



Manufacturer: Powersoft S.p.A.
Model: Mezzo Series
Device Type: Amplifier

CONTACT SUPPORT: (please fill out carefully)

COMPANY NAME:	Powersoft S.p.A.
SUPPORT CONTACT:	Michael S. Perry
EMAIL ADDRESS:	support.audio@powersoft.com
PHONE:	201.299.5300
ADDRESS:	78 John Miller Way STE 422. Kearny, NJ 07032
NOTES:	US Based Applications Engineering

GENERAL INFORMATION

SIMPLWINDOWS NAME:	Powersoft Mezzo v.2.0
CATEGORY:	Loudspeaker Power Amplifier
VERSION:	v.2.0
SUMMARY:	<p>This Module will control all Powersoft Mezzo Series Amplifiers. Added to this module since v.1.2 are <i>Standby Mode</i> controls. Within the module there are digital inputs and outputs for mute control. There are analog inputs and outputs for each gain stage. There are also serial outputs for each gain stage to allow for feedback to a text display field. When Linked, this module reads the IP address, serial number, firmware version and allows the user to read and write the amplifier’s Nickname.</p> <p>The communication method is UDP. The Mezzo receives its messages on Port 8002.</p>
GENERAL NOTES:	<p>To ensure proper control of Read Write settings, it is best to remove the Mezzo from the <i>Workspace</i> in Armonia Plus Software before operating this control module.</p> <p>The serial output of the Module, <i>Tx\$</i>, should be fed to the input of a UDP/IP Communications block configured to the IP address of the Mezzo you wish to control and communicating using Port 8002.</p> <p>Feed gain stages with positive integers and configure the start position of any gain slider in VTProE to the Top. The Crestron system uses positive integers. The Mezzo gain stage value is sent and received as a floating-point number encoded as IEEE754 (4) byte Hexadecimal. The Control Module is translating the positive integer from the Control System to the acceptable floating-point number format and transmitting the gain command to Mezzo.</p>
CRESTRON HARDWARE REQUIRED:	Creston 3-Series processor; Used RMC3 for demo, Compiler Version: 3.03, Firmware Version: RMC3 1.601.3934.21185. Crestron TSW-760; Firmware Version: 2.001.0050, UI Version: 6831.35831, Core 3 UI Level 3.00.



Manufacturer: Powersoft S.p.A.
 Model: Mezzo Series
 Device Type: Amplifier

SETUP OF CRESTRON HARDWARE:	The network configuration was created using device Hostnames on a 192.168.1.X subnet. The network switch used while creating this module was a D-Link DGS-1210-10P.
VENDOR FIRMWARE:	Mezzo firmware v.1.0.122 or higher
VENDOR SETUP:	<p>A Powersoft Mezzo amplifier by default is set to receive an IP address from a DHCP server. If there is no DHCP server on the network, the amp will default to the IP subnet: 169.254.X.Y., Where X and Y are variable and unique to each unit. It is recommended that the user set a static IP address on the Mezzo to be controlled.</p> <p>The user should download Powersoft Armonía software to configure the IP address.</p> <p>These are the steps to connect to the amplifier and read its IP address:</p> <ol style="list-style-type: none"> 1. Connect the amplifier, the control processor and the PC to the same network using network cable. 2. If there is no DHCP server available, set the PC Network Interface Card (NIC) to an address within the subnet 169.254.X.Y. Otherwise, skip to the next step. 3. Open Armonía Plus software and hit "Match", then "Discovery." The amp should appear under the list of amplifiers discovered on the network. By hovering the mouse over an amplifier its current IP address will be displayed. <p>These are the steps to set the amplifier IP address:</p> <ol style="list-style-type: none"> 1. Click on and drag the amp from the Discovery column into the Workspace. 2. Click on "Config" and select the amplifier to be configured in the Workspace. 3. Under "Select Mode" choose "DHCP" if a DHCP Server is present on the network and the amplifier is due to have a dynamic address, or "Static" to assign a static IP address to the amp. The IP address must be a member of the subnet the control processor is operating within. 4. Click "Apply" and close Armonía Plus.
CABLE DIAGRAM:	Category 6+ cable, terminated according to T-568B using 8P8C Connectors.

CONTROL: (Inputs; Digital, Analog & Serial)

<u>Signal/Function Name</u>	<u>D,S,A Digital, Serial, Analog signal property definition.</u>
AMP_Link	D Reads all configuration, mute, and gain stages from the amp.
Power_On	D Turns the Standby Mode of the Amp to Off.
Standby	D Turns the Standby Mode of the Amp to On.
Standby_State	D Reads the state of the Standby Mode.
Blink_On_System	D Initializes the (10) second LED Blink Sequence.



Manufacturer: Powersoft S.p.A.
 Model: Mezzo Series
 Device Type: Amplifier

Mute_On_Input_1~4	D	Engages mute for the designated input on rising edge of signal.
Mute_Off_Input_1~4	D	Disengages mute for the designated input on rising edge of signal.
Mute_On_SRC1~4_OUTA~D	D	Engages mute for the matrix cross-point of designated source as it is routed to designated output A through D.
Mute_Off_SRC1~4_OUTA~D	D	Disengages mute for the cross-point of designated source as it is routed to designated output A through D.
Mute_On_Output_A~D	D	Engages mute for the designated output with rising edge of signal.
Mute_Off_Output_A~D	D	Disengages mute for the designated output with rising edge of signal.
POLL_FAN_ALARM	D	Polls the amplifier for the state of the Hardware Fan Alarm; 0 (fine), (1) fault.
POLL_TEMP_ALARM	D	Polls the amplifier for the state of the Hardware Temperature Alarm; 0 (fine), (1) fault.
POLL_Matrix_Out_A	D	Polls the input cross-points to Matrix Output A for gain and mute state.
POLL_Matrix_Out_B	D	Polls the input cross-points to Matrix Output B for gain and mute state.
POLL_Matrix_Out_C	D	Polls the input cross-points to Matrix Output C for gain and mute state.
POLL_Matrix_Out_D	D	Polls the input cross-points to Matrix Output D for gain and mute state.
ai_Input_1~4_Gain	A	Gain for the input stage in dBFS. Scale is 0 dBFS (top) to -60dBFS (bottom). Feed with positive integer and attenuation will occur.
ai_Matrix_SRC1~4_OUTA~D_Gain	A	Gain for the matrix cross-point Stage in dBFS. Scale is 0 dBFS (top) to -60dBFS (bottom). Feed with positive integer and attenuation will occur.
ai_Output_A~D_Gain	A	Gain for the output stage in dBu. Scale is 15 dBu (top) to -60dBFS (bottom). Feed with positive integer and attenuation will occur.
Nickname_TX	S	User entered Nickname string. Up to (80) characters.
Rx\$	S	Serial data input coming from the Mezzo through UDP/IP Communications.

FEEDBACK: (Outputs; Digital, Analog, Serial)

fb_Standby_State	D	The state of the Standby Mode on the amplifier.
fb_Mute_On_Input_1~4	D	Indicates the state of the mute for the designated input.
fb_On_Matrix_SRC1~4_OUTA~D	D	Indicates the state of the mute for the designated matrix cross-point.



Manufacturer: Powersoft S.p.A.
 Model: Mezzo Series
 Device Type: Amplifier

fb_Mute_On_Output_A~D	D	Indicates the state of the mute for the designated output.
ALARM_ON_FAN	D	Indicates the state of the alarm for the Hardware Fan Fault.
ALARM_ON_TEMP	D	Indicates the state of the alarm for the Hardware Temperature Fault.
ao_Input_1~4_Gain_dB	A	Indicates the gain of the designated input gain stage.
ao_Matrix_SRC1~4_OUTA~D_Gain_dB	A	Indicates the gain of the designated matrix cross-point gain stage.
ao_Output_A~D_Gain_dB	A	Indicates the gain of the designated output gain stage.
so_Input_1~4_Gain_dB	S	Text indicating gain for the designated input gain stage in dBFS.
so_Matrix_SRC1~4_OUTA~D_Gain_dB	S	Text for indicating gain for designated matrix cross-point gain stage in dBFS.
so_Output_A~D_Gain_dB	S	Text for indicating gain for designated output gain stage in dBu.
IP_Address	S	Response from the amplifier of its IP Address.
Nickname_RX	S	Response from the amplifier of its Nickname.
Serial_Number	S	Response from the amplifier of its Serial Number.
Firmware	S	Response from the amplifier of its Firmware Version.
Tx\$	S	Serial Data Transmission coming from the module to Mezzo through UDP/IP Communications.

TESTING: (please fill out carefully)

OPS USED FOR TESTING:	Windows 10 Professional, SIMPL Windows v.4.11.06, SIMPL+ v.4.04.01, coded using Microsoft Visual Studio Code v.1.42.1
SIMPL WINDOWS USED FOR TESTING:	4.11.06
DEVICE DB USED FOR TESTING:	111.00.001.00
CRES DB USED FOR TESTING:	85.00.001.00
SYMBOL LIBRARY USED FOR TESTING:	(Version of Symbol Library used to develop)
SAMPLE PROGRAM:	Powersoft Mezzo v.1
REVISION HISTORY:	Revision v.2.0