

Network Format



Game State:

Current Ticks (2 bytes)

Update Period (1 byte)

Game Mode (1 byte)

Mode Steps (1 byte)

Mode Duration (1 byte)

Level Steps (2 bytes)

Current Score (2 bytes)

Current Level (1 byte)

Current Lives (1 byte)

Ghost Combo (1 byte)

Ghosts (4 x 4 = 16 bytes)

Pacman (2 bytes)

Fruit (4 bytes)

Pellets (124 bytes)

159 bytes total

Helpful Reference for Bitwise Operations:

>> means right-shift, divide by power of 2
(for example, $1234 \gg 5 = 1234 // 2^5 = 38$)

<< means left-shift, multiply by power of 2
(for example, $12 \ll 3 = 12 * 2^3 = 96$)

~ means bitwise NOT (flip all the bits)
(for example, ~ 12 [8-bit] = $\sim 0b00001100 = 0b11110011 = 115$)

| means bitwise OR (keep bits where either is 1)
(for example, $12 | 5 = 0b1100 | 0b0101 = 0b1101 = 13$)

& means bitwise AND (clear bits where either is 0)
(for example, $12 \& 5 = 0b1100 \& 0b0101 = 0b0100 = 4$)

^ means bitwise XOR (if the bits add, would it be odd or even?)
(for example, $12 \wedge 5 = 0b1100 \wedge 0b0101 = 0b1001 = 9$)