



## Using a Third-Party Control System

The microphone receives logic commands over the network. Many parameters controlled through the web application can be controlled through a third party control system, using the appropriate command string.

### Common applications:

- Mute
- LED color and behavior
- Loading presets
- Adjusting levels

## MXA910 Microflex® Advance™ Command Strings

This document can also be found at: [http://shure.custhelp.com/app/answers/detail/a\\_id/6058](http://shure.custhelp.com/app/answers/detail/a_id/6058)

The device is connected via Ethernet to a control system, such as AMX, Crestron or Extron.

**Connection:** Ethernet (TCP/IP; select "Client" in the AMX/Crestron program)  
**Port:** 2202

### Conventions

The device has 4 types of strings:

#### GET

Finds the status of a parameter. After the AMX/Crestron sends a GET command, the MXA910 responds with a REPORT string

#### SET

Changes the status of a parameter. After the AMX/Crestron sends a SET command, the MXA910 will respond with a REPORT string to indicate the new value of the parameter.

#### REP

When the MXA910 receives a GET or SET command, it will reply with a REPORT command to indicate the status of the parameter. REPORT is also sent by the device when a parameter is changed on the MXA910 or through the GUI.

#### SAMPLE

Used for metering audio levels.

All messages sent and received are ASCII. Note that the level indicators and gain indicators are also in ASCII

Most parameters will send a REPORT command when they change. Thus, it is not necessary to constantly query parameters. The MXA910 will send a REPORT command when any of these parameters change.

The character "x" in all of the following strings represents the channel of the MXA910 and can be ASCII numbers 0 through 9 as in the following table.

0	All channels
1 through 8	Individual channels
9	Automix output

### Command Strings (Common)

Get All		
Command String:	< GET x ALL >	Where x is ASCII channel number: 0 through 9. Use this command on first power on to update the status of all parameters.
MXA910 Response:	< REP . . . >	The MXA910 responds with individual Report strings for all parameters.
Get Channel Name		
Command String:	< GET x CHAN_NAME >	Where x is ASCII channel number: 0 through 9.
MXA910 Response:	< REP x CHAN_NAME {YYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYY} >	Where yyyyyyyyyyyyyyyyyyyyyyyyyyyyyyyyy is 31 characters of the user name. The MXA910 always responds with a 31 character name.

<b>Get Device ID</b>		
	Command String: < GET_DEVICE_ID >	The Device ID command does not contain the x channel character, as it is for the entire device.
	MXA910 Response: < REP_DEVICE_ID {yyyyyyyyyyyyyyyyyyyyyyyyyyyyyyyyyyyy} >	Where yyyyyyyyyyyyyyyyyyyyyyyyyyyyyyyyy is 31 characters of the device ID. The MXA910 always responds with a 31 character device ID.
<b>Get Audio Gain</b>		
	Command String: < GET x AUDIO_GAIN_HI_RES >	Where x is ASCII channel number: 1 through 9. Channel number 0 (all channels) is not valid for this command.
	MXA910 Response: < REP x AUDIO_GAIN_HI_RES yyyy >	Where yyyy takes on the ASCII values of 0000 to 1400. yyyy is in steps of one-tenth of a dB.
<b>Set Audio Gain</b>		
	Command String: < SET x AUDIO_GAIN_HI_RES yyyy >	Where yyyy takes on the ASCII values of 0000 to 1400. yyyy is in steps of one-tenth of a dB.
	MXA910 Response: < REP x AUDIO_GAIN_HI_RES yyyy >	Where yyyy takes on the ASCII values of 0000 to 1400.
<b>Increase Audio Gain by n dB</b>		
	Command String: < SET x AUDIO_GAIN_HI_RES INC nn >	Where nn is the amount in one-tenth of a dB to increase the gain. nn can be single digit ( n ), double digit ( nn ), triple digit ( nnn ).
	MXA910 Response: < REP x AUDIO_GAIN_HI_RES yyyy >	Where yyyy takes on the ASCII values of 0000 to 1400.
<b>Decrease Audio Gain by n dB</b>		
	Command String: < SET x AUDIO_GAIN_HI_RES DEC nn >	Where nn is the amount in one-tenth of a dB to decrease the gain. nn can be single digit ( n ), double digit ( nn ), triple digit ( nnn ).
	MXA910 Response: < REP x AUDIO_GAIN_HI_RES yyyy >	Where yyyy takes on the ASCII values of 0000 to 1400.
<b>Get Channel Audio Mute</b>		
	Command String: < GET x AUDIO_MUTE >	Where x is ASCII channel number: 0 through 9. Channel Audio Mute is pre-meter
	MXA910 Response: < REP x AUDIO_MUTE ON > < REP x AUDIO_MUTE OFF >	The MXA910 will respond with one of these strings.
<b>Mute Channel Audio</b>		
	Command String: < SET x AUDIO_MUTE ON >	
	MXA910 Response: < REP x AUDIO_MUTE ON >	
<b>Unmute Channel Audio</b>		
	Command String: < SET x AUDIO_MUTE OFF >	
	MXA910 Response: < REP x AUDIO_MUTE OFF >	
<b>Toggle Channel Audio Mute</b>		
	Command String: < SET x AUDIO_MUTE TOGGLE >	
	MXA910 Response: < REP x AUDIO_MUTE ON > < REP x AUDIO_MUTE OFF >	The MXA910 will respond with one of these strings.
<b>Get Device Audio Mute</b>		
	Command String: < GET_DEVICE_AUDIO_MUTE >	Device Audio Mute is post-meter.
	MXA910 Response: < REP_DEVICE_AUDIO_MUTE ON > < REP_DEVICE_AUDIO_MUTE OFF >	The MXA910 will respond with one of these strings.
<b>Mute Device Audio</b>		
	Command String: < SET_DEVICE_AUDIO_MUTE ON >	
	MXA910 Response: < REP_DEVICE_AUDIO_MUTE ON >	

<b>Unmute Device Audio</b>		
Command String:	< SET DEVICE_AUDIO_MUTE OFF >	
MXA910 Response:	< REP DEVICE_AUDIO_MUTE OFF >	
<b>Toggle Device Audio Mute</b>		
Command String:	< SET DEVICE_AUDIO_MUTE TOGGLE >	
MXA910 Response:	< REP DEVICE_AUDIO_MUTE ON > < REP DEVICE_AUDIO_MUTE OFF >	The MXA910 will respond with one of these strings.
<b>Get Output Clip Status</b>		
Command String:	< GET x AUDIO_OUT_CLIP_INDICATOR >	Where x is ASCII channel number: 0 through 9. It is not necessary to continually send this command. The MXA910 will send a REPORT message whenever the status changes.
MXA910 Response:	< REP x AUDIO_OUT_CLIP_INDICATOR ON > < REP x AUDIO_OUT_CLIP_INDICATOR OFF >	The MXA910 will respond with one of these strings.
<b>Flash Lights on Microphone</b>		
Command String:	< SET FLASH ON > < SET FLASH OFF >	Send one of these commands to the MXA910. The flash automatically turns off after 30 seconds.
MXA910 Response:	< REP FLASH ON > < REP FLASH OFF >	The MXA910 will respond with one of these strings.
<b>Turn Metering On</b>		
Command String:	< SET METER_RATE sssss >	Where sssss is the metering speed in milliseconds. Setting sssss=0 turns metering off. Minimum setting is 100 milliseconds. Metering is off by default.
MXA910 Response:	< REP METER_RATE sssss > < SAMPLE aaa bbb ccc ddd eee fff ggg hhh iii >	Where aaa, bbb, etc is the value of the audio level received and is 000-060. aaa = output 1 bbb = output 2 ccc = output 3 ddd = output 4 eee = output 5 fff = output 6 ggg = output 7 hhh = output 8 iii = output 9
<b>Stop Metering</b>		
Command String:	< SET METER_RATE 0 >	A value of 00000 is also acceptable.
MXA910 Response:	< REP METER_RATE 00000 >	
<b>Get Audio Peak Level</b>		
Command String:	< GET x AUDIO_IN_PEAK_LVL >	
MXA910 Response:	< REP x AUDIO_IN_PEAK_LVL nn >	Where nn is the audio level and is 00-60.
<b>Get Audio RMS Level</b>		
Command String:	< GET x AUDIO_IN_RMS_LVL >	
MXA910 Response:	< REP x AUDIO_IN_RMS_LVL nn >	Where nn is the audio level and is 00-60.
<b>Get Preset</b>		
Command String:	< GET PRESET >	
MXA910 Response:	< REP PRESET nn >	Where nn is the preset number 01-10.

<b>Set Preset</b>		
	Command String: < SET PRESET nn >	Where nn is the preset number 1-10. (Leading zero is optional when using the SET command).
	MXA910 Response: < REP PRESET nn >	Where nn is the preset number 01-10.
<b>Get Preset Name</b>		
	Command String: < GET PRESET1 > < GET PRESET2 > < GET PRESET3 > etc	Send one of these strings to the MXA910.
	MXA910 Response: < REP PRESET1 {yyyyyyyyyyyyyyyyyyyyyyyyyyyy} > < REP PRESET2 {yyyyyyyyyyyyyyyyyyyyyyyyyyyy} > < REP PRESET3 {yyyyyyyyyyyyyyyyyyyyyyyyyyyy} > etc	Whereyyyyyyyyyyyyyyyyyyyyyyyy is 25 characters of the device ID. The MXA910 always responds with a 25 character device ID
<b>Get Gate Out Status</b>		
	Command String: < GET x AUTOMIX_GATE_OUT_EXT_SIG >	Where x is ASCII channel number: 0 through 8. It is not necessary to continually send this command. The MXA910 will send a REPORT message whenever the status changes.
	MXA910 Response: < REP x AUTOMIX_GATE_OUT_EXT_SIG ON > < REP x AUTOMIX_GATE_OUT_EXT_SIG OFF >	The MXA910 will respond with one of these strings.
<b>Set LED State</b>		
	Command String: < SET DEV_LED_IN_STATE ON > < SET DEV_LED_IN_STATE OFF >	Send one of these commands to the MXA910.
	MXA910 Response: < REP DEV_LED_IN_STATE ON > < REP DEV_LED_IN_STATE OFF >	The MXA910 will respond with one of these strings.
<b>Get LED Brightness</b>		
	Command String: < GET LED_BRIGHTNESS >	
	MXA910 Response: < REP LED_BRIGHTNESS n >	Where n can take on the following values: 0 = LED disabled 1 = LED dim 2 = LED default
<b>Set LED Brightness</b>		
	Command String: < SET LED_BRIGHTNESS n >	Where n can take on the following values: 0 = LED disabled 1 = LED dim 2 = LED default
	MXA910 Response: < REP LED_BRIGHTNESS n >	
<b>Get LED Mute Color</b>		
	Command String: < GET LED_COLOR_MUTED >	
	MXA910 Response: < REP LED_COLOR_MUTED nnnn >	Where nnnn can be RED, GREEN, BLUE, PINK, PURPLE, YELLOW, ORANGE, or WHITE
<b>Set LED Mute Color</b>		
	Command String: < SET LED_COLOR_MUTED nnnn >	Where nnnn can be RED, GREEN, BLUE, PINK, PURPLE, YELLOW, ORANGE, or WHITE
	MXA910 Response: < REP LED_COLOR_MUTED nnnn >	
<b>Get LED Unmute Color</b>		
	Command String: < GET LED_COLOR_UNMUTED >	
	MXA910 Response: < REP LED_COLOR_UNMUTED nnnn >	Where nnnn can be RED, GREEN, BLUE, PINK, PURPLE, YELLOW, ORANGE, or WHITE

<b>Set LED Unmute Color</b>		
Command String:	< SET_LED_COLOR_UNMUTED nnnn >	Where nnnn can be RED, GREEN, BLUE, PINK, PURPLE, YELLOW, ORANGE, or WHITE
MXA910 Response:	< REP_LED_COLOR_UNMUTED nnnn >	
<b>Get LED Mute Flashing</b>		
Command String:	< GET_LED_STATE_MUTED >	
MXA910 Response:	< REP_LED_STATE_MUTED nnn >	Where nnn can be ON, OFF, or FLASHING
<b>Set LED Mute Flashing</b>		
Command String:	< SET_LED_STATE_MUTED nnn >	Where nnn can be ON, OFF, or FLASHING
MXA910 Response:	< REP_LED_STATE_MUTED nnn >	
<b>Get LED Unmute Flashing</b>		
Command String:	< GET_LED_STATE_UNMUTED >	
MXA910 Response:	< REP_LED_STATE_UNMUTED nnn >	Where nnn can be ON, OFF, or FLASHING
<b>Set LED Unmute Flashing</b>		
Command String:	< SET_LED_STATE_UNMUTED nnn >	Where nnn can be ON, OFF, or FLASHING
MXA910 Response:	< REP_LED_STATE_UNMUTED nnn >	
<b>Get X-Axis Beam (Lobe) Steering</b>		
Command String:	< GET_x_BEAM_X >	Where the X-Axis is parallel with the Shure logo.
MXA910 Response:	< REP_x_BEAM_X nnnn >	Where nnnn is 0000-3048 in centimeters. The value 1524 is the centerline of the MXA910.
<b>Set X-Axis Beam (Lobe) Steering</b>		
Command String:	< SET_x_BEAM_X nnnn >	Where nnnn is 0000-3048 in centimeters. The value 1524 is the centerline of the MXA910.
MXA910 Response:	< REP_x_BEAM_X nnnn >	
<b>Get Y-Axis Beam (Lobe) Steering</b>		
Command String:	< GET_x_BEAM_Y >	Where the Y-Axis is perpendicular to the X-Axis.
MXA910 Response:	< REP_x_BEAM_Y nnnn >	Where nnnn is 0000-3048 in centimeters. The value 1524 is the centerline of the MXA910.
<b>Set Y-Axis Beam (Lobe) Steering</b>		
Command String:	< SET_x_BEAM_Y nnnn >	Where nnnn is 0000-3048 in centimeters. The value 1524 is the centerline of the MXA910.
MXA910 Response:	< REP_x_BEAM_Y nnnn >	
<b>Get Beam (Lobe) Height</b>		
Command String:	< GET_x_BEAM_Z >	Where height is the distance down from the MXA910.
MXA910 Response:	< REP_x_BEAM_Z nnn >	Where nnn is 000-914 in centimeters.
<b>Set Beam (Lobe) Height</b>		
Command String:	< SET_x_BEAM_Z nnn >	Where nnn is 000-914 in centimeters.
MXA910 Response:	< REP_x_BEAM_Z nnn >	

<b>Get Beam (Lobe) Width</b>	
Command String: < GET x BEAM_W >	
MXA910 Response: < REP x BEAM_W nnnn >	Where nnnn can be WIDE, MEDIUM, or NARROW
<b>Set Beam (Lobe) Width</b>	
Command String: < SET x BEAM_W nnnn >	Where nnnn can be WIDE, MEDIUM, or NARROW
MXA910 Response: < REP x BEAM_W nnnn >	