skin
WiFi Sync. Options
    When shutting down, allow files to synchronize up to:
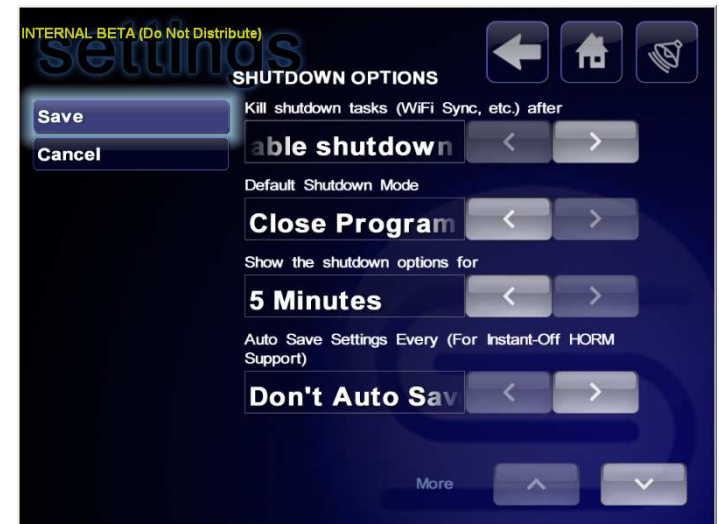   Source (remote) computer
        Sync now

Figure 8 - Shutdown sequence settings screen

Note: HORM refers to 'Hibernate Once, Resume Many' – a feature added to Windows XP *Embedded*, Service Pack 2 (XPe SP2).

Bluetooth Options
    Select the sound card that the microphone is connected to
    Select the microphone input on the sound card
Application Colors
    User interface color
    Background color
    Use static wallpaper
        Defaults
Music
    Preferred visualization
    When a new song not in the current playlist is selected:
    Crassfade music between songs:
    Automatically play audio CDs when they are inserted
    Show a confirmation dialog when deleting music from the collection
    When deleting music, remove the file from the file system and the media
    collection link
    Enable spectrum analyzer
    Automatically index and move music files when StreetDeck starts
    Use the Album Artist ID3 tag rather then the Artist tag when looking up by
    artist
        Reindex My Music
        Clear Music Index
Navigation
    Select the GPS device port or other GPS source
    Voice Guidance should be given when:
    Select the unit of measurement for navigation data
    Size of the text for all place and street names on the map
    Show full text directions when the next direction is within:
    Select the voice to use for spoken navigation directions
    Use a celebrity voice for navigation directions
    Default zoom for fullscreen navigation module
    When nearing a turn, use maximum zoom when within:
    Automatically reroute when off course
    Rotate the map to the current heading
    Scroll the map smoothly
    Suppress the media change text when in fullscreen mode
    When searching for addresses, fill in the state from the current address
    Smooth GPS updates

Show the route after calculating it
Show extended Virtual Earth modes
Broadcast GPS location data over the network so other StreetDeck
computers can use it
    Roadspeeds
        Interstate
        Limited Access
        Other Highway
        Arterial
        Street

Pictures
Slideshow Interval
Show image information during slideshow
Animate the images during slideshow

Radio
Radio Plugin:
Select the Sound Card that the device is connected to
Select the sound card's destination line that the radio device output is
connected to
Choose the COM port the radio tuner is connected to
Force mono sound output only
Exponential Volume Control
    Configure

Satellite Radio
COM port the satellite radio device is connected to
Select the sound card
Select the sound card to use for streaming mode recording.
Select the sound card's recording line that the radio device output is
connected to
Record line volume
When recording, if he song already exists in the database:
Select the bitrate to record XM radio as windows media audio (WMA) files at:
Show song titles when the current song changes
Enable XM Direct compatibility mode
Exponential volume control
Always send the mute command to the XM radio hardware
    Clear channels
    Reset rec. playlist

Vehicle
        Camera Options
                Select a camera
        OBDII Options
        OBD II Plugin
        Chose the COM port the OBDII hardware is connected to
                Configure rec. playlist
        Relay Plugins
                Configure hardware
                Map to commands
Videos

The Radio Module

StreetDeck can interface with an FM tuner to make FM radio available on your touchscreen. Simply use the 'Tune' or 'Scan' buttons or slider to find a station, and save it to a preset by holding in one of the numbered preset buttons.

Figure 9

The Music Module

StreetDeck offers a number of ways for you to access your music in an organized fashion. Before you can play any music in StreetDeck, you must first select a playlist of files you want to listen to. The Select Music function allows you to select all music indexed by StreetDeck, all music in a specific album, all music by a certain artist, all music within a specific genre, all music from an existing playlist, or to select music by navigating the directory structure your music is organized by.

Other playlist manipulation options can only be accessed directly from the music module. The '**More Options**' button shows the advanced functions for your music. The most important of these is '**Queue Music**'. This option completely changes the way the music playlist operates. While in queue mode, whenever new music is selected, it is *added* to the current playlist rather then *replacing* it. In addition, as music is played it is automatically removed from the playlist. This in effect allows you to "Queue" up only the music you want to listen to before each drive.

After selecting your playlist, you can play any item in it by simply scrolling to and pressing the item you want to play. Whenever a new media item begins playing, it appears in the lower left along with its status and the different control options for it.

Pressing the media menu button shows the control buttons for the current media. Pressing the upward arrow button at the right shows the more advanced control options including rewind, fast forward, find music, delete the current playing item, and equalizer access. These controls remain while music is playing in most modules. In addition to the visible media controls, the most common media control options are available through gesturing.

Figure 10

Figure 11

Music Indexing

Indexing catalogs your music files in a highly efficient database so that complex information, like the artist's name, the album's name, or the song's title can be quickly retrieved. You may have noticed the indexing status overlay appear when starting StreetDeck. This overlay indicates indexing has begun to enumerate all the unindexed items in your music path and shows you the progress. You can press the details button at any time to get more in depth status information on the indexing progress.

By default, the StreetDeck music path is mapped to your My Music folder. Browsing to the My Music folder in windows, we can see that only 1 sub folder is present, called _indexed.   Whenever StreetDeck indexes new media items it automatically moves everything into the indexed folder, keeping all subfolders intact. This makes adding new media items to StreetDeck simple. Just place any new media items in the My Music folder, outside of the _indexed folder and it is automatically indexed and moved the next time StreetDeck starts.

This feature becomes particularly useful if the music folder is remapped to a removable hard drive. To change your music folder, open the media paths tool installed with StreetDeck, then press the browse button for the indexed music path and choose a path on your removable hard drive where you want music to be stored. Do the same for the path where your media will be imported from. The next time StreetDeck starts; it indexes all the items within the import path and move them to the new indexed sub path.

When changing media paths, the files that have already been indexed remain cataloged in StreetDeck until you explicitly clear them. To do this, go to Settings > Music, Clear Music Index. If there are already files within your new music path that have already been indexed, they will be cleared and not re-indexed automatically. To re-index these files, you have to press the 'reindex my music' button.

Playing Audio CDs

When you insert an audio CD into your system with StreetDeck running, the audio CD will immediately begin playback and display the *Now Playing* module with all CD tracks added to the current playlist. Audio CDs typically only contain track numbers and audio data. They usually do not contain metadata information about the album like artist names or song titles. On systems equipped with Gracenote's® MusicID® Music Recognition Database, StreetDeck will attempt to lookup the CD in the Gracenote database using just the CD track information. If the album contained on the CD is found, the artist name, song title, and album name will be displayed for all tracks on the CD. If the album is not in the database or the database is not installed, only track numbers will be displayed for all tracks on the CD.

Metadata information will only be applied to tracks on audio CDs. If a data CD containing MP3 or other types of music files supported by StreetDeck is inserted, StreetDeck will only display the metadata contained within the file itself.

Ripping Audio CDs

Ripping an audio CD is the process of copying all files found on an audio CD to a hard drive for later playback without the CD. Whenever an audio CD is present in the CD drive, StreetDeck will add an option to the *Now Playing* music module called Rip CD. Choosing this button will start copying and compressing all audio tracks contained on the audio CD to the system hard drive. The files will automatically be compressed using the windows media audio codec to create compressed WMA files on the hard drive. The files are created under the StreetDeck music folder in a sub folder named after the album. If the system is equipped with the Gracenote's® MusicID® Music Recognition Database, the album, artist, and track names will be filled in automatically for the file's metadata and used for the file name. The file name will be created as *<Artist Name> - <Track Name>.wma*.

If the Gracenote database is not installed, StreetDeck will prompt for the name of the album to create a sub folder for the files and will name the files after just the track numbers.

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Music recognition technology and related data are provided by Gracenote®. Gracenote is the industry standard in music recognition technology and related content delivery. For more information visit www.gracenote.com.

Gracenote technology is only included on some embedded systems sold with StreetDeck preinstalled like the Infill G4.

Importing Media (Other than Audio CDs)

Before you can play any files in StreetDeck, you first need to get them into the system. The simplest way to transfer files into StreetDeck is to simply insert a CD-ROM or removable USB hard drive into your system containing the files to be imported.

After the inserted media is read, the media type module is shown allowing you to choose the type of files you wish to transfer. All files of the specified type and folders on the media are shown. The files can be played directly or they can be copied to the systems harddrive for play later by selecting copy folder. If the recursive option is checked, the contents of all sub folders within the current folder are also transferred. Note that the recursive option only applies to transfers; only files within the current folder can be played directly off the media. After choosing to copy files, StreetDeck prompts for a folder name to copy the media files to. All media files are transferred to this sub folder within the proper media folder for the type of media being copied. StreetDeck also supports transfer of media files via a network connection.

Network synchronization through StreetDeck allows files from a Microsoft Windows XP share to be transferred automatically right before StreetDeck shuts down. To setup a network share for use with StreetDeck with your home computer, first create a new user name with limited privileges to be used exclusively with StreetDeck. The username and password MUST use only lowercase letters and numbers. After the username is created, go to Setup > General > WiFi Sync, select a source computer to sync with, and select the share names on the source computer. You need a different share for each media type: music, video, etc. If shutdown tasks are disabled, network sync will not run.

The DVD Module

The DVD module automatically begins playing whenever a DVD is inserted and is only accessible when a DVD is in the drive. Certain DVDs have active areas, such as those found in the title menu of most DVDs. These active areas can be pressed to control the DVD in a manner specific to the DVD. Touching any non-active area of the screen reveals the standard video controls which are hidden to allow the active areas of the DVD to be accessed and for general aesthetics.

Figure 12

DVD Options

Control Bar

DVD Home Menu

To access the DVD options module (Figure 13), press the DVD button at the lower right. Certain functions in this module are dependant on support on the specific DVD playing and may display an error message. This is to be expected and does not necessarily mean there is a problem.

Figure 13

The Videos Module

Videos are organized according to the directory structure in your videos folder. All files that have the video MIME type are shown in this folder view, even if the codec for playing them is not installed to play the video. Every playable video within the folder appears with a thumbnail extracted from the beginning of the movie. To find a particular movie, you can sort by name or by date.

Figure 14

Select a video to play it at full screen. Note that videos can only play while not in motion; if the vehicle begins moving, any playing video automatically minimizes. Touching the screen while the video is playing shows the video controls. These controls automatically hide after 5 seconds of no input. They allow you to play, pause, stop, rewind, fast forward, delete the current video, change the video equalizer settings, or scroll to a specific time within the video. Leaving the full screen video module minimizes the video to the lower left corner. From here you can pause and play the video, or click on the video image itself to return to fullscreen mode.

You can gesture up for stop, down for play/pause, left for previous, and right for next to control the play of the video. The next or previous video is selected according to the sort order in videos file module.

Figure 15   Equalizer Module

The Navigation Module

The full screen navigation module always shows your position in the world based on your GPS location. By default, the map always rotates according to your current direction. At the right of the screen, the large characters indicate your current compass heading. Near the bottom left of the screen, the name of the current street you are traveling on is indicated. To switch between 2D and 3D views, the toggle view button can be pressed. The zoom of the view automatically changes based on your speed and proximity to upcoming turns. To manually change the zoom, the zoom slider can be shown by pressing the zoom button at the upper left. Moving the slider changes the zoom and prevents it from automatically changing until the full screen navigation module is exited and reentered.

Figure 16

Creating Routes

To create a route to a particular destination, press the route button in the upper left of the module. To start a new route, press create route, which displays a number of different ways to find a specific destination. If you know the complete address, an intersection, a street name, or even just the town of the destination you want to get to, press the Address button. This module allows you to enter a complete address. Most fields are optional, but more information results in quicker and more specific searches. Note that by default, the state field is always populated by the state of your current GPS location. If the desired destination is in a different state, you may change this field.

You may have noticed when the state field is pressed, the onscreen keyboard automatically changed from numbers to characters. Since both numbers and letters do not fit on the onscreen keyboard, the keyboard changes according to what is best for the current text field, or when you toggle the keyboard manually.

To enter an address, the on screen keyboard can be used, or the letters or numbers can be gestured in. Note that the onscreen keyboard indicates which gesturing
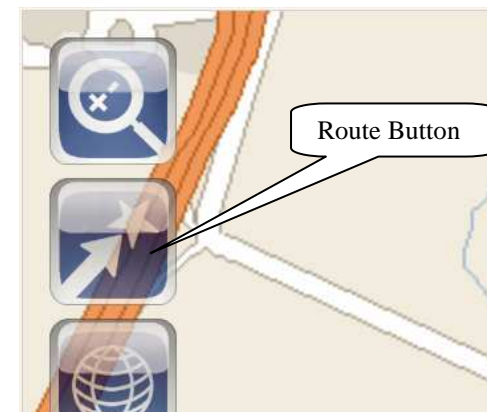

Figure 17

mode is active. When letters are shown, all gestures are recognized as characters and when numbers are shown, only number gestures are valid.

After all information about the destination has been entered, pressing search attempts to find the best location that matches the query. If more then one matching location is found, a list is displayed. Otherwise, the found destination and different routing options are shown. Notice the small 'H' in the top corner of this module. Pressing this button binds this destination as your home address, which becomes important later on. Choosing a route option creates a route to the destination and returns the full screen navigation module showing the first direction to take.

When a route is present, the path you should follow is indicated in blue and green. The street that is highlighted in blue indicates the portion of the route that you are currently on.   The streets highlighted in green indicate other streets within the route. As you progress through the route, each street that you turn onto turns from green to blue. The fullscreen navigation module displays the full text direction at the top of the screen and speaks them when close to the next action. At the bottom center, the name of your current destination is indicated. Directly below that is the action that should be taken next. To the right is the distance to the next action and the next street in the route. Finally, to the far right, the total distance to the destination is indicated as well as the estimated time to reach it.

Pressing the route button after a route has been created takes you back to the route options module. Note that all the directions within the current route are indicated. The top highlighted item always starts as the current portion of the route you are following. Looking at the options at the right, the home button creates a new route to your home location set from the destination options module described earlier. The clear route button resets your current destination and no longer show directions in the full screen navigation module. To change the type of route you are following, press the reroute button. This allows you to change the type of route that you follow if you find the current one undesirable.

For more in depth information about your current location or destination, you can press the GPS status button at the left center of the screen. This shows a module containing all pertinent information about your current status and your current destination. The current address label is perhaps the most useful as it indicates the current street and town you are in and when available, also indicates the nearest house number. You can add this address to your favorite destinations list by clicking the 'add to favorites' button at the right.

Advanced Navigation

Aside from searching by address, StreetDeck offers a number of different ways to find a particular destination from the create route module. You can locate destinations by type through the points of interest module. The most common points of interest can be listed simply by selecting a new category from the POI type's selection box. After a short delay, the list is repopulated with the destinations of the chosen type. Only destinations within the specified search radius are shown. Increasing the search radius usually yields greater results, however the search may take much longer. Choosing any of the list items presents the route type module and allows a route to the location to be created.

StreetDeck also allows a destination to be chosen simply by browsing to it on the map. To find a new destination in this way, place the map into browse mode by pressing the browse mode button in the fullscreen map module. When in browse mode, pressing anywhere on the map automatically centers the map on the *nearest location that can be found around the pressed area* and displays the location's name in the top right of the module. If there are no new locations in the database around the area that was pressed on the map, the map will not move. The map can also be moved by using the scroll buttons that appear at the bottom right of the screen. To return the GPS tracking mode to show your current location, press the GPS button, which returns the map to your current GPS location.

Every time a new route is made, it is automatically added to the list of recent destinations. The last 50 destinations will be saved and shown in the 'create route' module. Specific destinations can also be added to the favorites list by choosing 'add to favorites' in the destination options module.
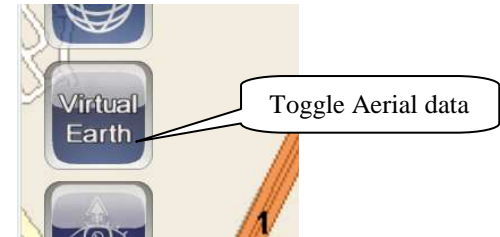
The destination options module also offers a number of other advanced features for route destinations. To view a location prior to creating a route to it, select view location. The fullscreen navigation module is shown centered around the selected location. You can then view the surrounding area of the selected location or even choose a new location nearby as the destination.

The final routing option 'add a waypoint' only becomes active after a route has been created. Adding a waypoint to a route adds an additional location that the route is forced to pass through. This feature can be used not only to add multiple stops for a
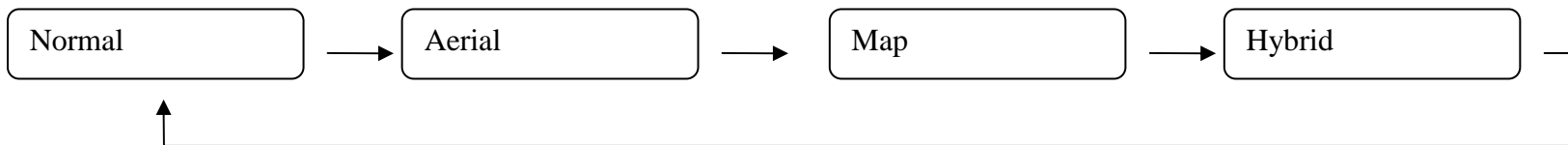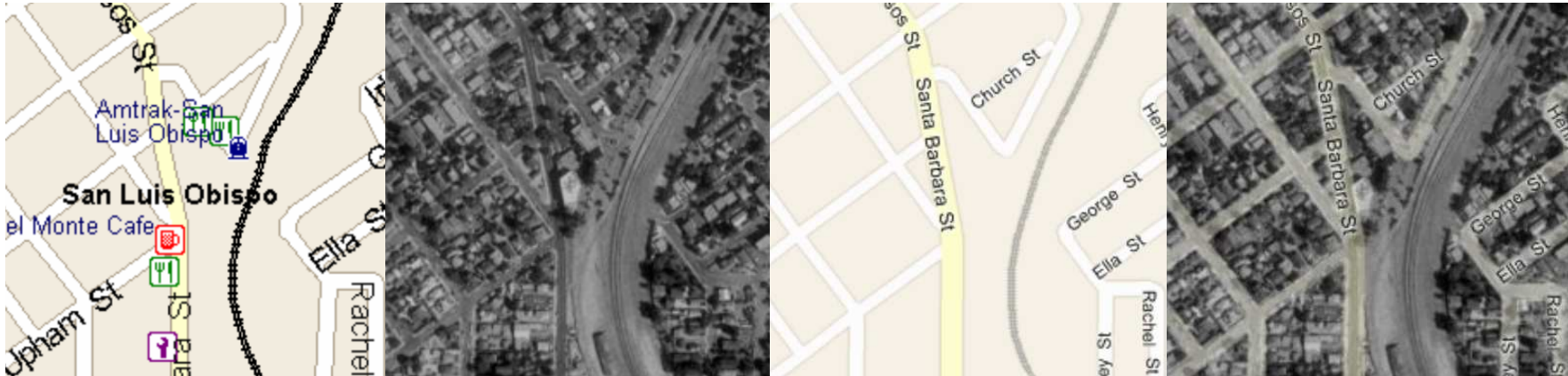
route, but also can be used to force the current route to use a particular street or streets if there is a portion of the route that is known to be faster. Up to 10 additional waypoints can be added. They are always added in consecutive order between the start and end location used for the initial route. There is no way to clear individual waypoints, the only way to remove them is to clear the route or create a new route.

Virtual Earth Data

In Navigation mode, selecting the 'Virtual Earth' button allows the user to toggle between Map data, Aerial Imagery, or hybrid data, which is map data superimposed on the aerial data. Access to aerial data requires an internet connection, which can be through a cell phone (GPRS/EDGE/EVDO). Images are 'tiled' together based upon what zoom resolution is set and are cached by StreetDeck for use when you return to that area without an internet connection.

Toggle Aerial data

Repeating the press of the Virtual Earth button, toggles between four view modes:

Normal ⟶ Aerial ⟶ Map ⟶ Hybrid

Touching the 'Virtual Earth' button will download image data if connected to the internet and superimpose image data with map data.
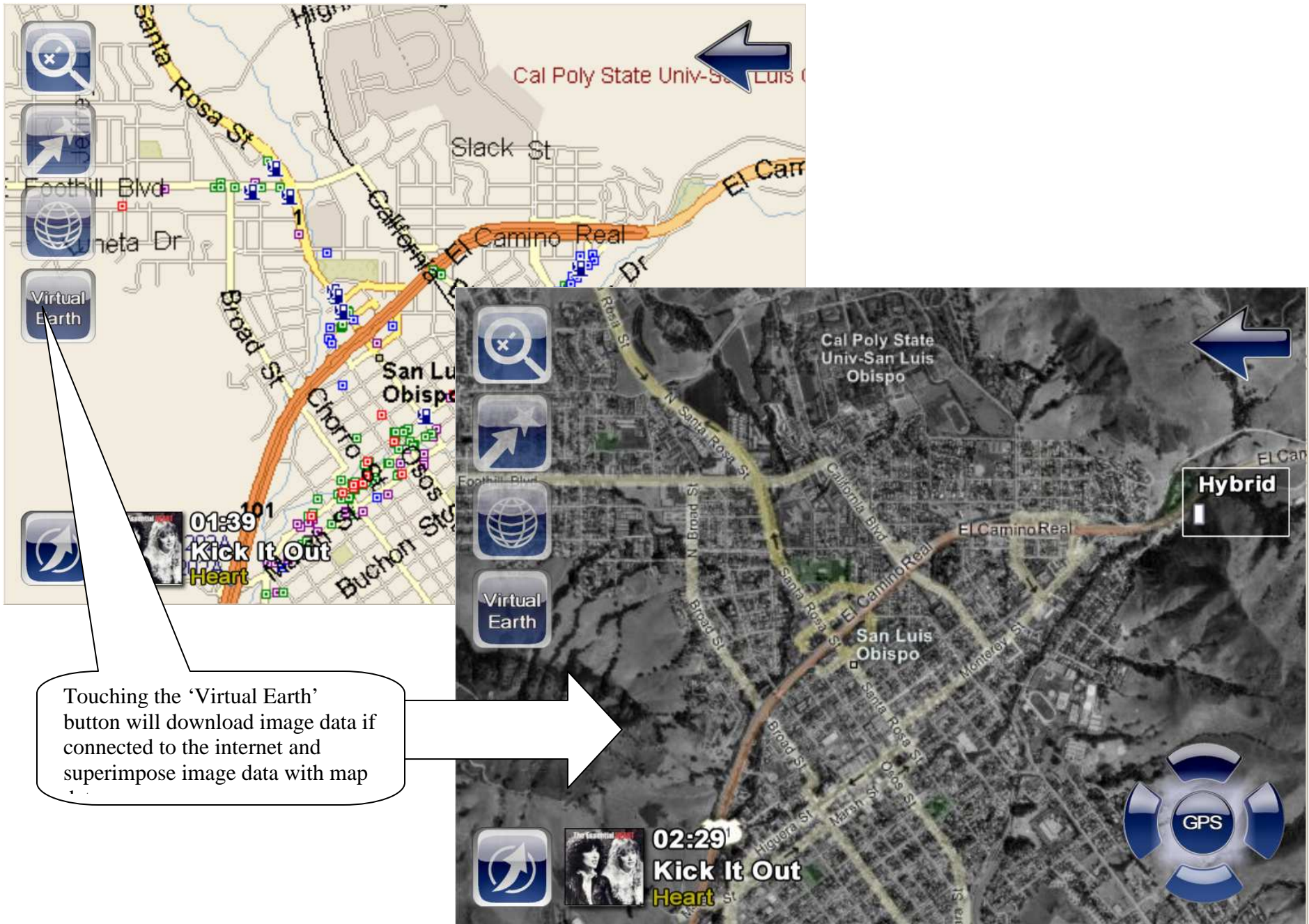
Figure 2

The Vehicle Module

Relay Control

Relays are switches that can be controlled by applying power to them to control any switched device in your car. StreetDeck works with a number of different relay devices that can be connected directly to your computer to allow you to control them from the StreetDeck interface. This allows you to do such things as open your windows by voice command or by gesturing through the relay hardware.
Warning: Configuring your relay hardware for your car is an advanced skill and should only be undertaken by those with an in depth understanding of the car's electrical system.

Graph Sensors + Diagnostics

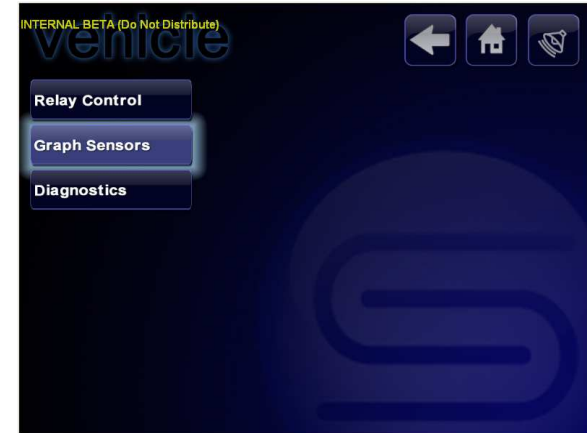Graph sensor data and diagnostic codes are obtained from the car's electronic control unit (ECU) using OBD II.
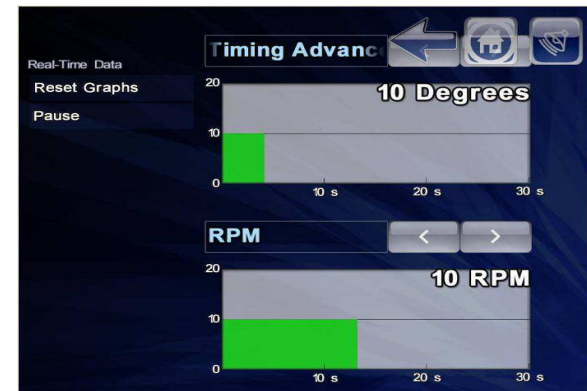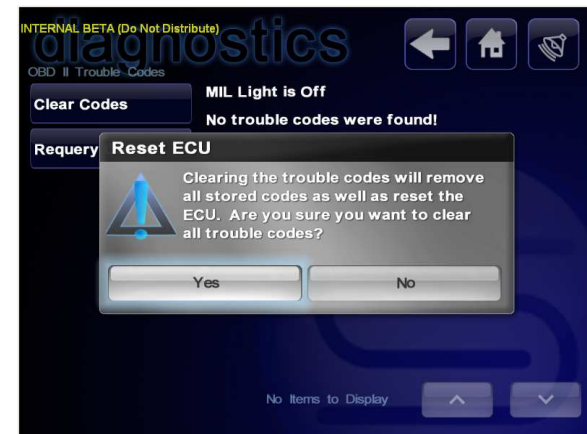

Figure 18

Figure 19

Figure 20

Camera Module

StreetDeck allows any video device such as a webcam or video capture device to be used as an in-vehicle camera. However, before any camera can be used it must be configured for use in StreetDeck. This can be accomplished by going to Settings > Vehicle > Camera Options. This shows slots for the maximum of 4 cameras that StreetDeck supports. Selecting one of these slots allows you to configure its connected camera. Most webcams only need the video device to be selected to operate. The other options allow you to configure video devices with multiple inputs and how the video should be displayed. An overlay can also be displayed on top of the video image that can be used for rear view cameras to help with judging distances. This overlay image can be manually changed by changing the skin image called CAMERA.OVERLAY.

The video from the first configured video camera is automatically displayed. If multiple cameras are configured, numbered buttons appear allowing the video input to be switched to the corresponding camera.

Figure 21

The Pictures Module

Pictures are organized according to the directory structure in your pictures folder and can be sorted by title or by modification date. To view a single picture, click on it to show it fullscreen. The filename and date of the pictures are shown in the upper right. The module navigation controls appear in the upper right and the next or previous image buttons appear along the bottom. All controls automatically hide after a small timeout until the screen is touched again. To have pictures automatically advance after a specified period of time, you can activate slideshow mode by going back to the pictures module and clicking slideshow.

Although, the playing media control functions do not appear while in slideshow mode, you can still control playback through gesturing. To control the slideshow itself, the page up and page down gestures can be used to advance to the previous and next pictures respectively.

Figure 22

The Satellite Radio Module

The satellite radio module works similarly to the music module; however, instead of playing sound files organized by playlists, it plays satellite radio stations organized by categories. Each item in the list to the right shows a single station and information about the current playing song, including song name, artist, station category, station id, and station art. When first entering the satellite radio module, all station names may be blank. Station information quickly appears as soon as the song information is downloaded. To change the categories of stations shown in the list, the available stations can be filtered. Pressing any item in the filter stations list causes the station list to show only the stations that correspond to the selected category. To ignore a radio station so that it will never appear in any list, go to the ignore list and place a check mark next to each station you do not wish to see in the station list. This will both make selecting your favorite stations easier as well as make downloading station information for the ones you do like quicker. To play a particular song, simply press a station in the list. The station appears in the lower left along with its status and the different control options for it.

Figure 23

StreetDeck also supports presets for your favorite satellite radio stations. Up to 10 specific stations can be bound to presets by pressing and holding down a station name until the preset number appears. The station is automatically bound to the next available preset number. Alternatively, a preset can be bound for the current playing station by pressing and holding down a preset number from the advanced controls list. The selected presets can be shown together by filtering to the preset list.

On supported systems, you can record satellite radio to a file for later listening. To record the current playing song, the record gesture, a circle, can be used or the record button in the advanced control options can be pressed. This tells StreetDeck to save and compress the recorded audio for the current song to a file once it is finished. The audio is automatically clipped at the start and end of the song. The resulting compressed file is stored in your music folder under the artist and song name and be automatically indexed to the StreetDeck music library. If the station was switched to after the recorded song began, the audio starts at the time the station was switched to. When recording, a small red dot indicates recording is active. After recording a complete file, the circle has a white haze while it compresses the file. To cancel the recording before it finishes, you can send the record command again.

The External Apps Module

External applications can be launched from within StreetDeck by placing shortcuts in the Application Data Path folder listed in the 'Edit Media Paths' application.
Launching the external application minimizes StreetDeck.

Figure 24

Common Problems and Solutions

1. **How do I change where my media files are located?**

   By default, StreetDeck uses the My Documents\My Music, My Documents\My Pictures, and My Documents\My Videos folder to store music, pictures, and videos respectively.

   Additionally whenever StreetDeck runs, it will automatically indexes all files in the Music path and in doing so will move it to the indexed sub folder. To prevent StreetDeck from moving files in your My Music folder, you should set change your Music Path to My Music and create a new sub folder called import in that folder, then set your Import Music Path to point to it.
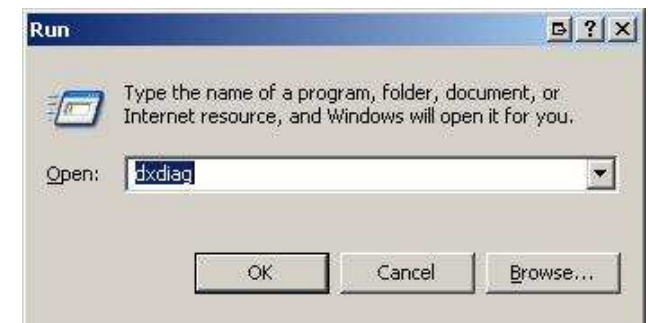
   To change the paths that StreetDeck uses to store media files. From windows, you must use the media paths tool from the shortcut installed under: **Start | Programs | StreetDeck | Tools | Edit Media Paths**

2. **Could not find any compatible Direct3D Devices Error**

   For StreetDeck to run at its full performance level, your computer must have at least a DirectX7 compatible or better video card installed and you MUST have DirectX 9 or later installed.

   If you get an error from StreetDeck saying: "Could not find any compatible Direct3D Devices..." it means either your video card does not support Direct3D or a proper driver is not installed. Some special drivers or applications, like power strip, also may prevent StreetDeck from running properly.
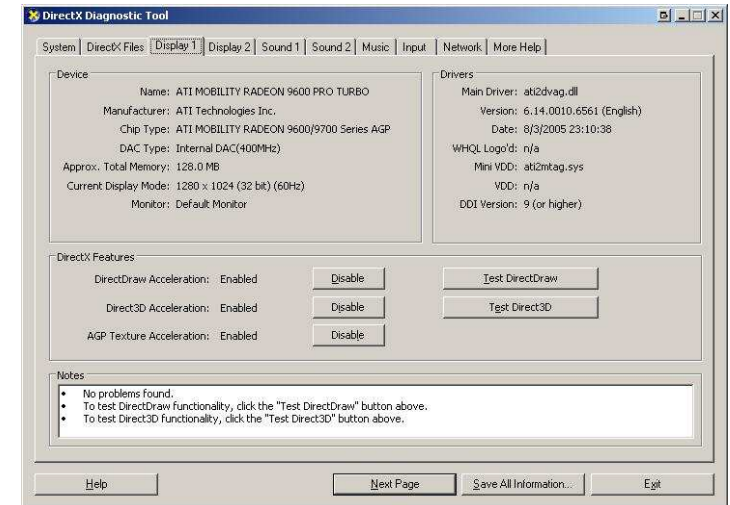
   To fix the problem, you should first run the DXDiag tool included with DirectX. You can do this by going to "Start | Run" and entering "DXDiag" in the open textbox to the right:

Once the DXDiag utility starts, go to the Display 1 tab, verify that it says "No problems found", then click the "Test Direct3D" button. This will run a series of tests, if your video card passes all tests; it means StreetDeck should run on your hardware.

If your video card does not pass the DXDiag tests, you should install the latest stable driver from your video card manufacturer and try again.

If your video card is not capable of supporting Direct3D 7, you can still run StreetDeck in GDI mode adding **-GDI** to the command arguments of the StreetDeck shortcut.

3. ERROR: Cannot play media, license not found!

If you are receiving this error, it is likely due to the fact that the media you are attempting to play requires a license. If you are playing a CD, and eject it, you may receive this error message as well.

This is not just related to .wma files; it is also related to .mp3 files as well. There are many different music formats that have built in 'Digital Rights Management' otherwise known as 'DRM'.

4. My COMM port doesn't show up in StreetDeck

Some virtual COM ports and USB Serial devices don't show up in StreetDeck.

You can fix this by running StreetDeck with the -allcomm command line parameter. This will force all ports from 1 to 99 to show up.

i.e. StreetDeck.exe –allcomm

5. Album Art for StreetDeck

StreetDeck will recognize album art for music files in a number of ways to support a wide variety of ways you may maintain your album art in...

First off it will NOT recognize album art embedded in the mp3 files itself. This is done for performance reasons and is one of the only unsupported ways.

Second, album art will be copied whenever music is ripped from a CD or thumb drive through StreetDeck.

The following, in order of precedence, is how StreetDeck will read album art:

1. By GUID
Every song in a windows media player database uses a globally unique id to identify the album. When media player downloads album art from the internet it will save the art to a .jpg file that is hidden, placed in the album's directory, and named after the GUID. StreetDeck will attempt to read this album art for the song so if you manage all your music with media player and copy the entire directories over to your StreetDeck music folder, the album art will be recognized.
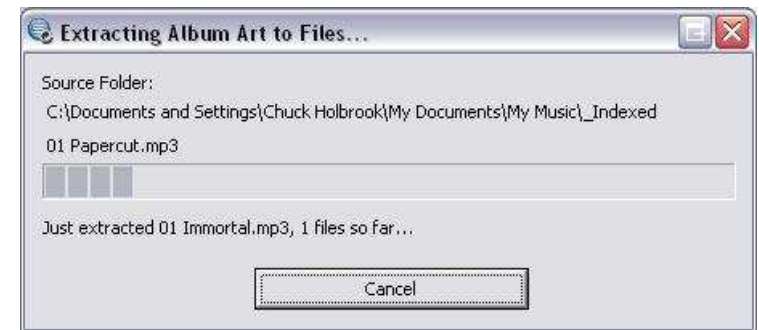
2. By Name
If there is an image file (can be .jpg, .png, .bmp, .gif, etc.) with the same filename, differing only by extension from the music file, it will be used as album art for that file. i.e. the art for "Linkin Park - By Myself.mp3" would by "Linkin Park - By Myself.jpg"

3. By Folder
If there is a file called folder.jpg or AlbumArtSmall.jpg in the same directory as a music file, it will be used as the album art.

A utility is now available for automatically extracting album art embedded in mp3 files and converting them to a format StreetDeck understands.

The StreetDeck Album Art extractor will extract all album art embedded in mp3 files and save them as PNG files with the same file name as the mp3 file, but with a .png extension instead of an .mp3 extension.

To use, simply run the executable, if StreetDeck is installed, it will recursively run through the mapped StreetDeck music folder and covert all mp3 files in it. If StreetDeck is not installed, it will prompt for a root directory to perform the conversion on.

To extract files from a path other then the StreetDeck music folder, run with the -browse command line option. i.e.
"C:\program files\StreetDeck\StreetDeck.exe" -browse

Download Here:
http://www.streetdeck.com/update/utils/sdalbumart.zip

Special thanks go out to Konnichiwa for contributing the code that made this utility possible.

6. **UNBOUND error when trying to access Navigation / Navigation Failed Error**

    Many times this error is caused when a previous version of Map Point or Streets & Trips was installed.

    If you are going to be using the StreetDeck DVD to install StreetDeck, you will need to completely remove any previous installs of Map Point or Streets & Trips from your system. Failure to do so will yield errors when trying to access the navigation module.

    A MapPoint Diagnostic Tool has been created that will help diagnose where the error is coming from and allow the MapPoint control used for StreetDeck navigation to be reregistered. You can download the tool from: http://www.streetdeck.com/update/utils/MappointTest3.zip

    To use the tool, extract the executable to the Program Files\StreetDeck directory and run MappointTest.exe. After it runs it should show a verbose log of what happened when the navigation control tried to initialize. Warning messages may be shown even if the tool successfully runs. If navigation is installed properly a small map should show in the upper left

corner. If the map is not visible, you should press the registration button and rerun the tool. If the map still does not show up, press the registration button again and copy the contents of the log output and paste it into a new thread created in the StreetDeck sub forum on mp3car.com. Be sure to include how you installed navigation, i.e. from the StreetDeck DVD or by installing MapPoint and any other steps you may have already tried to diagnose your problem with your post.

If you run this tool on Windows Vista, you will need to run in as an administrator for registration to succeed.

7. **Why don't my videos / images / music files show up in StreetDeck**

For a file to be recognized in StreetDeck, it needs to have an appropriate MIME type associated with it in the registry. These are normally set correctly by windows XP already for the most common types, but if not you can add a type manually by going into the registry editor in windows by going to "Start | Run", typing in regedit.exe in the run dialog, then clicking "Ok".
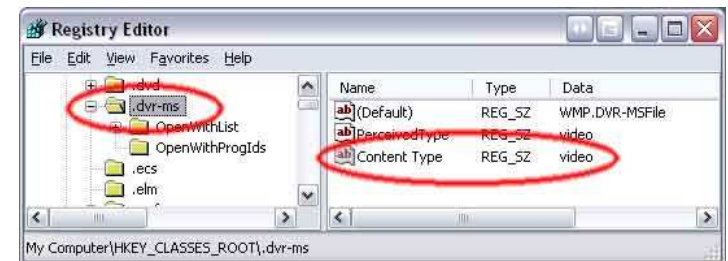
You should then browse to the extension for the file type you want to associate. The registry key you want should be found under HKEY_CLASSES_ROOT\<extension> where extension is the file type extension.

You should then create a "Content Type" string value by right clicking in the click area of the extension key and selecting "New | String Value".

When prompted you should enter 1 of the following values depending on the type of file you are trying to register for My Music, My Videos, My Pictures respectively:
**audio
video
image**

For example to register the .dvr-ms video type to show up in StreetDeck in the videos module, you would go to the "HKEY_CLASSES_ROOT\.dvr-ms" key, create a new "Content Type" string value and set it to "video"

8. How to get FLAC files to play within StreetDeck

Since many customers are interested in lossless audio formats and would like to play these from StreetDeck, this FAQ has been created to help those individuals achieve this.

- Install the lossless codec to enable .flac files to be played from within Windows Media Player: http://www.illiminable.com/ogg/
- Register the MIME type according to number 4 above (register as **audio**).

9. Performance Tuning

The number one most critical thing for running StreetDeck efficiently is to control the frame rate to a level your graphics card and CPU can handle.

Since StreetDeck uses the Direct3D graphics card for all rendering, it means if you have a fully compatible Direct3D card, all the rendering work will be offloaded to the card, leaving the primary CPU free to do other work in the background. However, if the 3D card is not fast enough or doesn't support enough Direct3D features to keep up with the frame rate, it means it will use the CPU time to complete the rendering and slow down the entire performance of the system.

45 fps is probably the best bang for your buck, there are diminishing returns as you push it higher and 60 fps is the maximum effective frame rate, anything above this and you won't notice much of a difference.

To see the frame rate StreetDeck is obtaining, run with -info as a command line parameter. This will show a number followed by fps in the upper left hand corner, this is your frame rate. This number is limited artificially by the StreetDeck frame rate limiter set in "Settings | General | Display" from within StreetDeck. For optimal performance, the frame rate number you see should be at or within 1 fps of the frame rate limit while StreetDeck does not have a secondary task going on. i.e. (Calculating a nav route, switching songs etc.) If the frame rate number you see is constantly below this limit or performance, particularly gesturing performance, seems sluggish it means your frame rate limit is too high and should be lowered. You should continue to lower the frame rate until these performance issues disappear and your actual frame rate rarely

dips below the frame rate limit, you should then lower the frame rate limit by at least 25% from the maximum sustainable idle frame rate.

For example, a shuttle XPC with Nforce 4 chipset easily achieves above 60 fps and is limited there, a Pentium M motherboard with an Intel 915 graphics processor can just about sustain 60 fps, but we set it to 45 fps. A via SP13000 can sustain 30 fps, but it really taxes the main CPU a lot to do so, so it's set to 15 fps. The easiest way to increase the performance of StreetDeck is to add a faster graphics card. This will drastically lower the requirements for the main CPU.

10. If you receive a 'No Hardware Found!' message when clicking on Phone in StreetDeck

- Verify your StreetDeck dongle is physically inserted properly. If not, remove the dongle and reinsert it. You can do this while StreetDeck is running and a Bluetooth On message should be shown on a successful reinsertion.

- Verify the StreetDeck Bluetooth driver is properly installed. In Windows XP right click on **My Computer**, select **Properties** choose the **Hardware** tab and then click on **Device Manager**. Verify there is a device under the Universal Serial Bus Controllers class and called **StreetDeck Bluetooth Dongle with CSR BlueCore Bluetooth**. The device will NOT be under the Bluetooth Radios class.

  If the dongle does not show up as a universal serial bus controller, look for a Bluetooth device under **Bluetooth Radios**. The Generic Microsoft Bluetooth Driver as well as some drivers from other manufacturers may also work with the StreetDeck hardware, but this driver will NOT allow StreetDeck to work with it. If you have never installed any other Bluetooth dongles onto your computer, the dongle will probably show up as Generic Bluetooth Radio. If another driver is installed for the dongle, you will need to update the driver to the StreetDeck Bluetooth driver, right click on the device and choose **Update Driver**, then follow the instructions in **Appendix B** to update the driver.

Appendix B: Command Line Parameters

About Command Line Parameters

Command line parameters alter the way StreetDeck runs. They can do any number of functions from resetting options to disabling features.

Using Command Line Parameters

To run StreetDeck with a command line parameter, right click on the shortcut to StreetDeck and select **Properties**. Click on the **Shortcut** tab. In the **Target** text box, place each command line parameter, separated by spaces, after the filename in quotes. i.e.
"C:\Program Files\StreetDeck\StreetDeck.exe" –skin:default –testmode

Command Line Parameters

D - Developer mode.
Info - Output debug information to screen.
GDI_ResX:<Width> - Width to startup in (GDI Mode Only).
GDI_ResY:<Height> - Height to startup in (GDI Mode Only).
Close - Closes the running instance of StreetDeck.
AllCOMM - Force all potential COMM ports from 0-99 to be enumerated.
Verbose - Log extra information for debugging.
Skin:<Skin Name> - Force the program to use the specified skin.
Embed:<Left>,<Top>,<Width>,<Height> - Sets StreetDeck to run in embedded mode at the specified window position.
ResetConfig - Reset program configuration to defaults.
Wizard - Launch the settings wizard on start.
NoThreads - Disables thumbnail extracting threads.
NoVoice - Disables voice recognition from loading.
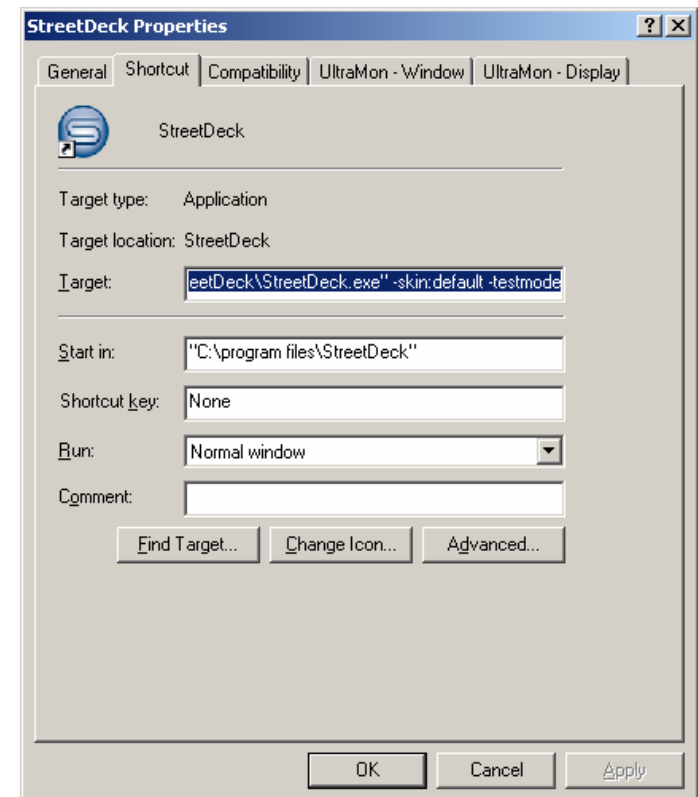**AllowMediaDuplicates** - Disables checking for duplicate items when indexing music.
ResetRegistration - Deletes all license information and forces the program to be registered again.
NoPowerButton - Don't show the shutdown module when the power button is pressed.
16bit - Force 16-bit color mode when fullscreen.
Slow - Disable transparencies, Use low fidelity gestures.
GDI - Disable Direct3D rendering.

StreetDeck Properties

General | Shortcut | Compatibility | UltraMon - Window | UltraMon - Display

StreetDeck

Target type: Application

Target location: StreetDeck

Target: eetDeck\StreetDeck.exe" -skin:default -testmode

Start in: "C:\program files\StreetDeck"

Shortcut key: None

Run: Normal window

Comment:

Find Target...   Change Icon...   Advanced...

OK   Cancel   Apply

NoDelayComp - Disable delay loading of program components.

NoDelayLoad - Disable delay loading of skin images.

NoBackgroundMP3 - Use background loading of music files.

FakeData - Use fake data for various media managers.

NoConstrainMouse - Don't constrain the mouse to the primary monitor (MultiMonitor Mode ONLY!).

DisableMultiMon - Disable multiple monitor mode.

DisableScripting - Disable script support.

DisableWindowHooks - Disable window hooks that prevent some other windows from being enabled.

ExtraSecure - Lock the user to fullscreen navigation when moving.

ImportSkin - Merge / Copy modules or overlays from another skin (use with -d).

GPSBaud:<baud> - Explicitly Set the GPS baud rate. i.e. -GPSBaud:9600.

DisableGestures - Disable gestures.

FlipScreen - Rotate the screen 180 degrees.

ForceEurope - Force a European map to be used when multiple data sets are installed.

UPnPClientOnly - Make this copy of StreetDeck a UPnP client for routing and playing purposes.

ParrotBluetooth - Use the parrot based Bluetooth adaptor for UMPCs.

StaticBackground - Disable the dynamic visualization background.

G4DontForceDVDCodec - Don't force the default DVD codec on the G4 to be used.

VMRDVD - Use the video mixing renderer rather then overlays for DVD playback.

DontRouteInfillRadio - Use the analog audio line for radio on the infill rather then digitally routing.

RadioTuneEvenStations - Tune to even stations needed for some non-US countries.

DisableAutoUpdater - Disables the auto updater from trying to download files.

Sirius - Select Sirius mode for satellite radio.

PromptPassengerMode - Display a prompt when StreetDeck starts that allows the user to select passenger mode.

KioskMode - Disables most settings and configuration changes.

Map:<Map File Name>.ptm - Load a MapPoint map with avoidance areas for use in routing.

NoNav - Disable navigation.

RecordGPS - Record raw NMEA data from GPS to new file in Logs\GPS.

RegServer - Register the StreetDeck automation server. run StreetDeck

Appendix C: Contact Information

For technical support please visit the StreetDeck forums on MP3Car.com at http://www.mp3car.com/

Phone sales and support can be reached during regular business hours at 410-526-2852

The StreetDeck Bluetooth dongle has been created by MP3Car, Inc. for StreetDeck.

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Appendix D: Trademarks and Copyrights

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