1 RDM

Requirements:

A directly connected Remote Device Management (= RDM) device to one of the following grandMA2 series devices:

- grandMA2 consoles
- MA onPC command wing
- MA onPC fader wing
- MA 8Port Node onPC/MA 4Port Node onPC
- MA 2Port Node onPC 2K/MA 2Port Node onPC 1K

RDM is a protocol that allows bi-directional communication between the grandMA2 and attached RDM compliant devices (= RDM compliant fixtures) over a standard DMX line. ANSI E1.20 - 2010 by PLASA specifies the RDM standard as an extension of the DMX 512 protocol.

Manual settings like adjusting the DMX starting address are no longer needed. This is especially useful when the device is installed in a remote area.

RDM is integrated in DMX without influencing the connections. The RDM data is transmitted via the standard XLR-poles - new DMX cables are not necessary. RDM ready and conventional DMX devices can be operated in one DMX line. The RDM protocol sends own packages in the DMX512 data feed and does not influence conventional devices.

RDM to grandMA2 can also be done by MA-Net2. This allows configuration, status monitoring, and management of these devices.

RDM can provide the following uses, depending on the RDM device.

- Identification of the connected devices
- Addressing of devices controllable by DMX512
RDM

- Status reporting of fixtures (alerts and warnings)
- Configuration of fixtures by setting RDM parameters

RDM discovers the RDM device every six seconds. If a RDM device is offline, a timeout will be reported after three ineffective RDM discoveries (= 18 seconds).
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1.1 RDM Sheet

To open the RDM sheet, tap at an empty space in the user defined area, tap at Sheets and then RDM.

- The RDM sheet is used to have a quick overview about the discovered RDM devices, their parameters, and their sensors.
- You can set RDM parameter, see work with RDM parameters.
- You can monitor RDM sensors, see work with RDM sensors.
- The first title bar button in the RDM sheet allows to filter the RDM sheet by:
  - All: Displays all RDM discovered RDM devices
  - Current Fixture Type: Displays to the selected fixture or channel the RDM devices with the same fixture type.
  - Selection: Displays only the RDM devices of the fixture or channel selection
  - Alerts/Warnings: Displays only the RDM devices with a notification
  - Unmatched Fixtures: Displays only the unmatched RDM devices
- The second title bar button in the RDM sheet allows to filter the RDM sheet by:
  - Parameters and Sensors
  - Parameters
  - Sensors

For a better overview, you can sort every column up-and-down. To sort a column tap and hold in a header cell of the RDM sheet or right mouse click in the header cell.
1.2 Turn RDM on

To use RDM (= Remote Device Management Protocol) you need to turn on RDM global. By default RDM is turned off.

1.2.1 Turn on RDM global

Requirements:
- One connected RDM device.
- One patched fixture or channel to have an outgoing DMX signal.

1. Press Setup and tap under Console Global Settings.

2. Tap at Enable RDM until the On is yellow.

RDM is global turned on for all universes. The console starts to discover RDM devices.

Hint:
To turn on RDM global, you can also go to Setup -> Patch & Fixture Schedule -> RDM Devices and tap RDM Disabled until RDM Enabled is displayed.
1.2.2 Turn on RDM per universe

If RDM is turned off for an universe, indicated by a red RDM icon in the universe pool, the following example explains how to turn on RDM per universe.

**Requirement:** RDM is global turned on. For more information, see turn on RDM global.

There are two ways to turn on RDM per universe.

**Way A:**

1. Tap on an empty space in the screen, tap Pools, and then item Universes.
   The universe pool opens.

   ![Universe pool](image1)

2. Press Edit and tap at the universe you want to turn on RDM.
   The Edit universe pop-up opens.

   ![Edit universe](image2)

3. Tap and hold in the RDM cell until On is displayed.

**Hint:**
To edit more universes at once, use the sheet style of the universe pool. Open the universe pool, tap at the yellow ball in the title bar, and tap at Sheet Style. Swipe to select the cells you like to edit.

**Important:**
If the On is displayed in red, RDM is global turned off. For more information, see turn on RDM global.

RDM is turned on for the selected universe. A green RDM icon is displayed in the universe tile.
RDM - Turn RDM on

Way B:

1. Press Setup and tap under Show Patch only (Live).
   The Live Setup opens.

   ![Live setup](image)

2. Tap DMX List.
   The DMX list opens.

   ![DMX list](image)
3. Under List of Universes is a column RDM. Tap and hold in the cell until On is displayed for that universe you want to turn on RDM.

RDM is turned on for the selected universe. A green RDM icon is displayed for this universe in the universe pool.

1.3 Match RDM devices

After RDM (= Remote Device Management Protocol) is turned on the grandMA2 starts to discover RDM devices. The discovered RDM devices are displayed in the RDM devices window. On the left hand side there are the fixture types, on the right hand side the fixtures.

When working with parameters only you can skip the match RDM devices topic and continue with the topic work with RDM parameters.

To work with sensors or notifications the RDM devices have to match to the patch. That means you have to select which fixture of the patch belongs to which RDM fixture. Footprint and DMX address have to be the same.

There are two ways to match RDM devices:

- Match to Fixture manually
- Auto-Match by Patch
1.3.1 Match to fixture manually

The match to fixture manually is the preferred way when you are not sure if the MA Fixture and RDM Fixture have the same DMX address and the same DMX footprint. If you already double-checked the DMX address and the DMX footprint use the auto-match by patch function.

---

**Discovered RDM devices**

**Requirement:** RDM is turned on.

1. To open the RDM devices window press Setup and tap under Show at Patch & Fixture Schedule. The Edit Setup opens.

2. Tap in the lower right corner at RDM devices. The RDM devices window opens.

3. To select the fixture type you like to match tap at the corresponding fixture type under Discovered RDM FixtureTypes. The fixtures of the selected fixture type are displayed on the right side of the RDM devices window.

4. To select the fixture tap at the fixture in the table on the right screen side.

5. If you want to identify this fixture in the lighting-rig tap at Identify. The identify mode of the selected fixture starts. For more information about the identify mode, see the fixtures manual.

6. If you have the to be matched fixture selected in the table tap at Match to Fixture. The Match to MA Fixture pop-up opens. This pop-up displays all fixtures in your patch.
For a better overview you can:
- Search in the green search field for fixture or channel ID.
- Select in the title bar one of the patched layers.
- Choose in the title bar if you want to see All fixtures, Unmatched fixtures or Current FixtureType only.

### Match to MA fixture pop-up

7. Tap in the table at the fixture you like to match and tap Match.

**Important:**
RDM universe and DMX universe has to be the same. If they are not the same, double-check the network configuration under **Setup -> Network -> MA Network Configuration** and / or the DMX wiring.
The patch of the selected fixtures matches to the RDM device. A successful match is indicated by green check marks in the field below the fixture table.

### Matched RDM devices

The fixtures are matched.

#### 1.3.2 Auto-Match by Patch

**Important:**

Make sure that the MA Fixture and RDM Fixture have the same DMX address and the same DMX footprint. If they are not the same, match the fixture manually.

The auto-match by patch is a fast way to match fixtures.

1. To open the RDM devices window press Setup and tap under Show at Patch & Fixture Schedule.
   The Edit Setup opens.

2. Tap in the lower right corner at RDM devices.
   The RDM devices window opens.

3. To select the fixture type you like to match tap under Discovered RDM FixtureTypes at the fixture type.
   The fixtures to the selected fixture type are displayed on the right side of the RDM devices window.

4. To select the fixture tap at the fixture in the table on the right screen side.
5. If you want to identify this fixture in the lighting-rig tap at Identify. The identify mode of the selected fixture starts. For more information about the identify mode see the fixtures manual.


The software checks if there is a matched MA fixture with the same DMX address and DMX footprint available. If a matched fixture is found the auto-match is successful. A successful match is indicated by green check marks in the field below the fixture table.

**Matched RDM devices**

**Hint:**
You can also use the keyword `RdmAutomatch` to auto-match RDM devices by using the command line.
1.4  **Auto-Patch RDM devices**

If the RDM fixture DMX address and the DMX address of the patch is not the same, you can auto-patch the fixture and send the patch DMX address via RDM to the fixture.

**Requirements:**
- MA Fixture is matched
- MA Fixtures is patched
- MA Fixture and RDM Fixture have the same universe

1. Open the RDM devices window. Press Setup and tap under **Show at Patch & Fixture Schedule**.
   The **Edit Setup** opens.

2. Tap in the lower right corner at RDM devices.
   The **RDM devices window** opens.

3. To select the fixture type you like to auto-patch tap at the corresponding fixture type under **Discovered RDM FixtureTypes**.
   The fixtures to the selected fixture type are displayed on the right side of the RDM devices window.

4. To select the fixture tap at the fixture in the table on the right screen side.

5. Tap **Auto-Patch**.
The patched DMX address will be sent via RDM to the RDM fixture. The selected fixture is auto-patched. The green check marks in the field below the fixture table indicates a successful match and patch.

**Auto-patched RDM fixture**

**Hint:**
You can also auto-patch fixtures by using the `RdmAutopatch keyword`. 
1.5 Work with RDM parameters

After the RDM is turned on and an RDM fixture is discovered, you can:

- Send RDM commands to the RDM fixture, see Set RDM parameter
- Add RDM parameter used by the fixture, see Add RDM parameter
- Delete previous added parameters, see Delete RDM parameter

1.5.1 Set RDM parameters

The following examples will explain the set parameter function with the example of changing the fixture mode.

There are two ways to set RDM parameter.

Requirements: RDM is turned on and at least one RDM fixture is discovered.

Way A:

1. Open the RDM sheet. Tap on an empty space in the user defined area, tap at Sheets and then at RDM.
2. The RDM sheet opens.
3. Scroll with the scroll bar to the column DMX PERSONALITY and tap at the cell you like to change the fixture mode. Press the screen encoder.
4. The Select RDM Mode pop-up opens.
5. Tap at the mode the fixture should use.

A new mode is set and transmitted via RDM to the RDM fixture.

Way B:


2. Tap in the lower right corner at RDM devices. The RDM devices window opens. In this window, you can set the parameter of the DMX personality and the DMX start address of the RDM fixture.

3. To select the fixture type you like set parameters to, tap at under Discovered RDM FixtureTypes at the fixture type. The fixtures to the selected fixture type are displayed on the right side of the RDM devices window.

4. To select the fixture, tap at the fixture in the table on the right screen side.
5. Tap in the lower right corner at RDM Info. The RDM Parameters window opens. In the title bar, you can choose between Show only Set, Show only Get, Show All, and FixtureType Messages.

6. Tap and hold the value cell in the row DMX PERSONALITY. The Select RDM Mode pop-up opens.

7. Tap at the mode the fixture should use.

8. Double-check if Yes is set in the cell of the column Poll. Yes means, that the information is collected from the fixture. If Poll is set to No, you can change the parameter but the changes are not visible in the console. If No is set, tap and hold in the cell until Yes is set.

A new mode is set and transmitted via RDM to the RDM fixture.
1.5.2 Add RDM parameter

If the fixture uses RDM parameters but those parameters are not transmitted, you can add RDM parameter.

1. Open the RDM devices window.
   - Press Setup, and tap under Show at Patch & Fixture Schedule.
   - Tap in the lower right corner at RDM devices.

2. To select the fixture type you like to add parameters to, tap at under Discovered RDM FixtureTypes at the fixture type.
   The fixtures to the selected fixture type are displayed on the right side of the RDM devices window.

3. To select the fixture, tap at the fixture in the table on the right screen side.

4. Tap in the lower right corner at RDM Info.
   The RDM Parameters window opens.

5. Tap Add.
   The calculator opens.

   ![Calculator Add RDM parameter](image)

6. Enter the hex value or tap at one of the standard RDM parameters.

   The RDM parameter is added and visible in the RDM parameters window.
1.5.3 Delete RDM parameter

Important:
The delete RDM parameters function is not oopsable.

You can delete previous added RDM parameters.

1. Open the RDM devices window.
   - Press Setup, and tap under Show at Patch & Fixture Schedule.
   - Tap in the lower right corner at RDM devices.

2. To select the fixture type you like to delete parameters from, tap at under Discovered RDM FixtureTypes at the fixture type.
   The fixtures to the selected fixture type are displayed on the right side of the RDM devices window.

3. To select the fixture, tap at the fixture in the table on the right screen side.

4. Tap in the lower right corner at RDM Info.
   The RDM Parameters window opens.

5. Tap at the to be deleted parameter.

6. Tap Delete.

The parameter is deleted.
1.6  **Work with RDM sensors**

After the RDM fixture is matched, you can:

- Monitor RDM sensors via the RDM sheet
- Monitor RDM sensors via Edit Setup / Reset RDM sensors

### 1.6.1 Monitor RDM sensors via the RDM sheet

The following example explains how to monitor RDM sensors.

**Requirements:**

- RDM is turned on
- Fixture is matched
- Fixture is patched

1. Open the RDM sheet. Tap on an empty space in the user-defined area, tap at Sheets and then at RDM.

The RDM sheet opens.

```
RDM sheet - Sensors
```

2. To get the sensors displayed, tap at the right title bar button at Sensor or Parameters and Sensors.

In default, the transmitted sensor data are displayed at the far right of the RDM sheet.

**Hint:**
You can also monitor the RDM sensors by using the **RDMInfo keyword**.
1.6.2 Monitor RDM sensors via the Edit Setup / Reset RDM sensors

The following example explains how to reset an RDM sensor. This is also the way to monitor RDM sensors via the Edit Setup.

1. Open the RDM devices window. Press Setup and tap under Show at Patch Et Fixture Schedule.
   The Edit Setup opens.

2. Tap in the lower right corner at RDM devices.
   The RDM devices window opens.

3. To select the fixture type you like to reset the sensor for tap at the corresponding fixture type under Discovered RDM FixtureTypes.
   The fixtures to the selected fixture type are displayed on the right side of the RDM devices window.

4. To select the fixture, tap at the fixture in the table on the right screen side.

5. Tap at RDM Info.
   The RDM Parameters window opens.
6. Tap on the right screen side at Sensors. This window displays the transmitted data to the sensors of the RDM device to monitor them.

![RDM sensors window](image)

7. To clear the low and high values of a sensor, tap at the sensor in the table and tap Reset Sensor.

You have reset a sensor.

### 1.7 Configure RDM notifications

You can add or delete RDM notifications to or from the fixture types. RDM notification can be add for RDM parameters and for RDM sensors. Choose if the notification should be a RDM alert (displayed in red) or a RDM warning (displayed in yellow). The RDM notifications are applied for all fixtures of the fixture type.

Depending on the settings in the windows, the RDM notifications icons are displayed in the:

- Fixture Sheet
- Layout View
- Command line

The RDM notifications themselves are displayed in the:

- Message Center
- RDM Messages, go to Setup -> Patch & Fixture Schedule -> RDM Devices -> RDM Info -> Messages.
1.7.1 Add RDM notifications

The following example will explain how to add a RDM notification.

Requirements:

- RDM is turned on
- Fixture is matched
- Fixture is patched

1. Open the Channels window.
   - Press Setup, and tap under Show at Patch & Fixture Schedule.
   - Tap on the right screen side at Fixture Types.
   - Tap at the fixture type in the table you like to add a notification to and tap Edit.
   The Channels window opens.

   ![Channels window image]

   **Fixture Type Editor**

2. Tap on the right screen side RDM Notifications.
3. The Configure RDM Notifications window opens. Absent is a RDM warning by default and can not be deleted. You can change the RDM Notification Type. The Absent warning appears if the RDM device is not reachable anymore.

![Configure RDM Notifications window](image)

3.1 Configure RDM Notifications window

4. Tap Add or tap in the cell of the column Type and press the screen encoder. The Select RDM Notification Type pop-up opens.

![Select RDM Notification Type pop-up](image)

4.1 Select RDM Notification Type pop-up

5. Tap at Parameter or Sensor, depending for what type you want to add a RDM notification. To edit the next cell, tap at the Parameter/Sensor ID cell and press the screen encoder. The Select RDM Notification ID pop-up opens.

![Select RDM Notification ID pop-up](image)

5.1 Select RDM Notification ID pop-up
6. Tap at the Parameter or Sensor you like to add a RDM notification for. To edit the next cell, tap at the Threshold Operator cell and press the screen encoder. The Select RDM Notification Threshold Operator pop-up opens.

7. Select when the RDM notification should appear:
   - None: No RDM Notification.
   - Is: If exactly the threshold value is reached.
   - Is Not: If any value but not the threshold value is reached.
   - Greater Than: If a value greater than the threshold value is reached.
   - Less Than: If a value less than the threshold value is reached.
   To edit the next cell, tap at the Threshold Value cell and press the screen encoder. The Calculator opens.

8. Enter the threshold value in the calculator. The title bar displays the allowed value range. To edit the next cell, tap at the Notification Type cell and press the screen encoder. The Select RDM Notification Type pop-up opens.

9. Tap at RDM Alert (red) or RDM Warning (yellow).

The RDM notification is added.
1.7.2 Delete RDM notifications

If you do not need a previous added RDM notification anymore, you can delete the RDM notification from the fixture type.

The following example will explain how to delete a RDM notification.

1. Open the Configure RDM Notifications window.
   - Press Setup, and tap under Show at Patch & Fixture Schedule.
   - Tap on the right screen side at Fixture Types.
   - Tap at the fixture type in the table you like to add a notification to and tap Edit.
   - Tap on the right screen side RDM Notifications.

   The Configure RDM Notifications window opens.

   [Image]

   **Configure RDM Notifications window**

2. Tap in the table at the to be deleted notification.

3. Tap Delete.

   The RDM notification is deleted.
1.8 Unmatch RDM devices

To unmatch RDM devices from the patch:

1. Open the RDM devices window. Press Setup, and tap under Show at Patch & Fixture Schedule.
   The Edit Setup opens.

2. Tap in the lower right corner at RDM devices.
   The RDM devices window opens.

3. To select the fixture type you like to unmatch, tap at under Discovered RDM FixtureTypes at the fixture type.
   The fixtures to the selected fixture type are displayed on the right side of the RDM devices window.

4. To select the fixture, tap at the fixture in the table on the right screen side.

5. Tap Unmatch.

The selected fixture is unmatched from the patch.

Unmatched RDM device

Hint:
You can also unmatch RDM devices by using the keyword RdmUnmatch.
1.9 Turn RDM off

To ensure a trouble-free DMX signal and to minimize network traffic, we recommend to turn RDM off for universes including only fixtures NOT providing RDM functionality.

1.9.1 Turn off RDM per universe

There are two ways to do this.

Way A:

1. Tap on an empty space in the screen, tap Pools, and then item Universes.
   The universe pool opens.

2. Press Edit and tap at the universe you want to turn off RDM.
   The Edit universe pop-up opens.

3. Tap in the RDM cell until the cell is empty.

RDM is turned off for the selected universe. The green RDM icon is not visible anymore in the universe pool – pool style.

Way B:

1. Press Setup and tap under Show Patch only (Live).
   The Live Setup opens.

2. Tap DMX List.
   The DMX list opens.

3. Under List of Universes is a column RDM. Tap in the RDM cell until the cell is empty for that universe you want to turn off RDM.

RDM is turned off for the selected universe. The green RDM icon is not visible anymore in the universe pool – pool style.
1.9.2 Turn off RDM global

There are two ways to turn off RDM global.

Way A:

1. Press Setup and tap under Console Global Settings.

   ![Console Global Settings](image)

   Setup global settings

2. Tap at Enable RDM until the Off is yellow.

RDM is global turned off. The **red RDM icon** is displayed in the universe pool – pool style, if RDM is on for that universe.
Way B:

1. Press Setup and tap under Show Patch & Fixture Schedule. The Edit Setup opens.

2. Tap in the lower right corner at RDM Devices. The RDM Devices window opens.

3. Tap at RDM Enabled until RDM Disabled is displayed.

RDM is global turned off. The red RDM icon \(^{\text{RDM}}\) is displayed in the universe pool – pool style, if RDM is on for that universe.
2 RDM Keywords

2.1 RdmAutomatch Keyword

To get the RdmAutomatch keyword in the command line, type RdmAutomatch or the shortcut RdmA in it.

2.1.1 Description

Requirements:
- MA Fixture is not matched
- MA Fixture and RDM Fixture have the same DMX address
- MA Fixture Type has no or the same RDMFixtureType ID as the RDM Fixture
- MA Fixture Type has the same DMX footprint as the RDM Fixture
- All Subfixtures of the MA Fixture are in the current World and Filter

The RdmAutomatch keyword automatches RDM Fixtures.

Possible objects are:

- Channel
- Fixture
- FixtureType
- RDMFixtureType
- Group
- Sequence
- Cue
- Executor
- Preset (only selective Presets)
- Selection
- World

If no object is given, the current selection will be used.

RdmAutomatch is a function keyword.

For more information, see RDM.
RDM Keywords - RdmAutopatch Keyword

2.1.2 Syntax

RdmAutomatch [Object List]

2.1.3 Examples

- To automatch the selected fixtures, type in the command line:

  [Channel]> RdmAutomatch

- To automatch the fixtures used in group 1, type in the command line:

  [Channel]> RdmAutomatch Group 1

- To automatch only the fixtures used in group 1 and also used in sequence 2, type in the command line:

  [Channel]> RdmAutomatch Group 1 If Sequence 2

2.2 RdmAutopatch Keyword

To get the RdmAutopatch keyword in the command line, type RdmAutopatch in the command line or use the shortcut RdmAutop.

2.2.1 Description

Requirements:
- MA Fixture is matched
- MA Fixture is patched
- MA Fixture and RDM Fixture have the same universe

The RdmAutopatch keyword patches the RDM fixtures to the DMX address in the setup.
RDM Keywords - RdmAutopatch Keyword

Possible objects are:

- Channel
- Fixture
- FixtureType
- RDMFixtureType
- Group
- Sequence
- Cue
- Executor
- Preset (only selective Presets)
- Selection
- World

If no object is given, the current selection will be used.

RdmAutopatch is a function keyword.

For more information about, see RDM.

2.2.2 Syntax

RdmAutopatch [Object List]

2.2.3 Examples

- To autopatch the selected fixtures, type in the command line:

  [Channel]> RdmAutopatch

- To autopatch the fixtures used in group 1, type in the command line:

  [Channel]> RdmAutopatch Group 1

- To autopatch only the fixtures used in group 1 and also used in sequence 2, type in the command line:

  [Channel]> RdmAutopatch Group 1 If Sequence 2
2.3 RdmFixtureType Keyword

To get the RdmFixtureType keyword in the command line, type `RdmFixtureType` or the shortcut `Rd` in the command line.

2.3.1 Description

The RdmFixtureType is an object keyword to access Rdm fixtures with a Rdm fixture type ID.

To get the RdmFixtureType ID, go to Setup -> Patch & Fixture Schedule -> RDM Devices. The RdmFixtureType ID is displayed in the information field.

Hint:
To get the RdmFixtureType ID you can also enter in the command line, CD RDM_Data.RDM_Fixture_Types. Then enter in the command line List, press Please, and open the command line feedback window.

For more information, see RDM.

2.3.2 Syntax

[RDM Function] RdmFixtureType [ID]

2.3.3 Examples

- To automatch RDM fixture type 1, type in the command line:

  [Channel]> RdmAutomatch RdmFixtureType 1

- To unmatch RDM fixture type 1, type in the command line:

  [Channel]> RdmUmatch RdmFixtureType 1
2.4 RdmInfo Keyword

To get the RdmInfo keyword in the command line, type `RdmInfo` or the shortcut `RdmI` in the command line.

2.4.1 Description

The RdmInfo keyword opens the RDM info pop-up with the actual RDM information to the entered fixture or channel.

The RdmInfo keyword is a function keyword.

For more information, see RDM.

2.4.2 Syntax

RdmInfo [Channel / Fixture] [ID]

RdmInfo [Channel / Fixture] [ID] / [screen] [ID]

2.4.3 Examples

To open the RDM Info pop-up for fixture 3, type in the command line:

```
[Channel]> RDMInfo Fixture 3
```

The RDM Info pop-up opens.

![RDM Info pop-up](image)

---

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RDM Keywords - RdmList Keyword

To open the RDM Info pop-up for fixture 3 on screen 3:

1. Type in the command line:

   [Channel]> RDMInfo Fixture 3/screen = 3

2. Press Please.

The RDM Info pop-up opens on screen 3.

### 2.5 RdmList Keyword

To get the RdmList keyword in the command line, type RdmList or the shortcut RdmL in the command line.

#### 2.5.1 Description

The RdmList keyword generates a list of the received RDM data. The list is displayed in the command line feedback window.

If no fixture or channel ID is given, all RDM data will be listed.

The RdmList keyword is a function keyword.

#### 2.5.2 Syntax

RdmList [Channel / Fixture] [ID] / [Option] = [Option value]

#### 2.5.3 Options

To get a list all available options to the RdmList keyword, type in the command line:

[Channel]> RdmList /?

The RdmList has the following options:

<table>
<thead>
<tr>
<th>Option</th>
<th>Option shortcut</th>
<th>Option value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filename</td>
<td>f</td>
<td>e.g. &quot;data&quot;</td>
<td>Generates the RDM list in the temp folder called data.txt. If no filename is given, the filename is called RDM.txt.</td>
</tr>
<tr>
<td>multipatch</td>
<td>M</td>
<td>e.g. 3</td>
<td>Generates the RDM list only for the third multipatch fixture.</td>
</tr>
<tr>
<td>UID</td>
<td>no shortcut</td>
<td>e.g. &quot;43500F019FCB&quot;</td>
<td>Generates the RDM list for this specific UID.</td>
</tr>
</tbody>
</table>
2.5.4 Examples

- To get the RDM list of fixture 3 in the command line feedback window, type in the command line:

  [Channel]> RdmList Fixture 3

- To get the RDM list of fixture 3 in the command line feedback window and as a .txt file called RDM Fixture 3 in the temp folder, type in the command line:

  [Channel]> RdmList Fixture 3 / filename = "RDM Fixture 3"

2.6 RdmSetParameter Keyword

To get the RdmSetParameter keyword in the command line, type RdmSetParameter in the command line or use the shortcut RdmS.

2.6.1 Description

With the RdmSetParameter keyword you can set RDM parameters by using the command line.

If no Unique ID is given, the fixture selection will be used.

The RdmSetParameter keyword is a function keyword.

2.6.2 Syntax

RdmSetParameter [Parameter ID ] [Parameter Value] / [Option] = [Option value]

2.6.3 Parameter ID (= PID)

You can enter the PIDs in the command line by using the PID name or the PID hex number.

Important:
If you enter manufacturer specific PIDs or PID values in the command line, it is necessary to use the hex value. A manufacturer specific PID name or PID value name can not be processed from a grandMA2 command line.

The following table lists the supported PIDs along with the command line and the parameter value.

<table>
<thead>
<tr>
<th>PID name</th>
<th>PID hex value</th>
<th>PID value name</th>
<th>PID value hex value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLEAR_STATUS_ID</td>
<td>0x0032</td>
<td>No value.</td>
<td>---</td>
<td>Clears the status message queue.</td>
</tr>
<tr>
<td>PID name</td>
<td>PID hex value</td>
<td>PID value name</td>
<td>PID value hex value</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------</td>
<td>---------------</td>
<td>----------------</td>
<td>---------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>DEVICE_ HOURS</td>
<td>0x0400</td>
<td>32 bit number.</td>
<td>---</td>
<td>Retrieves or sets the number of hours of operation.</td>
</tr>
<tr>
<td>DEVICE_LABEL</td>
<td>0x0082</td>
<td>ASCII text label. Up to 32 characters.</td>
<td>---</td>
<td>Provides a means of setting a descriptive label for each device.</td>
</tr>
<tr>
<td>DEVICE_POWER_CYCLES</td>
<td>0x0405</td>
<td>Power Cycle Count (32-bit)</td>
<td>---</td>
<td>Retrieves or sets the number of power-up cycles. Some devices may only support the GET_COMMAND for this operation and not allow the device's power-up cycles to be set.</td>
</tr>
<tr>
<td>DISPLAY_INVERT</td>
<td>0x0500</td>
<td>Off On Auto</td>
<td>0x00 0x01 0x02</td>
<td>Retrieves or changes the display invert setting. Invert is often used to rotate the display image by 180 degrees.</td>
</tr>
<tr>
<td>DISPLAY_LEVEL</td>
<td>0x0501</td>
<td>Display Level</td>
<td>Manufacturer specific. See fixture manual.</td>
<td>Retrieves or changes the display intensity setting.</td>
</tr>
<tr>
<td>DMX_PERSONALITY</td>
<td>0x00E0</td>
<td>Current Personality # of Personalities</td>
<td>---</td>
<td>Sets the responder's DMX512 personality. Many devices such as moving lights have different DMX512 personalities. Many RDM parameters may be affected by changing personality.</td>
</tr>
<tr>
<td>DMX_START_ADDRESS</td>
<td>0x00F0</td>
<td>DMX512 Address (16-bit).</td>
<td>---</td>
<td>Sets the DMX512 start address</td>
</tr>
<tr>
<td>FACTORY_DEFAULTS</td>
<td>0x0090</td>
<td>False True</td>
<td>0x00 0x01</td>
<td>Reverts the device to its factory default user settings or configuration.</td>
</tr>
<tr>
<td>IDENTIFY DEVICE</td>
<td>0x1000</td>
<td>Off, Stop On, Start</td>
<td>0x00 0x01</td>
<td>Physically identifies the device represented by the UID.</td>
</tr>
<tr>
<td>PID name</td>
<td>PID hex value</td>
<td>PID value name</td>
<td>PID value hex value</td>
<td>Description</td>
</tr>
<tr>
<td>------------------</td>
<td>---------------</td>
<td>---------------------------------</td>
<td>---------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>LAMP_HOURS</td>
<td>0x0401</td>
<td>Lamp Hours (32-bit)</td>
<td>---</td>
<td>Retrieves the number of lamp hours or to sets the counter to a specific start value.</td>
</tr>
<tr>
<td>LAMP_ON_MODE</td>
<td>0x0404</td>
<td>Manufacturer-Specific Modes</td>
<td>0x00 0x01 0x02 0x03 0x80 – 0xDF</td>
<td>Retrieves or changes the current Lamp On Mode. The Lamp On Mode defines the conditions under which a lamp will be struck.</td>
</tr>
<tr>
<td>LAMP_STATE</td>
<td>0x0403</td>
<td>Manufacturer-Specific States</td>
<td>0x00 0x01 0x02 0x03 0x04 0x7F 0x80 – 0xDF</td>
<td>Retrieves or changes the current operating state of the lamp.</td>
</tr>
<tr>
<td>LAMP_STRIKES</td>
<td>0x0402</td>
<td>Lamp Strikes (32-bit)</td>
<td>---</td>
<td>Retrieves the number of lamp strikes or to sets the counter to a specific start value.</td>
</tr>
<tr>
<td>LANGUAGE</td>
<td>0x00B0</td>
<td>2 character alpha code for ISO 639-1</td>
<td>---</td>
<td>Changes the language of the messages.</td>
</tr>
<tr>
<td>PAN_INVERT</td>
<td>0x0600</td>
<td>Off On</td>
<td>0x00 0x01</td>
<td>Retrieves or changes the pan invert setting.</td>
</tr>
<tr>
<td>PAN_TILT_SWAP</td>
<td>0x0602</td>
<td>Off On</td>
<td>0x00 0x01</td>
<td>Retrieves or changes the pan/tilt swap setting.</td>
</tr>
<tr>
<td>PERFORMSELFTEST</td>
<td>0x1020</td>
<td>SELF_TEST_OFF Manufacturer Tests SELF_TEST_ALL</td>
<td>0x00 0x01 – 0xFE 0xFF</td>
<td>Executes any built in self-test routine that may be present.</td>
</tr>
<tr>
<td>PID name</td>
<td>PID hex value</td>
<td>PID value name</td>
<td>PID value hex value</td>
<td>Description</td>
</tr>
<tr>
<td>---------------</td>
<td>---------------</td>
<td>---------------------------------</td>
<td>--------------------</td>
<td>----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>POWER_STATE</td>
<td>0x1010</td>
<td>POWER_STATE_FULL_OFF</td>
<td>0x00</td>
<td>Retrieves or changes the power state.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>POWER_STATE_SHUTDOWN</td>
<td>0x01</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>POWER_STATE_SLEEPS</td>
<td>0x02</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>POWER_STATE_STANDBY</td>
<td>0xFF</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>POWER_STATE_NORMAL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>REAL_TIME_CLOCK</td>
<td>0x0603</td>
<td>Year (16-bit), Month, Day, Hour, Minute, Second</td>
<td>---</td>
<td>Retrieves or set the real-time clock in a device.</td>
</tr>
<tr>
<td>RECORD_SENSORS</td>
<td>0x0202</td>
<td>Sensor Number</td>
<td>---</td>
<td>Instructs devices such as dimming racks that monitor load changes to store the current value for monitoring sensor changes.</td>
</tr>
<tr>
<td>RESET_DEVICE</td>
<td>0x1001</td>
<td>Warm Reset</td>
<td>0x01</td>
<td>Resets the responder.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cold Reset</td>
<td>0xFF</td>
<td></td>
</tr>
<tr>
<td>SENSOR_VALUE</td>
<td>0x0201</td>
<td>Sensor #, Present Value (16-bit), Lowest Detected Value (16-bit), Highest Detected Value (16-bit), Recorded Value (16-bit)</td>
<td>---</td>
<td>Retrieves or reset sensor data.</td>
</tr>
<tr>
<td>TILT_INVERT</td>
<td>0x0601</td>
<td>Off</td>
<td>0x00</td>
<td>Retrieves or changes the tilt invert setting.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>On</td>
<td>0x01</td>
<td></td>
</tr>
</tbody>
</table>
### 2.6.4 Options

To get a list all available options to the RdmSetParameter keyword, type in the command line:

```
[Channel]> RdmSetParameter /?
```

The RdmSetParameter has the following options:

<table>
<thead>
<tr>
<th>Option</th>
<th>Option shortcut</th>
<th>Option value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>multipatch</td>
<td>m</td>
<td>0 = multipatch for all fixtures</td>
<td>Sets the multipatch index.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 = multipatch for one fixture and so on</td>
<td></td>
</tr>
<tr>
<td>UID</td>
<td>No shortcut</td>
<td>e.g. &quot;43500F019FCB&quot;</td>
<td>Sets the RDM UID to send RDM Parameter to the device.</td>
</tr>
</tbody>
</table>

### 2.6.5 Examples

- To set the DMX start address to 3 of a RDM device, type in the command line:

  ```
  [Channel]> RdmSetParameter dmx_start_address 3 / UID = 43500F019FCB
  ```

- To invert the display of a RDM device for the selected fixture, type in the command line:

  ```
  [Channel]> RdmSetParameter invert_display 1
  ```
2.7  RdmSetPatch Keyword

To get the RdmSetPatch keyword in the command line, type `RdmSetPatch` or the shortcut `RdmSetPat` in it.

2.7.1  Description

With the RdmSetPatch keyword you set the DMX address of a RDM fixture by using the command line.

If no Unique ID is given, the fixture selection will be used.

The RdmSetPatch keyword is a function keyword.

2.7.2  Syntax

RdmSetPatch [DMX address] / [Option] = [Option Value]

2.7.3  Options

To get a list all available options to the RdmSetPatch keyword, type in the command line:

[Channel]> RdmSetPatch /?

The RdmSetpatch has the following options:

<table>
<thead>
<tr>
<th>Option</th>
<th>Option shortcut</th>
<th>Option value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>multipatch</td>
<td>m</td>
<td>0 = for all multipatches and the fixture</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 = multipatch for the first multipatch fixture and so on</td>
<td>Sets the multipatch index.</td>
</tr>
<tr>
<td>UID</td>
<td>No shortcut available</td>
<td>e.g. &quot;43500F019FCB&quot;</td>
<td>Sets the RDM UID to send RDM Parameter to the device.</td>
</tr>
</tbody>
</table>
2.7.4 Examples

- To set the fixtures of the current fixture selection to the DMX address 25, type in the command line:

[Channel]> RdmSetPatch 25

- To set the fifth multipatch fixture of the current fixture selection to the DMX address 25, type in the command line:

[Channel]> RdmSetPatch 25 / multipatch = 5

- To set the DMX address of the fixture with the UID 43500F019FCB to 25, type in the command line:

[Channel]> RdmSetPatch 25 / UID = 43500F019FCB
2.8 RdmUnmatch Keyword

To get the RdmUnmatch keyword in the command line, type `RdmUnmatch` or the shortcut `Rdm` in the command line.

2.8.1 Description

The RdmUnmatch keyword unmatches previous matched RDM devices in the show file. If no object is given, the current selection will be used.

Possible objects are:

- Channel
- Fixture
- FixtureType
- RDMFixtureType
- Group
- Sequence
- Cue
- Executor
- Preset (only selective Presets)
- Selection
- World

The RdmUnmatch keyword is a function keyword.

2.8.2 Syntax

`RDMUnmatch [Object-List]`

2.8.3 Examples

- To unmatch the selected fixtures, type in the command line:

  `[Channel]> RdmUnmatch`

- To unmatch the fixtures used in group 1, type in the command line:

  `[Channel]> RdmUnmatch Group 1`
RDM Keywords - RdmUnmatch Keyword

- To unmatch the fixtures used in group 1 and in sequence 2, type in the command line:

[Channel]> RdmUnmatch Group 1 If Sequence 2