

IQDLOG SDI Logo Inserter



Module Description

The IQDLOG is a sophisticated SDI logo inserter. The unit is capable of adding static or animated, full 8-bit, colour logos at any point in the active picture region of the SDI stream. Logos or animation sequences can be of any size or length up to a total 250K pixels. Logos are downloaded over the RollCall network and stored in non-volatile memory. A simple animation control file allows easy creation and manipulation of the animation parameters (H/V position, fade and logo selection).

All logos are uncompressed 4:2:2:4 with 8 bit (smooth) control of fade in and out.

3 GPIs inputs are provided that can remotely control all logo functions (-2 version only). They may be used separately or configured as a 3-bit binary coded input.

The IQDLOG is supplied with a suite of PC/RollCall-based utilities to process logo files. Industry standard file formats supported are TGA, BMP and PPM files. It will not support versions of these formats which include embedded alpha (key) channels or any form of compression. This logo creation download facility is used at the customers own risk; for the latest version please see the Snell & Wilcox web site homepage at www.snellwilcox.com.

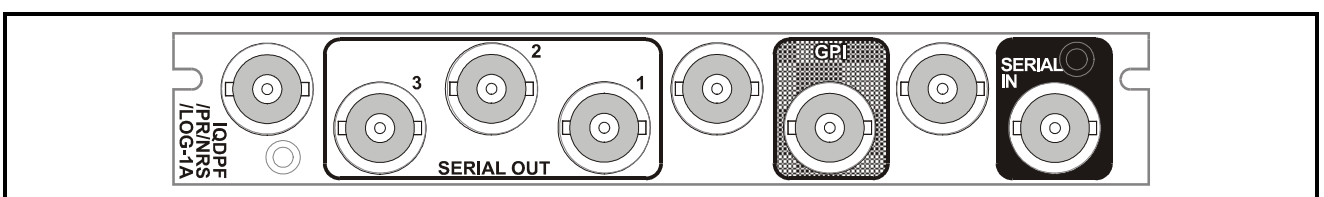
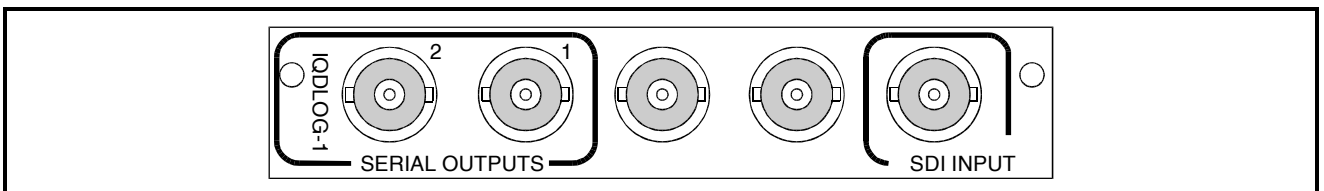
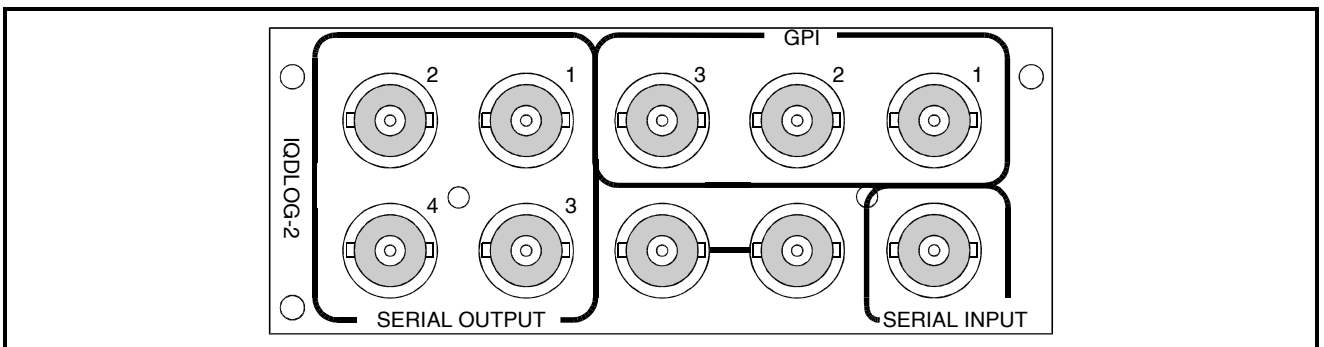
A crystal locked output helps in reducing incoming jitter and together with sync insertion provides a continuous output in event of input loss. The unit automatically detects 525 and 625 line inputs and will detect EDH errors and insert EDH on the output. For added flexibility four SDI outputs are provided. The unit will pass all HANC ancillary data.

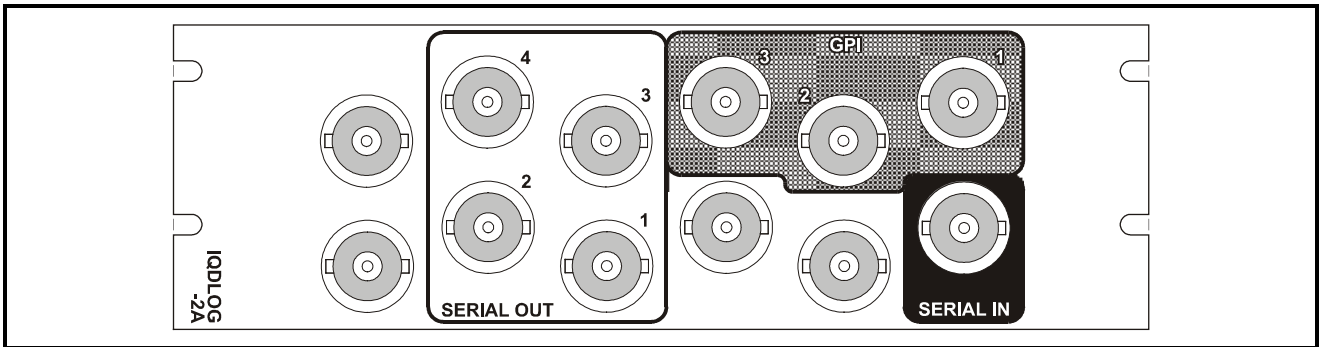
Full remote control via RollCall™ is included.

Customised Logos

Snell & Wilcox can provide a service to produce logos to customer's specifications. Contact your local Snell & Wilcox sales office for details.

REAR PANEL VIEW





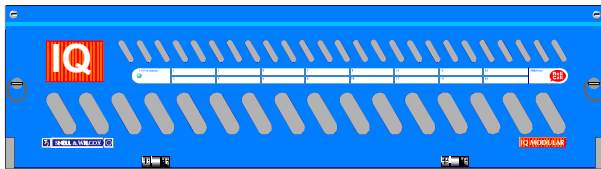
Versions of the module cards available are:

IQDLOG-2	SDI logo inserter 4 SDI outputs with EDH and 3 GPI inputs	Double width module
IQDLOG-1	SDI logo inserter 2 SDI outputs with EDH (no GPI)	Single width module
IQDLOG-2A	SDI logo inserter 4 SDI outputs with EDH and 3 GPI inputs	Double width module
IQDLOG-1A	SDI logo inserter 3 SDI outputs with EDH and 1 GPI input	Single width module

Note that there are two styles of rear panels available. They are not interchangeable between the two styles of enclosures. However, the cards may be fitted into any style of enclosure.

‘A’ Style Enclosure

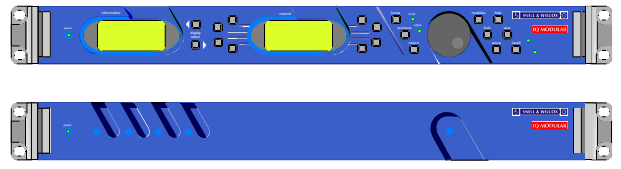
Rear panels **with** the suffix A may only be fitted into the ‘A’ style enclosure shown below.



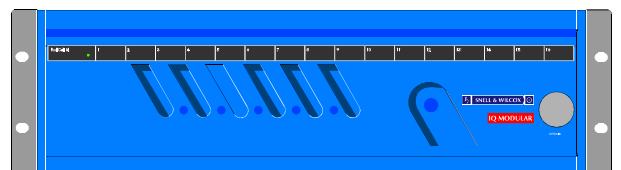
(Enclosure order codes IQH3A-E-O, IQH3A-E-P, IQH3A-N-O, IQH3A-N-P)

‘O’ Style Enclosures

Rear panels **without** the suffix A may only be fitted into the ‘O’ style enclosures shown below.

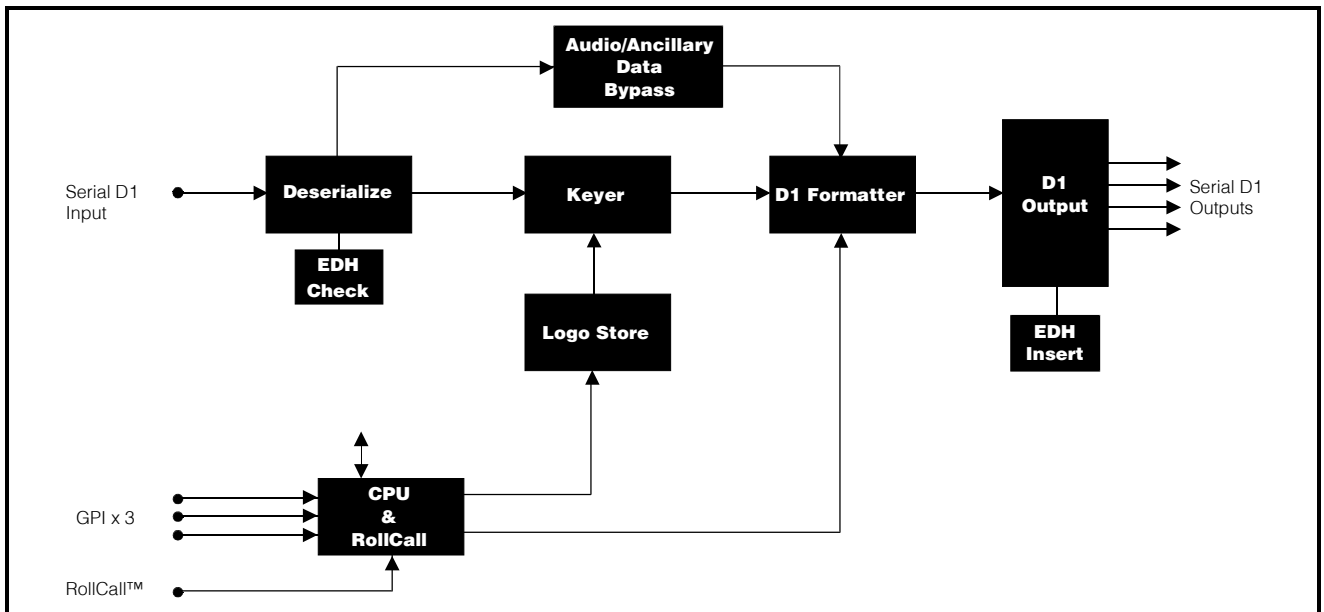


(Enclosure order codes IQH1S-RC-O, IQH1S-RC-AP, IQH1U-RC-O, IQH1U-RC-AP, Kudos Plus Products)



(Enclosure order codes IQH3N-O, IQH3N-P)

BLOCK DIAGRAM



Features

- Static or animated Serial Digital logo insertion
- Any size of logo, using up to 250K pixels
- User defined logos can be loaded over a PC network
- Video and Alpha-channel processing at 4:2:2:4 resolution
- Totally transparent to ancillary data
- Horizontal and vertical logo positioning anywhere in active picture
- Smooth fade with dedicated fade control
- Easy creation/modification of animations
- Continuous valid output
- 10-bit data paths throughout
- GPI control of all logo functions
- Automatic 625 and 525 operation
- User defined input failure Logo
- EDH checking and insertion to SMPTE RP165
- RollCall Control

TECHNICAL PROFILE

Features

Signal Inputs

Serial Digital.....	1 x SDI
Standards	SMPTE 259M-C-1997
GPI	3 Closing Contact style inputs (-2version only)

Signal Outputs

Serial Digital.....	Up to 4 x SDI
Standards	SMPTE 259M-C-1997

Card Edge Controls (also available via RollCall)

Input Standard	525 / 625 / Auto
EDH checking	
Logo.....	Reverse/stop/Forward/Single Cycle
Logo Fade Max.....	0 to 255 (off to full on)
Logo Fade Min.....	0 to 255 (off to full on)
Logo H position.....	-120 to +718 samples (525) -138 to +710 samples (625)
Logo V position	0 to 500 lines (525) 0 to 600 lines (625)

Fade.....	Fade In/ Fade Out (unit fades in to maximum fade value and fades onto minimum fade value)
Fade in time	1 to 300 frames
Fade out time	1 to 300 frames
On Input Fail	Selectable Logo
User Memories.....	16 [save / recall / name]
Preset Unit	Returns all settings to factory defaults

Functions Available via RollCall™ Only

Logging	EDH, Input Loss and Standard Change
Animation file download	
Logo Download	Note: The logo download software IQSSAM supports TGA, BMP and PPM files. It will not support versions of these formats which include embedded alpha (key) channels or any form of compression.

Specifications

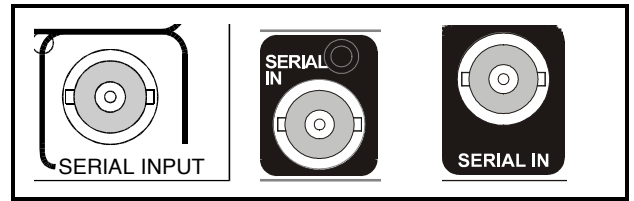
Serial Input Return Loss.....	Better than 15 dB to 270 MHz
Maximum Input Cable length >	200 m (PSF1/2 or equiv. cable)
Serial Output Level	800 mV ±10%
Output Return Loss.....	Better than -15 dB to 270 MHz
Output Jitter	< 0.2UI
Insertion Delay.....	approx. 4 µs
Logo Limits	The IQDLOG software released to date (V5.4.6 issue B cards and V6.0.6 issue C cards) is limited to a maximum Logo file size of 786,430 bytes.

Power Consumption

Module Power Consumption	6.2W max.
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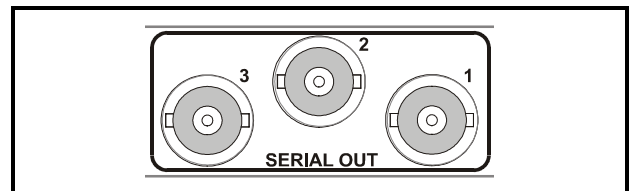
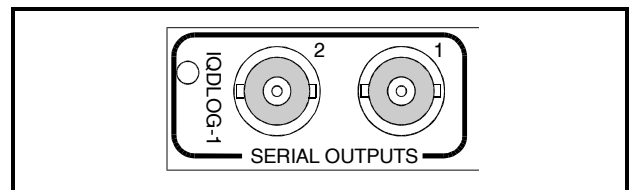
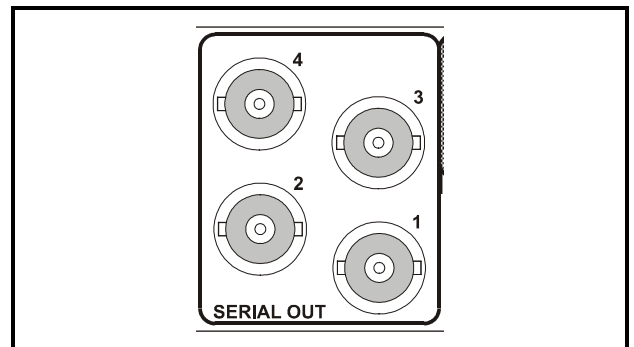
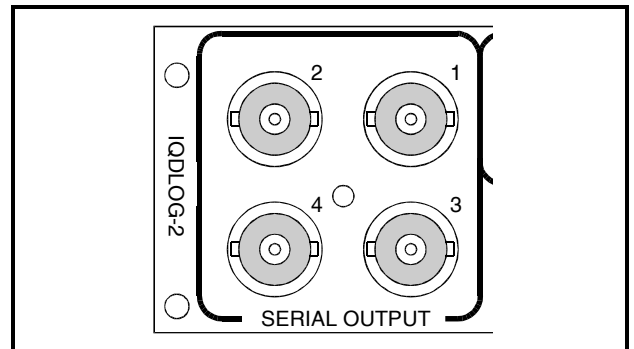
SERIAL INPUT

The serial digital input to the unit is made via this BNC connector that terminates in 75 Ohms.



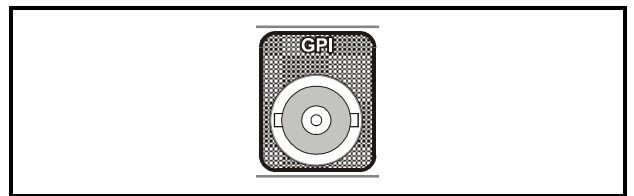
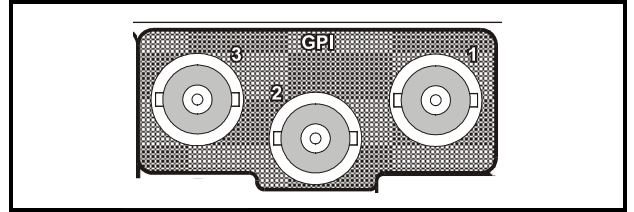
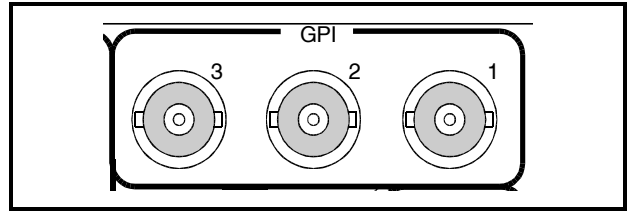
SERIAL OUTPUTS

These are the isolated Serial Digital outputs of the unit via BNC connectors for 75 Ohms.

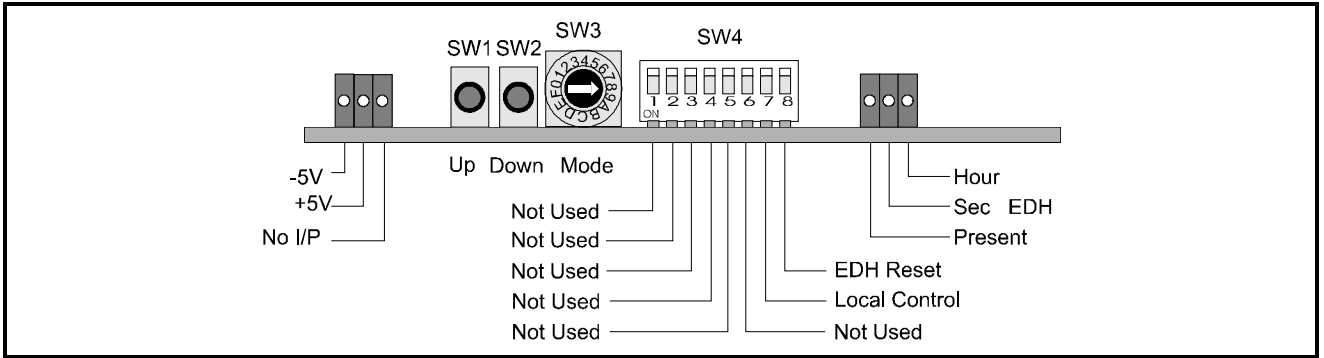


GPI INPUTS

These three connectors are used for accepting GPI information (from mechanical switch contacts, relay contacts etc.) The resulting action that the unit takes may be programmed via RollCall.



CARD EDGE CONTROLS



Note that the unit will respond to both local and remote control, one system overriding the settings of the other. For cards using the RollCall™ remote control system, activating these switches will override the remote control settings. The RollCall™ control panel will then follow these settings.

Note that in Main-frames where RollCall™ is not available SW4/7, should be set to ON (DOWN). This ensures that when the unit is powered-up the factory default settings of parameters not available as card edge adjustments, are loaded. With SW4/7 OFF (UP) the card will power-up with the last settings sent by the remote control panel.

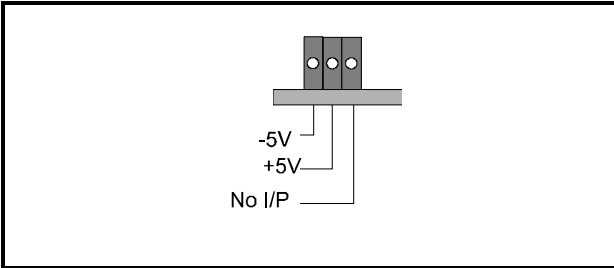
LED INDICATORS

+5V and -5V

When illuminated these LED's indicate that the +5 V and -5 V supplies are present.

No I/P

The **No I/P** LED will be continuously illuminated when the unit is not receiving an input signal.

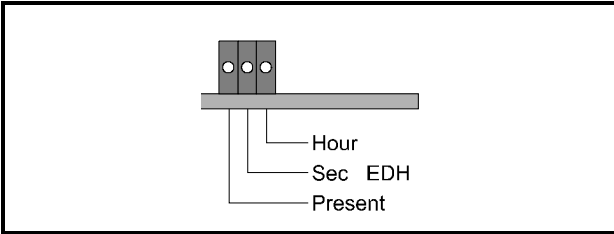


EDH Reporting

The **Present** LED will be illuminated if EDH data is present on the incoming signal.

The **Hour** LED indicates that an error has occurred in the last hour and the **Sec** LED indicates that an error has occurred in the last second.

Note that SW4/8 resets these indicators.



SWITCHES

Two push buttons, a Hex switch and a 8 way DIL switch allow various functions and modes to be set.

The DIL switch SW4 selects a particular function and the Hex switch SW3 selects a mode or variable parameter.

The push buttons SW1, SW2 allow the value of the selected function/parameter to be adjusted.

The Mode select switch SW3 may select a mode or a parameter that may be adjusted using SW1 and SW2.

Note that to select the preset value both buttons (SW1 and SW2) should be pressed together.

These switches allow the module to be operated when an active front panel is not available.

More detailed information about these functions will be found under *MENU DETAILS*

FUNCTION AND MODE SELECTIONS

DIL SWITCH FUNCTIONS SW4

By setting these switches various modes of operation may be selected.
(Down is ON and Up is OFF)

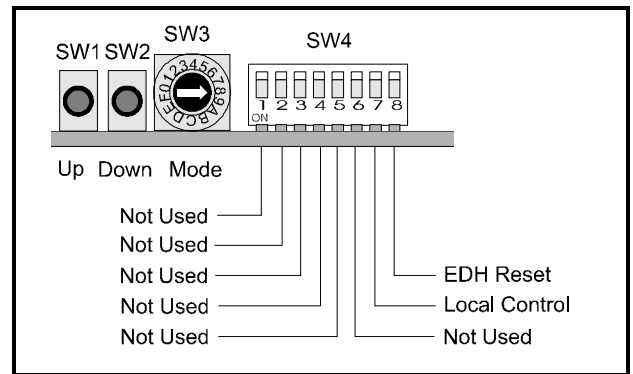
Positions 1 to 6 are not used**Position 7**

When set to ON (Down) this allows the unit to operate under **local control**.

Note that in Main-frames where RollCall™ is not available this switch should be set to the ON position. This ensures that when the unit is powered-up the factory default settings of parameters not available as card edge adjustments, are loaded. When set to the UP position the card will power-up with the last settings sent by the remote control panel.

Position 8

Setting this to the ON position resets the **EDH** log indicators.



SW3

This HEX switch selects a parameter that may be adjusted with the push-buttons SW1 and SW2.

Note that SW1 increases a setting and SW2 decreases a setting. Continual pressure on the button will cause the setting to change continuously, the rate of change increasing with time. Pressing both together sets functions to their default values.

SW3

Position 0 Not Used
Position 1 Not Used

Position 2: H Position Offset

The horizontal position of the logo on the screen may be set using this function.

The range of control is from -120 to +718 (525), -138 to +710 (625) samples in steps of 2 samples and preset is to 100.

Position 3: V Position Offset

The vertical position of the logo on the screen may be set using this function.

The range of control is from 0 to +500 (525), 0 to 600 (625) lines in steps of 2 lines and preset is to 100.

Position 4: Minimum Fade

When a fade is activated the amplitude of the logo signal at the end of the fade may be set using this function.

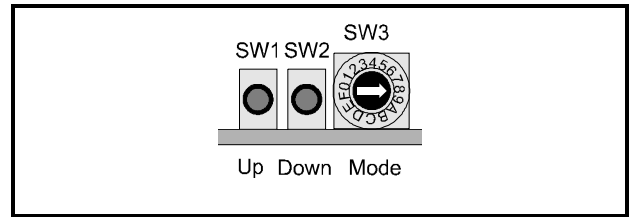
Minimum Fade will set the minimum amplitude of the logo at the end of a Fade-out function.

The range of control is from 0 to 255 in steps of 1 unit and preset is to 0.

Position 5: Maximum Fade

Maximum Fade will set the maximum amplitude of the logo at the end of a Fade-In function.

The Maximum Fade range of control is from 0 to 255 in steps of 1 unit and preset is to 255.



Position 6: Select Animation

This position allows the logo sequence to be selected using SW1 and SW2. Preset selects the static S & W Logo.

Position 7: Step Animation

This position allows an individual frame within an animated sequence to be selected.

The range of control is from 1 to the maximum number of frames in 1 frame steps and preset is to frame 1.

Position 8: Single Cycle Fwd/Rev

When selected the logo sequence will complete one cycle forward (SW1 pressed) or one cycle back (SW2 pressed) and then stop.

Position 9: Forward

If an animated logo has been selected this function will allow the sequence to flow forward by pressing SW1. Pressing SW2 will stop the flow.

Position A: Reverse

If an animated logo has been selected this function will allow the sequence to flow in reverse by pressing SW1. Pressing SW2 will stop the flow.

Position B: Fade In/Out

Pressing SW1 will fade in the logo and pressing SW2 will fade out the logo. The fade-in and fade-out times will be those set via the RollCall menu system.

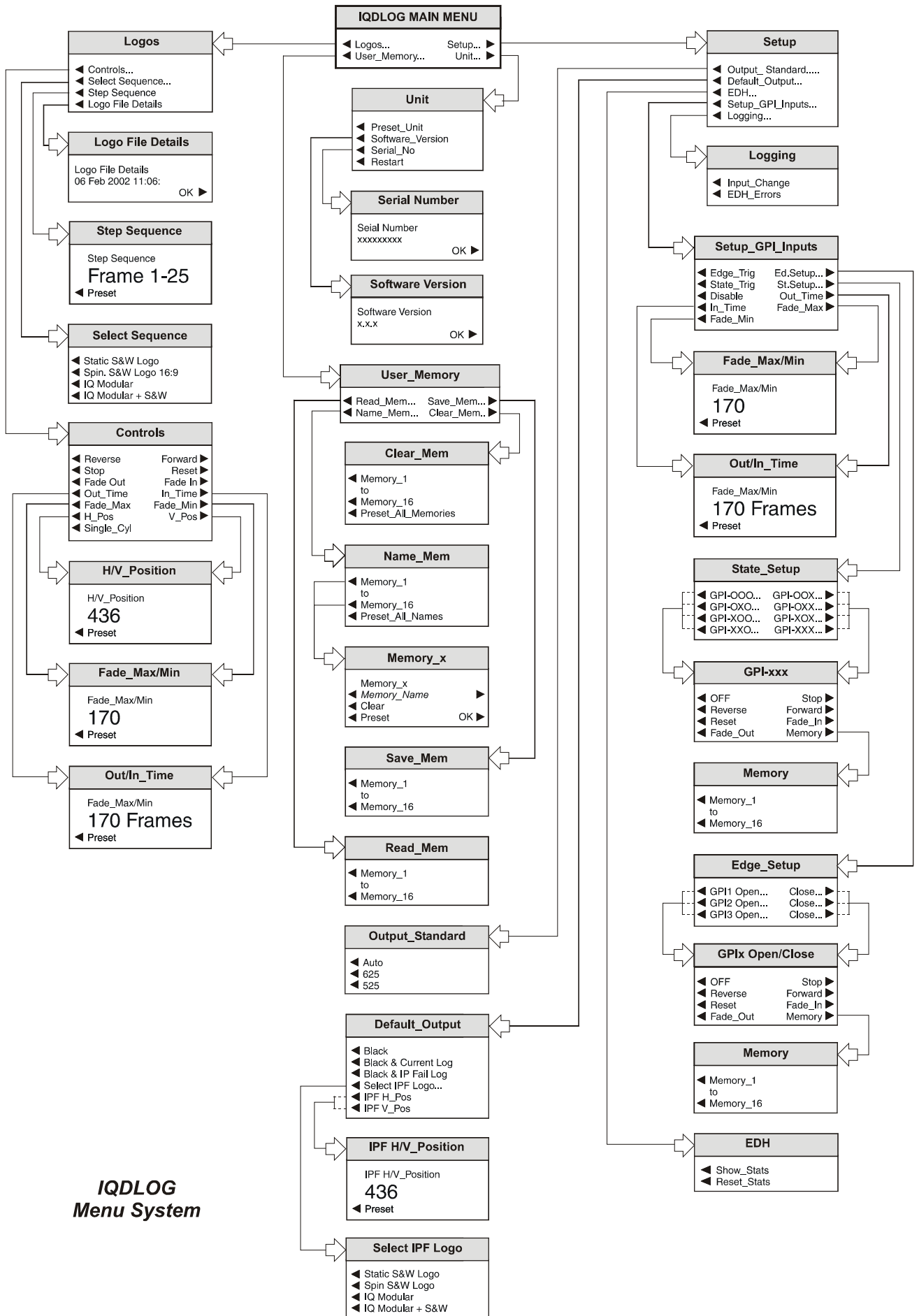
Position C: Not Used

Position D: Not Used

Position E: Not Used

Position F:

In this position pressing SW1 and SW2 together sets all parameters to the **default/preset** conditions.



***IQDLOG
Menu System***

OPERATION FROM AN ACTIVE CONTROL PANEL

The card may be operated with an active control panel via the RollCall™ network.

The menus available for this card are shown opposite and will appear in the Control display window.

Operational details for the remote control panel will be found in SECTION 1 of the Modular System Operator's Manual.

MENU DETAILS

(see IQDLOG Menu System opposite)

MAIN MENU

The main, or top level menu allows various sub-menus to be selected by pressing the button adjacent to the required text line.

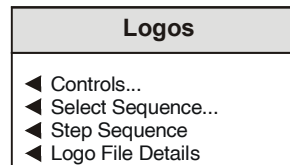
Note that where a menu item is followed by three dots (...) this indicates that a further sub-menu may be selected.

Whenever a menu item is selected the parameters of that selection will be displayed in the **Information** window of the front panel. Where the selection is purely a mode selection and does not enable a sub-menu, the text will become reversed (white-on-black) indicating that the mode is active. If the mode is not available for selection the text will remain normal.

MAIN MENU



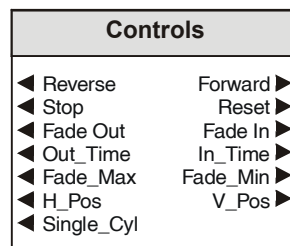
◀ Logos...



This menu allows the logo to be selected and manipulated in various ways.

◀ Controls

Methods of controlling the logo may be selected from this menu.



◀ Reverse Forward ▶

If an animated logo has been selected these toggle functions allow the sequence to flow forward (from start to finish) or reverse (from finish to start).

*Note that if the **Single_Cyl** (single cycle) item is not enabled these functions will continuously recycle the sequence.*

*If the **Single_Cyl** (single cycle) item is enabled these functions will only perform a single cycle event.*

◀ Stop

This function will stop an animated logo sequence.

◀ Reset

This function will reset an animated sequence to the start of the sequence.

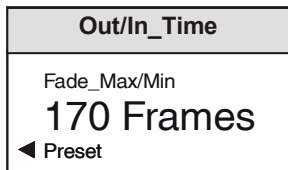
◀ Fade Out/Fade In

By selecting these items the logo may be faded out of or faded into the main picture.

◀ Out_Time and In_Time

When the Fade Out or Fade In functions above have been activated these items allow fade time to be set.

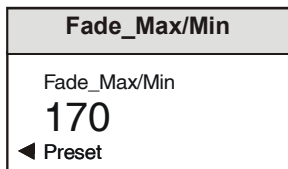
Both times may be adjusted separately using the spinwheel and the value will be shown in the display.



The range of control is from 1 to 300 frames in 1 frame steps and preset is to 1.

◀ Fade_Max and Fade_Min

When a fade is activated the amplitude of the logo signal at the end of the fade may be set using this function.



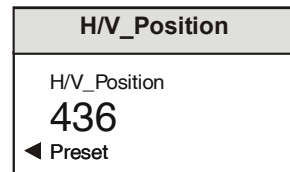
Fade_Max will set the maximum amplitude of the logo at the end of a Fade-In function and Fade_Min will set the minimum amplitude of the logo at the end of a Fade-out function.

The Maximum Fade range of control is from 0 to 255 in steps of 1 unit and preset is to 255.

The Minimum Fade range of control is from 0 to 255 in steps of 1 unit and preset is to 0.

◀ H and V Position

The position of the logo on the screen may be set using this function.



The horizontal position is set using the H_Pos item and the vertical position by using the V_Pos item.

The H Position range of control is from -120 to +718 samples (525) or -138 to +710 samples (625) in steps of 2 samples and preset is to 100.

The V Position range of control is from 0 to +500 (525), 0 to 600 (625) lines in steps of 2 lines and preset is to 100.

◀ Single_Cyl

This item effects the operation of the ◀ Reverse and Forward ▶ functions.

Single_Cyl (single cycle) not enabled

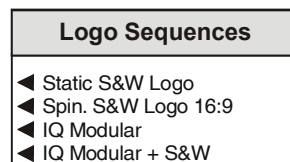
When the ◀ Reverse and Forward ▶ functions are selected the logo sequence will continuously recycle.

Single_Cyl (single cycle) enabled

When the ◀ Reverse and Forward ▶ functions are selected the logo sequence will only perform a single cycle. It will stop on the last frame of the sequence.

◀ Select Sequence

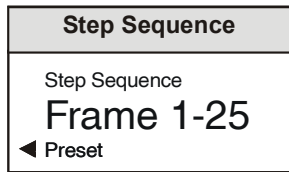
This menu allows a particular logo to be selected



- ◀ Static S&W Logo
- ◀ Spin S&W Logo 16:9
- ◀ IQ Modular
- ◀ IQ Modular + S&W

◀ Step Sequence

When activated the function allows an individual frame within an animated sequence to be selected.



The range of control is from 1 to the maximum number of frames in 1 frame steps and preset is to frame 1.

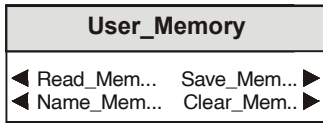
Note that this menu item will not be available if a static logo has been selected.

◀ Logo File Details

This item will display the date and time information embedded in the Logo file.

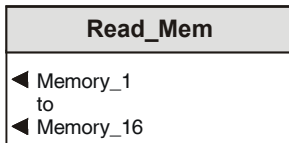


◀ **User_Memory...**



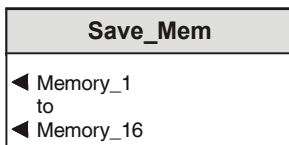
All settings of the unit may be stored in any of 16 non-volatile memory locations. These locations may be read, saved, given a name or cleared to the preset names by selecting the function to reveal the appropriate sub-menu.

◀ **Read_Mem**



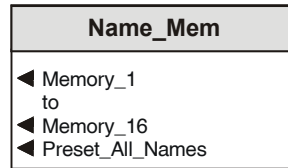
This will reveal a list of 16 memory locations. When a particular location is enabled, settings will be changed to the values contained in that memory location.

Save_Mem ▶

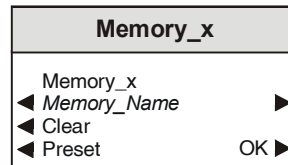


This will reveal a list of 16 memory locations. When a particular location is enabled, current settings will be saved in that memory location.

◀ **Name_Mem**



This will reveal a list of the 16 memory locations that may be given a specific name.



To compile/edit the text the right ▶ and left ◀ buttons adjacent to the upper text line in the menu should be used to select the character position in the text and the spinwheel used to select the character.

The ◀ **Clear** function blanks out the selected character.

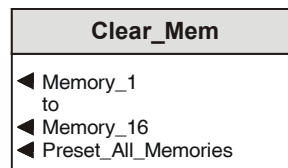
The ◀ **Preset** function loads the default text.

O.K. ▶ saves the caption text and returns to the main menu.

◀ **Preset All Names**

Selecting this function will reset all the memory names to their default names.

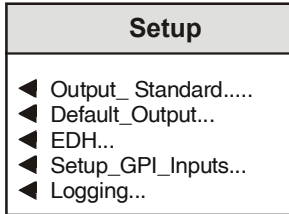
Clear_Mem ▶



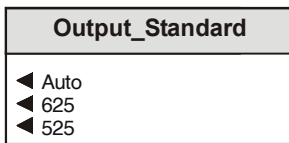
This will reveal a list of the 16 memory locations that may be selected and individually cleared to their default settings. All memories may be cleared to their default settings using ◀ **Preset_All_Memories**.

Setup...▶

This menu allows various system parameters to be set.



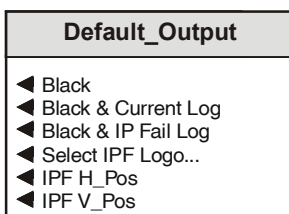
◀ Output_Standard



The output standard may be set to:

- ◀ Auto The output standard will be the same as the input
- ◀ 625 The output will be in the 625 standard. *Note that if this is not the same as the input standard an error message will appear in the information window and the output picture will become black.* If the input fails the output will become this standard.
- ◀ 525 The output will be in the 525 standard. *Note that if this is not the same as the input standard an error message will appear in the information window and the output picture will become black.* If the input fails the output will become this standard.

◀ Default_Output



This item allows an output picture to be selected in the event of a loss of input signal.

The output picture that appears may be selected from the following list:

◀ Black

The picture will become black

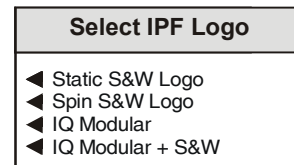
◀ Black & Current Logo

The picture will be black with the currently selected logo; if the currently selected logo contains movement the movement will continue.

◀ Black & IP Fail Logo

The picture will be black with the selected IPF logo chosen using the **Select IPF Logo** function below:

This allows a different logo from the current logo to be chosen from the **IPF Logo** list.

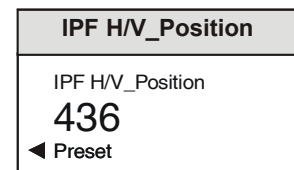


This Logo will then appear when the input signal fails.

Note that if a Logo that contains movement is chosen for this function, the Logo movement will be lost under input failure conditions and the first frame in the sequence will be displayed.

◀ IPF H and V Position

The position of the logo on the screen may be set using this function.



The horizontal position is set using the H_Pos item and the vertical position by using the V_Pos item.

The H Position range of control is from -120 to +718 samples (525) or -138 to +710 samples (625) in steps of 2 samples and preset is to 100.

The V Position range of control is from 0 to +500 (525), 0 to 600 (625) lines in steps of 2 lines and preset is to 100.

◀ EDH

This selection reveals a sub-menu that allows various Input or Output EDH parameters to be enabled.

EDH	
◀	Show_Stats
◀	Reset_Stats

◀ Show Stats (Statistics)

When this function is enabled (text reversed) the information window will display the number of errors from the time the function was enabled. The elapsed time in hours, minutes and seconds is also displayed.

◀ Reset Stats (Statistics)

Selecting this function will reset the EDH error count and the timer shown in the information window, to zero.

◀ Setup_GPI_Inputs (-2 version only)

Setup_GPI_Inputs	
◀ Edge_Trig	Ed.Setup... ▶
◀ State_Trig	St.Setup... ▶
◀ Disable	Out_Time ▶
◀ In_Time	Fade_Max ▶
◀ Fade_Min	

GPI Overview

The three GPI connectors on the rear panel are used for accepting GPI information (from mechanical switch contacts, relay contacts etc.) The resulting action that the unit takes may be selected from these menus.

The type of input that activates the GPI function may be selected as either an edge trigger or by the change of state of any of the 3 GPI inputs. The edge trigger polarity may be selected as closed-to-open (Open) or open-to-closed (Close) for each of the GPI inputs.

The function may also be disabled.

To set up a function to be activated by an edge trigger.

From the **Setup_GPI_Inputs** menu select **Edge_Trig**. Then select **Ed.Setup**; this will reveal the Edge Setup menu.

Edge_Setup	
◀ GPI1 Open...	Close... ▶
◀ GPI2 Open...	Close... ▶
◀ GPI3 Open...	Close... ▶

Decide which GPI input to use (GPI 1, 2 or 3) and then select the edge trigger polarity required from the menu. **Open** will be activated by a closed-to-open action and **Close** will be activated by an open-to-closed action.

This will reveal a list of actions that may be chosen to occur when the GPI is activated.

GPIx Open/Close	
◀ OFF	Stop ▶
◀ Reverse	Forward ▶
◀ Reset	Fade_In ▶
◀ Fade_Out	Memory ▶

Setting	Action
◀ OFF	No action occurs
Stop ▶	Stop Sequence
◀ Reverse*	Sequence finish to start
Forward* ▶	Sequence start to finish
◀ Reset	Return to start
Fade IN ▶	Fade in Logo
◀ Fade OUT	Fade out Logo

Memory ▶

This will allow a memory location to be selected.

Memory
◀ Memory_1 to Memory_16

Setting	Action
◀ Memory 1	Selects Memory settings 1
to	to
◀ Memory 16	Selects Memory settings 16

Make the required selection.

Select **Return** on the front panel to return to the Edge Setup menu.

The other GPI inputs may be programmed in the same way.

** Note that if the **Single Cycle** item in the Logo template is not enabled these functions will continuously recycle the sequence.*

*If the **Single Cycle** item in the Logo template is enabled these functions will only perform a single cycle event.*

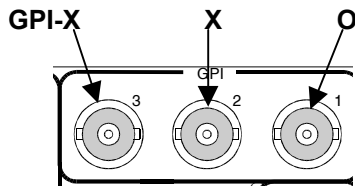
To set up a function to be activated by a state trigger.

From the **Setup_GPI_Inputs** menu select **State_Trig**; then select **St.Setup**; this will reveal the State Setup menu.

Decide the 3-bit binary code that is required to activate the function from the State Setup menu.

State_Setup	
◀ GPI-OOO... GPI-OOX... ▶	
◀ GPI-OXO... GPI-OXX... ▶	
◀ GPI-XOO... GPI-XOX... ▶	
◀ GPI-XXO... GPI-XXX... ▶	

Where O = Open and X = Closed and the GPI input order is as follows:



For example selecting GPI-XXO will activate the function when the state of the 3 GPI inputs changes to X (input 3 to closed), X (input 2 to closed) and O (input 1 to open)

When a code has been selected the function menu will appear. This will reveal a list of actions that may be chosen to occur when the GPI is activated by the change of state to the selected code.

GPI-xxx	
◀ OFF	Stop ▶
◀ Reverse	Forward ▶
◀ Reset	Fade_In ▶
◀ Fade_Out	Memory ▶

Setting	Action
◀ OFF	No action occurs
Stop ▶	Stop Sequence
◀ Reverse*	Sequence finish to start
Forward* ▶	Sequence start to finish
◀ Reset	Return to start
Fade IN ▶	Fade in Logo
◀ Fade OUT	Fade out Logo

Memory ▶

Memory
◀ Memory_1 to Memory_16

Setting	Action
◀ Memory 1 to Memory 16	Selects Memory settings 1 to 16

Select **Return** on the front panel to return to the State Setup menu.

Other codes may be programmed to activate other functions in the same way.

For example GPI-XXO may have been programmed to Fade In the logo and GPI-XOO to Fade Out the logo.

* Note that if the **Single Cycle** item in the Logo template is not enabled these functions will continuously recycle the sequence. If the **Single Cycle** item in the Logo template is enabled these functions will only perform a single cycle event.

◀ Disable

The Edge-Trig and State_Trig functions will be inactive when this item is selected.

◀ Out_Time and In_Time

These items allow fade in and fade out time to be set when activated by the GPI input setup.

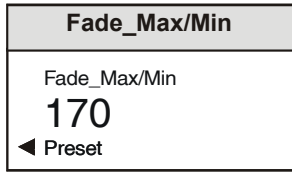
Both times may be adjusted separately using the spinwheel and the value will be shown in the display.

Out/In_Time
Fade_Max/Min
170
◀ Preset

The range of control is from 1 to 300 frames in 1 frame steps and preset is to 30.

◀ Fade_Max and Fade_Min

When a fade is activated by the GPI input setup the amplitude of the logo signal at the end of the fade may be set using this function.

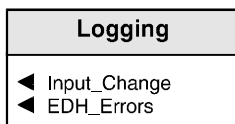


Fade_Max will set the maximum amplitude of the logo at the end of a Fade-In function and Fade_Min will set the minimum amplitude of the logo at the end of a Fade-out function.

The Maximum Fade range of control is from 0 to 255 in steps of 1 unit and preset is to 255.

The Minimum Fade range of control is from 0 to 255 in steps of 1 unit and preset is to 0.

◀ Logging



If a logging device is attached to the RollCall™ network, information about various parameters can be made available to such a device.

Selecting this item reveals a display that allows information about three parameters to be made available for logging.

◀ Input Change

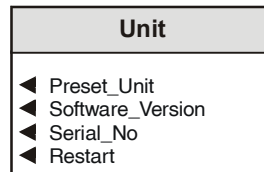
When activated, a change of input signal condition will be available for the logging device.

◀ EDH Errors

When activated, EDH error reports will be available for the logging device.

Unit ▶

This item allows basic information about the unit to be displayed and basic functions to be enabled.



◀ Preset Unit

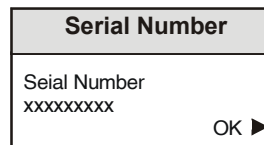
Selecting this item sets all adjustment functions that include a preset facility, to their preset values. *Note that this is a momentary action and the text will not become reversed.*

◀ Software Version



Selecting this item reveals a display showing the version of the software fitted in the module. Select OK to return to the Setup Menu.

◀ Serial Number



Selecting this item reveals a display showing the serial number of the module. Select OK to return to the Setup Menu.

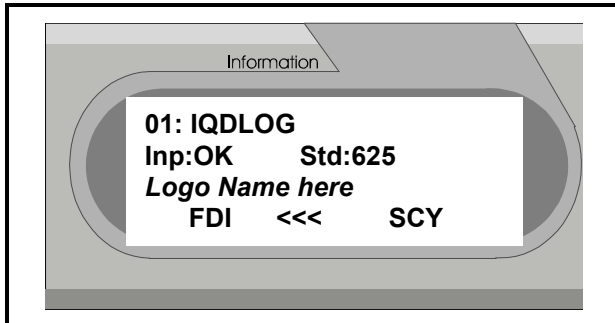
◀ Restart

This function allows the unit to reboot and all power-up settings to be enabled.

THE INFORMATION WINDOW

The parameters of the selected item in the Control window will be displayed in the Information window.

An example is shown below:



The first line shows the name of the module card. This name can be changed using RollCall™ and the Remote Control Interface Menu.

The second line shows that the signal input is receiving a valid signal (**OK**); if there is no signal or the signal is invalid it will show **Inp:****

The third line will display the name of the currently selected Logo.

The fourth line shows various abbreviated text messages providing information about the logo status as described below:

STP Stop

FDO..... Fade Out

FDI Fade In

<<<..... Reverse

>>> Forward

FD+ During Fade In

FD-..... During Fade Out

SCY Single Cycle sequence

GPE = xxx..... GPI Edge trigger input values

GPS = xxx..... GPI State trigger input values

RollCall Control via a PC

For full details please see the operator's manual for the IQSPCR, RollCall™ Software Installation Guide & Operational Overview

IQSPCR is a PC application that runs under Windows 3.1x or 95. It allows full remote control of RollCall for this and other compatible units.

SOFTWARE INSTALLATION GUIDE

System Requirements

The minimum requirement for installing the RollCall software is:

RollCall PC Control Software (IQSPCR).

IQ Modular 1RU or 3RU rack with Gateway card installed.

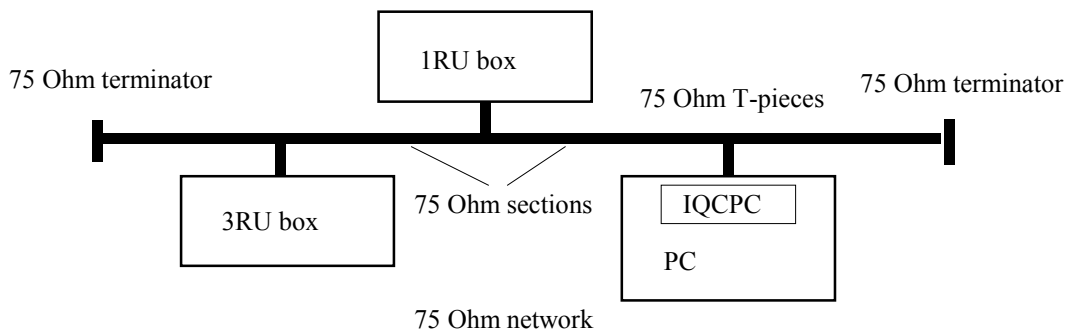
PC running Microsoft Windows 3.1x or Windows '95 .

Either a RollCall PC card (IQCPC) or a RS232 to RS422 9 way converter fitted to the PC.

Connecting the hardware:

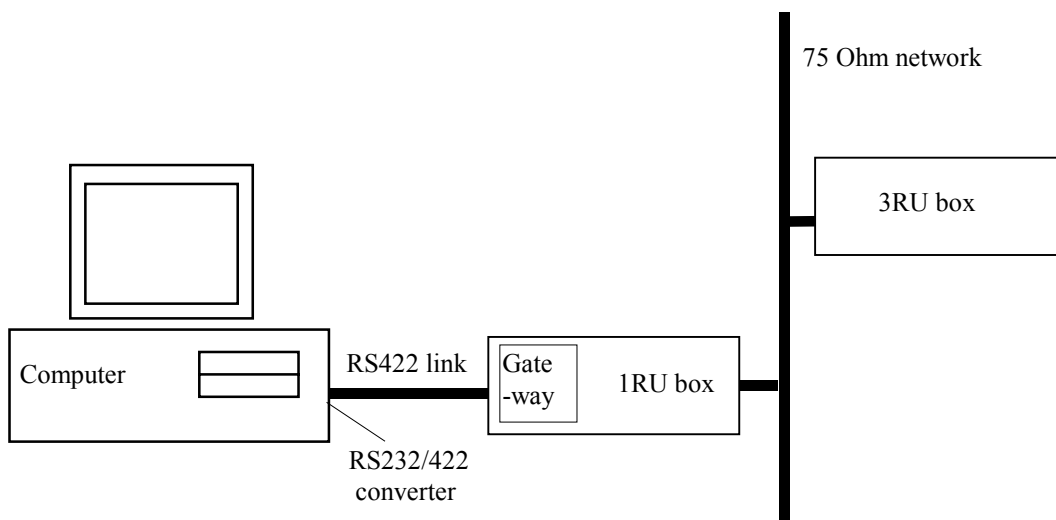
There are two choices for connecting the PC to the Modular IQ System:

75 Ohm co-axial cable BNC for box-to-box connections running at 2.5 Mbs.



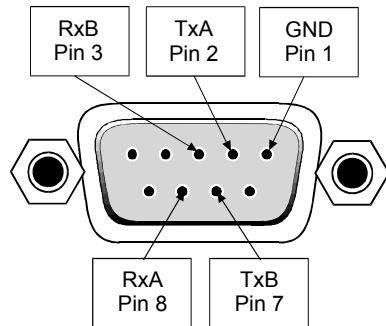
Each unit is physically joined via a T-piece connector. Each T-piece is connected by 75 Ohm co-ax cable to create a section. Each section of cable can be up to 400m. Each end of the network is terminated by a 75 Ohm terminator.

RS422 running at 38.4 kbs asynchronous:



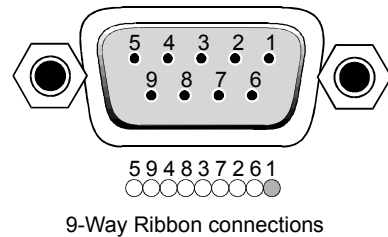
Connect the RS232/RS422 converter to COM1 or COM2 of the PC and connect this via RS422 cable to the 9 pin 'D' on the IQ modular unit. This interface is specifically designed for third party connections into the system. This allows PC's or any other serial device access to any of the units within the system. Every active 1RU or 3RU box has one of these ports.

Physical Interface - RollCall RS422



N.B. Connector is a socket, viewed from mating face. Equivalently, this is a plug, viewed from the rear, cable face.

For reference, the A signal is at 0V at line idle, and the B signal at 5V.



Standard Connections

9-way Connector	FUNCTION
1	Frame Ground
2	Transmit A (Tx-)
3	Receive B (Rx+)
4	Receive Common
5	[No connection]
6	Transmit Common
7	Transmit B (Tx+)
8	Receive A (Rx-)
9	Frame Ground

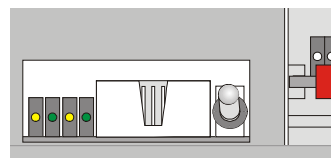
N.B. The D connector on the Gateway card could also be configured as RS485.

Selection of the interface format is by a switch on the card.

Note that RS485 interconnections should be pin to pin and only be used for Snell & Wilcox RollNet applications.

DOWN i.e. towards the PCB selects RS422

UP i.e. away from the PCB selects RS485



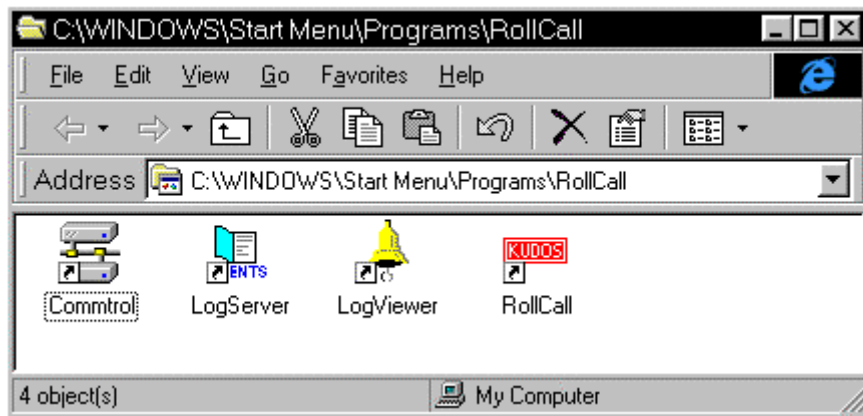
Switch set to RS485

Software Installation

Run SETUP.EXE from the installation diskette to install the suite of Rollcall programs. Product code IQSPCR contains the Rollcall Remote Control (rollcall.exe) and communications driver (commtrol.exe) programs. Product code IQSPCD contains the Rollcall Remote Control (rollcall.exe), communications driver (commtrol.exe), logserver (rolllog.exe) and logviewer (rollview.exe) programs.

On startup, the setup program prompts for an installation directory. The default installation directory is C:\ROLLCALL. The set-up procedure will copy all the necessary files to this directory. Set-up will also create a Windows Group called RollCall.

Depending on the product code of the diskette, Either two icons (RollCall and Commtrol for IQSPCR) or four icons (RollCall, Commtrol, LogServer and LogViewer for IQSPCD) will appear in the group.



Overview

ROLLCALL.EXE:

This program allows control of RollCall compatible units. (IQ Modules, Supervisor, other S&W units with RollCall gateway). Each unit has a 'control template' window for control of that device. The user can configure the program for USER, ENGINEER or SUPERVISOR access levels with password protection. It can install "template" files from new units automatically or by user request.

ROLLLOG.EXE:

This is the Log Server application that collects logging information from units on the network. Keeps a running log file of every event received. Writes a current status file for configured units and allows the LogViewer program to display the information.

ROLLVIEW.EXE:

This program displays the current status file written by ROLLLOG.EXE in a tabulated form. Coloured conditions highlight warning and failure states. Can be configured for network access for remote monitoring using share information from the LogServer program.

COMMTROL.EXE:

This program is called automatically by ROLLCALL.EXE or ROLLLOG.EXE and normally runs minimized. Usually, there is no need to run this program by itself. This program provides the basic communications with the PC card, serial comms ports or TCP/IP protocols. It also has monitoring facilities for data analysis.

For more details see the operator's manual for the IQSPCR Section 3

RollCall Control Templates for the IQDLOG Logo

This menu allows the logo to be selected and manipulated in various ways.

Logo Sequence

This menu allows a particular logo to be selected from the list.

Note that for this and other screens the following applies:

The **P** symbol represents the Preset function and will return the function to the default setting.

The **◀** and **▶** symbols at the ends of the scroll bar allow the value to be adjusted in discrete steps.

The numerical value will be shown above the scroll bars.

Step Logo Sequence

This function allows an individual frame within an animated sequence to be selected.

The range of control is from 1 to the maximum number of frames in the sequence in 1 frame steps and preset is to frame 1.

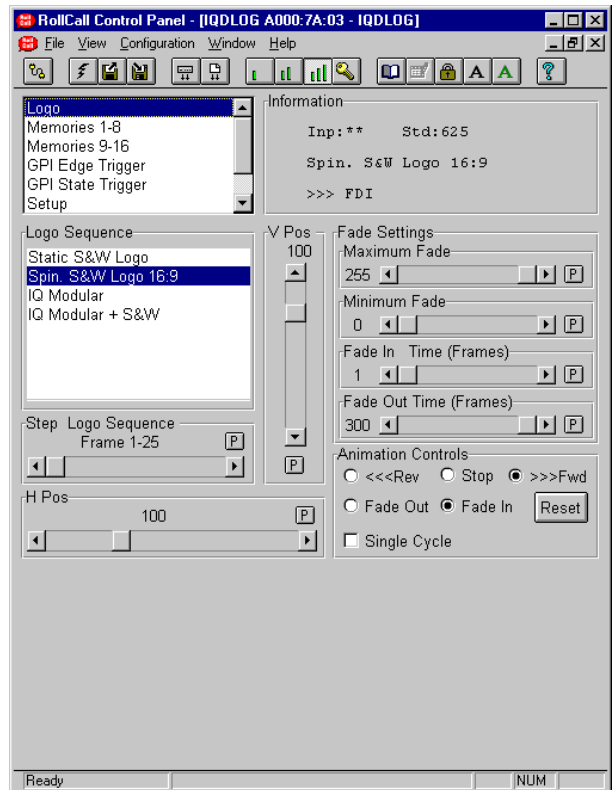
Note that this item will not be available (greyed out) if a static logo has been selected.

H Position and V Position

The position of the logo on the screen may be set using these functions.

The H Position range of control is from -120 to +718 samples (525) or -138 to +710 samples (625) in steps of 2 samples and preset is to 100.

The V Position range of control is from 0 to +500 (525), 0 to 600 (625) lines in steps of 2 lines and preset is to 100.



Fade Settings

Maximum and Minimum Fade

When a fade is activated the amplitude of the logo signal at the end of the fade may be set using this function.

Maximum Fade will set the maximum amplitude of the logo at the end of a Fade-In function and Minimum Fade will set the minimum amplitude of the logo at the end of a Fade-out function.

The Maximum Fade range of control is from 0 to 255 in steps of 1 unit and preset is to 255.

The Minimum Fade range of control is from 0 to 255 in steps of 1 unit and preset is to 0.

◀ Fade In /Fade Out

The Fade In and Fade Out times for Fade Out/Fade In functions under **Controls** may be adjusted here and the value in frames will be displayed.

The range of control is from 1 to 300 frames in 1 frame steps and preset is to 1.

Logo (continued)

Animation Controls

Methods of controlling the logo may be selected here.

<<<Rev <<<<Fwd

If an animated logo has been selected the these toggle functions allow the sequence to flow forward (from start to finish) or in reverse (from finish to start)

*Note that if the **Single Cycle** item is not enabled these functions will continuously recycle the sequence.*

*If the **Single Cycle** item is enabled these functions will only perform a single cycle event.*

Fade Out/Fade In

When selected these items allow the logo to be faded out of or faded into the main picture over an adjustable time period time.

Stop

This function will stop an animated logo sequence.

Reset

This function will reset an animated sequence to the start of the sequence.

Single_Cycle

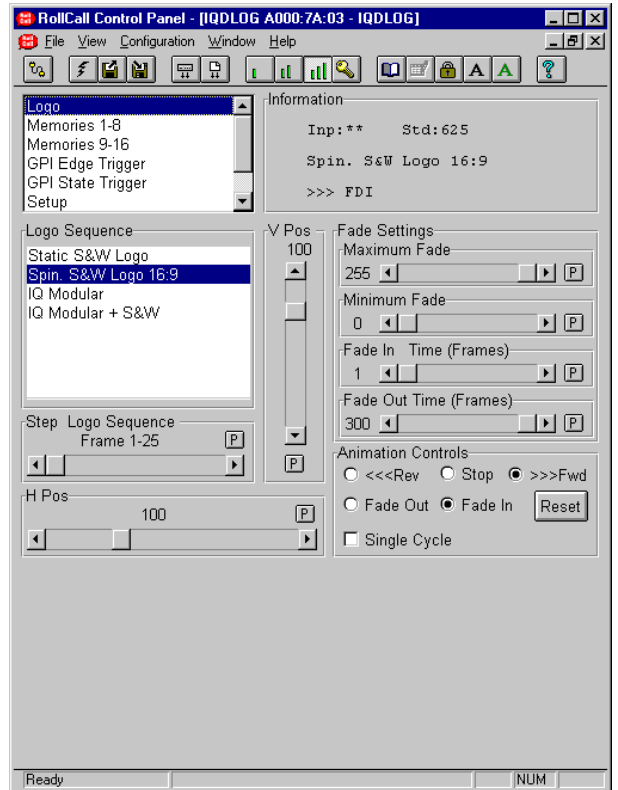
This item effects the operation of the ◀ Reverse and Forward ▶ functions.

Single_Cycle not enabled

When the ◀ Reverse and Forward ▶ functions are selected the logo sequence will continuously recycle.


Single_Cycle enabled


When the ◀ Reverse and Forward ▶ functions are selected the logo sequence will only perform a single cycle.



Memories 1-8 and 9-16

All settings of the unit may be stored in any of 16 non-volatile memory locations. These locations may be Recalled, Saved, given a name or Cleared to the preset names by selecting the appropriate function.

To change the memory name, type the new name in the text area and then select  (return).

Selecting  (Preset) will return the text to the default name.



This item allows the memory location to be cleared and returned to the default (preset) setting.



This function allows the settings of all items to be saved at the memory location.



This function allows the settings saved at the memory location to be recalled.

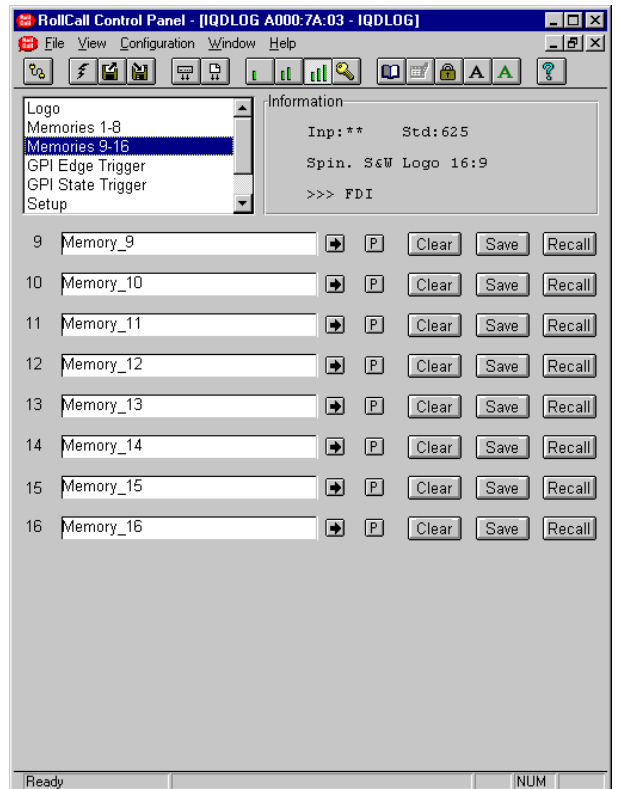
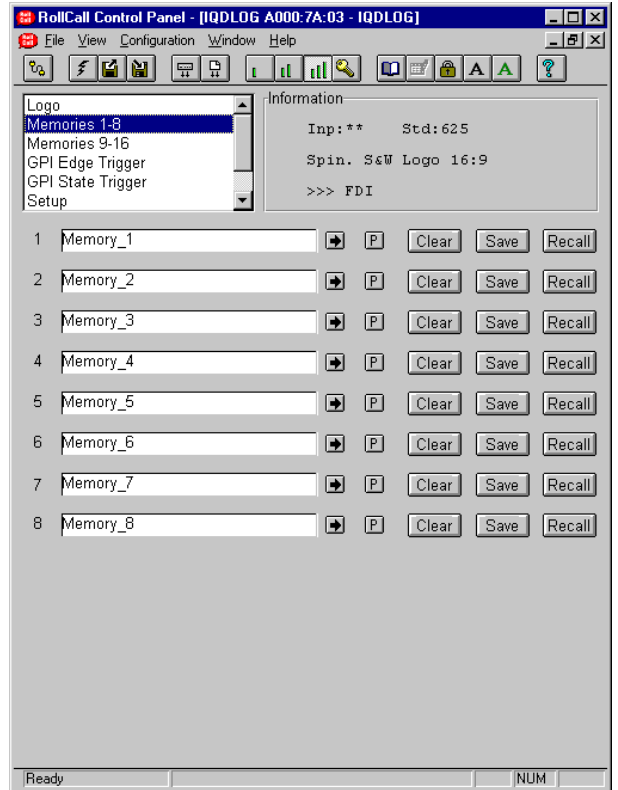
Note that all the above functions are a momentary action.

These memory names will appear in the GPI list in the memory locations.

Note that if an asterisk appears in front of a memory name, this means that the sequence name it has stored is no longer in the logo sequence list.



This can happen if a new logo file is loaded which does not contain the name of a logo sequence in the memory.



GPI Edge Trigger

GPI Overview (-2 version only)

The three GPI connectors on the rear panel are used for accepting GPI information (from mechanical switch contacts, relay contacts etc.) The resulting action that the unit takes may be selected from these menus.

The type of input that activates the GPI function may be selected as either an edge trigger or by the change of state of any of the 3 GPI inputs. The edge trigger polarity may be selected as closed-to-open (Open) or open-to-closed (Close) for each of the GPI inputs.

The function may also be disabled.

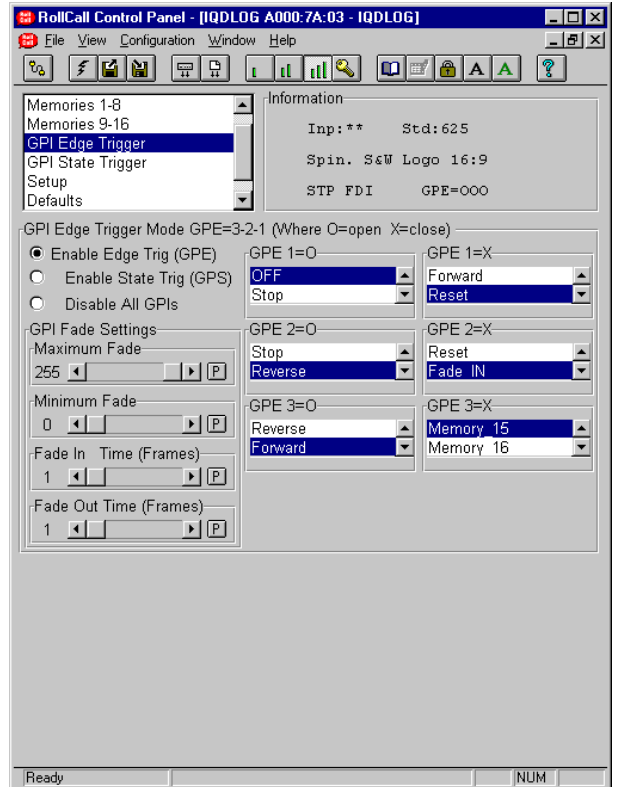
To set up a function to be activated by an edge trigger.

Check the **Enable Edge Trig (GPE)** box.

Decide which GPI input to use (GPI 1, 2 or 3) and the edge trigger polarity required (GPI 1, 2, 3 = 0 or GPI 1, 2, 3 = X) where 0 = closed-to-open and X = open-to-closed.

Scroll down the list of actions that may be chosen to occur when the GPI is activated and select the desired item.

Setting	Action
OFF	No action occurs
Stop	Stop Sequence
Reverse*	Sequence finish to start
Forward*	Sequence start to finish
Reset	Return to start
Fade IN	Fade in Logo
Fade OUT	Fade out Logo
Memory 1	Selects Memory settings 1
to	to
Memory 16	Selects Memory settings 16



In this example the following setup has been selected.

GPI Port	Trig Polarity	Action
1	0 = closed-to-open	None
2	0 = closed-to-open	Reverse
3	0 = closed-to-open	Forward
1	X = open-to-closed	Reset
2	X = open-to-closed	Fade IN
3	X = open-to-closed	Memory 15

GPI Edge Trigger (continued)

Using the **GPI Fade Settings** section the following fade parameters may be set up:

** Note that if the **Single Cycle** item in the Logo template is not enabled these functions will continuously recycle the sequence. If the **Single Cycle** item in the Logo template is enabled these functions will only perform a single cycle event.*

Maximum and Minimum Fade

When a fade is GPI activated the amplitude of the logo signal at the end of the fade may be set using this function.

Maximum Fade will set the maximum amplitude of the logo at the end of a Fade-In function and Minimum Fade will set the minimum amplitude of the logo at the end of a Fade-out function.

The Maximum Fade range of control is from 255 to 0 in steps of 1 unit and preset is to 255.

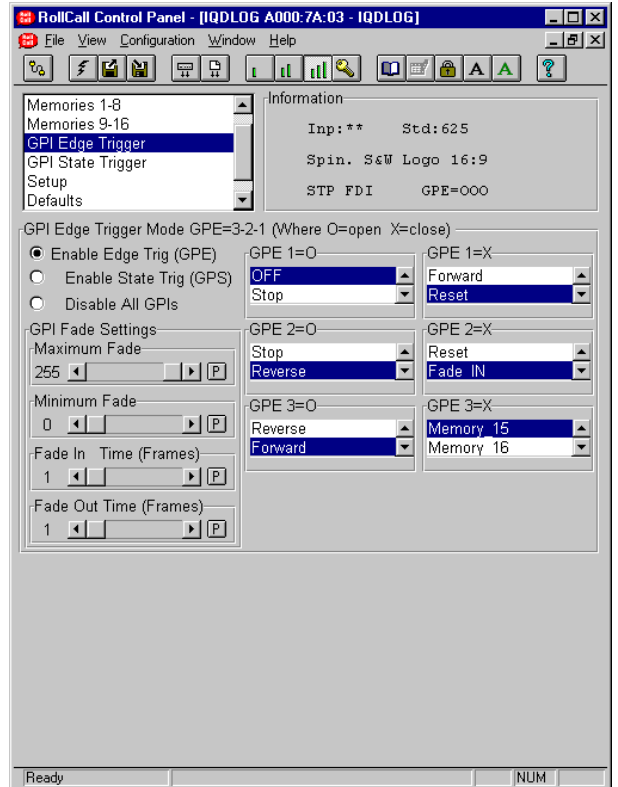
The Minimum Fade range of control is from 0 to 255 in steps of 1 unit and preset is to 0.

Fade In Time and Fade Out Time (in Frames)

These items allow GPI activated fade in and fade out times to be set.

Both times may be adjusted separately using the scroll bars and the value will be indicated.

The range of control is from 1 to 300 frames in 1 frame steps and preset is to 1 frame.



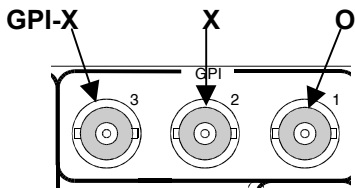
GPI State Trigger

To set up a function to be activated by a state trigger.

Check the **Enable State Trig (GPS)** box.

Choose the 3-bit binary code that is required to activate the function from the **State 0 to State 7** items.

Where O = Closed to Open and X = Open to Closed and the GPI input order is as follows:



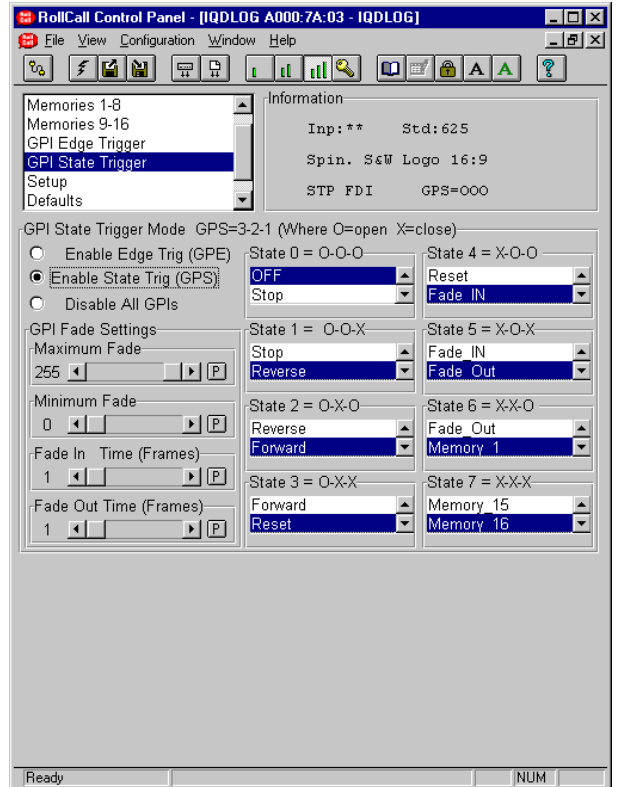
For example selecting State 6 X-X-O will activate the function when the state of the 3 GPI inputs changes to X (input 3 to closed), X (input 2 to closed) and O (input 1 to open)

When a code has been selected scroll down the list of actions that may be chosen to occur when the GPI is activated and select the desired item.

Setting	Action
OFF	No action occurs
Stop	Stop Sequence
Reverse*	Sequence finish to start
Forward*	Sequence start to finish
Reset	Return to start
Fade IN	Fade in Logo
Fade OUT	Fade out Logo
Memory 1	Selects Memory settings 1
to	to
Memory 16	Selects Memory settings 16

Using the **GPI Fade Settings** section the following fade parameters may be set up:

* Note that if the **Single Cycle** item in the Logo template is not enabled these functions will continuously recycle the sequence. If the **Single Cycle** item in the Logo template is enabled these functions will only perform a single cycle event.



Maximum and Minimum Fade

When a fade is GPI activated the amplitude of the logo signal at the end of the fade may be set using this function.

Maximum Fade will set the maximum amplitude of the logo at the end of a Fade-In function and Minimum Fade will set the minimum amplitude of the logo at the end of a Fade-out function.

The Maximum Fade range of control is from 255 to 0 in steps of 1 unit and preset is to 255.

The Minimum Fade range of control is from 0 to 255 in steps of 1 unit and preset is to 0.

Fade In Time and Fade Out Time

These items allow GPI activated fade in and fade out times to be set.

Both times may be adjusted separately using the scroll bars and the value will be indicated.

The range of control is from 1 to 300 frames in 1 frame steps and preset is to 1 frame.

Setup

This display allows various system parameters to be set.

Preset Unit

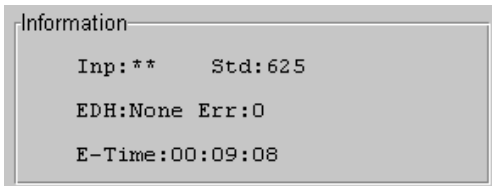
Selecting this item sets all adjustment functions that include a preset facility, to their preset values.

EDH

This section allows EDH parameters to be shown and reset.

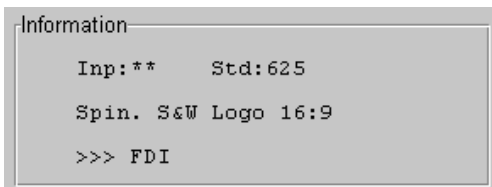
Show Stats (Statistics)

When this function is enabled the information window will display the number of errors from the time the function was enabled.



The elapsed time in hours, minutes and seconds is also displayed.

When this function is not enabled the information window will display the Logo name the state of the Logo.



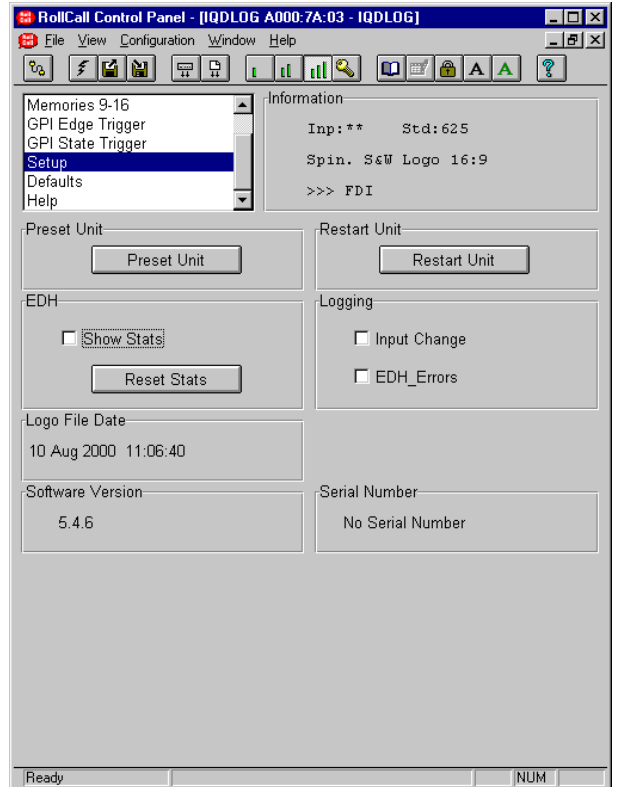
For an explanation of the abbreviations used please see the HELP section.

Reset Stats (Statistics)

Selecting this function will reset the EDH error count and the timer shown in the information window, to zero.

Restart Unit

This function allows the unit to reboot and all power-up settings to be enabled.



Logging

If a logging device is attached to the RollCall™ network, information about various parameters can be made available to such a device.

Input Change

When enabled a change of input signal condition will be available for the logging device.

EDH Errors

When enabled EDH error reports will be available for the logging device.

Logo File Details

This item will display the date and time information embedded in the Logo file.

Software Version

This item shows the version of the software fitted in the module.

Serial Number

This item shows the serial number of the module.

Defaults

Default Standard

In the event of a loss of input the output standard may be set to become:

- Auto** The output standard will be the same as the input
- 625** The output will be in the 625 standard. Note that if this is not the same as the input standard an error message will appear in the information window and the output picture will become black. If the input fails the output will become this standard.
- 525** The output will be in the 525 standard. Note that if this is not the same as the input standard an error message will appear in the information window and the output picture will become black. If the input fails the output will become this standard.

Default Output-On Input Fail

This item allows an output picture to be selected in the event of a loss of input signal.

The output picture that appears may be selected from the following list:

Black

The picture will become black

Black & Current Logo

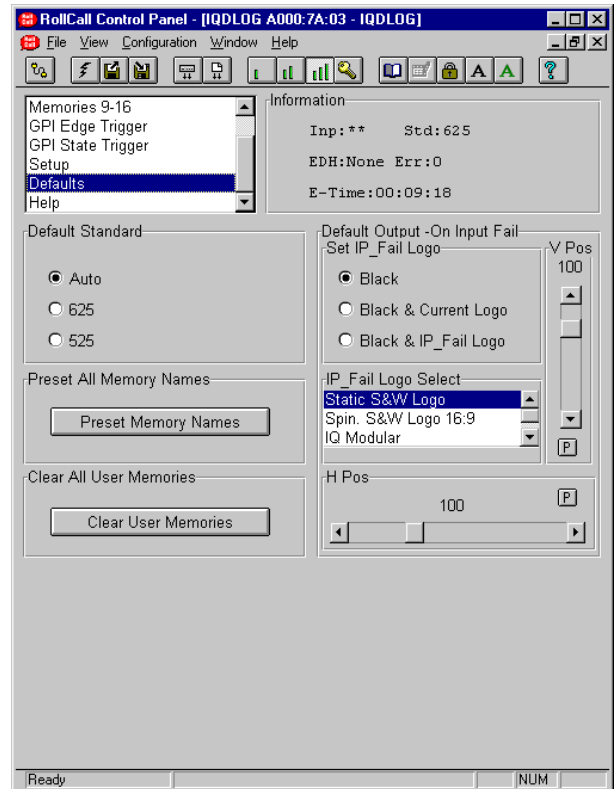
The picture will be black with the currently selected logo; if the currently selected logo contains movement the movement will continue.

Black & IP_Fail Logo

The picture will be black with the selected IPF logo chosen using the **IP_Fail Logo Select** function below.

This allows a different logo from the current logo to be chosen as the Logo that will then appear when the input signal fails.

Note that if a Logo that contains movement is chosen for this function, the Logo movement will be lost under input failure conditions and the first frame of the selected sequence will be shown.



H and V Position

The position of the IP_Fail logo on the screen may be set using this function.

The horizontal position is set using the H_Pos item and the vertical position by using the V_Pos item.

The H Position range of control is from -120 to +718 samples (525) or -138 to +710 samples (625) in steps of 2 samples and preset is to 100.

The V Position range of control is from 0 to +500 (525), 0 to 600 (625) lines in steps of 2 lines and preset is to 100.

Preset All Memory Names.

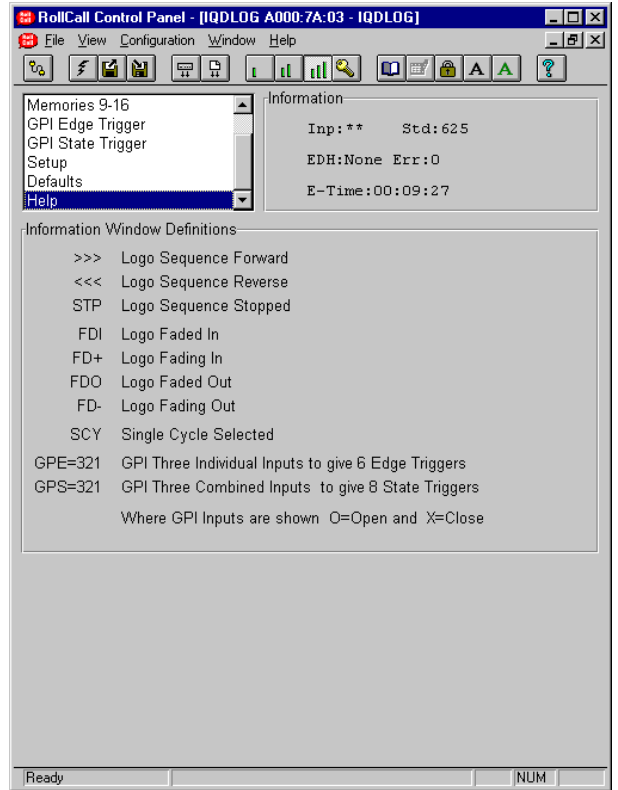
Selecting Preset Memory Names will reset all the memory names to their default names.

Clear All User memories

All memories may be cleared to their default settings by selecting the Clear User Memories function.

Help

This function will display a list of explanations for the abbreviations used in the information window and examples of some GPI setup's.



Manual Revision Record

Date	Version No.	Issue No.	Change	Comments
080200	1	1		First issue
200202	1	2	General corrections	New issue released
120402	1	3	Now includes information for the 3A enclosure modules	New manual issued
100403	1	4	Power consumption added to techspec	New manual issued