

**SIMPLWINDOWS
NAME:**

Opus SCU-500 System Control Interface

CATEGORY:

Receiver/Processor

VERSION:

1.0

SUMMARY:

The Opus SCU-500 is an add-on box that allows from 1 to 4 Opus MCU500's to be controlled as a unified system by a PC or a Crestron Control System. This module has a single parameter, which should be set to the corresponding address of the MCU5000 to be interfaced with. The module is designed to implement the most commonly used functions of a WCU500 Wall Control Unit. Each zone/room in the Opus Multi-Room Distribution system can be controlled by a WCU500, a Crestron control system, or both. The module provides real-time feedback of the source selected in each room, the volume level in the room, whether or not the room's keypad is in 'Standby' mode, and the current settings for the room's Bass/Treble/Balance/Mute/Shared.

The module also allows for selection of "All Zones". In this mode, commands for source selection, volume, power, etc. will effect all rooms simultaneously. If the volume level on an individual wall panel is changed while the SCU is still sending "All Zones" commands, it is possible to get the rooms "out of sync" with respect to volume (until the "All Zones" mode is entered again).

GENERAL NOTES:

Carefully follow the instructions in the Opus "System Installer's Guide" with respect to connecting the MCU500 to the WCU500's via the DZM20/50/1000 Digital Zone Modules. If a DZM20 is used, power is supplied directly from the MCU500. Each WCU500 is connected to, and powered by, a DZM unit via Opus BTC1 cable (Balanced Transmission Cable). Specifications for the BTC1 cable, including run restrictions, are also in the System Installer's Guide.

The parameter for the MCU Address should be entered as the hex equivalent of the ASCII value without any specifier. For example, if the MCU Address is 1, then you should use 31 as a parameter value.

If it is intended to use this module to emulate the Wall Unit in just one room, you may put a '1' on the corresponding zone input and zeroes ('0') on all other zone inputs.

Upon system startup, Zone 1 is selected for control by default.

If you are using this module to control all zones individually, there may be a delay of up to five seconds the first time you select a zone to control before proper readings are displayed for source selection, power state, volume setting, and bass/treble/balance.

This module has been designed to select source 1 (Tuner) and volume level 0 for all rooms when "All Zones" is first selected. This allows for the rooms to properly sync up to one another.

If you cannot control the Opus SCU-500, or if you are not getting the expected feedback, make sure that the unit is set for "Verbose" mode. In this mode, the SCU-500 replies to all Set and Get commands and also sends all updates.

Please note that a WCU500 can be brought out of

Standby mode by selecting any source, either from the wall panel itself, or from the Crestron controller.

Note that all digital inputs to this module should be momentary, (as if coming from a button on a touch panel), or 0.

**CRESTRON
HARDWARE
REQUIRED:** 2-Series Processor
C2COM-3
CNMSX
CNXCOM
ST-COM

**SETUP OF CRESTRON
HARDWARE:** Baud Rate - 9600
Parity - None
Data Bits - 8
Stop Bits - 1
RTS/CTS is not required, but is recommended

VENDOR FIRMWARE: None

VENDOR SETUP: The SCU-500 should be connected to the MCU500 by the 25-pin D-type connector cable supplied by Opus. There is an internal DIP switch to allow for RS422 connection, but this was not tested.

CABLE NUMBER: CNSP-141 (5 conductor straight-through)

CONTROL:

Zone1-Zone4	D	Selection of individual zone/room to control
Zone_All	D	Selection to control all zones/rooms simultaneously
Power_On	D	Brings a WCU500 out of Standby mode
Power_Off	D	Puts a WCU500 into Standby mode
Power_Toggle	D	Toggles Standby mode on a WCU500
Tuner-Local_In	D	Selects one of seven sources to listen to
Volume_Up/Down	D	Press and hold to raise/lower volume in a zone
Mute_Toggle	D	Toggles MUTE on a WCU500
Wide_Toggle	D	Toggles WIDE mode on a WCU500
Loudness_Toggle	D	Toggle LOUD on a WCU500
Bass_Up/Down	D	Press and hold to raise/lower bass
Treble_Up/Down	D	Press and hold to raise/lower treble
Balance_Left/Right	D	Press and hold to "move" audio left or right
(7 IR commands)	D	PSeven (7) buttons that send out IR commands which are learned by Opus Learning Remote LRC500 and uploaded into the MCU500. There is a different bank of codes learned for each of seven sources. Each bank is "mapped" to these seven function names. See "System Installer's Guide".
From_Device\$	S	Routed to COM port for command strings coming back from Opus

FEEDBACK:

To_Device\$	S	Routed to COM port for command strings sent to Opus
Zone(X)_Source\$	S	Real feedback indicating what source has been selected

Zone(X)_FB	D	Indicates which zone has been selected for control
Zone(X)_On	D	Real feedback indicating that WCU is out of Standby mode
Zone(X)_Volume	A	Real feedback indicating volume level (1-30) set on WCU
Zone(X)_Volume_Bar	A	Real feedback scaled for display on an analog gauge
Zone(X)_Mute_Fb	D	Real feedback indicating if each zone is muted
Zone(X)_Bass\$	S	Serial text indicating bass level (-12 to +12)
Zone(X)_Treble\$	S	Serial text indicating treble level (-12 to +12)
Zone(X)_Balance\$	S	Serial text indication balance level (-12 to +12)
Zone(X)_Shared_Fb	D	Real feedback indicating if the source in each zone is shared with the source selected in another zone
To_Device\$	S	Routed to COM port for command strings sent to Opus

OPS USED FOR TESTING: 3.015
COMPILER USED FOR TESTING: SimplWindows Ver 2.03.12
SAMPLE PROGRAM: Opus MCU500 Demo
REVISION HISTORY: None