TECHNICAL NOTES

THIRD-PARTY CONTROL PROTOCOL
ENGLISH

MSMP

MESSAGE SCHEDULER-STREAMER MUSIC PLAYER
LDMSMP

CONTENTS

MSMP USER MANUAL ONLINE

Scan this QR Code to get to the download section of MSMP.
Here you can get the complete User manual in the following languages:
EN, DE, FR, ES, PL, IT
www.ld-systems.com/LDMSMP-downloads

ENGLISH

JSON COMMAND OVERVIEW

JSON (JavaScript Object Notation) is a lightweight data-interchange format that allows MSMP to communicate with third-party devices and platforms. JSON is a text format that is completely language independent but uses conventions that are familiar to programmers of the C-family of languages. Visit the official website for more information: https://www.json.org

GLOBAL CONSIDERATIONS

- **Checking IP Address:** MSMP comes by default with the ethernet port configured in DHCP mode. Please make sure that MSMP is connected to a network router or switch with enabled DHCP server. MSMP uses multicast DNS (mDNS) protocol that allows users to discover it and reach its web server application on a local network, even when MSMP's IP address is unknown. To access the web application, open your preferred web browser and type in "msmp.local/" into the web browser' search bar. If the mDNS service is not available, in both Wired or WiFi client mode the IP address assigned to MSMP could be obtained by entering the DHCP server (router/switch) configuration and checking the list of connected devices. An LD Systems MSMP device should appear in that list with its IP address details. Type in that address into your web browser's navigation bar to enter the web application.
  There, in the Network/Interfaces menu the IP settings for the ethernet port (WAN) can be found.
  You can also access MSMP using its own Wi-Fi access point, in Wi-Fi Master mode. This way, MSMP works as a network access point. Connect your WiFi device (computer, smartphone, etc.) to MSMP's access point via your WiFi network wizard.
  - SSID: MSMP-WIFI
  - Wifi Password: LDPlayerAP

  In that case, the default IP address of MSMP is 192.168.0.190. The default access credentials for the web application are:
  - Username: root
  - Password: ldsystems
- **Establishing Communication:** Communication with MSMP can be established using the TCP/IP transport protocol via wired Ethernet or WiFi. Use TCP port 2003.
- **Control System Compatibility:** To facilitate easier message processing by control systems (such as CRESTRON®, EXTRON®, AMX®, RTI®, VITY®, MEDIALON®, etc.), MSMP appends a carriage return (CR, character 10) to the end of each message.
- **Command Responses:** All commands will respond with either `{"result":true}` (success) or `{"result":false}` (failure).

1. PLAYER COMMANDS

1.1 SET PLAYER STEREO/MONO

Mono mode

```
{"jsonrpc":"2.0","method":"Player.Stereo","Stereo":false}
```

Stereo mode

```
{"jsonrpc":"2.0","method":"Player.Stereo","Stereo":true}
```

1.2 SET PLAYER FADE

No fade

{"jsonrpc":"2.0","method":"Player.Fade","Fade":0}

Cross Fade

{"jsonrpc":"2.0","method":"Player.Fade","Fade":1}

Fade

{"jsonrpc":"2.0","method":"Player.Fade","Fade":2}

1.3 SET PLAYER MODE

Player mode Sequential

{"jsonrpc":"2.0","method":"Player.Mode","PlayMode":0}

Player mode Random

{"jsonrpc":"2.0","method":"Player.Mode","PlayMode":1}

1.4 SET PLAYER REPEAT

Play all

{"jsonrpc":"2.0","method":"Player.Repeat","Repeat":0}

Play one

{"jsonrpc":"2.0","method":"Player.Repeat","Repeat":1}

Repeat all

{"jsonrpc":"2.0","method":"Player.Repeat","Repeat":2}

Repeat one

{"jsonrpc":"2.0","method":"Player.Repeat","Repeat":3}

1.5 GET SHORT PLAYER INFORMATION

{"jsonrpc":"2.0","method":"Player.GetStats"}

Response

{"title":"Brian Hyland - Sealed With a Kiss","counter":"19:30","txtSource":"NET","status":1}

1.6 GET FULL PLAYER INFORMATION

{"jsonrpc":"2.0","method":"Player.GetStatsEx"}

Response

{"title":"Elvis Presley - Judy","counter":"07:02","txtSource":"NET","status":1,"SourceList":
["","MMC","USB UNAVAILABLE","DLNA","AIRPLAY","JVL PLAYLIST","MUSICUP"],"source":6,"preset":1,"
volume":100,"txtVolume":"0dB","stereo":1,"repeat":
2,"playmode":0,"fade":1,"bootpreset1":0,"sp":1,"bitrate":"128","duration":"--:--","freq":"44.1",
"playlist_index":" 0006 / 0056"}

1.7 ADD NEXT PLAYLIST ITEM TO THE PLAYER
With this function, users can manage the device playlist by inserting the next item just before the current item ends.
Example: Set "next_item.mp3" as the next item in the playlist
{"jsonrpc":"2.0","method":"Player.QueueNextElem","url":"mmc://next_item.mp3"}

1.8 INSERT PRIORITY AUDIO FILE TO THE PLAYER
With this function, users can insert a priority audio file that will play over the current file.
The current file will fade out. Once the priority file finishes, the previous file will fade back in again.
Example: set and play "priority_item.mp3"as a priority file.
{"jsonrpc":"2.0","method":"Player.PrioritySetElem","url":"usb://priority_item.mp3"}

1.9 OPEN PLAYLIST URL
The "Url" parameter must be a valid device url address.
{"jsonrpc":"2.0","method":"Player.Open","Url":"http://50.7.181.186:8060"}

1.10 OPEN A PRESET
The Preset parameter must be a valid preset index between 1 and 20.
{"jsonrpc":"2.0","method":"Player.Open","Preset":10}

1.11 RELOAD A PRESET
Reload the indicated preset index. The Index parameter should be a valid number between 1 and 20.
Must be called after modifying any preset variables and calling commit commands.
{"jsonrpc":"2.0","method":"Preset.Reload","Index":1}

1.12 OPEN AND LOAD A SOURCE FROM THE AVAILABLE SOURCES LIST
The source must be indicated using a valid player source index. Please check the next command "Get list of available sources" to know all valid sources. The first player source starts with index 1.
{"jsonrpc":"2.0","method":"Player.Open","Source":4}

1.13 GET LIST OF AVAILABLE SOURCES
This command returns the list of available sources.
{"jsonrpc":"2.0","method":"Source.GetList"}

Response
{"SourceList":["","MMC","USB UNAVAILABLE","DLNA","AIRPLAY","ROCK 80s","DISCO 80s"]}

1.14 PLAYER TRANSPORT CONTROLS
1.14.1 PLAYER PLAY
If the player is paused or stopped, use this function to start playing the currently loaded file.
Otherwise, the player will be paused.
{"jsonrpc":"2.0","method":"Player.Play"}

1.14.2 PLAYER STOP
{"jsonrpc":"2.0","method":"Player.Stop"}

1.14.3 PLAYER NEXT
{"jsonrpc":"2.0","method":"Player.Next"}

1.14.4 PLAYER PREVIOUS
{"jsonrpc":"2.0","method":"Player.Prev"}

1.15 VOLUME CONTROL
1.15.1 INCREASE VOLUME
Increase volume by one dB.
{"jsonrpc":"2.0","method":"Player.Volume","Action":"inc"}

1.15.2 DECREASE VOLUME
Decrease volume just one dB.
{"jsonrpc":"2.0","method":"Player.Volume","Action":"dec"}

1.15.3 SET VOLUME
The volume parameter is expressed as a percentage. To set the volume to 50%, use the following command.
{"jsonrpc":"2.0","method":"Player.Volume","Volume":50}

2 CONFIGURATION COMMANDS

2.1 RESET DEVICE SETTINGS
Restore the device factory settings. All previous settings will be lost.
{"jsonrpc":"2.0","method":"Settings.Reset"}

2.2 RESTORE DEVICE SETTINGS FROM URL
Restore the device settings to values stored in a URL file.
{"jsonrpc":"2.0","method":"Settings.Restore","url":"http://ldsystems.com/my_player_config.config"}

2.3 BACKUP CURRENT DEVICE CONFIGURATION
Backup the device settings to a URL address. Available backup types: user or admin.
{"jsonrpc":"2.0","method":"Settings.Backup","url":"mmc://backups/gim.config","user":"admin"}

2.4 GETTING DEVICE VARIABLE VALUE
This function returns a device variable value. Please check the MSMP LUA manual in order to check all the interface settings variable values.
Example: In order to retrieve preset01.settings.bname (preset name) user should send next command to the MSMP:
{"jsonrpc":"2.0","method":"CFG.get","interface":"preset01","section":"settings","variable":"bname"}

Response:
{"value":"AFTERNOON PRESET"}

2.5 SETTING DEVICE VARIABLE VALUE
This function sets a device variable value. Please check the MSMP LUA manual in order to check all the interface.settings.variable values.
In order to set preset01.settings.bname (preset name), users should send this command to MSMP:
{"jsonrpc":"2.0","method":"CFG.set","interface":"preset01","section":"settings","variable":"bname", "value":"MIDNIGHT PRESET"}

2.6 STORE CHANGES IN DEVICE INTERNAL MEMORY

This function stores all interface variables to the internal device memory. It should be called after setting all the changes. MSMP must reload the data using reload functions.

```
{"jsonrpc":"2.0","method":"CFG.commit","interface":"preset01"}
```

2.7 RELOAD AN EVENT

This command reloads the indicated event. The event name should be: GPI1, GPI2 or SILENCE.
This command must be called after modifying any event variables and calling a commit command.

```
{"jsonrpc":"2.0","method":"Event.Reload","Name":"GPI1"}
```

2.8 RELOAD A CALENDAR EVENT

This command reloads the indicated calendar event. A valid calendar index should be a number between 1 and 24. It must be called after modifying any calendar variables and calling a commit command.
Example: Reload calendar event 24

```
{"jsonrpc":"2.0","method":"Calendar.Reload","Index":24}
```

3 STORE AND FORWARD COMMANDS

3.1 RELOAD STORE AND FORWARD (SAF)

This command reloads SAF configuration. It must be called after modifying SAF variables and calling a commit command.

```
{"jsonrpc":"2.0","method":"SAF.Reload"}
```

4 CONTENT MANAGEMENT SYSTEM (CMS) COMMANDS

4.1 RELOAD CMS

This command reloads the CMS configuration. It must be called after modifying any CMS variables and calling a commit command.

```
{"jsonrpc":"2.0","method":"CMS.Reload"}
```

5 SCRIPTS COMMANDS

5.1 RELOAD A SCRIPT

This command reloads the script configuration. A valid index for the script should be a number between 1 and 20. It must be called after modifying any Script variables and calling a commit command.
Example: Reload script 7:

```
{"jsonrpc":"2.0","method":"Script.Reload","Index":7}
```

5.2 EXECUTE A SCRIPT

Example: Call script 6

```
{"jsonrpc":"2.0","method":"Script.Command","Index":6,"Command":"Start"}
```

5.3 KILL A SCRIPT

Example: Kill script 3

```
{"jsonrpc":"2.0","method":"Script.Command","Index":3,"Command":"Stop"}
```

5.4 QUERY SCRIPT STATUS

{"jsonrpc":"2.0","method":"Script.Status","Index":11}

Response:
{"status":"Idle"}

6 REGISTER COMMANDS

6.1 ADD A REGISTER LINE

This command adds a line to the device LOG. Possible line values are: Trace, Warning, or Error.
Example: Add a warning line:
{"jsonrpc":"2.0","method":"Device.Log","Severity":"Trace","Message":"This is a warning message"}

7 DEVICE COMMANDS

7.1 DEVICE REBOOT

{"jsonrpc":"2.0","method":"Device.Reboot"}

7.2 GET DEVICE VERSION

{"jsonrpc":"2.0","method":"Device.GetVersion"}

Response:
{"version":"1.00r0"}

7.3 DEVICE UPDATE FIRMWARE

With this function users can update the device firmware to a specific version. Users must provide a firmware URL address. Device settings will be saved.
{"jsonrpc":"2.0","method":"Device.Update","url":"https://www.ld-systems.com/new_firmware.bin"}

7.4 DEVICE BOOT CONFIGURATION COMMAND

The available BootPreset1 options are: 1 (MSMP loads PRESET1 during booting process) or 2 (MSMP keeps the previous status)
Example: Set the boot configuration to 2. Keep the previous status
{"jsonrpc":"2.0","method":"Device.BootPreset1","BootPreset1":2}

7.5 DEVICE GET MAC ADDRESS

{"jsonrpc":"2.0","method":"Device.GetMac"}

Response:
{"mac":"32 41 41 20 40 42"}

This technical note may contain misprints and errors, as well as technical or other modifications!

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LD systems

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