**System Communication**

Data Format

**Basic Format**

< receiver ID / sender ID / Command or Status / Value#\*/>

\*If there is a sub value to be parsed

**Sensor**

Begin Program [receiving data]

<sensorID/CENTRAL/BEGIN/ROUTE:repeaterID#>

<sensorID/repeater ID/BEGIN/1/>

*Note*

* CENTRAL means the message comes from the gateway or any person in charge
* The data might contain a sub value, in this case ROUTE have its own value which can be parsed
* The sub value will be using different delimiter, its ‘**:**’

Car Status [sending data]

<repeaterID/sensorID/CAR/1\*#>

*Note*

* \* (data option): 0 [empty], 1 [filled]

Reset Report [sending data]

<repeaterID/sensorID/RST/1#>

Battery Status [sending data]

<repeaterID/sensorID/BATT/3\*#>

*Note*

* \* (data option): 1[<25%], 2, 3 ,4 [75% - full]

Acknowledge Data [receiving data]

<sensorID/repeaterID/ACK/1#>

**Repeater**

Begin Program [receiving data]

<repeaterID/CENTRAL/BEGIN/ROUTE:gatewayRoute\*#>

*Note*

* \* (contained): repeater1ID:repeater2ID:...:gatewayID

Sensor Data [receiving data]

<repeaterID/sensorID/CAR\*/1\*\*#>

*Note*

* \* (data option): CAR, BATT. \*\* value depends on the status type.

To Another Bouncer [sending data]

<Route\*/containedData\*\*#>

*Note*

* \* (contained): a route “to gateway” or “to a specific LED Display”

Ex. repeater1ID:repeater2ID:...:gatewayID

* \*\* (contained): sensorID/Information/Value

From Another Bouncer or Gateway [receiving data]

<Route--\*/containedData\*\*#>

*Note*

* -- Remove its own ID from the gateway route
* \*\* (contained): sensorID/Information/Value

**Gateway**

From Bouncer [receiving data]

<gatewayID/containedData\*#>

*Note*

* \* (contained): sensorID/Information/Value

To Bouncer [sending data]

<ledRoute\*/containedData\*\*#>

*Note*

* \* (contained): a route to a specific LED Display

Ex. repeater1ID:repeater2ID:...:ledID

* \* \*(contained): ADD\*/1

\* or MIN.