

INFRARED REMOTE CONTROL CODE
FOR JVC MODEL

TV RECEIVER

D-VHS RECORDER

DVD RECORDER

24 Aug. 2006

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 \pm 60 μ s
4. Pulse interval (0)	1.055ms \pm 60 μ s
5. Pulse interval (1)	2.11ms \pm 100 μ s
6. Output form	Word-unit continuous output
7. Word cycle	46.42 ms \pm 2 ms
8. Space between words	(46.42 -16.88 - 0.527 - n x 1.055) \pm 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.

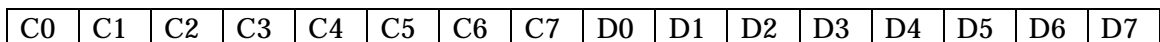


Fig. 1 Code form

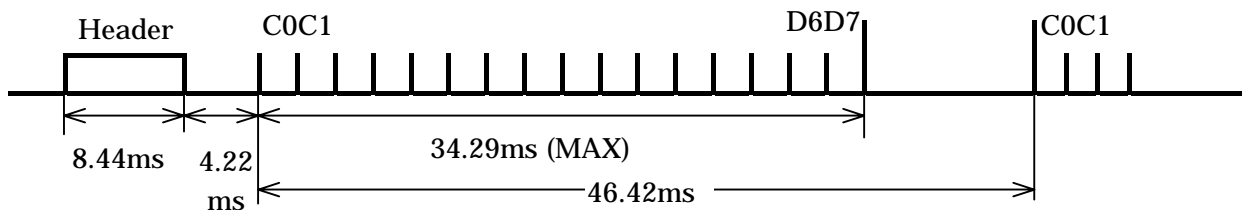


Fig. 2 Waveform of output

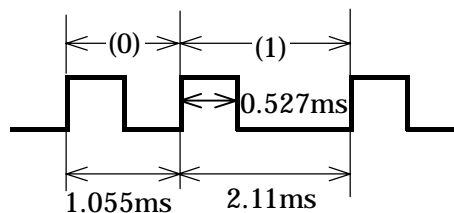


Fig. 3 Pulse width and pulse interval

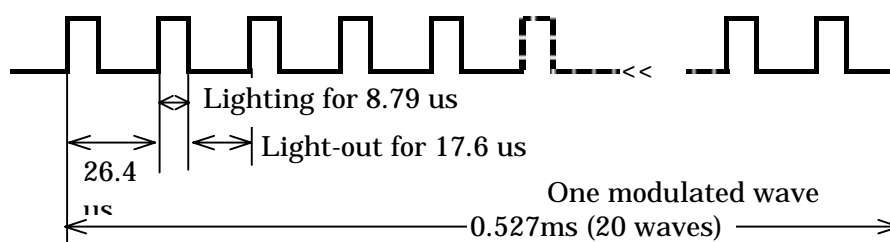
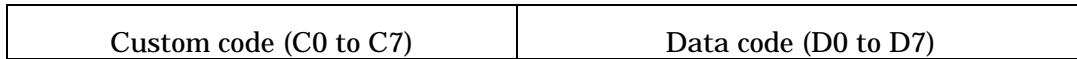


Fig. 4 Waveform of carrier

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.



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.

TV RCU KEY CODE TABLE for USA (1)

24-Aug-06

Key Name	Key Function	Custom Code (hex)	Data Code (hex)
MAIN/SAP ML/MTS	TV	03	00
SLEEP TIMER SLEEP	TV	03	03
DISPLAY	TV	03	04
RETURN+ RETURN+/TV	TV	03	05
ENTER ENTER/ACTION OK	TV	03	0A
VIDEO STATUS	TV	03	0D
CLOSED CAPTION	TV	03	0E
TV	TV	03	10
VIDEO1 INPUT1	TV	03	11
VIDEO2 INPUT2	TV	03	12
TV/VIDEO	TV	03	13
VIDEO3 INPUT3	TV	03	14
DIGITAL-IN	TV	03	15
POWER ON/OFF	TV	03	17
CHANNEL-	TV	03	18
CHANNEL+	TV	03	19
POWER OFF	TV	03	1A
VIDEO4 INPUT4	TV	03	1B
MUTE/MUTING	TV	03	1C
POWER ON	TV	03	1D
VOLUME+	TV	03	1E
VOLUME-	TV	03	1F
0	TV	03	20
1	TV	03	21
2	TV	03	22
3	TV	03	23
4	TV	03	24
5	TV	03	25
6	TV	03	26
7	TV	03	27
8	TV	03	28
9	TV	03	29
SOUND MODE	TV	03	42
100+ or TUNE	TV	03	77
MENU	TV	03	7A
PIP FREEZE FREEZE	TV	03	80
INDEX ON/OFF	TV	03	82
PIP ON/MOVE/OFF	TV	03	85

TV RCU KEY CODE TABLE for USA (2)

24-Aug-06

Key Name	Key Function	Custom Code (hex)	Data Code (hex)
PIP SWAP SWAP	TV	03	89
SPLIT TWIN	TV	03	8B
ASPECT	TV	03	93
THEATER PRO	TV	03	D5
EXIT BACK	TV	03	E6
ANALOG/DIGITAL	TV	0F	0A
SELECT	TV	0F	11
DIGITAL-IN2	TV	0F	17
VIDEO5 INPUT5	TV	0F	1B
DIGITAL CHANNNEL	TV	0F	1C
NATURAL CINEMA	TV	0F	26
B.B.E. ON/OFF	TV	0F	46
POP ON/OFF	TV	0F	61
EZ SURF	TV	0F	66
SUB CHANNEL +	TV	0F	67
SUB CHANNEL -	TV	0F	68
SUB CHANNEL	TV	0F	6B
FAVORITE CHANNEL	TV	0F	70
i.LINK/TIMER i.LINK MENU	TV	0F	78
TIMER	TV	0F	79
EPG/GUIDE	TV	0F	7D

* Some codes depend on the model.

D-VHS RCU KEY CODE TABLE for USA

06-Oct-04

Key Name	Key Function	Custom Code (hex)	Data Code (hex)
STOP	VCR	43/53/6F/7F	03
FF	VCR	43/53/6F/7F	06
REW	VCR	43/53/6F/7F	07
POWER	VCR	43/53/6F/7F	0B
PLAY	VCR	43/53/6F/7F	0C
PAUSE	VCR	43/53/6F/7F	0D
RIGHT CURSOR (+ /VISS-FF)	VCR	43/53/6F/7F	14
LEFT CURSOR (- /VISS-REW)	VCR	43/53/6F/7F	15
A.MONITOR	VCR	43/53/6F/7F	17
CH- or DOWN CURSOR	VCR	43/53/6F/7F	18
CH+ or UP CURSOR	VCR	43/53/6F/7F	19
POWER OFF	VCR	43/53/6F/7F	1A
POWER ON	VCR	43/53/6F/7F	1D
1	VCR	43/53/6F/7F	21
2	VCR	43/53/6F/7F	22
3	VCR	43/53/6F/7F	23
4	VCR	43/53/6F/7F	24
5	VCR	43/53/6F/7F	25
6	VCR	43/53/6F/7F	26
7	VCR	43/53/6F/7F	27
8	VCR	43/53/6F/7F	28
9	VCR	43/53/6F/7F	29
REC LINK	VCR	43/53/6F/7F	30
REC SPEED(-/-)	VCR	43/53/6F/7F	31
0	VCR	43/53/6F/7F	33
TIMER	VCR	43/53/6F/7F	35
< (1-(CANCEL))	VCR	43/53/6F/7F	36
MENU	VCR	43/53/6F/7F	37
DISPLAY	VCR	43/53/6F/7F	38
OK	VCR	43/53/6F/7F	3C
PROG. CHECK	VCR	43/53/6F/7F	3D
ENTER/OSD	VCR	43/53/6F/7F	3E
BACK	VCR	43/53/6F/7F	84
>(ADD)(2- (TIMER))	VCR	43/53/6F/7F	90
CM CUT(SKIP.S)	VCR	43/53/6F/7F	96
PROGRAM	VCR	43/53/6F/7F	C1
DATE+	VCR	43/53/6F/7F	C6
DATE- /DIGITAL CH	VCR	43/53/6F/7F	C7
START+ /EPG	VCR	43/53/6F/7F	C8
START- /DTV MENU	VCR	43/53/6F/7F	C9
STOP+ /SUB CH+	VCR	43/53/6F/7F	CA
STOP- /SUB CH-	VCR	43/53/6F/7F	CB
RECORD PLAY	VCR	43/53/6F/7F	CC
RECORD PAUSE	VCR	43/53/6F/7F	CD
NAVI	VCR	43/53/6F/7F	E0

Notice;

1. Custom code is set to '43' at shipping.
2. Custom code: VCR A ---43h VCR B---53h VCR C---6Fh VCR D---7Fh
3. Some codes depend on the model.

DVD RECORDER RCU KEY CODE TABLE FOR USA

6-Oct-04

Key Name	Key Function	Custom Code (hex)	Data Code (hex)
STOP/CLEAR	DVD	43/53/6F/7F	03
FF/SLOW(+)	DVD	43/53/6F/7F	06
REW/SLOW(-)	DVD	43/53/6F/7F	07
POWER	DVD	43/53/6F/7F	0B
PLAY/SELECT	DVD	43/53/6F/7F	0C
PAUSE	DVD	43/53/6F/7F	0D
JUMP+	DVD	43/53/6F/7F	0E
JUMP-	DVD	43/53/6F/7F	0F
TV/DVD	DVD	43/53/6F/7F	13
NEXT	DVD	43/53/6F/7F	14
PREVIOUS	DVD	43/53/6F/7F	15
AUDIO SEL	DVD	43/53/6F/7F	17
DVD CH-	DVD	43/53/6F/7F	18
DVD CH+	DVD	43/53/6F/7F	19
1	DVD	43/53/6F/7F	21
2	DVD	43/53/6F/7F	22
3	DVD	43/53/6F/7F	23
4	DVD	43/53/6F/7F	24
5	DVD	43/53/6F/7F	25
6	DVD	43/53/6F/7F	26
7	DVD	43/53/6F/7F	27
8	DVD	43/53/6F/7F	28
9	DVD	43/53/6F/7F	29
REMAIN/REC MODE	DVD	43/53/6F/7F	31
DVD	DVD	43/53/6F/7F	32
0/AUX	DVD	43/53/6F/7F	33
DUBBING	DVD	43/53/6F/7F	34
DVD TIMER	DVD	43/53/6F/7F	35
X/CANCEL	DVD	43/53/6F/7F	36
SET UP	DVD	43/53/6F/7F	37
DISPLAY	DVD	43/53/6F/7F	38
ENTER (OK)	DVD	43/53/6F/7F	3C
PROG/CHECK	DVD	43/53/6F/7F	3D
ONSCREEN(OSD)	DVD	43/53/6F/7F	3E
VHS	DVD	43/53/6F/7F	43
HDD	DVD	43/53/6F/7F	44
RIGHT CURSOR	DVD	43/53/6F/7F	80
MENU	DVD	43/53/6F/7F	81
UP CURSOR	DVD	43/53/6F/7F	82
LEFT CURSOR	DVD	43/53/6F/7F	84
DOWN CURSOR	DVD	43/53/6F/7F	86
OPEN/CLOSE	DVD	43/53/6F/7F	87
PROGRESSIVE or PLAY SET UP/RPOGRESSIVE	DVD	43/53/6F/7F	8E
TOP MENU	DVD	43/53/6F/7F	8F
MEMO/MARK	DVD	43/53/6F/7F	90
-->(30S SKIP)	DVD	43/53/6F/7F	96
ANGLE/LIVE CHECK	DVD	43/53/6F/7F	C0
G-CODE or PROGRAM	DVD	43/53/6F/7F	C1
SUBTITLE	DVD	43/53/6F/7F	C4
RECORD PLAY	DVD	43/53/6F/7F	CC
RECORD PAUSE	DVD	43/53/6F/7F	CD
RETURN	DVD	43/53/6F/7F	D4
VHS/DVD	DVD	43/53/6F/7F	D6
<-- (7S BACK)	DVD	43/53/6F/7F	DC
EDIT	DVD	43/53/6F/7F	DD
NAVI or TOP MENU/NAVI	DVD	43/53/6F/7F	E0
HELP	DVD	43/53/6F/7F	E8
LIVE	DVD	43/53/6F/7F	E9

Notice;

1. Custom code is set to '6F' at shipping.
2. Some codes depend on the model.