Physical Specification for JVC Infrared Remote Control

1. Definition of terms
   a) Custom code A code allocated to each device.
   b) Data code A code (8bits) allocated to actual operation of the device.

2. Standard
2.1 Wavelength of infrared light The central wavelength of infrared light shall be 940nm.
2.2 Frequency of carrier The frequency of carrier shall be 37.9 kHz.
2.3 Transmission format The transmission format is shown in Table 1 and Fig. 1-4.

Table 1 Transmission format

Item	Content
1. Type of modulation	Pulse-interval modulation
2. Header	Mark 8.44 ms, space 4.22 ms (omissible)*1
3. Pulse width	0.527 ms +–60 us
4. Pulse interval (0)	1.055ms +–60 us
5. Pulse interval (1)	2.11ms +–100 us
6. Output form	Word-unit continuous output
7. Word cycle	46.42 ms +-2 ms
8. Space between words	(46.42 -16.88 - 0.527 – n x 1.055) +- 2 ms: n is the number of "1".

Remarks: A header is outputted only when transmission is started to stabilize the receiving circuit.
Note*1 In principle, it is desirable to add this although it can be omitted if necessary.

C0	C1	C2	C3	C4	C5	C6	C7	D0	D1	D2	D3	D4	D5	D6	D7

Fig. 1 Code form

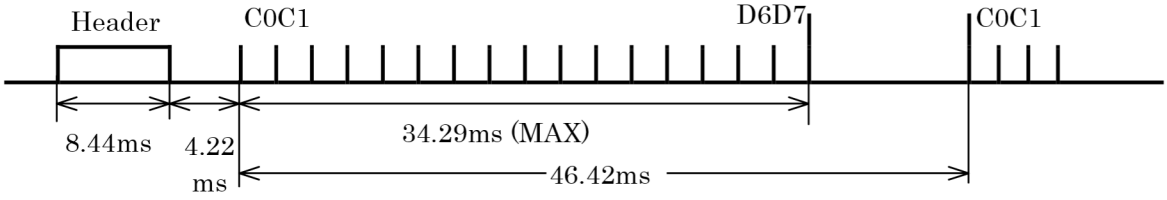

Fig. 2 Waveform of output

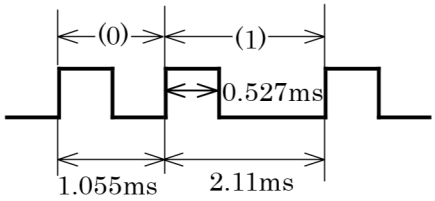

Fig. 3 Pulse width and pulse interval

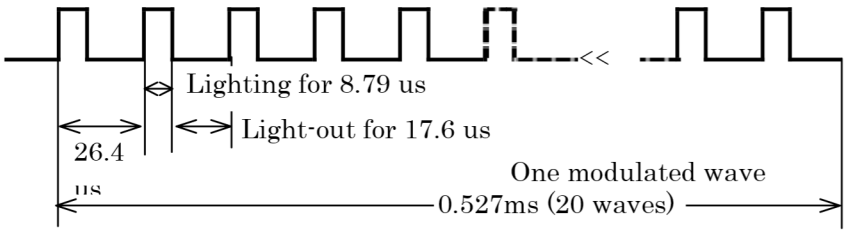

Fig. 4 Waveform of carrier

Remarks: A carrier frequency of 37.9 kHz with a duty ratio of 1/3 is used as the standard.

2.4 Transmission and reception codes

1) The bits The bits for transmission and reception codes are 16 bits comprised of custom code and data code.

Custom code (C0 to C7)	Data code (D0 to D7)

3. Prevention of malfunctions

a) Frequency characteristics The frequency of carrier shall be within 37.9 kHz +- 0.4 kHz.

b) Checking of 17th bit After the completion of code transmission, the existence of the 17th-bit pulse needs to be checked for a certain period of time (the time longer than a pulse interval between “0” and “1”) and if the pulse is detected, the operation of device shall be stopped.

c) Checking of two-word coincidence Check the two-word coincidence.