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**GTP - 32**

**GPI TALLY PROCESSOR**

**Formerly Tally Interface Box**

**Setup Manual**



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## **I. REVISION HISTORY**

011305	Rev. 1.0	Original Document
093005	Rev. 1.1	Revised to conform to current software. V1.87
120905	Rev. 1.2	Separated into setup and installation manual.
012406	Rev. 1.3	Inserted event logging instructions.

## II. GETTING STARTED

Configure the GPIs and GPOs per instructions in the SETUP section. This step is required after initial installation and after changing external GPIs or GPOs.

This step will accomplish the following:

- A. Configure the GPI TALLY PROCESSOR software specifically for the GPIs and GPOs it will be connected to.
- B. Set user selected password.
- C. Set the system label to uniquely identify the GPI TALLY PROCESSOR.

## III. USING THE GPI TALLY PROCESSOR

Build an Event Monitor Table to route GPIs to GPOs following instructions in the EVENT MONITOR TABLE section. This step is required when GPI or GPO routing must be created or changed.

This step will accomplish the following:

- A. Assign control of a GPO to one or more GPIs.
- B. Assign control of a GPO to a Remote Source Event Definition or Combinatorial Event Definition.
- C. Save the Event Monitor Table in a file for later restore.
- D. Build more than one Event Monitor Table for later restore.

## IV. GPI TALLY PROCESSOR OVERVIEW

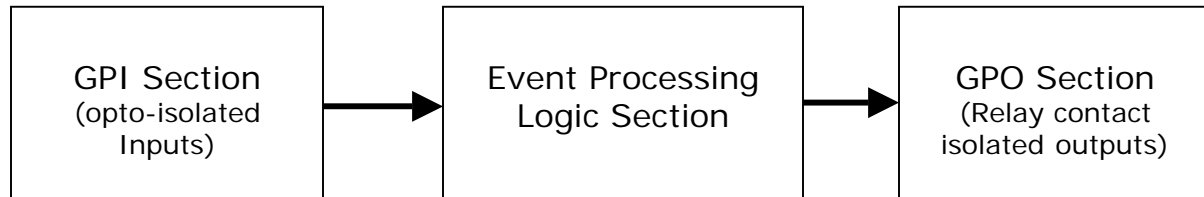
The GPI TALLY PROCESSOR is a GPI/Tally router, GPI/Tally distributor, and a GPI/Tally combiner. As a GPI/Tally router, any GPI may be routed to any GPO. GPIs may be located on the GPI TALLY PROCESSOR or located on another, remote GPI TALLY PROCESSOR. When the GPI turns ON, the associated GPO is turned ON. When the GPI turns OFF, the GPO is turned OFF.

As a GPI/Tally distributor, one GPI can be routed to many GPOs. GPOs may be located on the GPI TALLY PROCESSOR or located on another, remote GPI TALLY PROCESSOR. When the GPI turns ON, all of the associated GPOs will turn on. When the GPI turns OFF, all of the GPOs will turn off.

As a GPI/Tally combiner, many GPIs can be routed to one GPO. GPIs may be located on the GPI TALLY PROCESSOR or located on another, remote GPI TALLY PROCESSOR. In this situation, when at least one of the GPIs turns on, the

associated GPO is turned ON. Only after all of the these GPIs turn off, the GPO is turned off.

The GPI TALLY PROCESSOR is comprised of 3 major sections:



## GPI Section

The GPI Section is responsible for providing isolation between the various GPI sources and the GPO devices, as well as detecting active GPIs. Each GPI input is isolated using an opto-isolator that requires a differential voltage across it to turn it on. This input supports positive and negative voltages, active high GPI sources, and active low GPI sources. The GPI source must provide the differential voltage required to turn on the opto-isolator. No voltage or current is supplied by the GPI TALLY PROCESSOR to power the opto-isolators

## Event Processing Logic Section

The Event Processing Section is the Event Monitoring Table. The Event Monitoring Table is the power of the GPI TALLY PROCESSOR, routing GPI Inputs to GPO Outputs. The state of each GPO is dependent upon the state of the GPI it is routed to. The GPI state is dependent upon the external device it is connected to.

The GPI TALLY PROCESSOR monitors local and remote GPIs to control the state of the “Local GPOs”, GPOs that are located inside the GPI TALLY PROCESSOR. “Local GPIs” are GPIs that are located inside the GPI TALLY PROCESSOR. “Remote GPIs” are GPIs located in another GPI TALLY PROCESSOR that is connected via ethernet, intranet, or internet to this GPI TALLY PROCESSOR.

The GPI TALLY PROCESSOR monitors the current state of a GPI. When the GPI turns “ON”, the associated GPO is affected by the assigned “ON FUNCTION”, typically “Turn On GPO”. When the GPI turns “OFF”, the associated GPO is affected by the assigned “OFF FUNCTION”, typically “Turn Off GPO”.

In the Event Monitoring Table, a single GPI may be routed to control a single GPO. A single GPI may be routed to control many GPOs. Also, many GPIs may be routed to control a single GPO.

The Event Monitoring Table uses combining logic to support the “One to Many” and “Many to One” relationships. If three (3) GPIs (i.e.: production switcher tally outputs) are routed to control the same GPO, (i.e.: camera tally light), the camera tally light will turn on if ANY one of the three GPIs is turned on. The camera tally light will only turn off when ALL three GPIs are turned off.

Each row in the Event Monitoring Table is used to route one GPI to one GPO. To use one GPI to control many GPOs, add a row for each GPO to be controlled. To use many GPIs to control one GPO, add one row for each GPI.

## **GPO Section**

The GPO section is made up of relay contact closures, providing isolation between the GPI sources and the various GPO controlled devices. Each GPO output is a normally open, relay contact pair. The GPO output is a "dry" contact closure. No voltage or current is provided by the GPI TALLY PROCESSOR.

## **V. COMBINATORIAL LOGIC OPTION OVERVIEW**

The Combinatorial Logic Option for the GPI TALLY PROCESSOR delivers Tally Intelligence. In addition to one tally input controlling one tally output, the Combinatorial Logic Option allows one tally output to be controlled by multiple tally inputs based upon a user-entered definition. Now, diode OR'ing and other "glue logic" circuits are no longer necessary.

The Combinatorial Event Definition screen, available through the GPI TALLY PROCESSOR's web interface is used by the operator to create a combinatorial event definition.

The combinatorial event definition consists of:

- A. Unique user entered name (event identifier)
- B. User entered equation that contains a list of GPI sources to monitor and logical operators (AND, OR, NOT, XOR, NAND, and NOR).
- C. User selected "Available: Yes" or "Available: No" allows the definition to be temporarily disabled.

Combinatorial Event Definitions may be added, deleted, or modified at any time without affecting system operation or requiring a system reboot. Combinatorial Event Definitions may also be nested in other Combinatorial Event Definitions.

After defining Combinatorial Event Definitions, their event identifiers may be used in the Channel Event Monitoring Table as a source to affect local GPOs. Remote GPI TALLY PROCESSORS may also use these event identifiers in their Channel Event Monitoring Tables to affect GPOs.

The individual components of the Combinatorial Event Definition are monitored on a real-time basis by the Event Monitoring Table. When the current states of the components cause the definition to become true, the GPO assigned in the Event Monitoring Table will be controlled by the associated "ON Function". When

the current states of the components cause the definition to become false, the assigned GPO will be controlled by the associated "OFF Function".

## **VI. EVENT LOGGING OPTION OVERVIEW**

The EVENT LOGGING option allows the GTP to log each GPI and GPO change (also referred to as "event") into a log file on the GTP. For each GPI/GPO event, the GPI/GPO number, current state (ON or OFF) along with the system date and time will be saved into the log file. If the LTC time code option is installed, the "House System Time" will also be saved.

The EVENT LOGGING option will maintain 7 log files, one log file for each day of the week. At midnight, based upon the GTP's internal clock, the logging will continue in the next day's file. On the 8<sup>th</sup> day, the oldest log file will be deleted and replaced with a new empty file.

Each daily log file is actually two separate files, elog-xxx-0.txt and elog-xxx-1.txt. The "-0.txt" file is used first and when full, the "-1.txt" file is used. The two files will hold a maximum of approximately 40,000 events. If the number of logged events for a day exceeds this maximum number, the "-0.txt" file will be overwritten with the new events.

The data in the log file will be in a standard comma delimited format, (CSV, Comma-Separated-Value). This file can be uploaded to a "PC" and viewed with any text editing program or word processor. It can also be imported into a spreadsheet or database program for viewing or statistical analysis. There is no user intervention necessary to start the logging feature, it is always active.



## VII.SETUP

Setup is required after initial installation. Setup may also be required after changing external GPIs or GPOs.

Setup is performed using a computer running an off the shelf web browser such as "Microsoft Internet Explorer" or "Netscape". Connect the CAT5 cable from the computer to the same ethernet hub that the GPI TALLY PROCESSOR is connected to.

After launching the web browser, enter the IP address of the GPI TALLY PROCESSOR to be setup. The GPI TALLY PROCESSOR Home Page will be displayed.

The screenshot shows the GPI TALLY PROCESSOR Home Page. At the top left is the DNF CONTROLS logo. To its right is the text "Flex Control Network™". On the top right, there are two columns of information: "Model NO: Tally Interface Box", "Software Ver: 1.87B12", and "Serial Ports: 0" on the left; and "Serial NO: 500206", "GPI/GPO: 32/32", and "Label: DC30" on the right. Below this is a navigation bar with links: Home, GPI, GPO, Source Event Definition, Combinatorial Event Definition, Event Monitoring, Event Diagnostics, System, and Logout. The main content area has a section titled "IP Configuration" with the following details: IP Address: 192.168.10.30, Subnet Mask: 255.255.255.0, and Gateway: 0.0.0.0. At the bottom left, there is a logo for "goahead WEB SERVER" and a logo for "ARS RTC/MLTnet".

### A. Set Password

The default password, when shipped from the factory, is "controls", all lower case. The password is used to access all configuration screens.

Using the web browser:

1. From the Tally Interface Home Page, click on the “System” link. The System page will be displayed.

The screenshot shows the 'System' page of the DNF Controls Flex Control Network. The header includes the DNF logo, the product name 'Flex Control Network™', and system information: Model NO: Tally Interface Box, Software Ver: 1.87B12, Serial Ports: 0, Serial NO: 500206, GPI/GPO: 32/32, and Label: DC30. The navigation menu includes Home, GPI, GPO, Source Event Definition, Combinatorial Event Definition, Event Monitoring, Event Diagnostics, System (selected), and Logout. The main content area lists three items: Set Password, Set System Time, and Set System Label, followed by a link for System maintenance.

2. Click on “Set Password”. The Set Password page will be displayed.

The screenshot shows the 'Set Password' page of the DNF Controls Flex Control Network. The header and navigation menu are identical to the previous screenshot. The main content area is titled 'Set Password' and contains a list of password requirements: Password must be between 5 & 10 characters, Password may only contain characters A-Z and 0 - 9, Password cannot contain special characters or spaces, and Password is case-sensitive. Below the requirements are three input fields labeled 'Old Password:', 'New Password:', and 'Verify New Password:'. At the bottom are 'Save' and 'Cancel' buttons.

3. In the "Old password" entry box, enter the current password.

**Note:** When shipped from the factory, the default password is "controls", all lower case.

4. Enter the new password in the "New Password" entry box.
5. Enter the new password in the "Verify New Password" entry box.
6. Click on "Save" to save the new password.

**OR**

Click on "Cancel" to exit without changing passwords.

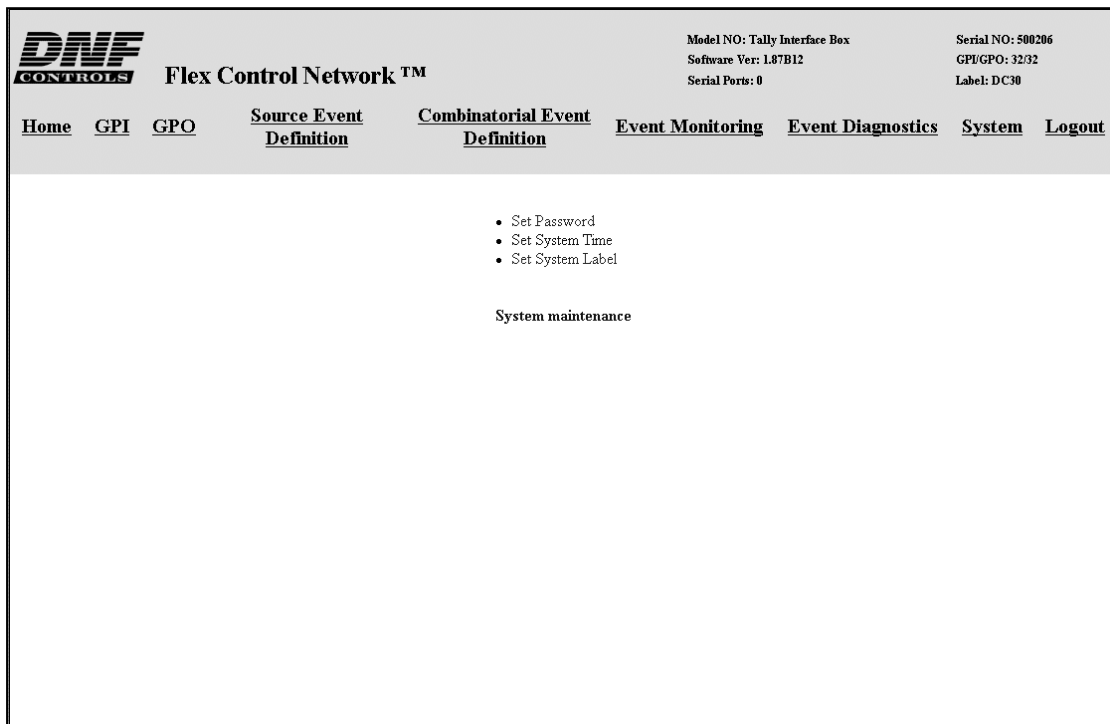
**Note:** If the "New Password" entry and the "Verify New Password" entry do not match, an error will be displayed.

## B. Set System Label

The System Label is used to uniquely identify a GPI TALLY PROCESSOR. This name is associated with the IP address.

Using the web browser:

1. From the Tally Interface Home Page, click on the “System” link. The System page will be displayed.



2. Click on “Set System Label”. The Set System Label page will be displayed.

**DNF**  
CONTROLS

Flex Control Network™

Model NO: Tally Interface Box  
Software Ver: 1.87B12  
Serial Ports: 0

Serial NO: 500206  
GPI/GPO: 32/32  
Label: DC30

[Home](#) [GPI](#) [GPO](#) [Source Event Definition](#) [Combinatorial Event Definition](#) [Event Monitoring](#) [Event Diagnostics](#) [System](#) [Logout](#)

### Set System Label

- Label may contain any alpha, numeric, or special characters.
- Max length of label is 16 characters.

System label: DC30

New System Label:

3. Enter any name made up of letters, numbers, or special characters, up to 16 characters.
  4. Click on "Save" to save the name entered in step 3).
- OR**
- Click on "Cancel" to exiting without changing the System Label.

## C. Set System Time

The system time is only used for error logging. It is not used to process GPIs or control GPOs.

Using the web browser:

1. From the Tally Interface Home Page, click on the “System” link. The System page will be displayed.
2. Click on “Set System Time”. The Set System Time page will be displayed.


The screenshot displays the DNF Controls Flex Control Network web interface. The header includes the DNF Controls logo, the product name 'Flex Control Network™', and system information: Model NO: Tally Interface Box, Software Ver: L87B12, Serial Ports: 0, Serial NO: 500206, GPI/GPO: 32/32, and Label: DC30. The navigation menu contains links for Home, GPI, GPO, Source Event Definition, Combinatorial Event Definition, Event Monitoring, Event Diagnostics, System, and Logout. The 'System' link is highlighted. The main content area is titled 'Set System Time' and shows the 'Current Time' as January / 1 / 1970 22:13:59. Below this, there are drop-down menus for Year (1990), Month (January), Day (1), Hour (22), Min. (13), and Sec. (59). At the bottom of the form are 'Save' and 'Cancel' buttons.

3. Using the drop down menus, set the current date and time.
4. Click on “Save” to save the entered date and time.  
**OR**  
Click on “Cancel” to exit without saving.

## D. GPI Setup

Using the web browser:

1. From the GPI TALLY PROCESSOR Home Page, click on the “GPI” link. The GPI Configuration Table page will be displayed.

**Flex Control Network™**

Model NO: Tally Interface Box  
Software Ver: 1.87B12  
Serial Ports: 0

Serial NO: 500206  
GPI/GPO: 32/32  
Label: DC30

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Edit / Backup / Restore GPI Configuration Table

GPI CONFIGURATION TABLE

Refresh


GPI#	Label	GPI CURRENT STATE	Configuration		
			User Defined "ON" State	User Defined "ON" Mode	Debounce (*10 ms)
1	GPI_1	ON	OPTO ON	Latched	1
2	GPI_2	ON	OPTO ON	Latched	1
3	GPI_3	ON	OPTO ON	Latched	1
4	GPI_4	ON	OPTO ON	Latched	1
5	GPI_5	ON	OPTO ON	Latched	1
6	GPI_6	ON	OPTO ON	Latched	1
7	GPI_7	ON	OPTO ON	Latched	1
8	GPI_8	ON	OPTO ON	Latched	1
9	GPI_9	ON	OPTO ON	Latched	1
10	GPI_10	ON	OPTO ON	Latched	1
11	GPI_11	ON	OPTO ON	Latched	1
12	GPI_12	ON	OPTO ON	Latched	1
13	GPI_13	ON	OPTO ON	Latched	1
14	GPI_14	ON	OPTO ON	Latched	1
15	GPI_15	ON	OPTO ON	Latched	1
16	GPI_16	ON	OPTO ON	Latched	1
17	GPI_17	OFF	OPTO ON	Latched	1
18	GPI_18	OFF	OPTO ON	Latched	1
19	GPI_19	OFF	OPTO ON	Latched	1
20	GPI_20	OFF	OPTO ON	Latched	1
21	GPI_21	OFF	OPTO ON	Latched	1
22	GPI_22	OFF	OPTO ON	Latched	1
23	GPI_23	OFF	OPTO ON	Latched	1
24	GPI_24	OFF	OPTO ON	Latched	1
25	GPI_25	OFF	OPTO ON	Latched	1
26	GPI_26	OFF	OPTO ON	Latched	1
27	GPI_27	OFF	OPTO ON	Latched	1
28	GPI_28	OFF	OPTO ON	Latched	1
29	GPI_29	OFF	OPTO ON	Latched	1
30	GPI_30	OFF	OPTO ON	Latched	1
31	GPI_31	OFF	OPTO ON	Latched	1
32	GPI_32	OFF	OPTO ON	Latched	1

Edit / Backup / Restore GPI Configuration Table

2. At the top or bottom of the page, click on the “Edit GPI Configuration Table” link.

If prompted for password, enter your password then click on “Login” to log in to the GPI TALLY PROCESSOR. If already logged in, the password prompt will not be displayed.

The GPI Configuration Table will be displayed with drop down boxes.



**Flex Control Network™**

Model NO: Tally Interface Box  
Software Ver: 1.87B12  
Serial Ports: 0

Serial NO: 500206  
GPI/GPO: 32/32  
Label: DC30

[Home](#) [GPI](#) [GPO](#) [Source Event Definition](#) [Combinatorial Event Definition](#) [Event Monitoring](#) [Event Diagnostics](#) [System](#) [Logout](#)

- Enter a GPI label.
- Choose an "ON" State.
- Choose an "ON" Mode.
- Enter a Debounce Time.
- Max Debounce value is 255 (= 2550 ms).

Save

Cancel

**GPI CONFIGURATION TABLE**

GPI#	Label	GPI CURRENT STATE	Configuration		
			User Defined "ON" State	User Defined "ON" Mode	Debounce (*10 ms)
1	<input type="text" value="GPI_1"/>	OFF	<input type="text" value="OPT0 ON"/>	<input type="text" value="Latched"/>	<input type="text" value="1"/>
2	<input type="text" value="GPI_2"/>	OFF	<input type="text" value="OPT0 ON"/>	<input type="text" value="Latched"/>	<input type="text" value="1"/>
3	<input type="text" value="GPI_3"/>	OFF	<input type="text" value="OPT0 ON"/>	<input type="text" value="Latched"/>	<input type="text" value="1"/>
4	<input type="text" value="GPI_4"/>	OFF	<input type="text" value="OPT0 ON"/>	<input type="text" value="Latched"/>	<input type="text" value="1"/>
5	<input type="text" value="GPI_5"/>	OFF	<input type="text" value="OPT0 ON"/>	<input type="text" value="Latched"/>	<input type="text" value="1"/>
6	<input type="text" value="GPI_6"/>	OFF	<input type="text" value="OPT0 ON"/>	<input type="text" value="Latched"/>	<input type="text" value="1"/>
7	<input type="text" value="GPI_7"/>	OFF	<input type="text" value="OPT0 ON"/>	<input type="text" value="Latched"/>	<input type="text" value="1"/>
8	<input type="text" value="GPI_8"/>	OFF	<input type="text" value="OPT0 ON"/>	<input type="text" value="Latched"/>	<input type="text" value="1"/>
9	<input type="text" value="GPI_9"/>	OFF	<input type="text" value="OPT0 ON"/>	<input type="text" value="Latched"/>	<input type="text" value="1"/>
10	<input type="text" value="GPI_10"/>	OFF	<input type="text" value="OPT0 ON"/>	<input type="text" value="Latched"/>	<input type="text" value="1"/>
11	<input type="text" value="GPI_11"/>	OFF	<input type="text" value="OPT0 ON"/>	<input type="text" value="Latched"/>	<input type="text" value="1"/>
12	<input type="text" value="GPI_12"/>	OFF	<input type="text" value="OPT0 ON"/>	<input type="text" value="Latched"/>	<input type="text" value="1"/>
13	<input type="text" value="GPI_13"/>	OFF	<input type="text" value="OPT0 ON"/>	<input type="text" value="Latched"/>	<input type="text" value="1"/>
14	<input type="text" value="GPI_14"/>	OFF	<input type="text" value="OPT0 ON"/>	<input type="text" value="Latched"/>	<input type="text" value="1"/>
15	<input type="text" value="GPI_15"/>	OFF	<input type="text" value="OPT0 ON"/>	<input type="text" value="Latched"/>	<input type="text" value="1"/>
16	<input type="text" value="GPI_16"/>	OFF	<input type="text" value="OPT0 ON"/>	<input type="text" value="Latched"/>	<input type="text" value="1"/>
17	<input type="text" value="GPI_17"/>	ON	<input type="text" value="OPT0 ON"/>	<input type="text" value="Latched"/>	<input type="text" value="1"/>
18	<input type="text" value="GPI_18"/>	ON	<input type="text" value="OPT0 ON"/>	<input type="text" value="Latched"/>	<input type="text" value="1"/>
19	<input type="text" value="GPI_19"/>	ON	<input type="text" value="OPT0 ON"/>	<input type="text" value="Latched"/>	<input type="text" value="1"/>
20	<input type="text" value="GPI_20"/>	ON	<input type="text" value="OPT0 ON"/>	<input type="text" value="Latched"/>	<input type="text" value="1"/>
21	<input type="text" value="GPI_21"/>	ON	<input type="text" value="OPT0 ON"/>	<input type="text" value="Latched"/>	<input type="text" value="1"/>
22	<input type="text" value="GPI_22"/>	ON	<input type="text" value="OPT0 ON"/>	<input type="text" value="Latched"/>	<input type="text" value="1"/>
23	<input type="text" value="GPI_23"/>	ON	<input type="text" value="OPT0 ON"/>	<input type="text" value="Latched"/>	<input type="text" value="1"/>
24	<input type="text" value="GPI_24"/>	ON	<input type="text" value="OPT0 ON"/>	<input type="text" value="Latched"/>	<input type="text" value="1"/>
25	<input type="text" value="GPI_25"/>	ON	<input type="text" value="OPT0 ON"/>	<input type="text" value="Latched"/>	<input type="text" value="1"/>
26	<input type="text" value="GPI_26"/>	ON	<input type="text" value="OPT0 ON"/>	<input type="text" value="Latched"/>	<input type="text" value="1"/>
27	<input type="text" value="GPI_27"/>	ON	<input type="text" value="OPT0 ON"/>	<input type="text" value="Latched"/>	<input type="text" value="1"/>
28	<input type="text" value="GPI_28"/>	ON	<input type="text" value="OPT0 ON"/>	<input type="text" value="Latched"/>	<input type="text" value="1"/>
29	<input type="text" value="GPI_29"/>	ON	<input type="text" value="OPT0 ON"/>	<input type="text" value="Latched"/>	<input type="text" value="1"/>
30	<input type="text" value="GPI_30"/>	ON	<input type="text" value="OPT0 ON"/>	<input type="text" value="Latched"/>	<input type="text" value="1"/>
31	<input type="text" value="GPI_31"/>	ON	<input type="text" value="OPT0 ON"/>	<input type="text" value="Latched"/>	<input type="text" value="1"/>
32	<input type="text" value="GPI_32"/>	ON	<input type="text" value="OPT0 ON"/>	<input type="text" value="Latched"/>	<input type="text" value="1"/>

Save

Cancel



3. For each GPI, do the following:

**Note:** It is only necessary to change these settings to achieve specific functions. Under normal use these will remain at their default settings.

- a) Enter a label name to help identify the GPI with a source function.
- b) Set the "User Define ON State". Click on the drop down arrow.

Select OPTO ON if the GPI is considered "ON" when power (+V or -V) is applied across the GPI TALLY PROCESSOR's opto-isolator 2-wire input.

Select OPTO OFF if the GPI is considered on when no power is applied across the GPI TALLY PROCESSOR's opto-isolator 2-wire input.

- c) Set the "User Defined ON Mode". Click on the drop down arrow.

Select LATCHED if the GPI source signal turns on and stays on when activated. The GPI source signal turns off and stays off when de-activated (GPI follows the source signal). This is the recommended setting.

Select MOMENTARY if the GPI source signal turns on for a specific duration then automatically turns off, when activated.

- d) If MOMENTARY is selected in step c) above, enter a "Debounce" time in the DEBOUNCE box. If LATCH was selected, debounce time is ignored.

The debounce time is used to filter out unwanted GPI signals. If the debounce time is greater than that GPI's on time, then the GPI will be ignored. If the debounce time is less than the GPI on time, then the GPI will be detected.

Set the debounce time to the minimum on time of the GPI to be detected.

All debounce time entries are automatically multiplied by 10milliseconds. The minimum entry is "1", for 10 milliseconds. The maximum entry is "255" for 2550 milliseconds. All entries greater than "255" will be set to "255".

Examples:


For a debounce time of 30 milliseconds, enter "3". For a debounce time of 65 milliseconds, enter "6" or "7", for 60 or 70 milliseconds, respectively.

4. After entering GPI configuration data, click on SAVE to save the entered configuration data or click on CANCEL to exit without saving.

## E. GPO Setup

Using the web browser:

1. From the GPI TALLY PROCESSOR Home Page, click on the "GPO" link. The GPO Configuration Table page will be displayed.

**Flex Control Network™**

Model NO: Tally Interface Box  
Software Ver: 1.87B12  
Serial Ports: 0

Serial NO: 500206  
GPI/GPO: 32/32  
Label: DC30

[Home](#) [GPI](#) [GPO](#) [Source Event Definition](#) [Combinatorial Event Definition](#) [Event Monitoring](#) [Event Diagnostics](#) [System](#) [Logout](#)

Edit / Backup / Restore GPO Configuration Table

GPO CONFIGURATION TABLE

Refresh

GPO#	Label	User Defined "ON" State	User Defined "ON" Mode	On time (*10 ms)
1	GPO_1	Relay Closed	Latched	0
2	GPO_2	Relay Closed	Latched	0
3	GPO_3	Relay Closed	Latched	0
4	GPO_4	Relay Closed	Latched	0
5	GPO_5	Relay Closed	Latched	0
6	GPO_6	Relay Closed	Latched	0
7	GPO_7	Relay Closed	Latched	0
8	GPO_8	Relay Closed	Latched	0
9	GPO_9	Relay Closed	Latched	0
10	GPO_10	Relay Closed	Latched	0
11	GPO_11	Relay Closed	Latched	0
12	GPO_12	Relay Closed	Latched	0
13	GPO_13	Relay Closed	Latched	0
14	GPO_14	Relay Closed	Latched	0
15	GPO_15	Relay Closed	Latched	0
16	GPO_16	Relay Closed	Latched	0
17	GPO_17	Relay Closed	Latched	0
18	GPO_18	Relay Closed	Latched	0
19	GPO_19	Relay Closed	Latched	0
20	GPO_20	Relay Closed	Latched	0
21	GPO_21	Relay Closed	Latched	0
22	GPO_22	Relay Closed	Latched	0
23	GPO_23	Relay Closed	Latched	0
24	GPO_24	Relay Closed	Latched	0
25	GPO_25	Relay Closed	Latched	0
26	GPO_26	Relay Closed	Latched	0
27	GPO_27	Relay Closed	Latched	0
28	GPO_28	Relay Closed	Latched	0
29	GPO_29	Relay Closed	Latched	0
30	GPO_30	Relay Closed	Latched	0
31	GPO_31	Relay Closed	Latched	0
32	GPO_32	Relay Closed	Latched	0

Edit / Backup / Restore GPO Configuration Table

2. At the top or bottom of the page, click on the "Edit GPO.... Configuration Table" link.

If prompted for password, enter your password then click on "Login" to log in to the GPI TALLY PROCESSOR. If already logged in, the password prompt will not be displayed.



- Enter a GPO label.
- Choose an "ON" State.
- Choose an "ON" Mode.
- Enter an On Time.
- On Time only effects momentary GPO's.
- Max On Time value is 127 (= 1270 ms).

GPO CONFIGURATION TABLE

GPO#	Label	Configuration		
		User Defined "ON" State	User Defined "ON" Mode	On Time (*10 ms)
1	GPO_1	Relay Closed ▾	Latched ▾	0
2	GPO_2	Relay Closed ▾	Latched ▾	0
3	GPO_3	Relay Closed ▾	Latched ▾	0
4	GPO_4	Relay Closed ▾	Latched ▾	0
5	GPO_5	Relay Closed ▾	Latched ▾	0
6	GPO_6	Relay Closed ▾	Latched ▾	0
7	GPO_7	Relay Closed ▾	Latched ▾	0
8	GPO_8	Relay Closed ▾	Latched ▾	0
9	GPO_9	Relay Closed ▾	Latched ▾	0
10	GPO_10	Relay Closed ▾	Latched ▾	0
11	GPO_11	Relay Closed ▾	Latched ▾	0
12	GPO_12	Relay Closed ▾	Latched ▾	0
13	GPO_13	Relay Closed ▾	Latched ▾	0
14	GPO_14	Relay Closed ▾	Latched ▾	0
15	GPO_15	Relay Closed ▾	Latched ▾	0
16	GPO_16	Relay Closed ▾	Latched ▾	0
17	GPO_17	Relay Closed ▾	Latched ▾	0
18	GPO_18	Relay Closed ▾	Latched ▾	0
19	GPO_19	Relay Closed ▾	Latched ▾	0
20	GPO_20	Relay Closed ▾	Latched ▾	0
21	GPO_21	Relay Closed ▾	Latched ▾	0
22	GPO_22	Relay Closed ▾	Latched ▾	0
23	GPO_23	Relay Closed ▾	Latched ▾	0
24	GPO_24	Relay Closed ▾	Latched ▾	0
25	GPO_25	Relay Closed ▾	Latched ▾	0
26	GPO_26	Relay Closed ▾	Latched ▾	0
27	GPO_27	Relay Closed ▾	Latched ▾	0
28	GPO_28	Relay Closed ▾	Latched ▾	0
29	GPO_29	Relay Closed ▾	Latched ▾	0
30	GPO_30	Relay Closed ▾	Latched ▾	0
31	GPO_31	Relay Closed ▾	Latched ▾	0
32	GPO_32	Relay Closed ▾	Latched ▾	0

The GPO Configuration Table will be displayed with drop down boxes.

3. For each GPO, do the following:

**Note:** It is only necessary to change these settings to achieve specific functions. Under normal use these will remain at their default settings.

- a) Enter a label name to help identify the GPO with an output function.
- b) Set the "User Defined ON State". Click on the drop down arrow.

Select "RELAY CLOSED" if the GPO is considered "ON" when the relay contacts are closed. In this mode the relay will pass a signal or ground from the COM contact to the NORMALLY OPEN contact.

Select "RELAY OPEN" if the GPO is considered "ON" when the relay contacts are open. In this mode the relay will NOT pass any signal voltage or ground from the COM contact to the NORMALLY OPEN contact.

- c) Set the "User Defined ON Mode".

Select LATCHED if the GPO should stay ON or OFF until told to change states(GPO follows the assigned GPI). This is the recommended setting.

Select MOMENTARY if the GPO should turn ON for a finite period of time then automatically turn OFF without being told to turn OFF.

- d) If MOMENTARY is selected in step c) above, enter an ON TIME. The GPO will turn on for the ON TIME, then automatically turn OFF.

All ON TIME entries are automatically multiplied by 10milliseconds. The minimum entry is "1", for 10 milliseconds. The maximum entry is "255" for 2550 milliseconds. All entries greater than "255" will be set to "255".

Examples:

For an on time of 30 milliseconds, enter "3". For an on time of 65 milliseconds, enter "6" or "7", for 60 or 70 milliseconds, respectively.

4. After entering GPO configuration data, click on SAVE to save the entered configuration data or click on CANCEL to exit without saving.

## **F. Additional Setups**

No additional setups are required in “Event Diagnostic” or “System Maintenance” for normal operation. The LOGOUT link is used to log out of the GPI TALLY PROCESSOR thereby disallowing any changes that are password protected.

## **VIII. EVENT MONITORING**

The Event Monitor Table, the power of the GPI TALLY PROCESSOR, routes GPI Inputs to GPO Outputs. The state of each GPO is dependent upon the state of the GPI that it is routed to. The GPI state is determined by the external device that it is connected to.

The GPI TALLY PROCESSOR monitors local and remote GPIs to control the state of the “Local GPOs”, GPOs that are located inside the GPI TALLY PROCESSOR. “Local GPIs” are GPIs that are located inside the GPI TALLY PROCESSOR. “Remote GPIs” are GPIs located in another GPI TALLY PROCESSOR, on the same local area network.

The GPI TALLY PROCESSOR monitors the current state of a GPI. When the GPI turns “ON”, the associated GPO is affected by the assigned “ON FUNCTION”, typically “Turn On GPO”. When the GPI turns “OFF”, the associated GPO is affected by the assigned “OFF FUNCTION”, typically “Turn Off GPO”.


In the Event Monitoring Table, a single GPI may be routed to control a single GPO. A single GPI may be routed to control many GPOs. Also, many GPIs may be routed to control a single GPO.

The Event Monitoring Table uses combining logic to support the “One to Many” and “Many to One” relationships. If three (3) GPIs (i.e.: production switcher tally outputs) are routed to control the same GPO, (i.e.: camera tally light), the camera tally light will turn on if ANY one of the three GPIs is turned on. The camera tally light will only turn off when ALL three GPIs are turned off.

Each row in the Event Monitoring Table is used to route one GPI to one GPO. To use one GPI to control many GPOs, add a row for each GPO to be controlled. To use many GPIs to control one GPO, add one row for each GPI.

## A. Launch Web Browser

1. Launch the web browser on the computer connected through an ethernet hub to the GPI TALLY PROCESSOR. Most off the shelf web browsers, like Microsoft Internet Explorer or Netscape, may be used.
2. Enter the IP address of the GPI TALLY PROCESSOR to be setup. The GPI TALLY PROCESSOR Home Page will be displayed.
3. Click on the "Event Monitoring" link. The Event Monitor Table page will be displayed.

**Flex Control Network™**

Model NO: Tally Interface Box  
Software Ver: 1.87B12  
Serial Ports: 0

Serial NO: 500206  
GPI/GPO: 32/32  
Label: DC30

[Home](#) [GPI](#) [GPO](#) [Source Event Definition](#) [Combinatorial Event Definition](#) [Event Monitoring](#) [Event Diagnostics](#) [System](#) [Logout](#)

Add / Edit / Delete / Backup / Restore Channel Event  
Create Default Event Monitor Table

Restored File Name:  Last Updated: January / 1 / 1970 22:41:44

CHANNEL EVENT MONITORING TABLE [Refresh](#)

Status	Source IP	Source Event Label	Frequency	GPO Label	ON Function	OFF Function
Enabled	0.0.0.0	CAMERA1	Repetitive	GPO_4	Turn On GPO	Turn Off GPO
Enabled	0.0.0.0	CAMERA2	Repetitive	GPO_5	Turn On GPO	Turn Off GPO
Enabled	0.0.0.0	CAMERA3	Repetitive	GPO_6	Turn On GPO	Turn Off GPO
Enabled	0.0.0.0	GPI_1	Repetitive	GPO_1	Turn On GPO	Turn Off GPO
Enabled	0.0.0.0	GPI_8	Repetitive	GPO_8	Turn On GPO	Turn Off GPO
Enabled	0.0.0.0	STUDIO1	Repetitive	GPO_2	Turn On GPO	Turn Off GPO
Enabled	0.0.0.0	STUDIO2	Repetitive	GPO_3	Turn On GPO	Turn Off GPO
Enabled	0.0.0.0	STUDIO4	Repetitive	GPO_7	Turn On GPO	Turn Off GPO

Add / Edit / Delete / Backup / Restore Channel Event  
Create Default Event Monitor Table

## B. ADD a row to the Event Monitor Table

Using the web browser:

1. Click on the “Event Monitoring” link at the top of the page. The Event Monitor Table will be displayed.
2. Click on “Add ... Channel Event”. The entry screen will be displayed.

- Assign source event to GPO.
- Source event may be local or remote event.
- For REMOTE EVENT, enter Source IP and Source Event Label.
- GPO may be any local GPO.

---

**Add Event to Channel Event Monitoring**

Status	Enabled ▾
Source IP	0.0.0.0
Source Event Type	LOCAL EVENT ▾
Source Event Label	1 : GPI_1 ▾
Frequency	Repetitive ▾
GPO Label	GPO_1 ▾
ON Function	Turn On GPO ▾
OFF Function	Turn Off GPO ▾

Save & Exit

Save & Add

Done

3. Select Status “Enabled” from the drop down menu.
4. Select Source event type, “Local” or “Remote”.
5. Enter the Source IP address, Enter 0.0.0.0 to monitor a local event or the IP address of the Remote GPI TALLY PROCESSOR to monitor.



6. Select a Source Event Label. This is the source that will be monitored. For example, to monitor a GPI, enter "GPI\_1".
7. Select "Repetitive" from the FREQUENCY drop down menu.
8. Select the Destination GPO number from the drop down menu. This is the GPO that will be controlled by the GPI or event entered in step 5) above.
9. Select the "ON FUNCTION". This is the function that will execute each time the GPI turns on. From the drop down menu select "Turn On GPO".
10. Select the "OFF FUNCTION". This is the function that will execute each time the GPI turns off. From the drop down menu select "Turn Off GPO". If the GPO is controlled by more than one GPI, all GPIs must turn off before the OFF FUNCTION will execute.
11. Click on SAVE and EXIT to save the entry and exit to the previous page.

Click on SAVE and Add to save the entry and continue to add events.

**OR**


Click on DONE to exit without saving.

**Note:** Duplicate events are not permitted in the table. If an added row is a duplicate of an existing row, the new row will not be added to the table.

## C. EDIT a row in the Event Monitor Table

Using the web browser:

1. Click on the “Event Monitoring” link at the top of the page. The Event Monitor Table will be displayed.
2. Click on “Edit ... Channel Event”. The row selection page will be displayed.

**Flex Control Network™**

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Serial NO: 500206  
GPI/GPO: 32/32  
Label: DC30

[Home](#) [GPI](#) [GPO](#) [Source Event Definition](#) [Combinatorial Event Definition](#) [Event Monitoring](#) [Event Diagnostics](#) [System](#) [Logout](#)

• Click the "All" box to edit all rows OR click the desired row(s) to edit.

**Edit Event in Channel Event Monitoring Table**

All <input type="checkbox"/>	Status	Source IP	Source Event Label	Frequency	GPO Label	ON Function	OFF Function
<input type="checkbox"/>	Enabled	0.0.0.0	CAMERA1	Repetitive	GPO_4	Turn On GPO	Turn Off GPO
<input type="checkbox"/>	Enabled	0.0.0.0	CAMERA2	Repetitive	GPO_5	Turn On GPO	Turn Off GPO
<input type="checkbox"/>	Enabled	0.0.0.0	CAMERA3	Repetitive	GPO_6	Turn On GPO	Turn Off GPO
<input type="checkbox"/>	Enabled	0.0.0.0	GPI_1	Repetitive	GPO_1	Turn On GPO	Turn Off GPO
<input type="checkbox"/>	Enabled	0.0.0.0	GPI_8	Repetitive	GPO_8	Turn On GPO	Turn Off GPO
<input type="checkbox"/>	Enabled	0.0.0.0	STUDIO1	Repetitive	GPO_2	Turn On GPO	Turn Off GPO
<input type="checkbox"/>	Enabled	0.0.0.0	STUDIO2	Repetitive	GPO_3	Turn On GPO	Turn Off GPO
<input type="checkbox"/>	Enabled	0.0.0.0	STUDIO4	Repetitive	GPO_7	Turn On GPO	Turn Off GPO

3. Click the “All” box to edit all rows OR click on the desired row(s) to edit.
4. Click on “EDIT” at the bottom of the table.  
**OR**  
Click on “BACK” to return to the previous page.

5. On the next screen the selected events, in consecutive order, will show their current contents with drop down menus to permit editing.

- Assign source event to GPO.
- Source event may be local or remote event.
- For REMOTE EVENT, enter Source IP and Source Event Label.
- GPO may be any local GPO.
- Click "Save" to apply changes, or "Done" to exit.

**Edit Event in Channel Event Monitoring Table**

Status	Enabled ▾
Source IP	0.0.0.0
Source Event Type	LOCAL EVENT ▾
Source Event Label	4: CAMERA1 ▾
Frequency	Repetitive ▾
GPO Label	GPO_4 ▾
ON Function	Turn On GPO ▾
OFF Function	Turn Off GPO ▾

Save

Next

Previous

Done

6. Modify the contents of the items in the event.
7. Click on SAVE to save the entry.

Click on NEXT to edit the next selected event.

**OR**

Click on DONE to exit without saving.

**Note:** Duplicate events are not permitted in the table. If an edited row is a duplicate of an existing row, the edited row will be restored with its original data.

## D. DELETE a row in the Event Monitor Table

Using the web browser:

1. Click on the “Event Monitoring” link at the top of the page. The Event Monitor Table will be displayed.
2. Click on “Delete ... Channel Event”. The row selection page will be displayed.

**DNF**  
CONTROLS

Flex Control Network™

Model NO: Tally Interface Box  
Software Ver: 1.87B12  
Serial Ports: 0

Serial NO: 500206  
GPI/GPO: 32/32  
Label: DC30

[Home](#) [GPI](#) [GPO](#) [Source Event Definition](#) [Combinatorial Event Definition](#) [Event Monitoring](#) [Event Diagnostics](#) [System](#) [Logout](#)


- Click the "All" box to delete all rows  
OR click the desired row(s) to delete.

Delete Channel Event Monitoring Table

All <input type="checkbox"/>	Status	Source IP	Source Event Label	Frequency	GPO Label	ON Function	OFF Function
<input type="checkbox"/>	Enabled	0.0.0.0	CAMERA1	Repetitive	GPO_4	Turn On GPO	Turn Off GPO
<input type="checkbox"/>	Enabled	0.0.0.0	CAMERA2	Repetitive	GPO_5	Turn On GPO	Turn Off GPO
<input type="checkbox"/>	Enabled	0.0.0.0	CAMERA3	Repetitive	GPO_6	Turn On GPO	Turn Off GPO
<input type="checkbox"/>	Enabled	0.0.0.0	GPI_1	Repetitive	GPO_1	Turn On GPO	Turn Off GPO
<input type="checkbox"/>	Enabled	0.0.0.0	GPI_8	Repetitive	GPO_8	Turn On GPO	Turn Off GPO
<input type="checkbox"/>	Enabled	0.0.0.0	STUDIO1	Repetitive	GPO_2	Turn On GPO	Turn Off GPO
<input type="checkbox"/>	Enabled	0.0.0.0	STUDIO2	Repetitive	GPO_3	Turn On GPO	Turn Off GPO
<input type="checkbox"/>	Enabled	0.0.0.0	STUDIO4	Repetitive	GPO_7	Turn On GPO	Turn Off GPO

3. Click the “All” box to delete all rows  
**OR**  
Click the desired row(s) to delete.

- Click on "DELETE" at the bottom of the table. The "Are You Sure" page will be displayed. OR, click on "CANCEL" to return to the previous page.



**Flex Control Network™**

Model NO: Tally Interface Box  
 Software Ver: 1.87B12  
 Serial Ports: 0

Serial NO: 500206  
 GPI/GPO: 32/32  
 Label: DC30

Home
GPI
GPO
Source Event Definition
Combinatorial Event Definition
Event Monitoring
Event Diagnostics
System
Logout

Are you sure you want to delete following rows?

Status	Source IP	Source Event Label	Frequency	GPO Label	ON Function	OFF Function
Enabled	0.0.0.0	CAMERA1	Repetitive	GPO_4	Turn On GPO	Turn Off GPO
Enabled	0.0.0.0	CAMERA2	Repetitive	GPO_5	Turn On GPO	Turn Off GPO
Enabled	0.0.0.0	CAMERA3	Repetitive	GPO_6	Turn On GPO	Turn Off GPO
Enabled	0.0.0.0	GPI_1	Repetitive	GPO_1	Turn On GPO	Turn Off GPO
Enabled	0.0.0.0	GPI_8	Repetitive	GPO_8	Turn On GPO	Turn Off GPO
Enabled	0.0.0.0	STUDIO1	Repetitive	GPO_2	Turn On GPO	Turn Off GPO
Enabled	0.0.0.0	STUDIO2	Repetitive	GPO_3	Turn On GPO	Turn Off GPO
Enabled	0.0.0.0	STUDIO4	Repetitive	GPO_7	Turn On GPO	Turn Off GPO

Delete
Cancel

- Click on "DELETE" at the bottom of the page to delete the selected rows.

**OR**

Click on "CANCEL" to return to the previous page without deleting.

## E. Save Event Monitor Table File

Save the current Event Monitor Table as a file in the GPI TALLY PROCESSOR's non-volatile memory for later recall.

Multiple Event Monitor Table files may be created then saved for later recall. This provides a quick and easy way to change GPI/GPO routing during an event.

Using the web browser:

1. Click on the "Event Monitoring" link at the top of the page. The Event Monitor Table will be displayed.
2. Click on "Backup....Channel Events". The "Save Event Monitor Table" page will be displayed.

The screenshot shows the 'Save Event Monitor Table' page of the DNF Controls Flex Control Network. The header includes the DNF Controls logo, the product name 'Flex Control Network™', and system information: Model NO: Tally Interface Box, Software Ver: 1.87B12, Serial Ports: 0, Serial NO: 500206, GPI/GPO: 32/32, and Label: DC30. The navigation menu has links for Home, GPI, GPO, Source Event Definition, Combinatorial Event Definition, Event Monitoring (which is highlighted), Event Diagnostics, System, and Logout. The main content area is titled 'Save Event Monitor Table' and contains a list of instructions: 'The file name may contain up to 8 characters, excluding extension.', 'The file name must be unique.', and 'The file name extension will always default to ".db".'. Below this is a section titled 'Saved Event Monitor Table Files:' with the instruction 'To copy file into computer, "right click" on the filename and choose "Save Target as" function.' and the message 'No Files Found.'. There is an input field for 'Enter File Name:' followed by '.db'. At the bottom, there are three buttons: 'Save', 'Done', and 'Delete Saved File'.

The list of currently saved Event Monitor Table files is displayed. If no Event Monitor Table files have been saved, "No files found" will be displayed.

3. Enter a unique 8 character name in the "Enter File Name" field.
4. Click on "SAVE" to save the Event Monitor Table in a file of the entered name.

**OR**

Click "DONE" to return to the previous page without saving.

## F. Download Event Monitor Table File to Computer

Download the Event Monitor Table file to the computer.

Multiple Event Monitor Table files may be created then saved for later recall. This provides a quick and easy way to change GPI/GPO routing during an event.

Using the web browser:

1. Click on the “Event Monitoring” link at the top of the page. The Event Monitor Table will be displayed.
2. Click on “Backup.....Channel Events”. The “Save Event Monitor Table” page will be displayed.

The screenshot shows the DNF Flex Control Network web interface. The top navigation bar includes links for Home, GPI, GPO, Source Event Definition, Combinatorial Event Definition, Event Monitoring, Event Diagnostics, System, and Logout. The 'Event Monitoring' link is currently selected. The main content area is titled 'Restore Event Monitor Table' and contains the following elements:

- A warning box with two bullet points: 'The file name may contain up to 8 characters, excluding extension.' and 'The file name must be unique.'
- A text input field labeled 'Select file to upload:' followed by a 'Browse...' button.
- An 'Upload to Tally Interface Box' button.
- A section titled 'Saved Event Monitor Table File:' with the instruction '(Select Saved File to Restore)'.
- A list of three radio buttons: 'test.db', 'Default.db', and 'testcmb.db'.
- 'Restore' and 'Cancel' buttons.
- A 'Delete Saved File' button.

3. From the list of displayed “Saved Event Monitor Table Files”, select a file. If no Event Monitor Table files have been saved, “No files found” will be displayed. The Download process cannot continue.
4. After selecting a file, press the right mouse button. If the mouse is configured for “Left-handed” operation, press the left mouse button. The web browser will prompt to “Save the Link as” or “Save Target as”. Follow the web browser’s prompts to copy the file to the computer.

## G. Restore Event Monitor Table File

Restore a saved Event Monitor Table file as the current Event Monitor Table. Also, upload an Event Monitor Table file from a computer to the GPI TALLY PROCESSOR.

Using the web browser:

1. Click on the “Event Monitoring” link at the top of the page. The Event Monitor Table will be displayed.
2. Click on “Restore .....Channel Event”. The “Restore Event Monitor Table” page will be displayed.

The screenshot shows the 'Restore Event Monitor Table' page within the DNF Controls Flex Control Network™ interface. The top navigation bar includes links for Home, GPI, GPO, Source Event Definition, Combinatorial Event Definition, Event Monitoring, Event Diagnostics, System, and Logout. The page title is 'Restore Event Monitor Table'. Below the title, there are instructions: 'The file name may contain up to 8 characters, excluding extension.' and 'The file name must be unique.' A file upload section includes a text input field for 'Select file to upload:', a 'Browse...' button, and an 'Upload to Tally Interface Box' button. Below this, a section titled 'Saved Event Monitor Table File:' (with the instruction 'Select Saved File to Restore') displays a list of saved files, currently showing 'test.db'. At the bottom, there are 'Restore' and 'Cancel' buttons, and a 'Delete Saved File' button.

3. From the list of displayed “Saved Event Monitor Table Files”, select a file. If no Event Monitor Table files have been saved, “No files found” will be displayed. The Restore process cannot continue.
  4. After selecting a file, click on “RESTORE” to restore this file as the current Event Monitor Table.
- OR**
- Click “CANCEL” to return to the previous page without restoring.



## H. Upload Event Monitor Table File from Computer

Upload an Event Monitor Table file saved on a computer to the GPI TALLY PROCESSOR.

Using the web browser:

1. Click on the “Event Monitoring” link at the top of the page. The Event Monitor Table will be displayed.
2. Click on “Restore .....Channel Event”. The “Restore Event Monitor Table” page will be displayed.

The screenshot shows the DNF Controls Flex Control Network web interface. The header includes the DNF logo, the text 'Flex Control Network™', and system information: Model NO: Tally Interface Box, Software Ver: 1.87B12, Serial Ports: 0, Serial NO: 500206, GPI/GPO: 32/32, and Label: DC30. The navigation menu includes Home, GPI, GPO, Source Event Definition, Combinatorial Event Definition, Event Monitoring, Event Diagnostics, System, and Logout. The main content area is titled 'Restore Event Monitor Table' and contains instructions: 'The file name may contain up to 8 characters, excluding extension.' and 'The file name must be unique.' Below this is a 'Select file to upload:' field with a 'Browse...' button. An 'Upload to Tally Interface Box' button is also present. Under the heading 'Saved Event Monitor Table File:', there is a sub-heading '(Select Saved File to Restore)' and three radio button options: 'test.db', 'Default.db', and 'testcmb.db'. At the bottom are 'Restore', 'Cancel', and 'Delete Saved File' buttons.

3. Click on “BROWSE” to browse the list of files on the computer.
4. Select the file to be transferred to the GPI TALLY PROCESSOR.
5. Click on “Upload to GPI TALLY PROCESSOR”. The selected file will be transferred to the GPI TALLY PROCESSOR’s non-volatile memory.

## I. Delete Event Monitor Table File from GPI TALLY PROCESSOR

Using the web browser:

1. Click on the “Event Monitoring” link at the top of the page. The Event Monitor Table will be displayed.
2. Click on “Restore ....Channel Event”. The “Restore Event Monitor Table” page will be displayed.

The screenshot displays the DNF Controls Flex Control Network web interface. The header includes the DNF logo, the product name 'Flex Control Network™', and system information: Model NO: Tally Interface Box, Software Ver: L87B12, Serial Ports: 0, Serial NO: 500206, GPI/GPO: 32/32, and Label: DC30. The navigation menu contains links for Home, GPI, GPO, Source Event Definition, Combinatorial Event Definition, Event Monitoring, Event Diagnostics, System, and Logout. The main content area is titled 'Restore Event Monitor Table' and contains the following elements:

- Instructions: The file name may contain up to 8 characters, excluding extension. The file name must be unique.
- File selection: A text input field for 'Select file to upload:' followed by a 'Browse...' button.
- Upload button: A button labeled 'Upload to Tally Interface Box'.
- Saved files section: A heading 'Saved Event Monitor Table File:' with the instruction '(Select Saved File to Restore)'. Below this is a list of saved files, currently showing 'test.db' with a radio button next to it.
- Action buttons: 'Restore' and 'Cancel' buttons are positioned above a 'Delete Saved File' button.

3. From the list of displayed “Saved Event Monitor Table Files”, select a file. If no Event Monitor Table files have been saved, “No files found” will be displayed. The Delete process cannot continue.

4. After selecting a file, click on “Delete Saved File” to delete the selected file. The following page will be displayed:

The screenshot displays the DNF Controls Flex Control Network web interface. The header includes the DNF logo and the text "Flex Control Network™". To the right of the header, system information is listed: Model NO: Tally Interface Box, Software Ver: 1.87B12, Serial Ports: 0, Serial NO: 500206, GPI/GPO: 32/32, and Label: DC30. Below the header is a navigation menu with links: Home, GPI, GPO, Source Event Definition, Combinatorial Event Definition, Event Monitoring, Event Diagnostics, System, and Logout. The main content area shows a confirmation dialog with the text "Do you really want to delete following file?" and "test.db". At the bottom of the dialog are two buttons: "Delete" and "Cancel".

5. Click “Delete” to delete the selected file.  
**OR**  
Click “Cancel” to cancel the delete process.

## IX. SOURCE EVENT DEFINITION

Source Event Definition is used to define remote source events occurring on another GTP that may be monitored by the local Event Monitor Table.

**Note:** Source Event definitions are not required to add local or remote GPIs to the Event Monitor Table.

## X.COMBINATORIAL EVENT DEFINITION (Optional)

The Combinatorial Logic Option for the GPI TALLY PROCESSOR delivers Tally Intelligence. In addition to one tally input (GPI) controlling one tally output (GPO), the Combinatorial Logic Option allows one tally output to be controlled by multiple tally inputs based upon a user-entered definition. Now, diode OR'ing and other "glue logic" circuits are no longer necessary.

The Combinatorial Event Definition screen, available through the GPI TALLY PROCESSOR's web interface is used by the operator to create a combinatorial event definition.

The combinatorial event definition consists of:

- A. Unique user entered name (event identifier)
- B. User entered equation that contains a list of GPI sources to monitor and logical operators (AND, OR, NOT, XOR, NAND, and NOR).
- C. User selected "Available: Yes" or "Available: No" allows the definition to be temporarily disabled.

Combinatorial Event Definitions may be added, deleted, or modified at any time without affecting system operation or requiring a system reboot. Combinatorial Event Definitions may also be nested in other Combinatorial Event Definitions.

After defining Combinatorial Event Definitions, their event identifiers may be used in the Channel Event Monitoring Table as a source to affect local GPOs. Remote GPI TALLY PROCESSORS may also use these event identifiers in their Channel Event Monitoring Tables to affect GPOs.

The individual components of the Combinatorial Event Definition are monitored on a real-time basis by the Event Monitoring Table. When the current states of the components cause the definition to become true, the GPO assigned in the Event Monitoring Table will be controlled by the associated "ON Function". When the current states of the components cause the definition to become false, the assigned GPO will be controlled by the associated "OFF Function".

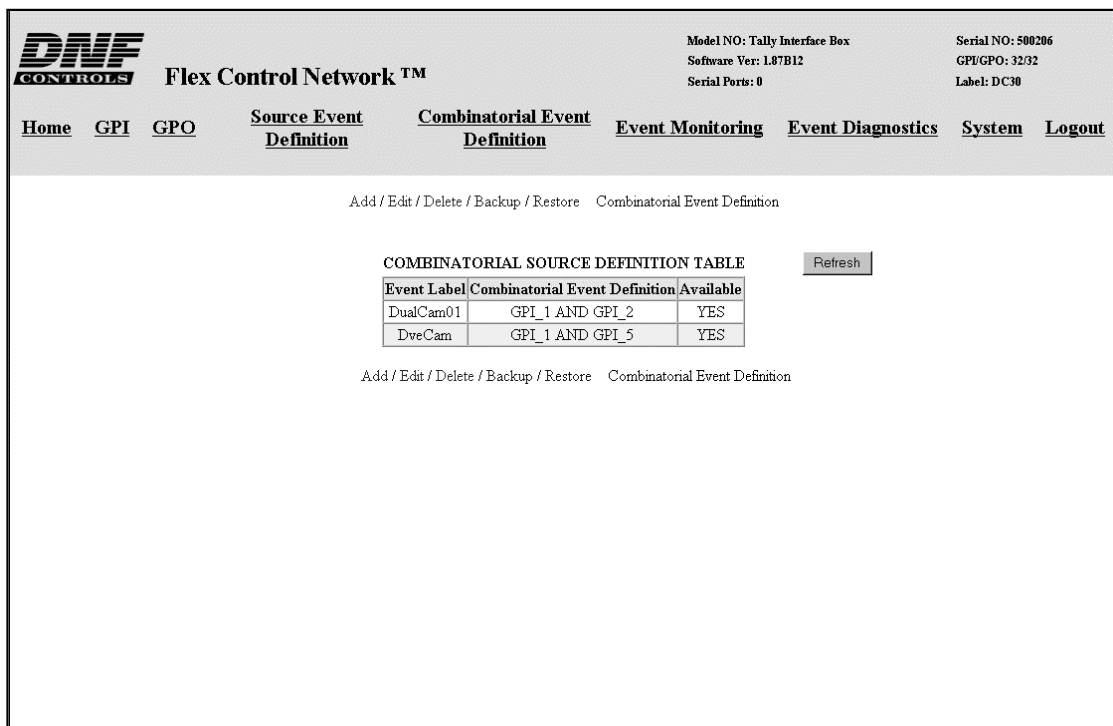
## 1. Combinatorial Event Setup

To view the Combinatorial Event Definition screen, launch a web browser on the computer connected to the GPI TALLY PROCESSOR through an ethernet hub. (Most off the shelf web browsers, like Microsoft Internet Explorer or Netscape, may be used.)

Using the web browser-

Enter the IP address of the GPI TALLY PROCESSOR. The GPI TALLY PROCESSOR Home Page will be displayed.

Click on the "Combinatorial Event Definition" link at the top of the page.



The screenshot displays the web interface for the DNF Controls Flex Control Network. The header includes the DNF logo, the product name "Flex Control Network™", and system information: Model NO: Tally Interface Box, Software Ver: 1.87B12, Serial Ports: 0, Serial NO: 500206, GPI/GPO: 32/32, and Label: DC30. The navigation menu contains links for Home, GPI, GPO, Source Event Definition, Combinatorial Event Definition (which is highlighted), Event Monitoring, Event Diagnostics, System, and Logout. Below the navigation bar, there is a sub-header "Add / Edit / Delete / Backup / Restore Combinatorial Event Definition". The main content area features a table titled "COMBINATORIAL SOURCE DEFINITION TABLE" with a "Refresh" button to its right. The table has three columns: "Event Label", "Combinatorial Event Definition", and "Available". It contains two rows of data: "DualCam01" with definition "GPI\_1 AND GPI\_2" and status "YES", and "DveCam" with definition "GPI\_1 AND GPI\_5" and status "YES". At the bottom of the content area, there is another sub-header "Add / Edit / Delete / Backup / Restore Combinatorial Event Definition".

Event Label	Combinatorial Event Definition	Available
DualCam01	GPI_1 AND GPI_2	YES
DveCam	GPI_1 AND GPI_5	YES

The Combinatorial Event Definition Table will be displayed.

## 2. ADD a Combinatorial Event Definition

Using the web browser:

- a) Click on the "Combinatorial Event Definition" link at the top of the page. The Combinatorial Event Definition Table will be displayed.
- b) Click on "Add ... Combinatorial Event Definition". The entry screen will be displayed.

- Create combinatorial event definition using local events.
- For remote events, first create source event definition.
- Event Label must be unique on this unit.
- Event Label must contain only letters, numbers, and underscores.
- Event Label can must be 15 characters or less.
- Definition example: GPI\_1 AND (GPI\_2 OR GPI\_3).
- Use Available Source Events and Operators drop down menu to append to Combinatorial Event Definition, OR manually enter source events, operators, and parenthesis.

---

### Add Combinatorial Source Definition

Event Label	<input type="text"/>
Available Source Events	Select one ... ▼
Operators	Select one ... ▼
Combinatorial Event Definition	<div></div>
Available	YES ▼

Save & Exit

Save & Add

Cancel

- c) In the Event Label box, enter a unique Label of up to 15 alphanumeric characters. This label must be unique on the GPI TALLY PROCESSOR that it is created on. This unique label will be used by the local Event Monitor Table and remote Event Monitor Tables to access this definition.
- d) The second box shows the list of "Available Events" that may be used in the combinatorial event definition. Manually enter an source event followed by a logic operator followed by another source event.
- e) Select "YES" in the "Available" column to allow this definition to be used. Select "NO" to temporarily disable this definition.
- f) Click on "Save and Exit" to save the entered combinatorial event definition and Exit.

**OR**

Click on "Save and Add" to continue to enter additional events.

**OR**

Click on "Cancel" to exit without saving.


**Note:** "Available" for the event definition will be set to Disabled if an source event entered in step 4 above does not exist or has been misspelled. To correct, select edit to re-enter the source event name(s).

The individual components of the entered combinatorial definition are monitored on a real-time basis by the Event Monitor Table. When the current states of the components cause the definition to become true, the GPO assigned in the Event Monitoring Table will be controlled by the "ON Function". When the current states of the components cause the definition to become false, the assigned GPO will be controlled by the "OFF Function".

### 3. EDIT a Combinatorial Event Definition

Using the web browser:

- a) Click on the "Combinatorial Event Definition" link at the top of the page. The Combinatorial Event Definition Table will be displayed.
- b) Click on "Edit ... Combinatorial Event Definition". The selection screen will be displayed.

**Flex Control Network™**

Model NO: Tally Interface Box  
Software Ver: 1.87B12  
Serial Ports: 0

Serial NO: 500206  
GPI/GPO: 32/32  
Label: DC30

[Home](#) [GPI](#) [GPO](#) [Source Event Definition](#) [Combinatorial Event Definition](#) [Event Monitoring](#) [Event Diagnostics](#) [System](#) [Logout](#)

- Click the "All" box to edit all rows OR click the desired row(s) to edit.

EDIT

BACK

Edit Event in Channel Event Monitoring Table


All <input type="checkbox"/>	Status	Source IP	Source Event Label	Frequency	GPO Label	ON Function	OFF Function
<input type="checkbox"/>	Enabled	0.0.0.0	CAMERA1	Repetitive	GPO_4	Turn On GPO	Turn Off GPO
<input type="checkbox"/>	Enabled	0.0.0.0	CAMERA2	Repetitive	GPO_5	Turn On GPO	Turn Off GPO
<input type="checkbox"/>	Enabled	0.0.0.0	CAMERA3	Repetitive	GPO_6	Turn On GPO	Turn Off GPO
<input type="checkbox"/>	Enabled	0.0.0.0	GPI_1	Repetitive	GPO_1	Turn On GPO	Turn Off GPO
<input type="checkbox"/>	Enabled	0.0.0.0	GPI_8	Repetitive	GPO_8	Turn On GPO	Turn Off GPO
<input type="checkbox"/>	Enabled	0.0.0.0	STUDIO1	Repetitive	GPO_2	Turn On GPO	Turn Off GPO
<input type="checkbox"/>	Enabled	0.0.0.0	STUDIO2	Repetitive	GPO_3	Turn On GPO	Turn Off GPO
<input type="checkbox"/>	Enabled	0.0.0.0	STUDIO4	Repetitive	GPO_7	Turn On GPO	Turn Off GPO

EDIT

BACK

- c) Click the "All" box to edit all combinatorial event definitions OR click on the desired event definition to edit.
- d) Click on "Edit" to edit the selected items.  
**OR**  
Click on "Back" to return to the previous screen.




**Flex Control Network™**

Model NO: Tally Interface Box  
Software Ver: 1.87B12  
Serial Ports: 0

Serial NO: 500206  
GPI/GPO: 32/32  
Label: DC38

[Home](#)
[GPI](#)
[GPO](#)
[Source Event Definition](#)
[Combinatorial Event Definition](#)
[Event Monitoring](#)
[Event Diagnostics](#)
[System](#)
[Logout](#)

- Create combinatorial event definition using local events.
- For remote events, first create source event definition.
- Event Label must be unique on this unit and a maximum of 15 characters.
- Definition example: GPI\_1 AND (GPI\_2 OR GPI\_3).
- Use Available Source Events and Operators drop down menu to append to Combinatorial Event Definition, OR manually enter source events, operators, and parenthesis.

### Edit Combinatorial Source Definition

Event Label	Combinatorial Event Definition	Available
DualCam01	GPI_1 AND GPI_2	YES
DveCam	GPI_1 AND GPI_5	YES

Save
Back

The selected items will be displayed.

e) Modify the Label, Value, or Available status of the definition

f) Click on “Save” to save the edited items.

**OR**

Click on “Back” to return to the previous screen without saving the changes.

## 4. DELETE a Combinatorial Event Definition

Using the web browser:

- Click on the “Combinatorial Event Definition” link at the top of the page. The Combinatorial Event Definition Table will be displayed.
- Click on “Delete ... Combinatorial Event Definition”. The definition selection page will be displayed.

**DNF**  
CONTROLS

Flex Control Network™

Model NO: Tally Interface Box  
Software Ver: 1.87B12  
Serial Ports: 0

Serial NO: 500206  
GPI/GPO: 32/32  
Label: DC30

[Home](#) [GPI](#) [GPO](#) [Source Event Definition](#) [Combinatorial Event Definition](#) [Event Monitoring](#) [Event Diagnostics](#) [System](#) [Logout](#)

- Click the "Check All" box to edit all rows OR click the desired row(s) to edit.

Edit Combinatorial Source Definition Table


Check All <input type="checkbox"/>	Event Label	Combinatorial Event Definition	Available
<input type="checkbox"/>	DualCam01	GPI_1 AND GPI_2	YES
<input type="checkbox"/>	DveCam	GPI_1 AND GPI_5	YES

- Click the “Check All” box to delete all definitions OR click the desired definition(s) to delete.

d) Click on “DELETE” at the bottom of the table. The “Are You Sure” page will be displayed.

**OR**

Click on “BACK” to return to the previous page.

**Flex Control Network™**

Model NO: Tally Interface Box  
Software Ver: 1.87B12  
Serial Ports: 0

Serial NO: 500206  
GPI/GPO: 32/32  
Label: DC30

[Home](#) [GPI](#) [GPO](#) [Source Event Definition](#) [Combinatorial Event Definition](#) [Event Monitoring](#) [Event Diagnostics](#) [System](#) [Logout](#)

Are you sure you want to delete following Combinatorial Source Definition?

Combinatorial Source Definition Table

Name	Value	Status
DualCam01	GPI_1 AND GPI_2	YES
DveCam	GPI_1 AND GPI_5	YES

e) Click on “DELETE” at the bottom of the page to delete the selected rows.

**OR**

Click on “BACK” to return to the previous page without deleting.

## **XI. EVENT LOGGING (OPTIONAL)**

### **Overview**

The EVENT LOGGING option allows the GTP to log each GPI and GPO change (also referred to as "event") into a log file on the GTP. For each GPI/GPO event, the GPI/GPO number, current state (ON or OFF) along with the system date and time will be saved into the log file. If the LTC time code option is installed, the "House System Time" will also be saved.

The EVENT LOGGING option will maintain 7 log files, one log file for each day of the week. At midnight, based upon the GTP's internal clock, the logging will continue in the next day's file. On the 8<sup>th</sup> day, the oldest log file will be deleted and replaced with a new empty file.

Each daily log file is actually two separate files, elog-xxx-0.txt and elog-xxx-1.txt. The "-0.txt" file is used first and when full, the "-1.txt" file is used. The two files will hold a maximum of approximately 40,000 events. If the number of logged events for a day exceeds this maximum number, the "-0.txt" file will be overwritten with the new events.

The data in the log file will be in a standard comma delimited format, (CSV, Comma-Separated-Value). This file can be uploaded to a "PC" and viewed with any text editing program or word processor. It can also be imported into a spreadsheet or database program for viewing or statistical analysis. There is no user intervention necessary to start the logging feature, it is always active.

### **A. View or Upload Log Files**

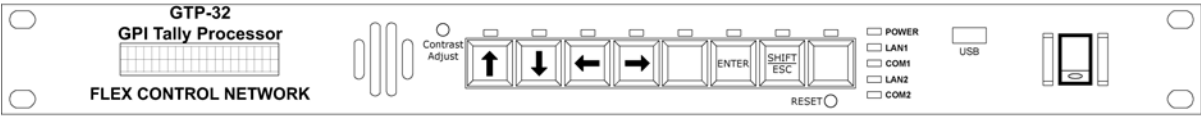
Using an Internet Browser such as "MS Internet Explorer" or "Netscape Navigator" you can access the log files. Click on the SYSTEM link on the GTP's home page. Click on SYSTEM MAINTENANCE, then click on VIEW EVENT LOGS. You will see a list of log files. Click on the radio button of the file you wish to view and then click on the VIEW LOG button to view the log file on the browser. You can click on the BACK TO FILE LIST button to return to the list of files or click on any other link to exit the VIEW LOG feature.

To up load a file to a "PC", while on the EVENT LOG FILE LIST page, right click on the file which you want to upload, then click on the "Save Target As" item. This will open a standard "Windows" file dialogue box; here navigate to the directory where you want to store the file, Click on the SAVE button to complete the save process.

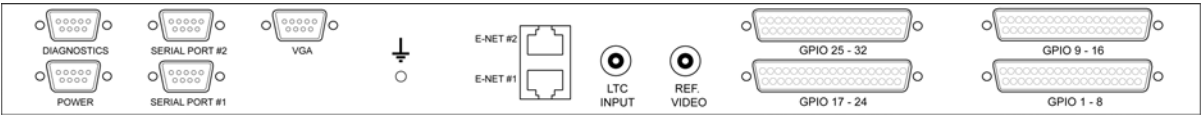
### **B. Clear Log Files**

To clear the data from a log file, while on the EVENT LOG FILE LIST page, click on the desired file's radio button and then click on the CLEAR LOG button. You will be asked to confirm the clear process, press the CONFIRM button to complete the process or press CANCEL to exit without clearing the file.

# XII.FRONT & REAR VIEWS



Front View



Rear View

## **XIII. LIMITED WARRANTY**

DNF Controls warrants its product to be free from defects in material and workmanship for a period of one (1) year from the date of sale to the original purchaser from DNF Controls.

In order to enforce the rights under this warranty, the customer must first contact DNF's Customer Support Department to afford the opportunity of identifying and fixing the problem without sending the unit in for repair. If DNF's Customer Support Department cannot fix the problem, the customer will be issued a Returned Merchandise Authorization number (RMA). The customer will then ship the defective product prepaid to DNF Controls with the RMA number clearly indicated on the customer's shipping document. The merchandise is to be shipped to:

DNF Controls  
12843 Foothill Blvd., Suite D  
Sylmar, CA 91342  
USA

Failure to obtain a proper RMA number prior to returning the product may result in the return not being accepted, or in a charge for the required repair.

DNF Controls, at its option, will repair or replace the defective unit. DNF Controls will return the unit prepaid to the customer. The method of shipment is at the discretion of DNF Controls, principally UPS Ground for shipments within the United States of America. Shipments to international customers will be sent via air. Should a customer require the product to be returned in a more expeditious manner, the return shipment will be billed to their freight account.

This warranty will be considered null and void if accident, misuse, abuse, improper line voltage, fire, water, lightning or other acts of God damaged the product. All repair parts are to be supplied by DNF Controls, either directly or through its authorized dealer network. Similarly, any repair work not performed by either DNF Controls or its authorized dealer may void the warranty.

After the warranty period has expired, DNF Controls offers repair services at prices listed in the DNF Controls Price List. DNF Controls reserves the right to refuse repair of any unit outside the warranty period that is deemed non-repairable.

DNF Controls shall not be liable for direct, indirect, incidental, consequential or other types of damage resulting from the use of the product.

# # #

