

Overview

Virtual Keypad (**FG3005-01**) provides a simple web-based user interface for NetLinX control systems which can be used in a wide range of control environments. You can program Virtual Keypad and upload the settings to a NetLinX Master using AMX's NetLinX Studio application. Virtual Keypad works in an identical fashion to a physical keypad.

This single Virtual Keypad module has the ability to display two different button layouts depending on the size of the display being used. On screens with resolution less than 1000 x 700 pixels, the Mobile button layout will automatically be displayed. The standard button layout will be displayed on all other screen sizes.

- The standard button layout is designed to look like an AMX Mio Modero 12-button Keypad (FIG. 1):



FIG. 1 NDT-VKP VIRTUAL KEYPAD STANDARD USER INTERFACE

- The Mobile button layout is designed for use on mobile devices, optimized for use on Apple® iPhone™ and iPod Touch™ touchscreens (FIG. 2):



FIG. 2 NDT-VKP VIRTUAL KEYPAD MOBILE USER INTERFACE

- While the Mobile User Interface is optimized for use with the iPhone and iPod Touch (screen resolution: 480 x 320 pixels at 163 ppi, with 3:2 aspect ratio), it is suitable for use with any web-enabled mobile phone.
- Your iPhone / iPod Touch must have OS **v2.1** or greater in order to view Virtual Keypad web pages.

Installing Virtual Keypad onto a NetLinX Master

Note: Before you start, verify that you have installed the latest version of NetLinX Studio 3 (free download at www.amx.com).

- Unzip the Virtual Keypad.zip file, and double-click the VirtualKeypad.axw file to open the *Import from AXW File dialog* (FIG. 3) in NetLinX Studio 3.

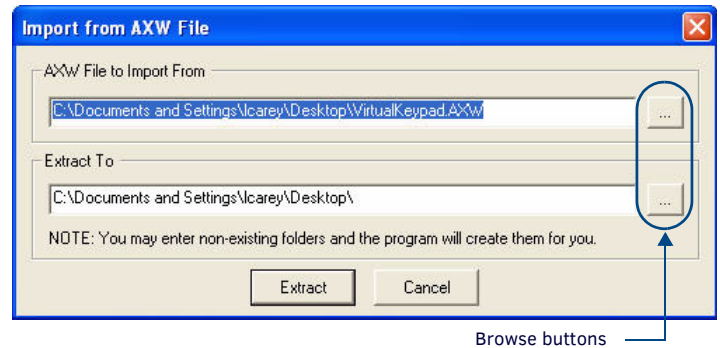


FIG. 3 IMPORT FROM AXW FILE DIALOG (NETLINX STUDIO 3)

- Use the **Browse** button to navigate to the location in which you want to extract the files.
- Click **Extract** to extract the files to the designated location.
- In NetLinX Studio, open the Virtual Keypad workspace (FIG. 4).

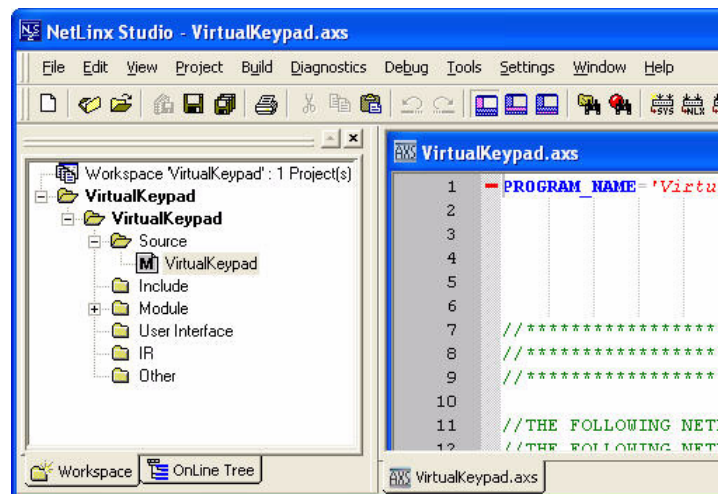


FIG. 4 NETLINX STUDIO 3 - VIRTUAL KEYPAD WORKSPACE

- In the application workspace, add the custom code to implement functionality for button events, line text feedback, and button label text. This includes constant definitions, virtual device number definitions, variable definitions (for ramping), module definitions, data events, and button events.
- Ensure the virtual device definition for the Virtual Keypad has a unique device number, as there may be other previously-defined virtual devices.
- Click the **Build Active System** button to build the system and ensure all code compiles without errors.
- Select the NetLinX Master to which you want to transfer the code.
- Click **Send** to transfer the code to the NetLinX Master.

Changing the Button Text

1. In NetLinx Studio, locate the DATA_EVENT section.
2. Enter the following line of code:

```
SEND_COMMAND VIRTUALKEYPAD, "'LABELx-<string>'"  
where:
```

- **x** corresponds to the number of the button on the user interface
- **<string>** represents the text you want to appear on the button.

You can also enter the code as:

```
SEND_COMMAND VIRTUALKEYPAD, "'LABELx-',<variable>'"
```

where **<variable>** represents a previously-defined variable that contains the text you want to appear on the button.

Changing the Line Text

1. In NetLinx Studio, locate the DATA_EVENT section.
2. Enter the following line of code:

```
SEND_COMMAND VIRTUALKEYPAD, "'LINETEXTx-<string>'"  
where:
```

- **x** corresponds to the line of text on the user interface
- **<string>** represents the text you want to appear.

You can also enter the code as:

```
SEND_COMMAND VIRTUALKEYPAD, "'LINETEXTx-',<variable>'"
```

where **<variable>** represents a previously-defined variable that contains the text you want to appear.

Clearing a Line of Text

1. In NetLinx Studio, open the Virtual Keypad workspace.
2. Enter the following line of code:

```
SEND_COMMAND VIRTUALKEYPAD, "'CLEARTEXTx'"
```

where **x** corresponds to the line of text to be cleared.

- You can use 0 through 3 as valid values.
- Using 0 clears all lines.

Note: The number of buttons on the user interface is set and cannot be altered. The base color of each button also cannot be changed. The font, font size, and font color are browser-based and cannot be changed through NetLinx Studio. Unicode characters are not supported.

Channel Codes

Channel codes correspond to the number of each button on the keypad. For example, the channel code for button 1 is 1.

The same logic applies for all 12 buttons on the keypad.

Instantiating Virtual Keypad Module

Instantiate the Virtual Keypad module with one of the following commands, depending on which version you are using:

NDT-VKP Virtual Keypad:

```
DEFINE_MODULE 'VirtualKeypad_dr1_0_0' VKP (VIRTUALPAD,  
VIRTUALPAD)
```

You must enter the name of the module ('VirtualKeypad_dr1_0_0') exactly as indicated above in the DEFINE_START section of the NetLinx code for Virtual Keypad to work.

For Best Performance

- Only one instance of Virtual Keypad can be run per NetLinx Master.
- For the best possible performance, you should only have one instance of a browser open at a time using Virtual Keypad.
- Multiple browsers simultaneously using Virtual Keypad on the same network may cause a delay in response time.
- If you are experiencing delays in response time, please wait until all queued commands have been executed before issuing new commands.
- If response times are unusually long and commands do not seem to be executing, reboot the NetLinx Master.

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3000 RESEARCH DRIVE, RICHARDSON, TX 75082 AMX.com | 800.222.0193 | 469.624.8000 | +1.469.624.7400 | fax 469.624.7153

AMX (UK) LTD, AMX by HARMAN - Unit C, Auster Road, Clifton Moor, York, YO30 4GD United Kingdom • +44 1904-343-100 • www.amx.com/eu/

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