datavideo®

▪ VIDEO
CHARACTER GENERATOR
Supports Windows Unicode for multi-language inputs

CG-100

DATAVIDEO CG

CG-100

Version 1.72 with USB Dongle

Rev 080410

USER MANUAL

www.datavideo-tek.com

Warnings and Precautions

If you have purchased this CG-100 software with a Blackmagic Design DeckLink Card please observe the install precautions supplied the DeckLink card.

It is also advisable to read any precautionary notes supplied with your computer which relate to installing new hardware and software.

When installing new software on to a Windows XP or Vista machine it is advisable to first create a ***System Restore Point***, this will provide a working machine to go back to, should anything go wrong during the installation.

Details of how to create a ***System Restore Point*** can be found in your PC instruction manual or on the Microsoft Website. Alternatively you can approach your company I.T. support desk.

Please also see the *EULA - End User Licence Agreement* at the rear of this manual.

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Packing List

1. CG-100 software CD
2. CG-100 Security Dongle x1
3. CG-100 Installation Guide (PDF version)
4. CG-100 User Manual (PDF version)

Optional video card*

Blackmagic Design DeckLink SDI PCIe card

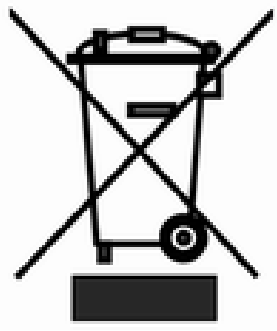
or

Blackmagic Design DeckLink Studio 2 PCIe card

** Please consult your dealer to confirm if these items should be present.*

Disposal

For EU Customers only - WEEE Marking.



This symbol on the USB Dongle indicates that it should not be treated as household waste. It must be handed over to the applicable take-back scheme for the recycling of waste electrical and electronic equipment. For more detailed information about the recycling of this product, please contact your local Datavideo office.

Warranty

Please also see the *EULA - End User Licence Agreement* at the rear of this manual.

Standard Warranty

Datavideo equipment is guaranteed against any manufacturing defects for one year from the date of purchase.

The original purchase invoice or other documentary evidence should be supplied at the time of any request for repair under warranty.

Damage caused by accident, misuse, unauthorized repairs, sand, grit or water is not covered by this warranty.

All mail or transportation costs including insurance are at the expense of the owner.

All other claims of any nature are not covered.

Cables & batteries are not covered under warranty.
Warranty only valid within the country or region of purchase.
Your statutory rights are not affected.

Two Year Warranty

All Datavideo products purchased after 01-Oct.-2008 qualify for a free one year extension to the standard Warranty, providing the product is registered with Datavideo within 30 days of purchase. For information on how to register please visit www.datavideo-tek.com or contact your local Datavideo office or authorized Distributors.

Certain parts with limited lifetime expectancy such as LCD Panels, DVD Drives, Hard Drives are only covered for the first 10,000 hours, or 1 year (whichever comes first).

Any second year warranty claims must be made to your local Datavideo office or one of its authorized Distributors before the extended warranty expires.

Introduction

Thank you for purchasing the Datavideo CG-100 Character Generator PC software. CG-100 is the first CG software that uses a Blackmagic Design DeckLink card as a video output card. This PC software and card set up can be used as an accessory DSK overlay to Datavideo vision mixers such as the SE-800 or SE-900, or as an individual unit.

It is also the first Live CG software for PC with an SDI interface at an affordable price. We hope you will be amazed by what you can do with this product!

In order to get the maximum of this product, we recommend that you spend some time reading this manual carefully to familiarize yourself with its capabilities.

Product Overview

SDI overlay offers the best, broadcast quality, CG solution in the industry today. However, it has always been beyond the budget of small studios and production houses – Datavideo CG-100 has now changed that!

The CG-100 combines with a Blackmagic Design DeckLink Card to give you a live SD-SDI CG overlay at an affordable price.

It can be switched between NTSC and PAL video standards and is able to generate graphics for either 16:9 or 4:3 aspect ratios.

Pages can be composed, saved to file and combined with animation effects, to run as a sequence, or they can be displayed and edited live.

CG-100 combines perfectly with the SE-800 / SE-900 mixers to give superb quality graphics / text / logo overlay on live production mixes.

CG-100 can be used with any SDI or YUV input switchers depending on the connections of the DeckLink card used. It can also be used with the SE-800 / SE-900 via their own SDI / CG DSK overlay interfaces.

Features

- Import image objects as graphics and store them as part of a page.
- Simple shapes (bars, ellipses and rectangles) are menu items and may be added to the page.
- Animation objects can Wipe, Push, and Fade in various directions at different speeds.
- Text can roll and crawl.
- Supports Windows Unicode for multi-language inputs and fonts.
- Redo/Undo functions for quick testing of an additional effect.
- Live editing mode provides great flexibility to immediately alter one CG page while another CG page running is live.
- Quick CG Text Editor allows navigation from page to page to quickly modify text.
- Stand-alone logo display function.
- Nine items can be stored to the “clipboard” and used in CG combinations on different pages and files.
- Group function makes CG combinations easy to edit.
- SDI available. (via DeckLink SDI or Studio PCIe cards).
- YUV available. (via DeckLink Studio PCIe card).
- Automatically create multiple CG pages from a text file.
- Time & date display.
- TARGA sequence playback.
- GPI trigger animation.
- App Button “Logo Generator” mode for live productions.

Plus bonus Live Streaming software*

* This software can only be used on a PC with Windows XP Professional 32bit OS

Minimum Requirements

CPU:

Intel Pentium 4 (2.0 GHz) or higher

Operating System:

Microsoft Windows XP Professional (SP2) 32bit OS
or
Microsoft Windows Vista Business (SP1) 32bit OS

System RAM:

2GB or higher for Windows XP
or
4GB for Windows Vista Business

VGA resolution:

32-bit colour recommended VGA, XGA or higher
CG-100 requires a PC monitor resolution of 1024 x 768

Required Free Hard Drive Space:

150 MB (for CG-100 & DeckLink Driver)

Compatible PCIe cards:

Blackmagic Design DeckLink SDI card
or
Blackmagic Design DeckLink Studio 2 Card.

USB Port:

Computer needs 1 free USB 2.0 port for the CG-100 USB Dongle

NOTE:
These system specifications may change, without notice, depending upon the card used. Please consult your dealer for the latest advice.

For the latest information on Blackmagic Design Cards please visit:

http://www.blackmagic-design.com/support/

QuickTime Recommendations

We have found that QuickTime™ 6.3 or later is fully compatible with CG-100, DeckLink cards and their drivers.

If upgrading to the latest version of QuickTime™, you will need to un-install and re-install the latest DeckLink drivers to regain full functionality of the DeckLink card.

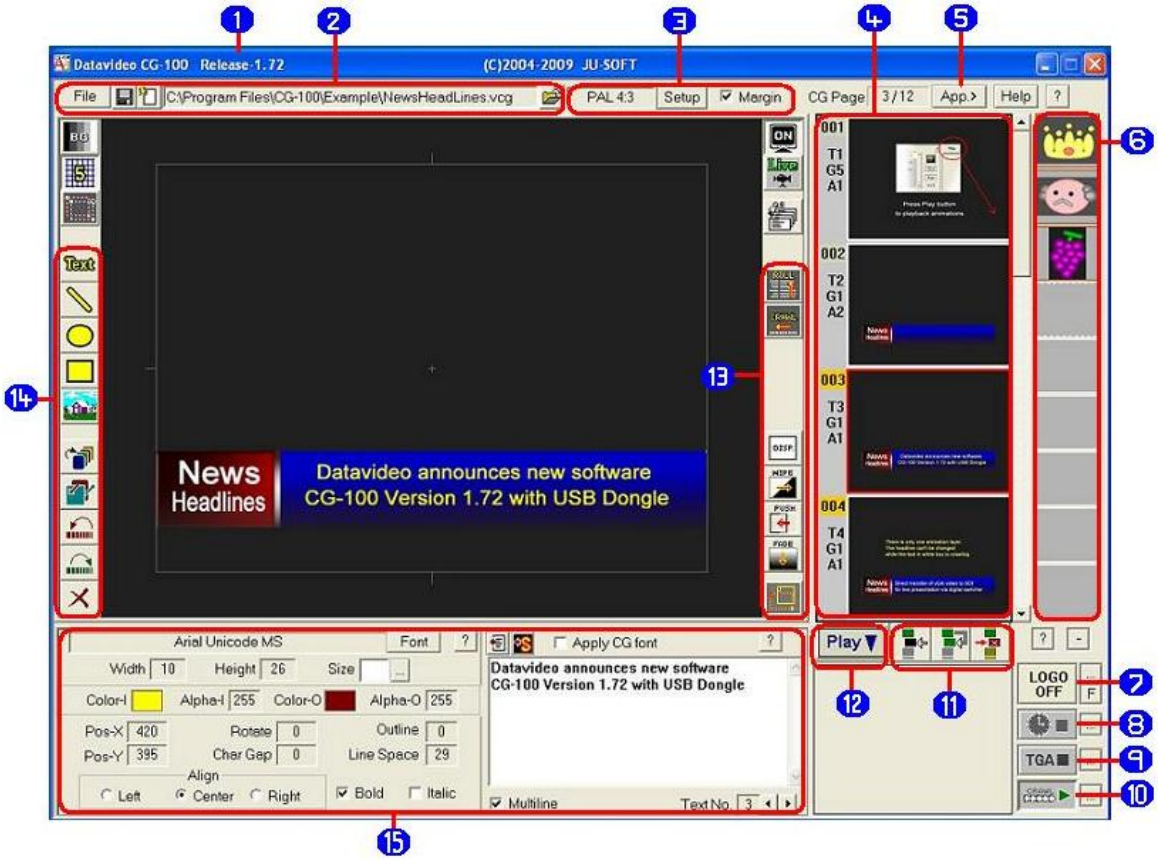
Additional information and downloads can be found using:

www.apple.com/quicktime/

For the latest information and drivers on Blackmagic Design Cards please visit:

http://www.blackmagic-design.com/support/

CG-100 Interface



1). CG-100 Version Information

2). File, Save, New & Open

3). Screen Aspect, Set Up & Margin

4). Page List & Information

5). App Button / Logo Generator

6). Object Clipboard

7). Logo Management

8). Time & Date / Timer Functions

9). Targa Sequence

10). Single Text Crawl Button

11). Insert, Copy, Delete Page

12). Play or Stop Page Sequence

13). Text Animation Controls

14). Editing and Graphic Tools

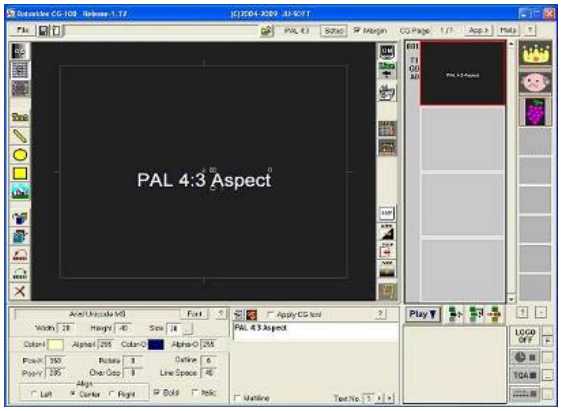
15). Text & Graphic Management

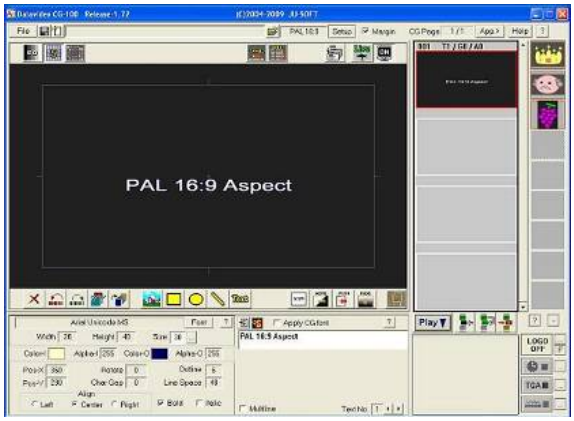
These are the basic function descriptions. For a more detailed overview of each function, please read through the appropriate section later in this manual.

System Set Up

TV system selection

CG-100 can be set for either NTSC or PAL. It can also be set as either 4:3 or 16:9. When choosing NTSC, the TV screen resolution is 720 x 486 pixels. When choosing PAL, the resolution will become 720 x 576 pixels. However, on the PC monitor, there is no difference between PAL and NTSC, the screen aspect is just 4:3 or 16:9. When using the CG-100, you must keep in mind that the pixels on the PC monitor are not the same as on a TV. The following pictures show how CG-100 looks when a 4:3 or 16:9 aspect is selected.





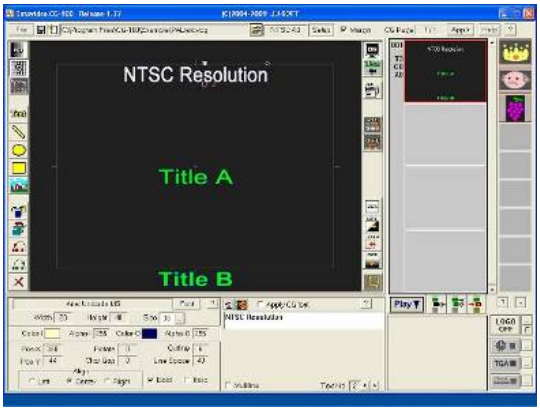
Difference between NTSC and PAL

Although the resolutions of NTSC (720x486) and PAL (720x576) are different, the ratio of their widths and heights are the same.

If we use the idea of pixel co-ordinates (X and Y). Let us say that the Y co-ordinate of **Title A** is 243. In NTSC the height of **Title A** is in the middle of the screen, as NTSC is 486 high. However, in PAL **Title A** would appear in a higher position, as PAL is 576 high. See the examples on the next page.

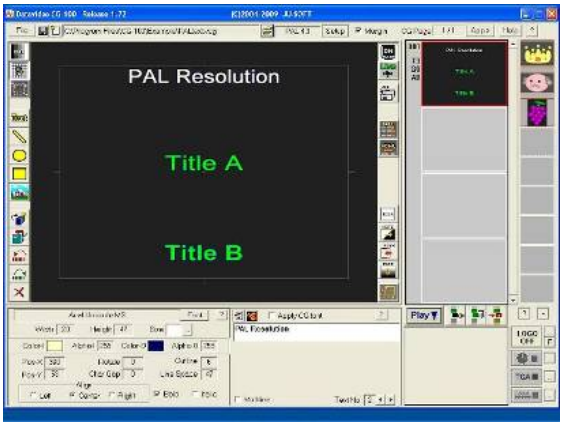
Now, if **Title B** is placed at 440 on the Y axis it is near the bottom of a PAL screen. **Title B** would be lower, and outside the safe area when the same Y value 440 is used in an NTSC mode.

In NTSC mode **Title A** is in the Middle of the screen



Title B is outside the Safe Area in NTSC mode

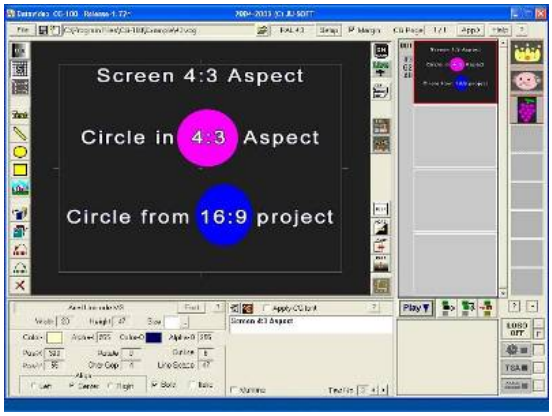
Title A is higher when the screen is changed to PAL



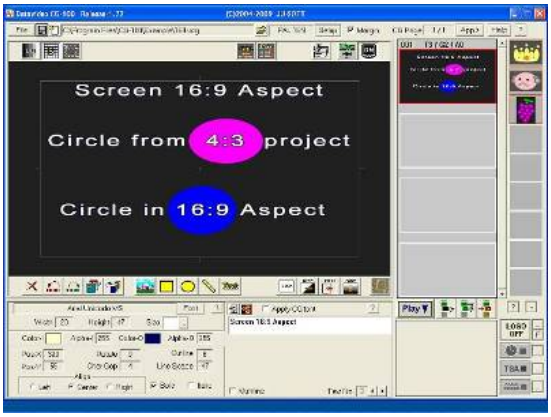
Title B is within the Safe Area in PAL mode

Display mode 4:3 or 16:9

Setting CG-100 mode from 4:3 to 16:9 will not change the resolution of the PC monitor. However, transferring a circle from a 4:3 project to 16:9 Aspect, will change its shape from a round circle to an ellipse and vice versa. Please see the examples as below.



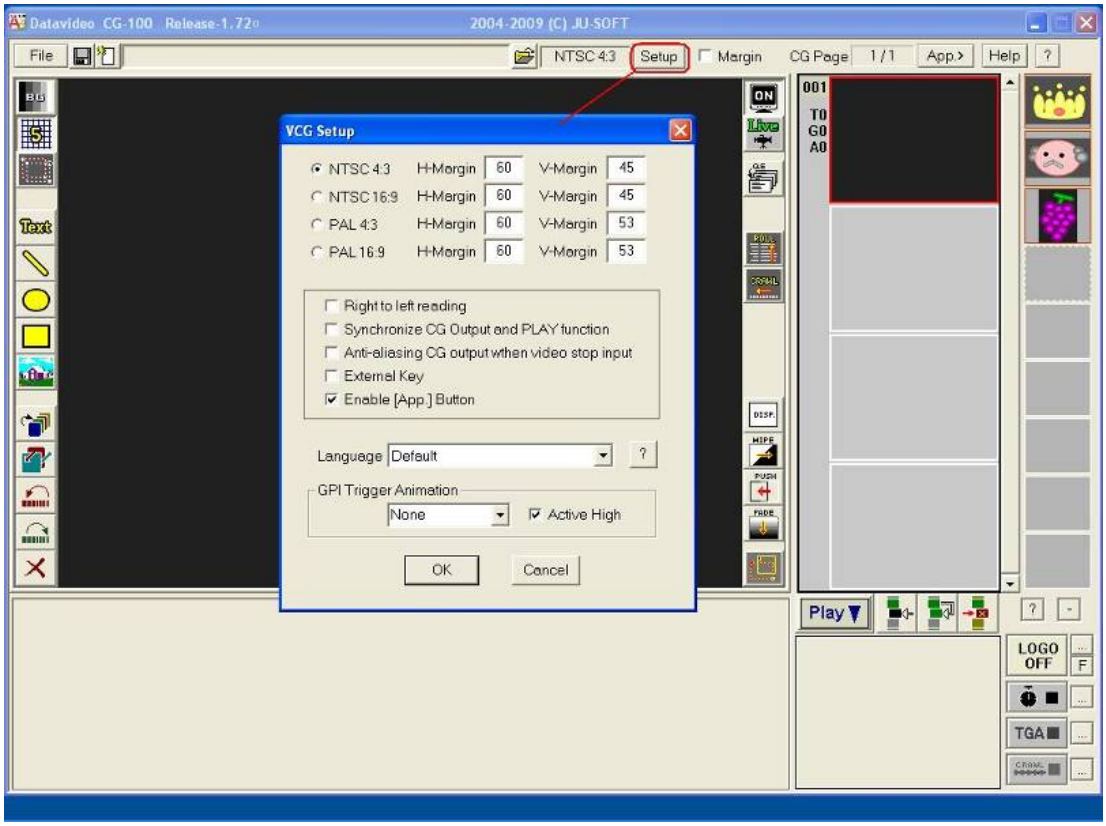
Top is a circle in 4:3
Bottom is a tall ellipse in 4:3



Top changes to an ellipse in 16:9
Bottom changes to a circle in 16:9

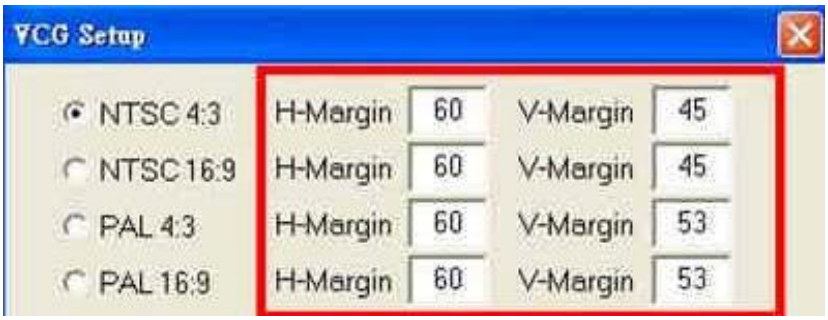
Setting the Video Standard

Go to SET UP, Click on the required video standard. The CG-100 Application needs to be re-started if changes have been made.



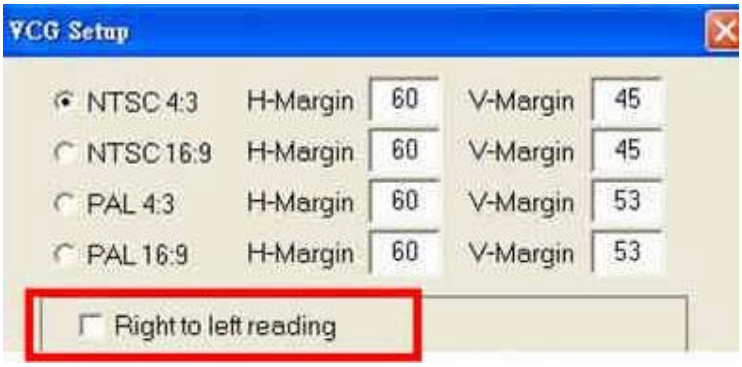
Set Margins

Type the pixels to be deducted for horizontal and vertical margins

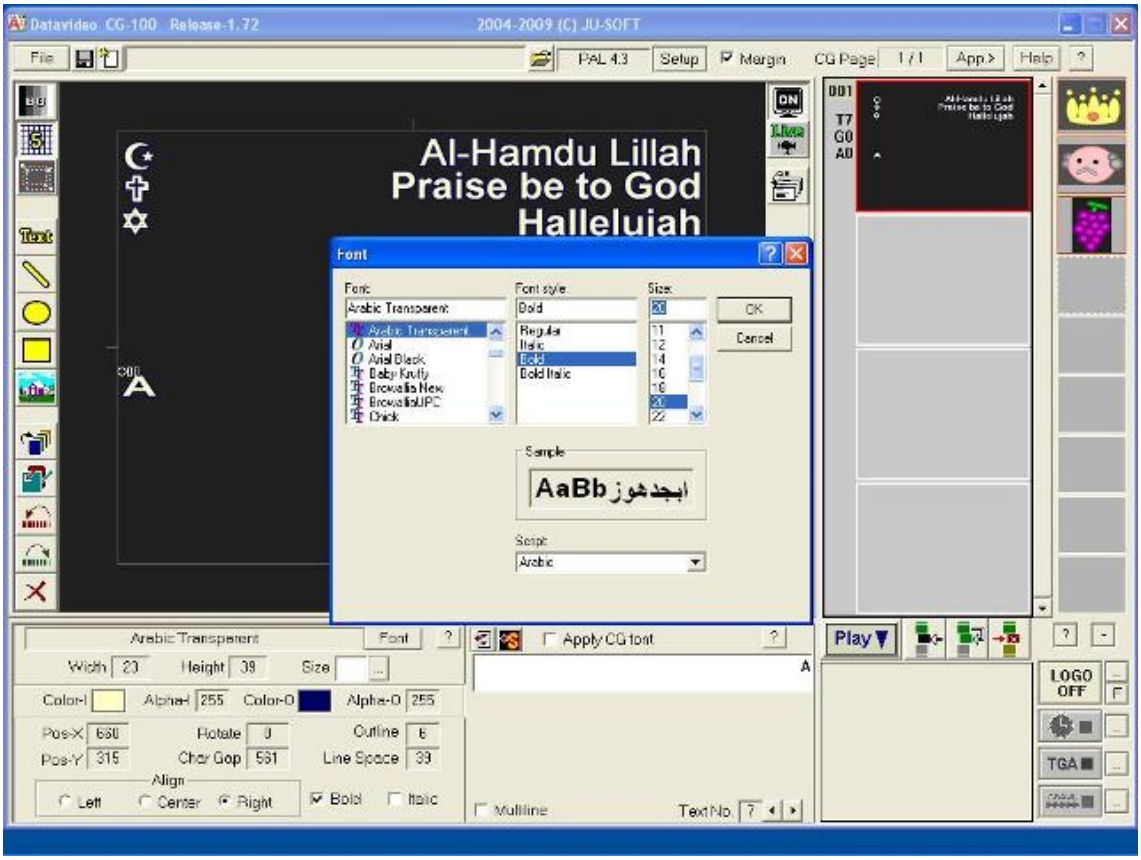


Right to left reading

CG-100 enables typing for Left to Right and Right to Left. For Right to Left reading you need to tick the check box “Right to left reading”

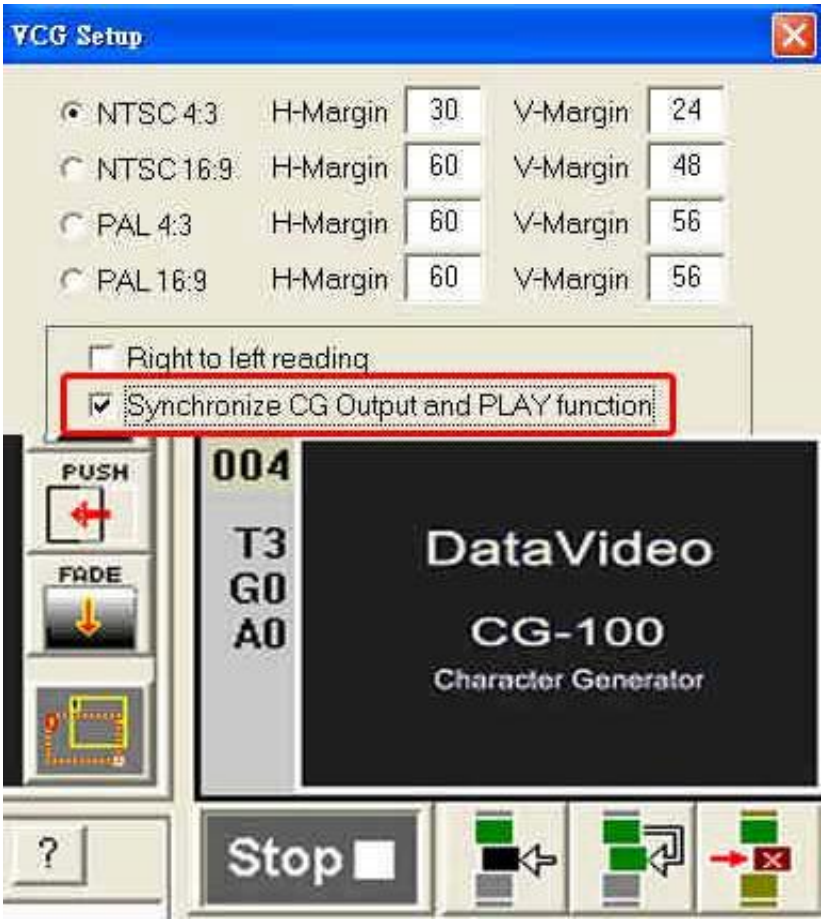


Be aware that you need to select appropriate fonts, especially for Hebrew or Arabic and to have *Right to Left reading* selected. For example a question mark “?” will be placed at the left side while choosing Hebrew fonts.



Synchronize CG output, PLAY function

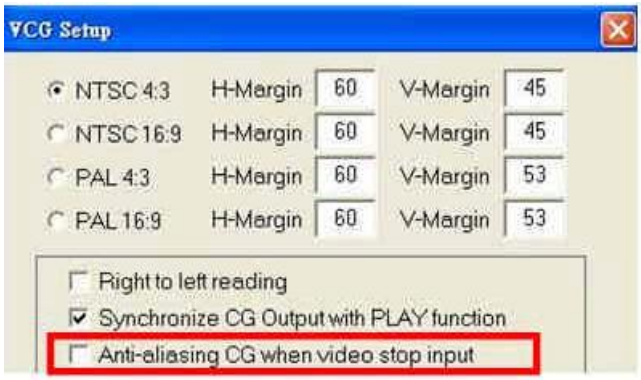
This function needs to be enabled when using live CG mode. When this selection has been ticked, the CG output will be cleared when clicking stop. ***i.e.*** *it does not appear on the video out.*



CG output with no video input

Anti-aliasing CG output when video stop input - This option is used if there is no video being input, and you want to output the computer graphics and text only on a black background just for presentation etc.

Remember: tick the check box: "*Anti-aliasing CG output when video stop input*" to ensure a good quality presentation output.

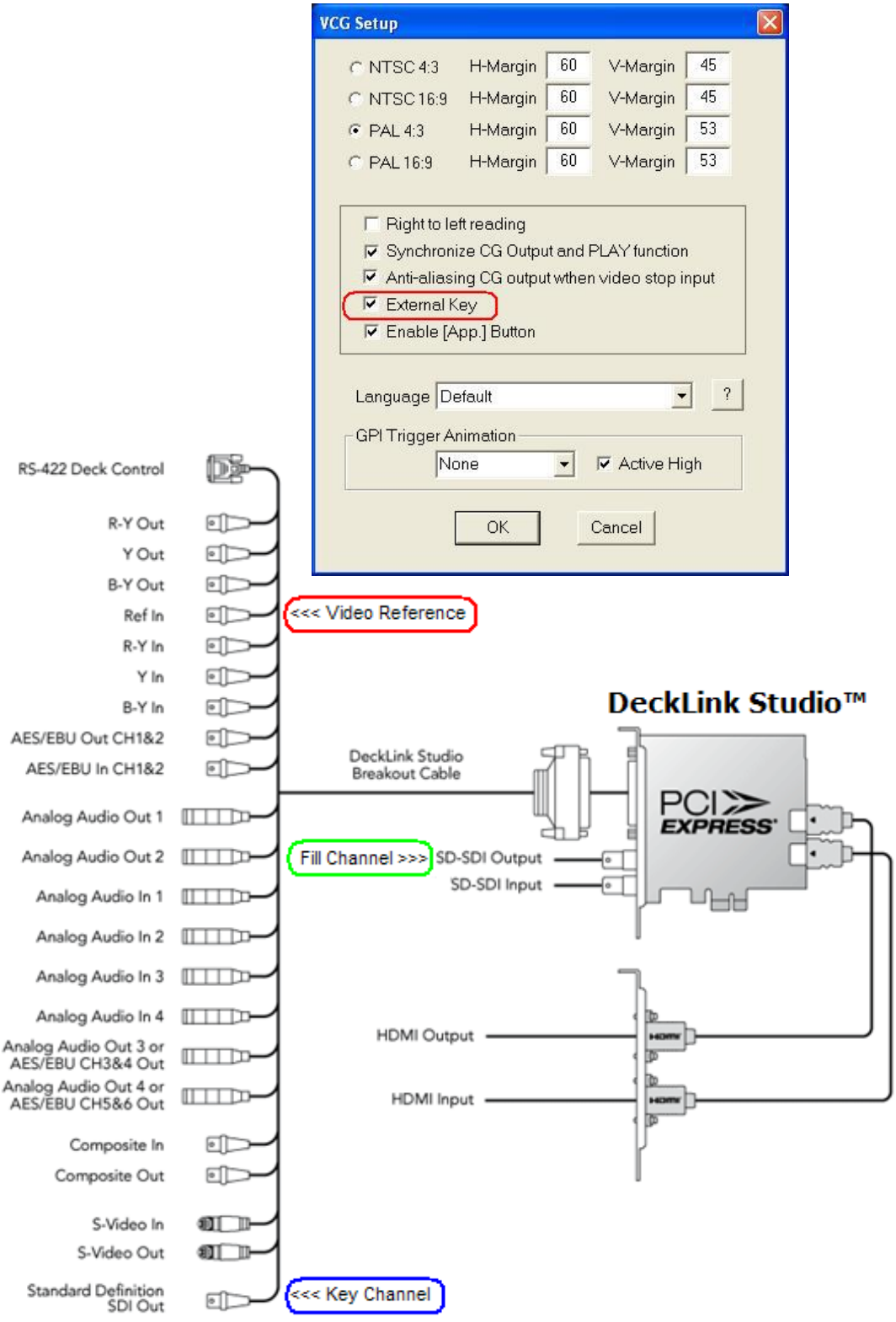


Without Video Input

However, if there is video being input, do not tick the check box.

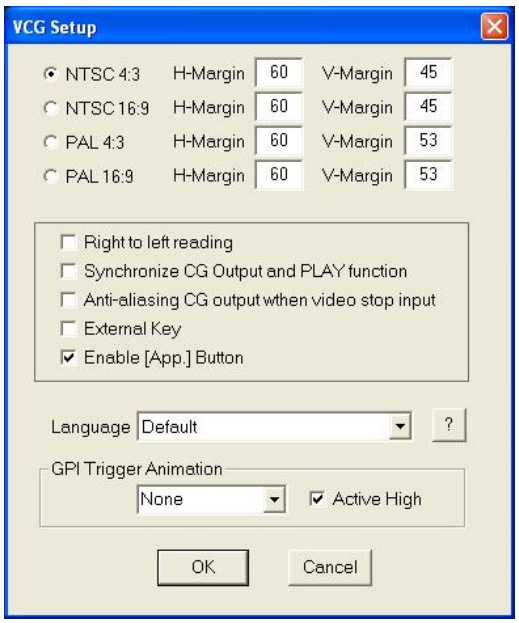
External Key

This function works with the DeckLink Studio Card. Tick the check box: “External Key” So the Alpha Key output for Live Video and CG output can be merged externally in another device / mixer.



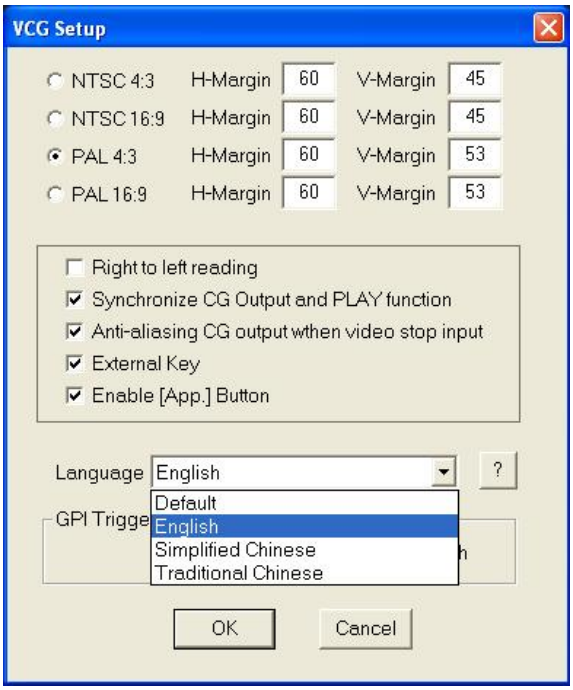
Enable [App] button

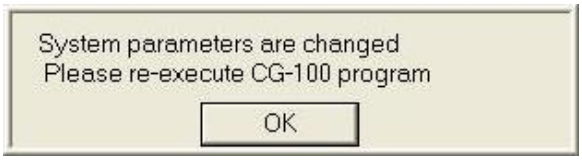
To enable a special logo generator plug-in application of CG-100, please go to SETUP window and tick “Enable [App] button”. If you do not want this plug in, remove the tick so that the App. Button box is empty.



Language setting

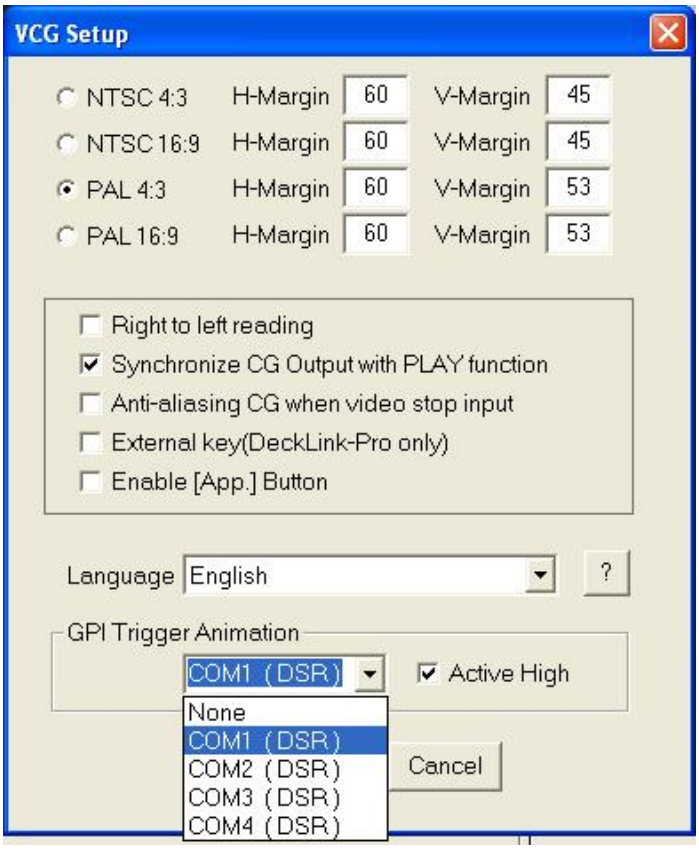
Select the language setting for your user interface. The software needs to be restarted after selecting your chosen language.





GPI Trigger

You can set a GPI to trigger the Animation objects like wipe, push, fade etc in CG-100.



The following steps are used to set up a “GPI trigger”

Step1 Set “Wait until keyboard” for the “Prior_Wait” and “Post_Wait” of all animation objects.

Please note that between 2 animation objects, you do not have to set “Wait until keyboard” twice. For example, the user would then have to send 2 GPI triggers to continue the motion. It is better have one wait for KB (or GPI trigger) and set the other wait to “0 seconds” instead as shown in the following image.

Step2. Go to [Setup] dialogue in [GPI Trigger], select from COM1 to COM4 to choose one of the Serial Port DSR signal lines. Connect the hardware GPI (General Purpose Interface) cable to the selected COM port.

Step3. Tick Active High, this means when the DSR signal is High Voltage, or GPI contact is made, the next animation will be triggered. Off Active High, means when the DSR signal is Low Voltage, the next animation will be triggered.

Step4

Method1 If your GPI is a switcher, the easiest way to connect the GPI to the COM port is to connect the ON/OFF point (line) directly to the 4th pin (DTR output) and the 6th pin (DSR input) of a 9-pin Sub D COM Port socket. In this case, please go to [Setup] and tick [Active High]. When the GPI switch is ON, the positive Voltage from DTR output goes to the DSR and it becomes High Voltage, so that it now triggers the animation objects set as “Wait until keyboard” in CG-100. The connection cable of the GPI can be up to 10 meters in length.

Step4

Method2 If your GPI is a photo transistor, please note the direction of electric current is from the 4th pin (DTR output) of COM Port 9-pin Sub D socket to the 6th pin (DSR input). When the ON/OFF points of the photo transistor are connected in an opposite way, the GPI will not function properly.

Step4

Method3 If one of the GPI ON/OFF points has to be grounded, then you have to place a 1k Ohm resistor between the 4th pin (DTR output) and the 6th pin (DSR input) of the COM PORT 9-pin socket. Meanwhile, the GPI ON/OFF points should be connected to the 6th pin (DSR input) and the 5th pin (GND). In this case, the Active High in [Setup] dialogue should be “OFF” for an Active Low setting.

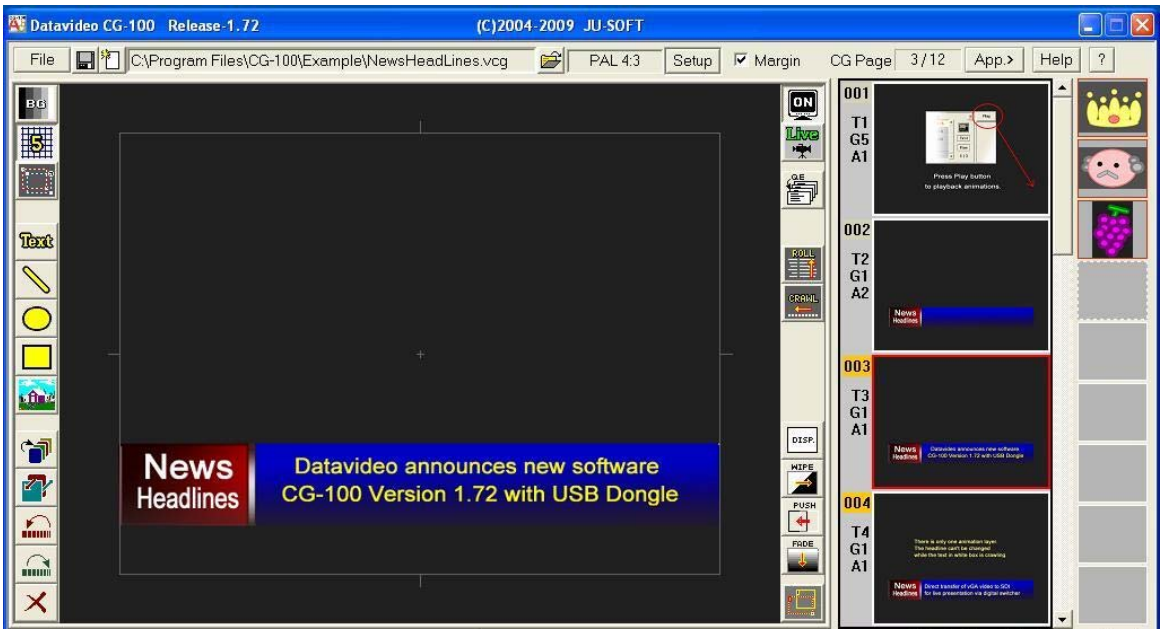
Tools, Effects

Files

The file format for a CG-100 project is *.vcg. Click the [File] button to display the “File” drop down menu options.

Alternatively, you can also use buttons to save, or create a new *.vcg file as well as opening existing *.vcg files or CG-100 projects.

Pages



Each *.vcg file can include many “Pages” but only 4 are displayed in the Page list as well as the current page in the Work Area. Each page can contain 3 kinds of objects: Text, Graphics and Animations.

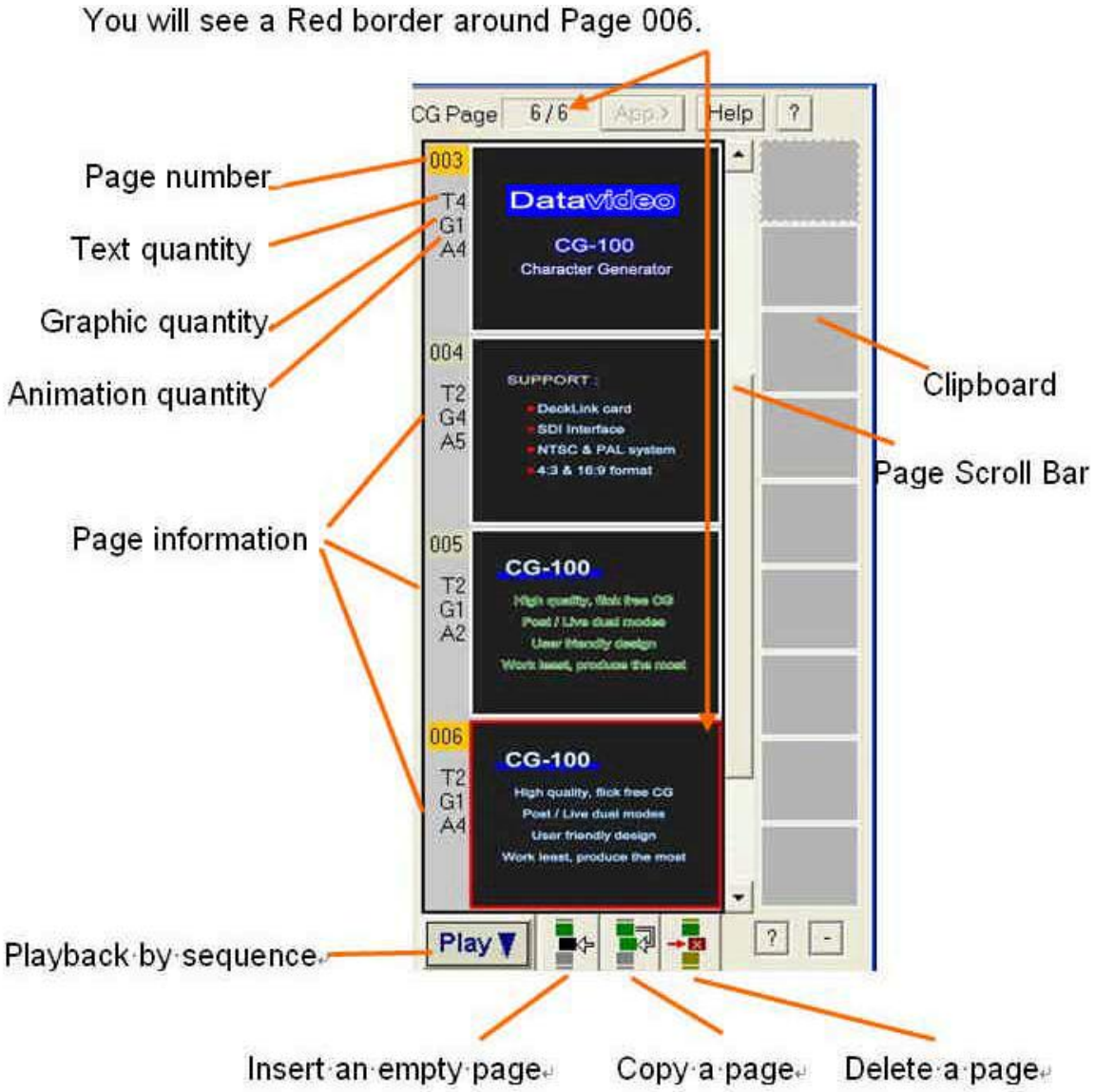
When a new *.vcg file is created, 4 blank pages will automatically appear in the Page List. Click on one to select a page. You will see a Red border highlighting the selected page. The highlighted page is also the page that is currently in use or being changed in the Work Area.

All the pages in a *.vcg file will be shown in this Page list to the right side of the Work Area. If there are more than 4 pages in the *.vcg file then a scroll bar to the right of the Page list can be used to view the other pages.

The pages will be created in the selected standard and aspect ratio, either 4:3 or 16:9 and either NTSC or PAL. See the Set Up section for more information.

The following image explains how the pages of a .vcg file will appear in preview list on the right side of the Page Area.

The current page is the sixth page and there are six pages in total.



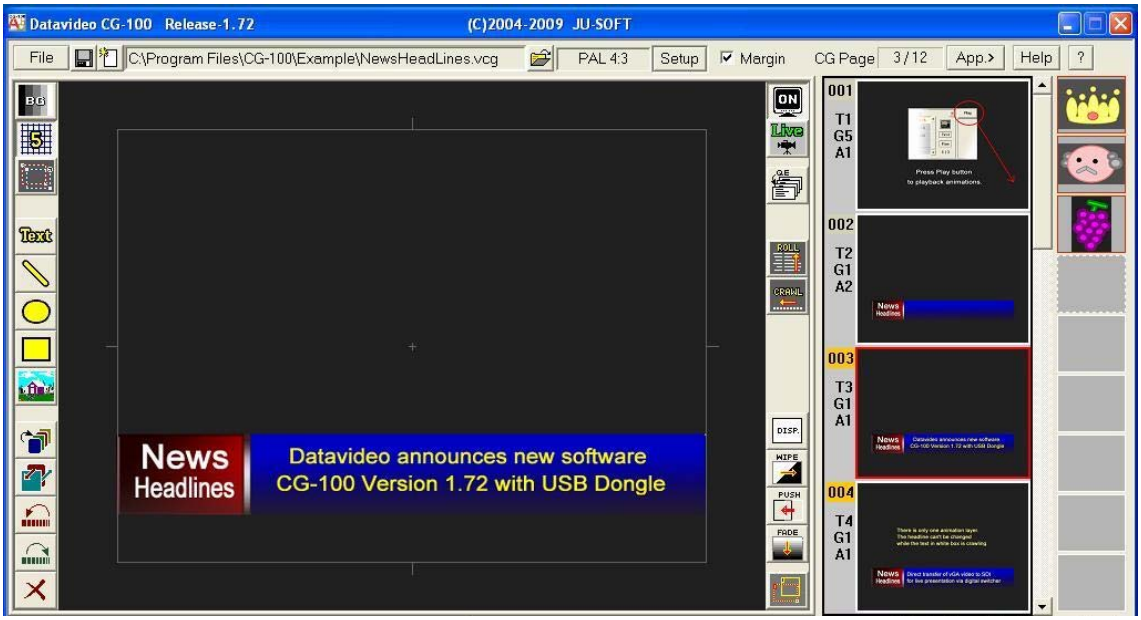
You can edit a project by inserting, copying or deleting pages with the Page buttons at the bottom of the list. To change the running order of the pages, just click on a page in the list and while holding down the left mouse button drag the selected page to its new position in the list.

Note: The selected page will not change position in the list until you drag it at least half a page above or below where it currently is.

Objects

The Selected page is highlighted with a Red border in the Page List. The same page is also shown in the larger Work Area.

To the left of the selected page in the Page List is the Page Number (003), the number of Text Objects (T3), the number of Graphic Objects (G1) and the number of Animations (A1).



T3 means there are 3 Text objects on this page:
These are (1) the word ‘News’, (2) the word ‘Headlines’ and (3) the sentence ‘Datavideo announces…’.

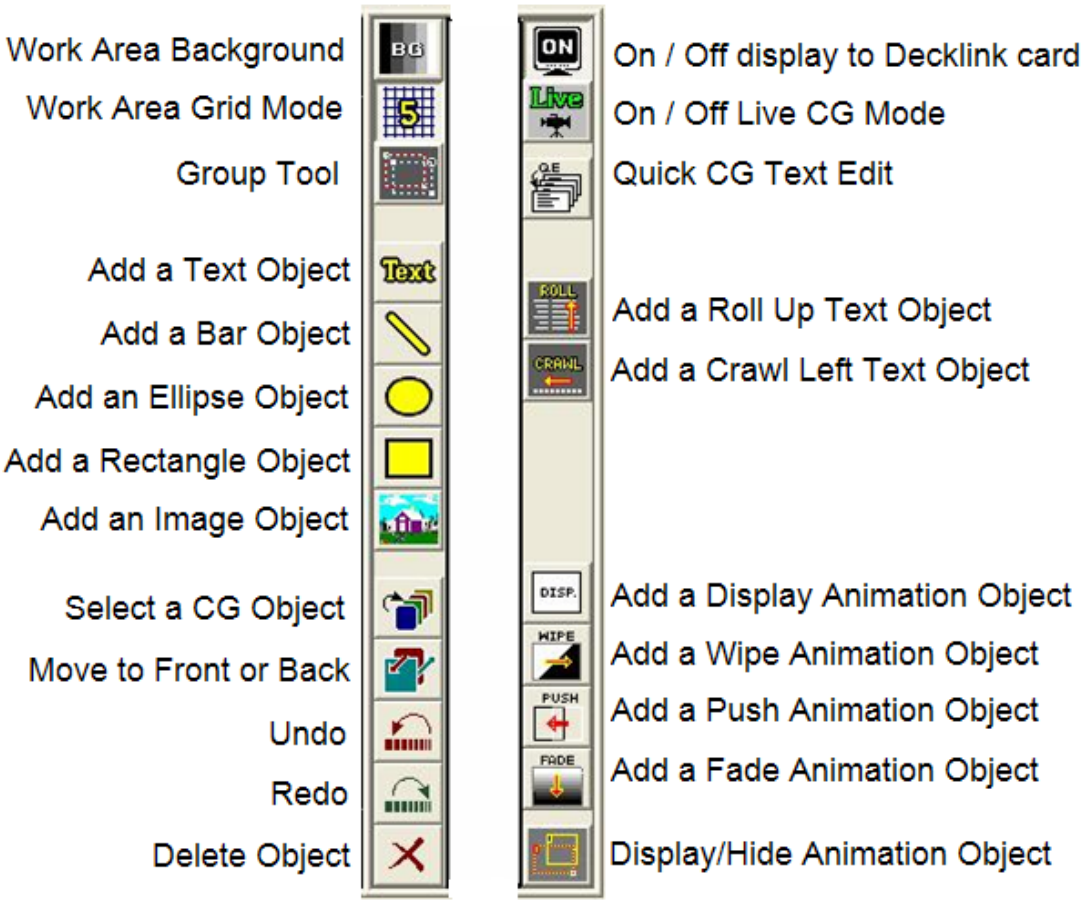
G1 means there is 1 Graphic object on this page:
The graphic object is the Red and Blue bar behind the text.

A1 means there is 1 Animation object on this page:
The animation object is the Wipe used to display the sentence.

The objects can be created, sized and altered. They can be moved and layered on top of each other and to do this we use a variety of Tools.

Layout Tools & Animation Tools

CG-100 offers the following Editing, Layout and Object tools:

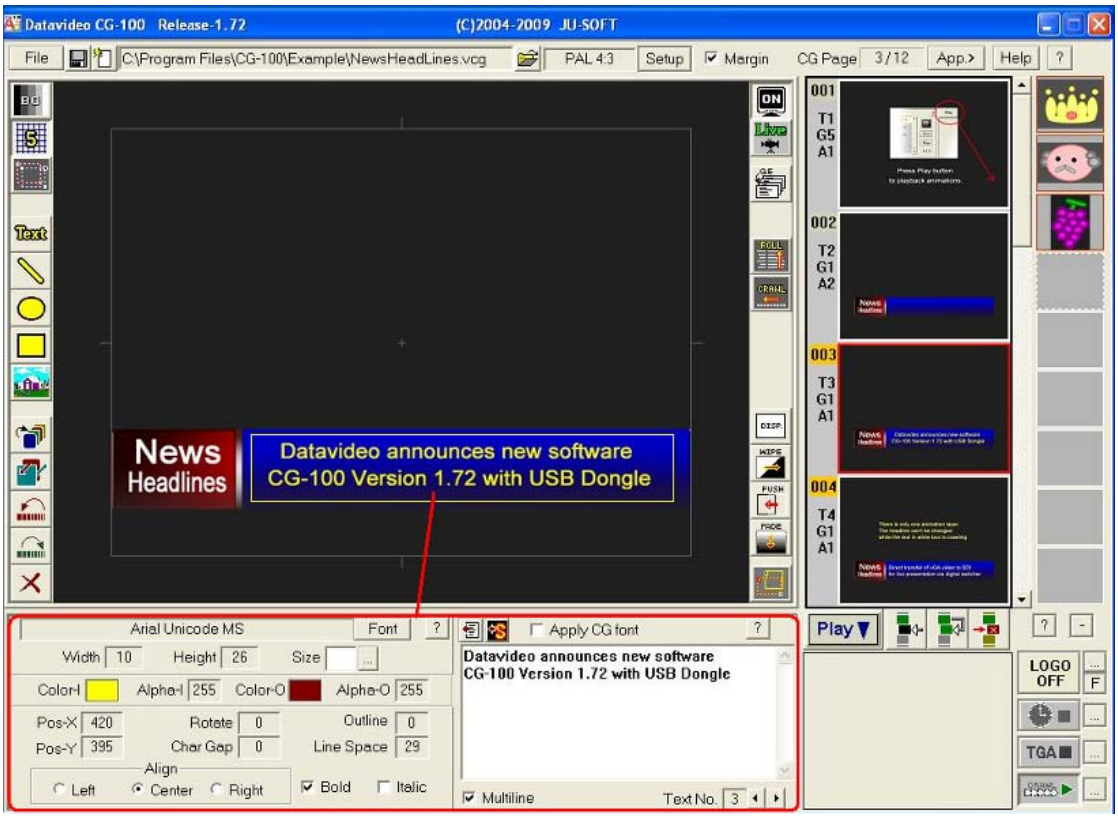


In 4:3 aspect ratio set up, the Tool bars appear either side of the Work Area.

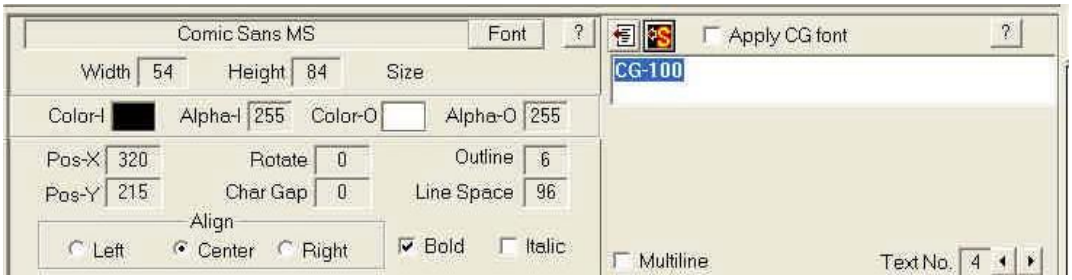
In 16:9 aspect ratio set up, the same tools appear in horizontal bars above and below the Work Area.

Parameter Panels

The CG-100 provides 5 editing tool-buttons for you to add Text, Bars, Rectangles, Ellipses and Images. You can go to the Parameter Panel to set the colours of text, the precise positions etc. Please see the following examples:



Text Parameter Panel (1)



Text Parameter Panel (2) or Saved Styles Panel

Text Parameter Panel (3) or Multi Line text

Graphic Parameter Panel

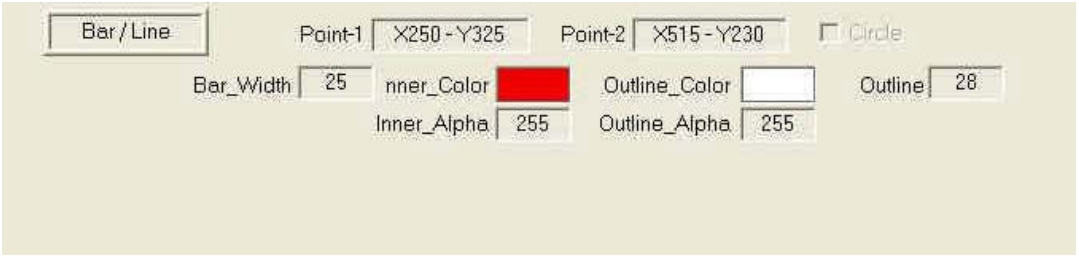
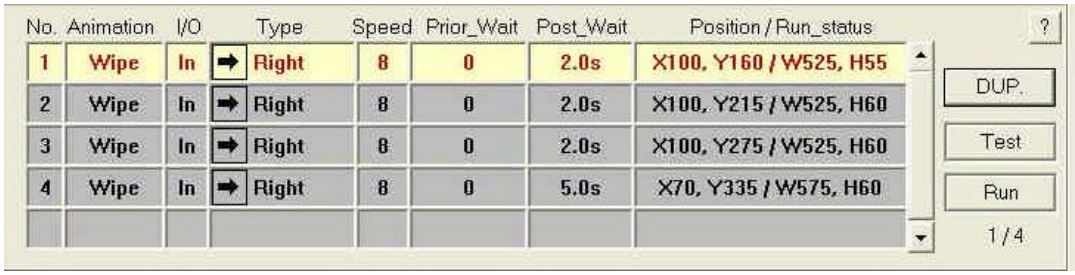


Image Parameter Panel

Animation List



The CG-100 provides 4 kinds of animations. You can click on the buttons to insert a Display, Wipe, Push or Fade effect. After inserting an animation effect, it can be edited on the Animation List Editing Panel.

Layout Editing

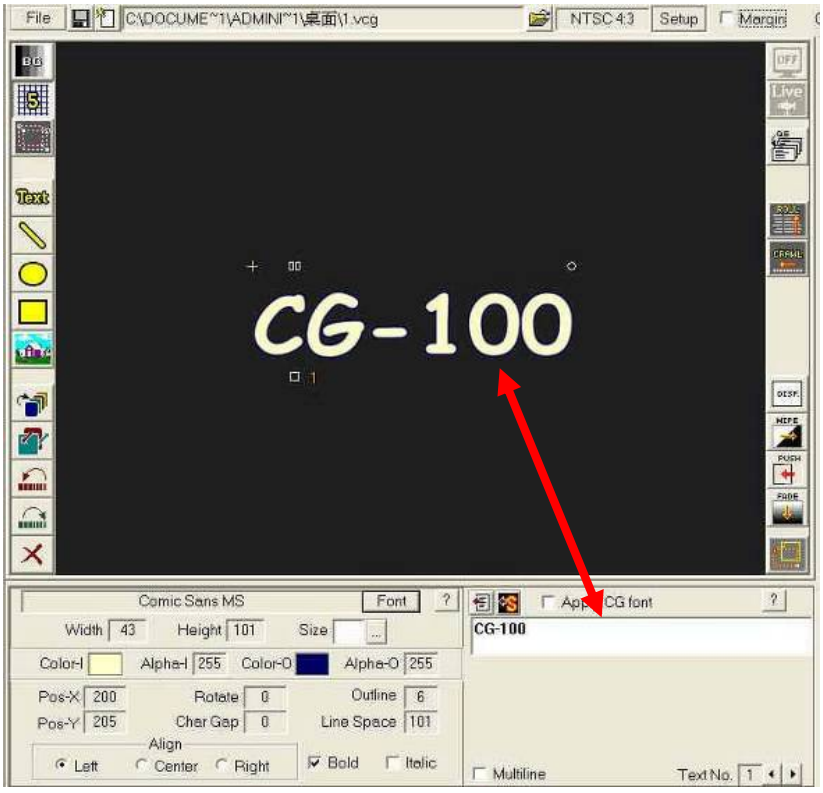
The CG-100 Layout is composed of 5 elements including text, graphic bars, rectangles, ellipses and images. To edit the CG Layout, you should do the following: Press one of the buttons on the tool bar to insert a new object. Drag the object to the required position and if necessary, resize it.

Set parameters on the Parameters Panels. If necessary, you can cut, delete, and adjust the sequences among objects.

Text Editing

This is the way to insert a text object:

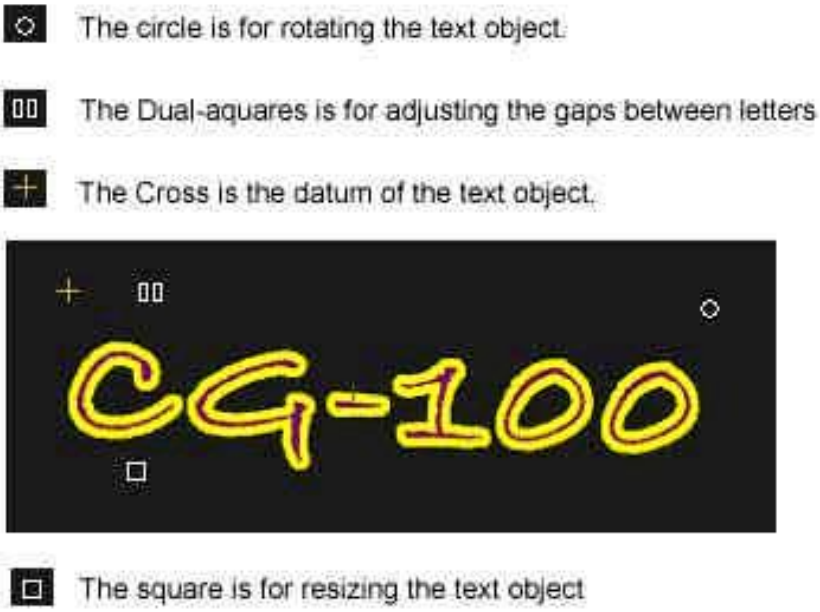
(1).Click Text button on the tool bar
A text object will be created in the working area.



Normally any text content is the same as the previous text object.
A default of “Text Sample” will be shown for the first text object.

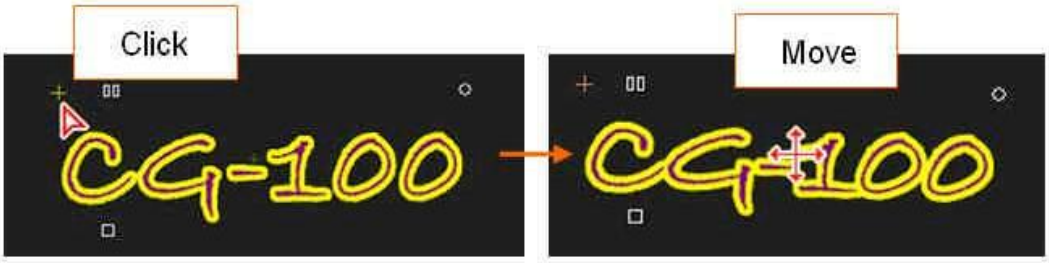
Marks around a text object

The current editing text object will be surrounded by 4 marks:



How to Move a text object

Place the cursor on the text object, but do not put the cursor on any of the 4 marks. Press and hold the left button. This will make the cursor become a Drag Symbol, which means the text object is selected and ready for editing. Hold the left button down and move the mouse, the text object will follow the mouse.



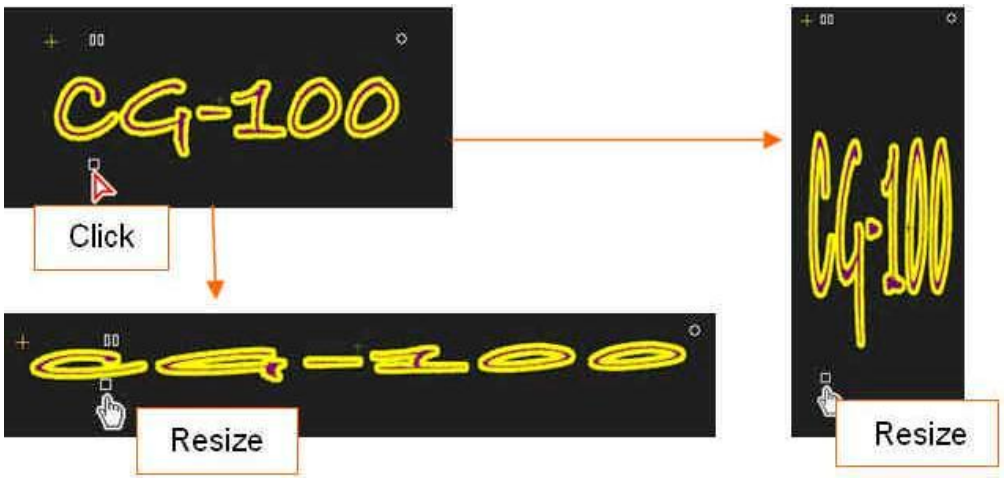
Once the text is in the right place, release the left button. The meshed surface allows you to see other objects through the selected one while it is moving over them.

Fine tune the position of a Text Object

It is hard to move just a pixel or two by using the object drag function. In this case, you can press the keyboard arrow buttons. Every arrow press moves the text object one pixel in the chosen direction.

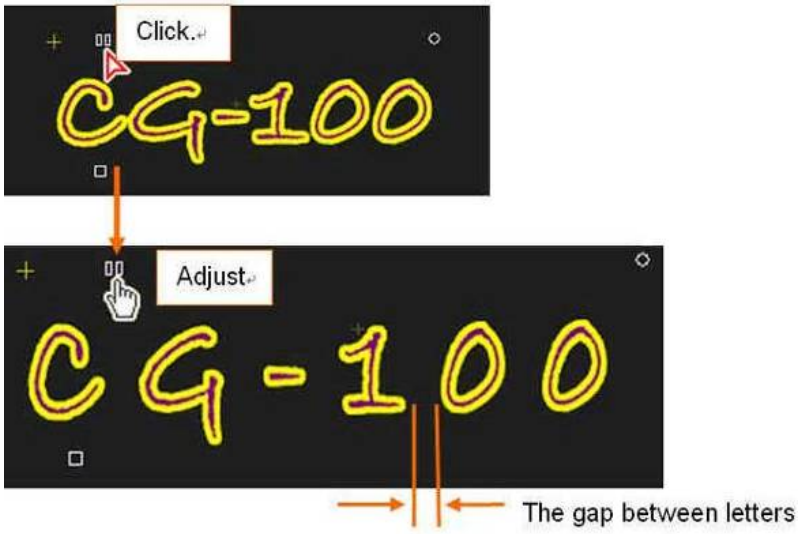
Note: While typing, the arrow buttons are for moving the cursor. If you want to use the arrow buttons for moving the text object, you have to use them immediately after dragging the object approximately into position.

Resize a Text Object



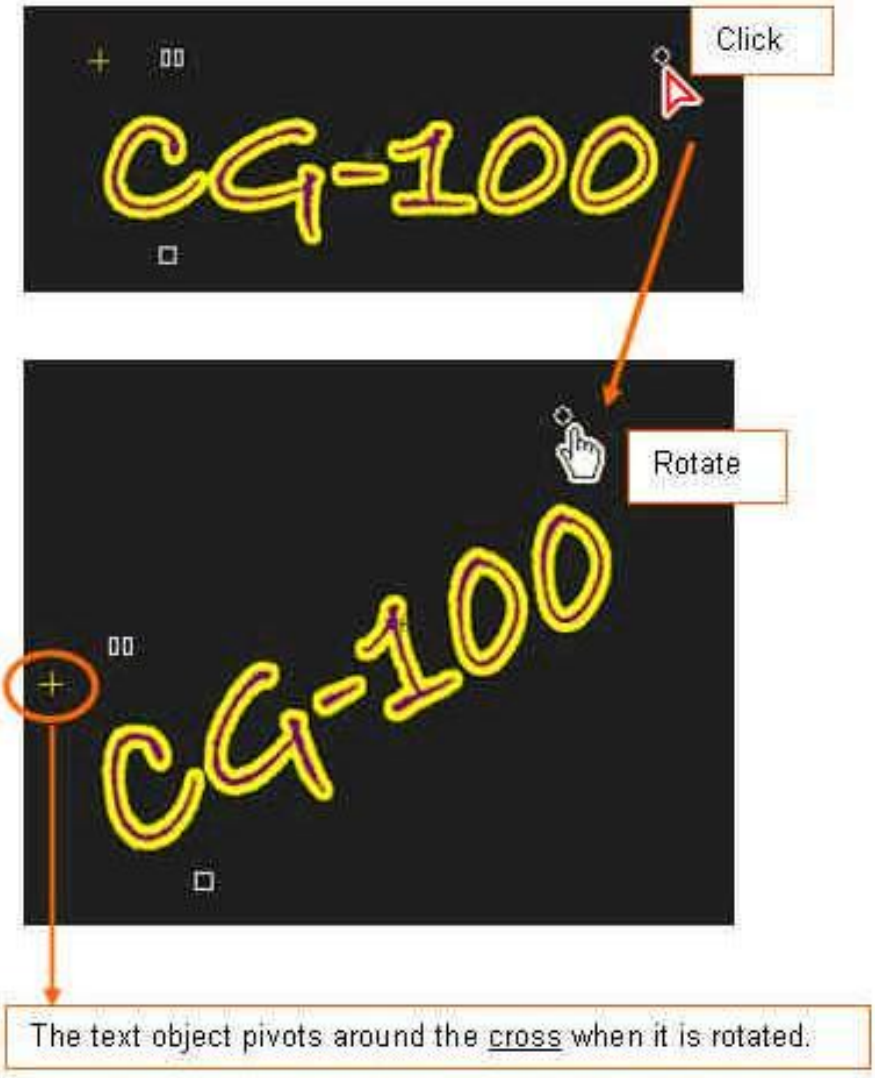
Adjust the Gaps between letters (Kerning)

Press dual-squares and move the mouse horizontally – Right to increase and Left to decrease.



How to Rotate a Text Object

To rotate the object left click on the circle, hold the left button down and move the mouse vertically.

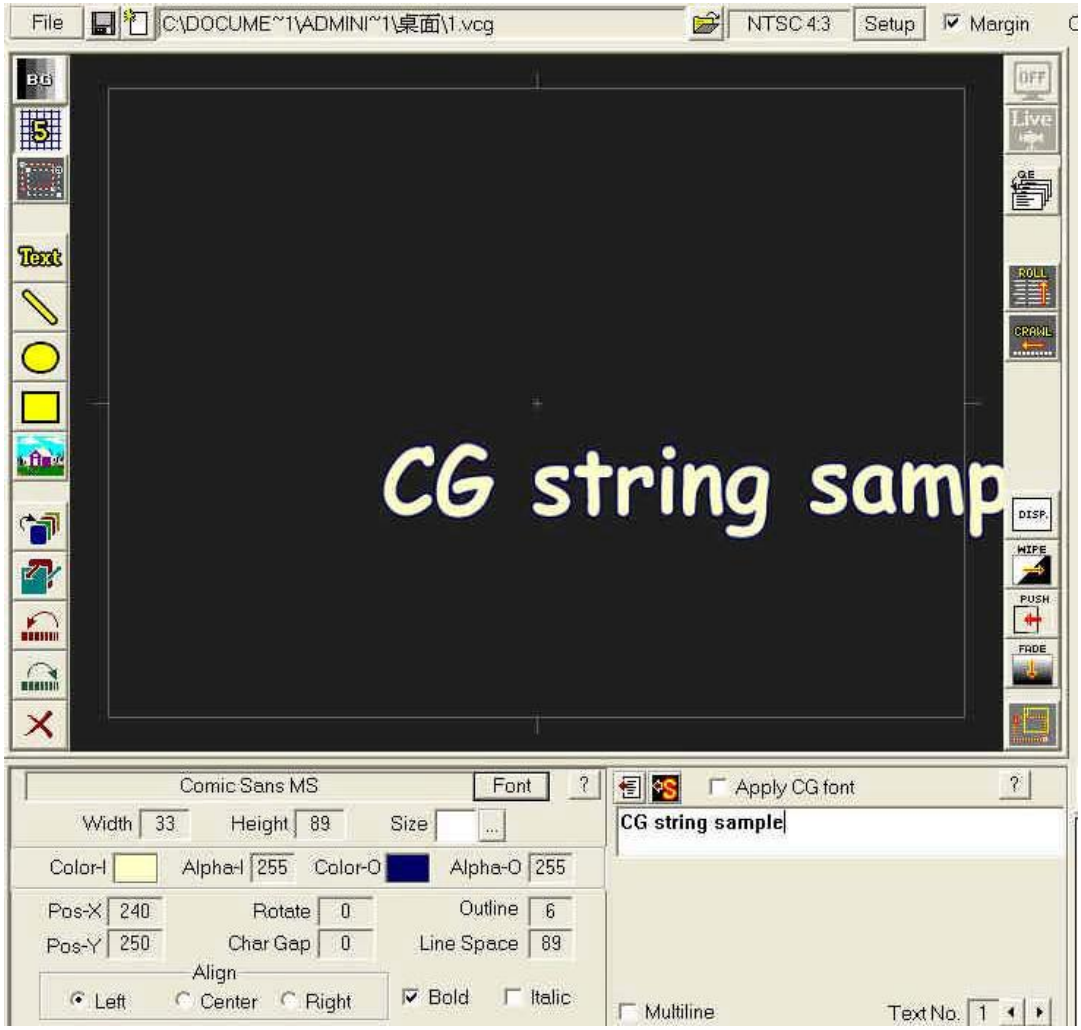


Change the content of Text Objects

You can type the content of the text objects in the typing area under the Working Area.

Change the text content here in the typing area

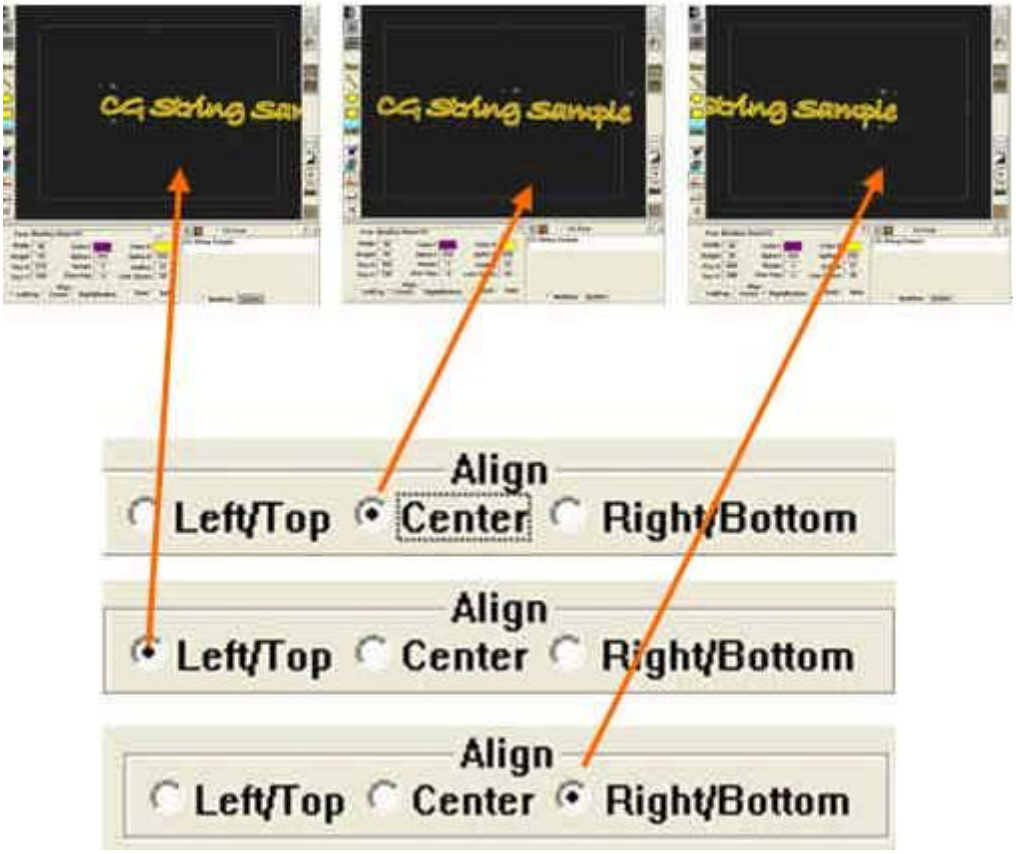
A text object literally means a single-line. When you've finished typing, press [enter] to update the text object. The below example shows "CG-100" now amended to "CG String Sample".



CG-100 will also automatically apply the alterations to a text object in the Work Area too. Part of the object may move outside the Work Area if it becomes too big. Select the object by clicking on the cross "+" and then drag to reposition it. Changing the font size may also help.

To avoid this situation; just remember to set the alignment of the object before amending the text object.

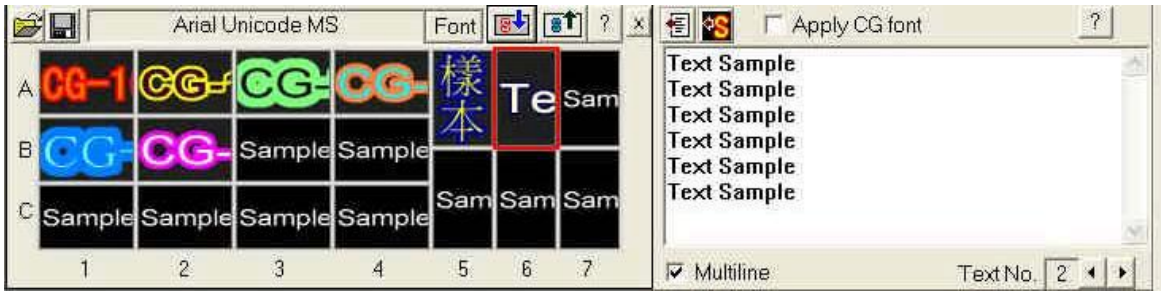
There are three choices of alignment which affect the position of a text object. These are align Left, Center and Right.



The text object will be moved horizontally as soon as you click a radio button.

Multi-line Text Objects

You can create a multi-line text object, like a paragraph of text.
Tick [Multi-line] to enable this function.

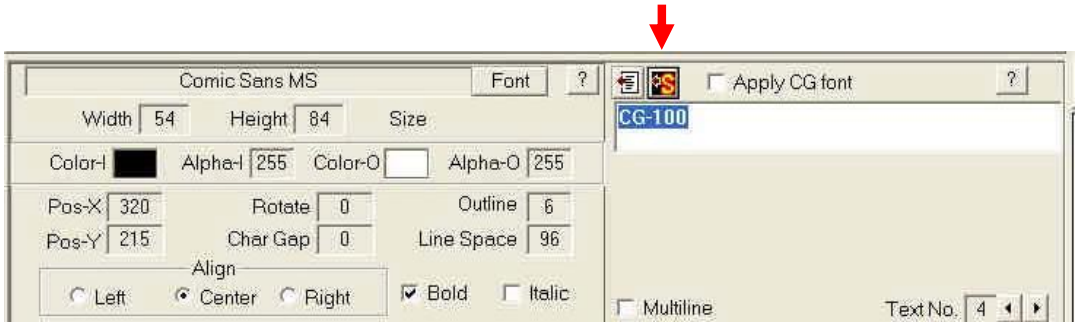


With Multi-line selected the typing area will be extended, so that you can type a whole paragraph.

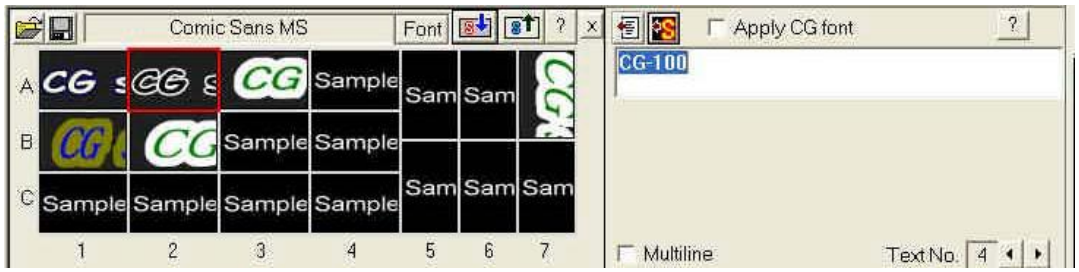
Saving Text Styles

When you create a text object and want to save its style as a sample, just click the Style button to open the [Text Styles] panel.

Step 1: Colours, fonts, outline and thickness can be stored in the "Style Panel". Click this to open the "Style Panel".



Step 2: Click on a box to select a place for storing the current style.



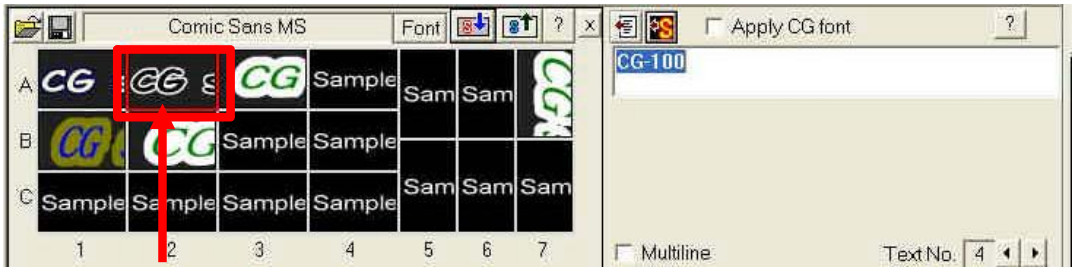
Step 3: Back to select the text line on the working area.

Step 4: Click this button to store the text style in the selected place.

You can also save all stored styles into a file that can be recalled for different CG-100 project.

How to apply a Style to a Text Object

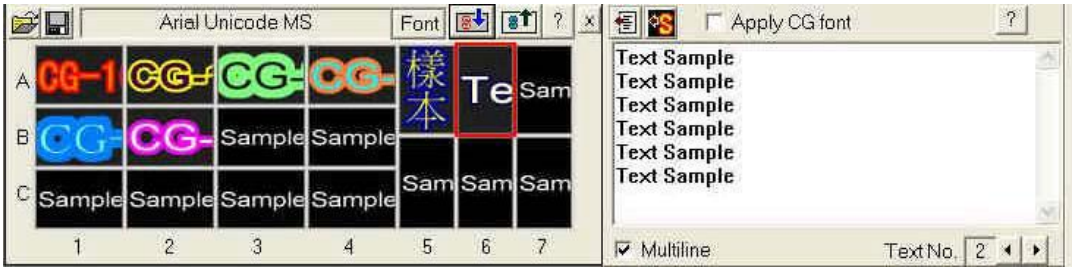
First click to select the text object.



Double click on one of the styles in the panel and the style will be applied to the selected text object.

Returning to the Text Parameters Setting

You can return to the parameters in the Text Parameter Panel. Click [X] to close the Saved Styles window.



The Text Parameters Panel is shown again.

The text parameters are:

Font	True Type fonts, click the button to select other fonts.
Width	The width of letters. Press left button, move the mouse horizontally.
Height	The height of letters. Press left button, move vertically.
Pos-X	X field of the text object. Press left button, move horizontally.
Pos-Y	Y field of the text object. Press left button, move vertically.
Color-I	The fill colour. Click the colour to select other colours.
Alpha-I	The opacity of the fill. Press left button, move horizontally.
Rotate	Rotate the text object. Press left button, move horizontally.
Char Gap	Gaps between letters. Press left button, move horizontally.
Color-O	The colour of the outline. Click the colour to select other colours.
Alpha-O	The opacity of the outline. Press left button, move horizontally.
Outline	The border of the text object. Press left button, move horizontally.
Line space	Only for Multi-line text objects. Press left button, move horizontally.
Align left /Top	Set the Axis of the text object (the cross mark) to the left/top. Words add from left to right, top to the bottom.
Align Center	Set the Axis of the text object (the cross mark) in the center. Words go from left to right, top to bottom.
Align Right /Bottom	Set the Axis of the text object (the cross mark) in the center. Words go from left to right, top to bottom.
Bold	Tick to make the fonts bold-faced.
Italic	Tick to make the fonts Italic.

Using the Mouse to set parameters

You can set a text object's parameters using the mouse too.
Click on a Tick box to select bold-faced fonts or click a radio button to change text alignment.

Other parameters can be set by holding down the left mouse button and then moving the mouse horizontally to increase or decrease its value.

For example, if you want to set the transparency of a text object:

- Select a text object.
- Click on the value box of the "Alpha-I" parameter.
- Press and hold the left mouse button.
- The mouse pointer will change shape to ⟷
- Whilst still holding the left hand mouse button move the mouse horizontally left and right to change the level of transparency.

You will see opacity of the text object changes immediately within the Work Area.

Vertical Text Objects (Asian fonts)

For some Asian languages, sometimes text goes vertically. If you want a vertical text object, follow the steps below.

Open the Font dialogue box.
Select a font with a name that starts with the @ symbol.
Set the parameter of [Rotation] to 270°.
Note: Double click on the value box of the [Rotate] item and the program will Automatically reset to the default angle for that font.

For font names that start with the @ symbol, the default angle is 270°.
For all other fonts the default angle is 0°.

Default width of a Letter or Character

The default width of a letter for a Windows PC is half of its default height.
If you want to return a font to its default setting, please double click the value boxes of the [Width] or [Height] parameters.

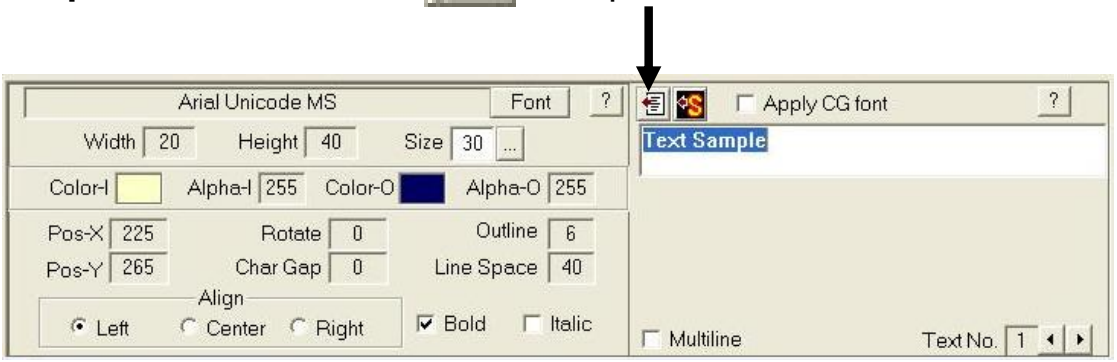
Double click [Width] item, the width will be 1/2 of its height.
Double click [Height] item, the height will be 2 times its width.

Importing Text from a Text File

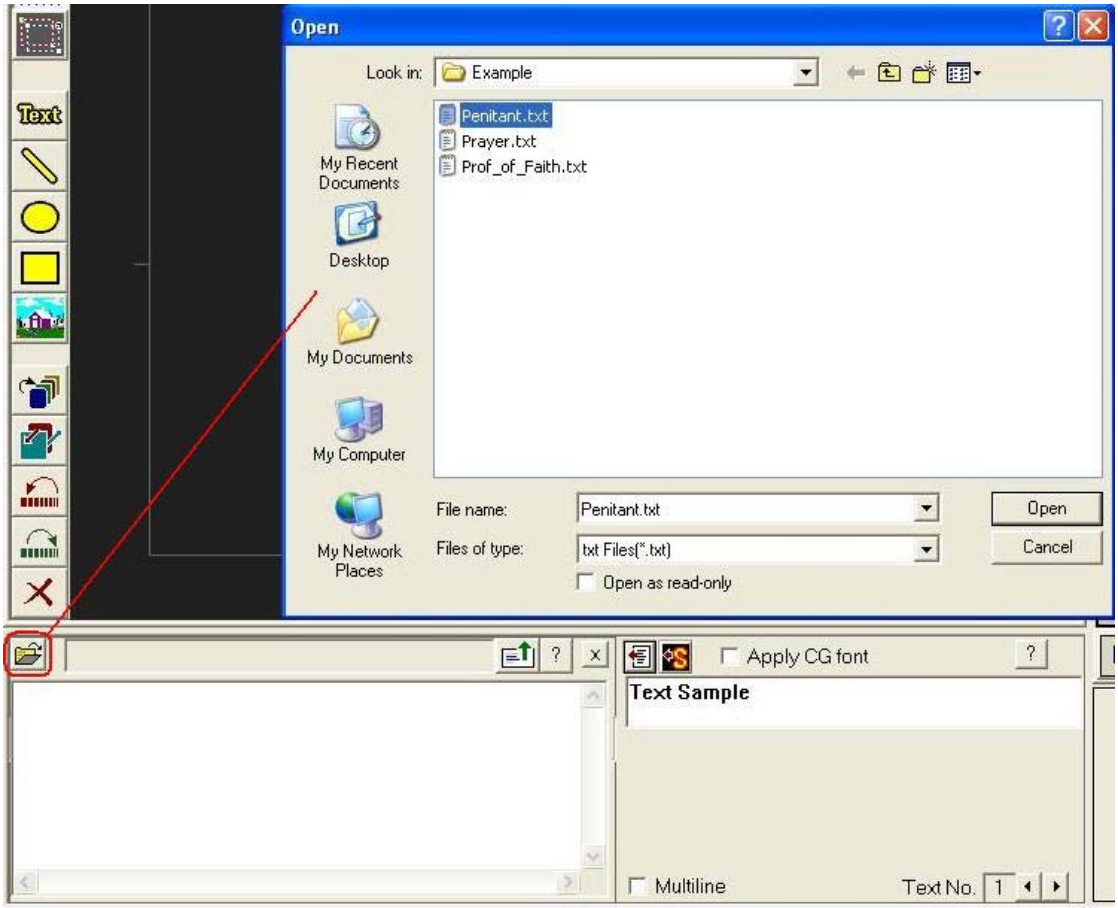
If you need to use a large amount of text or text in foreign languages, you can import the text from a file. The CG-100 allows you to import text from a *.txt file.

Step 1: Create a new text object with the text tool.

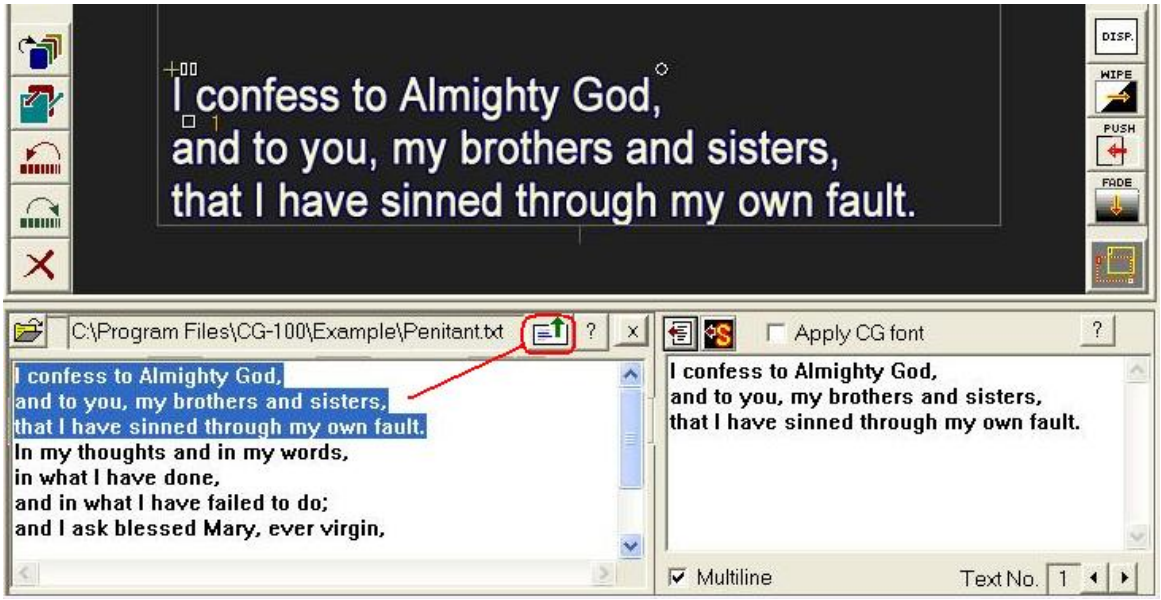
Step 2: Click this button to import text from a file.



Step 3: Open a text file.



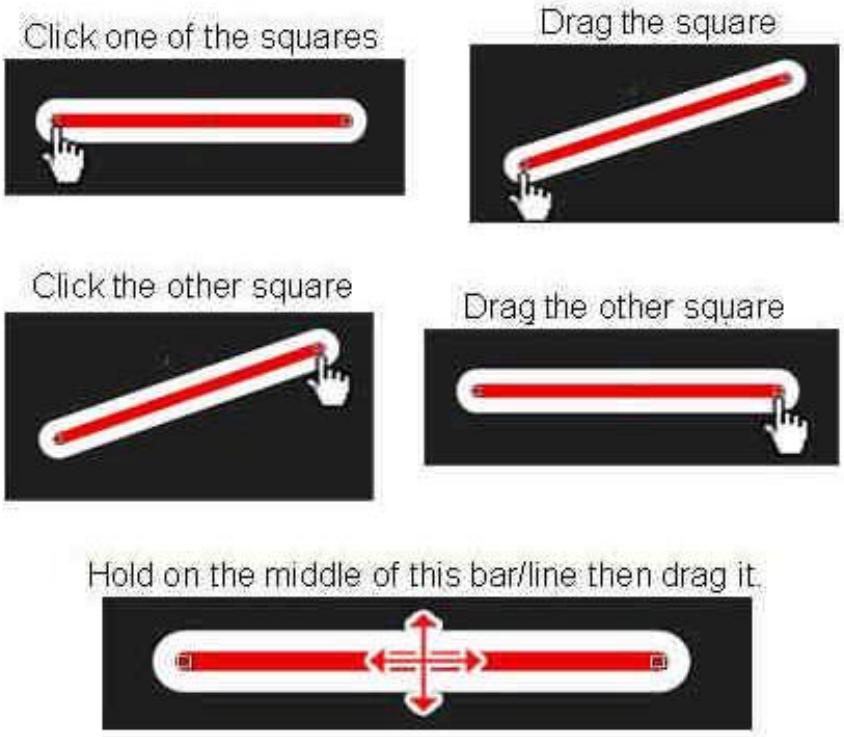
Step 4: Highlight the text to import and click the button



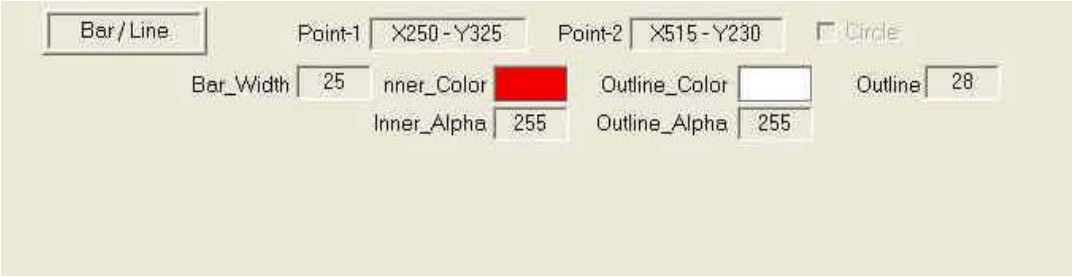
Inserting a Graphic Bar or a Line

Click this button to insert a bar or a line.

There are 2 square marks on both ends of a graphic bar. You can drag on either square to alter the bar's length and position.



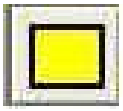
The parameters of the graphic bar/ line can be set on the following panel.

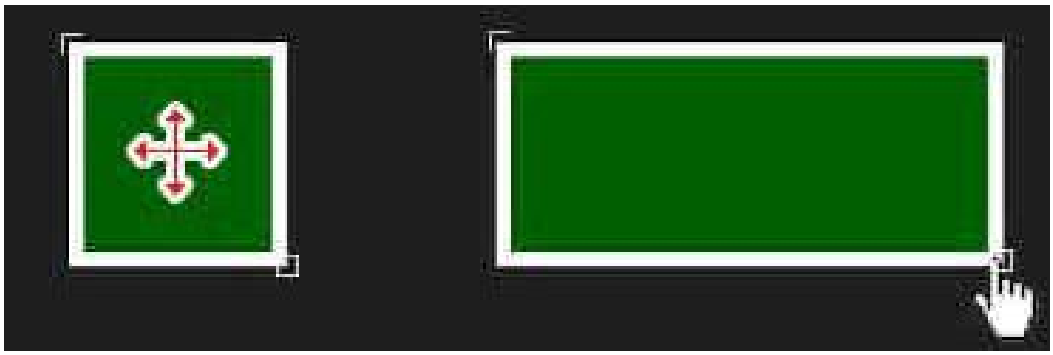


Bar Width	The width of the graphic bar/ line, press left button and move the mouse horizontally
Outline	The thickness of its outline, press left button and move the mouse horizontally
Inner Colour	The fill colour, click for further settings
Outline Colour	The outline colour, go to a dialog for further setting
Inner Alpha	The opacity of the fill, press left button and move the mouse horizontally
Outline Alpha	The opacity of the outline, press left button and move the mouse horizontally

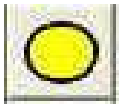
Examples of Graphic Bars and Lines:

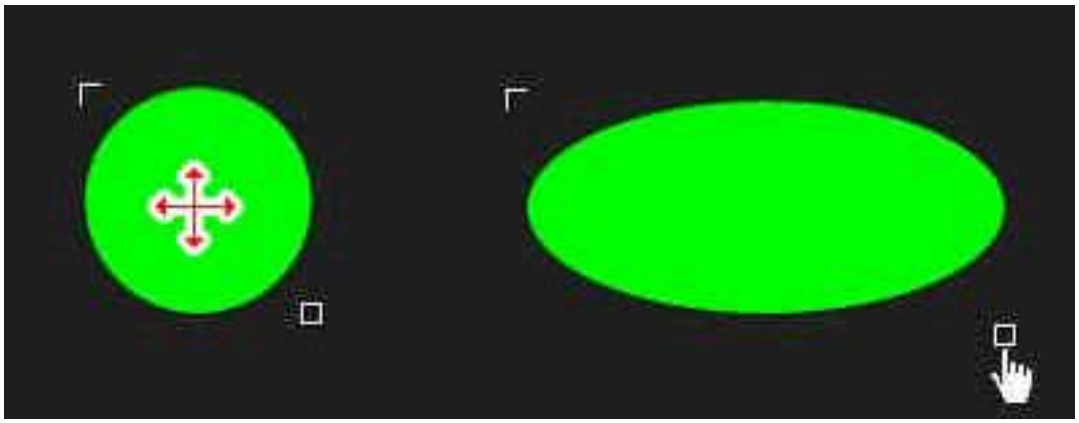
Inserting a Rectangle or an Ellipse

Click this button to import a rectangle 
To move this rectangle, click the inner part then move it.



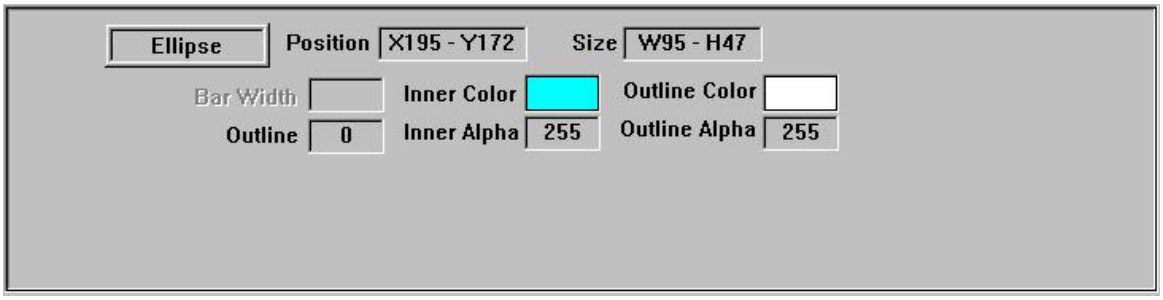
To resize the rectangle, click the square on the bottom right and move it around.

Click this button to import an ellipse. 
To move this ellipse, click the inner part then move it.



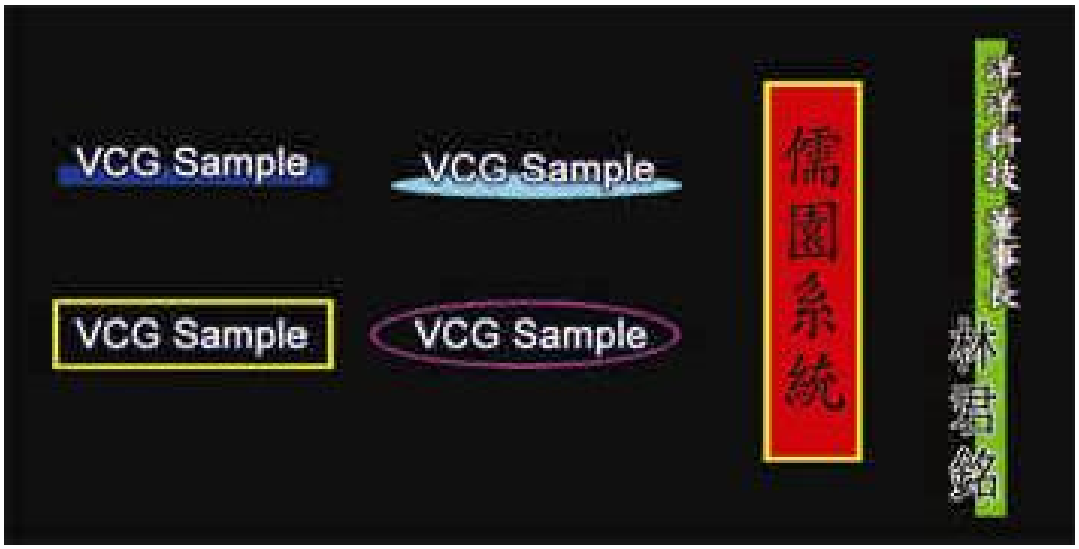
To resize this ellipse, click the square on the bottom right then move it around.

Parameters Panel for Rectangles and Ellipses



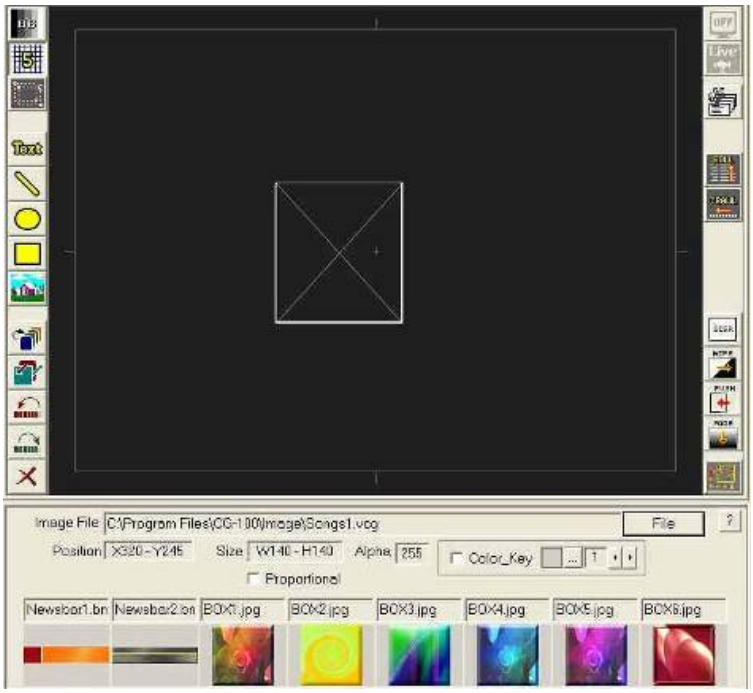
Outline	The thickness of its outline, press left button and move the mouse horizontally
Inner Colour	The fill colour, click for colour palette
Outline Colour	The outline colour, click for colour palette
Inner Alpha	The opacity of the fill, press left button and move the mouse horizontally
Outline Alpha	The opacity of the outline, press left button and move the mouse horizontally

Many Kinds of Ellipses and Rectangles:

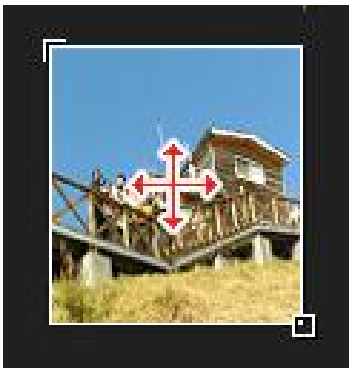


Inserting an Image

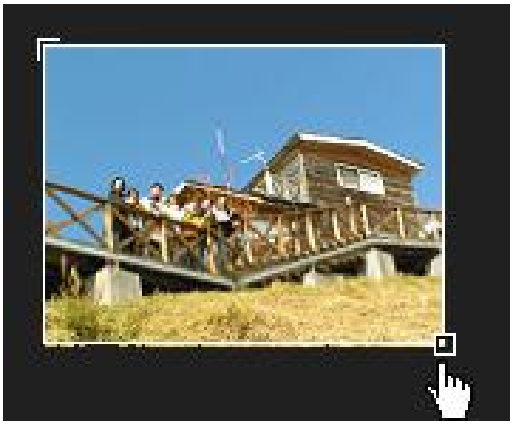
Step1: Click this button to insert an image object. This may be a blank square to begin with.



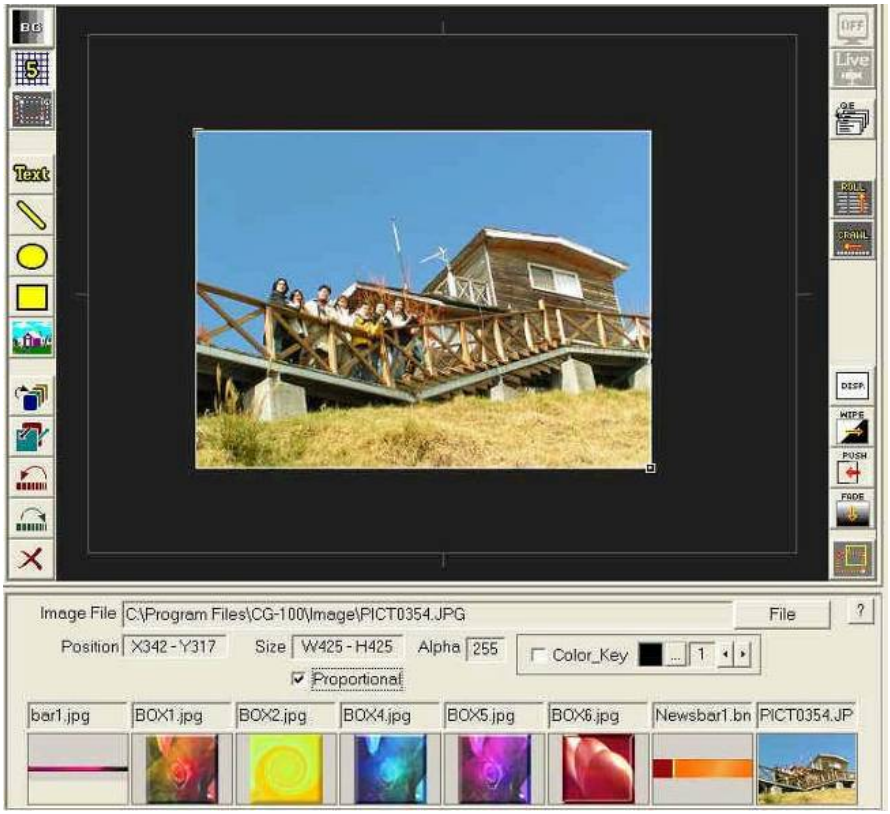
Step2: Click “File” to select an image file. The image will be shown on the working area.



Step3: Click the centre of the image to move the image.



Step4: Drag the square in the bottom right to resize the image.



Step5: Use the Image Parameter Panel as follows:

Image File Shows the file path of the image

Position Shows the X and Y pixel position of the image

Size Shows the width and Height size of the image in Pixels

Alpha Shows the opacity or transparency of the image

Colour Key This tick box enables a colour to be keyed out

Key Colour Click and choose a colour for keying
The chosen colour will become totally transparent

The transparency of an image

When you set the transparency of an image, the setting is applied to the whole image. The levels of transparency are from 0 to 255. Zero 0 is fully transparent while 255 is fully visible. If the image format is Targa 32 bit, then the transparency set here will multiply by the files original alpha. (Note: Some third party applications such as Adobe Photoshop allow users to create Targa 32bit images.)

A Targa Alpha=255 Alpha=85

Select an image colour to be transparent

Step1: Insert the image file and Tick the Colour Key box.

Step2: To turn the mouse pointer into a colour selection dropper press the […] properties button.

Step3: Place the dropper over the colour that will be transparent. Click left button to select the colour. You can adjust the number to remove the background and achieve the best effect.

Step4: The selected blue colour in the above example image becomes transparent.

Extra Editing Tools

The CG-100 provides extra editing tools that make CG editing easier.

Background button

The default background of the Work Area on the CG-100 is Black. However, if a title is very dark or the outline has to be black, it cannot be seen clearly with the black background. So the [BG] button allows you to change the background colour. When you click the button, the background will be changed from Black, to dark Gray, to Gray, to light Gray and to White. It then returns to Black as it goes around as a loop.

Please see the following background colour examples:

Grid Mode button

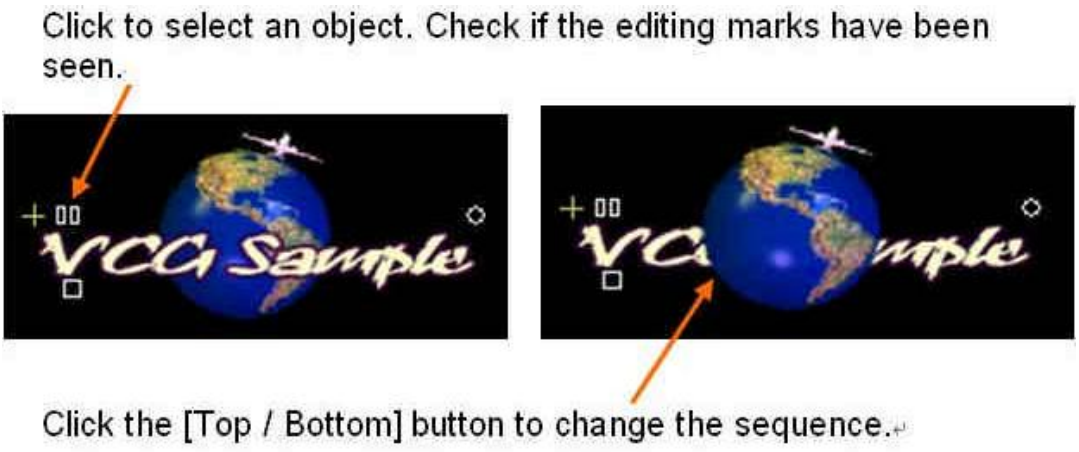
The snap to grid makes aligning objects much easier. When you click the Grid Mode button, it goes around in a loop from X, to 5, to 10. The [X] means the grid function is disabled. The [5] means the snap to squares are 5x5 pixels. The [10] means the snap to squares are 10x10 pixels.

Group button

Click the [group] button to display the group menu with the following options.

Top/ Bottom

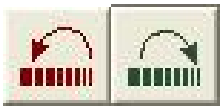
The objects on the CG-100 working area are placed in the order they were created. The first insertion is on the bottom and the last one is on the top. Of course it doesn't matter if no items are overlapping. However, if more than two objects overlap, the Top / Bottom button enables you to put the layers in the right order.



Click to select an object on the working area.
Then click the [Top / Bottom] button.
Every click moves:
The front object to the back
The lower objects all move one layer forward.

Delete

Click to delete the selected object.

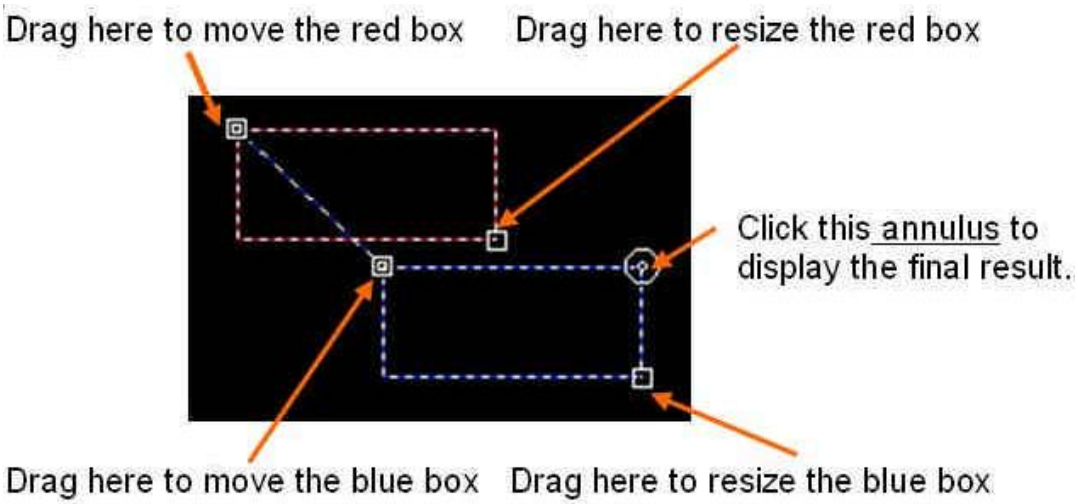
Undo / Redo 

Cancels or retrieves the last applied effect or command; i.e. reverts to previous attributes.

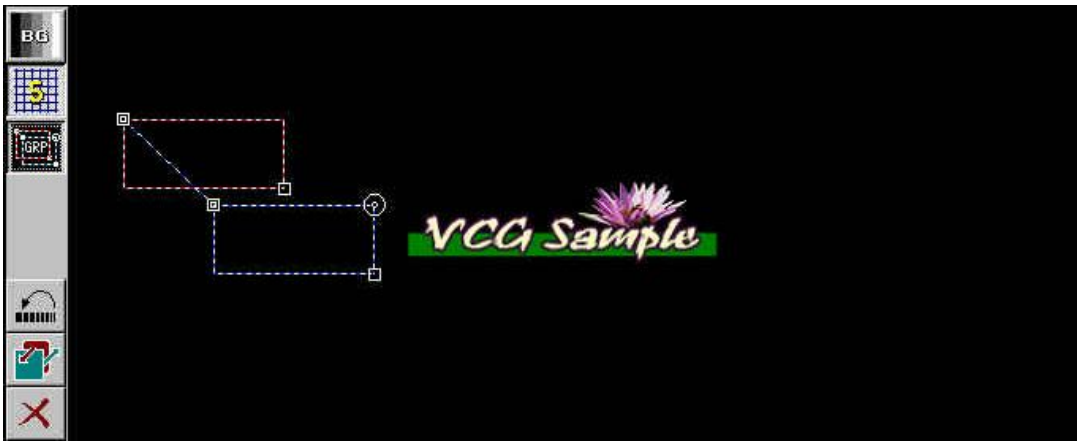
Group Move/Zoom

Click [Group Move/Zoom] button, There will be 2 boxes, the blue one and the red one. The red box, the source box, is to select the source object/s - usually more than one object. The blue box, the destination box, is to place and resize the result. If the red box is as big as the blue box, then the group of objects is just moved to another place. If the blue box is not equal to the red one, that means the group of objects will be moved and resized.

To perform this function, you need to place the cursor on the squares on the source box or on the destination box as below.

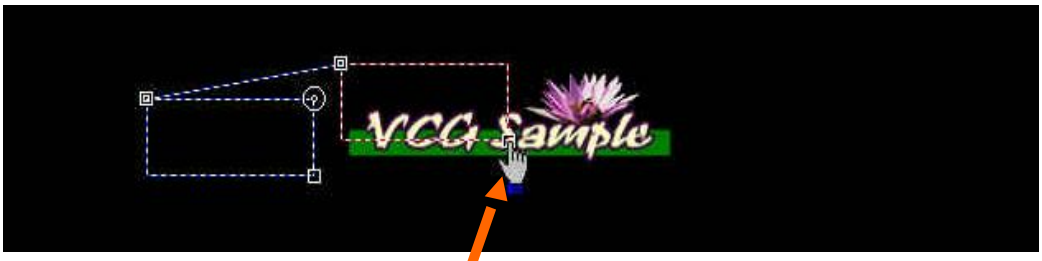


The following is a group of CG objects which include a water lily image, a green bar and a text object, “VCG Sample”.

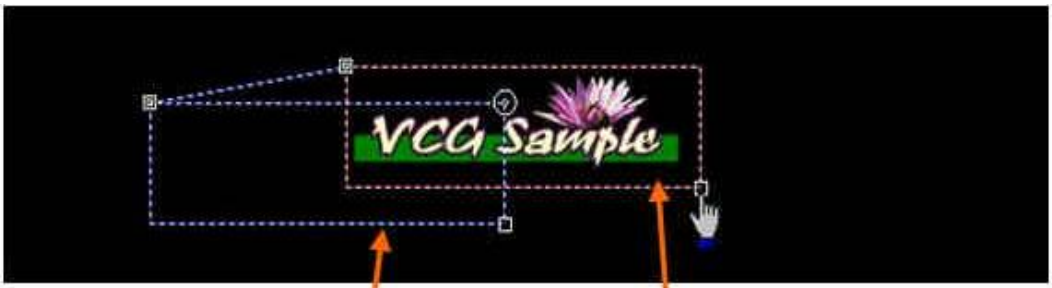


If you want to enlarge the whole group, the steps are as follows:
a.) Place the cursor on the top left side. Drag the red box to encompass the objects.

b.) Drag the red FRAME to the top left side of the group of objects.



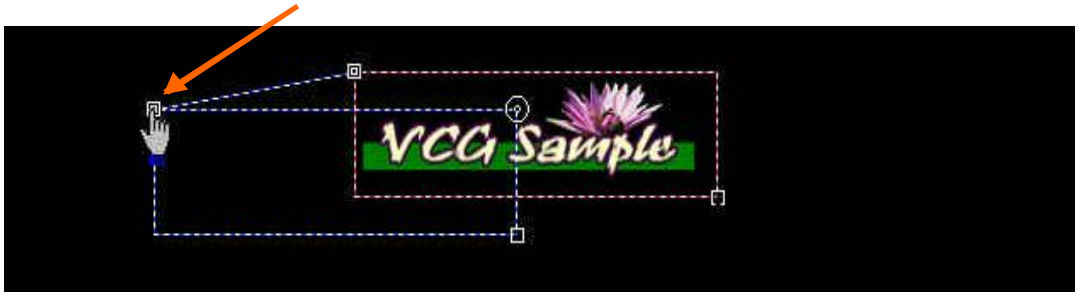
c,) Place the cursor to the bottom right of the red box. Then drag to resize the box



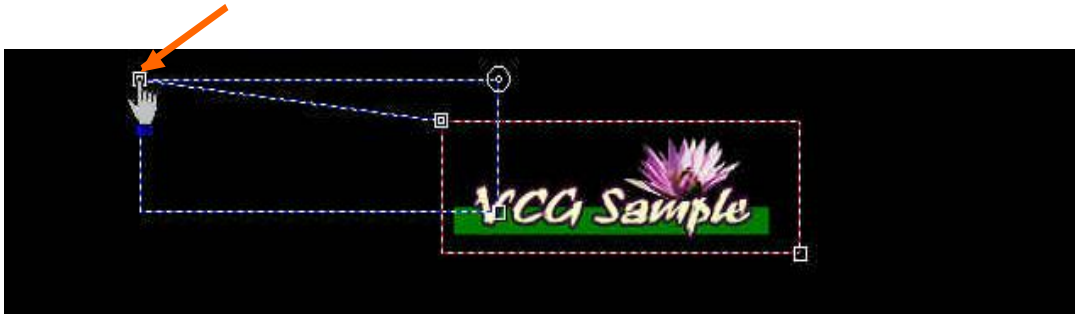
e.) The blue box will automatically be resized the same as the red box.

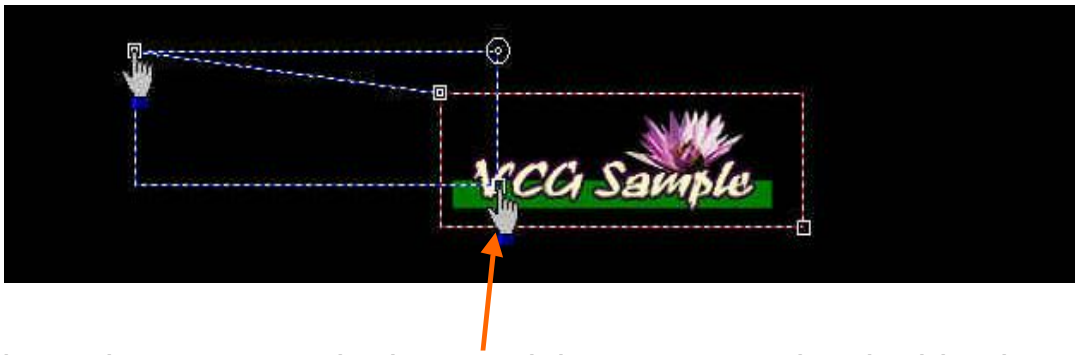
d.) Drag the square to make the red box surround all the objects.

f.) Then place the cursor to the top left side of the blue box.



g.) Drag to move this blue box to the destination.





h.) Put the cursor on the bottom right. Drag to resize the blue box.

i.) Drag to resize the blue box. The size of this blue box represents how big the whole group will be.

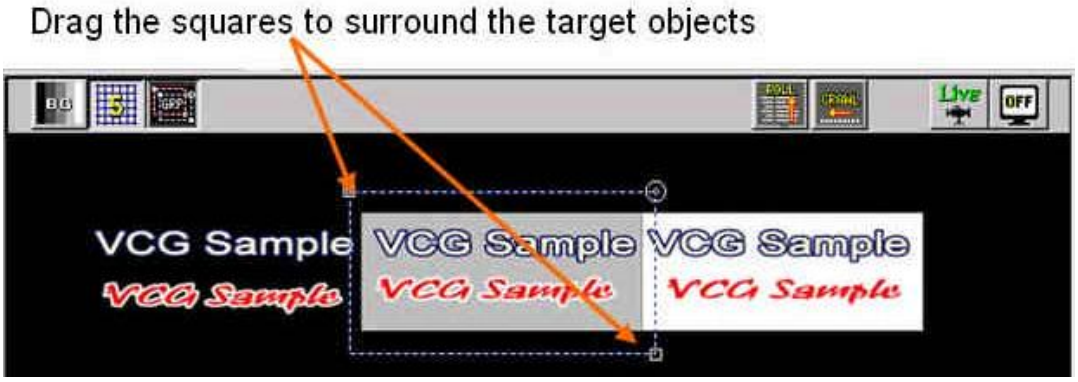
j.) When all the adjustments are done, click the annulus to finish and display the result.

k.) You will see the whole group has been enlarged to the size of the blue box.

If you want to undo this function, just click the [Group Move / Zoom] button again to revert to the original settings.

Group Copy/Cut/Delete

After clicking the Group button, select one of the options: [Group Copy], [Group Cut] and [Group Delete]. These functions all create a blue and white outlined box on the working area. Place and re-size the box to surround the target objects. Then you can copy, cut or delete the objects inside the box



Unlike when cropping an image, the CG-100 will copy, cut or delete the entire object instead of a portion of it. So, when the blue and white box only surrounds a part of an object, the CG-100 will verify whether the center of the object is inside the box. If so, the object is selected. If not, it is not selected.

Once the blue and white box is surrounding the target objects, click the annulus to start copy, cut or delete. Below is the result after doing the cut or delete.

The copy function allows you to copy the group of objects to the CG's clipboard.

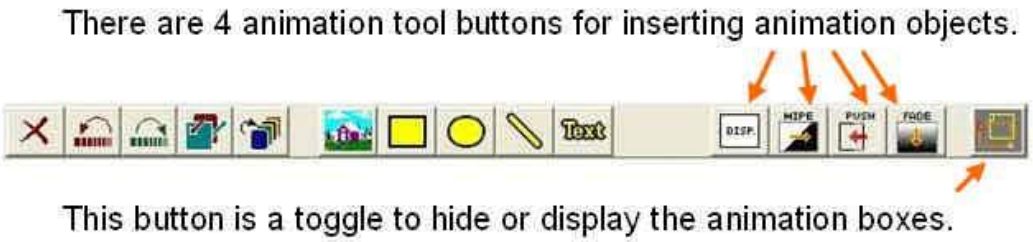
There are 10 spaces to store them. If you want to retrieve this group of objects, click the clipboard to paste the group in the original position on a page.

Animation Editing

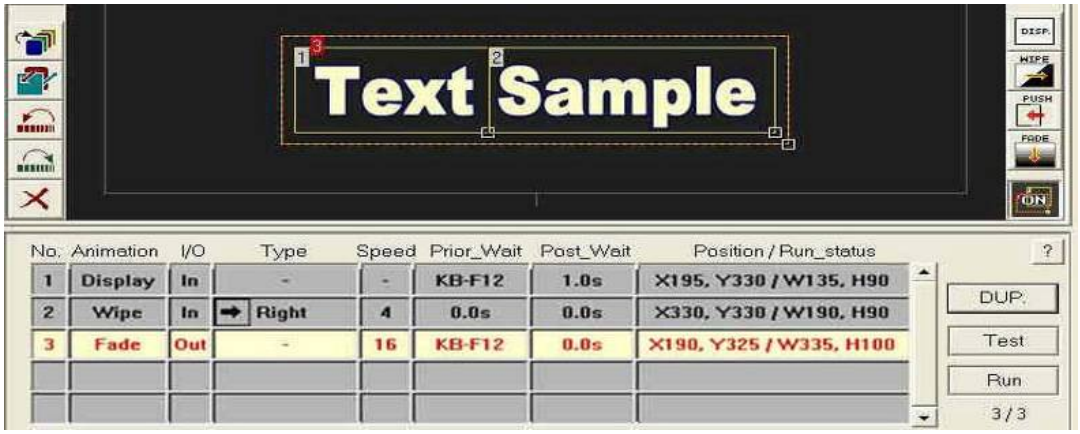
The CG-100 offers various animations such as Display, Wipe, Push, and Fade; also Roll and Crawl to scroll text across the screen or up the screen.

Setting up an Animation Box

Display, Wipe, Push and Fade, each of the four animations has a box and a set of parameters. You should regard the working area as two dimensions. Select any part of it to do the animations



Here is an example with 3 single-box animations:



The 1st animation box "VCG" is selected and set as Display-In, pressing any key will activate this animation.

The 2nd animation box "Sample" is selected and set as Wipe-In-Right.

The 3rd animation box "VCG Sample" is selected and set as Fade Out, pressing any key will activate this animation.

As long as the animation box is put on the working area, the detail of the animation will be shown on the animation list which is beneath the working area.

The parameters of the animation list are:

No. The number of the animation.

Animation Select an animation like Display, Wipe, Push or Fade. Click the right button here to change to a different animation.

I/O In/Out, shows whether the animation is affecting the way the object appears or disappears.
IE: A Fade In and a Fade Out
Click the right mouse button here to select in or out.

Type The direction of an animation. Click the right mouse Button here to select different movements.

Speed Determines how fast an animation moves. Click the right mouse button here to select a different speed. The higher values increase the speed.

Prior Wait Determines how the animation will be triggered. Click the right mouse button here to select different ways. For example, this may be a time delay or a key press.

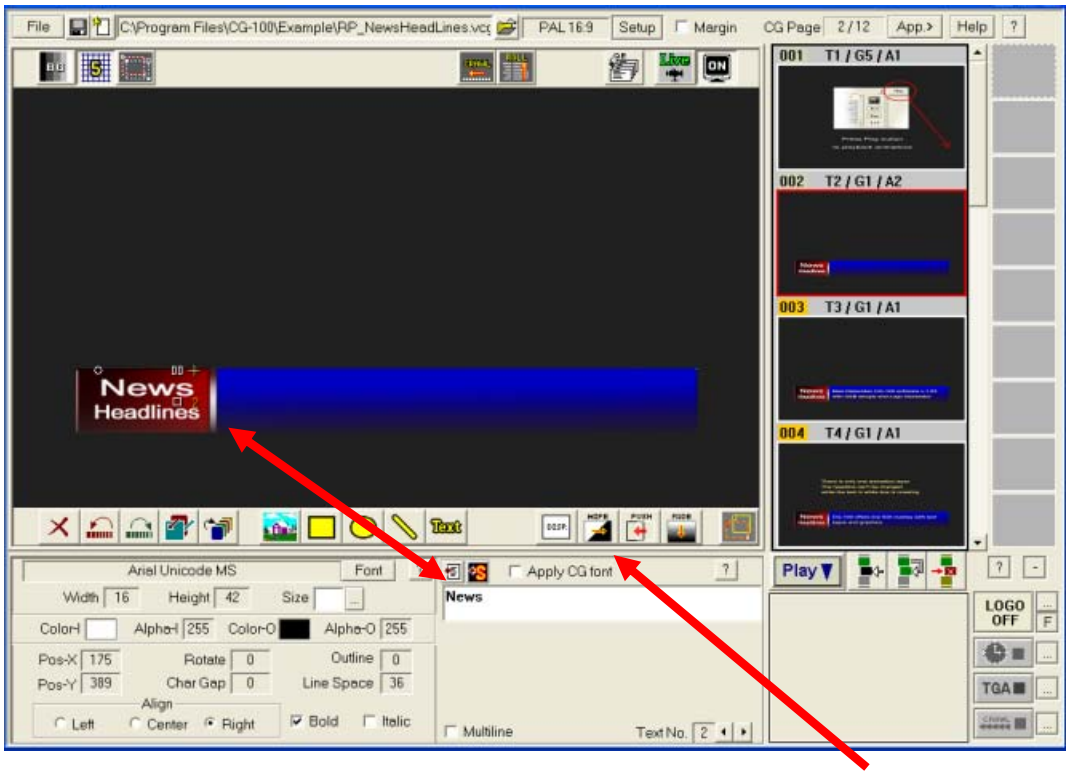
Post Wait Determines how you want to proceed to the next animation. Click the right button here to select different ways. For example, this may be a time delay or a key press.

Position The x, y coordinates of an animation box. Click the right mouse button here to position the animation box.

You can only use one animation at a time from the animation list. The current one on the list is highlighted in yellow with red words. The corresponding animation box is also highlighted in red and yellow.

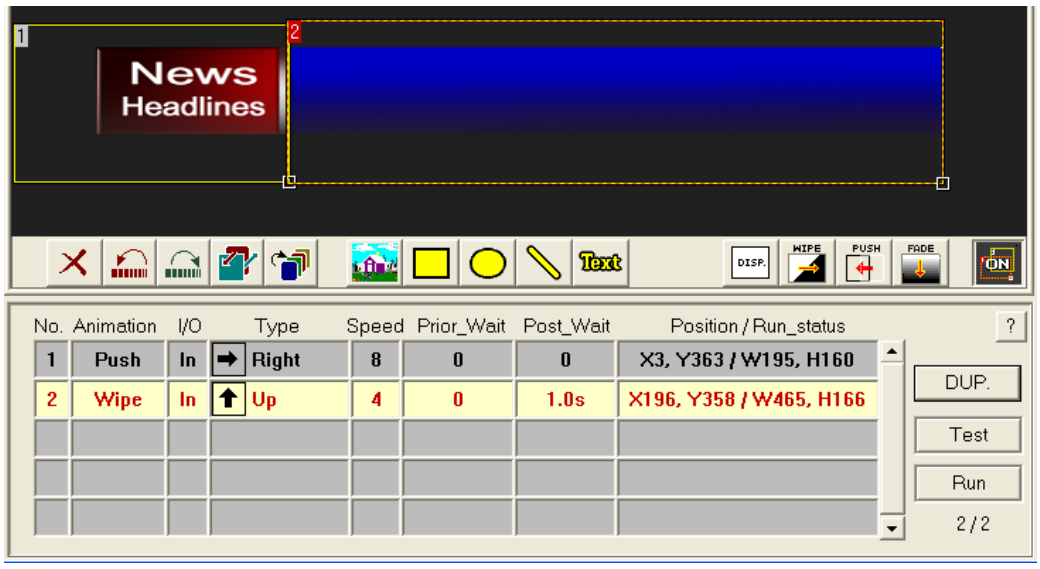
Editing Animation Boxes

Step 1. Use this button to make a text object.



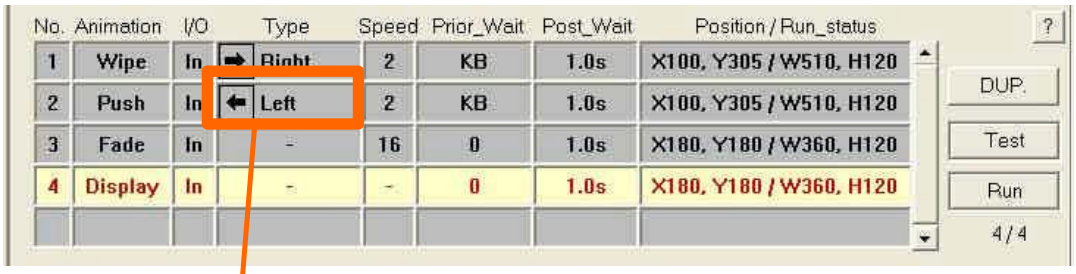
Step 2. Create an animation type by using these buttons.

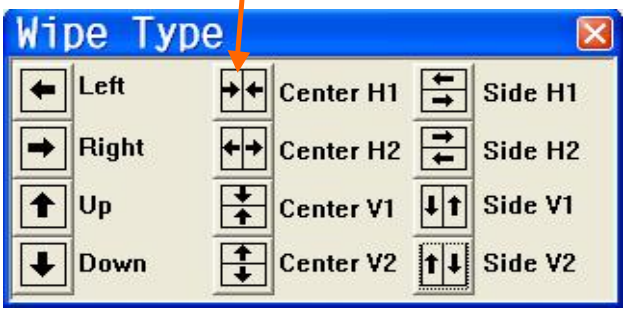
Step 3. Click this button to show all animation boxes.

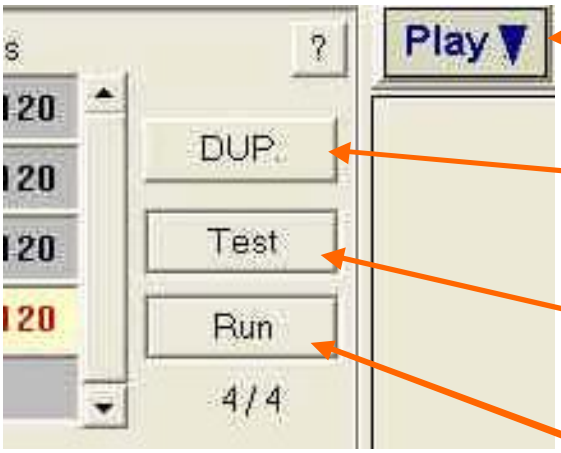


Step 4. Surround only the target object(s) with an animation box.

Step 5. All the animations will be listed as below. Change the attributes by clicking the **RIGHT MOUSE BUTTON** to launch the dialogue for further settings.







Step 8. Play all animations page by page

Duplicate the selected Animation box.

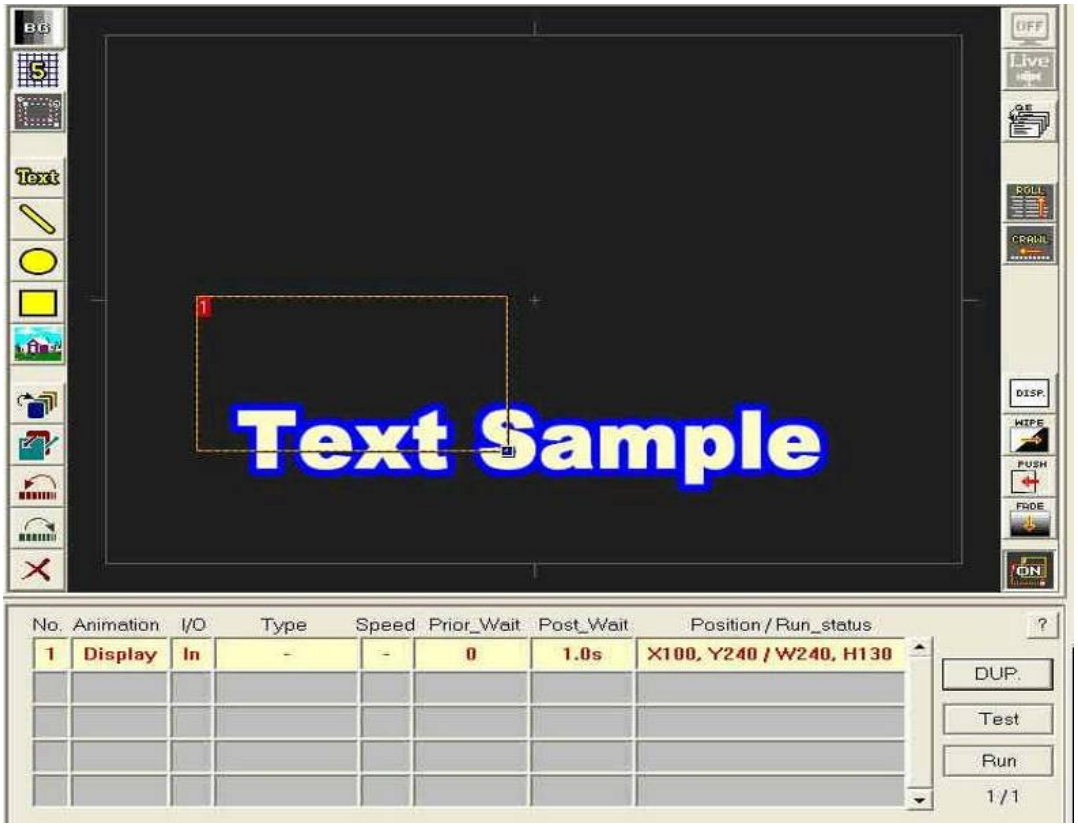
Step 6. Test a selected Animation on this page.

Step 7. Run all Animations on this page.

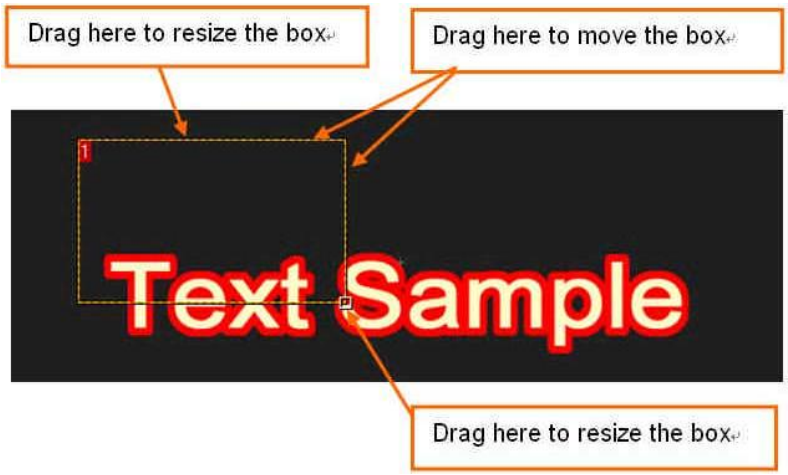
To add a [Display] Animation

Display is a basic animation.

Click [Display] button on the toolbar to create a red and yellow outlined animation box on the working area.

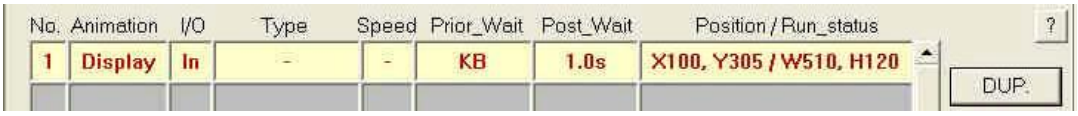


As you create the display animation, it will appear as a row in the Animations list below the working area. Now drag the animation box to surround the CG-100 object(s) that it will affect.

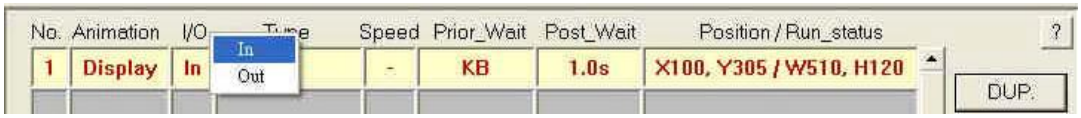


Place the animation box around an object such as a text object.

Then set the parameters in the animations list.

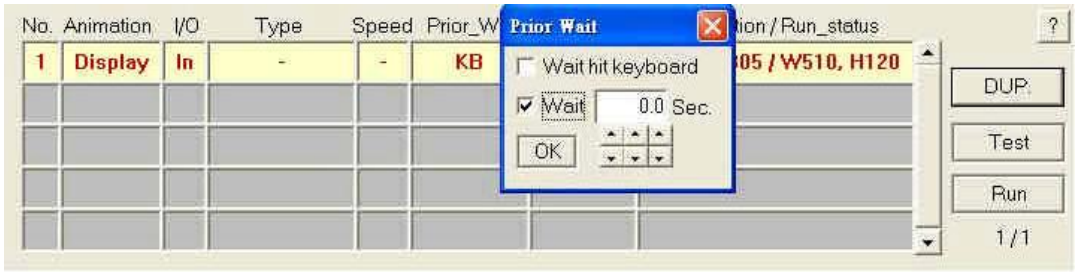


You can select [Display] [In] or [Out]. [In] means to show the area, [Out] means to hide the area.



The default setting of display is [Display-In]. Put the cursor on the [In] field and click right button to select [Out] from the pop-up menu as shown below. Select [In] or [Out] to finish the setting

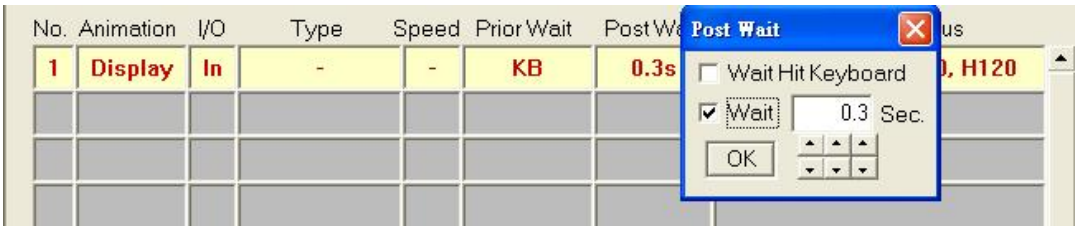
[Display] requires no settings for [Type] or [Speed] but you will have to set the [Prior Wait] and [Post Wait] settings. If you tick the “Wait to hit key” on the [Prior Wait] the animation will not start until you hit the Ctrl key on the keyboard. To do this, place the cursor on this field and click the right mouse button to open the pop-up dialog for setting.



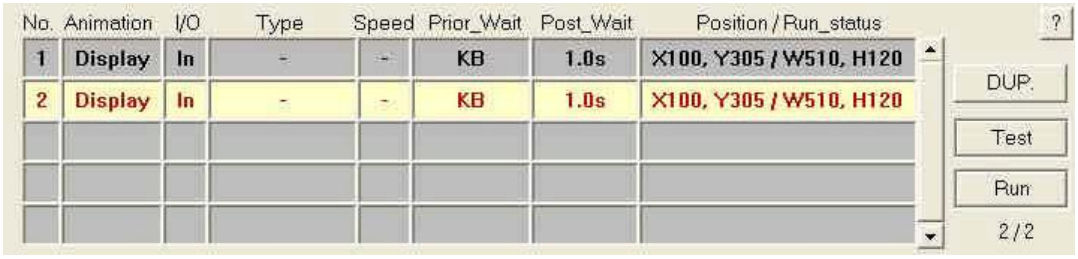
In this field [Prior Wait], you can also select a wait time in seconds before the animation starts

In this example, we have chosen [Wait Hit Keyboard].
[Post Wait] defines how long to wait after doing an animation. To fix the [Post Wait] setting, place the cursor on this field and click the right

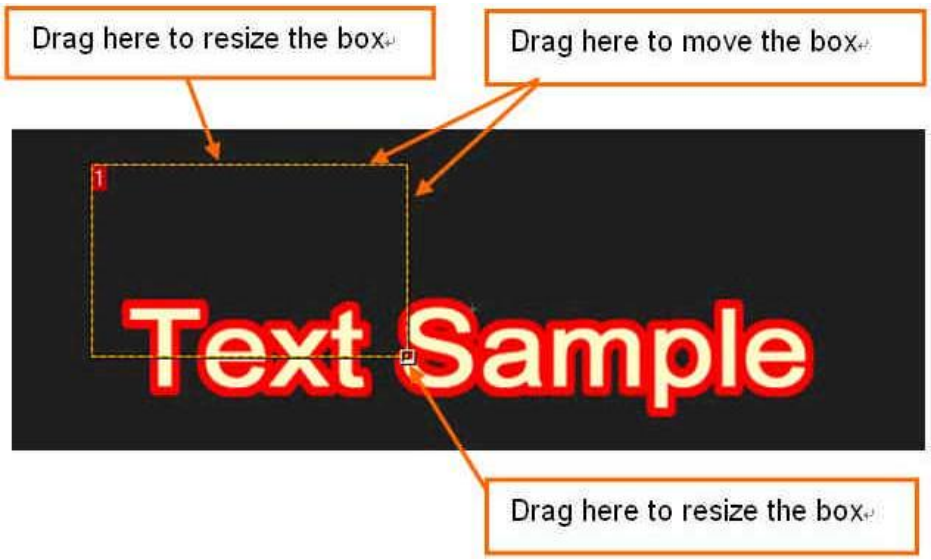
mouse button to open a pop-up dialog as below.



You can either type the [Post Wait] value directly or click the Arrow buttons to set the seconds. Click [OK] to finish the setting.



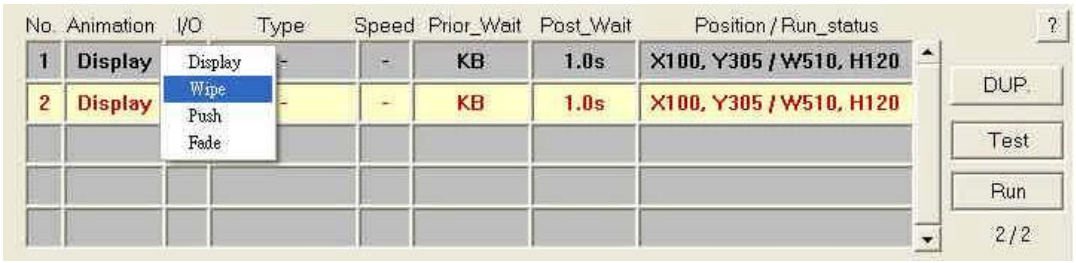
Finally, click the right mouse button on the field of [Position] the cursor will switch to the top left side of the animation box in the working area so that you can drag to resize the animation box.



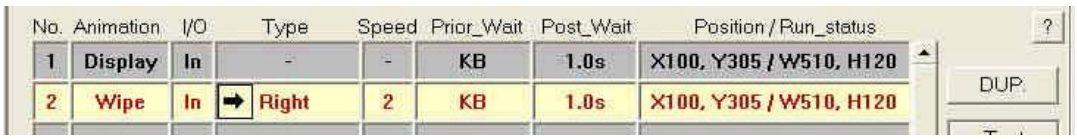
To add a [Wipe] animation

Click [Wipe] on the tool bar to create a new Wipe animation box.

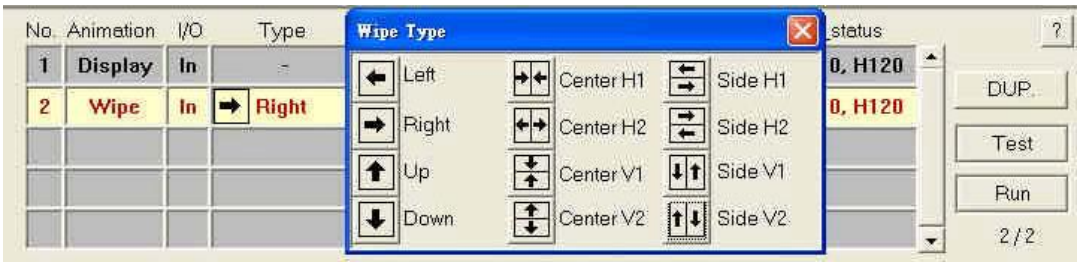
If there is an existing animation, you can also click the [Duplicate] button and then change its parameters to become a [Wipe]. Place the cursor on this field and click the right mouse button to open a pop-up menu.



Select [Wipe] animation



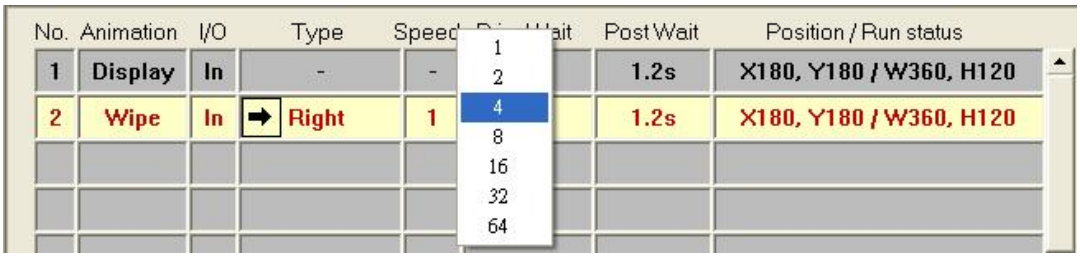
You will need to set the [Type] and [Speed] for the wipe animation. Place the cursor on the field of “Type”, click the right mouse button to open the pop-up dialogue.



In the [Wipe Type] dialog box, select the wipe you require. In this example we selected a right direction wipe.

In the [Speed] field, right click the mouse to open the pop-up menu.

Choose the required speed. Then the setting is finished.



Calculate Animation Time

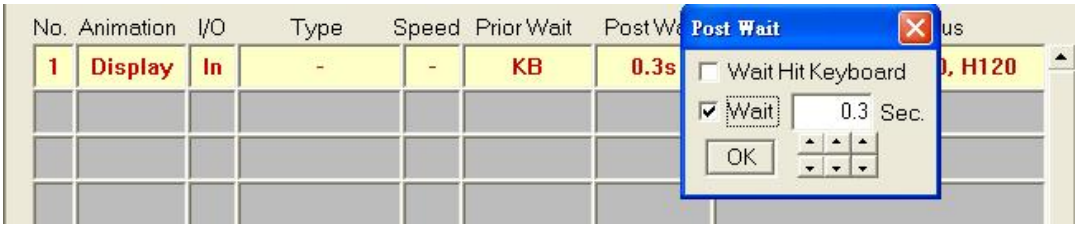
You can estimate the time an animation will take as follows. If the animation box is 120 pixels wide and the speed of WIPE is 4 pixels per frame, then it will take 30 frames to run this animation. In NTSC mode, it takes 1.0 second, while in PAL mode this will take about 1.17 seconds.

Prior Wait and Post Wait Time

If you have a set of wipe animations and do not set a “Prior Wait” time then the next animation will appear immediately after the previous wipe “Post Wait” time. If you set both the Prior Wait and Post Wait values then there will be a wait delay of both values added together.

Trigger Animation with Keyboard (KB)

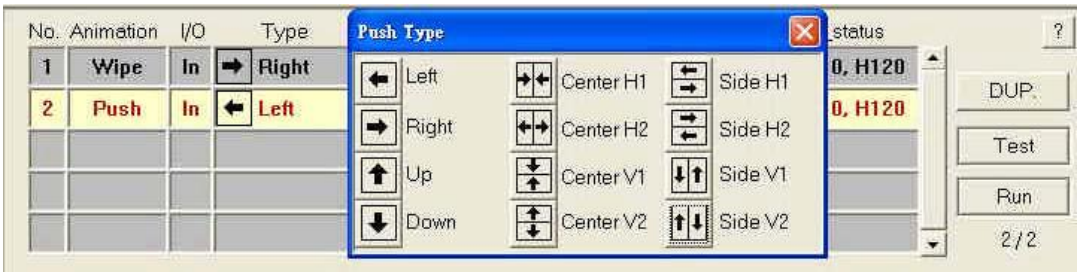
A flexible way to trigger the entrance and exit of a “Wipe” or other animation is to right mouse click on Prior Wait or Post Wait value and then Tick [Wait Hit Keyboard] in the pop up option. This lets the operator decide when to start or end the animation with the Ctrl key.



To add a [Push] animation

You can click [Push] on the tool bar to create a new PUSH animation box.

If there is an existing animation, you can click [Duplicate] then change the new animation line settings so it becomes a [PUSH].

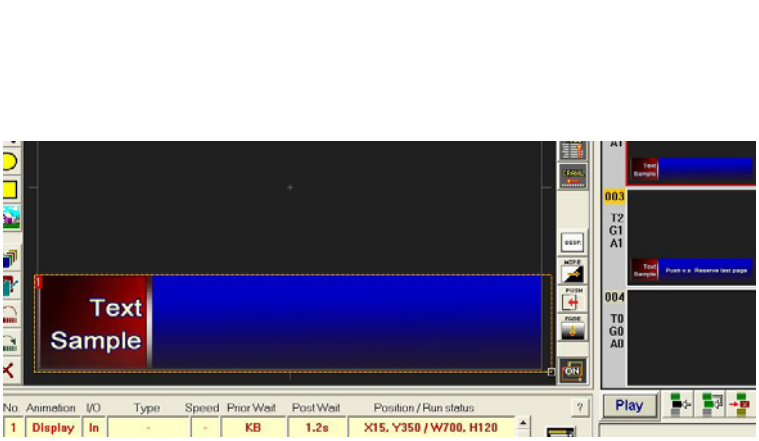


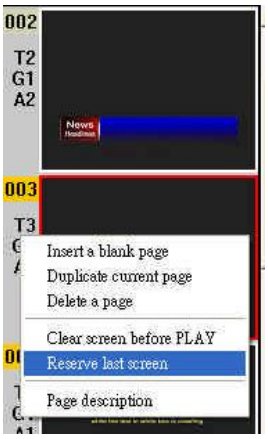
Unlike [Display] and [Wipe], [Push] cannot be used to preserve the screen on the last page even if you set the CG page attributes to reserve last screen or page.

See the next section to understand the difference between the effect of a [WIPE] and a [PUSH] with reserve last screen.

[WIPE] with Reserve Last screen

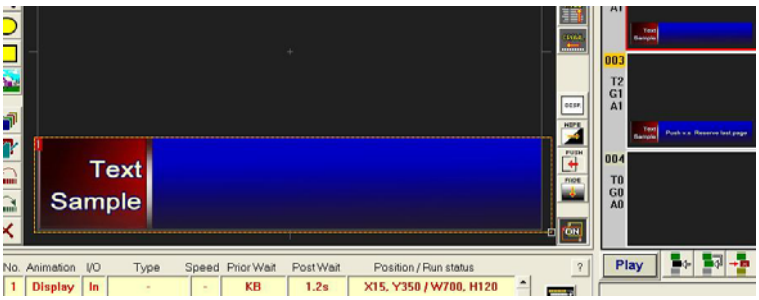
This first example shows the first page contains a Display animation, then the second page contains a wipe animation and this page also reserves last screen. When the two pages play back, the blue box acting as a background for white text will not be cleared.

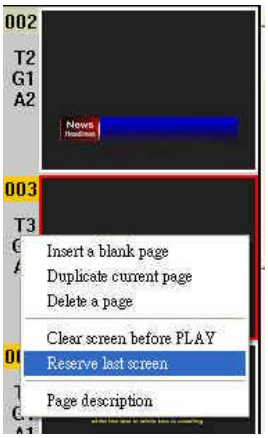


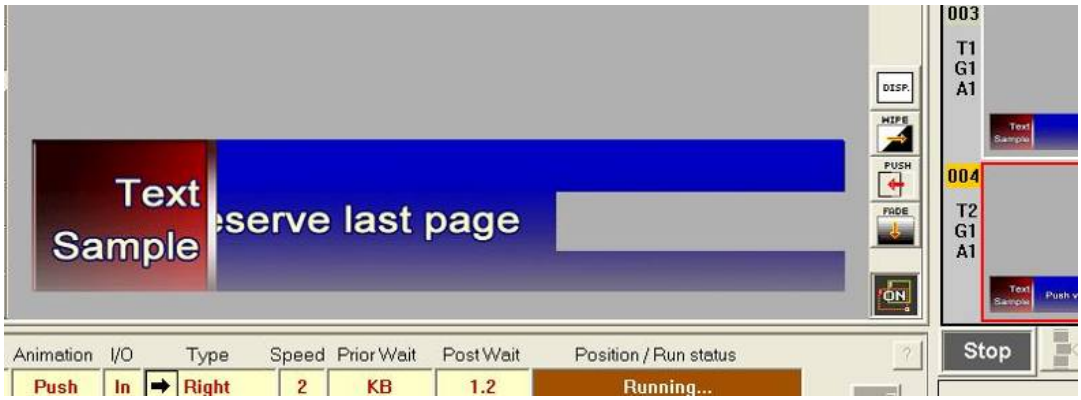


[PUSH] with Reserve Last Screen

This second example also sets first page to have a [Display] animation, then the second page contains a push animation and this page also reserves last screen. But this time, when the two pages play part of the blue box will be cleared in order to push the selected white text area.







Note part of the blue background is missing as the text Push is done.

To add a [Fade] animation

Adding a [Fade] animation is just the same as adding other animations already covered earlier in this manual.

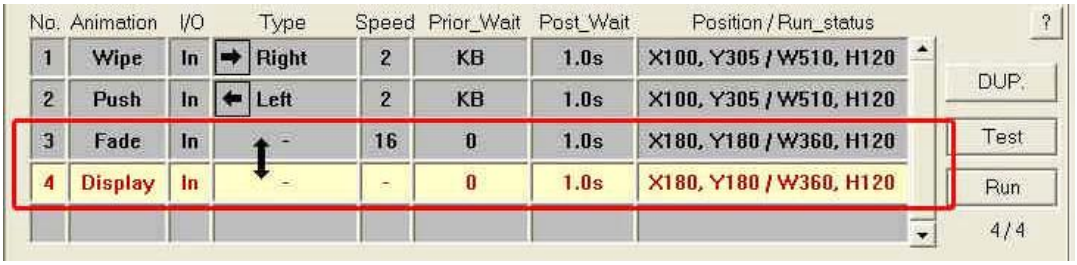
To insert a [FADE] animation, click the [Fade] button on the toolbar or first duplicate the previous animation and then modify it to be a [FADE].

Delete an existing animation line

To delete an existing animation, simply select the animation box and press the delete key on your keyboard or right click the mouse and select delete from the popup menu.

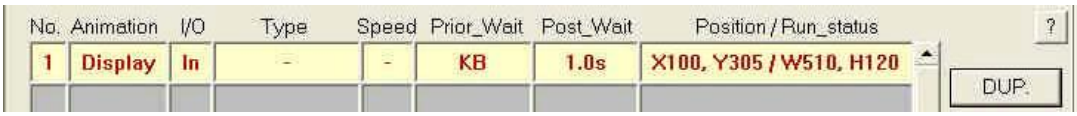
Change the order of animations

To change the sequence of animations, select one of the animations on the list and simply drag it to the desired position in the sequence.



Duplicate an Animation Line

If there is an existing animation, you can click the [Duplicate] button and then change the parameters of the new line to suit your requirement.



Place the cursor on the animation field and click the right mouse button to open a pop-up menu.

Select the required type for the newly created animation line.

Roll and Crawl

To Roll a List

The CG-100 provides the Roll function to roll a text list.

Step1: Click this button

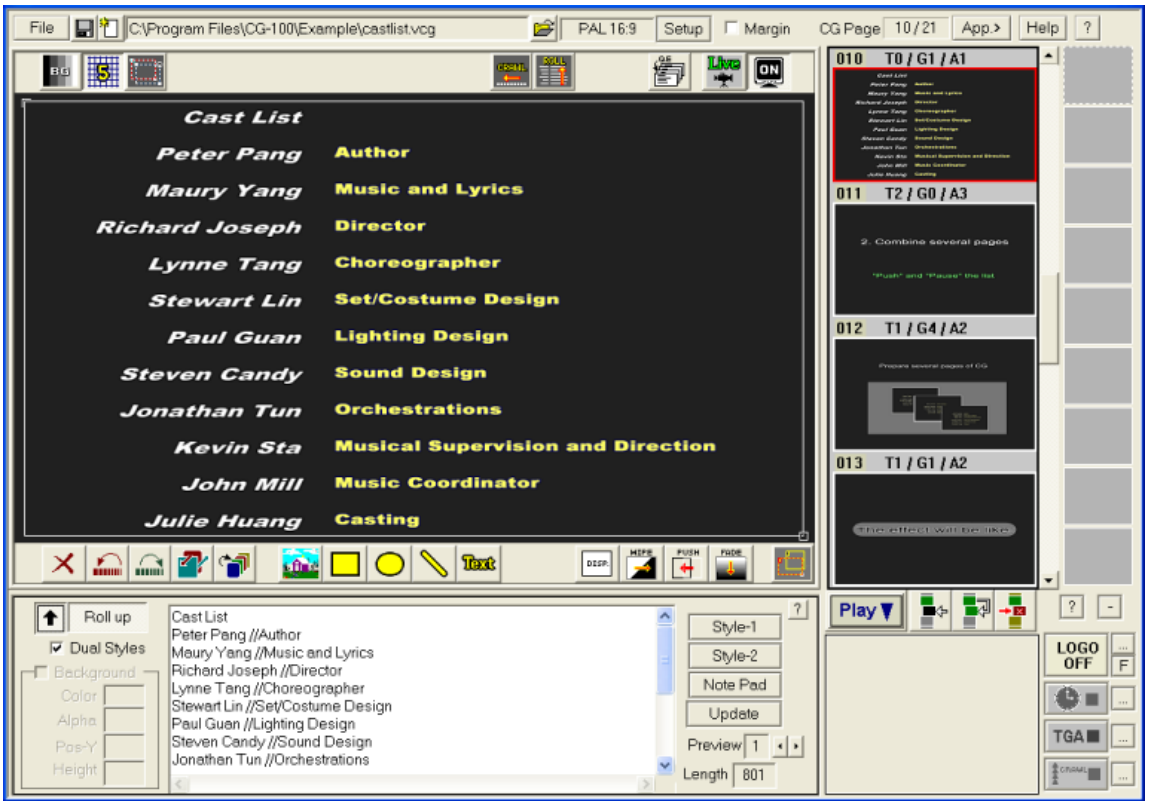
to create a Roll page.

Please be aware there can be only one Roll or Crawl object in a page

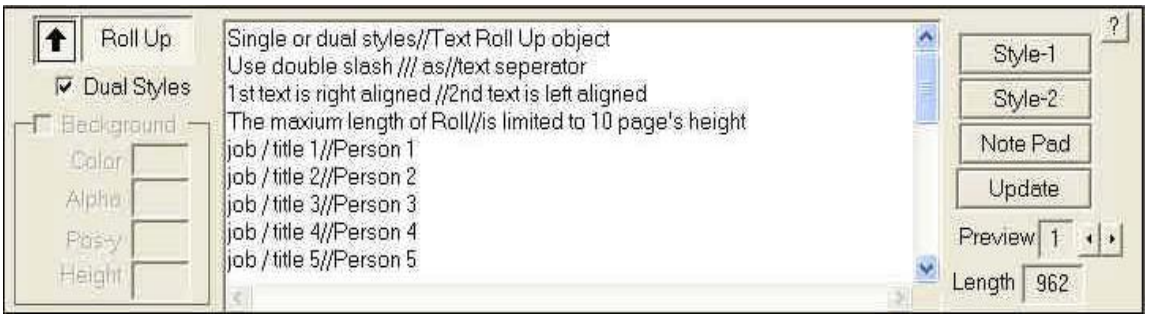
Limitations of a ROLL object

- There can be only one Roll or Crawl object in a page.
- A Roll object can be no longer than 10 pages in height.

Step2: To edit a Roll object, click the object in the working area.

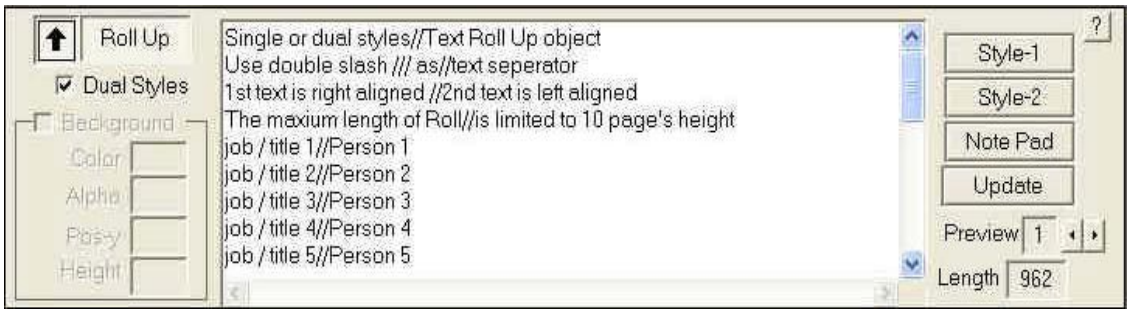


Step3: Define the Roll object in the roll object panel.

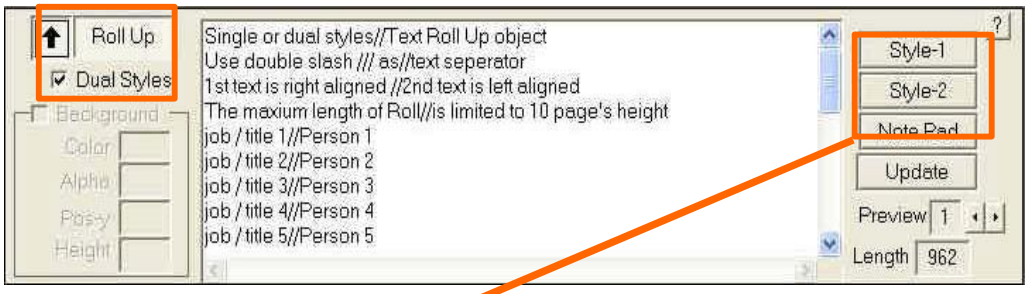


Step4: To set a dual string roll object like the sample on the panel, use // to separate 2 strings of text on every line. The part on the left of // is one string and the part on the right is another string. Set different colour, fonts for the strings using [style-1] and [style-2] button.

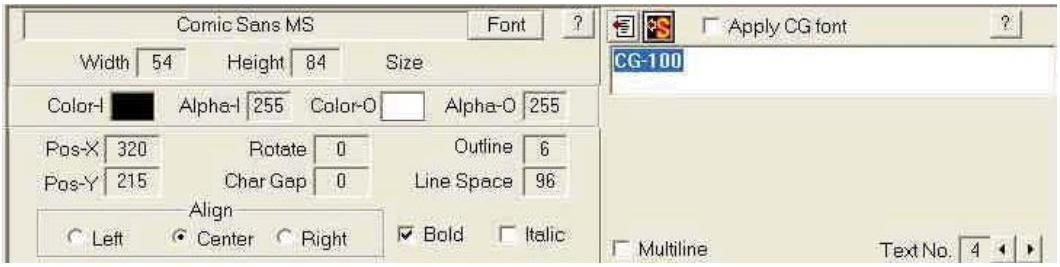
Further settings of the Roll object panel



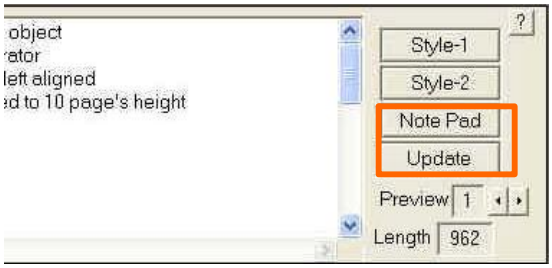
Un-check [Dual Styles] to create a single string roll object or tick this box to create a dual string roll object.



Click [style-1] or [style-2] button to edit the parameter of the string
To return to the Roll object panel, click this button.



To import text from a txt file, click [Note Pad] to find and open the file then copy and paste the required text into the Roll object text panel.



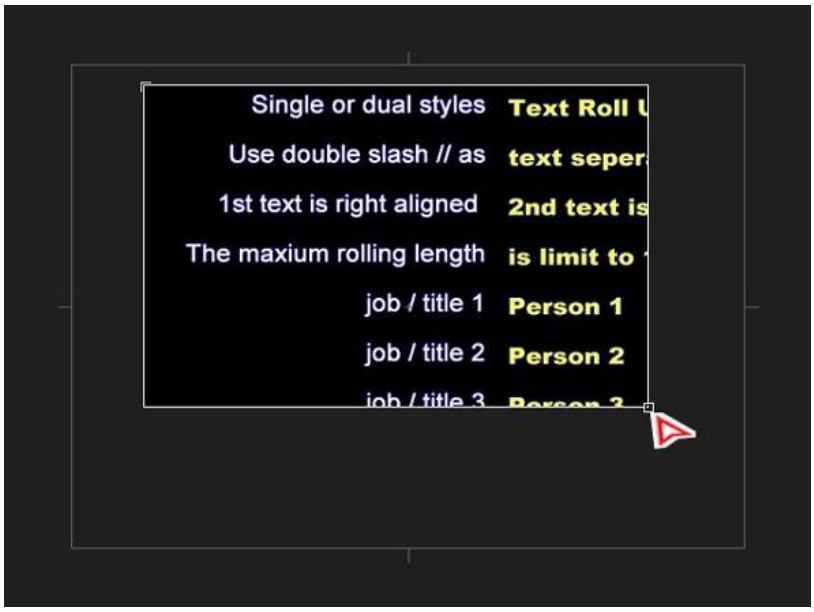
Click the [update] button when you import text from files

Once the Roll object has been altered, click to run the Roll object.

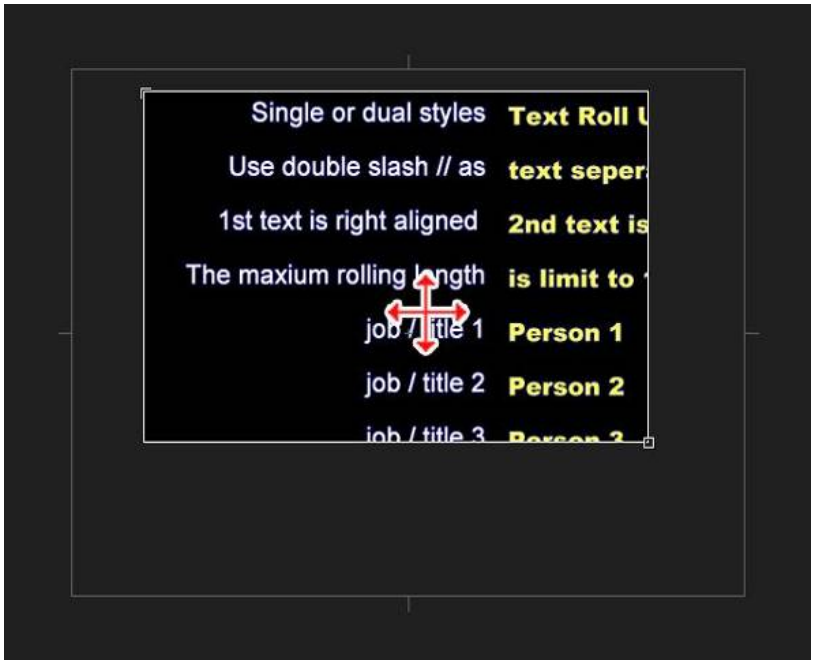
To adjust the size of a Roll Object

The size of a Roll Object is adjustable.

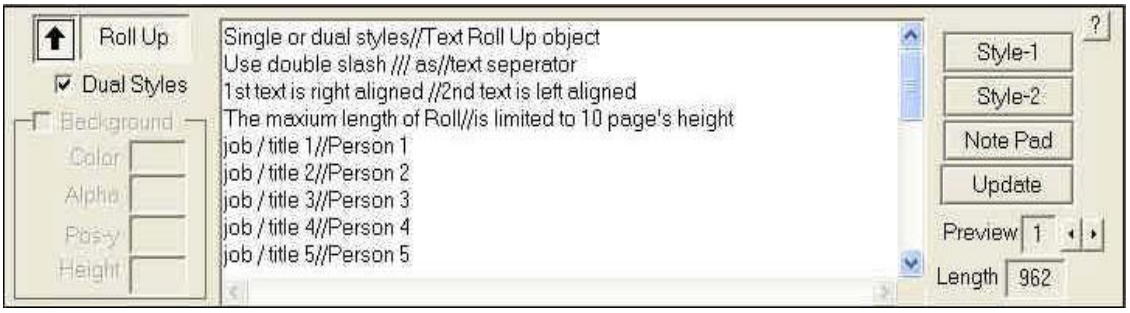
Step1: Use the cursor to resize the Roll object.



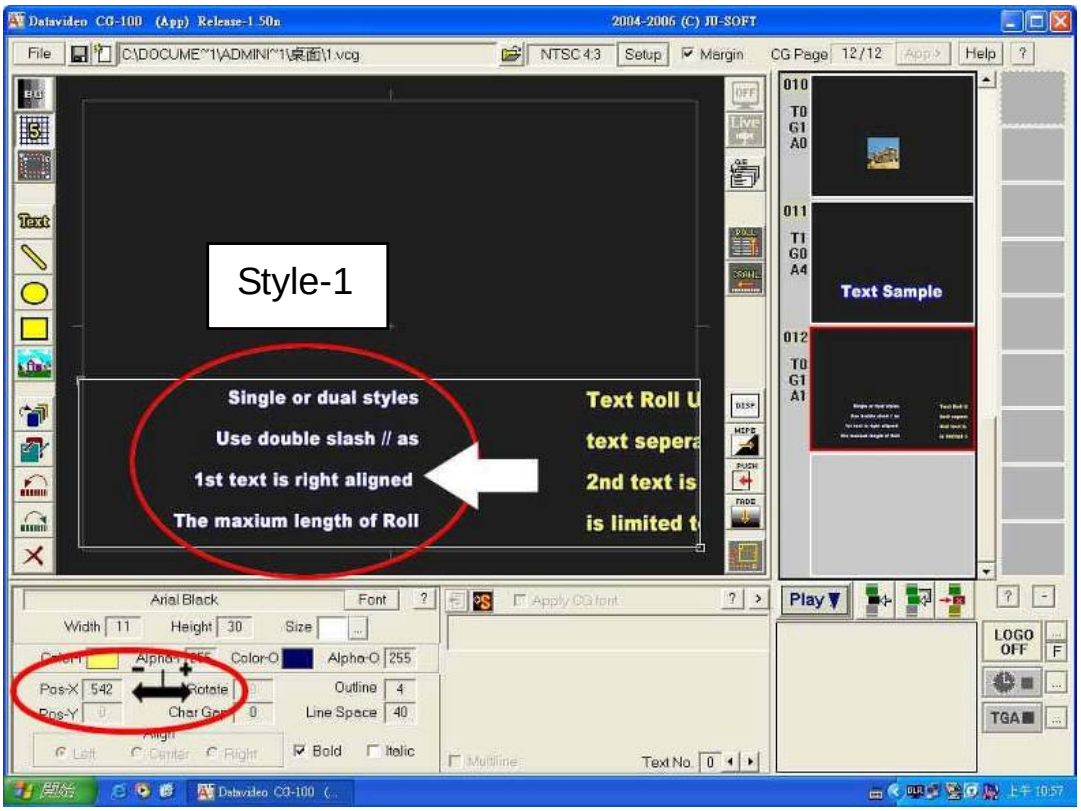
Step2: Move the Roll object to the required position.



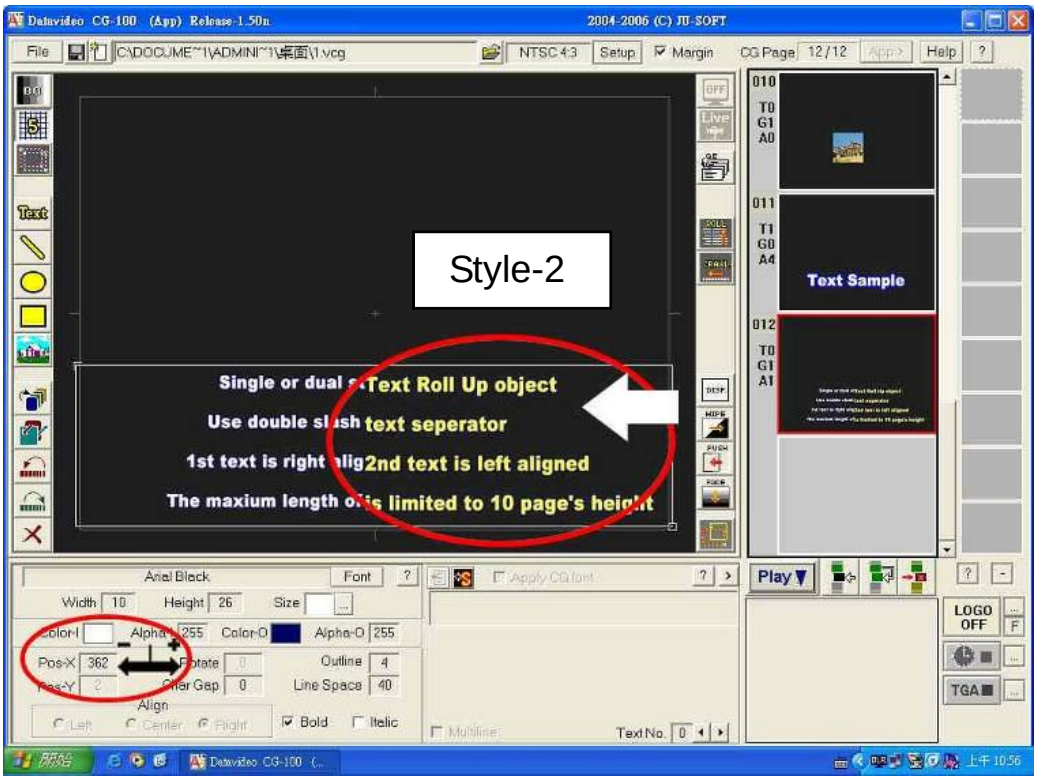
Step3: press [Style-1] to amend the position and other attributes of this part of the text string.



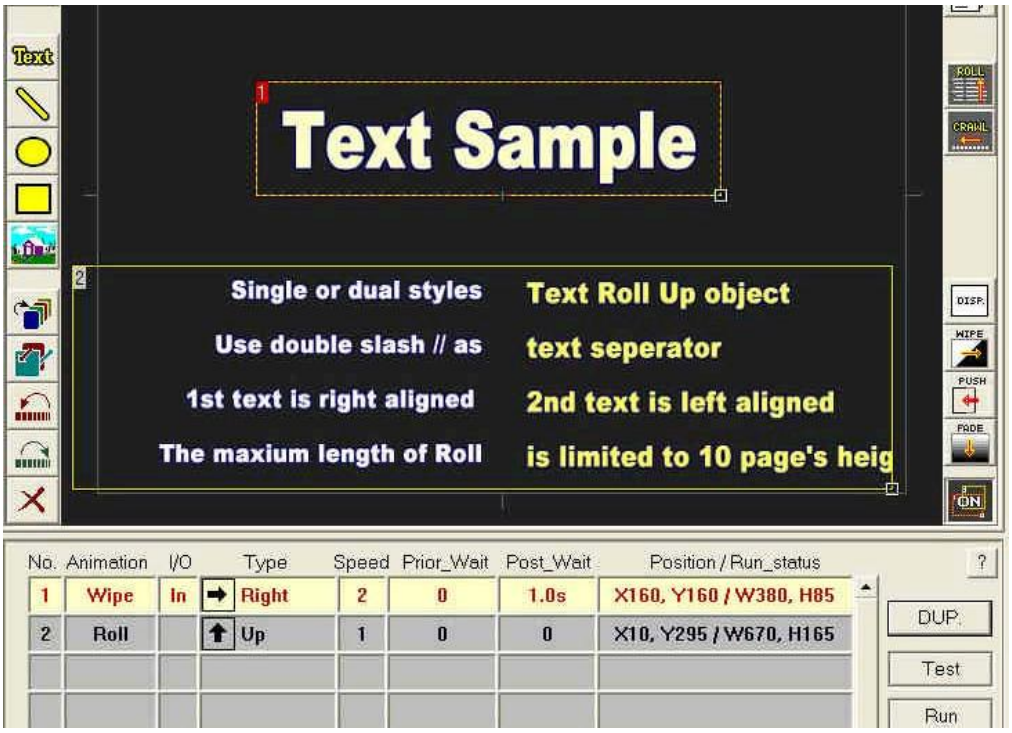
Step4: Change the string position by adjusting the Pos X value.



Step5: Now do the same with the other part of the string by adjusting the Pos X value for Style 2.



Step6: You can now place another text object on the screen and create an animation box for the new text object. Then arrange the playback sequence so all elements play correctly.



To adjust the size of a Crawl Object

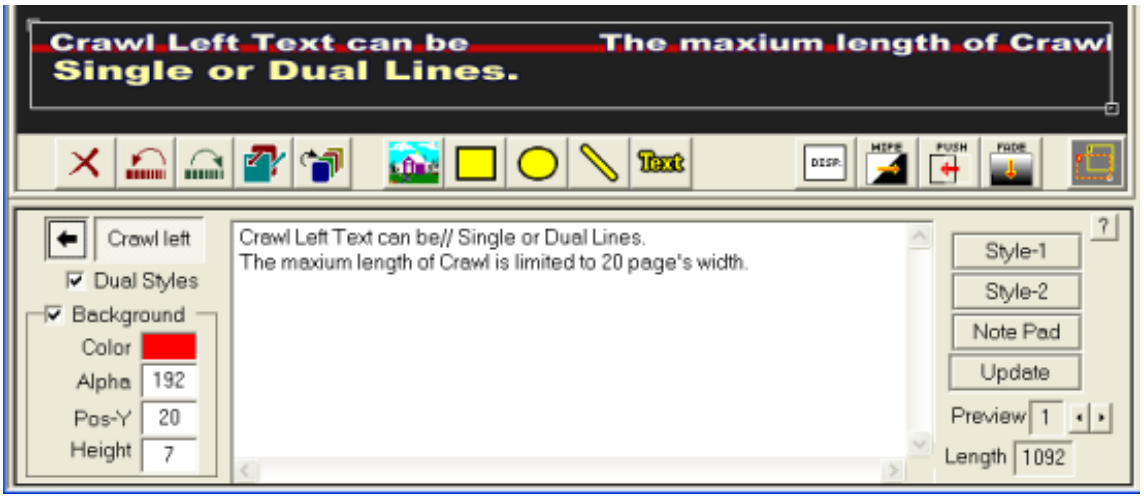
Step1: click this button

to create a crawl object

Please be aware there can be only one Roll or Crawl object in a page.

Limitation of a Crawl object:

- There can only be one Roll or Crawl object in a page.
- A Crawl object cannot be longer than 10 pages in width.



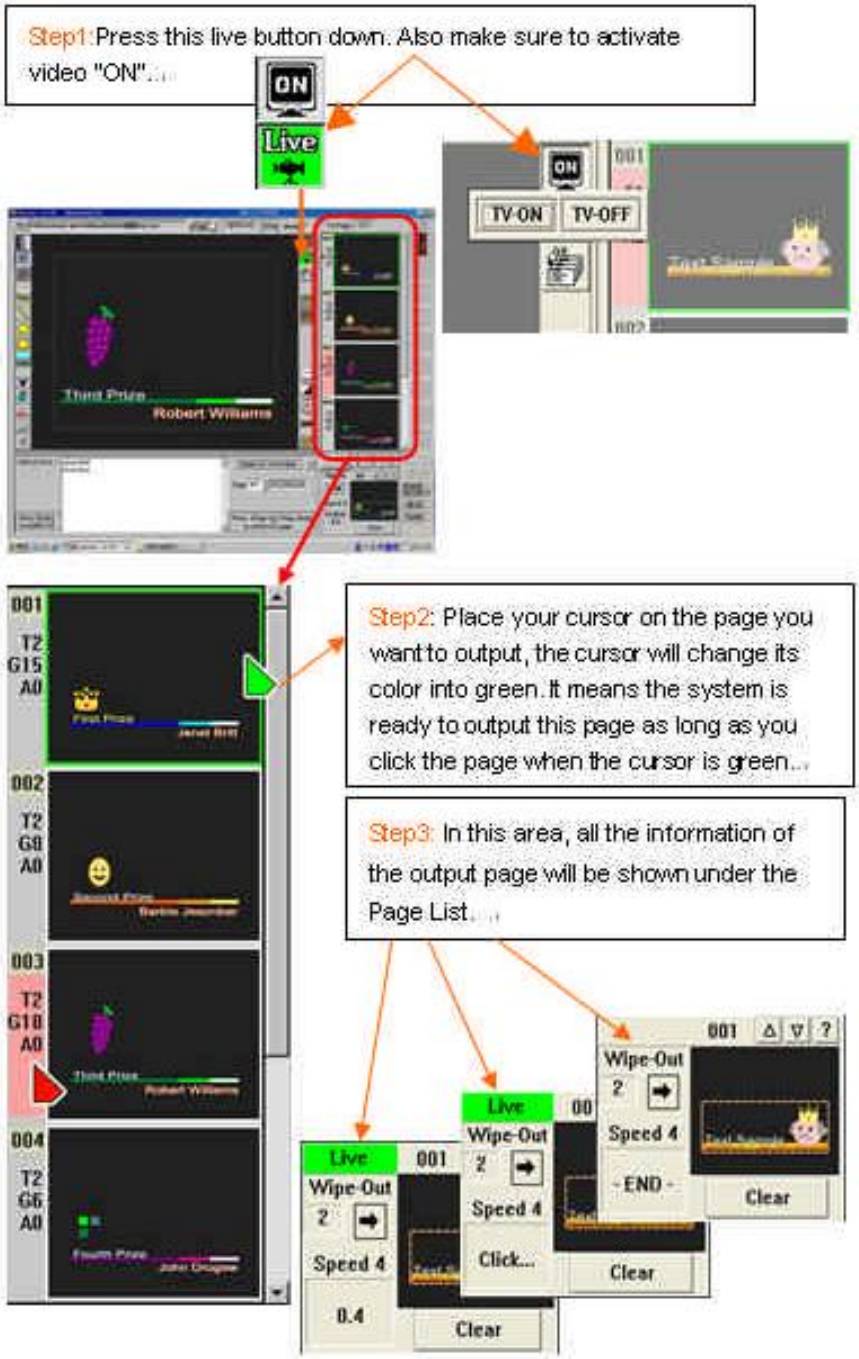
Further settings of the crawl parameters can be adjusted in the same way as a Roll Object see ***page 74*** for examples of what can be changed.

Live CG Editing

You can add CGs easily at any time during a post production work flow. It is also possible to use CG-100 in live production work flow and still have enough flexibility to provide good overlays with a small amount of time. Here's how…

Pressing this button

…. allows you to multi task so that whilst you are displaying one CG page on TV you can also be amending or preparing another CG page.



Make sure the current page is being output Live.

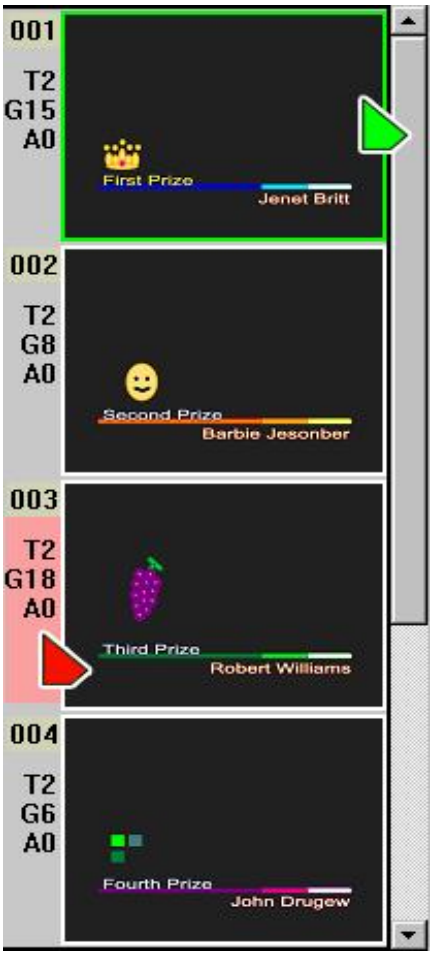
You are now ready to edit off line.

Move the mouse pointer to the information area just to the left of the CG Pages list.

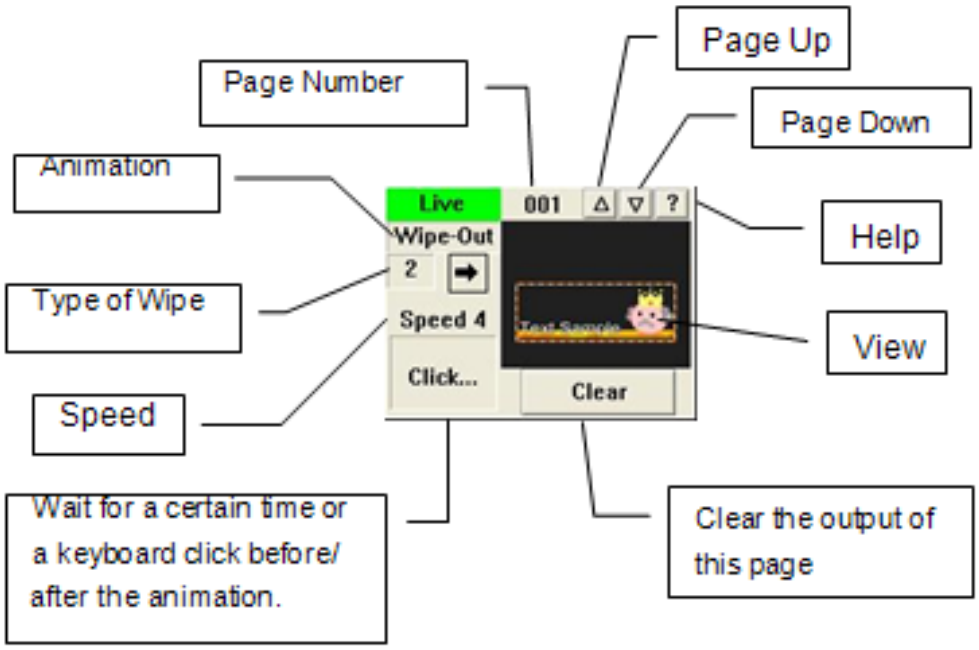
You will see the mouse pointer change colour from green to red.

Click the left mouse button when the pointer is red and the background colour of the information area will now become pink.

The selected page should now be ready for off line editing. All the objects on the selected page for off line editing will also be shown in the work area to the left of the CG Page list.



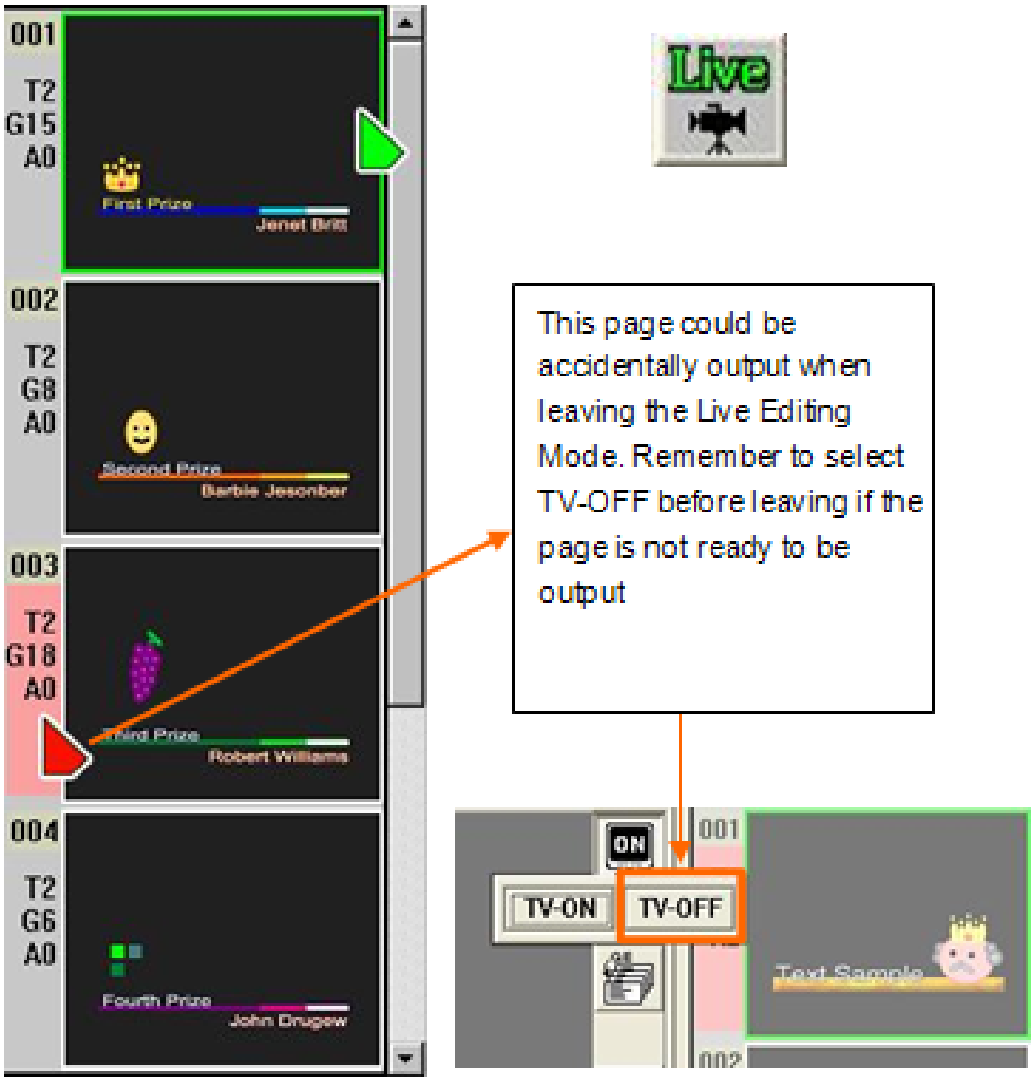
Live Status Panel



Whenever you want to quit the off line Live Editing mode, remember to click the appropriate selection of TV-On or TV-Off.

If you don't pay attention then the page currently being edited may be accidentally output before it is ready to be shown.

If the current page being edited is not ready for output, select TV-OFF before quitting the off line Live Editing mode.



Quick Edit function

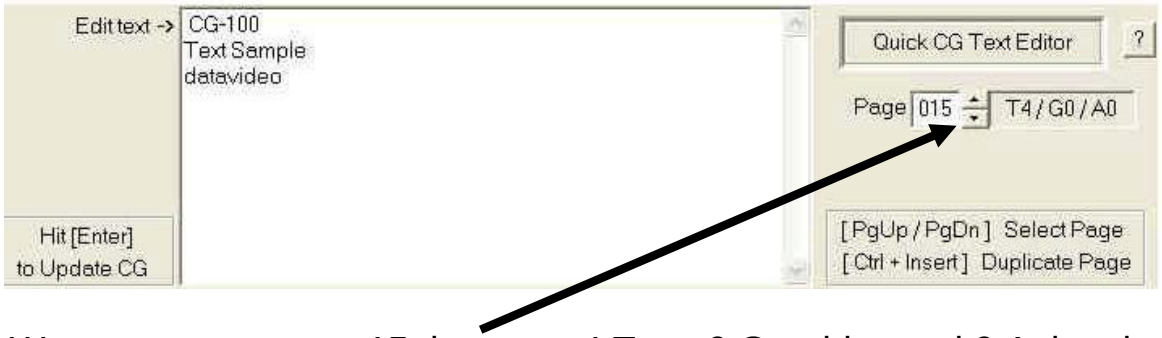
Think about this, in a talk show, the video will switch from the host to several different guests. The layout of the pages are set and there are just some names that need to be changed. If you need to edit something similar in a very short time, this function is really useful.

Click this button to open “Quick CG Text Editor”

This allows navigation from page to page to modify text or duplicate similar pages in a very efficient way.

Modify the Text

Step1: Select the page that you want to alter and click the Quick Edit button. The Quick Edit panel will be shown as below.



We can see on page 15 there are 4 Text, 0 Graphics and 0 Animation objects.

In the above panel image, we see there is a 3 line text object. For this example, there are 3 text lines: CG-100, Text Sample and Datavideo. But all of them are listed in the Edit text box. It doesn’t matter if there are single lines, multiple-lines, or a mixture of them.

Step2: Place the cursor on the line to be altered. Change the words directly.

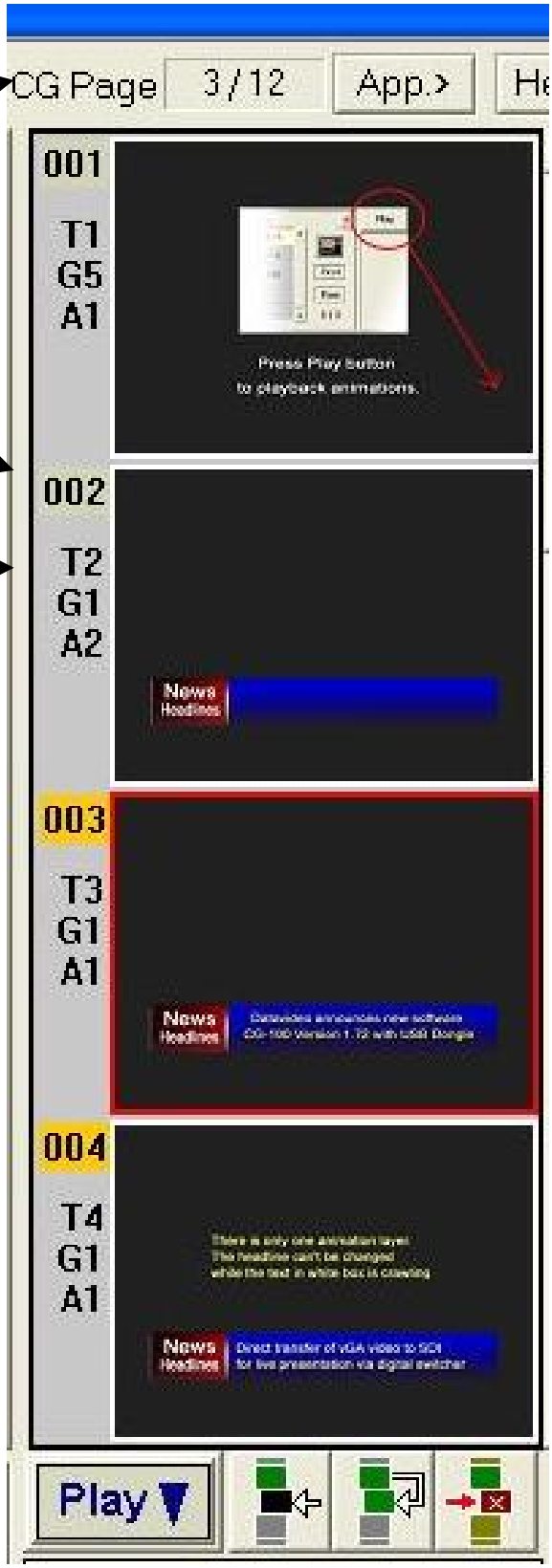
Step3: Press the [Enter] key to update the CG.

Step4: If there are other pages to be modified, Press [PgUp] or [PgDn] keys on the keyboard to select the previous or next page.

You can also mouse click the Up/Down buttons next to the page number to look for the desired page. Once you have found a page that needs to be altered, again repeat steps 2 and 3 above.

Page List

The Page List is used to view and select different pages in a CG-100 project.



At the top of this area the current ***page number*** and ***total number of pages*** in the CG-100 project are displayed.

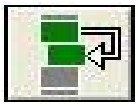
At the side of each page displayed in the list is the ***page number***

It also displays the number of ***Text objects*** ***Graphic objects*** and ***Animation objects*** in that page

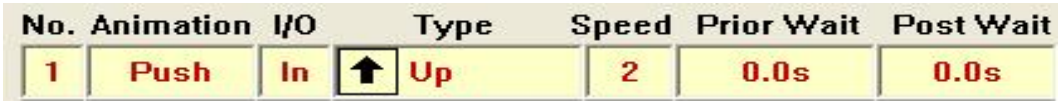
To ***select a page*** from the page list place the mouse pointer over the required page and left mouse click. A ***red border*** will then appear around that page. At the same time the selected page will also appear in the main work area.

At the bottom of the Page List are 4 buttons. These are used to ***Play*** the pages in sequence, or ***Insert*** a new blank page, or ***Duplicate*** an existing page, or ***Delete*** a page.

The effect of Reserve Last Screen

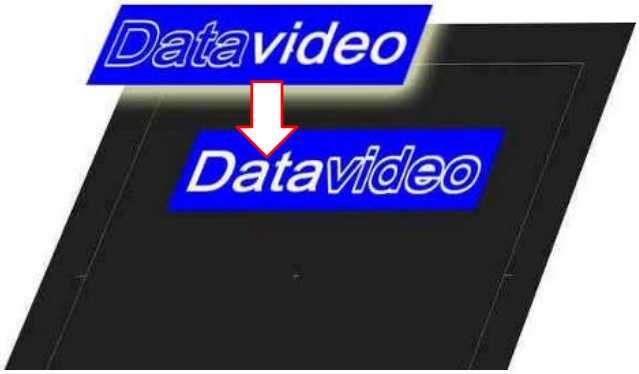
Step1: Select a page. Click the duplicate page  button to clone it.

Step2: Replace the original graphic object on the second page. Keep the new graphic object the same size and at the same position.



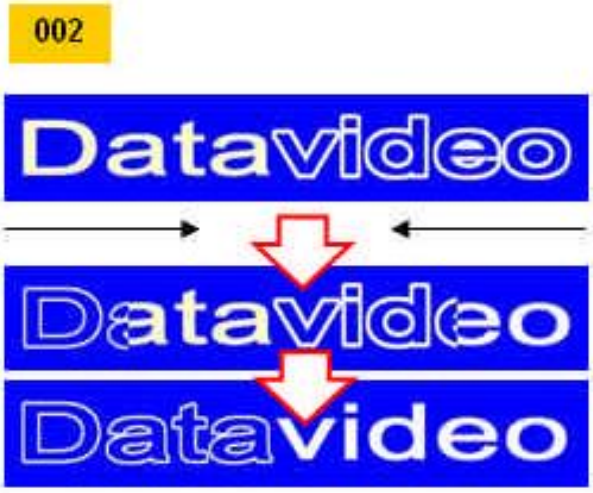
Step3: Set different animations for page 1 and 2. In this example, page 1 is “Push” and Page 2 is “Wipe”.

Step4: When selecting page 002 with the mouse on the page list. Click the Right button to open a Pop-up menu. Choose Reserve last screen here.



Reserve last screen

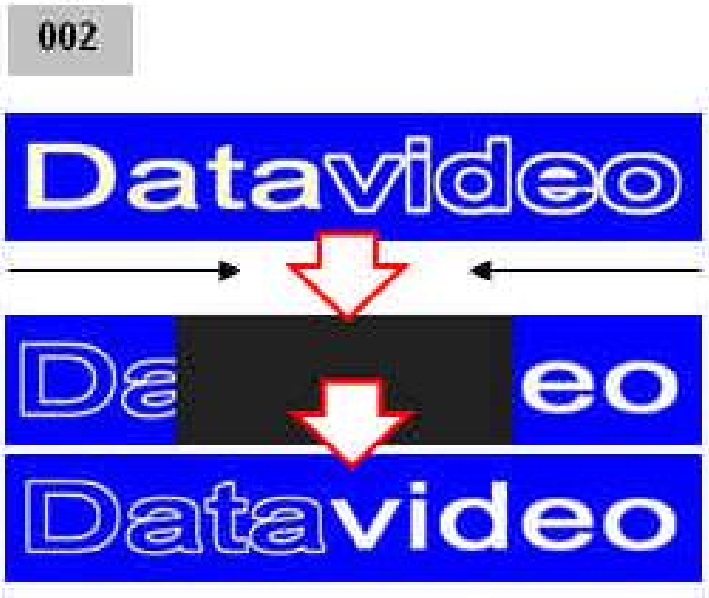
We can see the effect of page 002 is as below



Step5: When selecting page 002 a second time, again with the mouse on the page list. Click the Right button to open a Pop-up menu and this time choose Clean last screen instead.

Clean last screen

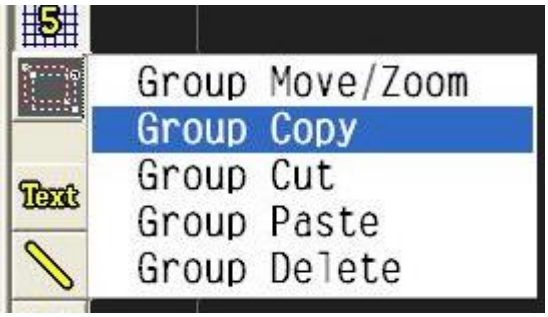
Select “Clean Last Screen”, the effect on page 002 will be like below.



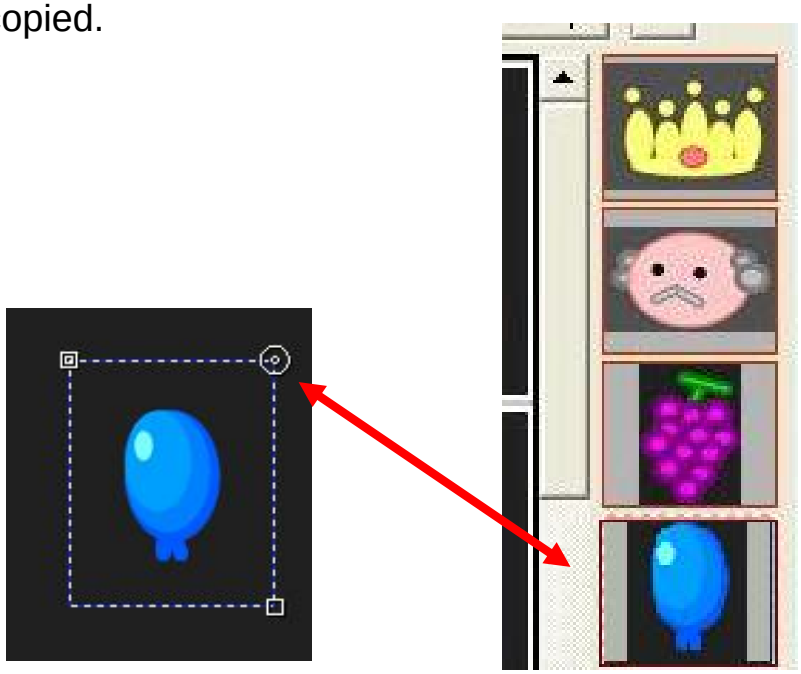
Clipboard
Group copy to Clipboard

Step1: To copy a group of objects to the clipboard click the Group Button.

Step2: From the popup menu select Group Copy.

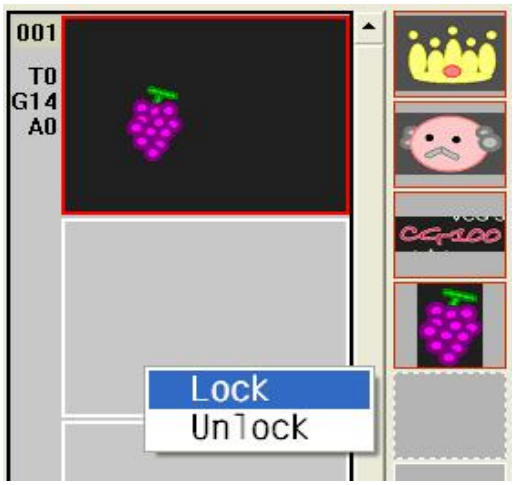


Step3: A blue selection box will appear on the work area. Use the square handles, in the top left and bottom right corners, of this blue box to position and re-size the selection box around the object(s) to be copied.



Step4: Click the *annulus* in the top right hand corner of the blue selection box to add the selected object(s) to the clipboard.

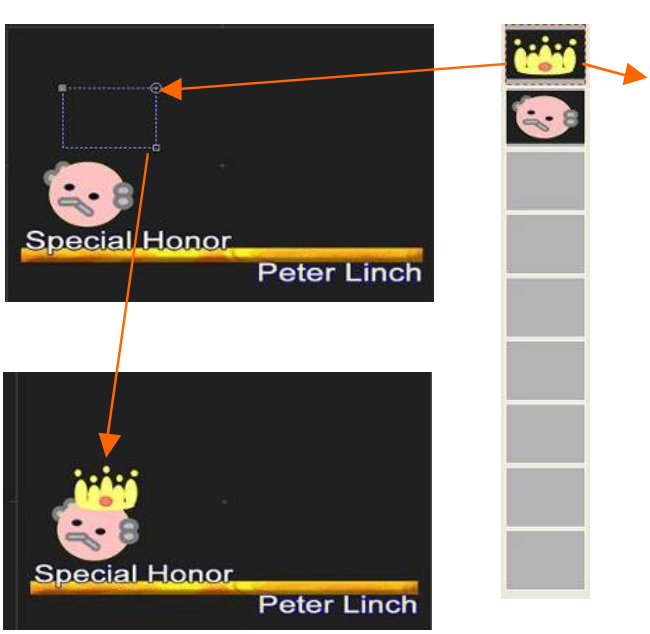
Lock/Unlock the Clipboards



Select a box in the clipboard and click right mouse button. Choose “Lock” from the popup menu. The object(s) in the locked box will be saved.

To unlock the clipboard, select the box and click right button, choose “Unlock”.

Paste from the Clipboard



Double click an icon from the clipboard, a blue box will be shown in the working area. Click the annulus on the right top of the blue box to paste the object(s).

LOGO

The Logo function is the simple and easy way to add a logo. You can also use the Logo Generator Application to utilize CG-100 as a professional Logo Generator. (Please see the Application, Logo Generator for more information.)

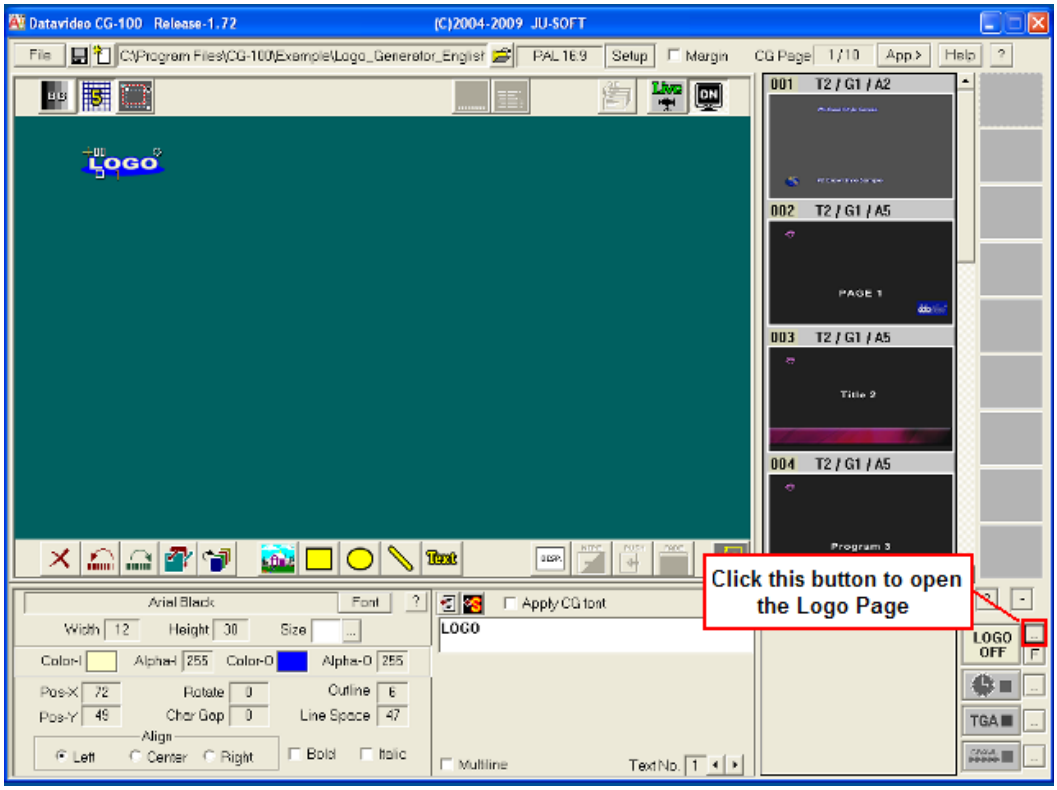
To add a simple Logo, please follow the steps as below to create your own logo.

The Logo Editing Page is different from other pages. You can identify it by its background colour which is blue instead of black.

You will not see this LOGO page in the Page List.

To edit a Logo follows these steps:

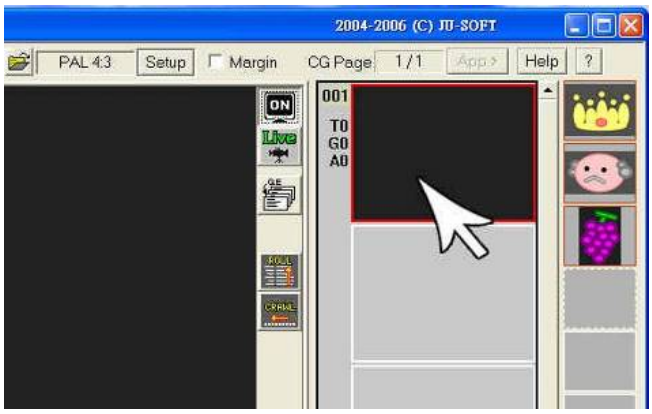
Step1: To edit the logo, please click the button as shown below.



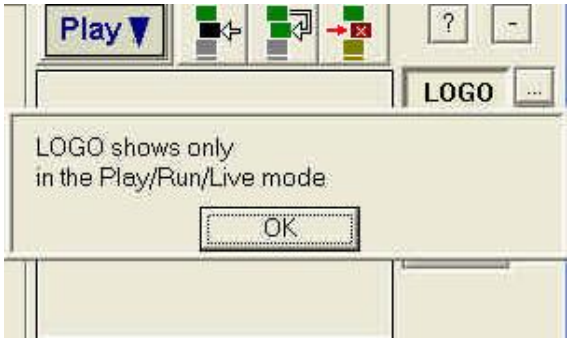
Step2: Edit the Logo. You can use the objects to combine a logo or import an image file. Move the logo to the desired position.

Step3: Create a display animation object by clicking
And place the display box to surround the logo.

Step4: To leave this logo page you can click mouse right button and confirm the message box, or just click on a page in the Page List.



Step5: To output the new Logo to the TV screen, please click the Logo On/Off button. Remember that the Logo shows only in the "Play" / "Run" / Live modes.



Step6: You can also click the B / F button to show Logo in the Foreground or in the Background.

Background **Foreground**

Clock & Stop Watch

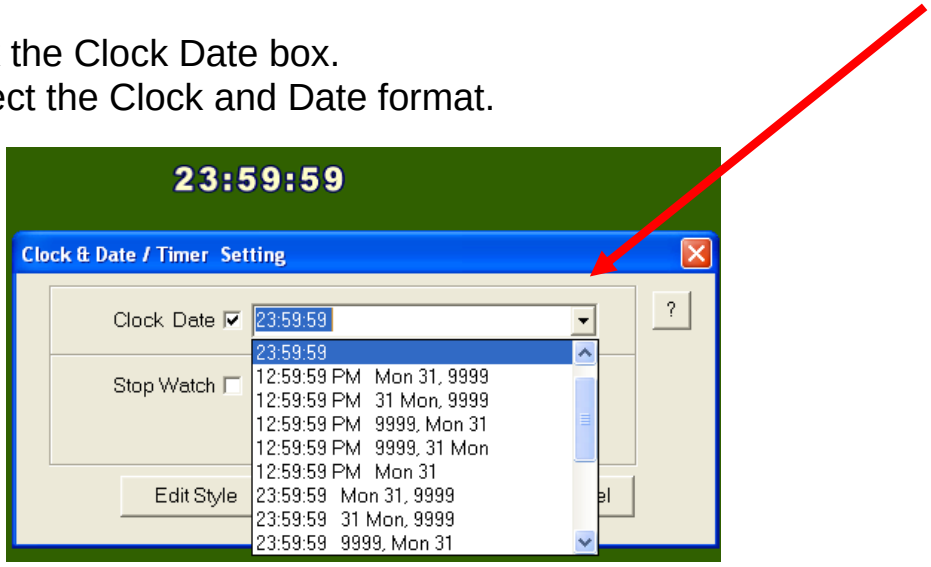
Clock

To insert a clock object on the screen, first click the following button

1. Setting

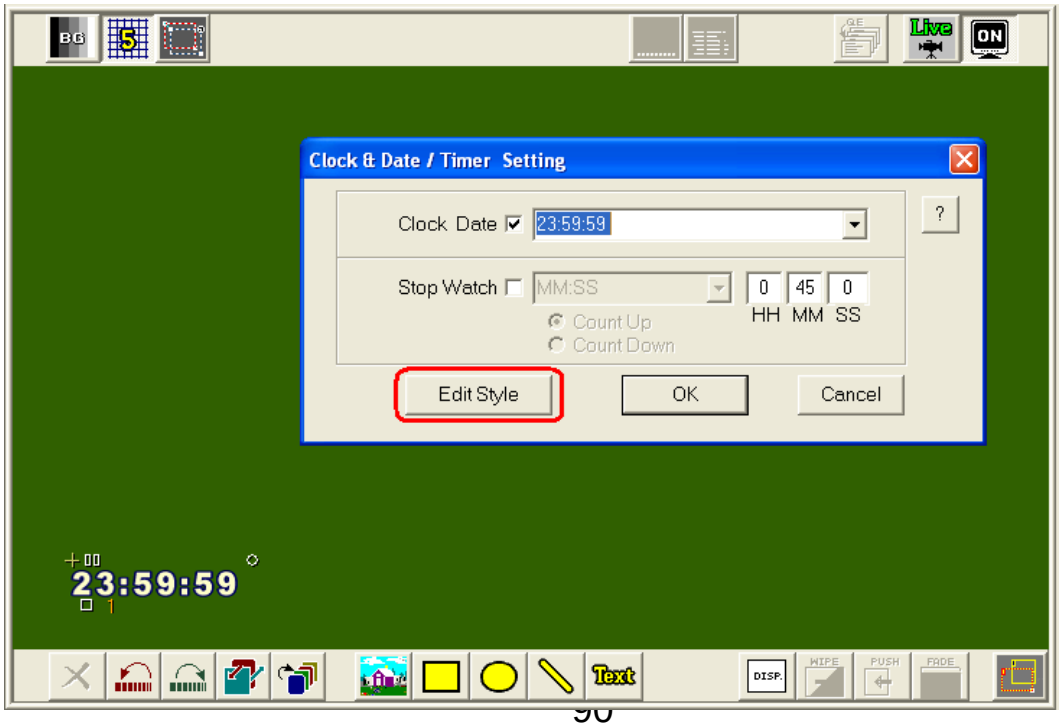
Click the circled button to launch the Clock properties dialogue box.

1.) Tick the Clock Date box.
2.) Select the Clock and Date format.

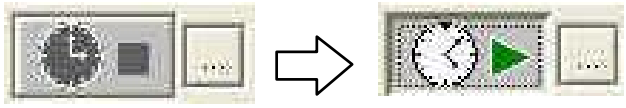


2. CG Position

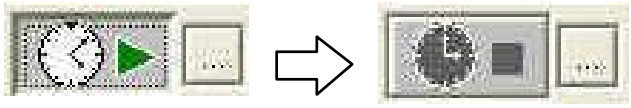
Click the Edit style button then CG Position button to adjust the clock layout. The text size, colour and position can then be adjusted also.



3. Start



4. Stop



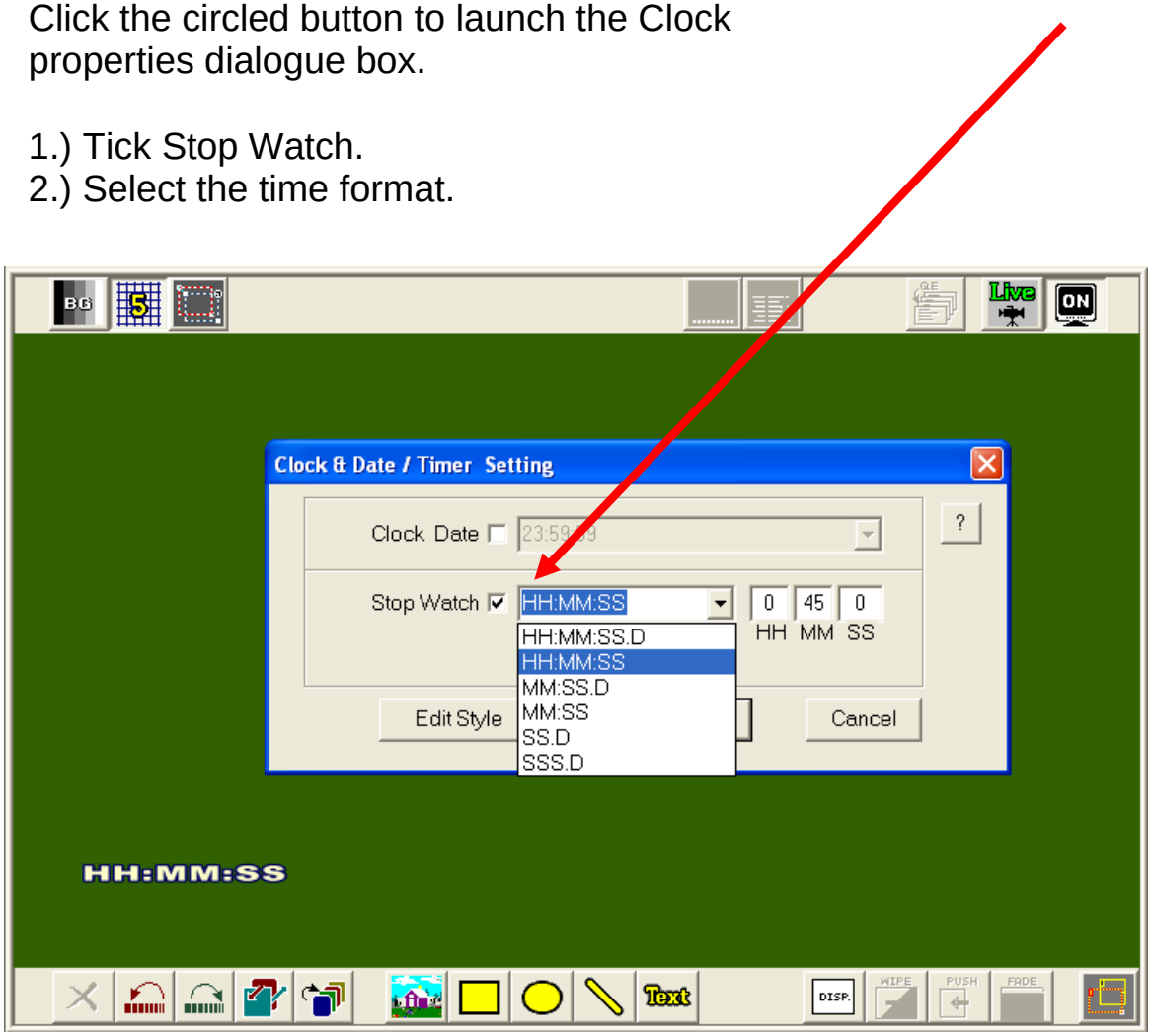
Please note that the Clock won't show on the PC's screen. It is only shown on the TV screen.

Timer / Stop Watch

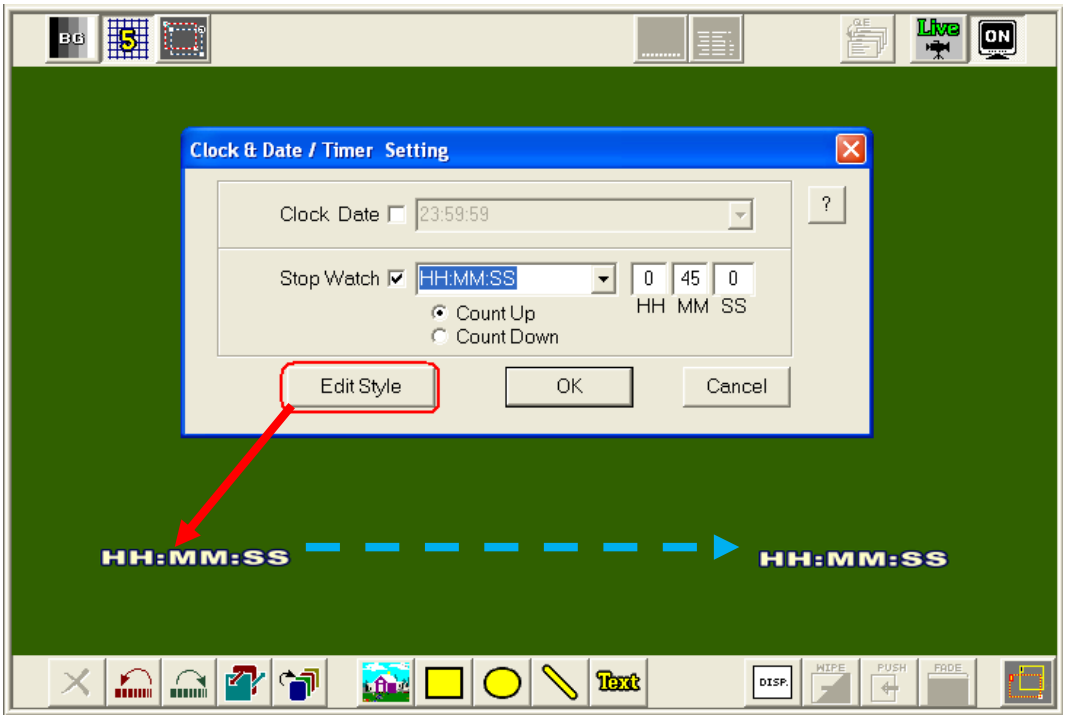
1. Setting

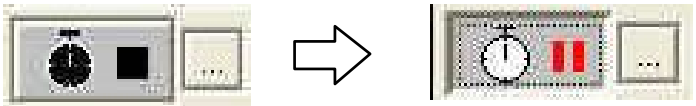
Click the circled button to launch the Clock properties dialogue box.

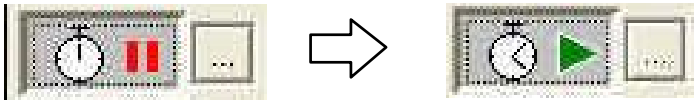
1.) Tick Stop Watch.
2.) Select the time format.

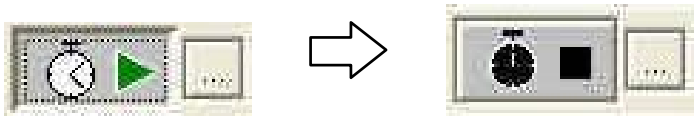


2. Edit Style CG Position



3. Pause 

4. Start 

5. Stop 

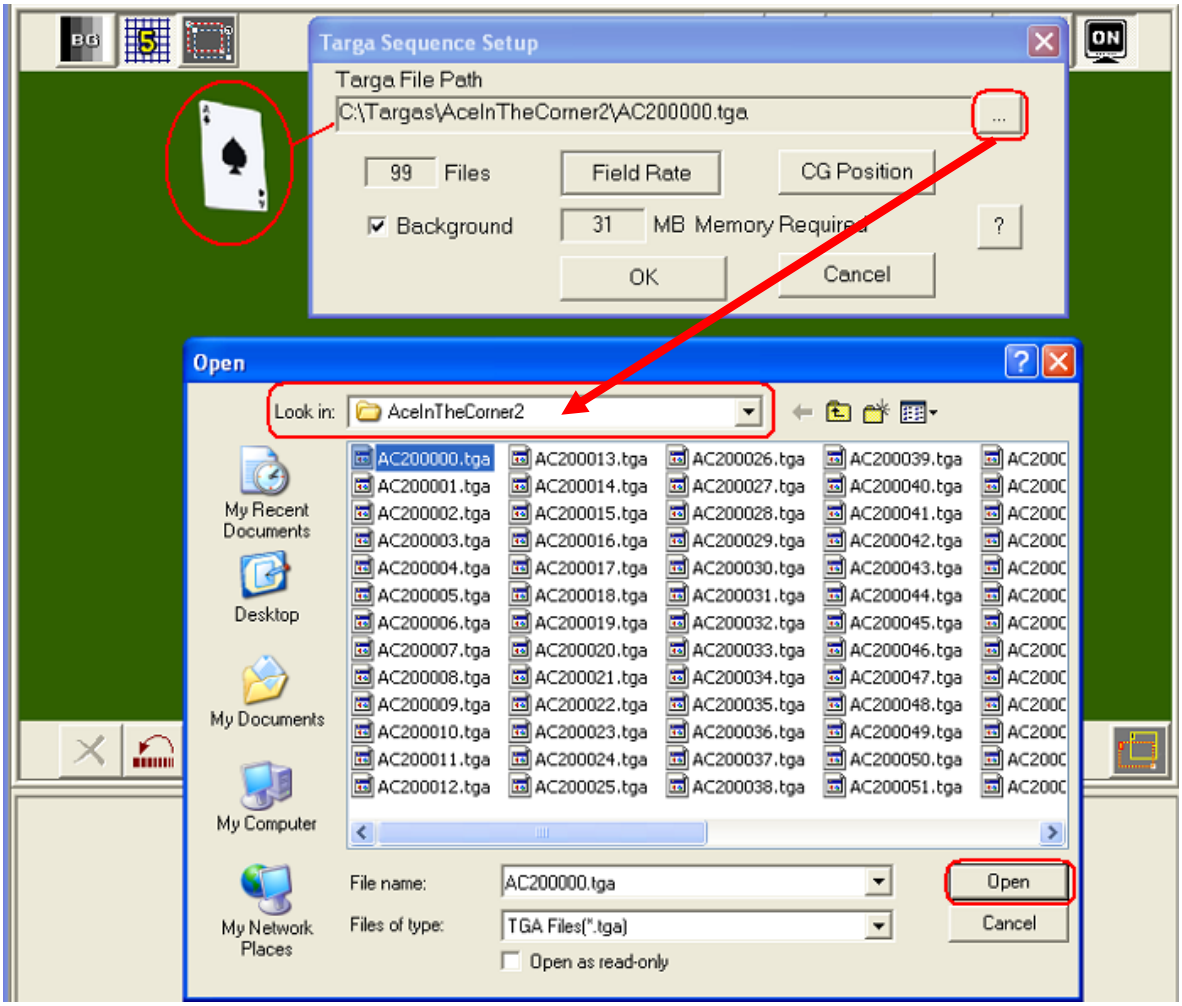
Please note that the Timer will not show on the PC's screen. It is only shown on the TV screen.

TARGA Sequences

You can import 3D animations or motion pictures as a sequence of targa files. Click the following button to prepare a targa sequence.

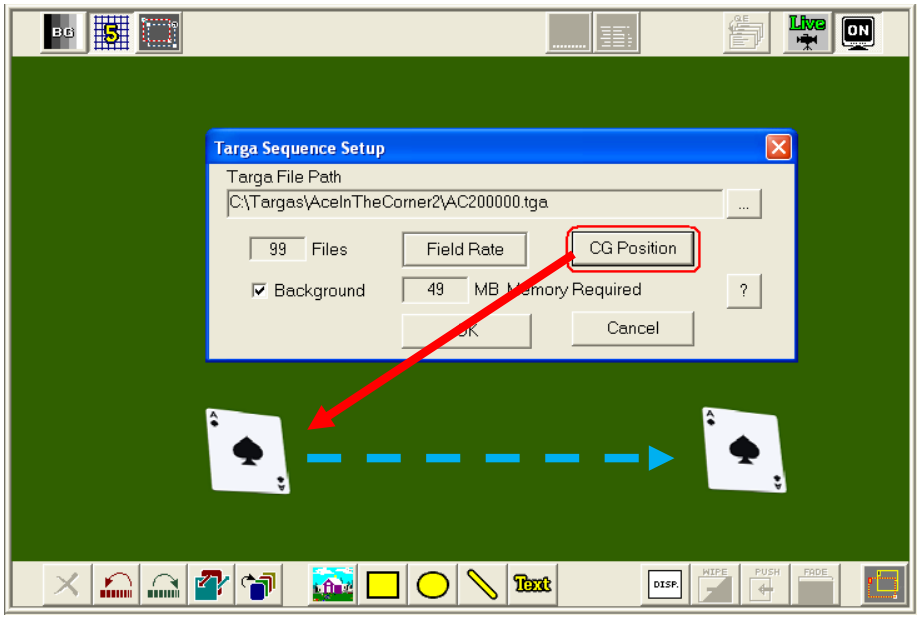
1. Setting

2. Select Targa Sequence



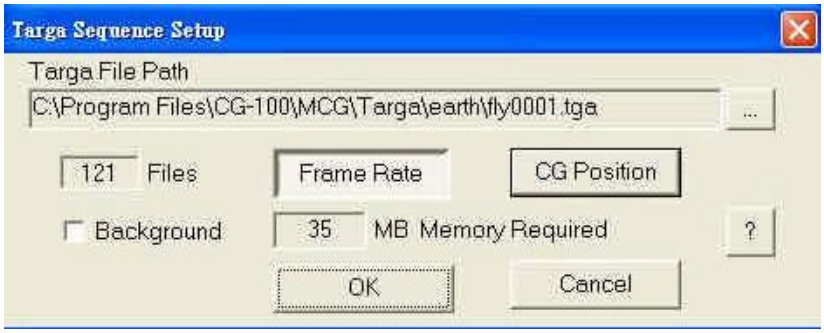
3. CG Position

Click this button and then mouse drag the item to adjust the size and the position of the Targa sequence on the screen.



4. Background/ Foreground

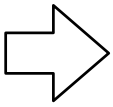
Tick the check box to set TGA background or foreground display.



5. Memory Requirement

Check if the computer has enough memory for the TGA sequence.

6. Play Targa Sequence

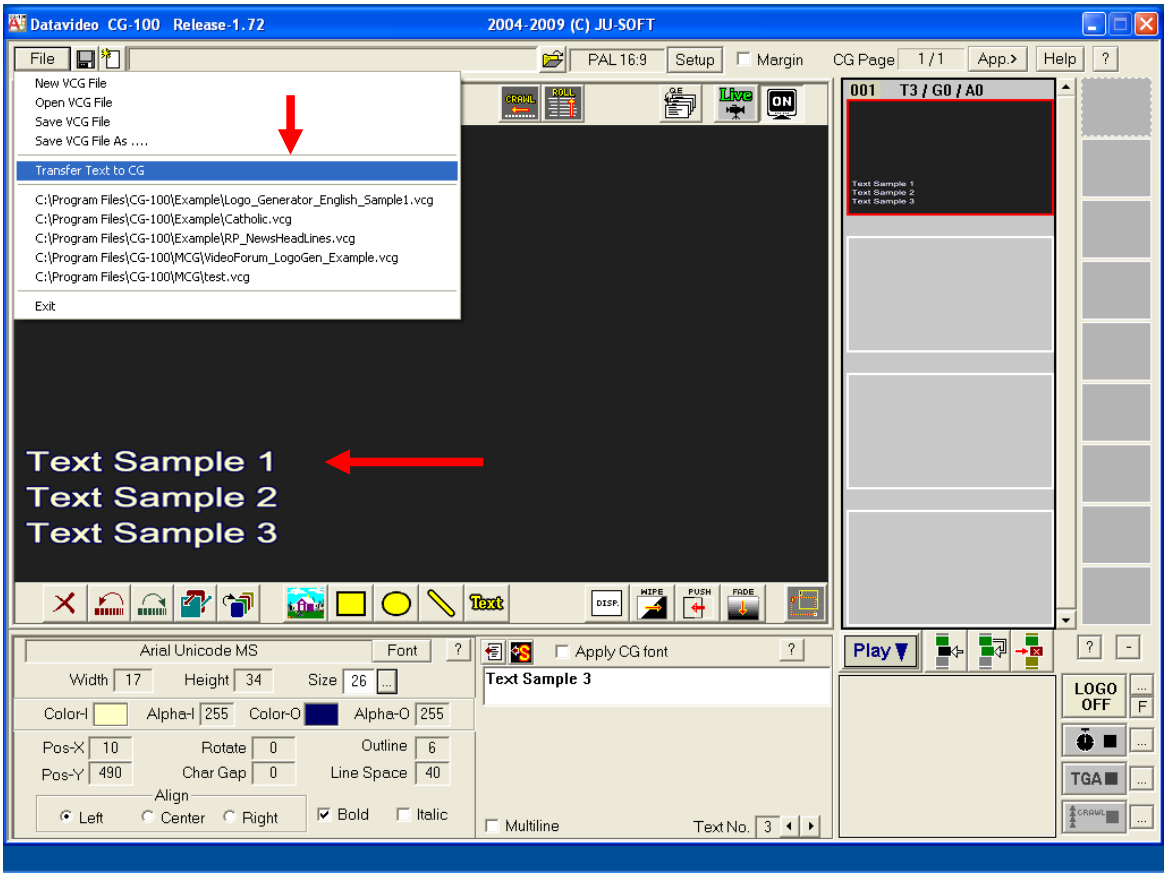


7. Clear Targa Sequence

Please note that the TARGA won't show on the PC's screen. It is only shown on the TV screen.

Transfer Text to CG function

The transfer text to CG function in CG-100 generates subtitles from text files.

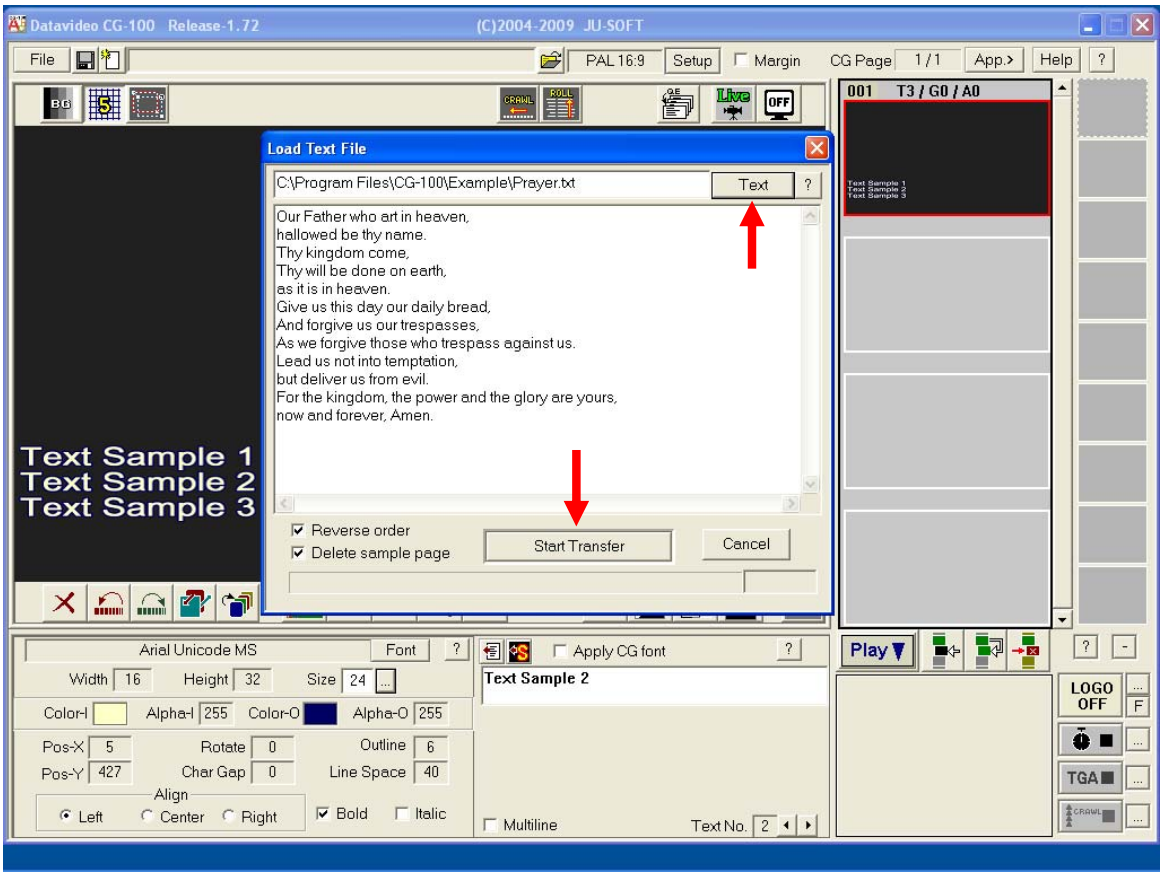


Before doing text to CG transfer, a sample page must be prepared like the above picture. Three text string objects are placed on the lower third of the working area. These will represent the subtitles so there will be three lines of subtitle text per CG page. You can set as many text samples as you like. The positions, colours, and fonts of these subtitles will be set based on the sample page.

The text objects on this sample page should be single-lined only as using the multi-line version will cause incorrect display later on.

Go to [File] dropdown menu [Transfer Text to CG] to open the following dialogue box.

Click the [Text] button to select a text file and show the content. The following is the content after a text file is opened.



Please note these principles while you prepare the text for subtitle.

Every line of text substitutes a string object. Every string object for this sample page has its own sequence number beside it. In this example, there are 3 string objects on the sample page, which means the maximum number of lines of CG will be 3 lines in a page and follow the sample page sequence.

The subtitles in a page can be less than 3 lines. To do this, enter a blank line separating two groups of text. Text under the blank line will be on the next page.

Tick [**Reverse order**] to place the subtitle conversely. Reverse order will place subtitles from bottom to the top. This way there will be less text over the screen.

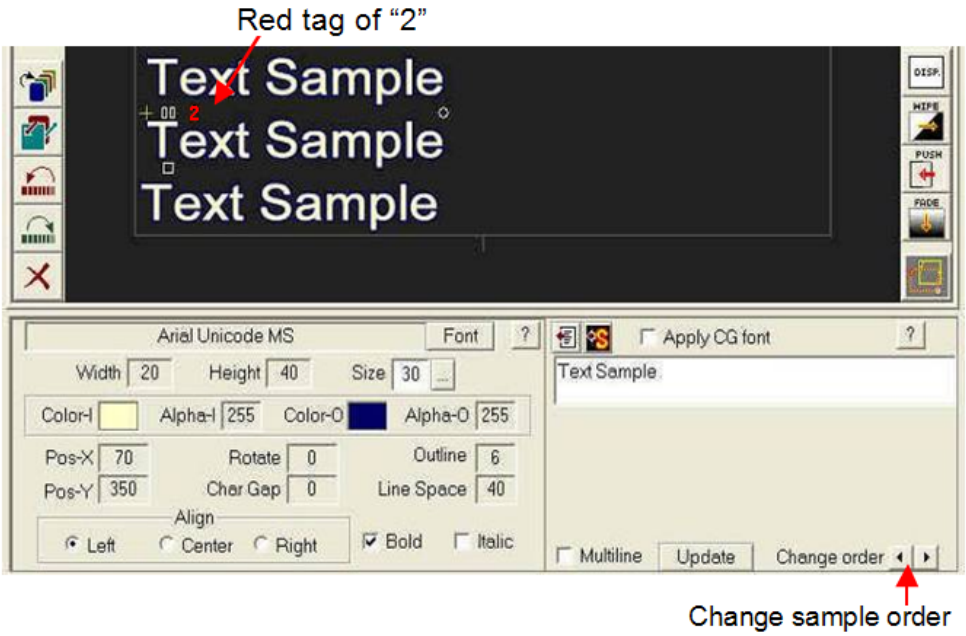
Tick [**Delete sample page**] to delete the first sample page.

Click [**Transfer**] button to start transferring from text to CG.

You can see the result as below :

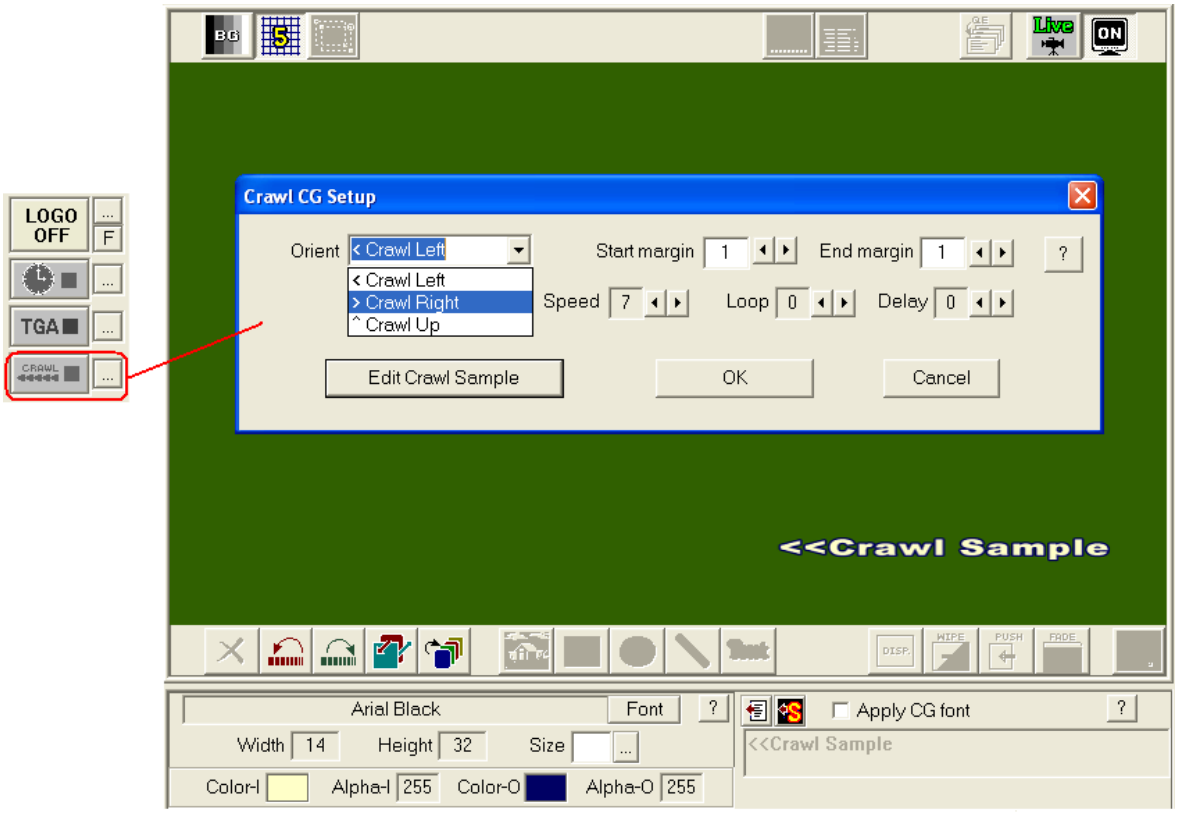
Number Tags for text objects

In order to help you verify the sequence of text samples in the sample page, there is a number tag for every string. The first string will be marked in a red tag as number 1, the second will be 2 and so on.



Try using the wheel on the mouse to scroll through CG pages. In this version you can scroll page lists by rolling the mouse wheel. In Live CG mode it can be an easy way to display subtitles.

Single Text Crawl Button



This button in the CG-100 layout screen allows a single horizontal or vertical text crawl to be set up quickly and easily.

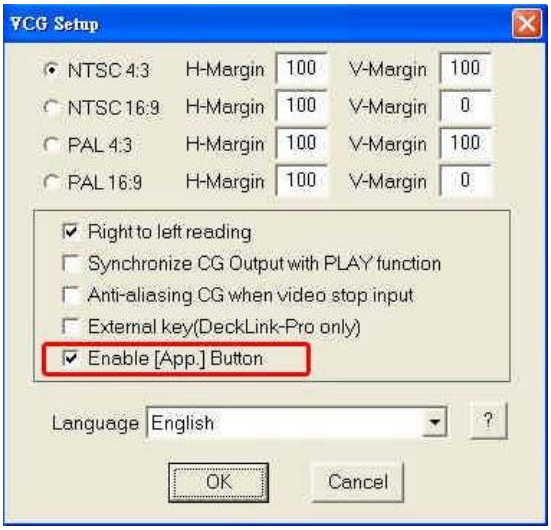
The <Crawl Left and ^Crawl Up options are fairly straight forward and can be modified for size, colour, font, position and kerning in the same way as other text objects except setting up a display box is not required.

However, the >Crawl Right option is designed for Right to left reading fonts like Arabic and Hebrew. If you wish to use this feature please first set up CG-100 for Right to left reading. See ***page 17*** also.

App Button

Logo Generator

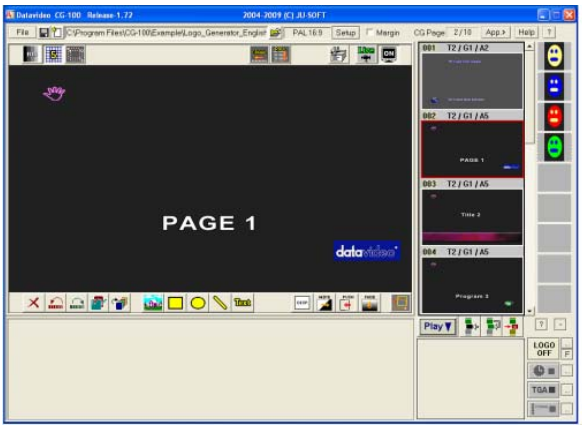
Logo Generator is a special plug-in application of CG-100.

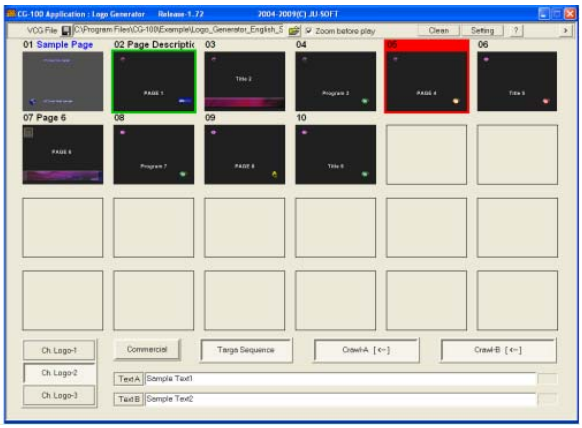


To enable this application, please go to SETUP and tick “Enable [App] button”. If you do not need this plug in, remove the tick so that the App Button box is empty.

Please note that when you click into the logo generator, the normal CG100 function will be hidden until next time the program is restarted. Even when you click > back to the CG-100 layout editing window, it looks like the ordinary CG-100 window but it is not the same function.

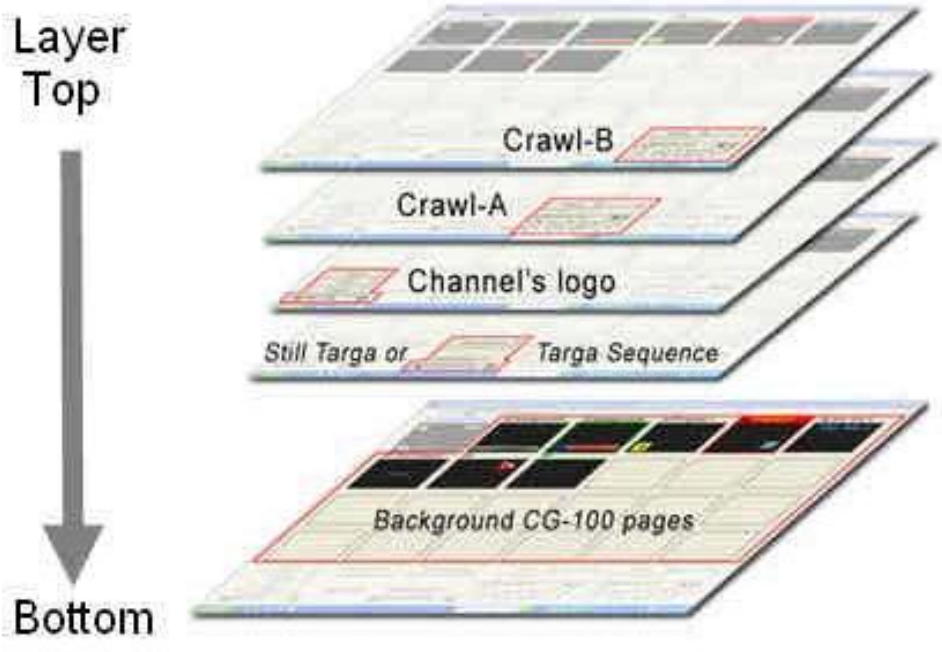
Features of the Logo Generator





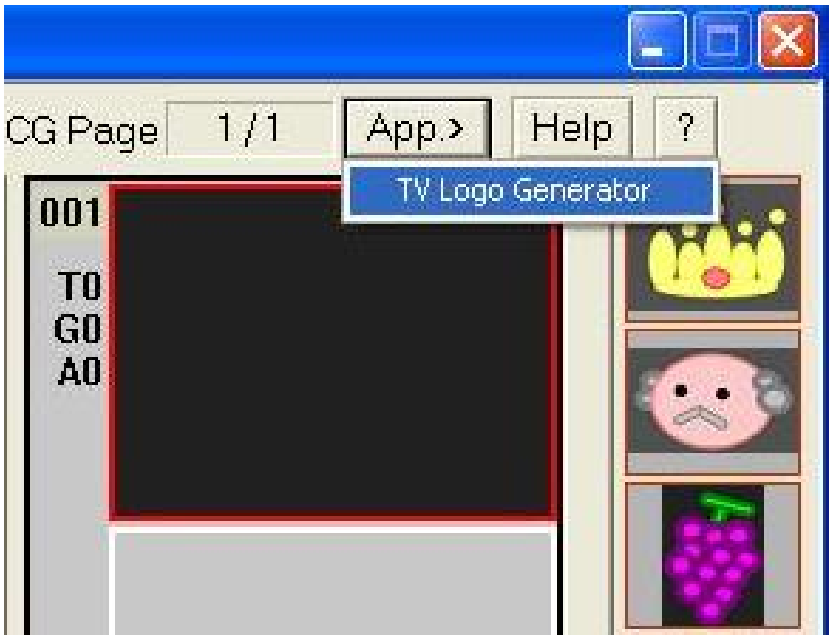
- 5 Independent layers of titles and graphics.
- 1 bottom layer of CG template page to allocate the positions and colours of Targa sequence, logo, Roll /Crawl strings.
- 23 CG backgrounds for Logos, Titles or other Graphics.
- 1 upper layer of animated Targa sequence.
- 1 upper layer of a still Targa graphic for TV Channel’s logo.
- 2 top layers of Roll/Crawl objects for emergency messages.

What can you create in the Logo generator?
Where to set up the objects? (See Red boxes)



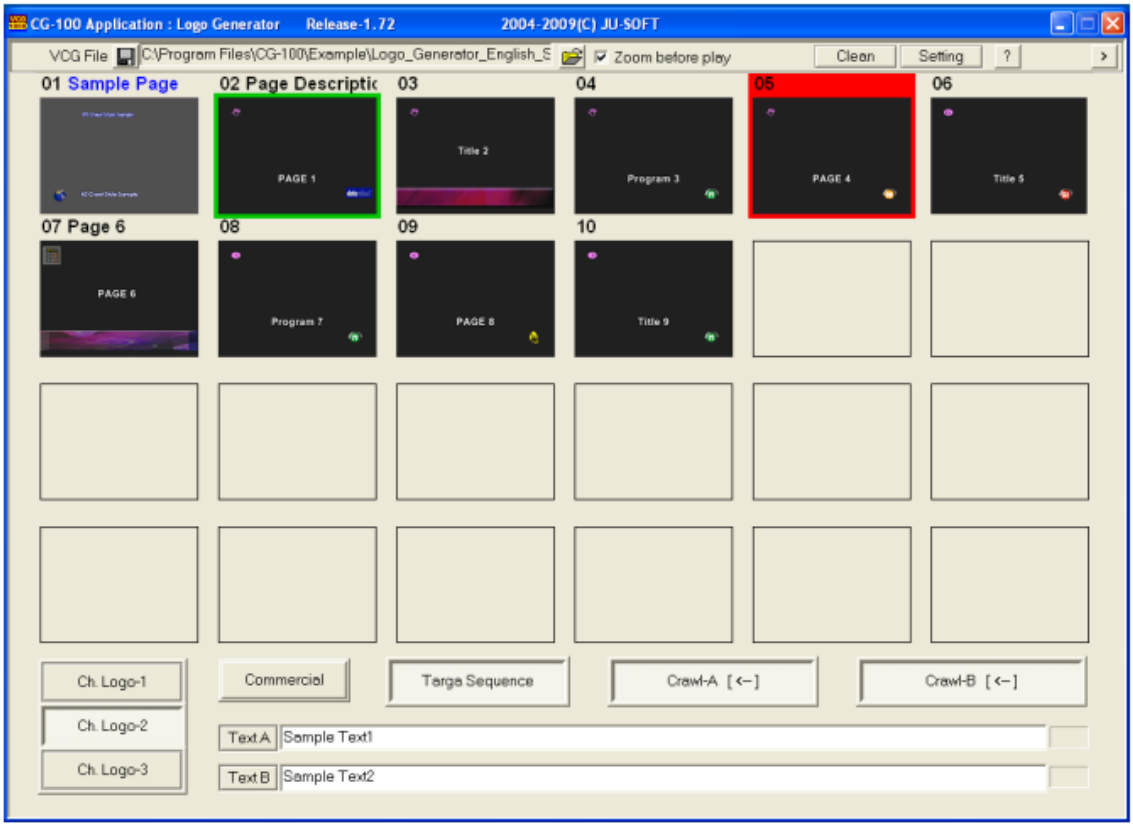
How to start the Logo Generator

To open the CG-Logo generator click the [App.] button, and then select [Logo Generator] to launch it.



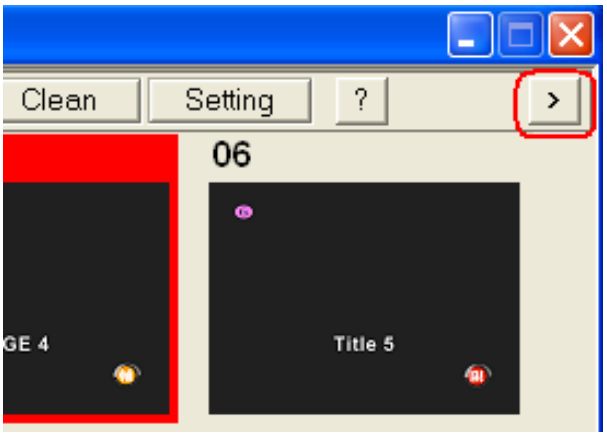
Logo Generator Screen Views

Page View

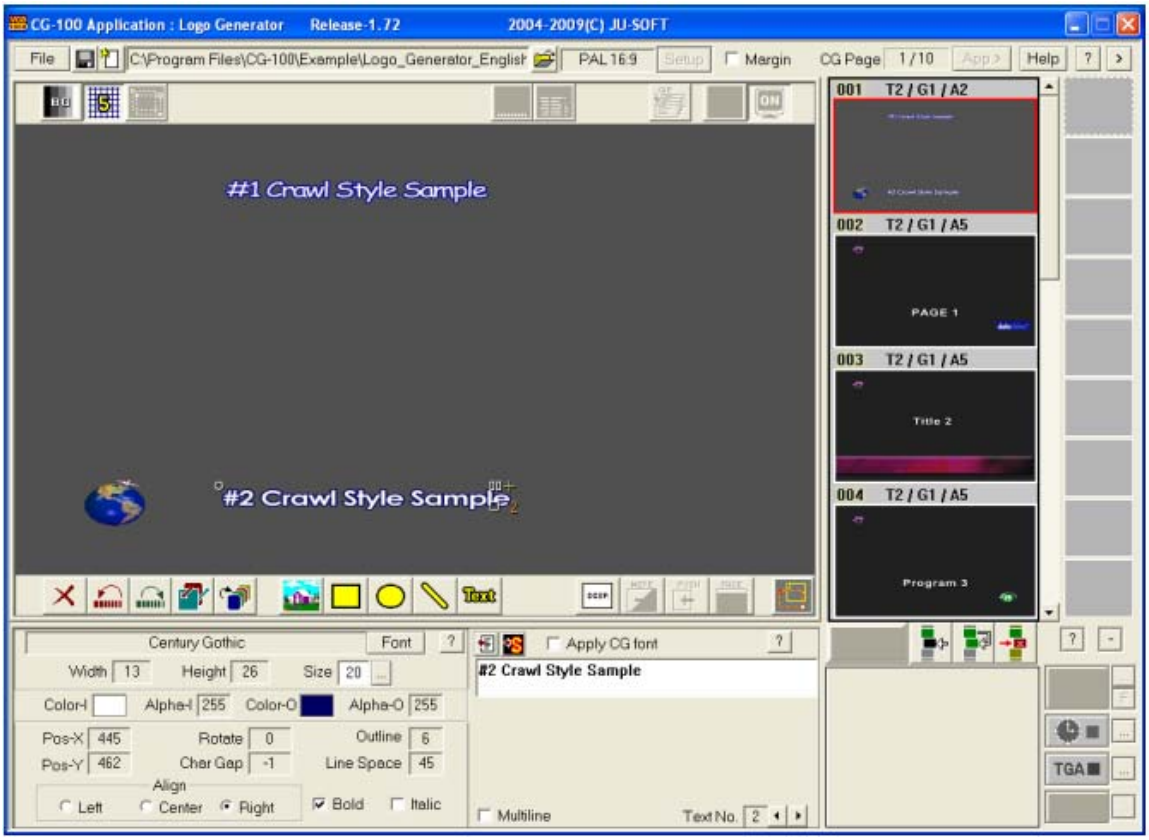


The first page (01) displayed in the top left hand corner of the Page View is the Sample Page and this cannot be displayed on the TV. It only confirms the layout positions for Crawl A, B and any Ch Logos or chosen Targa Sequence.

To switch from the Logo Generator Page View to the Layout View click the arrow button in the top right hand corner of the Page View display.

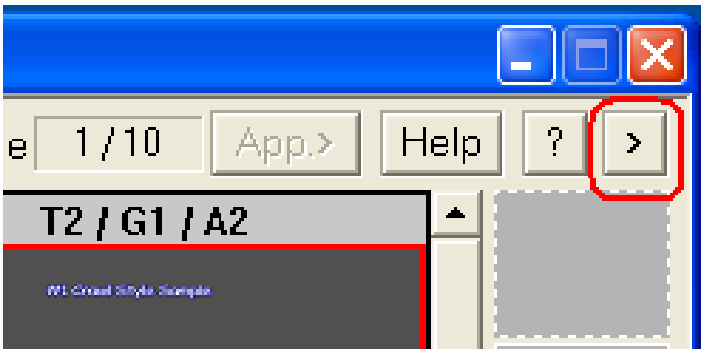


Layout View



Layout view looks like the normal CG view but it is not the same. You have access to features which allow you to change the settings for font, size, colour and placement of the Crawl text. You can also size and position Targa Sequences or add a still Logo or graphics.

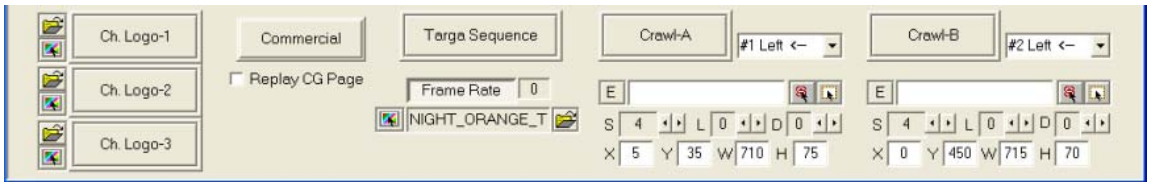
To switch from the Logo Generator Layout View back to the Page View click the arrow button in the top right hand corner of the Layout View display.



Page View Buttons and Settings

CG-100 VCG File Save and File Open/Browse buttons

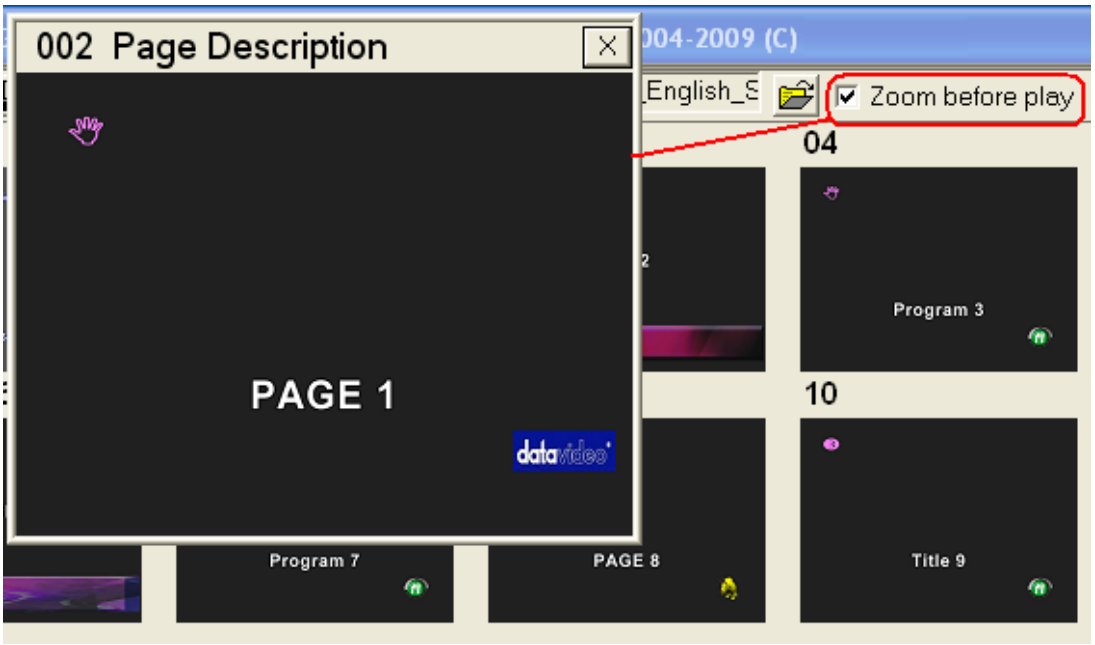
To see the file and settings options for the Logos, Targa Sequence and Text Crawls A and B press the Setting Button.



To return to the normal view click on the Setting button again.

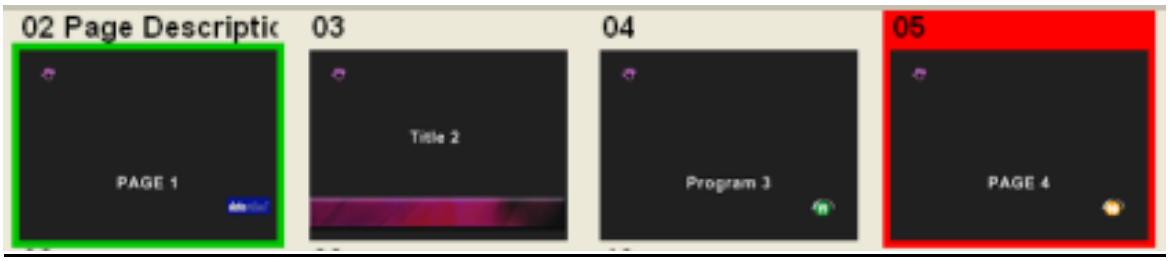
Zoom before play

When this box is ticked a mouse left button click on a page will select and Zoom the page so it is displayed larger on the screen for 6 seconds or until the mouse pointer is moved away from the page.



Logo Generator Background CG Pages

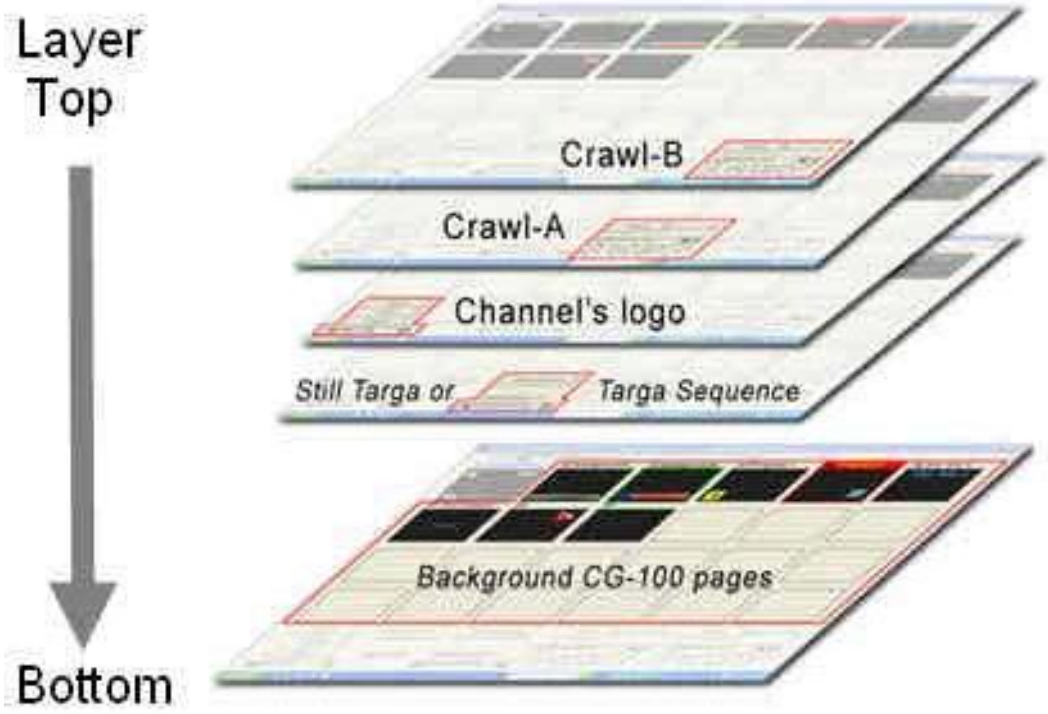
Each page is marked with its own page number and can have a page description too. These details will show in bold type above each page. If there is no set description, CG-100 will use the first text object in the page as the description and this will display in red text.



Red or Green Frames

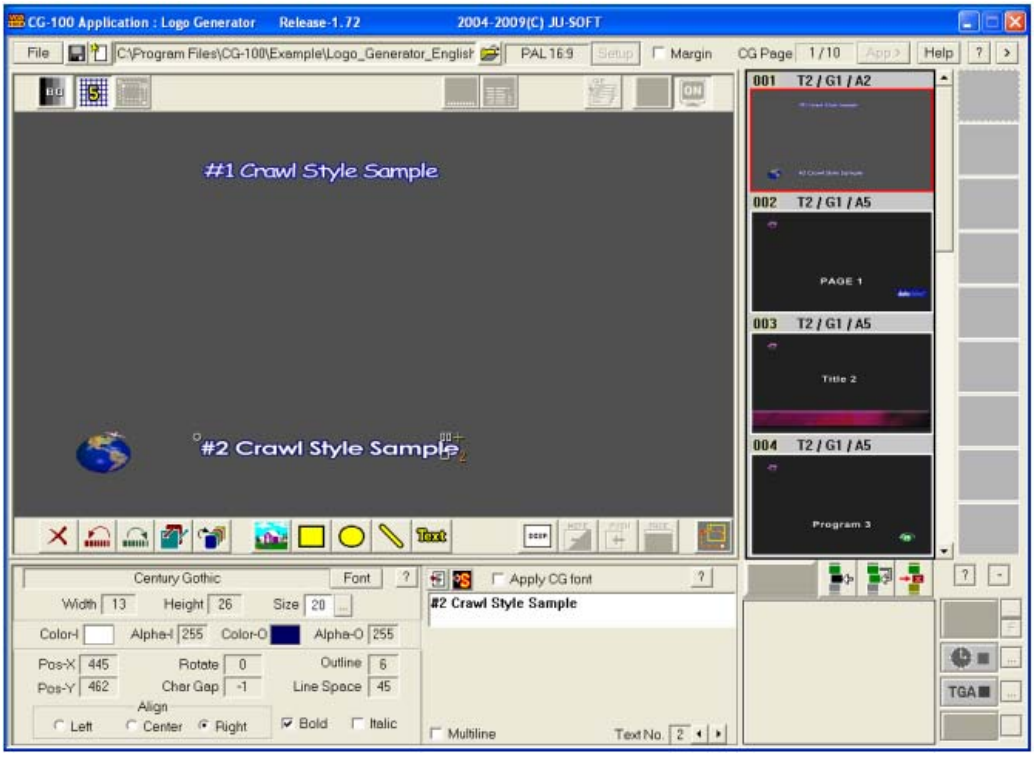
A Page with a Green frame – is the Logo page that you can edit immediately when you click <›> back to the Layout view mode.

A Page with a Red frame – is the Background CG page that the “Logo Generator” is going to play out to the TV. Every object in this page will be displayed in the bottom layer.



Setting up a Sample Page

First we have to return to the Layout view mode.



This is so we can see the Layout of Page 01 the Sample Page. Here we can set up the dummy logos, Targa sequence and sample crawls with their required animation boxes. Please note the size and the position of these items will directly match the output result on the TV.

The types of dummy in the initial sample page are:
1. TV Channel's Logo: Although you can only output one logo at any given time, you are able to set up three different logos. All three dummy logos have specific naming rules. The three logos should be named as Logo1_.tga, Logo2_.tga, and Logo3_.tga. The first letter of these file names should be a capital letter. You may add something like Logo1_channel.tga, or Logo2_TV.tga, etc.

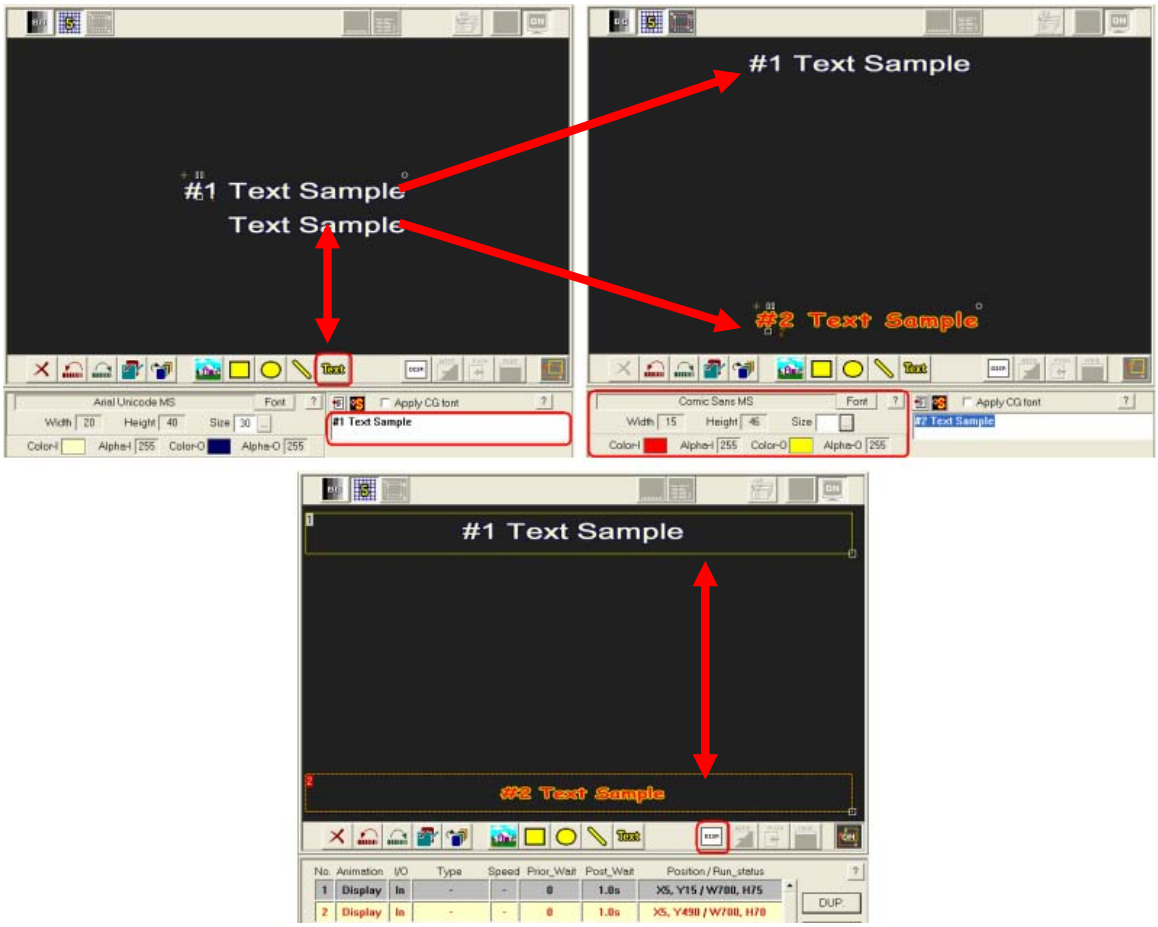
2. Still Targa or Targa Sequences: You can set one Targa_.tga or use the Targa_earth.tga image as the dummy (again the first letter of the file name should be a capital). Again this dummy will affect the size and position of the real targa during output. You do not need to set any animation box for this Targa Sequence.

3. Crawls: You can only output 2 crawls, Crawl-A and Crawl-B. You can select from 4 crawl types for each. Crawl types 1 and 2 run horizontally across the screen. Crawl dummies 3 and 4 run vertically up the screen and are meant for use with Asian Fonts.

Creation of Text Crawl Samples

To create the text Crawl-A and B samples, please click to create a Sample Text object on the blank sample page.

Change this sample crawl text content to start with #1, #2, for horizontal crawls or start with #3, #4 if you require vertical crawls for Asian fonts.



Change the text font, text size, colour and position in the same way as an ordinary CG text object. See page 36.

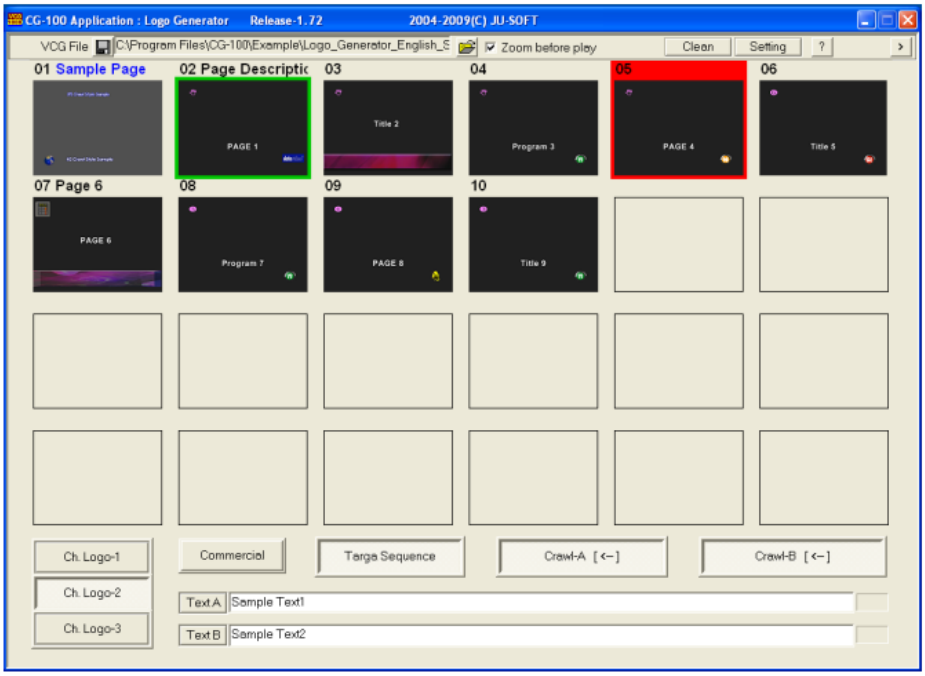
Next set up a display animation box for each line of text sample crawl. Animation boxes for sample crawls #1 and #2 will be horizontally longer and sample crawls #3 and #4 will be vertically taller because of the directions in which the real text will crawl (across and up).

The real text crawls will then follow the set animation box paths.

Adding background CG Pages

After setting up the sample page, you can then create 23 more (background) CG pages; adding images, text etc. You can also set different “animation boxes” to create a background page just like an ordinary CG-100 page.

Please note: even if you only need to display one logo for your TV station, besides the Sample page, you still have to ADD a blank background (page 02). Otherwise the logo output will not function correctly.

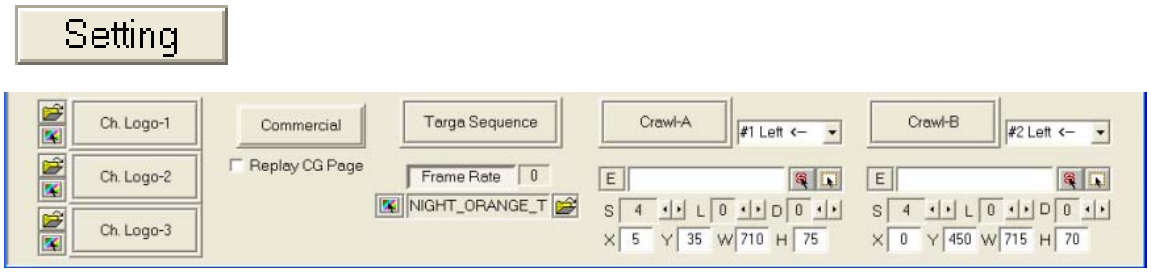


Just like the picture above, from page 02 to page 24, there will be up to 23 background pages. No matter how many objects are in a page, all will be output as the bottom layer of the logo generator. If there are animation-boxes contained, the display effects will also be executed sequentially once for each page.

Click > to go back to “Logo Generator Page View”. For example, if you have set 8 background pages, you will find 9 Pages in the Page View including the Sample page. Double click on any page in Page View to output it to the TV. If there are any animation boxes on this background page, they will be played in the order you set in the animation list.

Tips: To display more than one logo, besides using the Logo 1~3 buttons, you can also put more graphic logos on the background pages.

Adding a TV Channel's Logo



Click on the settings button to open up the setting parameters.

Open a Ch Logo image by clicking the "open file" button.

The three buttons: Ch. Logo-1, Ch. Logo-2 or Ch. Logo-3 refer to the three dummy images set on the sample page. If you want to adjust the position and size of the Logo image on the sample page, click the button

to go back to CG-100 layout editing mode. And then adjust the Image sizes and positions just like ordinary CG editing.

To output the TV Channel's Logo, click on one of the three buttons, Ch. Logo-1, Ch. Logo-2 or Ch. Logo-3.

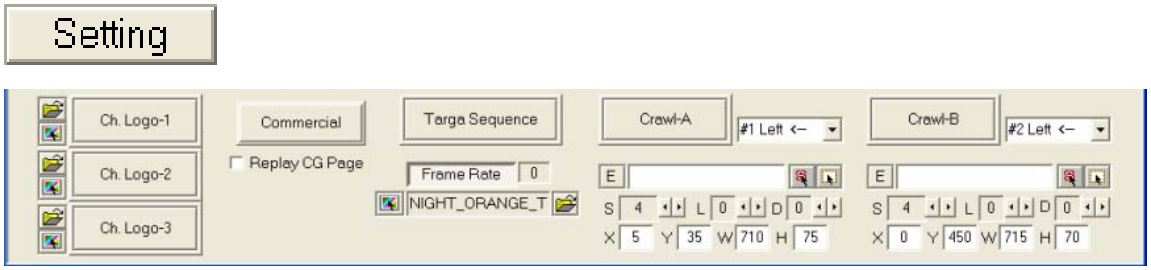
To clear the TV Channel's logo, click on the active button again.

Please note: even if you only need to display one logo for your TV station, you still have to ADD at least one blank background CG page. Otherwise the logo output will not function correctly.

Adding a Targa Sequence

Before talking about adding Targa Sequences, you first have to prepare the Targa Sequence using 3rd party animation or graphics software. This is software is not supplied with CG-100. Export the image animation from the 3rd party animation or graphics software as a Targa or .TGA sequence. This sequence of .TGA image files can then be added as a Targa sequence within a CG-100(.vcg) project.

Save all common .TGA files to the same folder on the computer. Do not place two different Targa Sequences in the same folder even if they have unique names as this may stop the playback of the Targa sequence.



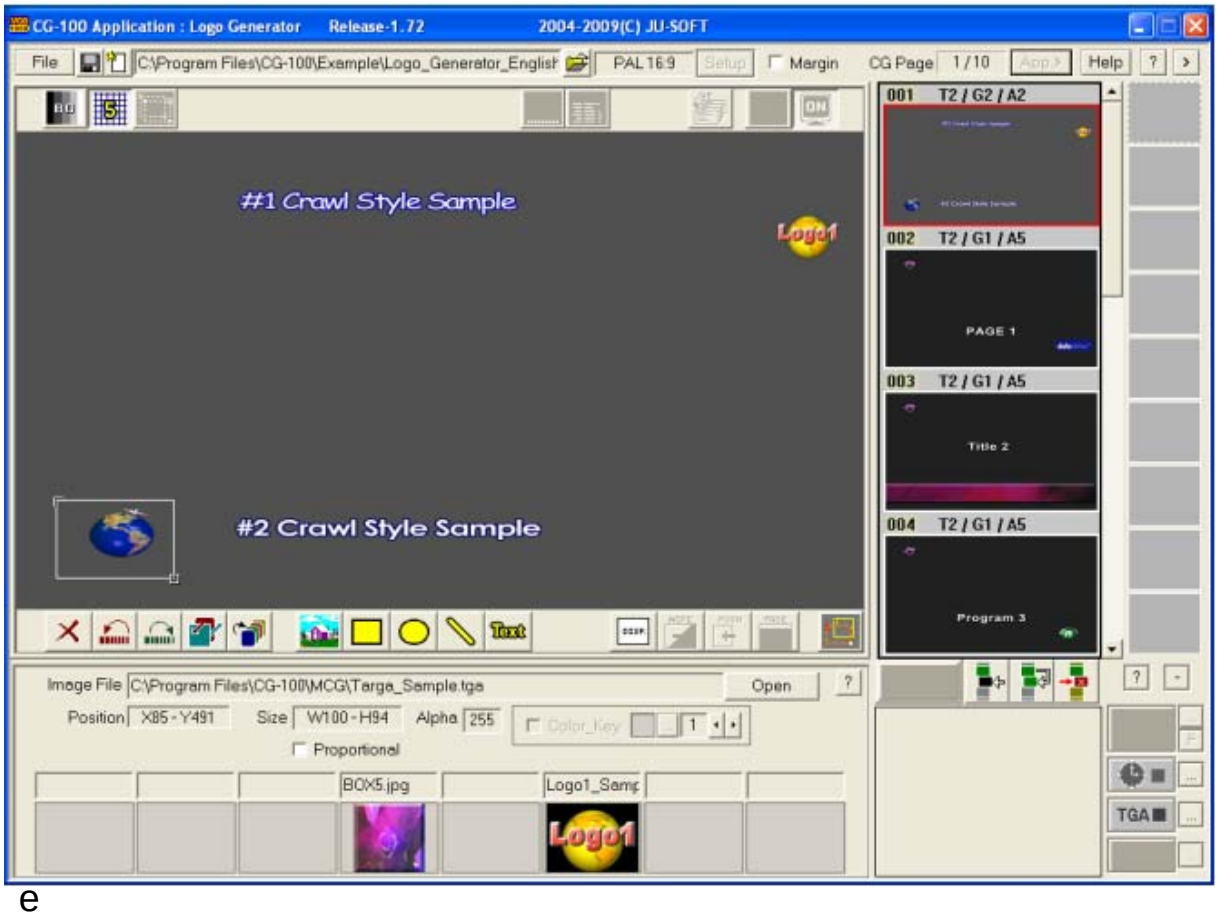
Click on the settings button to open up the setting parameters.

Open a Targa Sequence folder by clicking the “open file” button.

Select the first image in the sequence for example fly0001.tga.

Now click

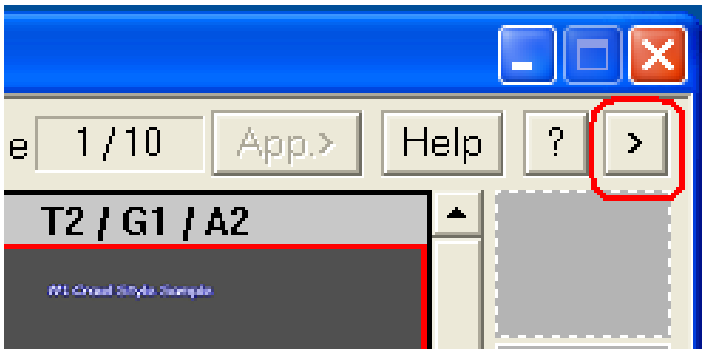
to go back to Page 001, the Sample Page in Logo Generator Layout view.



e

The current Targa Dummy image will be shown with a box around it. Drag the box handles to position and size the Targa in the correct part of the screen.

Return to the Logo Generator Page view.



Click the “Targa Sequence” button to output the Targa Sequence to the TV screen. Check that it is displaying in the right place and at the correct size, make any final minor adjustments.

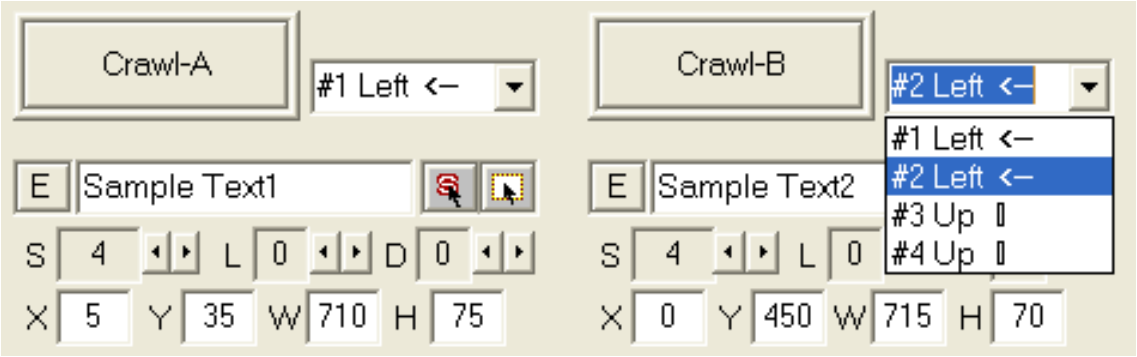
You can also set the playback frame/field speed for the targa sequences. There is a toggle button to set the speed of the Targa playing back. When the button is recessed, it is in frame mode; that is 30 frames /sec for NTSC and 25 frames /sec for PAL. So the Targa images will be switched following the frame speed.

If the button is not recessed it will be in Field mode, here the Targa images will be switched following the field speed: 60 fields / sec for NTSC, or 50 fields / sec for PAL.

Alternatively you could put a still targa image here, instead of an animated sequence.

Crawl-A / Crawl-B Set Up

As some languages use vertical writing, Logo Generator provides 4 dummy samples, 2 horizontal ones and 2 vertical ones. But for now we will discuss #1 and #2 dummy crawls as they are horizontal only.



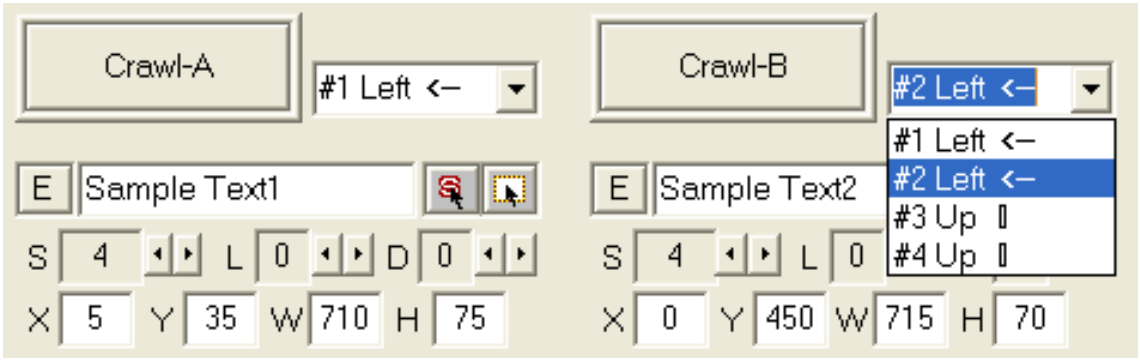
Use the Crawl-A and Crawl-B buttons to output the crawls to the TV. Use the drop down menu list to the right of these buttons to choose the direction of the crawl.

The default crawl directions for #1 and #2 are from Right to Left. If the opposite crawl direction is required then the Right to Left reading box will need to be changed under the Set Up button in Page View. When this is changed the CG-100 program will need to be restarted for the change to take effect so it may be wise to save any amended .vcg files first.

Click on this button to enter the crawl text that will be shown on the TV. This crawl text can be up to 500 letters or ANSI characters long.

Click on this button to change the text Style. When this button is clicked the screen will switch from Logo Generator Page View to Layout View. The selected Crawl Dummy Text will then need to be re-selected and its font, size and colour changed using the Parameter Panel below the Layout View work area.

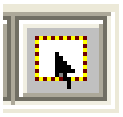
Once finished switch back to the Page view and click the crawl button. This is so the updated crawl style can be re-viewed on the TV output.



This section allows the speed of the crawl to be adjusted faster or slower.

This section allows the crawl text to be looped on screen for a set number of cycles.

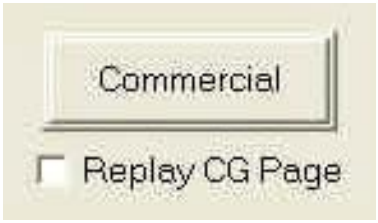
This section allows a delay in seconds to be set before the crawl text is seen on screen again or looped.



This button allows you to quickly jump to the Logo Generator Layout View. So the size and position of the text crawl display box can be adjusted manually by mouse and eye judgment.

This section allows numbers to be typed in to fine tune the position and size of the crawl display area.

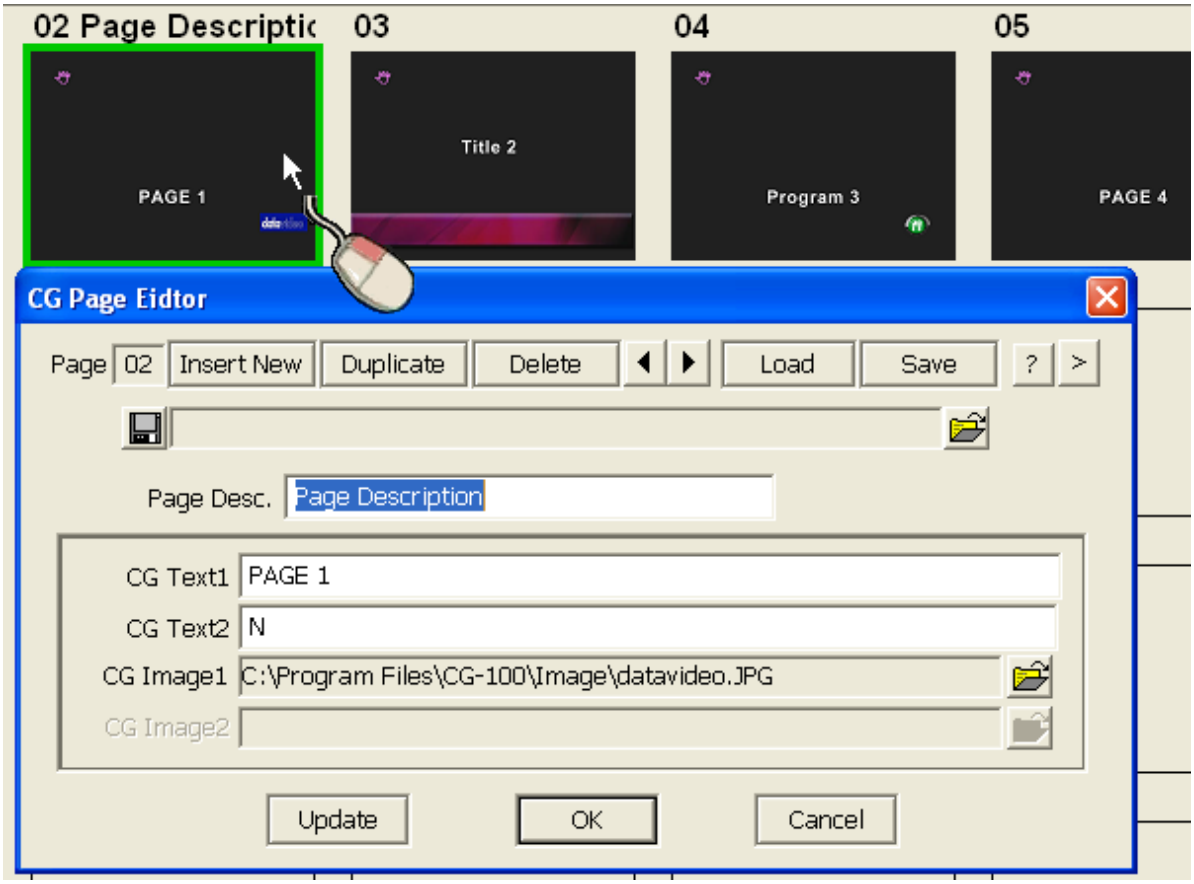
Commercial Break



- Click Commercial button to clear all the output objects except for TV Channel's logo.
- Click again to restore everything back on screen including objects and the current background CG page.
- Tick the selection box if you want to re-play all the animation boxes in the current background CG page one more time.

CG Page Editor

In order to make user operation easier and more flexible, you can directly edit standard items in all pages, including the Sample Page and the 23 background CG pages in the Logo Generator window. Use a Right mouse button click on a background CG page to open the CG Page Editor window for that page.



Confirms the page selected for edit.

Used to move the selection the previous or next page.

Inserts a new page to the right of the selected page.

Duplicate the current page and move the selection to the new page.

Delete the current page.

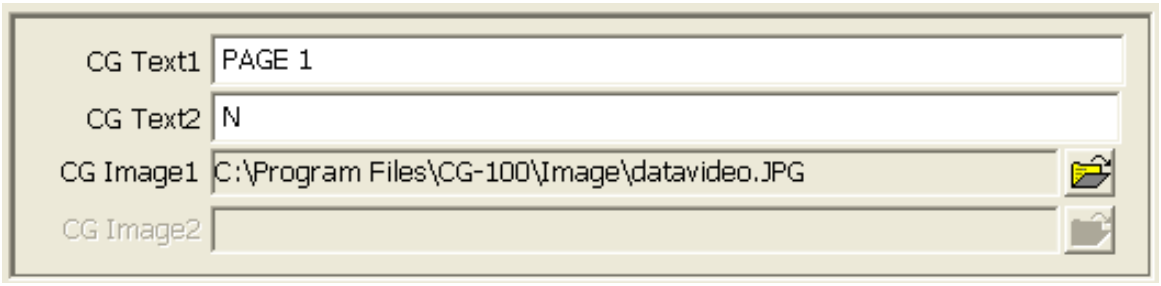
Replaces the selected page by loading a pre-prepared single page file (.pcg) into this position within the current Logo Generator (.vcg) project.

Saves the selected page only as a single page file (.pcg).

Each page is marked with its own page number and can have a page legend/description too of up to 14 characters. These details will show in bold type above each page. The Sample Page legend is always in blue text. A normal page legend will be displayed in black text. If there is no set description, CG-100 will use the first text object in the page as the legend and this will display in red text. If no legend is required replace the **Page Desc.** text with a spacebar character “ “.

Note: The Page **01** legend “**Sample Page**” cannot be changed.

Each page can contain up to 2 text objects and 2 image objects. Text objects can be typed in directly and then positioned and styled in Layout View. Image objects can be loaded from a file location and then positioned and sized in Layout View.



Once you are happy with the page objects and description click on Update or OK to confirm your actions and close the Page Editor window. Remember to save your (.vcg) project at this point if you want the changes to be permanent. The Cancel button will discard any changes and close the Page Editor window.

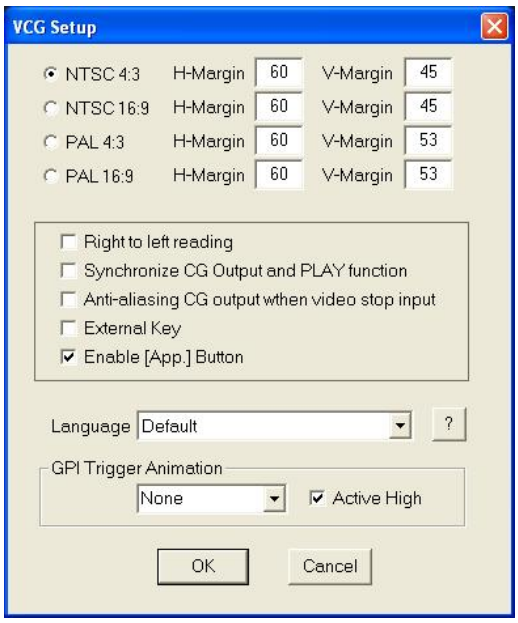
DL-Renderer

Introduction

The DL-Renderer is PC software to enable the use of DeckLink cards. The main purpose of separating the CG-100 software and the DeckLink card functions is to ensure that video is output all the time even when CG-100 software is shut down. For the earlier versions before version 1.40, CG-100 executes DeckLink card's functions internally within the CG-100 software. However, when CG-100 is stopped, the result is the DeckLink functions are stopped too. In this case only a black screen is output. So we now use the DL-Renderer as a bridge to execute any DeckLink functions. Thus, even when CG-100 software is down, the video can still pass through the DeckLink Card.

After installing CG-100 version 1.72, the DL-Renderer software is always on and executes the function of DeckLink card automatically. You will see the small DLR icon in the Windows System Tray as below:

Setting DL-Renderer

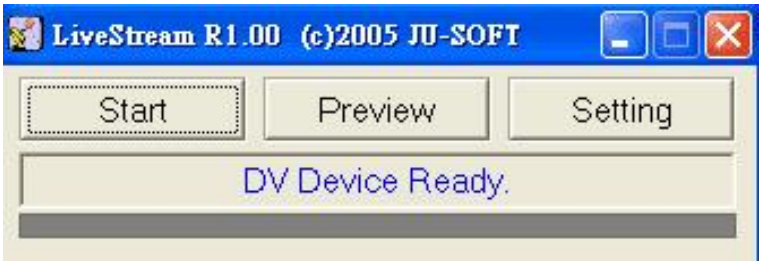


Use the Setup dialogue box within CG-100 to set the required DeckLink Card functions.

Bonus Utility of CG-100

This software will only work on Windows XP 32bit operating systems.

Live Streaming Software



Hardware requirement:

Beside the computer for CG-100 you need to prepare additional hardware for running this software.

An IEEE 1394 DV input

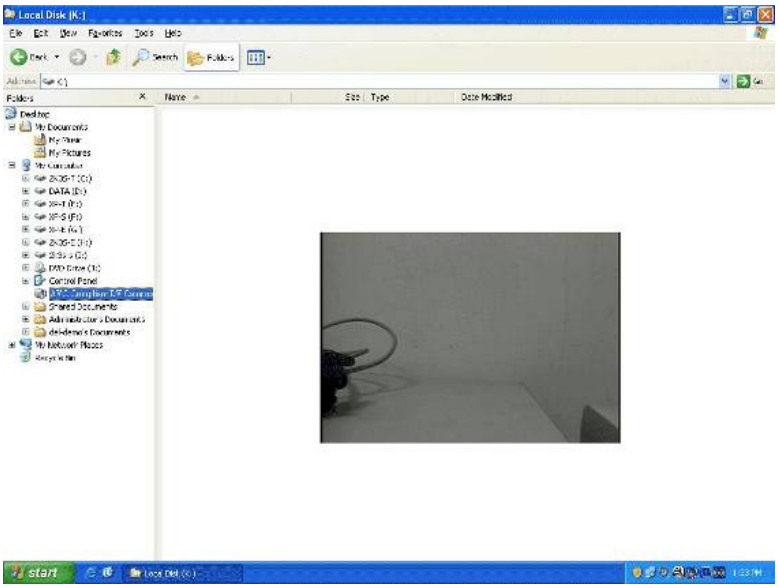
Purpose:

The purpose of this utility is to broadcast the DV video with CG to remote sites. The remote viewer can see the video through Windows media player by simply typing in a URL address.

For example: mms://192.168.1.2:8080

How to use this software

Step1. Before using this software, please connect a DV source,such as vision mixer, camera, player etc, through firewire. You can double check if your device is successfully connected to the computer by viewing the device itself via Windows explorer program. Please see the following picture.



Step2. Click the

Icon on the desktop.

Step3. When using for the first time, please click “Setting” and setup the necessary parameters. There are parameters are as described below:

Profiles: 2 types of WM7 profile to encode video for streaming.
WM7-300K-A2-V320-F30
WM7-600K-A2-V320-F30

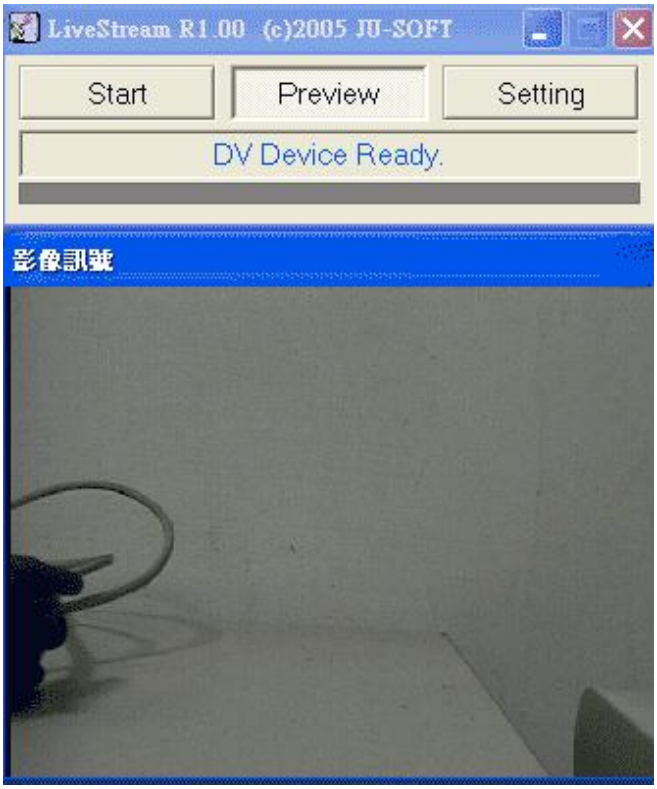
- WM7 represents Windows Media 7
- 300K represents the bit rate of this streaming is 300 kbps
- A2 represents stereo audio.
- V320 represents the width/height is 320x240 pixels.
- F30 represents the frame rate is 30 frames per second.
- IP: Please select the IP address of the executing computer.
- Port: Please select the opened port number of this computer. The default setting is 8080.

After selection, leave the setting dialogue. The setting will be auto saved.

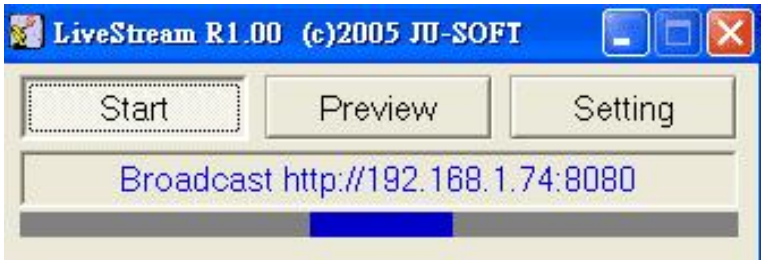
Step4. Check the firewall setting to see if there is any restriction to block the streaming. If you are not sure how to set it, please first try setting the firewall to OFF.

For more details about un-blocking the streaming, please approach your company I.T. support desk.

Step5. Go back to “LiveStream” software, and click “Preview” button and see if you can see the video in the small preview screen.

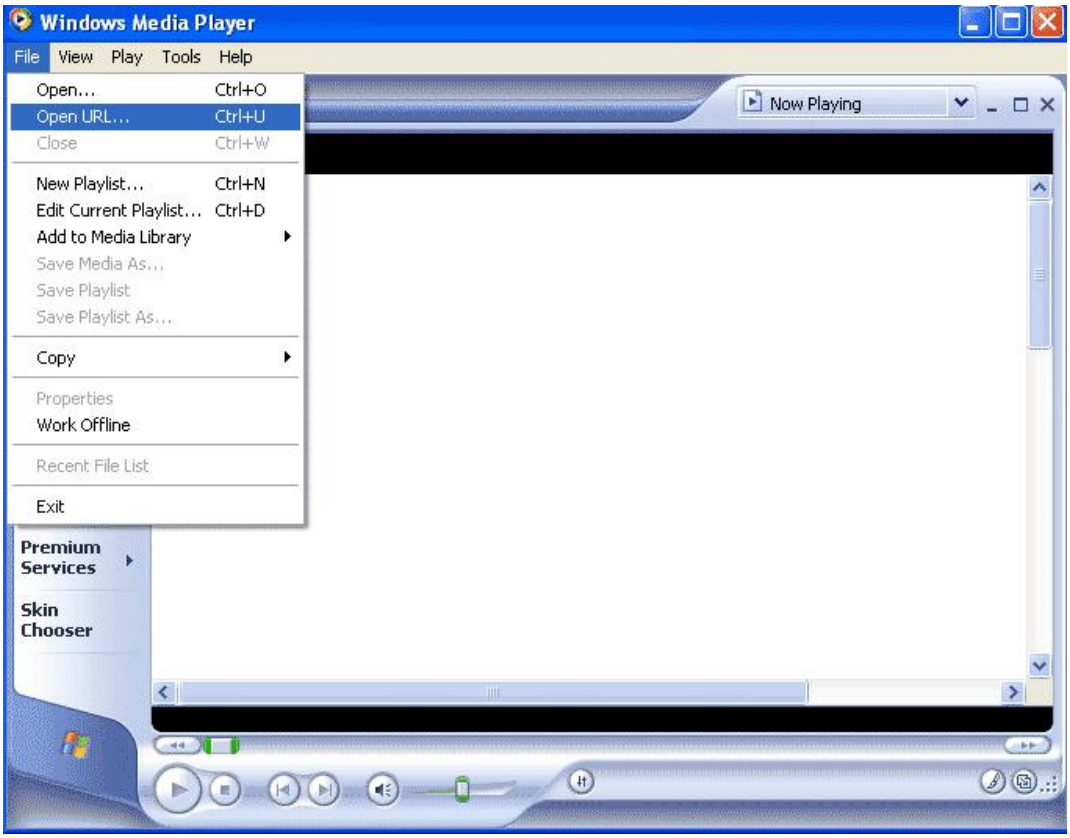


Step6. Click “Start” button to stream out the video. If you can see a blue bar running and “Broadcast http://192.168.x.xx:8080” It means the video has broadcasted without problem.

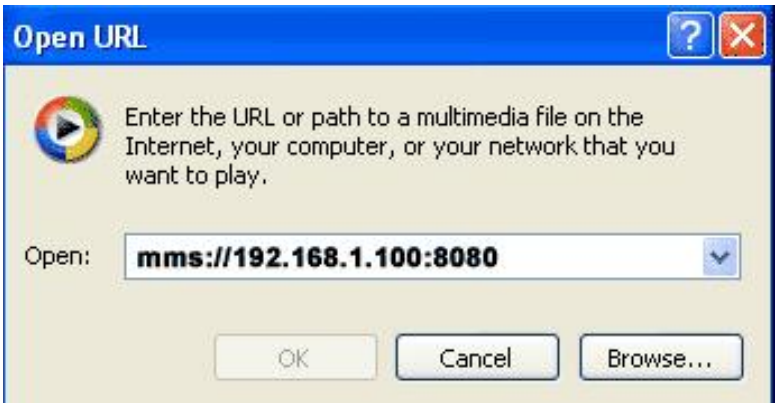


If when you click start you find out that there is a red bar running, as below, then there will be something wrong with the set up.
Please check the Video Input, Fire Wall settings and the parameters in the Set up dialog again.

Step7. To watch the streaming video remotely, just use the Windows Media Player. Go to file and select Open URL.



Type the URL as the following picture shows:



After a few seconds buffering you should see the steaming video.

Trouble Shooting

If you have any problem viewing video on the remote site, please check the following points :

- Firewall setting
- Port number
- The IP settings of the broadcasting computer

If the host's IP address uses a Private IP address.
For example: 192.168.1.100
It can serve internet users, but you should open the "Port Redirection" function at your firewall or IP sharing device, otherwise the internet users' computer cannot access your computer directly.

For example, if your IP sharing device's WAN port has a IP address "59.120.42.170", and the "LiveStream" program uses port 8080 to broadcast, you should configure Port Redirection (or sometimes named "Virtual Server" or "Port Mapping") function so: TCP protocol 8080 port is being accessed and redirection to private address 192.168.1.100

When you finish your configuration, internet users can enter… **mms://59.120.42.170:8080** into their Windows media player to watch the streaming video. ***Please note*** that the above is just an example of an IP set up, for further support please approach your company I.T. support desk.

Frequently Asked Questions

Q1: I have transparent text of CG-100 Demo or Datavideo displayed that I do not want. How do I get rid of this text?
A1: This is the watermark text. You have not connected the CG-100 USB Security Dongle when you started CG-100. Please restart CG-100 with the Dongle connected and the watermark text will be removed. Users on v1.52a or earlier need to activate their CG-100 software online at the time of install using their CG-100 Product key.

Q2: Once I have clicked on “PLAY”, why can’t I jump to the specific page I want?
A2: This is to avoid the user accidentally clicking on other functions while the program is LIVE on air. You should re-arrange the pages into the sequence you desire first; and then, click on the “PLAY” button.

Q3: Why do some pages of text, or graphics not show up when I click on “PLAY”?
A3: Please check if you have set up an effect on them. When you click on “PLAY” mode, it will play those pages’ which have an animation sequence assigned. Therefore, if you don’t have any effect selected, they will not show up when you click on “PLAY”. In this case, if you do not want any moving effect, you could select “DISPLAY” ON or OFF.

Q4: Why do I sometimes see a black dot or a gap between the character and its outline?
A4: It usually happens when you mix Red, Green, or Blue colours in the character itself and also the outline. Due to TV standard, this problem might occur. It is best not to use pure red, green and blue as the character and outline colours at the same time.

Q5: Sometimes when I set the outline as 1, I can see a saw tooth on the TV screen.
A5: This is another issue caused by the TV standard (interlace). When this happens it is best to make the outline larger than 4.

Q6: How do I keep the entire settings of a current page for future use?
A6: Use the group function, and select and copy the entire page. Then, it will automatically make a copy in the clipboard.

Q7: How can I keep a page in the clipboard from not being replaced by others?
A7: Right click on mouse. Then, select “Lock”.

Q8: When I use Italic style on text, it has a saw tooth on edge.
A8: Some fonts have sharper angles than others. Select a different font to resolve this problem.

Q9: Why is there a white (Green) blink on the TV screen while CG-100 is activating?
A9: Please make sure CG-100 is started before you switch on the Chroma Key EXT function on the SE-800 or CG function on the SE-900 mixer. In other applications, please do not take the SDI or YUV signal from the DeckLink card until CG-100 software is started.

Q10: Sometimes there are flickers or black edges when I use 1 or 2 on “Speed” in Crawl or Roll effect?
A10: This issue is caused by the TV standard (NTSC, 480i, interlace). You could select a higher number (Slower speed) to resolve this problem.

CG-100 Registration

Visit

http://www.datavideo.info/en/cg100form.htm

to register your software.

CG-100 software activation across the internet is not required if you have a CG-100 USB Dongle or version 1.63 and above.

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Datavideo Corporation
Tel: +1 562 696 2324 E-Mail: contactus@datavideo.us

Datavideo Technologies Europe BV
Tel: +31-30-261-96-56 E-Mail: service@datavideo.nl

Datavideo UK Limited
Tel: +44 1457 851 000 E-Mail: sales@datavideo.co.uk

Datavideo Technologies Co., Ltd
Tel: +886 2 8227 2888 E-mail: service@datavideo.com.tw

Datavideo Technologies China Co., Ltd
Tel: +86 21-5603 6599 E-mail: service@datavideo.cn

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