



Digital Sign Control

v2.50-G2

Operating Guide

www.qsigncontrol.com

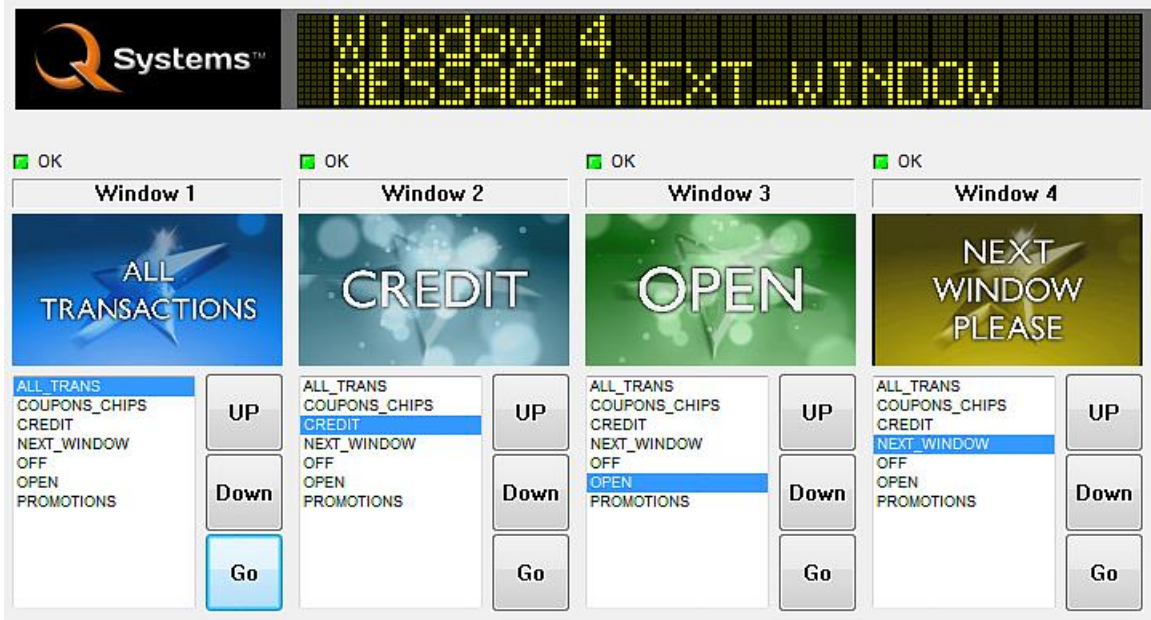
Copyright 2008-2016 Hightower Systems

Q System Overview

The Q System is an easy-to-use touch screen digital sign control system designed for casino cashier cages and other applications that require signage for managing lines, such as retail checkouts, supermarkets, banks, sports arenas, airports and more. Q is the most reliable, efficient and user-friendly turnkey digital sign management system available. The dual purpose digital displays are controlled via a user-friendly touch-screen interface to direct or queue customers into the appropriate lines for service, and may also display marketing messages for your "captive audience" when a window is inactive.

I. The Control Screen

The Control Screen is the Q System's primary operating screen. Sign messages are updated by touching buttons on the Control Screen. To change a sign message, use the 'UP' and 'DOWN' buttons to browse through message thumbnail images on the selected window, then click the 'Go' button to update the sign message display.



The Q System Control Screen

Refresh Button

Click this button to refresh the current sign message window settings.

The "A Little Help Please.." Button

Click this button for audible instructions on how to change a sign message.

II. The Setup Screen

Window Setup group

The Window Setup group is used to configure the system. When the system is initially configured during installation, Window Setup parameters usually do not need to be changed, except for occasional sign message content updates.

The screenshot shows the 'Window Setup' interface. At the top, there is a 'Window' section with a small grid icon and a 'Push to Display Window #' button. Below this is a 'Window Label' text box containing 'Win1 Group1'. The 'MonitorID' is set to '0'. The 'Content Directory' is a list box with '800x300' selected, and it has 'UP' and 'DOWN' buttons on either side. Below the list box is a 'Select a Window' grid with buttons labeled A through J. At the bottom of the window setup section is a 'Save Setup' button and a 'Setup Mode' checkbox. Below the window setup section is the 'Q System' section, which includes a 'Content Drive' dropdown set to 'C', an 'Auto-Load on Startup' checkbox, a 'Sync Windows' checkbox, a 'Set' button, a 'System Mode' dropdown set to 'Ext', and a 'Sys ID' dropdown set to '1'.

The 'Window Setup' group located on the Setup Screen

Windows are assigned the letters A – I and are grouped in the same order as they are on the Control Screen.

Controls

"Push to Display Window#" - Select a Window (A – I), then push this button to display a window number in the upper left corner of the Sign Message Display screen. Numbers are assigned in the following order, A = 1, B = 2, etc. Press the button again to disable the number display feature.

Window Label – To create a custom label for a Window, select a Window, then type the title into the Window Label box. This will be the label that is displayed for the Window on the Control Screen.

Content Directory – To assign a content directory to a Window, select a Window, then use the 'UP' and 'DOWN' buttons on the right side of the directory list to select. Each window can be set to a separate content directory, if desired.

Monitor ID – This parameter is used to assign a Window to a system monitor index. This parameter is set for each Window during initial setup and under normal circumstances should not be changed (see Setup Procedures, section V).

Select a Window – These buttons are used to select a Window before changing a parameter. When a Window is selected, its letter is displayed at the top of the Window Setup group.

Save Setup – Click the 'Save Setup' button after making a parameter change to store the new settings. After making a parameter change the LED next to the 'Save Setup' button will flash yellow indicating the need to save the changes.

Ad Groups (Banner Ads)

The Q System™ supports rotating banner advertising, allowing you to advertise to your captive audience, while they're standing in line. Banner ads are created as PNG graphics that overlay on top of sign messages. The PNG images can be set to fade in/out or wipe in/out with alpha-channel transparency support.

Banner ads are stored in special folders called 'Ad Groups'. When an Ad Group is selected for a window, the system continuously rotates through, and displays all of the ads in the group. Ad Group folders are created under J:\Q-Ads and each folder can contain up to 50 banner ads. The Ad Group folders are accessible via FTP, which allows for remote updating of banner ads over a network or the Internet.

Window displays are broken into three regions for displaying banner ads. Currently, regions 1 and 3 are supported on 16:9 aspect ratio monitors and region 3 only on LG Stretch monitors. The two modes for displaying rotating banner ads are "800x600" and "REG 3". The "800x600" mode is supported on standard 16:9 aspect ratio monitors and graphics are displayed in the lower left corner of the monitor, similar to a TV style "Bug". The "REG 3" (region 3) mode is supported on both 16:9 and LG Stretch Screen monitors. In this mode, graphics are displayed on right side of the screen, top to bottom.

Banner Ad Controls

'Ads On/OFF' – enables or disables the Banner Ad feature for the currently selected window. 'Ad Fade/Wipe' – sets the graphic transition mode for the currently selected window to fade in/out or wipe in/out from the bottom of the screen.

'REG 3/800x600' – sets the graphic display mode for the currently selected window.



A Banner ad displayed in 'REG 3' of an LG Stretch Screen LCD monitor

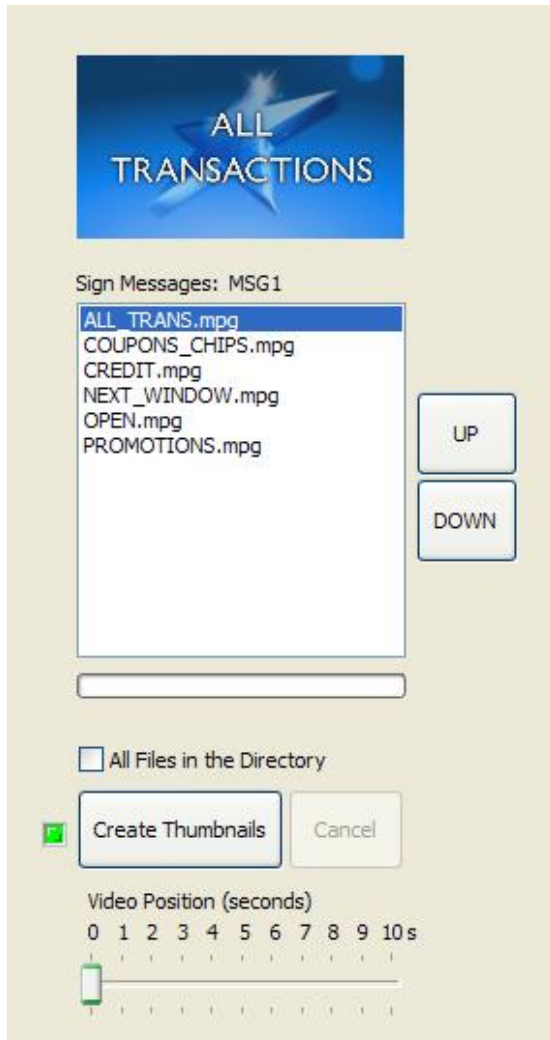
Q System group

This section contains system parameters for setting the Content Drive (where the

sign message files are stored) and the System Mode. The System Mode determines the operating mode of the system. There are three operating modes for the Q Controller: Solo and Extension. Solo Mode is used for a single, stand-alone unit and the Extension Mode enables a Q Controller to be controlled over a network using the qPad RemoteAssistant, or a custom application. The Sys ID provides the system with a unique ID, for use when multiple Q System controllers are controlled on a network.

Thumbnail group

The Q System creates thumbnail images of sign message content using the Thumbnail group on the Setup Screen.



The 'Thumbnail' group located on the Setup Screen

Creating thumbnail images for new sign message content - Select the desired content directory in the Window Setup group and the message content files will appear in the 'Sign Messages' list. Use the 'UP' and 'DOWN' buttons on the right side of the 'Sign Messages' list to select a message, or to create thumbnails for all files in the list, check the 'All Files in the Directory' check box, then press the 'Create Thumbnails' button. The LED next to the 'Create Thumbnails' button will flash yellow during the process and turn green when complete.

NOTE: Avoid creating thumbnail images while message windows are active.

Video Position - The 'Video Position' control allows you to set a point up to ten seconds into the sign message content file for extracting a thumbnail image. This feature aids in creating thumbnails for animated sign message content that may "build" or include special effects. Try starting at 0, and if the text in the message is not clearly readable, slide the 'Video Position' slider a second or so into the message and try again. Keep moving forward until you reach a point where the message text is easily readable in the thumbnail image.

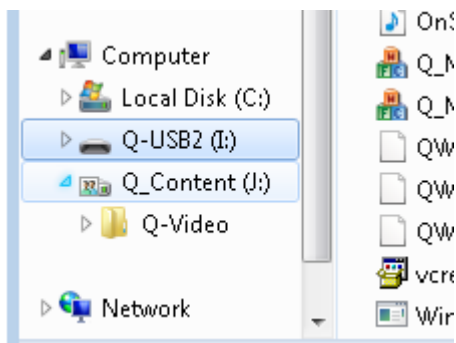
III. Managing Sign Message Content

Sign message content is stored in a folder called "Q-Video", located on the J: drive. The "Q-Video" folder is comprised of subfolders, each containing a set of sign message content. These subfolders (or sets of sign message content) are selected and assigned to individual Windows using the Window Setup group on the Setup Screen.

Messages are added to the system using a USB memory stick or can be uploaded over a network via FTP. Follow the instructions below to add new sign message content to the Q system using a USB Flash Drive.



Select the "Open folder to view files" option to add your new sign message content



The "Q_Content (J:)" drive on the lower left side of the File Manager window

Adding new Sign Message Content to the Q System

- 1) Create your sign message content (see Creating Sign Message Content, below).
- 2) Create a folder on a USB memory stick and give it a name.
- 3) Copy your sign message content to the new folder on your USB memory stick.
- 4) Insert your USB memory stick into one of USB ports on the front panel of the Q Controller. Wait for the 'AutoPlay' window to open.
- 5) Click on the "Open folder to view files" option.
- 6) Then, click on the small triangle next to "Q_Content (J:)".
- 7) Drag your new content onto the "Q-Video" folder under "Q_Content (J:)".
- 8) Close the file manager window when the transfer is complete.
- 9) Use the 'Window Setup' group on the Setup Screen to assign the new content to a Window.

IV. Creating Q System Sign Message Content



Sign message content for the Q System can be created using video editing and compositing software, such as Final Cut Pro, Sony Vegas Pro, Adobe AfterEffects, Adobe Premiere, and others. Sign Messages are encoded as MPEG2 video and can be any length, typically 10 to 15 seconds in duration. Since Sign Messages are looped, try to match the starting and ending points of your messages for smoother looping. The current version of Q does not support audio, but Sign Messages can be encoded with or without audio.

Encoding Parameters:

LG 29 inch LCD stretch display

Resolution - 800x300

Pixel Aspect Ration: 1.000 (Square)

Codec – MPEG2 program

Aspect Ratio: 16:9

Frame Rate: 29.970 fps

Profile: Main Profile

Level: High Level

Field Order: Progressive

I-Frames: 15

B-Frames: 2

Bitrate – VBR, 6 Mbit/s maximum, 4 Mbit/s average, 192Kbit/s minimum

Note:

Set 'Maintain Aspect Ratio' to OFF, if this setting is available in your NLE

Standard 16:9 aspect ratio LCD display

Resolution - 720x480

Pixel Aspect Ration: 1.000 (Square)

Codec – MPEG2 program

Aspect Ratio: 16:9

Frame Rate: 29.970 fps

Profile: Main Profile

Level: Main Level

Field Order: Progressive

I-Frames: 15

B-Frames: 2

Bitrate – VBR, 6 Mbit/s maximum, 4 Mbit/s average, 192Kbit/s minimum

Setup Procedures

V. Configuring MonitorID's

MonitorID's are numerical identifiers generated by the operating system for identifying each video monitor available to the system. One ID is assigned per monitor and they are based on a zero index (i.e. monitor 1 is 0, monitor 2 is 1, etc.). These ID's are arbitrarily assigned on boot-up and will remain the same each time the system is started, so long as no changes are made to the system's video connections. The MonitorID feature of the Q System allows you to assign any Window to any sign message monitor available to the system. In most cases, the sign message monitors will be assigned to Windows in numeric order, but any order may be achieved through the use of the MonitorID feature.

NOTE: The Q System ships pre-configured, so this procedure is normally not required. If the system is started without the video outputs connected to the DVI extenders, then it will be necessary to perform this procedure.

Identifying the MonitorID's of the Sign Message Monitors

- 1) Select Window 'A' in the Window Setup group.
- 2) Set the MonitorID to 0, using the 'UP' and 'DOWN' keys below the MonitorID display window.
- 3) Click 'Save Setup' to store the setting.
- 4) Click the 'Control' button on the right side navigation bar.
- 5) Select a Sign Message on Window 'A', then click the 'Go' button.
- 6) Determine which monitor is displaying the Sign Message and record its MonitorID on the Monitor Setup Sheet.
- 7) Repeat this procedure for all available monitors.

VI. FTP Support

The Q System™ supports FTP (File Transfer Protocol) updating of sign message and Banner ad content over a network. The default IP address is 192.168.1.201. The default username is: q2. The default password is: 020993.

FTP client software such as, Filezilla (freeware) or WS_FTP may be used to connect to the system over a local area network or the Internet. Once connected, message content is stored under the 'Q-Video' folder and banner ads are stored under the 'QAds' folder.

Sign Message content may be added to existing Content Directories or new Content Directories may be added by creating new folders in the 'Q-Video' directory. Banner ads can be updated or new Ad Groups can be added by creating new folders in the 'Q-Ads' directory.

NOTE: In order to gain access to the system over the Internet, it may be necessary to consult your IT department.

Q System™ Remote API (Beta)

The Q System™ now supports a Remote API (Application Programming Interface) that facilitates command-line control of one or more Q Controllers™ over a network. The API provides commands for retrieving status information and updating window messages over a local area network (LAN) or the Internet; providing a platform for third party development of custom control applications. Through the use of the Remote API and FTP support, you can manage sign message and banner ad content on any number of Q Controllers™, from virtually anywhere in the world with an Internet connection.

Remote API Commands

GCD [n] (Get Content Directory, n = window number)

Form: gcd [n] <return>

Description: Returns the content directory of the currently running sign message on window [n]

Return string: [n]gcd[cd] n = the unique ID of the system, cd = the content directory of the currently running sign message.

GMC (Get Monitor Count)

Form: gmc <return>

Description: Returns the number of monitors available on the Q controller.

Return string: [n]gmc[c] n = the unique ID of the system, c = the number of monitors available on the system.

GWL [n] (Get Window Label, n = window number)

Form: gwl [n] <return>

Description: Returns the window label of window [n]

Return string: [n]gwld[wl] n = the unique ID of the system, wl = the window label.

GWM [n] (Get Window Message, n = window number)

Form: gwm [n] <return>

Description: Returns the file name of the currently running sign message on window [n]

Return string: [n]gwm[fn] n = the unique ID of the system, fn = the file name of the currently running sign message.

SWM [n] [content dir\filename] (Set Window Message, n = window number)

Form: swm [n] [content dir\filename]<return>

Description: Returns the file name of the currently running sign message on window [n]

Return string: [n]swm[wm] n = the unique ID of the system, wm = the file name of the currently running sign message.

RST (Reset)

Form: rst <return>

Description: Reboots the system.

Return string: none

Monitor Setup Sheet

Q Controller ID _____

Monitor ID

Monitor Label