# MXCWNCS

## Command Strings

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## MXCWNCS Microflex® Complete Wireless Command Strings

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

There are 4 types of strings:

| | |
|---|---|
| **GET** | Finds the status of a parameter. After the AMX/Crestron sends a GET command, the device responds with a REPORT string |
| **SET** | Changes the status of a parameter. After the AMX/Crestron sends a SET command, the device will respond with a REPORT string to indicate the new value of the parameter. |
| **REP** | When the device 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 MXCWNCS 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 device will send a REPORT command when any of these parameters change.

### Indexing

Indexing is used to specifically identify upon what the command string is acting.

| | |
|---|---|
| **0** | All |
| **1 through 10** | Bay Number |

## Command Strings

### ALL

| | |
|---|---|
| **Description** | Retrieve all supported commands |

| Supported Commands | GET and REP |
|---|---|
| Indexing | 0: All device or bay properties<br><br>*n*: All device or bay *n* properties |
| Values | None |
| Examples | < GET 0 ALL > : Responds with REP for all device specific properties and ALL index related properties including all metered properties.<br><br>< GET n ALL > : Responds with REP for all device specific properties and ALL index n related properties including all metered properties. |

## MODEL

| Description | Retrieve model name |
|---|---|
| Supported Commands | GET and REP |
| Indexing | None |
| Values | Format: 32 character string |
| Examples | < GET MODEL ><br>< REP MODEL {MXCWNCS} > |

## FLASH

| Description | Turn on flash to identify a device |
|---|---|
| Supported Commands | GET, SET, and REP |
| Indexing | None |
| Values | Format: Fixed string<br><br>OFF<br><br>ON |
| Examples | < GET FLASH ><br>< REP FLASH OFF ><br><br>< SET FLASH ON ><br>< REP FLASH ON ><br><br>< SET FLASH OFF > |

| | < REP FLASH OFF > |
| --- | --- |

## FW_VER

| Description | Retrieve firmware version |
| --- | --- |
| Supported Commands | GET and REP |
| Indexing | None |
| Values | Format: 24 character string<br><br>Package version number presented in dot-decimal notation: Maj.Min.Pack.Build |
| Examples | Example where self test passed:<br><br>< GET FW_VER ><br>< REP FW_VER {2.0.15.2} ><br><br>Example where self test failed:<br><br>< GET FW_VER ><br>< REP FW_VER {2.0.15.2*} > |

## DEVICE_ID

| Description | Retrieve and set device ID |
| --- | --- |
| Supported Commands | GET, SET, and REP |
| Indexing | None |
| Values | Format: 31 character string for REP<br><br>1-31 Characters from the set: -0123456789ABCDEFGHIJKLMNOPQRSTUVWXYZabcde-fghijklmnopqrstuvwxyz<br><br>All DNS names and labels are up to 31 characters in length<br><br>Name and label comparisons are case-insensitive; "Guitar" and "guitar" are treated as the same label. Unicode and non-roman characters are not supported.<br><br>Device names should follow Domain Name System (DNS) hostname rules. Legal characters are A-Z, a-z, 0-9, and '-' (dash or hyphen).<br><br>Device names must begin with A-Z (or a-z), or 0-9. |
| Examples | < GET DEVICE_ID ><br>< REP DEVICE_ID {MXCWNCS} ><br><br>< SET DEVICE_ID {4 Pop} > |

| | |
|---|---|
| | < REP DEVICE_ID {4 Pop} > |

## STORAGE_MODE

| Description | Retrieve and set storage mode |
|---|---|
| Supported Commands | GET, SET, and REP |
| Indexing | None |
| Values | Format: Fixed string<br><br>OFF<br><br>ON<br><br>TOGGLE (for SET only) |
| Examples | < GET STORAGE_MODE ><br>< REP STORAGE_MODE OFF ><br><br>< SET STORAGE_MODE ON ><br>< REP STORAGE_MODE ON ><br><br>< SET STORAGE_MODE TOGGLE ><br>< REP STORAGE_MODE OFF > |

## BATT_DETECTED

| Description | Detect battery |
|---|---|
| Supported Commands | GET and REP |
| Indexing | Bay Number |
| Values | Format: Fixed string<br><br>YES<br><br>NO |
| Examples | < GET 10 BATT_DETECTED ><br>< REP 10 BATT_DETECTED YES > |

## BATT_STATE

| Description | Retrieve battery status |
|---|---|
| Supported Commands | GET and REP |

| Indexing | Bay Number |
|---|---|
| Values | Format: Fixed string<br><br>FULL<br><br>CALCULATING<br><br>NORMAL<br><br>WARM<br><br>WARM_FULL<br><br>HOT<br><br>COLD<br><br>PRECHARGE<br><br>READY_TO_STORE<br><br>DISCHARGE_CALC<br><br>DISCHARGING<br><br>DISCHARGING_WARM<br><br>DISCHARGING_COLD<br><br>ERROR: In which case see BATT_ERROR for corresponding error code<br><br>NO_BATT |
| Examples | < GET 1 BATT_STATE ><br>< REP 1 BATT_STATE NORMAL ><br><br>After some time and battery becomes full:<br><br>< REP 1 BATT_STATE FULL > |

## BATT_BARS

| Description | Retrieve the number of battery bars |
|---|---|
| Supported Commands | GET and REP |
| Indexing | Bay Number |
| Values | Format: 3 numbers<br><br>000-005: Number bars reported<br><br>254: An error has occurred, the value is not applicable at this time |

| | |
|---|---|
| | 255: Unknown, or not applicable |
| **Examples** | < GET 1 BATT_BARS ><br>< REP 1 BATT_BARS 003 ><br><br>After some time, an asynchronous report:<br><br>< REP 1 BATT_BARS 004 > |

## BATT_TIME_TO_FULL

| | |
|---|---|
| **Description** | Target time to full charge |
| **Supported Commands** | GET and REP |
| **Indexing** | Bay Number |
| **Values** | Format: 5 numbers<br><br>**Note:** Can be considered as time to target where:<br><br>Charging mode: Value is the estimated time to full charge<br>Storage mode: Value is estimated time to optimal storage voltage<br><br>00000 - 65528 : Number of minutes estimated to reach the target<br><br>65529 : Battery is full<br><br>65530 : Battery is hot<br><br>65531 : Battery is warm<br><br>65532 : Battery is cold<br><br>65533 : Calculation in progress<br><br>65534 : An error has occurred, the value is not applicable at this time<br><br>65535 : Unknown, or not applicable |
| **Examples** | Battery gets put into charger bay 4:<br><br>< REP 4 BATT_TIME_TO_FULL 65533 ><br><br>< REP 4 BATT_TIME_TO_FULL 00060 ><br><br>< REP 4 BATT_TIME_TO_FULL 00001 ><br>< REP 4 BATT_TIME_TO_FULL 00000 ><br>< REP 4 BATT_TIME_TO_FULL 65529 ><br><br>Battery removed:<br><br>< REP 4 BATT_TIME_TO_FULL 65535 > |

## BATT_CHARGE

| Description | View battery charge status |
| --- | --- |
| Supported Commands | GET and REP |
| Indexing | Bay Number |
| Values | Format: 3 numbers<br><br>000-100: Percent status of charge<br><br>254: An error has occurred, the value is not applicable at this time<br><br>255: Unknown, or not applicable |
| Examples | < GET 1 BATT_CHARGE ><br>< REP 1 BATT_CHARGE 027 ><br>< REP 1 BATT_CHARGE 028 ><br><br>< REP 1 BATT_CHARGE 099 ><br>< REP 1 BATT_CHARGE 100 > |

## BATT_HEALTH

| Description | Monitor battery health percentages |
| --- | --- |
| Supported Commands | GET and REP |
| Indexing | Bay Number |
| Values | Format: 3 numbers<br><br>000-100: Percent status of health<br><br>254: An error has occurred, the value is not applicable at this time<br><br>255: Unknown, or not applicable |
| Examples | < GET 1 BATT_HEALTH ><br>< REP 1 BATT_HEALTH 099 > |

## BATT_CYCLE

| Description | Monitor individual battery cycles |
| --- | --- |
| Supported Commands | GET and REP |
| Indexing | Bay Number |

| Values | Format: 5 numbers |
|---|---|
| | 00000 - 65533 : Number of charging cycles |
| | 65534 : An error has occurred, the value is not applicable at this time |
| | 65535 : Unknown, or not applicable |
| Examples | Battery gets put into charger bay 4: |
| | < REP 4 BATT_CYCLE 00006 > |
| | < GET 4 BATT_CYCLE ><br>< REP 4 BATT_CYCLE 00006 > |

## BATT_CURRENT_CAPACITY

| Description | View current battery capacity |
|---|---|
| Supported Commands | GET and REP |
| Indexing | Bay Number |
| Values | Format: 5 numbers |
| | 00000 to 65533: The current battery capacity in mAh |
| | 65534 : An error has occurred, the value is not applicable at this time |
| | 65535 : Unknown, or not applicable |
| Examples | < GET 1 BATT_CURRENT_CAPACITY ><br>< REP 1 BATT_CURRENT_CAPACITY 02189 > |

## BATT_CURRENT_CAPACITY_MAX

| Description | View current battery maximum capacity |
|---|---|
| Supported Commands | GET and REP |
| Indexing | Bay Number |
| Values | Format: 5 numbers |
| | 00000 to 65533: The current battery maximum capacity in mAh |
| | 65534: An error has occurred, the value is not applicable at this time |
| | 65535: Unknown, or not applicable |

| Examples | < GET 1 BATT_CURRENT_CAPACITY_MAX ><br>< REP 1 BATT_CURRENT_CAPACITY_MAX 02393 > |
|---|---|

## BATT_CAPACITY_MAX

| Description | View battery maximum capacity |
|---|---|
| **Supported Commands** | GET and REP |
| **Indexing** | Bay Number |
| **Values** | Format: 5 numbers<br><br>00000 to 65533: The battery maximum capacity in mAh<br><br>65534: An error has occurred, the value is not applicable at this time<br><br>65535: Unknown, or not applicable |
| **Examples** | < GET 1 BATT_CAPACITY_MAX ><br>< REP 1 BATT_CAPACITY_MAX 02393 > |

## BATT_TEMP_C

| Description | View battery temperature in Celsius |
|---|---|
| **Supported Commands** | GET and REP |
| **Indexing** | Bay Number |
| **Values** | Format: 3 numbers<br><br>ActualValue = ReportedValue - 40<br><br>000 to 253: Temperature in C<br><br>254: An error has occurred, the value is not applicable at this time<br><br>255: Unknown, or not applicable |
| **Examples** | < GET 1 BATT_TEMP_C ><br>< REP 1 BATT_TEMP_C 033 > |

## BATT_TEMP_F

| Description | View battery temperature in Fahrenheit |
|---|---|
| **Supported Commands** | GET and REP |
| **Indexing** | Bay Number |

| Values | Format: 3 numbers<br><br>ActualValue = ReportedValue - 40<br><br>000 to 253: Temperature in F<br><br>254: An error has occurred, the value is not applicable at this time<br><br>255: Unknown, or not applicable |
|---|---|
| Examples | < GET 1 BATT_TEMP_F ><br>< REP 1 BATT_TEMP_F 091 > |

## BATT_ERROR

| Description | View battery error |
|---|---|
| Supported Commands | GET and REP |
| Indexing | Bay Number |
| Values | Format: 3 numbers<br><br>000: No active error<br><br>001: Unknown module<br><br>002: Unrecognized battery<br><br>003: Deep discharge recovery failed<br><br>004: Charge failed<br><br>005: Check battery<br><br>006: Check charger<br><br>007: Communication failure<br><br>254: An error has occurred, the value is not applicable at this time<br><br>255: Unknown, or not applicable |
| Examples | < GET 1 BATT_ERROR ><br>< REP 1 BATT_ERROR 000 > |

## BATT_MODULE_TYPE

| Description | |
|---|---|
| Supported Commands | GET and REP |

| Indexing | Module Number: Depends on the model |
|---|---|
| **Values** | Format: 3 numbers<br><br>Macro corresponding to the model of the module:<br><br>000: No module installed<br><br>001: MXCWNCS<br><br>254: An error has occurred, the value is not applicable at this time<br><br>255: Unknown, or not applicable |
| **Examples** | For an SBC840:<br><br>< GET 1 BATT_MODULE_TYPE ><br>< REP 1 BATT_MODULE_TYPE 128 ><br><br>For a SBC240 ganged system of 3 units:<br><br>< GET 0 BATT_MODULE_TYPE ><br>< REP 1 BATT_MODULE_TYPE 129 ><br>< REP 2 BATT_MODULE_TYPE 129 ><br>< REP 3 BATT_MODULE_TYPE 129 ><br>< REP 4 BATT_MODULE_TYPE 000 > |
| **Notes** | The indexing and values listed above are the super set of all values.<br><br>For the SBCx40 charges the following values are expected:<br><br>SBC220:<br><br>Indexing: 1-4<br>Values: Primary - 133, Secondary - 133 or 129<br><br>SBC240:<br><br>Indexing: 1-4<br>Values: Primary - 129, Secondary - 133 or 129<br><br>SBC840:<br><br>Indexing: 1<br>Values: 128<br><br>SBC840M:<br><br>Indexing: 1<br>Values: 130 |