Astro Basic Commands:

Basic Statements & Commands

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| Command | Function | Notes |
| BOX X,Y,A,B,1 | Draw a box at position X,Y of Width A and Height B, Mode 1. Modes available: 1 Foreground Colour 2 Background Colour 3 Reverse box (xor) 4 Invisible | Updates CX, CY |
| LINE X,Y,1 | 1 Line to X,Y, mode 1 (See above) from last Pixel location. Use BOX, XY or mode 4 to set start location. | Updates CX,CY |
| CLEAR | Clears screen (to background colour) |  |
| FOR/TO/STEP/NEXT | Standard for loop |  |
| IFA=5 GOTO20 | If statement, if fails, skip the rest of the instruction. | Anything can follow the IF expression. |
| *LIST* | *Not implemented* |  |
| PRINT “XXX”  PRINT A  PRINT #4,A | Prints string, number or string with spaces (is this right ?) | Now prints at CX, CY and updates. |
| GOTO n | Go to line number n |  |
| GOSUB n | Push address on stack, go to line number n |  |
| RETURN | Pop address off stack. |  |
| RND(n) | Term, random number 1-n | Uses Astrocade extension RND(0) Is a random 16 bit value. |
| ABS(n) | Absolute value of n |  |
| *CALL(n)* | *Not implemented* |  |
| RM | Term, remainder of last division. |  |
| *SM* | *Not implemented* |  |
| *STOP* | *Not implemented* |  |
| *SZ* | *Not implemented* |  |
| JX(n), JY(n) | Return -1,0,1 on controller |  |
| TR(n) | Return button 1 or 2 |  |
| *KN(n)* | *Not implemented* |  |
| *KP* | *Not implemented* |  |
| TV = a | Print character a. | Printed at CX,CY which is updated. |
| XY =, XY | Term and target | Writing this updates CX,CY, reading it is composed from CX,CY |
| PX(x,y) | Return pixel at x,y |  |
| CX,CY | Coordinate variables. |  |
| MU = a / MU = “A” | Play note length NT |  |
| FC/BC | Only two colours work |  |
| NT | Note duration |  |
| Tape Commands | None implemented |  |
| +,-,\*,/,#,>,<,=,>=,<= | Arithmetic expressions. |  |
| @(n) | Bottom up array |  |

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| **Variable Number/Range** | **Contains** | **Notes** |
| 0-25 | A-Z | 26 variables |
| 26 | CX | X coordinate |
| 27 | CY | Y coordinate |
| 28 | RM | Remainder |
| 29 | FC | Colours |
| 30 | BC |  |

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| **Bytecode** | **Mnemonic** | **Notes** |
| 00-7F | -128..127 | 7 bit constant, sign extended to 16 bits |
| 80-9F | !<variable> | Store TOS in variable 0-31 |
| A0-BF | @<variable> | Push variable 0-31 |
| C0 aa bb | -32768..32767 | Push constant aa + bb \* 256 on stack. |
| C1 | + | Arithmetic |
| C2 | - | Arithmetic |
| C3 | \* | Arithmetic |
| C4 | / | Arithmetic (saves RM) |
| C5 | =0 | Set to 1 if TOS = 0 |
| C6 | >0 | Set to 1 if TOS +ve |
| C7 | SKZ | Skip to end of line if TOS = 0 |
| C8 | PUSH | Push (PC+1) onto the stack as a GOSUB call. |
| C9 | GOTO | Gosub line TOS |
| CA | SYSTEM | System call (command, TOS, Params on stack, last first) |
| CB | ARRAY | Converts array index to offset in memory |