

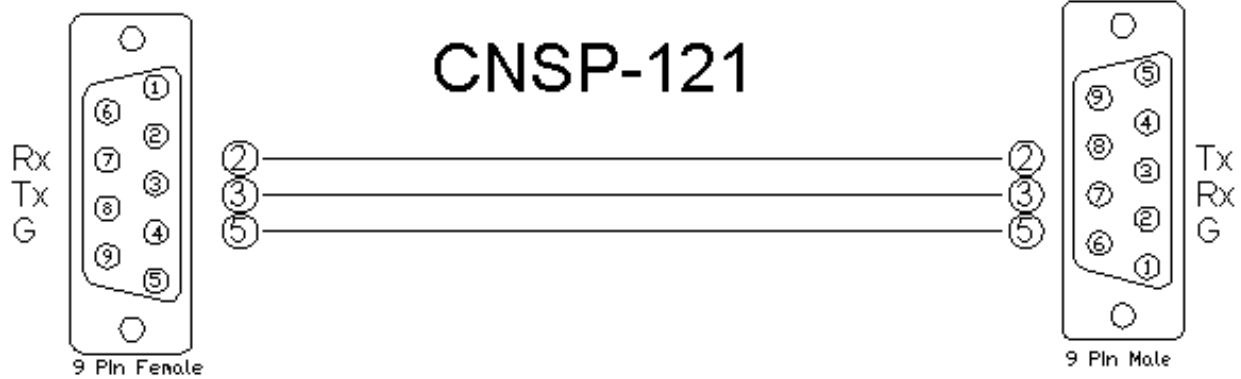
Partner: NAD Electronics
Model: T765
Device Type: A/V Surround Sound Receiver



GENERAL INFORMATION

SIMPLWINDOWS NAME:	NAD T765
CATEGORY:	Audio Processor
VERSION:	1
SUMMARY:	This module controls the NAD T765 A/V Surround Sound Receiver.
GENERAL NOTES:	<p>This module controls most of the functions of the NAD T765. To enable proper feedback, it is recommended that the Poll_Settings input be pulsed once at program initialization. Initialization takes approximately 10 seconds. During initialization, the unit ignores other commands. For continuous feedback updated sequentially every second put a "1" on the Poll_Enable signal. Tuner settings only work if at least 1 zone has tuner picked as its source. Tuner is shared between zones. For FM direct tuning, the "." is required. Unit has not undergone DAB or iPod testing. Tuner is shared between zones.</p> <p>Source names can be changed through the parameter fields for sources 1 to 9. Source 10 is reserved for tuner. Manufacturer states that the maximum source name length is 12 characters.</p>
CRESTRON HARDWARE REQUIRED:	CNX-COM, C2-COM, ST-COM
SETUP OF CRESTRON HARDWARE:	RS232 Baud: 115,200 Parity: N Data Bits: 8 Stop Bits: 1
VENDOR FIRMWARE:	V1.09
VENDOR SETUP:	None
CABLE DIAGRAM:	CNSP-121

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CONTROL:

Main_Power_On/Off/Toggle	D	Pulse to turn Main unit on and off.
Main_Volume_Up/Down	D	Press and hold to change main volume.
Main_Volume_Mute_Toggle/On/Off	D	Pulse to change main volume mute.
Main_Input_Source_*	D	Pulse to change source. Note: Sources 1-9 may have user-defined names (available through the parameter fields in this module).
Main_Input_Tuner	D	Pulse to change main source to tuner.
Tuner_Preset_*	D	Pulse to change a tuner preset. Presets are setup and saved through the memory key on the NAD T765 unit.
Tuner_Band_XM/DAB/FM/AM	D	Pulse to pick a tuner band. DAB is for Europe only.
Tuner_Tune_+/-	D	Pulse to change tuner frequency or channel up and down.
Tuner_Search_+/-	D	Pulse to change tuner search up and down.
Tuner_DigitalMode_DAB/XM	D	Pulse to change tuner digital mode to either DAB or XM.
Key_*	D	Pulse to enter a frequency or channel directly.
Menu_Up/Down/Left/Right	D	Pulse to navigate OSD menu system.
Menu_Enter	D	Pulse to choose menu enter on OSD menu system.
Menu_Display	D	Pulse to change display on OSD menu system.

Partner: NAD Electronics
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Sleep	D	Pulse to change sleep duration in minutes (0 means no sleep).
Zone_2_Power_On/Off/Toggle	D	Pulse to turn Zone 2 on and off.
Zone_2_Volume_Up/Down	D	Pulse to change Zone 2 volume.
Zone_2_Volume_Mute_Toggle/On/Off	D	Press and hold to change Zone 2 volume mute.
Zone_2_Input_Source_*	D	Pulse to change source in Zone 2. Note: Sources 1-9 may have user-defined names (available through the parameter fields in this module).
Zone_2_Input_Tuner	D	Pulse to change Zone 2 source to tuner.
Zone_3_Power_On/Off/Toggle	D	Pulse to turn Zone 3 on and off.
Zone_3_Volume_Up/Down	D	Press and hold to change Zone 3 volume.
Zone_3_Volume_Mute_Toggle/On/Off	D	Pulse to change Zone 3 volume mute.
Zone_3_Input_Source_*	D	Pulse to change source in Zone 3. Note: Sources 1-9 may have user-defined names (available through the parameter fields in this module).
Zone_3_Input_Tuner	D	Pulse to change Zone 3 source to tuner.
Zone_4_Power_On/Off/Toggle	D	Pulse to turn Zone 4 on and off.
Zone_4_Volume_Up/Down	D	Press and hold to change Zone 4 volume.
Zone_4_Volume_Mute_Toggle/On/Off	D	Pulse to change Zone 4 volume mute.
Zone_4_Input_Source_*	D	Pulse to change source in Zone 4. Note: Sources 1-9 may have user-defined names (available through the parameter fields in this module).
Zone_4_Input_Tuner	D	Pulse to change Zone 4 source to tuner.
Treble_Up/Down	D	Press and hold to adjust treble.
Bass_Up/Down	D	Press and hold to adjust bass.
Surround_Trim_Up/Down	D	Press and hold to adjust surround trim.
Center_Trim_Up	D	Press and hold to adjust center trim.
Sub_Trim_Up/Down	D	Press and hold to adjust subwoofer trim.

Partner: NAD Electronics
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Surround_Mode_*	D	Press and hold to change surround mode.
Speaker_A_On	D	Pulse to turn Speaker A on and off.
Speaker_B_On	D	Pulse to turn Speaker B on and off.
Main_Trigger_1_Out_Main/Zone_*	D	Pulse to set main trigger 1 to desired zone.
Main_Trigger_2_Out_Main/Zone_*	D	Pulse to set main trigger 2 to desired zone.
Main_Trigger_3_Out_Main/Zone_*	D	Pulse to set main trigger 3 to desired zone.
Main_Trigger_4_Out_Main/Zone_*	D	Pulse to set main trigger 4 to desired zone.
Poll_Settings	D	Pulse to poll (synch unit with a status query).
Poll_Enable	D	Set to 1 to enable real-time feedback
From_Device\$	S	Serial signal to be routed from a 2-way serial com port

PARAMETERS:

Source * Name	P	String parameter indicating source name. Source names can be changed through the parameter fields for sources 1 to 9. Source 10 is reserved for tuner. Manufacturer states that the maximum source name length is 12 characters.
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FEEDBACK:

Unit_Busy_Initializing_Fb	D	High to indicate the current initialization state of main unit.
Main_Power_On/Off_Fb	D	High to indicate the current power state of main unit.
Main_Volume_Bar	A	Analog signal to be routed to the panel indicating main volume level.
Main_Volume_Mute_On/Off_Fb	D	High to indicate the current volume mute state of main unit.
Main_Input_Source_*_Fb	D	High to indicate the current input source of main unit.
Main_Input_Tuner_Fb	D	High to indicate the current input source of main unit is tuner.
Tuner_Preset_*_Fb	D	High to indicate the tuner preset of main unit.
Tuner_Band_XM/AM/FM_Fb	D	High to indicate the tuner band (shared between all zones).

Partner: NAD Electronics
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Tuner\$	S	Serial string feedback indicating current channel or frequency.
Tuner_XM_ChannelName\$	S	Serial string feedback indicating current XM channel name.
Tuner_XM_Name\$	S	Serial string feedback indicating current XM name.
Tuner_XM_Title\$	S	Serial string feedback indicating current XM title.
Tuner_DigitalMode_DAB/XM_Fb	D	High to indicate the tuner digital mode (shared between all zones).
Tuner_FM_RDS_Name\$	S	Serial string feedback indicating current FM RDS name.
Tuner_FM_RDS_Text\$	S	Serial string feedback indicating current FM RDS text.
Direct_Tune_Display\$	S	Serial string feedback indicating current direct tuning entry.
Tuner_DAB_DLS\$	S	Serial string feedback indicating current DAB DLS name.
Tuner_DAB_Service\$	S	Serial string feedback indicating current DAB Service.
Zone_2_Power_On/Off_Fb	D	High to indicate the current power state of Zone 2.
Zone_2_Volume_Bar	A	Analog signal to be routed to the panel indicating Zone 2 volume level.
Zone_2_Volume_Mute_On/Off_Fb	D	High to indicate the current volume mute state of Zone 2.
Zone_2_Input_Source_*_Fb	D	High to indicate the current input source of Zone 3.
Zone_2_Input_Tuner_Fb	D	High to indicate the current input source of Zone 2 is tuner.
Zone_3_Power_On/Off_Fb	D	High to indicate the current power state of Zone 3.
Zone_3_Volume_Bar	A	Analog signal to be routed to the panel indicating Zone 3 volume level.
Zone_3_Volume_Mute_On/Off_Fb	D	High to indicate the current volume mute state of Zone 3.
Zone_3_Input_Source_*_Fb	D	High to indicate the current input source of Zone 3.
Zone_3_Input_Tuner_Fb	D	High to indicate the current input source of Zone 3 is tuner.
Zone_4_Power_On/Off_Fb	D	High to indicate the current power state of Zone 4.
Zone_4_Volume_Bar	A	Analog signal to be routed to the panel indicating Zone 4 volume level.

Partner: NAD Electronics
Model: T765
Device Type: A/V Surround Sound Receiver



Zone_4_Volume_Mute_On/Off_Fb	D	High to indicate the current volume mute state of Zone 4.
Zone_4_Input_Source_*_Fb	D	High to indicate the current input source of Zone 4.
Zone_4_Input_Tuner_Fb	D	High to indicate the current input source of Zone 4 is tuner.
Source_Name_*\$	S	Serial string feedback indicating current Source name for sources 1 to 9. Source 10 is reserved for tuner. The maximum source name length is 12 characters.
Treble_Bar	A	Analog signal to be routed to the panel indicating Treble level.
Bass_Bar	A	Analog signal to be routed to the panel indicating Bass level.
Surround_Trim_Bar	A	Analog signal to be routed to the panel indicating Surround Trim level.
Center_Trim_Bar	A	Analog signal to be routed to the panel indicating Center Trim level.
Sub_Trim_Bar	A	Analog signal to be routed to the panel indicating Subwoofer Trim level.
Sleep\$	S	Serial string feedback indicating current Sleep time in minutes. 0 = do not sleep.
Surround_Mode_*_Fb	D	High to indicate the current surround listening mode.
Speaker_A_On/Off_Fb	D	High to indicate the Speaker A On/Off.
Speaker_B_On/Off_Fb	D	High to indicate the Speaker B On/Off.
Main_Trigger_1_Out_Main/Zone_*_Fb	D	High to indicate main trigger 1 set to desired zone.
Main_Trigger_2_Out_Main/Zone_*_Fb	D	High to indicate main trigger 2 set to desired zone.
Main_Trigger_3_Out_Main/Zone_*_Fb	D	High to indicate main trigger 3 set to desired zone.
Main_Trigger_4_Out_Main/Zone_*_Fb	D	High to indicate main trigger 4 set to desired zone.
To_Device\$	S	Serial signal to be routed to a 2-way serial com port

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**TESTING:**

OPS USED FOR TESTING:	PRO2 3.155.1240
SIMPL WINDOWS USED FOR TESTING:	SIMPL 2.08.44
CRES DB USED FOR TESTING:	18.9.1
SYMBOL LIBRARY USED FOR TESTING:	508
SAMPLE PROGRAM:	NAD T765 Pro2_Demo
REVISION HISTORY:	None