# RED BOOK

## DEVICE ENCODING DATASHEET

| | |
|---|---|
| **Device Name :** | ASTRA nRF Modem 2.4GHz |
| **Model ID :** | UGV 369-B |
| **Lock Frequency :** | 160.00 - 164.00 MHz |
| **Radio Station :** | UGV SAR 160 |
| **Transmission Frequency :** | 2.3 - 2.5 GHz |

| Console code | Cheat code [ HEX ] | Binary encoding [ BIN ] | Access Key [ BIN ] | Output |
|:---:|:---:|:---:|:---:|:---|
| w | B0A5 | 1011000010100101 | 1011 | UGV forward |
| a | B0C6 | 1011000011000110 | 1101 | UGV left |
| s | B0A7 | 1011000010100111 | 1010 | UGV backward |
| d | B0C8 | 1011000011001000 | 1001 | UGV right |
| 5 | A0B9 | 1010000010111001 | 0011 | Arm open |
| 0 | A1C0 | 1010000111000000 | 1011 | Arm close |
| 8 | A1A1 | 1010000110100001 | 0101 | Palm up |
| 2 | A1B2 | 1010000110110010 | 0110 | Palm down |
| 4 | A1C3 | 1010000111000011 | 0001 | Wrist X axis |
| 6 | A1C4 | 1010000111000100 | 0100 | Wrist Y axis |
| + | A1B5 | 1010000110110101 | 1111 | Docking |
| - | A1A6 | 1010000110100110 | 1110 | Undocking |
| n | B1B7 | 1011000110110111 | 0100 | Backlight |
| m | B1C8 | 1011000111001000 | 0111 | Exhaust |
| x | B2A6 | 1011001010100110 | 0010 | UGV Emergency stop |
| i | C1A9 | 1100000110101001 | 1000 | Swarm forward |
| j | C2B0 | 1100001010110000 | 1101 | Swarm left |
| l | C2C1 | 1100001011000001 | 1011 | Swarm right |

| k | C2A2 | 110000101010010 | 0111 | Swarm backward |
|---|------|------------------|------|----------------|
| f | C2B3 | 110000101010011 | 1011 | Self destruct |
| g | C2A4 | 110000101010100 | 0010 | Retreat |
| h | C2C5 | 110000101100101 | 0000 | Attack |
| b | C2B7 | 110000101010111 | 0101 | Swarm Emergency Stop |