

Ensemble NXT430 with IP Control Buddy Getting Started Guide

Rev. 1.00

Getting Started.....

1. Set up IP address on EB-44.
(See *IP Control Buddy User Manual, page 5*)
2. Set up IP address on Ensemble BrightEye NXT 430.
(See *Ensemble BrightEye NXT 430 manual*)
3. Please perform the steps above before proceeding with IP Control Buddy configuration to control the Ensemble NXT-430 Router.

Overview.....

A quick guide to installing and configuring the IP Control Buddy EB-44 to communicate with an Ensemble NXT 430 router over an Ethernet connection.

Follow the instructions below to:

- ✓ Configure NXT 430 for **Direct Takes**
- ✓ Configure EB-44 to transmit ASCII commands to NXT 430

ENSEMBLE NXT 430 CONFIGURATION

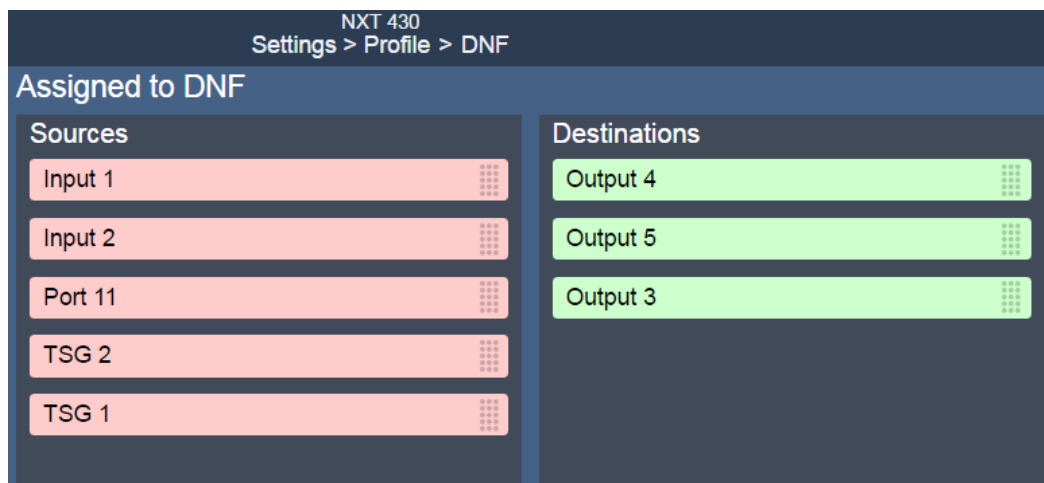
1. Assign the Source and Destination Ports on the NXT 430. (See NXT 430 Manual)
2. Create a Profile on the NXT 430 web page that will allow you to drag and drop specific sources and destinations for your routing work flow.

Creating a Profile

- A. From the left navigation panel of the web interface, click **Profiles**.
- B. Enter a profile name in the New Profile field.
- C. Click **Create**. The new Profile is listed on the Profiles page.
- D. Next to the newly created Profile, click **Edit**. All available Sources and Destinations are shown.
- E. Click and drag unassigned Sources to the Assigned to <profile name> Sources list. Click and drag unassigned Destinations to the “Assigned to” Destination list.
- F. Rearrange the order to fit your needs.
- G. Click **Save Changes**, then click **Done**.

***Note:** This is for Direct Takes only, not for Salvos.

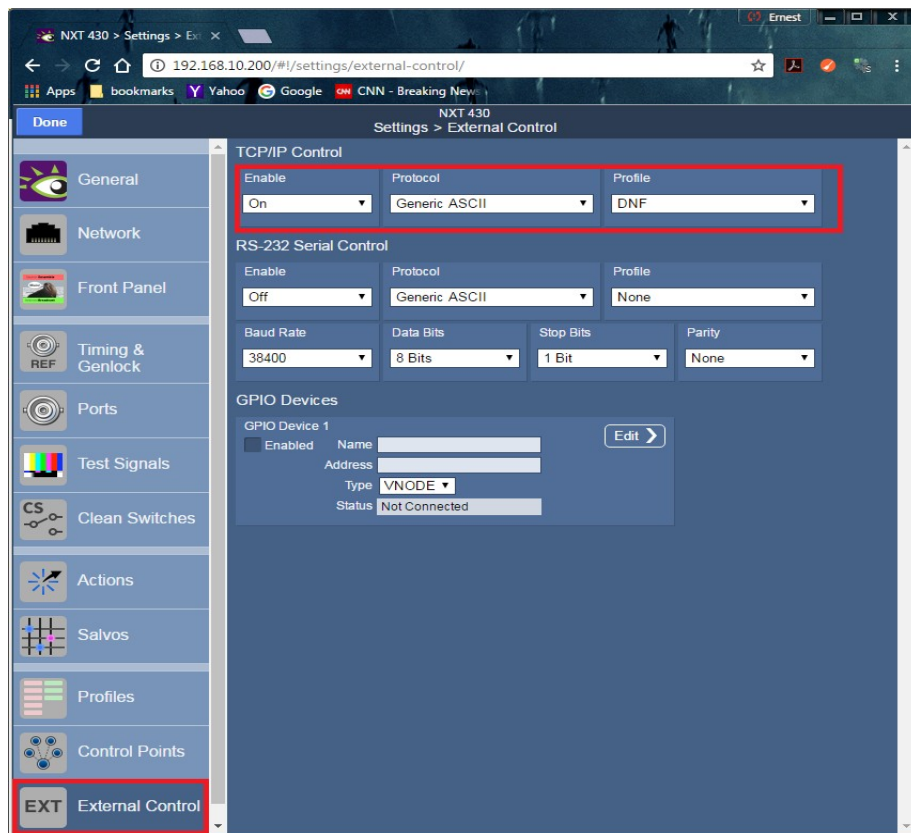
Example:



3. Set up NXT 430 for External TCP/IP Control to receive EB4X Commands

- A. From the left navigation panel of the web interface, click **EXT**.
- B. Choose "On" in the Enable drop down field.
- C. For Protocol, "Generic ASCII" will be used. Choose Generic ASCII in the protocol drop down field.
- D. Last but not least, you will want to choose the created Profile saved in step#1 that has your assigned source and destinations.
- E. Once all fields have been chosen, click on **Done**.

Example:



IP CONTROL BUDDY EB-44 CONFIGURATION

1. Configure Remote Device Assignment Table

- A. Enter Label to easily identify the Ensemble NXT 430
- B. In Device Type drop down, choose “Other”.
- C. In Connection Type drop down, choose “TCP/IP”
- D. Enter the IP Address of the NXT 430 and port number 5200

Example:

REMOTE DEVICE LIST												
Device #	Remote Device Label	Device Type	Primary /Backup Pair	Connection Type	Connection Mode	UDP Attempts	IP Address / URL <small>Add single forward slash '/' before URL. Do not add http:// or quotes to URL.</small>	URL IP	Port Number	Heartbeat/Comm Period (seconds)	Connection Status	
1	NXT 430X	Other		TCP/IP	Client Transmit/Receive		192.168.10.200	0	5200	5	Connected	
2	Remote Device 2	USP					0.0.0.0	0		5	
3	Remote Device 3	USP					0.0.0.0	0		5	
4	Remote Device 4	USP					0.0.0.0	0		5	

2. Configure AHSC TX Actions Table

The NXT TAKE command uses the entries in the Source and Destination Lists created in Settings > Profile, on NXT. The order of the list determines the Source number and Destination number used in the command.

The first entry in the Source list is zero, '0'. The second entry is 'the Source list is 1'. The same is true for the Destination list.

NXT Direct Crosspoint Take Command (from NXT manual):

```
@<%20>X:<Lvls>/<Dest>,<Src><%0D>
```

@	Start of command
<%20>	Space character
X:	Direct Crosspoint Take command
<Lvls>	Level (always set to zero, '0')
/	Forward slash character
<Dest>	Destination number
,	Comma character
<Src>	Source number
<%0D>	Carriage Return character

Example:

Source List		Destination List	
Number	Sources	Number	Destinations
0	Input 1	0	Output 4
1	Input 2	1	Output 5
2	Port 11	2	Output 3
3	TSG 1	3	Output 11
4	Input 3	4	Output 2

To take Input 1 to Output 5, use command:

@ %20 X:0/0,1 %0D

To take Input 3 to Output 11, use command:

@ %20 X:0/4,3 %0D

3. Create AHSC Transmit Actions entry:

- A. Enter Action Label to easily identify purpose of the command.
- B. Enter the command.
- C. Click on SAVE when finished adding entries.

Example:

AHSC TRANSMIT ACTIONS		
Line#	Action Label	ASCII/HEX Command
1	Input1_to_Out4	@%20X:0/0,0%0D
2	Input2_to_Out4	@%20X:0/0,1%0D
3	Port11_to_Out5	@%20X:0/1,2%0D
4	TSG1_to_Out5	@%20X:0/1,4%0D
5		
6	Status Request Output 4	@%20X?00%0D
7	Status Request Output 5	@%20X?01%0D
8	AHSC Transmit 8	
9	AHSC Transmit 9	
10	AHSC Transmit 10	
11	AHSC Transmit 11	

4. Configure AHSC RX Events Table

This table will be configured to follow the status of the “Source to Destination” take from the NXT430. A status request is sent via AHSC TX command and the response will be used for tally purposes or to trigger an action from the Event Actions Table.

NXT Status Response Command (from NXT manual):

S:<Lvl><Dest>,<Src><CR><LF>

Example:

Line#	Event Label	
1	Input1_to_Output4	S:00,0%0D%0A
2	Input2_to_Output4	S:00,1%0D%0A
3	Port11_to_Output5	S:02,1%0D%0A
4	TSG1_to_Output5	S:04,1%0D%0A
5	AHSC Receive 5	
6	AHSC Receive 6	

5. Set up a MEM to follow the Keypress in the Radio Group Operation

This set up is to allow following of an AHSC RX Event

Example:

Save

[Refresh](#)

NOTE: Radio Group setting used by MEM ON Action only

MEM CONFIGURATION			
MEM#	MEM Label	Radio Group	Currently
1	Take 1	RG1 ▼	OFF
2	Take 2	RG1 ▼	ON
3	Action 3	RG1 ▼	OFF
4	Action 4	RG1 ▼	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

6. Set up Event Action table

Set up the Event Action Table with the following events:

- Keypress trigger drives the AHSC Transmit Actions. (Control)
- AHSC Receive triggers turns ON a MEM. (Status)
- A Continuous Timer requests status of a destination via AHSC Actions. (Heartbeat)

Example:

EVENT IN -> ACTION OUT TABLE						
Line#	EVENT IN			ON ACTION		
	Source	Event Type	Event	Local/ Remote Device	Type	Action Label
1	Local	Key Press	1	NXT 430X	AHSC Transmit	Input1_to_Out4
2	Local	Key Press	2	NXT 430X	AHSC Transmit	Input2_to_Out4
3	NXT 430X	AHSC Receive	Input1_to_Output4	Local	MEM ON	Take 1
4	NXT 430X	AHSC Receive	Input2_to_Output4	Local	MEM ON	Take 2
5	Local	Cont. Timer-1	2 sec	NXT 430X	AHSC Transmit	Status Request Output 4
6	None					
7	None					
8	Local	Key Press	3	NXT 430X	AHSC Transmit	Port11_to_Out5
9	Local	Key Press	4	NXT 430X	AHSC Transmit	TSG1_to_Out5
10	NXT 430X	AHSC Receive	Port11_to_Output5	Local	MEM ON	Take 3
11	NXT 430X	AHSC Receive	TSG1_to_Output5	Local	MEM ON	Take 4
12	Local	Cont. Timer-2	2 sec	NXT 430X	AHSC Transmit	Status Request Output 5
13	None					
14	None					

(Continued on next page)

7. Set up Tally Assignment Table

This page allows you to set up the Keypress tally that will follow a MEM in the radio group operation.

Example:

TALLY ASSIGNMENTS								
Key #	Current State	Tally Source	Tally Type	Number	Tally	Tally Color	Text	Font Size
1	ON: 1	Local	Follow MEM	Take 1	OFF:	Amber	Input1 to Otput4	Small
					ON:	Green	Input1 to Otput4	Small
2	OFF: 0	Local	Follow MEM	Take 2	OFF:	Red	Input2 to Otput4	Small
					ON:	Green	Input2 to Otput4	Small
3	OFF: 0	Local	Follow MEM	Take 3	OFF:	Red	Port11 to Otput5	Small
					ON:	Amber	Port11 to Otput5	Small
4	OFF: 0	Local	Follow MEM	Take 4	OFF:	Amber	TSG1 to Otput5	Small
					ON:	Green	TSG1 to Otput5	Small

Press and save once configuration has been completed.

Please contact DNF Technical Support for any questions