Intercom Interface: C2N-IIF

Purpose

The purpose of this addendum is to provide additional information not supplied with the original C2N-IIF Operations & Installation Guide (Doc. 6235). Specifically, this addendum provides additional information with regard to:
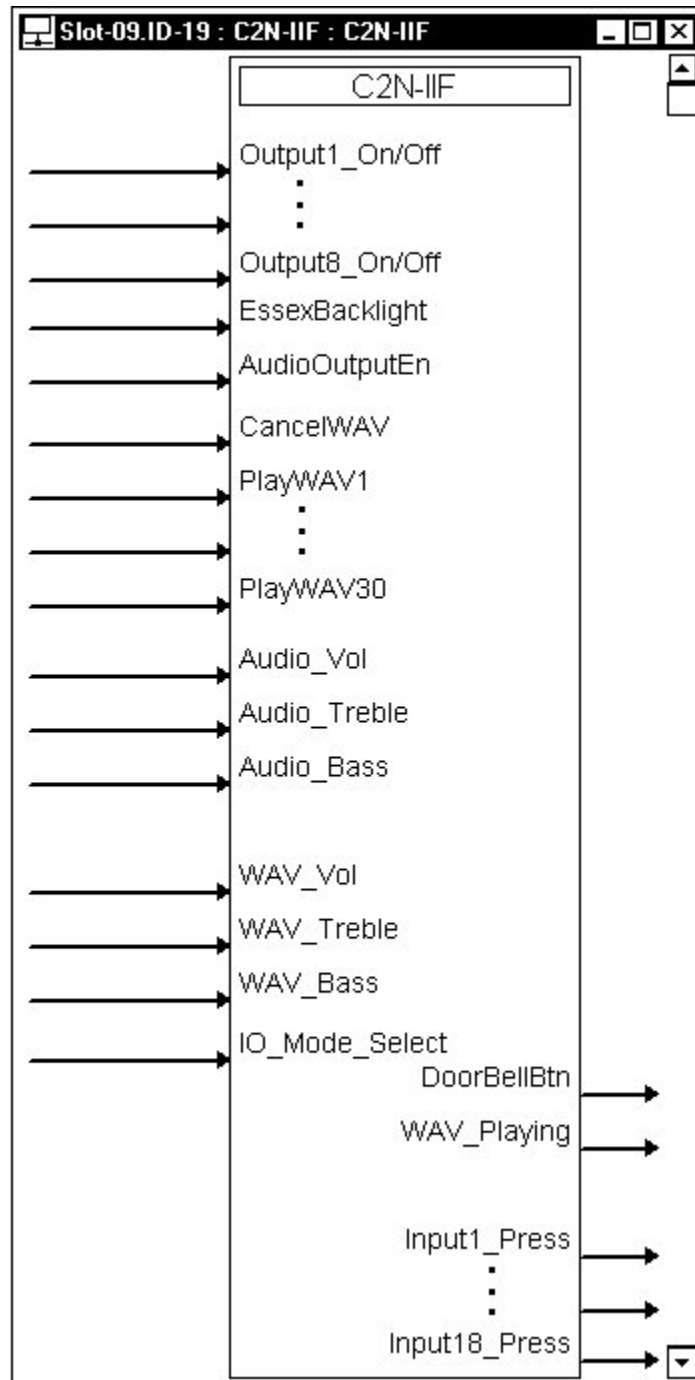
- The SIMPL Windows device symbol that appears on page 28.

- Signal definitions that appear on pages 29 through 31.

Revised SIMPL Windows Device Symbol

Due to changes in the C2N-IIF firmware (version 1.35 or later), the SIMPL Windows device symbol has been changed. Since muting can be accomplished by using other signals in the device symbol, the **MuteAudio** digital input signal has been removed to simplify programming. Instructions for programming a Mute function are now provided in the revised signal definitions found on page 3 of this document.

The following diagram shows the new device symbol.

Revised SIMPL Windows Device Symbol for the C2N-IIF

```
Slot-09.ID-19 : C2N-IIF : C2N-IIF          _ □ ✕

                    C2N-IIF

        ──▶  Output1_On/Off
                       ⋮
        ──▶  Output8_On/Off
        ──▶  EssexBacklight
        ──▶  AudioOutputEn

        ──▶  CancelWAV
        ──▶  PlayWAV1
                       ⋮
        ──▶  PlayWAV30

        ──▶  Audio_Vol
        ──▶  Audio_Treble
        ──▶  Audio_Bass


        ──▶  WAV_Vol
        ──▶  WAV_Treble
        ──▶  WAV_Bass

        ──▶  IO_Mode_Select
                         DoorBellBtn  ──▶
                         WAV_Playing  ──▶

                         Input1_Press  ──▶
                              ⋮
                         Input18_Press ──▶
```

New Signal Definitions

Many of the signal descriptions have been rewritten to better explain the functionality of the C2N-IIF and reflect the features found in C2N-IIF firmware version 1.35 or later. Refer to the following tables for the latest signal descriptions.

C2N-IIF Digital Input Signal Descriptions

INPUT	DESCRIPTION
Output1_On/Off through Output8_On/Off	Activates the corresponding output (electronic switch closure to ground) for as long as the input is high. Turns off the output when the signal is low. In the Essex and Discrete modes, all eight outputs are available. In the Matrix mode, only outputs 1 through 4 are available, while outputs 5 through 8 are reserved to enable four-by-four matrix switching.
EssexBacklight	When high, the Essex keypad (if installed) backlight is activated for as long as the signal remains high (Essex mode only).
AudioOutputEn	Enables audio to be routed from the line level source to the speaker output, for as long as the signal remains high. When low, cuts off the audio path.
	In order to hear the audio input through the speaker output: 1) a WAV file must not be playing (triggering a WAV file will override the audio input); 2) the audio volume level must be above 0%; and 3) The signal **AudioOutputEn** must be high.
	Mute Functions: To mute the audio input, **AudioOutputEn** should be set to low.
	To mute WAV file playback, **CancelWAV** should be pulsed high.
	To mute all audio, **AudioOutputEn** should be set to low *and* **CancelWAV** should be pulsed high.

NOTE: The signal definition for **EssexBacklight** has not been changed

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C2N-IIF Digital Input Signal Descriptions (continued)

INPUT	DESCRIPTION
CancelWAV	Cancels WAV file playback on the rising edge of the input. **Mute Functions:** To mute the audio input, **AudioOutputEn** should be set to low. To mute WAV file playback, **CancelWAV** should be pulsed high. To mute all audio, **AudioOutputEn** should be set to low *and* **CancelWAV** should be pulsed high.
PlayWAV1 through PlayWAV30	Plays the corresponding WAV file (digital joins 13 through 42 respectively) on the rising edge of the input signal. Refer to "Sound Manager Guidelines" on page 35 for information on digital joins. If a WAV file is playing and any **PlayWAV#** digital input goes high, the currently playing WAV file will stop and the WAV file associated with this digital will start playing. If a WAV file is playing and the **CancelWAV** digital input pulses high, the currently playing WAV file will stop.

C2N-IIF Analog Input Signal Descriptions

INPUT	DESCRIPTION
Audio_Vol	Adjusts audio volume from 0 to 100%. This corresponds to a gain range from -80 dB to 20 dB. At system startup the value is initialized to 0%.

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C2N-IIF Analog Input Signal Descriptions (continued)

INPUT	DESCRIPTION
Audio_Treble	Adjusts audio treble from -14 dB to 14 dB (with 0 dB being flat) in 2 dB steps. Valid analog values range from -14d to 14d. Values greater than 14 dB will set the treble to 14 dB; values less than -14 dB will set the treble to -14 dB. Odd, positive values (e.g. +3 dB) will be rounded up to the next even value (e.g. +4 dB). Odd, negative values (e.g. -3 dB) will be rounded down to the next even value (e.g. -4 dB). At system startup the value is initialized to 0 dB.
Audio_Bass	Adjusts audio bass from -14 dB to 14 dB (with 0 dB being flat) in 2 dB steps. Valid analog values range from -14d to 14d. Values greater than 14 dB will set the bass to 14 dB; values less than -14 dB will set the bass to -14 dB. Odd, positive values (e.g. +3 dB) will be rounded up to the next even value (e.g. +4 dB). Odd, negative values (e.g. -3 dB) will be rounded down to the next even value (e.g. -4 dB). At system startup the value is initialized to 0 dB.
WAV_Vol	Adjusts WAV volume from 0 to 100%. At system startup the value is initialized to 0%.
WAV_Treble	Adjusts WAV treble from -14 dB to 14 dB (with 0 dB being flat) in 2 dB steps. Valid analog values range from -14d to 14d. Values greater than 14 dB will set the treble to 14 dB; values less than -14 dB will set the treble to -14 dB. Odd, positive values (e.g. +3 dB) will be rounded up to the next even value (e.g. +4 dB). Odd, negative values (e.g. -3 dB) will be rounded down to the next even value (e.g. -4 dB). At system startup the value is initialized to 0 dB.

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C2N-IIF Analog Input Signal Descriptions (continued)

INPUT	DESCRIPTION
WAV_Bass	Adjusts WAV bass from -14 dB to 14 dB (with 0 dB being flat) in 2 dB steps. Valid analog values range from -14d to 14d. Values greater than 14 dB will set the bass to 14 dB; values less than -14 dB will set the bass to -14 dB. Odd, positive values (e.g. +3 dB) will be rounded up to the next even value (e.g. +4 dB). Odd, negative values (e.g. -3 dB) will be rounded down to the next even value (e.g. -4 dB). At system startup the value is initialized to 0 dB.
IO_Mode_Select	Selects Operating Mode for Input and Output ports. Refer to the following table for a list of acceptable values.

NOTE: The signal definition for **IO_Mode_Select** has not been changed

C2N-IIF Digital Output Signal Descriptions

INPUT	DESCRIPTION
DoorBellBtn	Goes high when door bell switch closes (pushed) for as long as the signal remains high.
WAV_Playing	Goes high when a WAV file is playing. Remains high for as long as the WAV file is playing.

NOTE: The signal definitions for **DoorBellBtn** and **WAV_Playing** have not been changed

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C2N-IIF Digital Output Signal Descriptions (continued)

INPUT	DESCRIPTION
Input1_Press through Input18_Press	Indicates the corresponding input's current state. If connected to a keypad, this means that the corresponding button is currently being pressed.
	In the Essex mode, when buttons 1 through 5 on the Essex keypad are pressed, the corresponding **Input#_Press** signal will briefly pulse. When discrete input 6 is closed to ground, the **Input6_Press** signal will remain high for as long as input 6 is closed to ground.
	In the Discrete mode, when inputs 1 through 6 are closed to ground, the corresponding **Input#_Press** signal will remain high for as long as the input is closed to ground.
	In the Matrix mode, inputs 1 through 4 are mapped to 16 button presses. Here when buttons 1 through 16 on the keypad are pressed, the corresponding **Input#_Press** signal will remain high for as long as the button is pressed. When discrete inputs 5 or 6 are closed to ground, the **Input#_Press** signal 17 and 18 will remain high for as long as the input is closed to ground.

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