

IP CONTROL BUDDY
EB-44, EB-42, EB-41
EB-22, EB-21
EG-4
User Manual

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REVISIONS

| | | |
|-----|----------|--|
| 1.0 | 04/07/16 | First Version |
| 1.1 | 08/29/16 | Added MEM, SNMP and SERIAL Configuration page. |

1. GETTING STARTED

1. Go to Installation Section to install the product.
2. Go to System Configuration Section to set static IP address, Subnet Mask, and Gateway address
3. Go to Remote Device Assignment Section to enter IP addresses for remote devices that product will communicate with.

2. EQUIPMENT LIST

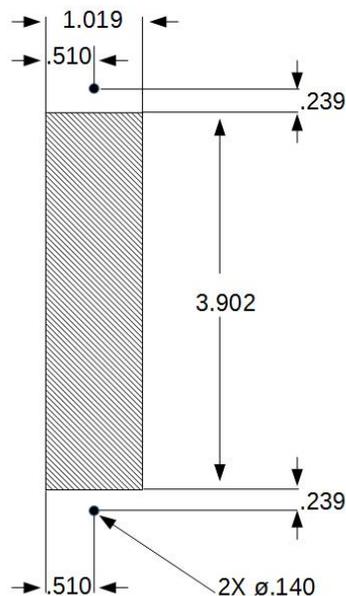
| Qty | Component | DNF Part Number |
|-----|---|-------------------------------|
| 1 | IP Control Buddy | EB-44, EB-42 , EB-41, EG-4 |
| 1 | Power Supply & Power Cord Part# PS-IPCB | Optional |

3. INSTALLATION

Mount product into rackmount panel, desktop, or other using the mechanical drawing below.

Note- All dimensions are in inches.

EB4X
Cutout and location of
mounting holes.



Rev 040516

Use mechanical drawing to mount product horizontally or vertically.

For EB-44, EB-42, EB-41, & EG-4:

If required, wire GPI Inputs, GPI Outputs (GPO), and serial cables to screw terminal blocks on rear of product. See SPECIFICATIONS section for wiring details.



Connect Power Over Ethernet (POE) by inserting Ethernet cable into RJ45 connector on rear. Or, connect external power supply to 2-pin white power connector adjacent to RJ45 connector.

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4. SYSTEM CONFIGURATION WEB PAGE

| | |
|----------------------------------|---|
| P1 Software Upgrade: | Use this link to install the P1 upgrade file provided by DNF Controls |
| Web Upgrade: | Use this link to install the Web pages upgrade file provided by DNF Controls |
| Save Configuration to PC: | Use this link to save the product's current configuration to a configuration file on a computer. The web browser will prompt for file name and directory. The file extension must be 'dnf'. |
| Restore Configuration from PC: | Use this link to download a configuration file from your computer to the product. The web browser will prompt for directory and configuration file name. The file extension must be 'dnf'. |
| Set Factory Defaults: | Use this link to reset all product configuration settings to factory defaults. This will NOT change the IP address, subnet mask or gateway address. The product will automatically reboot. |
| Enter Label: | Enter label to be displayed on top right of all web pages |
| Enter the new IP settings below: | Enter the new IP address, Gateway, and Subnet Mask. Click on <u>Save Config</u> to save the new entries. The product will automatically reboot. |

DEFAULT STATIC ETHERNET CONFIGURATION

IP Address: **192.168.10.217**
Subnet Mask: **255.255.255.0**
Gateway: **192.168.10.1**

The product is configured using a standard web-browser (Internet Explorer, Firefox, and Chrome). Enter the product's IP address in the Address/ URL bar, typically located at the top of the web-browser page, to access the Home Page. Use the links on the left side of the Home Page to access the desired configuration web pages.

All configuration settings are saved in non-volatile memory in the product. Settings are retained when power is removed.

Settings may be uploaded to a computer as a configuration file (.dnf) for storage. Configuration files may be downloaded from a computer into the product to restore a saved configuration. A configuration file contains all of the product's configurations except IP address, subnet mask, and gateway address. The product does not support partial configuration upload or download. The configuration file is a not a text formatted file. It cannot be viewed or modified with a text editor.

To access the System Configuration web page, use the following log-on when prompted:

Username: dnfuser
Password: controls

The user name and password cannot be changed.

5. GPI EVENTS WEB PAGE EB-44, EB-42, EB-41, EG-4


EB4X
EB4X

Home

GPI Events

GPO Actions

Remote Device Assignment

GTP-32/DC20 Receive Events

Serial Port Configuration

AHSC TX Actions

AHSC RX Events

SNMP TX/RX Actions

Event Action Table

Tally Assignment

Log Out

System Configuration

[Refresh](#)

| GPI CONFIGURATION | | | | | |
|-------------------|-----------|-------------------------|------------------------|-------------------|-----------|
| GPI# | GPI Label | User Defined "ON" State | User Defined "ON" Mode | Debounce (*10 ms) | Currently |
| 1 | GPI_1 | OPTO ON ▾ | Latch ▾ | 1 ▾ | OFF |
| 2 | GPI_2 | OPTO ON ▾ | Latch ▾ | 1 ▾ | OFF |
| 3 | GPI_3 | OPTO ON ▾ | Latch ▾ | 1 ▾ | OFF |
| 4 | GPI_4 | OPTO ON ▾ | Latch ▾ | 1 ▾ | OFF |

| | |
|-----------------------|---|
| GPI Label | Enter any 15 characters or symbols. For convenience only. Used in Event Action Table |
| User Defined ON State | OPTO ON: The GPI is ON when the opto-isolator is energized (powered). The GPI is OFF when the opto-isolator is de-energized. OPTO OFF: The GPI is ON when the opto-isolator is de-energized. The GPI is OFF when the opto-isolator is energized (powered). |
| User Defined ON Mode | LATCHED: The GPI turns ON and stays ON. The GPI turns OFF and stays OFF. MOMENTARY: The GPI turns ON for a short time and then turns OFF and stays OFF. This pattern repeats every time the GPI become active. |
| Debounce Time | The time period that the GPI must remain ON to be detected as ON and must remain OFF to be detected as OFF. The selected time is multiplied by 10 milliseconds to compute the actual Debounce time. |
| Currently | Current state of GPI as defined by User Defined ON State. |

6. GPO ACTIONS WEB PAGE EB-44, EB-42, EB-41, EG-4



- Home
- GPI Events
- GPO Actions
- Remote Device Assignment
- GTP-32/DC20 Receive Events
- Serial Port Configuration
- AHSC TX Actions
- AHSC RX Events
- SNMP TX/RX Actions
- Event Action Table
- Tally Assignment
- Log Out
- System Configuration

Save

[Refresh](#)

| GPO CONFIGURATION | | | | | | |
|-------------------|-----------|-----------------------|----------------|---------------------------|--------|-----------|
| GPO# | GPO Label | User Defined ON State | Operating Mode | Momentary On Time (*10ms) | Group | Currently |
| 1 | GPO_1 | Relay Closed ▾ | Latch ▾ | ▬ ▾ | None ▾ | OFF |
| 2 | GPO_2 | Relay Closed ▾ | Latch ▾ | ▬ ▾ | None ▾ | OFF |
| 3 | GPO_3 | Relay Closed ▾ | Latch ▾ | ▬ ▾ | None ▾ | OFF |
| 4 | GPO_4 | Relay Closed ▾ | Latch ▾ | ▬ ▾ | None ▾ | OFF |

| | |
|------------------------------|---|
| GPO Label: | Enter any 15 characters or symbols. For convenience only. Used in Event Action Table |
| User Defined ON State: | <p>RELAY OPEN: The relay is OPEN when the GPO is ON. The relay is CLOSED when the GPO is OFF.</p> <p>RELAY CLOSED: The relay is CLOSED when the GPO is ON. The relay is OPEN when the GPO is OFF (Factory Default).</p> |
| User Defined Operating Mode: | <p>MOMENTARY: The GPO turns ON, waits for the MOMENTARY ON TIME to expire, and then automatically turns OFF.</p> <p>LATCH: The GPO turns ON and stays ON. The GPO turns OFF and stays OFF.</p> |
| Momentary ON Time: | For MOMENTARY operating mode only. ON duration for Momentary GPO. Drop down menu settable from 0.01 sec to 2.0 sec. |
| Group: | Radio Group RG1 – RG4: Only one GPO in a Group can be ON at a time. Before a GPO is turned ON, all of the other GPOs in the group are immediately turned off. (Break before make) |
| Currently: | Current state of GPO as defined by User Defined ON State. |

7. REMOTE DEVICE ASSIGNMENT WEB PAGE

DNF EB4X EB4X

[Home](#)
[GPI Events](#)
[GPO Actions](#)
[Remote Device Assignment](#)
[Key Mapper](#)
[GTP-32/DC20 Receive Events](#)
[Serial Port Configuration](#)
[AHSC TX Actions](#)
[AHSC RX Events](#)
[SNMP TX/RX Actions](#)
[MEM Configuration](#)
[Event Action Table](#)
[Tally Assignment](#)
[Log Out](#)
[System Configuration](#)

Device Type= Other, this device listens on ports **50001- 50008** for TCP Server, UDP, and SNMP communication.

Remote Device 1: 50001
 Remote Device 2: 50002
 Remote Device 3: 50003
 Remote Device 4: 50004
 Remote Device 5: 50005
 Remote Device 6: 50006
 Remote Device 7: 50007
 Remote Device 8: 50008

For UDP and SNMP transmits, the source port number is the same as the listen port number.

Device Type= USP, GTP-32/DC20, or PKM
 This device listens on port 161 and transmits using source port number 161.

Communication Error= 2 missed Heartbeat or Comm Periods [Refresh](#)

| REMOTE DEVICE LIST | | | | | | | | | | |
|--------------------|---------------------|-------------|----------------------|-----------------|-----------------|--------------|-------------|-------------|----------------------------------|-------------------|
| Device # | Remote Device Label | Device Type | Primary /Backup Pair | Connection Type | Connection Mode | UDP Attempts | IP Addresss | Port Number | Heartbeat/ Comm Period (seconds) | Connection Status |
| 1 | Remote Device 1 | USP | | | | | 0.0.0.0 | | 5 | ----- |
| 2 | Remote Device 2 | USP | | | | | 0.0.0.0 | | 5 | ----- |
| 3 | Remote Device 3 | USP | | | | | 0.0.0.0 | | 5 | ----- |
| 4 | Remote Device 4 | USP | | | | | 0.0.0.0 | | 5 | ----- |
| 5 | Remote Device 5 | USP | | | | | 0.0.0.0 | | 5 | ----- |
| 6 | Remote Device 6 | USP | | | | | 0.0.0.0 | | 5 | ----- |
| 7 | Remote Device 7 | USP | | | | | 0.0.0.0 | | 5 | ----- |
| 8 | Remote Device 8 | USP | | | | | 0.0.0.0 | | 5 | ----- |
| 9 | SERIAL | | | | | | | | DISABLED | ----- |

[Save](#)

| | |
|----------------------|---|
| Remote Device Label: | Enter up to 32 characters. The label will be used in the Event Action Table device drop down menu |
| Device Type: | USP- Use to connect to other DNF Controls Universal Switch Panels GTP-32/DC20- Use to connect to DNF Controls GTP-32 and DC20/21 PKM- Use to connect to Panel Key Mapper Application OTHER- Use to connect to other Ethernet devices |
| Connection Type: | For OTHER Device Types only- Select UDP, SNMP or TCP/IP |
| Connection Mode: | For TCP/IP Only Client Transmit: Establish connection to remote device. Transmit command. Disconnect from remote device. Client Transmit/Receive: Establish connection to remote device. Maintain connection to remote device. Server Receive/Transmit: Accept connection from client. Only client at assigned IP Address can connect. The client is responsible for maintaining connection. Server Mode only, EB listens on the following ports: Port 50001 for connection from Remote Device 1 Port 50002 for connection from Remote Device 2 Port 50003 for connection from Remote Device 3 Port 50004 for connection from Remote Device 4 |

| | |
|--------------------|---|
| UDP Attempts: | For UDP Connection Type only. The number of times that the message will be sent separated by 10 milliseconds. Since UDP does not provide guaranteed delivery, UDP Attempts provides more than one transmit attempt to deliver the message. |
| IP: Address: | Enter IP address for remote device to be controlled or monitored |
| Port Number: | Destination port number for transmit actions Source port number for receive events. Set to '0' to receive events from any port number at remote device IP address. |
| Heartbeat Rate: | For USP and GTP-32/DC20 Device Types. Default value is 5 seconds. Communication error is defined as loss of two consecutive heartbeats. |
| Connection Status: | For USP and GTP-32/DC20 device types and TCP/IP connection types only Displays "Connected" in green when communicating with remote device Displays "-----" when NOT communicating with remote device or no IP address has been entered. |
| Save Button: | Click on Save button to save entered settings |
| Refresh Link: | Click on Refresh link to refresh Connection Status |

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8. KEY MAPPER



EB4X

EB4X

- Home
- GPI Events
- GPO Actions
- Remote Device Assignment
- Key Mapper
- GTP-32/DC20 Receive Events
- Serial Port Configuration
- AHSC TX Actions
- AHSC RX Events
- SNMP TX/RX Actions
- MEM Configuration
- Event Action Table
- Tally Assignment
- Log Out
- System Configuration

USAGE:
LABEL- Enter any 32 characters to identify key function. For user convenience only. Labels displayed in Switch Assignment Table.
KEY- Select key on PC keyboard.
MODIFIER- Select CTRL, SHIFT, ALT or combination.

Save

| KEY MAPPER LIST | | | |
|-----------------|-------|------|----------|
| Line# | Label | Key | Modifier |
| 1 | KM_1 | H | NONE |
| 2 | KM_2 | NONE | |
| 3 | KM_3 | NONE | |
| 4 | KM_4 | NONE | |
| 5 | KM_5 | NONE | |
| 6 | KM_6 | NONE | |
| 7 | KM_7 | NONE | |
| 8 | KM_8 | NONE | |
| 9 | KM_9 | NONE | |
| 10 | KM_10 | NONE | |
| 11 | KM_11 | NONE | |
| 12 | KM_12 | NONE | |
| 13 | KM_13 | NONE | |
| 14 | KM_14 | NONE | |
| 15 | KM_15 | NONE | |
| 16 | KM_16 | NONE | |
| 17 | KM_17 | NONE | |
| 18 | KM_18 | NONE | |
| 19 | KM_19 | NONE | |
| 20 | KM_20 | NONE | |
| 21 | KM_21 | NONE | |
| 22 | KM_22 | NONE | |

| | |
|----------|--|
| Label | Enter any 32 characters or symbols. For convenience only. Used in Event Action Table |
| Key | Select PC Keyboard key from drop down menu |
| Modifier | Select NONE or CTRL, SHIFT, ALT combination |

The Key Mapper List contains 48 entries. Select a PC keyboard combination from the drop down menus and assign an identifier label for the Event Action Table.

When a USP key is pressed, the assigned Key Mapper List entry is transmitted to the Panel Key Mapper application, pkm.exe, running on the Microsoft Windows based remote device.

9. GTP-32 / DC20 RECEIVE EVENTS



- Home
- GPI Events
- GPO Actions
- Remote Device Assignment
- GTP-32/DC20 Receive Events
- Serial Port Configuration
- AHSC TX Actions
- AHSC RX Events
- SNMP TX/RX Actions
- Event Action Table
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- Log Out
- System Configuration

| GTP-32/ DC20 RECEIVE EVENTS | | | |
|-----------------------------|----------------|--------------------------|---|
| Line# | Event Label | GTP-32/ DC20 Event Label | User Register Value (for UR_ labels only) |
| 1 | EVENT LABEL 1 | | |
| 2 | EVENT LABEL 2 | | |
| 3 | EVENT LABEL 3 | | |
| 4 | EVENT LABEL 4 | | |
| 5 | EVENT LABEL 5 | | |
| 6 | EVENT LABEL 6 | | |
| 7 | EVENT LABEL 7 | | |
| 8 | EVENT LABEL 8 | | |
| 9 | EVENT LABEL 9 | | |
| 10 | EVENT LABEL 10 | | |
| 11 | EVENT LABEL 11 | | |
| 12 | EVENT LABEL 12 | | |
| 13 | EVENT LABEL 13 | | |
| 14 | EVENT LABEL 14 | | |
| 15 | EVENT LABEL 15 | | |
| 16 | EVENT LABEL 16 | | |

| | |
|---------------------------|--|
| Event Label: | Enter any 32 characters. This label is used in the Event Action Table. |
| GTP-32/ DC20 Event label: | Enter the GTP-32 or DC20 Event Label to tally. This Event Label must be listed in the GTP-32/ DC20's Event Notification Table with the IP address of this Product. The entered Event Label must exactly match the event label in the Event Notification Table. |
| User Register Value: | For use with "UR_" event labels only. Enter a value '0' to '255'. When the received User Register value matches the entered value, the event turns ON momentarily |

NOTE- The GTP-32/ DC20 Receive Event type event is only displayed in the Event Action Table for Remote Devices of Device Type "GTP-32/ DC20".

10. SERIAL PORT CONFIGURATION

The screenshot shows the DNF Controls EB4X web interface. On the left is a vertical navigation menu with buttons for: Home, GPI Events, GPO Actions, Remote Device Assignment, Key Mapper, GTP-32/DC20 Receive Events, Serial Port Configuration (highlighted), AHSC TX Actions, AHSC RX Events, SNMP TX/RX Actions, MEM Configuration, Event Action Table, Tally Assignment, Log Out, and System Configuration. The main content area displays the 'SERIAL PORT CONFIGURATION' window, which is a table with the following settings:

| SERIAL PORT CONFIGURATION | |
|---------------------------|--------------|
| PORT CONFIGURATION: | RS422 CTRL ▾ |
| BAUD: | 38400 ▾ |
| PARITY: | ODD ▾ |
| DATA BITS: | 8 |

Below the configuration table is a 'Save' button.

| | |
|--------------------|---|
| Port Configuration | RS232 DTE or RS422 Controller |
| Baud Rate | 300, 1200, 2400, 4800, 9600, 19200, 38400 |
| Parity | None, Odd, Even |
| Data Bits | Fixed at 8 |
| Stop Bits | Fixed at 1 |
| Start Bits | Fixed at 1 |

11. AHSC TRANSMIT ACTION



- Home
- GPI Events
- GPO Actions
- Remote Device Assignment
- GTP-32/DC20 Receive Events
- Serial Port Configuration
- AHSC TX Actions
- AHSC RX Events
- SNMP TX/RX Actions
- Event Action Table
- Tally Assignment
- Log Out
- System Configuration

USAGE:
 Action Label is 1 - 32 characters in length. Use 'A' - 'Z', 'a' - 'z', and '0' - '9'.
 Label is for convenience only. Used in Event Action Table.

ASCII/HEX Command is 1 - 256 characters in length.
 Use %xy to enter HEX value. x and y are values 0 - 9 or A- F. Two characters must follow %.
 Use %BR to add serial BREAK (18 bit times). Valid only at beginning of command followed by at least one character.
 Use %WTttt to add WAIT. Transmit command up to %WT. Wait ttt time, 001 - 999 milliseconds. Transmit next part of command after the wait time expires. More than one %WT can be included in a command. NOTE- %WT is only an approximate wait time.

NOTE- Spaces between characters are NOT transmitted. Use %20 to transmit a space character.

Save

| AHSC TRANSMIT ACTIONS | | |
|-----------------------|------------------|-------------------|
| Line# | Action Label | ASCII/HEX Command |
| 1 | AHSC Transmit 1 | |
| 2 | AHSC Transmit 2 | |
| 3 | AHSC Transmit 3 | |
| 4 | AHSC Transmit 4 | |
| 5 | AHSC Transmit 5 | |
| 6 | AHSC Transmit 6 | |
| 7 | AHSC Transmit 7 | |
| 8 | AHSC Transmit 8 | |
| 9 | AHSC Transmit 9 | |
| 10 | AHSC Transmit 10 | |
| 11 | AHSC Transmit 11 | |
| 12 | AHSC Transmit 12 | |
| 13 | AHSC Transmit 13 | |
| 14 | AHSC Transmit 14 | |
| 15 | AHSC Transmit 15 | |
| 16 | AHSC Transmit 16 | |

| | |
|---------------------|---|
| Action Label: | Enter any 32 characters. This label is used in the Event Action Table. |
| ASCII/ HEX Command: | <p>The ASCII/HEX Command is 1 - 256 characters in length. Use %yz to enter a HEX value. 'y' and 'z' are values 0 - 9 or A- F. Two characters must follow %.</p> <p>Use %WTttt to add a WAIT time, 001 - 999 milliseconds. Three numbers must follow %WT. The characters preceding %WT are sent immediately. The characters after %WTttt are sent after the wait time expires. More than one %WT can be included in a command. NOTE- %WT is only an approximate wait time.</p> <p>For SERIAL only- Use %BR to add a BREAK character as the first transmitted character.</p> <p>NOTE- Spaces between characters are NOT transmitted. Use %20 to transmit a space character.</p> |

12. AHSC RECEIVE EVENT


EB4X
EB4X

Home

USAGE:
Event Label is 1 - 32 characters in length. Use 'A' - 'Z', 'a' - 'z', and '0' - '9'. Label is for convenience only. Used only in Event Action Table.

ASCII/HEX Receive Data is 1 - 16 character patterns in length.
Use %yz to enter a HEX value. y and z are values 0 - 9, A- F, or 'X'. Two characters must follow '%'. Use %Xz to match only z. Use %yX to match only y. Use %XX to ignore value.

Use #yyyyyyyy to match an exact bit pattern. Y values are '0', '1', or 'X' (don't care).
Use <yyyyyyyy to match any bit in the bit pattern. Y values are '0', '1', or 'X' (don't care).

Use '!' to NOT match a character pattern.
Example: Event Label= TEST. Receive Data= !A If any character other than 'A' is received, then TEST event is ON. If 'A' is received, then TEST event is OFF.
Use '!y', '!%yz, or !#yyyyyyyy to specify a NOT pattern match.

NOTE- Spaces between patterns are ignored. Use %20 to match a space character.

| AHSC RECEIVE EVENTS | | |
|---------------------|-----------------|------------------------|
| Line# | Event Label | ASCII/HEX Receive Data |
| 1 | AHSC Receive 1 | |
| 2 | AHSC Receive 2 | |
| 3 | AHSC Receive 3 | |
| 4 | AHSC Receive 4 | |
| 5 | AHSC Receive 5 | |
| 6 | AHSC Receive 6 | |
| 7 | AHSC Receive 7 | |
| 8 | AHSC Receive 8 | |
| 9 | AHSC Receive 9 | |
| 10 | AHSC Receive 10 | |
| 11 | AHSC Receive 11 | |
| 12 | AHSC Receive 12 | |
| 13 | AHSC Receive 13 | |
| 14 | AHSC Receive 14 | |
| 15 | AHSC Receive 15 | |
| 16 | AHSC Receive 16 | |
| 17 | AHSC Receive 17 | |

| | |
|-------------------------|--|
| Event Label | Enter any 32 characters. This label is for convenience only and is used in the Event Action Table. |
| ASCII/ HEX Receive Data | <p>Enter 1- 16 characters and/or bit patterns to match against received serial data.</p> <p>The received characters must exactly match the order and value of the entered patterns. If a received character does not match the entered pattern, all previous matches are discarded and the match process begins again with the first entered pattern. If more than 1 second elapses between received characters, all previous matches are discarded and the match process begins again.</p> <p>Use %yz to enter a HEX character. 'y' and 'z' are values 0 - 9, A - F, or 'X' (don't care).</p> <p>Enter %Xz to match only the z part of the HEX character. Enter %yX to match only the y part of the HEX character. Enter %XX to ignore the received value.</p> <p>Use #yyyyyyyy to match an exact bit pattern. 'y' values are '0', '1', or 'X' (don't care). For example, enter #0XXX1XXX to match bit7= 0 and bit3= 1. Bit0 is on the far right. Bit7 is on the far left.</p> <p>Use <yyyyyyyy to match any bit in the bit pattern. 'y' values are '0', '1', or 'X' (don't care). For example, enter <0XXX1XXX to match bit7=0 or bit3= 1. Bit0 is on the far right. Bit7 is on the far left.</p> <p>Use '!' to NOT match a character pattern. For example: Event Label= TEST. Receive pattern= !A. If any character other than 'A' is received, then TEST event is ON. If 'A' is received, then TEST event is OFF. Use '!y, '!%yz, or !#yyyyyyyy to specify a NOT pattern match.</p> <p>NOTE- Spaces between patterns are ignored. Use %20 to match a space character.</p> |

Pattern matching examples can be found in the back of this manual.

13. SNMP TX/RX ACTIONS



- Home
- GPI Events
- GPO Actions
- Remote Device Assignment
- Key Mapper
- GIP-32/DC20 Receive Events
- Serial Port Configuration
- AHSC TX Actions
- AHSC RX Events
- SNMP TX/RX Actions
- MEM Configuration
- Event Action Table
- Tally Assignment
- Log Out
- System Configuration

USAGE:
 Action Label is 1 - 32 characters in length. Use 'A' - 'Z', 'a' - 'z', and '0' - '9'. Label is for convenience only. Used in Event Action Table.
 Community string is 1 - 32 characters in length. Typical value is 'public'.
 Use dot notation to enter Object Identifier(OID). Use decimal values only. ie: 1.2.3.4.5.6.7.8
 Maximum decimal value is **99999999**

OID VALUE Type:
 Integer- Valid decimal values: 0 - 999999
 Octet Integer- Valid decimal values: 0 - 999999
 Octet String- ASCII or HEX characters
 Use %xy to enter HEX value. x and y are values 0 - 9 or A- F.
 Two characters must follow %.

SNMP Receive Events:
 Received OIDs must start with 1.3.6.1.4.1 to be processed. Contact DNF Control for other formats.
 Iso(1),org(2),dod(6),internet(1),private(4),enterprise(1)
 Received OIDs with NULL OID Value will be processed as momentary events. All other OID Value types will be processed as latching events.

| SNMP TRANSMIT ACTIONS / RECEIVE EVENTS | | | | | | |
|--|---|------------------------------------|----------|--|------------|---|
| Line# | Event/Action Label 32 characters maximum | Community 16 characters maximum | Command | OID 100 characters maximum Use dot notation with decimal values | VALUE TYPE | |
| 1 | Sat 7 Set Service 3 | private | SET | 1.3.6.1.4.1.1773.1.3.208.4.1.1.1.8.4 | Integer | 1 |
| 2 | Sat 7 Set Service 4 | private | SET | 1.3.6.1.4.1.1773.1.3.208.4.1.1.1.8.5 | Integer | 1 |
| 3 | Sat 7 Get Service 3 Resp | private | GET RESP | 1.3.6.1.4.1.1773.1.3.208.4.1.1.1.8.4 | Integer | 1 |
| 4 | Sat 7 Get Service 4 Resp | private | GET RESP | 1.3.6.1.4.1.1773.1.3.208.4.1.1.1.8.5 | Integer | 1 |
| 5 | Sat 7 Get Service 3 | private | GET | 1.3.6.1.4.1.1773.1.3.208.4.1.1.1.8.4 | Null | |
| 6 | Sat 7 Get Service 4 | private | GET | 1.3.6.1.4.1.1773.1.3.208.4.1.1.1.8.5 | Null | |
| 7 | SNMP TxRx 7 | | SET | | Null | |
| 8 | SNMP TxRx 8 | | SET | | Null | |
| 9 | SNMP TxRx 9 | | SET | | Null | |
| 10 | SNMP TxRx 10 | | SET | | Null | |

| | |
|-------------------------|--|
| Event/Action Label | Enter any 32 characters. This label is for convenience only and is used in the Event Action Table. |
| Community | Community string is 1 - 32 characters in length. Typical value is 'public'. |
| Command | SET, GET, GET RESPONSE |
| Object Identifier (OID) | The OID is 8 - 256 decimal values in length entered in dot notation. Only decimal values are accepted. ie: 1.22.333.4.55.666.7.88. Maximum entered decimal value is 99999999. |
| Value Type | OID Value Type: |
| OID Value | <p>Integer: Enter decimal value 0 - 999999 for OID value</p> <p>Octet Integer: Enter decimal value 0 - 999999 for OID value</p> <p>Octet String: Enter 16 alphanumeric characters</p> <p>NULL: Set to NULL when no OID value is entered.</p> |

14. MEM CONFIGURATION



- Home
- GPI Events
- GPO Actions
- Remote Device Assignment
- GTP-32/DC20 Receive Events
- Serial Port Configuration
- AHSC TX Actions
- AHSC RX Events
- SNMP TX/RX Actions
- MEM Configuration**
- Event Action Table
- Tally Assignment
- Log Out
- System Configuration

Save

[Refresh](#)

NOTE: Radio Group setting used by MEM ON Action only

| MEM CONFIGURATION | | | |
|-------------------|-----------|-------------|-----------|
| MEM# | MEM Label | Radio Group | Currently |
| 1 | MEM_1 | None | OFF |
| 2 | MEM_2 | None | OFF |
| 3 | MEM_3 | None | OFF |
| 4 | MEM_4 | None | OFF |
| 5 | MEM_5 | None | OFF |
| 6 | MEM_6 | None | OFF |
| 7 | MEM_7 | None | OFF |
| 8 | MEM_8 | None | OFF |
| 9 | MEM_9 | None | OFF |
| 10 | MEM_10 | None | OFF |
| 11 | MEM_11 | None | OFF |
| 12 | MEM_12 | None | OFF |
| 13 | MEM_13 | None | OFF |
| 14 | MEM_14 | None | OFF |
| 15 | MEM_15 | None | OFF |
| 16 | MEM_16 | None | OFF |

| | |
|-------------|--|
| MEM Label | Enter any 32 characters. This label is for convenience only and is used in the Event Action Table. |
| Radio Group | Select from "RG1 – RG6" to put the selected mem into a radio group. |

MEM's are used to save an Event In's ON or OFF state and trigger an ON or OFF ACTION. MEMs are also used on the Tally Assignment web page to control LCD Key text and color.

In the Event Action Table, an Event In can turn on, turn off or toggle the state of a MEM. Also, a MEM can be used as an Event In to trigger an ON or OFF ACTION.

For example, a MEM can be used to convert a momentary event into a latching tally. VTR Play status turns on MEM 1. VTR Stop status turns off MEM 1. The LCD Key tallying MEM 1 displays PLAY when MEM 1 is on and STOP when MEM 1 is off.

Please refer to section 18 for example of MEMs FLIP FLOP and RADIO GROUP.

15. EVENT ACTION TABLE

DNF
CONTROLS
EB4X
EB4X

Home
Save

| EVENT IN -> ACTION OUT TABLE | | | | | | | | | |
|------------------------------|----------|------------|-------|-------------------------|------|--------------|-------------------------|------|--------------|
| Line# | EVENT IN | | | ON ACTION | | | OFF ACTION | | |
| | Source | Event Type | Event | Local/ Remote Device | Type | Action Label | Local/ Remote Device | Type | Action Label |
| 1 | None | | | | | | | | |
| 2 | None | | | | | | | | |
| 3 | None | | | | | | | | |
| 4 | None | | | | | | | | |
| 5 | None | | | | | | | | |
| 6 | None | | | | | | | | |
| 7 | None | | | | | | | | |
| 8 | None | | | | | | | | |
| 9 | None | | | | | | | | |
| 10 | None | | | | | | | | |
| 11 | None | | | | | | | | |
| 12 | None | | | | | | | | |
| 13 | None | | | | | | | | |
| 14 | None | | | | | | | | |
| 15 | None | | | | | | | | |
| 16 | None | | | | | | | | |
| 17 | None | | | | | | | | |
| 18 | None | | | | | | | | |
| 19 | None | | | | | | | | |
| 20 | None | | | | | | | | |
| 21 | None | | | | | | | | |
| 22 | None | | | | | | | | |
| 23 | None | | | | | | | | |
| 24 | None | | | | | | | | |

On an Event Action Table line, select an EVENT IN on the left side of the table and then select an ACTION on the right side. Some events only support ON ACTIONS, so the OFF ACTION entries will be grayed out.

One EVENT IN can trigger more than one ACTION. Select the same EVENT IN on multiple lines and then select an ON or OFF ACTION on each line.

Only EVENTS and ACTIONS associated with the Remote Device's Device Type or Connection Type will be displayed in the drop down menus. If the desired event or action is not displayed, then go to the Remote Device Assignment web page and change the Device Type or Connection Type for the Remote Device.

There are 16 Sequence Timers. Use each Sequence Timer event number in multiple lines as the Event Type to create a sequence of actions. The first Sequence entry from the top of the table will be the first sequence action. The next Sequence entry from the top of the table will be the next sequence action. The Event column time is the delay before that line's action will execute. Use Sequence Start action to start a sequence. Use Sequence Stop/ Reset to stop a sequence. The Sequence will always start at its first line.

| | | |
|---|-------------------|---|
| E V E N T I N | Source | None (Greys out line) Local Event Remote Device Event |
| | Event Type | <p>Local: GPI GPI changed from OFF to ON. The selected ON ACTION will execute. GPI changed from ON to OFF. The selected OFF ACTION will execute</p> <p>MEM MEM changed from OFF to ON. The selected ON ACTION will execute. MEM changed from ON to OFF. The selected OFF ACTION will execute</p> <p>Sequence Timer The sequence timer's time has expired. Only ON ACTION is executed. The timer automatically restarts for the time period of the next sequence event in the table. After the last sequence event in the table has expired and its ON ACTION executed, the timer automatically restarts for the time period of the first sequence event in the table.</p> <p>Continuous Timer The Continuous timer's time has expired. Only ON ACTION is executed. The timer automatically starts once "Save" is pressed in the Event Action table. After the timer has expired and its ON ACTION executed, the timer automatically restarts for the time period setup in the Event Action table.</p> |
| | Event | <p>Remote: AHSC Receive Event A successful pattern match has occurred for the selected AHSC Receive Event pattern on the selected Remote Device. Only ON ACTION is executed. If the AHSC Receive Event pattern is assigned to multiple Remote Devices, only the ON ACTION associated with the Remote Device that received the successful match will execute.</p> <p>GTP-32/DC20 Receive (Only available for Device Type "GTP-32/DC20") An Event Label was received that matched the selected GTP-32/DC20 Event Label on the selected Remote Device. Only ON ACTION is executed. If an Event Label is assigned to multiple Remote Devices, only the ON ACTION associated with the sending Remote Device will execute.</p> <p>USP Keypress (Only available for Device Type "USP") An event (Keypress or GPI) was received that matched the selected event on the selected Remote Device.</p> |

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| | | |
|--|------------------------------------|---|
| O N A C T I O N | Local / Remote | Execute Action on Local USP3 Execute Action on Remote Device |
| | Type | <p>Local: GPO Do Nothing Turn GPO ON Turn GPO OFF</p> <p>MEM Do Nothing Turn MEM ON Turn MEM OFF</p> <p>Sequence Start Start identified sequence at its first line in the Event Action Table.</p> <p>Sequence Stop / Reset Immediately stop sequence.</p> <p>Sequence Toggle Toggle current sequence.</p> <p>Sequence Repeat Repeat current sequence</p> <p>Key Enable Turn ON Key Enable Turn OFF Key Enable Toggle Key Enable</p> <p>Redundant Turn ON Redundant Mode Turn OFF Redundant Mode Toggle Redundant Mode</p> <p>Main/Backup Select MAIN Select BACKUP Toggle between MAIN/BACKUP</p> <p>Restart Timer Restarts the currently selected timer in the Event Action Table.</p> |
| | | <p>Remote:</p> <p>AHSC Transmit Action Transmit the selected AHSC Action command. If command contains WAIT (%WT), then transmit all characters prior to %WT, wait for the time period defined by %WT, and then transmit the remaining characters or until the next %WT. A command may contain more than one %WT.</p> <p>GTP-32/ DC20 (Only available for Device Type "GTP-32/DC20") Transmit GPI ON (as a Key Press), GPI OFF (as a Key Release), GPO ON, and GPO OFF messages to a GTP-32 /DC20 Remote Device.</p> <p>USP (Only available for Device Type "USP") Transmit a Key Press to a Remote USP panel.</p> |
| Action Label | GPO Number AHSC Transmit Action | |

| | | |
|---|------------------------------------|---|
| O F F A C T I O N | Local / Remote | Execute Action on Local product Execute Action on Remote Device |
| | Type | <p>Local: GPO Do Nothing Turn GPO ON Turn GPO OFF</p> <p>MEM Do Nothing Turn MEM ON Turn MEM OFF</p> <p>Sequence Start Start identified sequence at its first line in the Event Action Table.</p> <p>Sequence Stop / Reset Immediately stop sequence.</p> <p>Sequence Toggle Toggle current sequence.</p> <p>Sequence Repeat Repeat current sequence</p> <p>Key Enable Turn ON Key Enable Turn OFF Key Enable Toggle Key Enable</p> <p>Redundant Turn ON Redundant Mode Turn OFF Redundant Mode Toggle Redundant Mode</p> <p>Main/Backup Select MAIN Select BACKUP Toggle between MAIN/BACKUP</p> <p>Restart Timer Restarts the currently selected timer in the Event Action Table.</p> |
| | | <p>Remote:</p> <p>AHSC Transmit Action Transmit the selected AHSC Action command. If command contains WAIT (%WT), then transmit all characters prior to %WT, wait for the time period defined by %WT, and then transmit the remaining characters or until the next %WT. A command may contain more than one %WT.</p> <p>GTP-32/ DC20 (Only available for Device Type "GTP-32/DC20") Transmit GPI ON (as a Key Press), GPI OFF (as a Key Release), GPO ON, and GPO OFF messages to a GTP-32 /DC20 Remote Device.</p> <p>USP (Only available for Device Type "USP") Transmit a Key Press to a Remote USP panel.</p> |
| Action Label | GPO Number AHSC Transmit Action | |

16. TALLY ASSIGNMENT EB-44, EB-42, EB-41, EB-22, EB-21

| | | |
|---------------|---|---|
| Key Number: | The product key number. | |
| Tally Type: | Local- Follow Key, Follow GPI, Follow GPO, Follow ENABLE Key, Follow Memory Location (MEM), Follow Sequence (SEQ) Remote- Tally Remote Device: USP, GTP-32/DC20, Other | |
| Tally Source: | Local | <p>Follow Key- Tally is ON when key is pressed Tally is OFF when key is released</p> <p>Follow GPI- Tally is ON when GPI is ON Tally is OFF when GPI is OFF</p> <p>Follow GPO- Tally is ON when GPO is ON Tally is OFF when GPO is OFF</p> <p>Follow ENABLE- Tally is ON when ENABLE is ON Tally is OFF when ENABLE is OFF</p> <p>Follow MEM- Tally is ON when MEM is ON Tally is OFF when MEM is OFF</p> <p>Follow SEQ- Tally is ON when Sequence is in progress Tally is OFF when Sequence is not running</p> |

| | | |
|---------------|---|--|
| Tally Source: | Remote: | <p>Follow remote USP GPI or GPO- Tally is ON when remote GPI/GPO is ON Tally is OFF when remote GPI/GPO is OFF</p> <p>Follow GTP-32 or DC-20 Event Label Tally is ON when Event Label state is ON Tally is OFF when Event Label state is OFF</p> <p>Extended Follow GTP/DC- For use with "ET_" Event Labels only Formatted: ET_NameField_StatusField</p> <p>The Extended Tally is off when received ET Event Label matches Name Field but does not match any Status entries assigned to key or matches OFF entry</p> <p>ET1 Tally is ON when the received Event Label matches the Name Field and Status Field for ET1 and the Event Label is ON</p> <p>ET2 through ET4 Tally is ON when the received Event Label matches the Name Field and Status Field for ET2 through ET4, respectively, and the Event Label is ON</p> <p>Follow GTP/DC User Register- For use with "UR_" Event Labels only The UR Event Label is OFF when User Register value does not match any UR entries for key or matches OFF entry value</p> <p>UR1 Tally is ON when the received User Register value matches the UR1 value entry</p> <p>UR2 through UR4 Tally is ON when the received User Register value matches the UR1 through UR4 value entry, respectively</p> |
| Tally Number: | <p>GPI / GPO Number</p> <p>SNMP Table Entry Number</p> <p>AHSC Table Entry Number</p> | |
| Tally: | <p>OFF / ON</p> <p>OFF / ET1, ET2, ET3, ET4 for Extended Tallies</p> <p>OFF / UR1, UR2, UR3, UR4 for User Register Tallies</p> | |
| Tally Color: | <p>Dark, Red, Green, Amber</p> <p>Flashing Red, Flashing Green, Flashing Amber Blinking Red, Blinking Green, Blinking Amber Dim Red, Dim Green, Dim Amber</p> <p>Dim Flashing Red, Dim Flashing Green, Dim Flashing Amber, Dim Blinking Red, Dim Blinking Green, Dim Blinking Amber</p> | |
| Text: | Text displayed on key face for each tally entry | |
| Font Size: | <p>Small: 3 rows x 6 characters per row</p> <p>Normal: 2 rows x 4 characters per row</p> <p>Big: 1 row x 3 characters per row</p> | |
| Event Label: | Manually enter, or cut & paste, the Event Label from the GTP-32's or DC20's Event Notification Table. The event label is case sensitive, may not contain spaces, and must exactly match the Event Notification Table entry. (Refer to the GTP-32 or DC20 User Manual.) | |
| Value: | Enter User Register value to match | |

17. EXAMPLES: RECEIVE PATTERN MATCHING

NOTE- ASCII and HEX data can be mixed in a user entered pattern. For simplicity only, the examples do not mix ASCII or HEX in a user entered pattern.

ASCII Examples

| User Entered Pattern | Received ASCII Data | Notes |
|--|---------------------------------------|---|
| ABCD | ABCDEFGH | Successful pattern match of first 4 received characters |
| ABCD | 1234ABCDEFGH | Successful pattern match of 5th , 6 th , 7 th , and 8 th received characters |
| ABCD | 1234A5BCDEFG | No pattern match. User entered pattern must be received as entered. |
| A %XX C D NOTE- spaces are not included in pattern match | ABCD ACCD AJCD A2CD | The value of the second character in the pattern, %XX, is like a wildcard, so it can be any character. A successful pattern match will result if the first, third and fourth characters are correct. All four received character patterns are a successful pattern match. |
| A %XX C D | 1234ABCDEFGH 1234A5CDEFG 4AKCDE | Successful pattern matches. |
| A %XX C D | ACD | No pattern match. Four characters must be received. |

Hex Examples (Base 16 Numbering)

| User Entered Pattern | Received Hex Data (spaces for display only) | Notes |
|----------------------|---|--|
| %12 %34 | 12 34 12 34 56 78 56 78 12 34 9A 56 78 12 34 | Successful pattern matches for hexadecimal values 12 and 34. |
| %X2 | 12 32 52 A2 | The first half of the received Hex value is like a wildcard and can be any value. Only the second half must match the user entered value. Successful pattern matches. |
| %12 %4X | 12 43 12 4A 12 49 56 98 12 49 | The second half of the received Hex value is like a wildcard and can be any value. Only the first half must match the user entered value. Successful pattern matches. |
| %12 %4X | 12 34 12 84 12 56 | No pattern match. |

Binary Examples (Base 2 Numbering)

| User Entered Pattern | Received Binary Data (spaces for display only) | Notes |
|---|---|--|
| #0XXX1XXX Bit7 = 0, Bit3= 1 All other bits are "Don't care" | 01011000 | Bit 7 is immediately after the '#'. Bit 0 is on the far right. A pattern match occurs only when Bit 7= 0 and Bit3= 1. The received data must exactly match these identified bit values for a match. The values of the other 6 bits are ignored. Successful match. |
| #0XXX1XXX | 01111111 00001000 01101001 | Successful pattern matches. |
| #0XXX1XXX | 10001000 | No pattern match. Bit 7, on the far left is '1'. It must be '0' to match. |
| #0XXX1XXX | 00000000 | No pattern match. Bit 3 is '0'. It must be '1' to match. |

| User Entered Pattern | Received Binary Data (spaces for display only) | Notes |
|---|---|---|
| <0XXX1XXX Bit7 = 0, Bit3= 1 All other bits are "Don't care" | 01011000 | Bit 7 is immediately after the '#'. Bit 0 is on the far right. A pattern match occurs when Bit 7= 0 or Bit3= 1. Only one of the bits in the received data must match. The values of the other 6 bits are ignored Successful match. |
| <0XXX1XXX Bit7 = 0, Bit3= 1 All other bits are "Don't care" | 11111111 | Received Bit 7 =1. Received Bit 3= 1. At least one identified bit, Bit 3, matches. Successful pattern match. |
| <0XXX1XXX Bit7 = 0, Bit3= 1 All other bits are "Don't care" | 10000000 | Received Bit 7 =1. Received Bit 3= 0. None of the identified bits match the user entered pattern. No pattern match. |
| <0XXX1XXX Bit7 = 0, Bit3= 1 All other bits are "Don't care" | 11111111 00000000 01010101 10101010 | Successful pattern matches. |
| <0XXX1XXX Bit7 = 0, Bit3= 1 All other bits are "Don't care" | 11110111 10000000 11010101 10100010 | No pattern match. |

ASCII Examples

| User Entered Pattern | Received ASCII Data | Notes |
|----------------------|---------------------|---|
| !A | B | A pattern match is successful when the received character is any character except 'A'. |
| !A | AAAAAA | All of the received characters are 'A'. No pattern match. |
| !A | AB | The second character is not an 'A'. The received data is a successful pattern match. |
| !A | BA | The first character is not an 'A' and is a successful pattern match. The received data is a successful pattern match. |
| !A | BC | No character is an 'A'. Successful pattern match. |
| !AB | AB | The first character can be any character except 'A'. The second character must be 'B'. No pattern match |
| !AB | CB DB ZB | The first character can be any character except 'A'. The second character must be 'B'. Successful pattern match |
| !AB | CD | The first character can be any character except 'A'. The second character must be 'B'. No pattern match |

Hex Examples (Base 16 Numbering)

| User Entered Pattern | Received Hex Data | Notes |
|----------------------|----------------------------------|---|
| !%12 | 12 | A pattern match is successful when any value is received except 12. No pattern match. |
| !%12 34 | 22 34 | A pattern match is successful when any value is received except 12, immediately followed by 34 Successful pattern match. |
| !%12 34 | 11 34 21 34 9F 34 87 34 | Successful pattern matches. |
| !%12 34 | 11 12 34 | No pattern match |
| !%12 34 | 11 22 34 11 45 34 56 | Successful pattern matches |

18. EXAMPLES: SEQUENCES

When the Sequence Timer's event time expires, the associated ON Action will execute and then the timer for the sequence's next entry in the Event Action Table will start.

Upon receipt of a Sequence Start action, the timer for the Sequence's first entry in the Event Action Table will start.

Upon receipt of a Sequence Stop action, the sequence will immediately stop. The sequence entry in progress will halt without executing. The next Start action will cause the sequence to start at its first entry in the Event Action Table.

When the last Sequence action executes, the sequence will automatically turn off and stop executing. If the last Sequence action is Sequence Start, the sequence will loop until a Sequence Stop is received.

Example #1 Wait for Sequence Start action and then play sequence until end and stop.

| Event Type | Event | Description |
|------------------|--------|--|
| Key Press | 1 | Sequence 1 Start action |
| Sequence 1 Timer | 100ms | Delay 100ms and then execute assigned ON Action |
| Sequence 1 Timer | 1 sec | Delay 1 second and then execute assigned ON Action |
| Sequence 1 Timer | 10 sec | Delay 10 seconds and then execute assigned ON Action |
| Sequence 1 Timer | 100ms | Sequence 1 Start action |
| Key Press | 2 | Sequence 1 Stop action |

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19. EXAMPLES: MEM / FLIP FLOP

To setup a FLIP FLOP action the use of a MEM is required. A source events (GPI or Keypress) ON action will FLIP FLOP the action of two GPO's.

The selected MEM that is being toggled will need to be setup in following manner to trigger the FLIP FLOP action.

ON ACTION: TURN ON GPO_1, TURN OFF GPO_2

OFF ACTION: TURN OFF GPO_1, TURN ON GPO_2

Example #1 MEM FLIP FLOP GPO 1 and 2

| | | | | | | | | |
|-------|-----------|-------|-------|------------|-------|-------|------------|-------|
| Local | Key Press | 1 | Local | MEM Toggle | MEM_1 | Local | Do Nothing | |
| Local | MEM | MEM_1 | Local | GPO ON | GPO_1 | Local | GPO OFF | GPO_1 |
| Local | MEM | MEM_1 | Local | GPO OFF | GPO_2 | Local | GPO ON | GPO_2 |

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20. EXAMPLES: MEM / RADIO GROUP TALLY

To setup a MEM based RADIO GROUP TALLY the use of MEMs is required. First a MEM/s will need to be assigned to a Radio Group (RG1 – RG6)

| MEM CONFIGURATION | | | |
|-------------------|-----------|-------------|-----------|
| MEM# | MEM Label | Radio Group | Currently |
| 1 | RWD | RG1 ▾ | OFF |
| 2 | PLAY | RG1 ▾ | OFF |
| 3 | STOP | RG1 ▾ | ON |

A source events (GPI, Keypress or Serial Event) ON action will turn ON the MEM/s associated with the Radio Group. MEM ON must be selected as the ON action for the Radio Group functionality to work properly.

| Line# | EVENT IN | | | ON ACTION | | | OFF ACTION | | |
|-------|----------|-------------|-------|---------------------|----------|--------------|---------------------|--------------|--------------|
| | Source | Event Type | Event | Local/Remote Device | Type | Action Label | Local/Remote Device | Type | Action Label |
| 1 | Local ▾ | Key Press ▾ | 1 ▾ | Local ▾ | MEM ON ▾ | RWD ▾ | Local ▾ | Do Nothing ▾ | ▾ |
| 2 | Local ▾ | Key Press ▾ | 2 ▾ | Local ▾ | MEM ON ▾ | PLAY ▾ | Local ▾ | Do Nothing ▾ | ▾ |
| 3 | Local ▾ | Key Press ▾ | 3 ▾ | Local ▾ | MEM ON ▾ | STOP ▾ | Local ▾ | Do Nothing ▾ | ▾ |

Assign each MEM to a specific USP3 Key in the Tally Assignment page.

| TALLY ASSIGNMENTS | | | | | | | | | | |
|-------------------|---------------|--------------|--------------|--------|-------|-------------|------|-----------|-------------|-------|
| Key # | Current State | Tally Source | Tally Type | Number | Tally | Tally Color | Text | Font Size | Event Label | Value |
| 1 | OFF: 0 | Local ▾ | Follow MEM ▾ | RWD ▾ | OFF: | Red ▾ | RWD | Normal ▾ | | |
| | | | | | ON: | Green ▾ | RWD | Normal ▾ | | |
| 2 | OFF: 0 | Local ▾ | Follow MEM ▾ | PLAY ▾ | OFF: | Red ▾ | PLAY | Normal ▾ | | |
| | | | | | ON: | Green ▾ | PLAY | Normal ▾ | | |
| 3 | ON: 1 | Local ▾ | Follow MEM ▾ | STOP ▾ | OFF: | Red ▾ | STOP | Normal ▾ | | |
| | | | | | ON: | Green ▾ | STOP | Normal ▾ | | |

When a Source Event triggers on the USP3, the MEM tied to this source event will turn ON. This MEM ON action will cause its Key tally to turn ON all other Key tallies in the same Radio Group will turn OFF.

21. SPECIFICATIONS

REAR PANEL CONNECTORS

POWER: Power Over Ethernet (POE)
External Power: +12V DC, 1.0 Amp

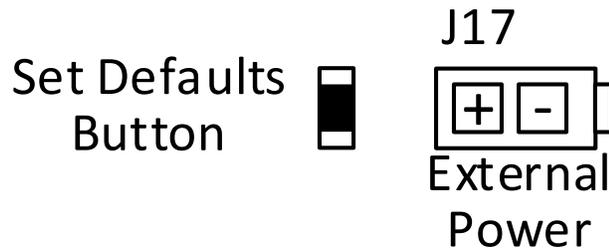
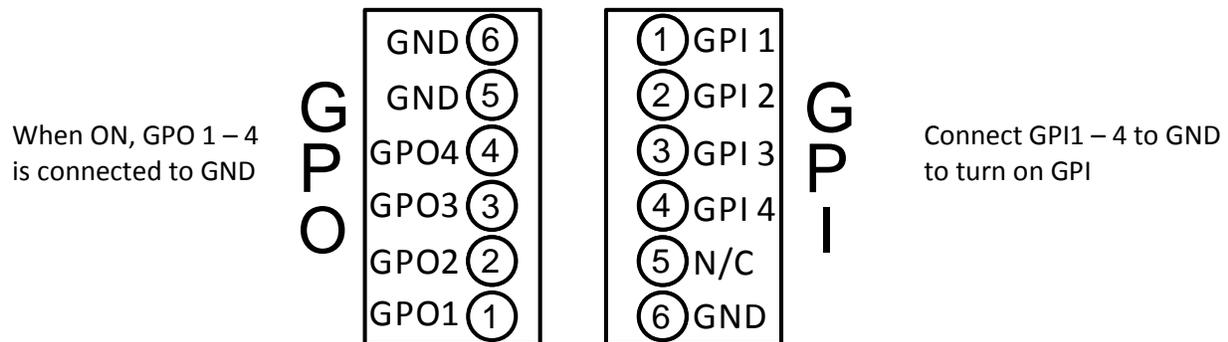
ETHERNET: RJ45 100baseT, Full Duplex

Rear Panel Terminal Blocks

RS232 Wiring:
Pin 1 Transmit
Pin 2 Receive
Pin 5 Ground



RS422 Wiring:
Pin 1 Transmit B (+)
Pin 2 Receive A (-)
Pin 3 Transmit A (-)
Pin 4 Receive B (+)
Pin 5 Ground



22. DNF CONTROLS 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
19770 Bahama St.
Northridge, CA 91324 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.

###