shifter is enabled and the TX pin goes to the mark condition. For each byte of data, the transmitter sends 2 stop bits, 1 start bit, and 8 data bits plus 3/16 bit internal clocking delay for a total of 1.375 bits per frame. Therefore the maximum transmission rate is:

Baud setting/11.375   (844 characters/second at 9600 baud)

Infrared I/O Hardware

The IR port allows half-duplex communication between systems at 2400 baud using pulses of infrared light instead of wires. Full-duplex is not used due to the need to suppress reflections.

IR Format

The format for IR transmission is similar to serial transmission except that a pulse of infrared light of 52 \(*ms duration (nominal) is used to transmit a zero-bit. The absence of a pulse indicates a one-bit or idle condition. Note that if the pulses are stretched out to fill a bit time this becomes very similar to the serial signal.

Example: an 'H' (48 hex)
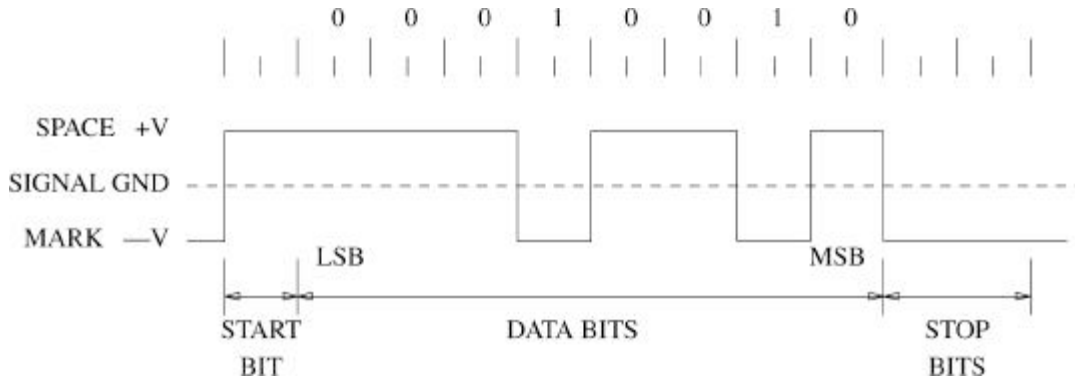
Transmit and Receive Circuits

The first circuit shown below detects incoming IR pulses and produces the signal shown at the left, labeled "IN." The second circuit generates the IR output given the signal shown at the left, labeled "OUT."