

unique automation

Units 12 – 14 Orion Business Centre, Surrey Canal Road, London SE14 5RT

Project number:

Project name: **BOM2 Protocol Steam**

Doc type: **Design process**

Author:	Emeric Bombenger
Version:	1.0.0.0
Data:	03/05/2016

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Changes

Date	Author	Description
03/05/2016	Emeric B	First Draw

BOM2 Protocol

Communication parameters

Parameter name	Value
Protocol	TCP
Ports	23, 24

Frame structure

Frames without parameters

Command	STI2_	XXX	!	<0x0d>
Query			?	
	Header	Frame Number	Type identification	End character

Frames with parameters

Command	STI2_	XXX	“ ”	PPPPP...	!	<0x0d>
Query			_		?	
	Header	Frame Number	Parameters indicator	Parameters	Type identification	End character

Response without parameters

Command	OK_	XXX	<0x0d>
Query			
	Header	Frame Number	End character

Response with parameters

Command	OK_	XXX	“ ”	PPPPP...	<0x0d>
Query			_		
	Header	Frame Number	Parameters indicator	Parameters	End character

Queries List

Nu m	Name	Description																																																																								
001	Current Values	Response																																																																								
<table border="1"> <thead> <tr> <th colspan="2">Current state</th> <th colspan="3">Room temp</th> <th colspan="3">Desired temp</th> <th colspan="4">Time</th> <th>Aroma</th> <th colspan="2">Aroma rate</th> <th>Color Index</th> <th colspan="3">Brightness</th> <th>Audio Cmd</th> </tr> <tr> <td>0</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td><td>11</td><td>12</td><td>13</td><td>14</td><td>15</td><td>16</td><td>17</td><td>18</td><td>19</td> </tr> <tr> <th colspan="3">Volume</th> <th colspan="3">Bass</th> <th colspan="3">Treble</th> <th colspan="2">Balance sign</th> <th colspan="3">Balance</th> <th>Port</th> <th>Total Color</th> </tr> </thead> <tbody> <tr> <td>20</td><td>21</td><td>22</td><td>23</td><td>24</td><td>25</td><td>26</td><td>27</td><td>28</td><td colspan="2">29</td><td>30</td><td>31</td><td>32</td><td>33</td><td>34</td> </tr> </tbody> </table> <p><i>Note: Current State code to state in appendix, colour index to real colour in appendix</i></p>			Current state		Room temp			Desired temp			Time				Aroma	Aroma rate		Color Index	Brightness			Audio Cmd	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Volume			Bass			Treble			Balance sign		Balance			Port	Total Color	20	21	22	23	24	25	26	27	28	29		30	31	32	33	34
Current state		Room temp			Desired temp			Time				Aroma	Aroma rate		Color Index	Brightness			Audio Cmd																																																							
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Volume			Bass			Treble			Balance sign		Balance			Port	Total Color																																																											
20	21	22	23	24	25	26	27	28	29		30	31	32	33	34																																																											
002	Preset values	STI2_002_P, where P is a preset number in 1-5 range																																																																								
<table border="1"> <thead> <tr> <th colspan="4">Time in second</th> </tr> </thead> <tbody> <tr> <td colspan="1">0</td> <td colspan="1">1</td> <td colspan="1">2</td> <td colspan="1">3</td> </tr> <tr> <th colspan="4">Temperature</th> </tr> <tr> <td colspan="2">4</td> <td colspan="1">5</td> <td colspan="1">6</td> </tr> <tr> <th colspan="4">Preset name</th> </tr> <tr> <td colspan="4">7..n</td> </tr> </tbody> </table> <p><i>Note: Preset name not more than 15 characters</i></p>			Time in second				0	1	2	3	Temperature				4		5	6	Preset name				7..n																																																			
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7..n																																																																										
003	Temperature Unit	Response																																																																								
<table border="1"> <thead> <tr> <th>Unit</th> </tr> </thead> <tbody> <tr> <td>0</td> </tr> </tbody> </table> <p><i>Note: response C or F</i></p>			Unit	0																																																																						
Unit																																																																										
0																																																																										

Commands List

Num	Name	Description																											
001	Desired Values	STI2_001_0895! This command start to 39°F with a time of 5min ! Temperature set always in <u>FAHRENHEIT</u>																											
<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td colspan="3" style="text-align: center;">Temperature</td> <td colspan="2" style="text-align: center;">Time</td> </tr> <tr> <td style="text-align: center;">0</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> <td style="text-align: center;">3</td> <td style="text-align: center;">4</td> </tr> </table> <p><i>If you want to leave one of the numeric parameter w/o changes you can send non-digit value in place of data and the parameter will be ignored (e.g. STI2_001_025AA! In this case only desired temperature will be changed)</i></p>			Temperature			Time		0	1	2	3	4																	
Temperature			Time																										
0	1	2	3	4																									
002	Colour Values	Change colour and brightness																											
<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td colspan="3" style="text-align: center;">Colour Index</td> <td colspan="3" style="text-align: center;">bright</td> </tr> <tr> <td style="text-align: center;">0</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> <td style="text-align: center;">3</td> <td></td> <td></td> </tr> </table> <p><i>If you want to leave one of the numeric parameter w/o changes you can send non-digit value in place of data and the parameter will be ignored. (same as command 001)</i></p>			Colour Index			bright			0	1	2	3																	
Colour Index			bright																										
0	1	2	3																										
003	Audio Settings	Change volume...																											
<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td colspan="3" style="text-align: center;">Volume</td> <td colspan="3" style="text-align: center;">Treble</td> <td colspan="3" style="text-align: center;">Bass</td> <td colspan="2" style="text-align: center;">Balance sign</td> <td colspan="3" style="text-align: center;">Balance</td> </tr> <tr> <td style="text-align: center;">0</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> <td style="text-align: center;">3</td> <td style="text-align: center;">4</td> <td style="text-align: center;">5</td> <td style="text-align: center;">6</td> <td style="text-align: center;">7</td> <td style="text-align: center;">8</td> <td style="text-align: center;">9</td> <td style="text-align: center;">10</td> <td style="text-align: center;">11</td> <td style="text-align: center;">12</td> </tr> </table> <p><i>NOTE Balance sign is character '+' or '-'</i></p>			Volume			Treble			Bass			Balance sign		Balance			0	1	2	3	4	5	6	7	8	9	10	11	12
Volume			Treble			Bass			Balance sign		Balance																		
0	1	2	3	4	5	6	7	8	9	10	11	12																	
004	Audio iPod Cmd	Play/pause forward backward																											
<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;">Cmd</td> </tr> <tr> <td style="text-align: center;">0</td> </tr> </table> <p><i>NOTE Forward: 0, back: 1, play pause: 2</i></p>			Cmd	0																									
Cmd																													
0																													

005	Audio Port	Change input for audio device		
<table border="1" style="margin: auto;"> <tr> <td style="text-align: center;">Port</td> </tr> <tr> <td style="text-align: center;">0</td> </tr> </table> <p><i>NOTE Input_A: 0, Input_B: 1, iPod: 2</i></p>			Port	0
Port				
0				
006	Start Preset	Start preset (range 1-5)		
<table border="1" style="margin: auto;"> <tr> <td style="text-align: center;">Preset index</td> </tr> <tr> <td style="text-align: center;">0</td> </tr> </table>			Preset index	0
Preset index				
0				
100	Stop steam system	Stop heater and time:0		
No parameter				
200	Change Unit	Change °C to °F or °F to °C		
<table border="1" style="margin: auto;"> <tr> <td style="text-align: center;">Unit</td> </tr> <tr> <td style="text-align: center;">0</td> </tr> </table> <p><i>NOTE Unit: 0 for °C and Unit:1 for °F</i></p>			Unit	0
Unit				
0				

Examples

1. Value preset 5

→ *STI2_002_5?<0x0d>*
← *OK_002_0120097Preset5<0x0d>*

2. Change desired values (set 88°F time:7min)

→ *STI2_001_08807!<0x0d>*
← *OK_001<0x0d>*

3. Change unit to °C

→ *STI2_200_0!<0x0d>*
← *OK_200<0x0d>*

Unique Automation Discovery Device Service (UADDS)

The UADDS works over UDP on fix port (30303) and broadcast the messages over the LAN as a response on the discovery query.

System that implements the service has to response for basic UADDS query although it can provide extended version of the frame. Extended messages have to be implemented on different port than the basic frame.

Bathomatic implements one extended UADDS messages.

Basic UADDS Message

IP Address	Broadcast
Protocol	UDP
Port	30303
Query message	<i>uadisc</i>
Response	<p><i>HHHvvvvvvMMMMMMMMMMMM<hostnamestring\0></i></p> <p>HHH – device ID BOM – Bathomatic ISH – iShower BOV – Bathovision BOR – Rako Converter</p> <p>vvvvvvv – firmware version MMMMMMMMMMMMMMMM – mac address (hex) <hostnamestring\0> - host name finished with 0x00</p>

Example:

PC send UDP(255.255.255.255:30303)	“uadisc”
Bathomatic send UDP(255.255.255.255:30303)	“BOM0100020004A300001ABath1stfloor”

