

Shure Battery Rack Mount Charger (SBRC) -- Command Strings

Command Strings Overview

Shure command strings are a set of commands and status reports used by control system programmers to interface to Shure devices. The Shure device is connected via Ethernet to a control system, such as

- AMX, Crestron or Extron
- Symetrix, Biamp, other digital signal processors (DSP)
- Specialized custom programs

The Shure device is considered to be the server and the control system is considered to be the client.

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

Port: 2202

Conventions

There are 4 types of strings

GET	Finds the status of a parameter. After the AMX/Crestron sends a GET command, the system responds with a REPORT string
SET	Changes the status of a parameter. After the AMX/Crestron sends a SET command, the system responds with a REPORT string to indicate the new value of the parameter.
REP	<ul style="list-style-type: none">• When the system receives a GET or SET command, it replies with a REPORT command to indicate the status of the parameter.• REPORT is also automatically sent by the device when a status changes, for example: As a battery charges, the charger sends the reports without any GET commands: < REP 1 BATT_TIME_TO_FULL 00107 > < REP 1 BATT_TIME_TO_FULL 00106 > < REP 1 BATT_TIME_TO_FULL 00105 >
SAMPLE	Used for metering audio levels. (Not applicable with some Shure devices.)

Note:

- All messages sent and received are ASCII. Note that the level indicators and gain indicators are also ASCII.
- It is not necessary to constantly query parameters because most parameters send a REPORT command when they change.

Device Command Strings

ALL

Description	Discovery of device properties.
Commands	<pre>< GET x ALL > < REP ... ></pre>
Variables	<p>When x is zero, the device responds with REP for all device-specific properties and ALL channel, module, or bay-related properties including all metered properties.</p> <p>When x is a channel, module, or bay number, the device responds with REP for all device-specific properties and ALL channel, module, or bay x-related properties, including all metered properties.</p>
Notes	None.

DEVICE_ID

Description	Controls the Device ID.
Commands	<pre>< GET DEVICE_ID > < REP DEVICE_ID {Name1yyyyyyyyyyyyyyyyyyyyyyyyyyyyyy} > < SET DEVICE_ID {Name1} > < REP DEVICE_ID {Name1yyyyyyyyyyyyyyyyyyyyyyyyyyyyyy} ></pre>
Variables	Where the repeating y represents the spaces returned by the device to pad the Device ID to 31 characters.
Notes	<p>The device always responds with 31-character ID.</p> <p>SET accepts 1-8 Characters from the set: A-Z,a-z,0-9,!"#\$%&'()*+,-./:;<=>? @[\\]^_`~ and space.</p>

FW_VER

Description	Discovery of the firmware version.
Commands	Self test passed: < GET FW_VER > < REP FW_VER {2.0.15.2yyyyyyyyyyyyyyyyyy} > Self test failed: < GET FW_VER > < REP FW_VER {2.0.15.2*yyyyyyyyyyyyyyyyyy} >
Variables	Where the repeating y represents the spaces returned by the device to pad the response to 24 characters.
Notes	Package version number reported as Maj.Min.Pack.Build.

FLASH

Description	Controls the flash to identify a device.
Commands	< SET FLASH ON > < REP FLASH ON >
Variables	None.
Notes	Device initiates an Identify then stops flashing.

MODEL

Description	Discovery of the model name of the device.
Commands	< GET MODEL > < REP MODEL {SBRCyyyyyyyyyyyyyyyyyyyyyyyyyyyyyy} >
Variables	Where the repeating y represents the spaces returned by the device to pad the model name to 32 characters.
Notes	The device always responds with a 32-character model name.

STORAGE_MODE

Description	Controls the storage mode setting.
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Commands	<pre>< GET STORAGE_MODE > < REP STORAGE_MODE OFF > < SET STORAGE_MODE ON > < REP STORAGE_MODE ON > < SET STORAGE_MODE TOGGLE > < REP STORAGE_MODE OFF ></pre>
Variables	None.
Notes	TOGGLE switches between ON and OFF.

Module Command Strings

BATT_MODULE_TYPE

Description	Discovers the type of the battery module.
Commands	<pre>< GET x BATT_MODULE_TYPE > < REP x BATT_MODULE_TYPE 002 > < GET 0 BATT_MODULE_TYPE > < REP 1 BATT_MODULE_TYPE 002 > < REP 2 BATT_MODULE_TYPE 004 > < REP 3 BATT_MODULE_TYPE 005 > < REP 4 BATT_MODULE_TYPE 000 ></pre>
Variables	<p>Where x is the module number.</p> <p>Using 0 returns information for all modules</p>

Notes	<p>Numeric string, 3 characters</p> <p>Identifies the model of the module:</p> <p>000 : No module installed</p> <p>001 : AXT902</p> <p>002 : AXT901</p> <p>003 : SBC-AX (For SB900x)</p> <p>004 : SBM920</p> <p>005 : SBM910</p> <p>006 : SBM910M</p> <p>255 : Invalid / Unsupported module</p>
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Bay Command Strings

BATT_BARS

Description	Discovers the number of bars for a battery.
Commands	<p>< GET x BATT_BARS ></p> <p>< REP x BATT_BARS 003 ></p> <p>When the number of bars changes:</p> <p>< REP x BATT_BARS 004 ></p>
Variables	<p>Where x is the bay number.</p> <p>Using 0 returns information for all bays.</p>
Notes	<p>Numeric, three characters</p> <p>000 - 005 : Number of bars reported</p> <p>254 : An error has occurred, the value is not applicable at this time</p> <p>255 : Unknown</p>

BATT_CAPACITY_MAX

Description	Discovers the manufacturer's battery maximum capacity in mAh.
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Commands	<pre>< GET x BATT_CAPACITY_MAX > < REP x BATT_CAPACITY_MAX 02393 ></pre>
Variables	<p>Where x is the bay number.</p> <p>Using 0 returns information for all bays.</p>
Notes	<p>Numeric, five characters</p> <p>00000 - 65533 : The manufacturer's battery maximum capacity in mAh</p> <p>65534 : An error has occurred, the value is not applicable at this time</p> <p>65535 : No battery or not applicable</p>

BATT_CHARGE

Description	Discovers the charge in percent for a battery.
Commands	<pre>< GET x BATT_CHARGE > < REP x BATT_CHARGE 027 > < REP x BATT_CHARGE 028 > ... < REP x BATT_CHARGE 099 > < REP x BATT_CHARGE 100 ></pre>
Variables	<p>Where x is the bay number.</p> <p>Using 0 returns information for all bays.</p>
Notes	<p>Numeric, three characters</p> <p>000 - 100 : Percentage of charge</p> <p>254 : An error has occurred, the value is not applicable at this time</p> <p>255 : Unknown</p>

BATT_CURRENT_CAPACITY

Description	Discovers the current battery capacity in mAh.
Commands	<pre>< GET x BATT_CURRENT_CAPACITY > < REP x BATT_CURRENT_CAPACITY 02189 ></pre>

Variables	Where x is the bay number. Using 0 returns information for all bays.
Notes	Numeric, five characters 00000 - 65533 : The current battery capacity in mAh 65534 : An error has occurred, the value is not applicable at this time 65535 : No battery or not applicable

BATT_CURRENT_CAPACITY_MAX

Description	Discovers the current maximum capacity in mAh.
Commands	< GET x BATT_CURRENT_CAPACITY_MAX > < REP x BATT_CURRENT_CAPACITY_MAX 02393 >
Variables	Where x is the bay number. Using 0 returns information for all bays.
Notes	Numeric, five characters 00000 - 65533 : The current battery maximum capacity in mAh 65534 : An error has occurred, the value is not applicable at this time 65535 : No battery or not applicable

BATT_CYCLE

Description	Discovers the number charging cycles for a battery.
Commands	Battery placed into charger bay x: < REP x BATT_CYCLE 00006 > ... < GET x BATT_CYCLE > < REP x BATT_CYCLE 00006 >
Variables	Where x is the bay number. Using 0 returns information for all bays.

Notes	<p>Numeric, five characters</p> <p>00000 - 65533 : Number of charging cycles</p> <p>65534 : An error has occurred, the value is not applicable at this time</p> <p>65535 : Unknown or not applicable</p>
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BATT_DETECTED

Description	Discovers if a battery is detected.
Commands	<pre>< GET x BATT_DETECTED > < REP x BATT_DETECTED YES ></pre>
Variables	<p>Where x is the bay number.</p> <p>Using 0 returns information for all bays.</p>
Notes	<p>Fixed String</p> <ul style="list-style-type: none"> • YES • NO

BATT_ERROR

Description	Discovers the error status of a battery.
Commands	<pre>< GET x BATT_ERROR > < REP x BATT_ERROR 000 ></pre>
Variables	<p>Where x is the bay number.</p> <p>Using 0 returns information for all bays.</p>

Notes	<p>Numeric, three characters</p> <p>000 : No Active Error</p> <p>001 : Unknown Module</p> <p>002 : Unrecognized Battery</p> <p>003 : Deep Discharge Recovery Failed</p> <p>004 : Charge Failed</p> <p>005 : Check Battery</p> <p>006 : Check Charger</p> <p>007 : Communication Failure</p> <p>255 : No Battery Present</p>
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BATT_HEALTH

Description	Discovers the health in percent for a battery.
Commands	<p>< GET x BATT_HEALTH ></p> <p>< REP x BATT_HEALTH 099 ></p>
Variables	<p>Where x is the bay number.</p> <p>Using 0 returns information for all bays.</p>
Notes	<p>Numeric, three characters</p> <p>000 - 100 : Percentage of health</p> <p>254 : An error has occurred, the value is not applicable at this time</p> <p>255 : Unknown</p>

BATT_STATE

Description	Discovers the state of a battery.
Commands	<p>< GET x BATT_STATE ></p> <p>< REP x BATT_STATE NORMAL ></p> <p>After some period of time, battery becomes fully charged:</p> <p>< REP x BATT_STATE FULL ></p>

Variables	<p>Where x is the bay number.</p> <p>Using 0 returns information for all bays.</p>
Notes	<p>Fixed String</p> <ul style="list-style-type: none"> • FULL • CALCULATING • NORMAL • WARM • WARM_FULL • HOT • COLD • PRECHARGE • READY_TO_STORE • DISCHARGE_CALC • DISCHARGING • DISCHARGING_WARM • DISCHARGING_COLD • ERROR • NO_BATT

BATT_TEMP_C

Description	Discovers the temperature in Celsius.
Commands	<pre>< GET x BATT_TEMP_C ></pre> <pre>< REP x BATT_TEMP_C 055 ></pre> <p>There is an offset of 40 so the actual value = 55 - 40 = 15° C.</p>
Variables	<p>Where x is the bay number.</p> <p>Using 0 returns information for all bays.</p>
Notes	<p>The actual value = the reported value - 40</p> <p>Numeric, three characters</p> <p>000 - 253 : Temperature in Celsius</p> <p>254 : An error has occurred, the value is not applicable at this time</p> <p>255 : Unknown</p>

BATT_TEMP_F

Description	Discovers the temperature in Fahrenheit.
Commands	<pre>< GET x BATT_TEMP_F ></pre> <pre>< REP x BATT_TEMP_F 095 ></pre> <p>There is an offset of 40 so the actual value = 95 - 40 = 50° F.</p>
Variables	<p>Where x is the bay number.</p> <p>Using 0 returns information for all bays.</p>
Notes	<p>The actual value = the reported value - 40</p> <p>Numeric, three characters</p> <p>000 - 253 : Temperature in Fahrenheit</p> <p>254 : An error has occurred, the value is not applicable at this time</p> <p>255 : Unknown</p>

BATT_TIME_TO_FULL

Description	Discovers the number of minutes for a battery to reach the target charging level.
Commands	<pre>< GET x BATT_TIME_TO_FULL ></pre> <pre>< REP x BATT_TIME_TO_FULL 00060 ></pre> <p>Battery placed into charger bay x:</p> <pre>< REP x BATT_TIME_TO_FULL 65533 ></pre> <p>...</p> <pre>< REP x BATT_TIME_TO_FULL 00060 ></pre> <p>...</p> <pre>< REP x BATT_TIME_TO_FULL 00001 ></pre> <pre>< REP x BATT_TIME_TO_FULL 00000 ></pre> <pre>< REP x BATT_TIME_TO_FULL 65529 ></pre> <p>Battery removed:</p> <pre>< REP x BATT_TIME_TO_FULL 65535 ></pre>
Variables	<p>Where x is the bay number.</p> <p>Using 0 returns information for all bays.</p>

Notes	<p>Numeric, five characters</p> <p>Considered as time to target where:</p> <ul style="list-style-type: none">• Charging Mode: Value is the estimated time to full charge.• Storage Mode: Value is the estimated time to optimal storage voltage. <p>00000 - 65528: Number of minutes estimated to reach the target</p> <p>65529 : Battery is fully charged</p> <p>65533 : Calculation in progress</p> <p>65534 : Error has occurred</p> <p>65535 : Unknown or not applicable</p>
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