**DALI COMMANDS**

|  |  |
| --- | --- |
| **Type of addresses:** | **address byte:** |
|  |  |
| Short or group address | YAAAAAAS |
| Short addresses (64) | 0AAAAAAS |
| Group addresses (16) | 100AAAAS |
| Broadcast | 100AAAAS |
| Special command | 101CCCC1 |
| Special command | 110CCCC1 |
|  |  |
| S: selector bit: | S = ‘0’ direct arc power level following |
|  | S = ‘1’ command following |
|  | Y = ‘0’ short address |
|  | Y = ‘1’ group address or broadcast |
| A: significant address bit |  |
| C: significant command bit |  |
|  |  |

Table 1 contains a complete summary of the DALI command set. Basically there are four types of commands (forward frames):

1. Direct / Indirect arc power control commands – used to set ballast power level.

2. Configuration commands – configures the ballast (for example: add to a group or store level). Command must be repeated within 100 ms, otherwise it’s ignored.

3. Query commands – ask slave (ballast) for status information (for example: power level or version number). The slave can send a backward frame.

4. Special commands – used to initialize and setup the ballast, some must be repeated within 100 ms, and some require an answer from the slave. Most commands are only processed within 15 minutes after an “INITIALIZE” command is received.

**Table 1. DALI Command Set Summary**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Number** |  | **Command Code** |  | **Repeat < 100 ms** | | **Answer Slave** |  | **Command Name** |  |
|  |  |  |  |  |  |  |  |  |  |  |
|  | **-** |  | **YAAA AAA0 XXXX XXXX** |  | **no** |  | **no** | **DIRECT ARC POWER CONTROL** | |  |
|  | **0** |  | **YAAA AAA1 0000 0000** |  | **no** |  | **no** |  | **OFF** |  |
|  | **1** |  | **YAAA AAA1 0000 0001** |  | **no** |  | **no** | **UP** | |  |
|  | **2** |  | **YAAA AAA1 0000 0010** |  | **no** |  | **no** |  | **DOWN** |  |
|  | **3** |  | **YAAA AAA1 0000 0011** |  | **no** |  | **no** |  | **STEP UP** |  |
|  | **4** |  | **YAAA AAA1 0000 0100** |  | **no** |  | **no** |  | **STEP DOWN** |  |
|  | **5** |  | **YAAA AAA1 0000 0101** |  | **no** |  | **no** |  | **RECALL MAX LEVEL** |  |
|  | **6** |  | **YAAA AAA1 0000 0110** |  | **no** |  | **no** | **RECALL MIN LEVEL** | |  |
|  | **7** |  | **YAAA AAA1 0000 0111** |  | **no** |  | **no** |  | **STEP DOWN AND OFF** |  |
|  | **8** |  | **YAAA AAA1 0000 1000** |  | **no** |  | **no** |  | **ON AND STEP UP** |  |
|  | **9-15** |  | **YAAA AAA1 0000 1XXX** |  |  |  |  |  | **RESERVED** |  |
|  | **16 - 31** |  | **YAAA AAA1 0001 XXXX** |  | **no** |  | **no** |  | **GO TO SCENE** |  |
|  | **32** |  | **YAAA AAA1 0010 0000** |  | **yes** |  | **no** |  | **RESET** |  |
|  | **33** |  | **YAAA AAA1 0010 0001** |  | **yes** |  | **no** |  | **STORE ACTUAL LEVEL IN THE DTR** |  |
|  |  |  |  |  |  |
|  | **34 - 41** |  | **YAAA AAA1 0010 XXXX** |  |  |  |  |  | **RESERVED** |  |
|  | **42** |  | **YAAA AAA1 0010 1010** |  | **yes** |  | **no** |  | **STORE THE DTR AS MAX LEVEL** |  |
|  |  |  |  |  |  |
|  | **43** |  | **YAAA AAA1 0010 1011** |  | **yes** |  | **no** |  | **STORE THE DTR AS MIN LEVEL** |  |
|  |  |  |  |  |  |
|  | **44** |  | **YAAA AAA1 0010 1100** |  | **yes** |  | **no** |  | **STORE THE DTR AS SYSTEM FAILURE LEVEL** |  |
|  |  |  |  |  |  |
|  | **45** |  | **YAAA AAA1 0010 1101** |  | **yes** |  | **no** |  | **STORE THE DTR AS POWER ON LEVEL** |  |
|  |  |  |  |  |  |
|  | **46** |  | **YAAA AAA1 0010 1110** |  | **yes** |  | **no** |  | **STORE THE DTR AS FADE TIME** |  |
|  |  |  |  |  |  |
|  | **47** |  | **YAAA AAA1 0010 1111** |  | **yes** |  | **no** |  | **STORE THE DTR AS FADE RATE** |  |
|  |  |  |  |  |  |
|  | **48 - 63** |  | **YAAA AAA1 0011 XXXX** |  |  |  |  |  | **RESERVED** |  |
|  | **64 - 79** |  | **YAAA AAA1 0100 XXXX** |  | **yes** |  | **no** |  | **STORE THE DTR AS SCENE** |  |
|  |  |  |  |  |  |
|  | **80 - 95** |  | **YAAA AAA1 0101 XXXX** |  | **yes** |  | **no** |  | **REMOVE FROM SCENE** |  |
|  |  |  |  |  |  |
|  | **96 - 111** |  | **YAAA AAA1 0110 XXXX** |  | **yes** |  | **no** |  | **ADD TO GROUP** |  |
|  |  |  |  |  |  |
|  | **112 -127** |  | **YAAA AAA1 0111 XXXX** |  | **yes** |  | **no** |  | **REMOVE FROM GROUP** |  |
|  |  |  |  |  |  |
|  | **128** |  | **YAAA AAA1 1000 0000** |  | **yes** |  | **no** |  | **STORE DTR AS SHORT ADDRESS** |  |
|  |  |  |  |  |
|  | **129 -143** |  | **YAAA AAA1 1000 XXXX** |  |  |  |  |  | **RESERVED** |  |
|  | **144** |  | **YAAA AAA1 1001 0000** |  | **no** |  | **yes** |  | **QUERY STATUS** |  |
|  |  |  |  |  |
|  | **145** |  | **YAAA AAA1 1001 0001** |  | **no** |  | **yes** |  | **QUERY BALLAST** |  |
|  |  |  |  |  |  |
|  | **146** |  | **YAAA AAA1 1001 0010** |  | **no** |  | **yes** |  | **QUERY LAMP FAILURE** |  |
|  |  |  |  |  |  |
|  | **147** |  | **YAAA AAA1 1001 0011** |  | **no** |  | **yes** |  | **QUERY LAMP POWER ON** |  |
|  |  |  |  |  |  |
|  | **148** |  | **YAAA AAA1 1001 0100** |  | **no** |  | **yes** |  | **QUERY LIMIT ERROR** |  |
|  |  |  |  |  |  |
|  | **149** |  | **YAAA AAA1 1001 0101** |  | **no** |  | **yes** |  | **QUERY RESET STATE** |  |
|  |  |  |  |  |  |
|  | **150** |  | **YAAA AAA1 1001 0110** |  | **no** |  | **yes** |  | **QUERY MISSING SHORT ADDRESS** |  |
|  |  |  |  |  |  |
|  | **151** |  | **YAAA AAA1 1001 0111** |  | **no** |  | **yes** |  | **QUERY VERSION NUMBER** |  |
|  |  |  |  |  |  |
| **152** | |  | **YAAA AAA1 1001 1000** |  | **no** |  | **yes** |  | **QUERY CONTENT DTR** | |
|  |  |  |  |  |  |