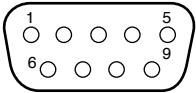


RS-232C interface

This unit is equipped with an RS-232C port, capable of receiving commands and sending status information. The commands cover all transport functions, menu functions and power on/standby. Return status includes timer readouts, type of disc, and transport status. Additional commands are available to enable/disable the unit's front panel or IR controls.

Specifications

■ 9-pin D-Sub (Male)



- Mode : Asynchronous
- Data rate : 9600 bps
- Command spacing : >25 ms
- Character length : 8 bits
- Parity bit : None
- Stop bit : 1 bit
- Transfer bit : LSBit First

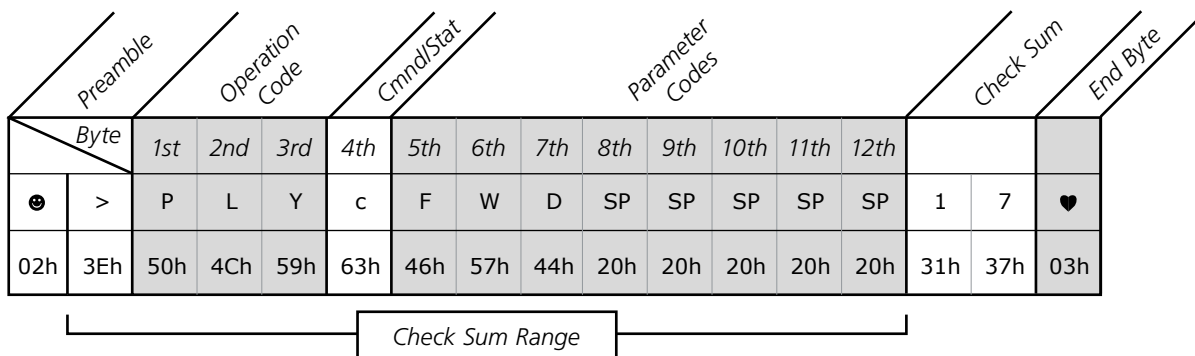
Note: For correct operation, wait at least 25ms after receiving the reply to a command from the DV-D01U before sending the next command.

| Pin | Signal | Description | Signal flow |
|-----|--------|------------------|------------------------------|
| 2 | RxD | Receive data | DVD player ← External device |
| 3 | TxD | Transmit data | DVD player → External device |
| 5 | GND | Signal grounding | |

Command

■ Command structure

Example: PLAY command



Preamble

All command strings for this unit begin with the start byte “02h” and header byte “3Eh”.

Operation Code

Each command has a 3-byte operation code, which are listed in the following pages. The operation code for play is simply PLY (uppercase letters).

Command/Status Byte

This section determines whether the command is telling the unit to do something, or asking for its status. A lowercase “c” (63h) indicates a command while a lowercase “s” (73h) indicates status request.

Parameter Codes

8 bytes are reserved for parameters on the command/status request. When the status information does not fill up all 8 bytes (most don't), the extra slots are filled with spaces (20h). In the above example, FWD indicates playing forward at normal (1x) speed.

Check Sum

The check sum is calculated from the “>” in the Preamble to the end of the Parameter Codes. The last two digits of the hexadecimal addition are shown as ASCII in the Check Sum area. In this example, the Check Sum is derived as follows:

$$3E + 50 + 4C + 59 + 63 + 46 + 57 + 44 + 20 + 20 + 20 + 20 + 20 = 317$$

The last two digits, “17” are displayed as ASCII in the Check Sum.

End Byte

This marks the end of the string with “03h”.

■ Command overview

Transport functions (See page 30.)

| Operation Code (first 3 bytes) | | | Description |
|--------------------------------|-----|-----|------------------------------|
| 1st | 2nd | 3rd | |
| P | L | Y | Play/Pause/Slow/Scan command |
| S | T | P | Disc stop command |
| S | K | P | Chapter/Track skip command |
| M | E | D | Open/Close tray command |
| P | O | W | Power On/Off command |

Menu navigation (See page 31.)

| Operation Code (first 3 bytes) | | | Description |
|--------------------------------|-----|-----|--|
| 1st | 2nd | 3rd | |
| M | N | U | Menu call command |
| N | A | V | Menu navigation (Cursors, ENTER, etc.) command |
| R | C | U | Remote controlling |

Status information (See page 33.)

| Operation Code (first 3 bytes) | | | Description |
|--------------------------------|-----|-----|--|
| 1st | 2nd | 3rd | |
| M | O | D | For acquiring DVD player status |
| D | S | C | For acquiring disc type information |
| S | P | D | For acquiring playback speed (video discs) |
| I | N | F | For acquiring counter information (elapsed time, etc.) |

Advanced functions (See page 36.)

| Operation Code (first 3 bytes) | | | Description |
|--------------------------------|-----|-----|------------------------------------|
| 1st | 2nd | 3rd | |
| P | S | W | Front panel control enable/disable |
| I | R | D | Infrared control enable/disable |
| S | E | T | Establish default settings |
| I | N | I | Initialize the DVD player |

RS-232C interface

Transport commands

These commands are pretty straightforward, they function in the same way as the remote control supplied.

NOTE

- If pause is sent when the unit is paused, the unit will advance one video frame. If several pause commands are issued in quick succession, the unit will engage slow motion playback. (This double function only applies to video discs.)

| | | | | | | | | | | | | | | | | | |
|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Play | ☺ | > | P | L | Y | c | F | W | D | SP | SP | SP | SP | SP | 1 | 7 | ♥ |
| | 02h | 3Eh | 50h | 4Ch | 59h | 63h | 46h | 57h | 44h | 20h | 20h | 20h | 20h | 20h | 31h | 37h | 03h |
| Stop | ☺ | > | S | T | P | c | SP | SP | SP | SP | SP | SP | SP | SP | 9 | 8 | ♥ |
| | 02h | 3Eh | 53h | 54h | 50h | 63h | 20h | 20h | 20h | 20h | 20h | 20h | 20h | 20h | 39h | 38h | 03h |
| Pause - Pause when paused advances frame, rapid succession is slow motion. | ☺ | > | P | L | Y | c | P | A | U | SP | SP | SP | SP | SP | 1 | C | ♥ |
| | 02h | 3Eh | 50h | 4Ch | 59h | 63h | 50h | 41h | 55h | 20h | 20h | 20h | 20h | 20h | 31h | 43h | 03h |
| Fast Forward | ☺ | > | P | L | Y | c | F | F | W | SP | SP | SP | SP | SP | 1 | 9 | ♥ |
| | 02h | 3Eh | 50h | 4Ch | 59h | 63h | 46h | 46h | 57h | 20h | 20h | 20h | 20h | 20h | 31h | 39h | 03h |
| Fast Backward | ☺ | > | P | L | Y | c | F | B | W | SP | SP | SP | SP | SP | 1 | 5 | ♥ |
| | 02h | 3Eh | 50h | 4Ch | 59h | 63h | 46h | 42h | 57h | 20h | 20h | 20h | 20h | 20h | 31h | 35h | 03h |
| Return to Beginning of Current Track/Chapter | ☺ | > | S | K | P | c | S | SP | SP | SP | SP | SP | SP | SP | C | 2 | ♥ |
| | 02h | 3Eh | 53h | 4Bh | 50h | 63h | 53h | 20h | 20h | 20h | 20h | 20h | 20h | 20h | 43h | 32h | 03h |
| Return to First Chapter of Current Title (DVDs) Return to First Track (Audio and Video CDs) | ☺ | > | S | K | P | c | T | SP | SP | SP | SP | SP | SP | SP | C | 3 | ♥ |
| | 02h | 3Eh | 53h | 4Bh | 50h | 63h | 54h | 20h | 20h | 20h | 20h | 20h | 20h | 20h | 43h | 33h | 03h |
| Next Track/Chapter | ☺ | > | S | K | P | c | N | SP | SP | SP | SP | SP | SP | SP | B | D | ♥ |
| | 02h | 3Eh | 53h | 4Bh | 50h | 63h | 4Eh | 20h | 20h | 20h | 20h | 20h | 20h | 20h | 42h | 44h | 03h |
| Previous Track/Chapter | ☺ | > | S | K | P | c | P | SP | SP | SP | SP | SP | SP | SP | B | F | ♥ |
| | 02h | 3Eh | 53h | 4Bh | 50h | 63h | 50h | 20h | 20h | 20h | 20h | 20h | 20h | 20h | 42h | 46h | 03h |
| Slow Motion | ☺ | > | P | L | Y | c | S | L | W | SP | SP | SP | SP | SP | 2 | C | ♥ |
| | 02h | 3Eh | 50h | 4Ch | 59h | 63h | 53h | 4Ch | 57h | 20h | 20h | 20h | 20h | 20h | 32h | 43h | 03h |

■ Go to specific track/chapter number

This command uses a capital “G” (47h) in the parameter codes before the track/chapter number.

| | TRACK/CHAPTER # | | | | | | | | | | | CHECK SUM | | | | | |
|--|-----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----|
| Go To Track/Chapter (E.g.: Go To Track/Chapter 12) | ☺ | > | S | K | P | c | G | 0 | 1 | 2 | SP | SP | SP | SP | E | 9 | ♥ |
| | 02h | 3Eh | 53h | 4Bh | 50h | 63h | 47h | 30h | 31h | 32h | 20h | 20h | 20h | 20h | 45h | 39h | 03h |

To go to a desired chapter on the DVD, set the 6th to 8th byte to the specific chapter number. For Audio and Video CDs, set the 7th and 8th byte to the specific track number with the 6th byte set to “0”.

Then calculate and set the check sum.

■ Go to specific title number

For DVDs that contain multiple titles, you can access each title directly using this command. This command is similar in structure to the command for locating a specific track or chapter except for the lowercase “g” (67h) used in the parameter code.

| | TITLE # | | | | | | | | | | | | | | | | |
|---|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Go To Title (E.g.: Go To Title 3) | ☺ | > | S | K | P | c | g | 0 | 0 | 3 | SP | SP | SP | SP | 0 | 9 | ♥ |
| | 02h | 3Eh | 53h | 4Bh | 50h | 63h | 67h | 30h | 30h | 33h | 20h | 20h | 20h | 20h | 30h | 39h | 03h |

To go to a desired title on the DVD, set the 7th and 8th byte to the specific title number with the 6th byte set to “0”. Then calculate and set the check sum.

RS-232C interface

■ Open/close disc tray

This command opens and closes the disc tray. If you wish to know whether the tray is open or closed before issuing this command, use the “MOD” status request.

CHECK SUM

| | | | | | | | |
|-----------------------------|---------|-------------|-----|-------------|---------------------|---------|-----|
| Open/Close Disc Tray | ☺ > | M E D | c | E J C | SP SP SP SP SP | E 9 | ♥ |
| | 02h 3Eh | 4Dh 45h 44h | 63h | 45h 4Ah 43h | 20h 20h 20h 20h 20h | 45h 39h | 03h |
| Open Disc Tray | ☺ > | M E D | c | O P N | SP SP SP SP SP | 0 4 | ♥ |
| | 02h 3Eh | 4Dh 45h 44h | 63h | 4Fh 50h 4Eh | 20h 20h 20h 20h 20h | 30h 34h | 03h |
| Close Disc Tray | ☺ > | M E D | c | C L S | SP SP SP SP SP | F 9 | ♥ |
| | 02h 3Eh | 4Dh 45h 44h | 63h | 43h 4Ch 53h | 20h 20h 20h 20h 20h | 46h 39h | 03h |

■ Power on/standby

There are separate commands for power on and standby mode. The unit will respond to the “MOD” when it is off.

| | | | | | | | |
|----------------------|---------|-------------|-----|---------|-------------------------|---------|-----|
| Power On | ☺ > | P O W | c | O N | SP SP SP SP SP SP | F 4 | ♥ |
| | 02h 3Eh | 50h 4Fh 57h | 63h | 4Fh 4Eh | 20h 20h 20h 20h 20h 20h | 46h 34h | 03h |
| Power Standby | ☺ > | P O W | c | O F | SP SP SP SP SP SP | E C | ♥ |
| | 02h 3Eh | 50h 4Fh 57h | 63h | 4Fh 46h | 20h 20h 20h 20h 20h 20h | 45h 43h | 03h |

Menu navigation commands

■ Menu call

The MNU command can recall either the “title” or “root” menus on a DVD. However, this command may not work on some DVDs.

| | | | | | | | |
|-------------------|---------|-------------|-----|-----|-------------------------|---------|-----|
| Title Menu | ☺ > | M N U | c | T | SP SP SP SP SP SP | C 5 | ♥ |
| | 02h 3Eh | 4Dh 4Eh 55h | 63h | 54h | 20h 20h 20h 20h 20h 20h | 43h 35h | 03h |
| Root Menu | ☺ > | M N U | c | R | SP SP SP SP SP SP | C 3 | ♥ |
| | 02h 3Eh | 4Dh 4Eh 55h | 63h | 52h | 20h 20h 20h 20h 20h 20h | 43h 33h | 03h |

■ Menu navigation keys

These are the standard navigation keys, and they function just like those on the remote control.

| | | | | | | | |
|---------------------|---------|-------------|-----|-------------|---------------------|---------|-----|
| Cursor Left | ☺ > | N A V | c | L F T | SP SP SP SP SP | 0 C | ♥ |
| | 02h 3Eh | 4Eh 41h 56h | 63h | 4Ch 46h 54h | 20h 20h 20h 20h 20h | 30h 43h | 03h |
| Cursor Right | ☺ > | N A V | c | R I T | SP SP SP SP SP | 1 5 | ♥ |
| | 02h 3Eh | 4Eh 41h 56h | 63h | 52h 49h 54h | 20h 20h 20h 20h 20h | 31h 35h | 03h |
| Cursor Up | ☺ > | N A V | c | U P | SP SP SP SP SP | E B | ♥ |
| | 02h 3Eh | 4Eh 41h 56h | 63h | 55h 50h 20h | 20h 20h 20h 20h 20h | 45h 42h | 03h |
| Cursor Down | ☺ > | N A V | c | D W N | SP SP SP SP SP | 0 F | ♥ |
| | 02h 3Eh | 4Eh 41h 56h | 63h | 44h 57h 4Eh | 20h 20h 20h 20h 20h | 30h 46h | 03h |
| Enter/Select | ☺ > | N A V | c | E N T | SP SP SP SP SP | 0 D | ♥ |
| | 02h 3Eh | 4Eh 41h 56h | 63h | 45h 4Eh 54h | 20h 20h 20h 20h 20h | 30h 44h | 03h |
| Return | ☺ > | N A V | c | R T N | SP SP SP SP SP | 1 A | ♥ |
| | 02h 3Eh | 4Eh 41h 56h | 63h | 52h 54h 4Eh | 20h 20h 20h 20h 20h | 31h 41h | 03h |
| Previous | ☺ > | N A V | c | P R E | SP SP SP SP SP | 0 D | ♥ |
| | 02h 3Eh | 4Eh 41h 56h | 63h | 50h 52h 45h | 20h 20h 20h 20h 20h | 30h 44h | 03h |
| Next | ☺ > | N A V | c | N X T | SP SP SP SP SP | 2 0 | ♥ |
| | 02h 3Eh | 4Eh 41h 56h | 63h | 4Eh 58h 54h | 20h 20h 20h 20h 20h | 32h 30h | 03h |

RS-232C interface

■ Remote control keys

These remote control keys functions just like those on the remote control.

| | | | | | | | | | | | | | | | | |
|--|----------------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|----------|----------|----------|
| Title/Group | ☺ > 02h 3Eh | R 52h | C 43h | U 55h | c 63h | T 54h | T 54h | L 4Ch | SP 20h | SP 20h | SP 20h | SP 20h | SP 20h | 1 31h | F 46h | ♥ 03h |
| Display | ☺ > 02h 3Eh | R 52h | C 43h | U 55h | c 63h | D 44h | S 53h | P 50h | SP 20h | SP 20h | SP 20h | SP 20h | SP 20h | 1 31h | 2 32h | ♥ 03h |
| Repeat | ☺ > 02h 3Eh | R 52h | C 43h | U 55h | c 63h | R 52h | P 50h | T 54h | SP 20h | SP 20h | SP 20h | SP 20h | SP 20h | 2 32h | 1 31h | ♥ 03h |
| Subtitle | ☺ > 02h 3Eh | R 52h | C 43h | U 55h | c 63h | S 53h | U 55h | B 42h | SP 20h | SP 20h | SP 20h | SP 20h | SP 20h | 1 31h | 5 35h | ♥ 03h |
| Audio/Fs Rate | ☺ > 02h 3Eh | R 52h | C 43h | U 55h | c 63h | A 41h | U 55h | D 44h | SP 20h | SP 20h | SP 20h | SP 20h | SP 20h | 0 30h | 5 35h | ♥ 03h |
| FVPP | ☺ > 02h 3Eh | R 52h | C 43h | U 55h | c 63h | V 56h | F 46h | P 50h | SP 20h | SP 20h | SP 20h | SP 20h | SP 20h | 1 31h | 7 37h | ♥ 03h |
| Angle | ☺ > 02h 3Eh | R 52h | C 43h | U 55h | c 63h | A 41h | N 4Eh | G 47h | SP 20h | SP 20h | SP 20h | SP 20h | SP 20h | 0 30h | 1 31h | ♥ 03h |
| Zoom | ☺ > 02h 3Eh | R 52h | C 43h | U 55h | c 63h | Z 5Ah | O 4Fh | M 4Dh | SP 20h | SP 20h | SP 20h | SP 20h | SP 20h | 2 32h | 1 31h | ♥ 03h |
| Instant Replay | ☺ > 02h 3Eh | R 52h | C 43h | U 55h | c 63h | I 49h | P 50h | L 4Ch | SP 20h | SP 20h | SP 20h | SP 20h | SP 20h | 1 31h | 0 30h | ♥ 03h |
| Dimmer | ☺ > 02h 3Eh | R 52h | C 43h | U 55h | c 63h | D 44h | I 49h | M 4Dh | SP 20h | SP 20h | SP 20h | SP 20h | SP 20h | 0 30h | 5 35h | ♥ 03h |
| Cancel | ☺ > 02h 3Eh | R 52h | C 43h | U 55h | c 63h | C 43h | A 41h | N 4Eh | SP 20h | SP 20h | SP 20h | SP 20h | SP 20h | F 46h | D 44h | ♥ 03h |
| Page | ☺ > 02h 3Eh | R 52h | C 43h | U 55h | c 63h | P 50h | A 41h | G 47h | SP 20h | SP 20h | SP 20h | SP 20h | SP 20h | 0 30h | 3 33h | ♥ 03h |
| Play Mode | ☺ > 02h 3Eh | R 52h | C 43h | U 55h | c 63h | P 50h | M 4Dh | D 44h | SP 20h | SP 20h | SP 20h | SP 20h | SP 20h | 0 30h | C 43h | ♥ 03h |
| On-screen | ☺ > 02h 3Eh | R 52h | C 43h | U 55h | c 63h | O 4Fh | S 53h | D 44h | SP 20h | SP 20h | SP 20h | SP 20h | SP 20h | 1 31h | 1 31h | ♥ 03h |
| Set Up | ☺ > 02h 3Eh | R 52h | C 43h | U 55h | c 63h | S 53h | E 45h | T 54h | SP 20h | SP 20h | SP 20h | SP 20h | SP 20h | 1 31h | 7 37h | ♥ 03h |
| Progressive Scan | ☺ > 02h 3Eh | R 52h | C 43h | U 55h | c 63h | P 50h | R 52h | O 4Fh | SP 20h | SP 20h | SP 20h | SP 20h | SP 20h | 1 31h | C 43h | ♥ 03h |
| Number Keys^{*1} (E.g.: To enter the number 9) | ☺ > 02h 3Eh | R 52h | C 43h | U 55h | c 63h | N 4Eh | U 55h | M 4Dh | 0 30h | 0 30h | 9 39h | SP 20h | SP 20h | 5 35h | 4 34h | ♥ 03h |

*1 For the Number Keys command, the number that can be send ranges from “0” to “010”. Simply set the 9th and 10th byte to the desired number you want to send with the 8th byte set to “0”. Then calculate and set the check sum.

Status information acquisition commands

■ "MOD" status request

This command is for acquiring information such as unit status (on/off), tray condition and disc type.

| | | | | | | | | | | | | | | | | | |
|---------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| MOD Status Request | ☺ | > | M | O | D | c | SP | SP | SP | SP | SP | SP | SP | SP | 8 | 1 | ♥ |
| | 02h | 3Eh | 4Dh | 4Fh | 44h | 63h | 20h | 20h | 20h | 20h | 20h | 20h | 20h | 20h | 38h | 31h | 03h |

■ Response to "MOD" request

The reply to the MOD status request will contain two main parameter bytes, offering both transport status and disc format. Refer to the tables below for the available codes.

| | | | | | | | | | | | | | | | | | |
|--|-----|-----|-----|-----|-----|-----|-------------------------|-----|-----|-----|-----|-----|--------------------|-----|-----|-----|-----|
| | | | | | | | <i>TRANSPORT STATUS</i> | | | | | | <i>DISC FORMAT</i> | | | | |
| Video DVD in Play (<i>Reply to "mod"</i>) | ☺ | > | M | O | D | s | : | 4 | SP | SP | SP | SP | SP | SP | B | F | ♥ |
| | 02h | 3Eh | 4Dh | 4Fh | 44h | 73h | 3Ah | 34h | 20h | 20h | 20h | 20h | 20h | 20h | 42h | 46h | 03h |

TRANSPORT STATUS

| ASCII | Hex | Description |
|-------|-----|----------------------|
| SP | 20h | Power off |
| 1 | 31h | No disc in tray |
| 2 | 32h | Tray open |
| 3 | 33h | Tray opening |
| 4 | 34h | Tray closing |
| 5 | 35h | Reading disc |
| 6 | 36h | DVD menus |
| 7 | 37h | Stop |
| 9 | 39h | Search |
| : | 3Ah | Play |
| ; | 3Bh | Pause |
| < | 3Ch | Still playback |
| = | 3Dh | Scan |
| > | 3Eh | Slow motion playback |

DISC FORMAT

| ASCII | Hex | Description |
|-------|-----|----------------|
| 0 | 30h | No disc |
| 1 | 31h | Unknown format |
| 3 | 33h | DVD Audio |
| 4 | 34h | DVD Video |
| 5 | 35h | Super Video CD |
| 6 | 36h | Video CD |
| 7 | 37h | Audio CD |
| 9 | 39h | MP3/JPEG disc |
| A | 41h | DVD VR disc |

RS-232C interface

■ "DSC" status request

The DSC request will simply return the type of disc in the unit. The same information can also be obtained in the MOD request.

| | | | | | | | | | | | | | | | | | | |
|---------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| DSC Status Request | ☺ | > | D | S | C | c | SP | SP | SP | SP | SP | SP | SP | SP | SP | 7 | B | ♥ |
| | 02h | 3Eh | 44h | 53h | 43h | 63h | 20h | 20h | 20h | 20h | 20h | 20h | 20h | 20h | 20h | 37h | 42h | 03h |

■ Response to "DSC" request

| | | | | | | | | | | | | | | | | | | |
|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Video DVD <i>(Reply to DSC Request)</i> | ☺ | > | D | S | C | s | V | i | d | SP | SP | SP | SP | SP | SP | 4 | E | ♥ |
| | 02h | 3Eh | 44h | 53h | 43h | 73h | 56h | 69h | 64h | 20h | 20h | 20h | 20h | 20h | 20h | 34h | 45h | 03h |
| Audio DVD <i>(Reply to DSC Request)</i> | ☺ | > | D | S | C | s | A | u | d | SP | SP | SP | SP | SP | SP | 4 | 5 | ♥ |
| | 02h | 3Eh | 44h | 53h | 43h | 73h | 41h | 75h | 64h | 20h | 20h | 20h | 20h | 20h | 20h | 34h | 35h | 03h |
| Video CD <i>(Reply to DSC Request)</i> | ☺ | > | D | S | C | s | V | C | D | SP | SP | SP | SP | SP | SP | 0 | 8 | ♥ |
| | 02h | 3Eh | 44h | 53h | 43h | 73h | 56h | 43h | 44h | 20h | 20h | 20h | 20h | 20h | 20h | 30h | 38h | 03h |
| Audio CD <i>(Reply to DSC Request)</i> | ☺ | > | D | S | C | s | C | D | A | SP | SP | SP | SP | SP | SP | F | 3 | ♥ |
| | 02h | 3Eh | 44h | 53h | 43h | 73h | 43h | 44h | 41h | 20h | 20h | 20h | 20h | 20h | 20h | 46h | 33h | 03h |
| Super Video CD <i>(Reply to DSC Request)</i> | ☺ | > | D | S | C | s | S | V | C | SP | SP | SP | SP | SP | SP | 1 | 7 | ♥ |
| | 02h | 3Eh | 44h | 53h | 43h | 73h | 53h | 56h | 43h | 20h | 20h | 20h | 20h | 20h | 20h | 31h | 37h | 03h |
| MP3/JPEG <i>(Reply to DSC Request)</i> | ☺ | > | D | S | C | s | F | I | L | SP | SP | SP | SP | SP | SP | 0 | 6 | ♥ |
| | 02h | 3Eh | 44h | 53h | 43h | 73h | 46h | 49h | 4Ch | 20h | 20h | 20h | 20h | 20h | 20h | 30h | 36h | 03h |
| None <i>(Reply to DSC Request)</i> | ☺ | > | D | S | C | s | U | N | K | SP | SP | SP | SP | SP | SP | 1 | 9 | ♥ |
| | 02h | 3Eh | 44h | 53h | 43h | 73h | 55h | 4Eh | 4Bh | 20h | 20h | 20h | 20h | 20h | 20h | 31h | 39h | 03h |
| Unknown <i>(Reply to DSC Request)</i> | ☺ | > | D | S | C | s | N | O | N | SP | SP | SP | SP | SP | SP | 1 | 6 | ♥ |
| | 02h | 3Eh | 44h | 53h | 43h | 73h | 4Eh | 4Fh | 4Eh | 20h | 20h | 20h | 20h | 20h | 20h | 31h | 36h | 03h |

■ "SPD" status request

The SPD status request will return the playback speed of the unit. The SPD will also provide information on the unit status (pause, play or stop).

| | | | | | | | | | | | | | | | | | | |
|---------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| SPD Status Request | ☺ | > | S | P | D | c | SP | SP | SP | SP | SP | SP | SP | SP | SP | 8 | 8 | ♥ |
| | 02h | 3Eh | 53h | 50h | 44h | 63h | 20h | 20h | 20h | 20h | 20h | 20h | 20h | 20h | 20h | 38h | 38h | 03h |

■ Response to "SPD" request

| | | | | | | | | | | | | | | | | | | |
|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Stop Status <i>(Reply to "spd")</i> | ☺ | > | S | P | D | s | S | SP | SP | SP | SP | SP | SP | SP | SP | C | B | ♥ |
| | 02h | 3Eh | 53h | 50h | 44h | 73h | 53h | 20h | 20h | 20h | 20h | 20h | 20h | 20h | 20h | 43h | 42h | 03h |
| Pause Status | ☺ | > | S | P | D | s | P | SP | SP | SP | SP | SP | SP | SP | SP | C | 8 | ♥ |
| | 02h | 3Eh | 53h | 50h | 44h | 73h | 50h | 20h | 20h | 20h | 20h | 20h | 20h | 20h | 20h | 43h | 38h | 03h |
| Play (Normal 1x) Status | ☺ | > | S | P | D | s | N | SP | SP | SP | SP | SP | SP | SP | SP | C | 6 | ♥ |
| | 02h | 3Eh | 53h | 50h | 44h | 73h | 4Eh | 20h | 20h | 20h | 20h | 20h | 20h | 20h | 20h | 43h | 36h | 03h |

RS-232C interface

■ “INF” status requests and responses

The INF commands offer requests for different types of information on the disc. CDs and DVDs work differently, so the commands and replies are different.

Structure for Audio and Video CDs

Note that the first parameter byte (following the “c” or “s” command/status byte) is lowercase on the CD status information.

| | | | | | | | | | | | | | | | | | | |
|--|-----|-----|-----|-----|-----|-----|-----|-----------|-----|----------|-----|--------|-----|-----|-----|-----|-----|-----|
| First and Last Track Request | ☺ | > | I | N | F | c | n | SP | SP | SP | SP | SP | SP | SP | SP | C | C | ♥ |
| | 02h | 3Eh | 49h | 4Eh | 46h | 63h | 6Eh | 20h | 20h | 20h | 20h | 20h | 20h | 20h | 20h | 43h | 43h | 03h |
| First and Last Track Response <i>(Shows tracks 01 and 23)</i> | ☺ | > | I | N | F | s | n | 0 | 1 | 2 | 3 | SP | SP | SP | 2 | 2 | ♥ | |
| | 02h | 3Eh | 49h | 4Eh | 46h | 73h | 6Eh | 30h | 31h | 32h | 33h | 20h | 20h | 20h | 32h | 32h | 03h | |
| | | | | | | | | First Trk | | Last Trk | | | | | | | | |
| Total Playing Time of Disc Request | ☺ | > | I | N | F | c | t | SP | SP | SP | SP | SP | SP | SP | D | 2 | ♥ | |
| | 02h | 3Eh | 49h | 4Eh | 46h | 63h | 74h | 20h | 20h | 20h | 20h | 20h | 20h | 20h | 44h | 32h | 03h | |
| Total Playing Time Response <i>(Shows 72min, 48sec, 13fr)</i> | ☺ | > | I | N | F | s | t | 7 | 2 | 4 | 8 | 1 | 3 | SP | 5 | B | ♥ | |
| | 02h | 3Eh | 49h | 4Eh | 46h | 73h | 74h | 37h | 32h | 34h | 38h | 31h | 33h | 20h | 35h | 42h | 03h | |
| | | | | | | | | Minutes | | Seconds | | Frames | | | | | | |
| Current Track and Index Request | ☺ | > | I | N | F | c | i | SP | SP | SP | SP | SP | SP | SP | C | 7 | ♥ | |
| | 02h | 3Eh | 49h | 4Eh | 46h | 63h | 69h | 20h | 20h | 20h | 20h | 20h | 20h | 20h | 43h | 37h | 03h | |
| Current Track and Index Response <i>(Shows track 23, index 01)</i> | ☺ | > | I | N | F | s | i | 2 | 3 | 0 | 1 | SP | SP | SP | 1 | D | ♥ | |
| | 02h | 3Eh | 49h | 4Eh | 46h | 73h | 69h | 32h | 33h | 30h | 31h | 20h | 20h | 20h | 31h | 44h | 03h | |
| | | | | | | | | Track | | Index | | | | | | | | |
| Elapsed Time, Current Track Request | ☺ | > | I | N | F | c | p | SP | SP | SP | SP | SP | SP | SP | C | E | ♥ | |
| | 02h | 3Eh | 49h | 4Eh | 46h | 63h | 70h | 20h | 20h | 20h | 20h | 20h | 20h | 20h | 43h | 45h | 03h | |
| Elapsed Time, Current Track Response <i>(Shows 03min, 12sec, 13fr)</i> | ☺ | > | I | N | F | s | p | 0 | 3 | 1 | 2 | 1 | 3 | SP | 4 | 8 | ♥ | |
| | 02h | 3Eh | 49h | 4Eh | 46h | 73h | 70h | 30h | 33h | 31h | 32h | 31h | 33h | 20h | 34h | 38h | 03h | |
| | | | | | | | | Minutes | | Seconds | | Frames | | | | | | |

Structure for Video DVDs

Note that the first parameter byte (following the “c” or “s” command/status byte) is uppercase on the DVD status information

| | | | | | | | | | | | | | | | | | | | |
|---|-----|-----|-----|-----|-----|-----|-----|-------------|-----|---------|-----|-----|-----|-----|-----|-----|-----|--|--|
| Total Number of Titles Request | ☺ | > | I | N | F | c | L | SP | SP | SP | SP | SP | SP | SP | A | A | ♥ | | |
| | 02h | 3Eh | 49h | 4Eh | 46h | 63h | 4Ch | 20h | 20h | 20h | 20h | 20h | 20h | 20h | 41h | 41h | 03h | | |
| Total Number of Titles Response <i>(Shows 2 Titles)</i> | ☺ | > | I | N | F | s | L | 0 | 2 | SP | SP | SP | SP | SP | D | C | ♥ | | |
| | 02h | 3Eh | 49h | 4Eh | 46h | 73h | 4Ch | 30h | 32h | 20h | 20h | 20h | 20h | 20h | 44h | 43h | 03h | | |
| | | | | | | | | # of Titles | | | | | | | | | | | |
| Elapsed Time, Current Title Request | ☺ | > | I | N | F | c | M | SP | SP | SP | SP | SP | SP | SP | A | B | ♥ | | |
| | 02h | 3Eh | 49h | 4Eh | 46h | 63h | 4Dh | 20h | 20h | 20h | 20h | 20h | 20h | 20h | 41h | 42h | 03h | | |
| Elapsed Time, Current Title Response <i>(Shows 1hr, 15min, 23sec)</i> | ☺ | > | I | N | F | s | M | 1 | 1 | 5 | 2 | 3 | SP | SP | 1 | 7 | ♥ | | |
| | 02h | 3Eh | 49h | 4Eh | 46h | 73h | 4Dh | 31h | 31h | 35h | 32h | 33h | 20h | 20h | 31h | 37h | 03h | | |
| | | | | | | | | HR | MIN | | SEC | | | | | | | | |
| Current Title & Chapter Request | ☺ | > | I | N | F | c | H | SP | SP | SP | SP | SP | SP | SP | A | 6 | ♥ | | |
| | 02h | 3Eh | 49h | 4Eh | 46h | 63h | 48h | 20h | 20h | 20h | 20h | 20h | 20h | 20h | 41h | 36h | 03h | | |
| Current Title & Chapter Response <i>(Shows Title 1, Chapter 23)</i> | ☺ | > | I | N | F | s | H | 0 | 1 | SP | 2 | 3 | SP | SP | 0 | C | ♥ | | |
| | 02h | 3Eh | 49h | 4Eh | 46h | 73h | 48h | 30h | 31h | 20h | 32h | 33h | 20h | 20h | 30h | 43h | 03h | | |
| | | | | | | | | Title | | Chapter | | | | | | | | | |

Advanced commands

■ Front panel and IR permissions

The unit uses the PSW and IRD commands to disable the front panel or IR controls for automated installations. These settings will remain in tact until either the power is disconnected from the unit, or until these commands are used to turn the control back on. The INI command can also be used to reset the controls to its default (on).

| | | | | | | | | | | | | | | | | | | |
|------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Disable Front Panel Control | ☺ | > | P | S | W | c | D | SP | SP | SP | SP | SP | SP | SP | SP | B | F | ♥ |
| | 02h | 3Eh | 50h | 53h | 57h | 63h | 44h | 20h | 20h | 20h | 20h | 20h | 20h | 20h | 20h | 42h | 46h | 03h |
| Enable Front Panel Control | ☺ | > | P | S | W | c | A | SP | SP | SP | SP | SP | SP | SP | SP | B | C | ♥ |
| | 02h | 3Eh | 50h | 53h | 57h | 63h | 41h | 20h | 20h | 20h | 20h | 20h | 20h | 20h | 20h | 42h | 43h | 03h |
| Disable IR Remote Control | ☺ | > | I | R | D | c | D | SP | SP | SP | SP | SP | SP | SP | SP | A | 4 | ♥ |
| | 02h | 3Eh | 49h | 52h | 44h | 63h | 44h | 20h | 20h | 20h | 20h | 20h | 20h | 20h | 20h | 41h | 34h | 03h |
| Enable IR Remote Control | ☺ | > | I | R | D | c | A | SP | SP | SP | SP | SP | SP | SP | SP | A | 1 | ♥ |
| | 02h | 3Eh | 49h | 52h | 44h | 63h | 41h | 20h | 20h | 20h | 20h | 20h | 20h | 20h | 20h | 41h | 31h | 03h |

■ Initializing the unit

The initial settings of the unit can be set and recalled using the SET and INI commands. The SET command should only be used directly after the unit is turned on. The INI command will initialize the unit, and return the unit to the settings last built by the SET command. No other commands should be sent for at least 500 ms while the RS-232 routine is initializing. As for the SET and INI commands, DV-D01U does not send back response.

| | | | | | | | | | | | | | | | | | | |
|----------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Capture Default Settings | ☺ | > | S | E | T | c | 0 | 0 | 8 | e | SP | SP | 0 | 8 | 3 | 2 | ♥ | |
| | 02h | 3Eh | 53h | 45h | 54h | 63h | 30h | 30h | 38h | 65h | 20h | 20h | 30h | 38h | 33h | 32h | 03h | |
| Initialize RS-232 Control | ☺ | > | I | N | I | c | SP | SP | SP | SP | SP | SP | SP | SP | SP | 8 | 1 | ♥ |
| | 02h | 3Eh | 49h | 4Eh | 49h | 63h | 20h | 20h | 20h | 20h | 20h | 20h | 20h | 20h | 20h | 38h | 31h | 03h |