



customcodecrafters

## C3 Nuvo NV-T2 series tuner

### GENERAL INFORMATION

<b>SIMPLWINDOWS FILE NAME:</b>	C3 Nuvo NV-T2 series tuner.umc
<b>CATEGORY:</b>	Tuner
<b>CURRENT VERSION:</b>	1.01
<b>PROGRAMMER:</b>	GO
<b>SUMMARY:</b>	Controls all functions of the Nuvo NV-T2 series dual tuners
<b>SYSTEMBUILDER COMPATIBLE</b>	Not tested

**GENERAL NOTES:**

This module will control the following Nuvo NV-T2 dual tuners:

- NV-T2SIR/FAM
- NV-T2DAB

Some commands are only applicable to specific models. For example all DAB functions will only work on the NV-T2DAB model. Commands that do not apply are ignored by the device.

The module provides the following general functions:

- Power control
- Source selection
- Sirius channel selection where applicable
- 100 station presets
- Seek/Tune functions
- Direct keypad entry of frequency/preset number
- Source information

The Nuvo NV-T2 range provides two tuners in one enclosure. To control each tuner two modules are required in the program. These should be assigned A or B using the 'select tuner' parameter.

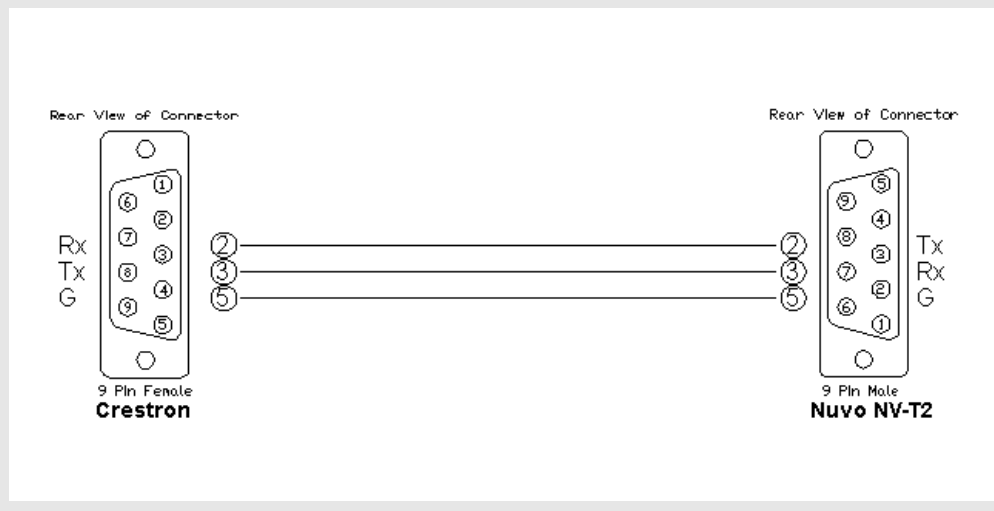
The module is written using simpl windows only, no simpl+ modules are required keeping system resource use to a minimum.

The Nuvo can be turned on either by asserting [power.on] or selecting any source.

**REQUIRED AUXILIARY FILES:** None

**COMMS SETUP:** 57600, 8, 1, N. Handshaking: None. RTS/CTS are not used.

### CABLE DIAGRAM:



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## INPUT DEFINITIONS

<b>rx\$</b>	<b>S</b>	Data from device comms
<b>[power.on/off]</b>	<b>D</b>	Turn the device on or off
<b>[source.am]</b>	<b>D</b>	Select the AM tuner (& power on) If the AM band has been disabled via the front panel or control pad, the device will respond with the disabled response message
<b>[source.fm]</b>	<b>D</b>	Select the FM tuner (& power on) If the FM band has been disabled via the front panel or control pad, the device will respond with the disabled response message
<b>[source.dab]</b>	<b>D</b>	Select the DAB digital tuner (& power on) NOTE: NV-T2DAB only If the DAB band has been disabled via the front panel or control pad, the device will respond with the disabled response message. If a DAB channel is not available, the device will respond with "???"
<b>[source.sirius]</b>	<b>D</b>	Select the Sirius internet radio receiver (& power on) NOTE: NV-T2SIR only If the Sirius band has been disabled via the front panel or control pad, the device will respond with the disabled response message. If a Sirius receiver is not connected to the tuner or it is in the process of powering-up, the device will respond with the unavailable response message
<b>[sirius.channel]</b>	<b>A</b>	Tune directly to the specified Sirius station. (NV-T2SIR only). Valid range: 1-255d
<b>[sirius.channel+]</b>	<b>D</b>	Increment Sirius station (NV-T2SIR only)
<b>[sirius.channel-]</b>	<b>D</b>	Decrement Sirius station (NV-T2SIR only)
<b>[preset]</b>	<b>A</b>	The Nuvo has 5 banks of 20 presets. To simplify preset selection the module provides one analog input to select any of the 100 presets. To access Bank 1 / Preset 19 set this input = 19d To access Bank 2 / Preset 11 set this input = 31d This command will have no effect if the preset's band is disabled A quick cross-reference table is provided at the end of this document
<b>[preset+/-]</b>	<b>D</b>	Tune to the next/prev station in the current band that is saved as a preset
<b>[seek+/-]</b>	<b>D</b>	Seek the next/prev valid station in the current band. If the current band does not have seek capabilities, this command will tune up/down one step
<b>[tune+/-]</b>	<b>D</b>	Tune up or down by one step
<b>[key.preset.mode]</b>	<b>D</b>	Temporarily enter 'preset entry' mode. Successive numeric buttons will be interpreted as a preset number instead of a direct frequency. This mode is disabled when a valid preset is entered or after a 5 second timeout
<b>[key.tune.mode]</b>	<b>D</b>	Places the numeric keys into 'direct frequency entry' mode. Note this is the default entry mode, so this command is only necessary when currently in the temporary [key.preset.mode]
<b>[numeric keys]</b>	<b>D</b>	[key.tune.mode]: The command will be interpreted as a digit in the frequency. [key.preset.mode]: The command will be interpreted as a digit in a preset.
<b>[enter]</b>	<b>D</b>	Confirm keypad entry
<b>[dab.channel.scan]</b>	<b>D</b>	Initiate a fresh scan for DAB stations

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<b>[factory.info]</b>	<b>D</b>	Reports the device firmware and hardware versions to the <b>[info.fb\$]</b> output
<b>[get.status]</b>	<b>D</b>	Request status information for the tuner
<b>[suspend.status.msg]</b>	<b>D</b>	Suspend sending of status messages out of the RS232 port. NOTE: Nothing will be reported. Even issuing commands will not generate any status updates
<b>[resume.status.msg]</b>	<b>D</b>	Resume sending of status messages out of the RS232 port
<b>[get.source.status.enable]</b>	<b>D</b>	Enable only (default value is 0) High - automatically issue a status request when the source is changed. Low - does not issue a status request when the source is changed.

## OUTPUT DEFINITIONS

<b>tx\$</b>	<b>S</b>	Commands to device comms
<b>[power.on/off.fb]</b>	<b>D</b>	Indicates the device power status
<b>[source.am.fb]</b>	<b>D</b>	Indicates valid AM source selection
<b>[source.fm.fb]</b>	<b>D</b>	Indicates valid FM source selection
<b>[source.dab.fb]</b>	<b>D</b>	Indicates valid DAB source selection
<b>[source.sirius.fb]</b>	<b>D</b>	Indicates valid Sirius source selection
<b>[sirius.channel.fb]</b>	<b>A</b>	Indicates the specified Sirius station. Value is set to 0d when powered off
<b>[preset.fb]</b>	<b>A</b>	Indicates the specified preset. Value is set to 0d when powered off
<b>[preset.info.fb]</b>	<b>S</b>	Indicates any preset information. Value is cleared when powered off
<b>[key.preset.mode.fb]</b>	<b>D</b>	Indicates the unit is in 'preset entry' mode
<b>[key.tune.mode.fb]</b>	<b>D</b>	Indicates the unit is in the default entry mode
<b>[freq.fb\$]</b>	<b>S</b>	String containing the current frequency. e.g. 99.5MHz, 105.8MHz (FM), 997KHz, 1002KHz (AM) Value is cleared when DAB, Sirius or unit powered off
<b>[artist.fb\$]</b>	<b>S</b>	String containing current artist name (80 characters maximum). (NV-T2SIR only) Value is cleared when powered off or another source is selected
<b>[title.fb\$]</b>	<b>S</b>	String containing current song or program (80 characters maximum). Value is cleared when powered off or another source is selected
<b>[album.fb\$]</b>	<b>S</b>	String containing current album text (80 characters maximum) . (NV-T2SIR only) Value is cleared when powered off or another source is selected
<b>[composer.fb\$]</b>	<b>S</b>	String containing composer text (80 characters maximum) . (NV-T2SIR only) Value is cleared when powered off or another source is selected
<b>[channel.fb\$]</b>	<b>S</b>	String containing current channel name (80 characters maximum) Value is cleared when powered off
<b>[category.fb\$]</b>	<b>S</b>	String containing category text (80 characters maximum) . (NV-T2SIR only) Value is cleared when powered off or another source is selected
<b>[dab.service.fb\$]</b>	<b>S</b>	String containing current service text (16 characters maximum). (NV-T2DAB only) Value is cleared when powered off or another source is selected

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[dab.component.fb\$]	<b>S</b>	String containing current component text (16 characters maximum). (NV-T2DAB only) Value is cleared when powered off or another source is selected
[info.fb\$]	<b>S</b>	String containing current user information text (36 characters maximum). Value is cleared when powered off.
[dab.channel.scan.fb]	<b>D</b>	Output goes high while scanning for DAB stations
[xx.button.mode.fb]	<b>A</b>	Mode output to show enable/disabled buttons on a touchpanel when bands are available

## PARAMETERS

Select tuner	<b>(s)</b>	Assign the module to the A or B tuner
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## REVISION NOTES

**1.00**   **GO**   Initial release: 05/01/11

**1.01**   **GO**

Bug fix: 28/07/11 - text outputs were not being updated correctly when 2 tuners were being controlled  
Added: 29/07/11 - [factory.info] input  
Added: 29/07/11 - [get.status] input  
Added: 29/07/11 - [xx.button.mode.fb] outputs  
Added: 29/07/11 - [suspend.status.msg] input  
Added: 29/07/11 - [resume.status.msg] input  
Added: 29/07/11 - [get.source.status.enable] input  
Rework: 29/07/11 - [preset +/-] now produces instant feedback which is subsequently updated when the tuner provides preset information.

## COMMENTS:

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## Additional information

### Preset cross reference

Bank 1	Bank 2	Bank 3	Bank 4	Bank 5
Preset 1 - 1d	Preset 1 - 21d	Preset 1 - 41d	Preset 1 - 61d	Preset 1 - 81d
Preset 2 - 2d	Preset 2 - 22d	Preset 2 - 42d	Preset 2 - 62d	Preset 2 - 82d
Preset 3 - 3d	Preset 3 - 23d	Preset 3 - 43d	Preset 3 - 63d	Preset 3 - 83d
Preset 4 - 4d	Preset 4 - 24d	Preset 4 - 44d	Preset 4 - 64d	Preset 4 - 84d
Preset 5 - 5d	Preset 5 - 25d	Preset 5 - 45d	Preset 5 - 65d	Preset 5 - 85d
Preset 6 - 6d	Preset 6 - 26d	Preset 6 - 46d	Preset 6 - 66d	Preset 6 - 86d
Preset 7 - 7d	Preset 7 - 27d	Preset 7 - 47d	Preset 7 - 67d	Preset 7 - 87d
Preset 8 - 8d	Preset 8 - 28d	Preset 8 - 48d	Preset 8 - 68d	Preset 8 - 88d
Preset 9 - 9d	Preset 9 - 29d	Preset 9 - 49d	Preset 9 - 69d	Preset 9 - 89d
Preset 10 - 10d	Preset 10 - 30d	Preset 10 - 50d	Preset 10 - 70d	Preset 10 - 90d
Preset 11 - 11d	Preset 11 - 31d	Preset 11 - 51d	Preset 11 - 71d	Preset 11 - 91d
Preset 12 - 12d	Preset 12 - 32d	Preset 12 - 52d	Preset 12 - 72d	Preset 12 - 92d
Preset 13 - 13d	Preset 13 - 33d	Preset 13 - 53d	Preset 13 - 73d	Preset 13 - 93d
Preset 14 - 14d	Preset 14 - 34d	Preset 14 - 54d	Preset 14 - 74d	Preset 14 - 94d
Preset 15 - 15d	Preset 15 - 35d	Preset 15 - 55d	Preset 15 - 75d	Preset 15 - 95d
Preset 16 - 16d	Preset 16 - 36d	Preset 16 - 56d	Preset 16 - 76d	Preset 16 - 96d
Preset 17 - 17d	Preset 17 - 37d	Preset 17 - 57d	Preset 17 - 77d	Preset 17 - 97d
Preset 18 - 18d	Preset 18 - 38d	Preset 18 - 58d	Preset 18 - 78d	Preset 18 - 98d
Preset 19 - 19d	Preset 19 - 39d	Preset 19 - 59d	Preset 19 - 79d	Preset 19 - 99d
Preset 20 - 10d	Preset 20 - 40d	Preset 20 - 60d	Preset 20 - 80d	Preset 20 - 100d

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Help file checked by: PJ  
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