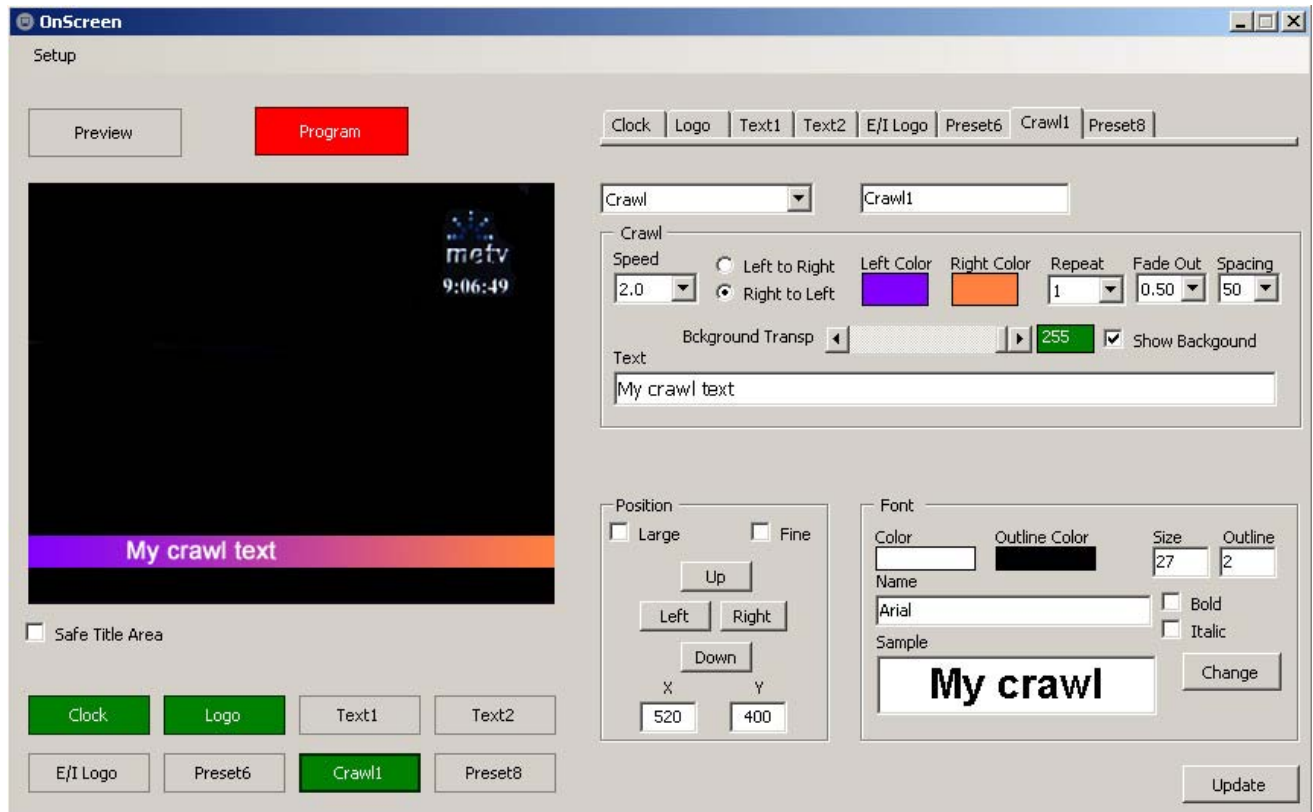


***OnScreen  
Instructions Manual***

***November 24, 2010***

## General Description

OnScreen is application for keying images, animated gifs (with alpha channels support), clocks, text and crawls using Decklink cards. It supports both SD and HD cards. It lets you set transparency for screen items and puts transient background for crawls. It supports Unicode, has GPI option and also provides preview window in order to set up and arrange items before they are put on-air.

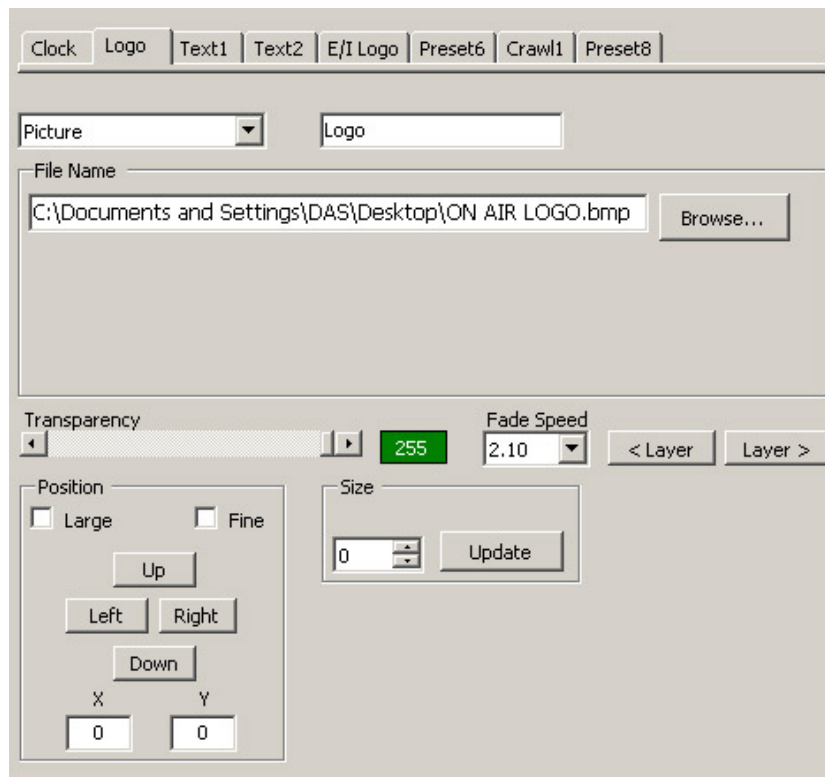


## Images

In order to put an image on screen the “Picture” option should be selected from the drop down menu. This will display the frame used to browse to the desired image file. Supported file formats are BMP (with alpha), JPEG, TGA (with alpha), GIF (animated, with alpha), TIFF, WMF, EXIF and PNG (with alpha). Once the image file path has been set, image can be put to preview or on-air by pressing its preset button. Multiple images can be shown at the same time.

For each image a different screen position, transparency, layer and fade in and out speed can be set. You can also set the size of an image. If set to zero, picture will have its default size, otherwise the number indicates the width in pixels. Picture will keep proportions during resizing.

In case user is adjusting image in preview mode, the Take button should be pressed (not shown on the picture below)



## Clock

In order to display a clock on screen the “Clock” option should be selected from the drop down menu. This will display the frame with various clock setup options:

- **12/24** hour selection
- **Show Hours** is handy for programs broadcasted through various time zones
- **Show Seconds** lets you choose between 12:31:20 and 12:31
- **Leading Zeros** will put a zero in case hours value is one digit

Multiple clocks can be shown at the same time. PC clock is used as a time reference. For each clock a different screen position, transparency, layer, font and fade in and out speed can be set.

Double clicking “Color” and “Outline Color” rectangles will pop up color selection window. Clicking the “Change” button will pop up font selection window. Font size can also be changed by typing a different value into the “Size” box, which also applies to outline size as well. On-screen changes will not take place until the “Update” button is pressed.

In case user is adjusting values in preview mode, the Take button should be pressed (not shown on the picture below)

The screenshot shows a software interface for configuring a clock display. At the top, there is a tabbed menu with options: Clock, Logo, Text1, Text2, E/I Logo, Preset6, Crawl1, and Preset8. The 'Clock' tab is selected. Below the menu, there is a dropdown menu set to 'Clock' and a text input field containing 'Clock'. The main configuration area is divided into several sections:

- Clock:** Contains radio buttons for '24 Hour' and '12 Hour' (selected). Checkboxes for 'Show Hours' (checked), 'Show Seconds' (checked), and 'Leading Zeros' (unchecked).
- Transparency:** A slider set to 255.
- Fade Speed:** A dropdown menu set to 0.50.
- Position:** Includes checkboxes for 'Large' and 'Fine', and buttons for 'Up', 'Left', 'Right', and 'Down'. Below are input fields for X (555) and Y (120).
- Font:** Includes input fields for 'Color' (white), 'Outline Color' (black), 'Size' (22), and 'Outline' (1). A 'Name' field contains 'Times New Roman'. Checkboxes for 'Bold' (checked) and 'Italic' (unchecked). A 'Sample' preview shows '11:01:36' in a white box with a black outline. A 'Change' button is next to the sample.

An 'Update' button is located at the bottom right of the interface.

## Text

Selecting the “Still Text” option from the drop down menu will put text on screen. Multiple texts can be put at any given time by using a different preset tabs. Unicode is supported. Which characters will be displayed depends on keyboard language selected in Windows.

For each text a different screen position, transparency, layer, font and fade in and out speed can be set. Double clicking “Color” and “Outline Color” rectangles will pop up color selection window. Clicking the “Change” button will pop up font selection window. Font size can also be changed by typing a different value into the “Size” box, which applies for the outline size as well. On-screen changes will not take place until the “Update” button is clicked.

In case user is adjusting text in preview mode, the Take button should be pressed (not shown on the picture below)

The image shows a software interface for configuring text. At the top, there are tabs for 'Clock', 'Logo', 'Text1', 'Text2', 'E/I Logo', 'Preset6', 'Crawl1', and 'Preset8'. Below the tabs, a dropdown menu is set to 'Still Text' and a text input field contains 'Text1'. A large text area below shows 'My Still Text'. The 'Transparency' section has a slider set to 255 and a 'Fade Speed' dropdown set to 0.50, with '< Layer' and 'Layer >' buttons. The 'Position' section has checkboxes for 'Large' and 'Fine', and buttons for 'Up', 'Left', 'Right', and 'Down'. Below these are input fields for 'X' (0) and 'Y' (20). The 'Font' section includes 'Color' and 'Outline Color' fields, 'Size' (21) and 'Outline' (1) inputs, and checkboxes for 'Bold' and 'Italic'. A 'Sample' box displays 'My Still' in a bold font, with a 'Change' button next to it. An 'Update' button is located at the bottom right.

## Crawl

When set to “Crawl” user has the following settings:

- **Speed** – lower value sets lower speed
- **Direction** – Left To Right and Right To Left
- **Left and Right color** – sets the left and right side transient background color of the crawl
- **Background Transparency** – sets the transparency level for the text’s background
- **Show Background** – determines whether to show the background or text only
- **Repeat** – sets number of times text will be repeated before it fades out. If set to Loop it will repeat indefinitely or until user fades it off manually
- **Fade Out** – sets fade out time of the crawl
- **Spacing** – if a crawl will be shown more than once, it determines the space between two crawls

Multiple crawls can be put on screen by using a different preset tabs. Unicode is supported. Which characters will be displayed depends on keyboard language selected in Windows.

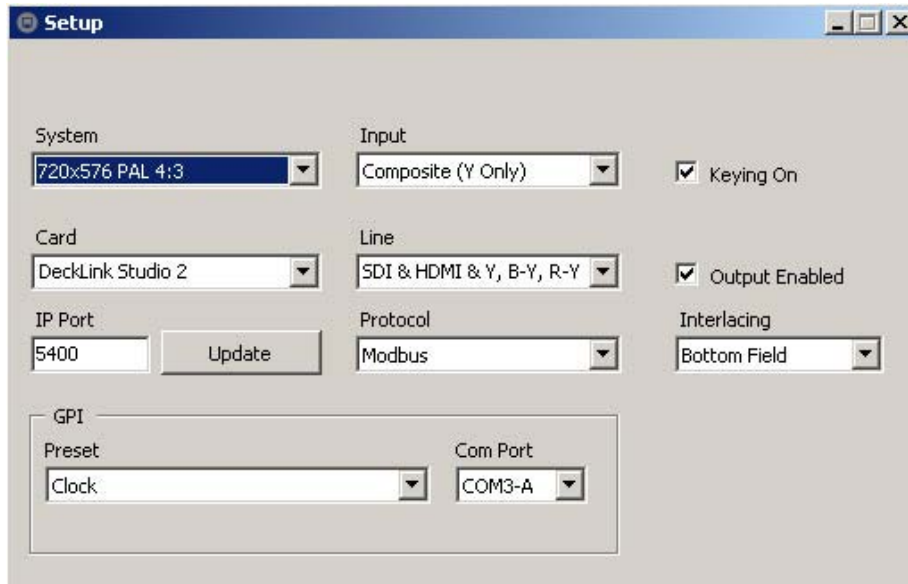
For each text a different screen position, transparency, font and fade in and out speed can be set. Double clicking “Color” and “Outline Color” rectangles will pop up color selection window. Clicking the “Change” button will pop up font selection window. Font size can also be changed by typing a different value into the “Size” box, which applies for the outline size as well. In order to see changes on the screen, “Update” button should be clicked and crawl should be taken off. Once the crawl has been activated again, the changes will show.

The screenshot displays a software control panel for a 'Crawl' feature. At the top, there are tabs for 'Clock', 'Logo', 'Text1', 'Text2', 'E/I Logo', 'Preset6', 'Crawl1', and 'Preset8'. Below the tabs, a dropdown menu is set to 'Crawl' and a text box contains 'Crawl1'. The main 'Crawl' section includes a 'Speed' dropdown set to '2.0', radio buttons for 'Left to Right' (unselected) and 'Right to Left' (selected), 'Left Color' (purple), 'Right Color' (orange), 'Repeat' (1), 'Fade Out' (0.50), and 'Spacing' (50). A 'Background Transp' slider is set to 255, and a 'Show Background' checkbox is checked. The 'Text' field contains 'My crawl text'. Below this are '< Layer' and 'Layer >' buttons. The 'Position' section has checkboxes for 'Large' and 'Fine', and buttons for 'Up', 'Left', 'Right', and 'Down'. The 'X' and 'Y' coordinates are 520 and 400. The 'Font' section shows 'Color' (white), 'Outline Color' (black), 'Size' (27), and 'Outline' (2). The font name is 'Arial', and 'Bold' and 'Italic' checkboxes are unchecked. A 'Sample' box shows 'My crawl' with a 'Change' button. An 'Update' button is at the bottom right.

## Setup

The Setup window sets TV system (gives various options for PAL, NTSC, SD, HD...), which DeckLink card will be used, its input and output etc.

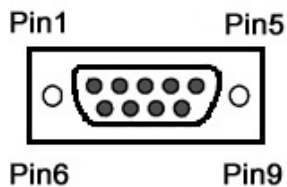
Application also supports Modbus protocol and the listen port can be changed if necessary.



Application is offering optional GPI control through Com ports. Each com port provides two GPIs, one by shorting pins 4 and 8 and the other one by shorting pins 6 and 7.

The com port drop down menu contains all Com port available on the PC, and each com port is added with "-A" and "-B" indicating shorting pins 4 and 8 and 6 and 7 respectively. Multiple presets can be connected to the same Com port, therefore user can control multiple presets with a single GPI

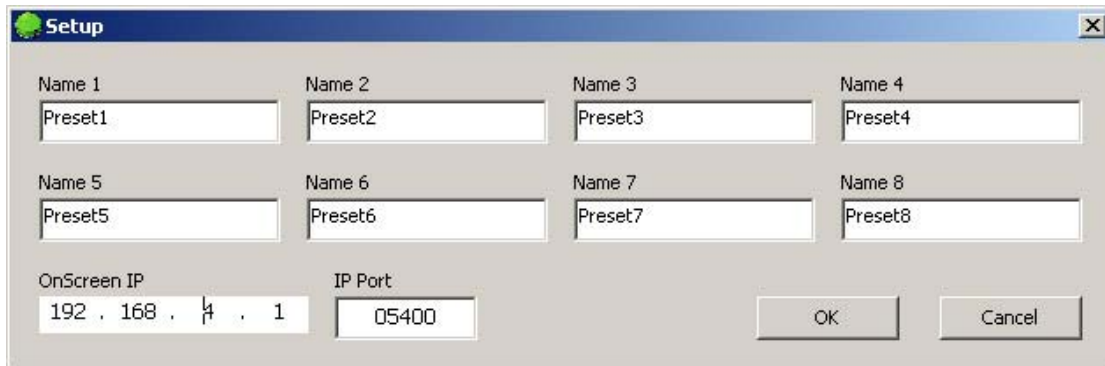
PC side com port pin out



## Remote Control

OnScreen is delivered with a simple remote control application used to activate and deactivate each one of eight presets. If a preset is activated, its appropriate button will turn green. By right-clicking remote control panel or one of the buttons a setup pop-up menu will be shown. When clicked, it will display the setup window.

The setup window sets up a name for each button as well as IP parameters for communicating with OnScreen application. In order to connect to OnScreen, please enter IP address of PC running OnScreen into the OnScreen IP box. PC's IP address can be obtained by typing "ipconfig" in the command prompt of Windows. Port number value will be found in OnScreen's setup window.



## ***System Requirements***

### **OS**

Windows XP, Windows Vista (x32, x64), Windows 7 (x32, x64)

Note: in Windows Vista and Windows 7 x64 the SDK works only in 32-bit mode (in 32-bit executable applications) via WOW subsystem

### **Hardware**

SD mode recommendations: Core 2 Duo CPU, 2GB RAM

HD mode recommendations: Core 2 Quad CPU (Q9xxx) or Core i7 CPU, 4GB RAM

Hardware requirements for remote control application are very low and any PC running Win2000 or higher will run it without any problems.



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