

InFocus IN5148HD

RS232 Control Instructions

Serial Communication Configuration

To control this projector via RS-232, connect a null modem cable and set the control system serial port settings to match the following communication configuration.

RS-232 Command and Configuration

Baud Rate: 9600 or 11520

Parity Bit:none

Data Bit:8

Stop Bit:1

Lamp Ignition delay = 10s

Power Down delay = 10s

Source change delay = 3s

Intercommand delay = >/=5ms

Intercharacter delay = >/=5ms

Communication Format

All communications consist of 3 alpha characters followed by a request or command, all enclosed in parentheses. A request is indicated by a "?", a command by an ASCII numerical value (1 to 4 digits).

Error Conditions

Not all commands consist of 3 alpha characters followed by a request, all enclosed in parentheses. The request can be a read request (indicated by a "?") or a write request (indicated by 1 to 4 ASCII digits).

Error Response

If the system cannot decode a communication correctly it will return a "?".

Read Requests

A read command returns a text string or the range and the current setting, for example:

Function	Command	Returns
Volume	(VOL?)	(0-10, 8)
Source	(SRC?)	(0-22, 2)
Lamp hours	(LMP?)	(0-65535, 42)
Max lamp life	(LIF?)	("5000")

Commands

Some commands have ranges, while others are absolute. If a number greater or less than the maximum range is received, it will return an error "?".

Function	Command	Returns
Volume	(VOL+)	Increases volume by one increment
Source	(SRC0)	Switches to Computer1
Power	(PWR1)	Turns the projector on
Ceiling mode	(CEL1)	Turns on ceiling mode

Write/Read Requests

Most commands have a "& Return" option you can use by adding a "!" before the final parenthesis. This will add a read command after the write command has been processed. For example, (PWR1!) would be equivalent to entering (PWR1)(PWR?).

Function	Command	Returns
Keystone	(DKH20!)	Sets keystone to +20
Source	(SRC4!)	Switches to HDMI1
Power	(PWR0!)	Turns the projector off
Color space	(CSM3!)	Sets the color space to REC601

Command List

Power		return code (ok)
Status ?	(PWR?)	(0-1,n) n=0,1
ON	(PWR1)	
OFF	(PWR0)	
ON & return	(PWR1!)	(0-1,1)
OFF & return	(PWR0!)	(0-1,0)
Menu (OSD) Status		return code (ok)
Status ?	(MNU?)	(0-1,n) n=0,1
ON	(MNU1)	
OFF	(MNU0)	
ON & return	(MNU1!)	(0-1,1)
OFF & return	(MNU0!)	(0-1,0)
Keypad		return code (ok)
Status ?	(NAV?)	(0-5,0) n=0-5
Menu	(NAV0)	
Up	(NAV1)	
Down	(NAV2)	
Select	(NAV3)	
Left	(NAV4)	
Right	(NAV5)	
Menu & return	(NAV0!)	(0-5,0)
Up & return	(NAV1!)	(0-5,1)
Down & return	(NAV2!)	(0-5,2)
Select & return	(NAV3!)	(0-5,3)
Left & return	(NAV4!)	(0-5,4)
Right & return	(NAV5!)	(0-5,5)
Auto Source		return code (ok)
Status ?	(ASC?)	(0-1,n) n=0,1
ON	(ASC1)	
OFF	(ASC0)	
ON & return	(ASC1!)	(0-1,1)
OFF & return	(ASC0!)	(0-1,0)

Blank Key		return code (ok)
Status ?	(BLK?)	(0-1,n) n=0,1
ON	(BLK1)	
OFF	(BLK0)	
ON & return	(BLK1!)	(0-1,1)
OFF & return	(BLK0!)	(0-1,0)
Blank Screen		return code (ok)
Status ?	(BSS?)	(0-6,n) n=0,3,4,5
Blue Screen	(BSS0)	
Black Screen	(BSS3)	
White Screen	(BSS4)	
Factory LOGO	(BSS5)	
User LOGO	(BSS6)	
Blue Screen & return	(BSS0!)	(0-6,0)
Black Screen & return	(BSS3!)	(0-6,3)
White Screen & return	(BSS4!)	(0-6,4)
Factory LOGO & return	(BSS5!)	(0-6,5)
User LOGO & return	(BSS6!)	(0-6,6)
Source		return code (ok)
Status ?	(SRC?)	(0-22,n) n=0-22
Next Source	(SRC+)	
Previous Source	(SRC-)	
Computer1	(SRC0)	
Computer2	(SRC1)	
VIDEO	(SRC11)	
S-VIDEO	(SRC12)	
HDMI1	(SRC4)	
HDMI2	(SRC5)	
LightCast	(SRC15)	
HDBase-T	(SRC17)	
Next Source & return	(SRC+!)	(0-22,n) n=0-22
Previous Source & return	(SRC-!)	(0-22,n) n=0-22
Computer1 & return	(SRC0!)	(0-22,0)
Computer2 & return	(SRC1!)	(0-22,1)
VIDEO & return	(SRC11!)	(0-22,11)
S-VIDEO & return	(SRC12!)	(0-22,12)
HDMI & return	(SRC4!)	(0-22,4)
HDMI2 & return	(SRC5!)	(0-22,5)
LightCast	(SRC15!)	(0-22,15)
HDBase-T	(SRC17!)	(0-22,17)
Auto Image		return code (ok)
exec	(AIM1)	
Keystone		return code (ok)
Status ?	(DKH?)	(-40-40,nnn) n=-40 ~ 40
Keystone +	(DKH+)	
Keystone -	(DKH-)	

Set keystone	(DKHnnn) n=-40 ~ 40	
Keystone + & return	(DKH+!)	(-40-40,nnn) n=-40 ~ 40
Keystone - & return	(DKH-!)	(-40-40,nnn) n=-40 ~ 40
Set keystone & return	(DKHnnn!) n=-40 ~ 40	(-40-40,nnn) n=-40 ~ 40
Aspect		return code (ok)
Status ?	(ARZ?)	(0-6,n) n=0,1,2,3,4,6
Auto	(ARZ0)	
Native	(ARZ1)	
4 X 3	(ARZ2)	
16 X 9	(ARZ3)	
Letterbox	(ARZ4)	
16 X 10	(ARZ6)	
Auto & return	(ARZ0!)	(0-6,0)
Native & return	(ARZ1!)	(0-6,1)
4 X 3 & return	(ARZ2!)	(0-6,2)
16 X 9 & return	(ARZ3!)	(0-6,3)
Letterbox & return	(ARZ4!)	(0-6,4)
16 X 10 & return	(ARZ6!)	(0-6,6)
Lamp Low Power(ECO Mode)		return code (ok)
Status ?	(IPM?)	(0-1,n) n=0,1
ON	(IPM1)	
OFF	(IPM0)	
ON & return	(IPM1!)	(0-1,1)
OFF & return	(IPM0!)	(0-1,0)
Volume		return code (ok)
Status ?	(VOL?)	(0-10,nn) n=0~10
Volume +	(VOL+)	
Volume -	(VOL-)	
Set volume	(VOLnn) n=0 ~ 10	
Volume + & return	(VOL+!)	(0-10,nn) n=0~10
Volume - & return	(VOL-!)	(0-10,nn) n=0~10
Set volume & return	(VOLnn!) n=0 ~ 10	(0-10,nn) n=0~10
Mute		return code (ok)
Status ?	(MTE?)	(0-1,n) n=0,1
ON	(MTE1)	
OFF	(MTE0)	
ON & return	(MTE1!)	(0-1,1)
OFF & return	(MTE0!)	(0-1,0)
Factory Reset		return code (ok)
exec	(RST1)	
Firmwave Version		return code (ok)
Status ?	(FVS?)	(nnnn) n=x.x.xx
Lamp ECO Hours		return code (ok)
Status ?	(LME?)	(0-65535,n) n=lamp hours
Lamp Normal Hours		return code (ok)
Status ?	(LMO?)	(0-65535,n) n=lamp hours
Lamp ECO Blank Hours		return code (ok)
Status ?	(LML?)	(0-65535,n) n=lamp hours
Lamp Hours		return code (ok)
Status ?	(LMP?)	(0-65535,n) n=lamp hours

Total ECO Hours		return code (ok)
Status ?	(LTE?)	(0-65535,n) n=lamp hours
Total Normal Hours		return code (ok)
Status ?	(LTO?)	(0-65535,n) n=lamp hours
Total ECO Blank Hours		return code (ok)
Status ?	(LTL?)	(0-65535,n) n=lamp hours
Total Hours		return code (ok)
Status ?	(LMT?)	(0-65535,n) n=lamp hours
Lamp Hours Reset Times		return code (ok)
Status ?	(LMR?)	(0-65535,n) n=lamp hours
Lamp hours reset		return code (ok)
exec	(LRT1)	
Message		return code (ok)
Status ?	(DMG?)	(0-1,n) n=0,1
ON	(DMG1)	
OFF	(DMG0)	
ON & return	(DMG1!)	(0-1,1)
OFF & return	(DMG0!)	(0-1,0)
Timer		return code (ok)
Status ?	(AOT?)	(0-6,n) n=0-6
Never	(AOT0)	
5 Min	(AOT1)	
10 Min	(AOT2)	
15 Min	(AOT3)	
20 Min	(AOT4)	
25 Min	(AOT5)	
30 Min	(AOT6)	
Never & return	(AOT0!)	(0-6,0)
5 Min & return	(AOT1!)	(0-6,1)
10 Min & return	(AOT2!)	(0-6,2)
15 Min & return	(AOT3!)	(0-6,3)
20 Min & return	(AOT4!)	(0-6,4)
25 Min & return	(AOT5!)	(0-6,5)
30 Min & return	(AOT6!)	(0-6,6)
Ceiling Set		return code (ok)
Status ?	(CEL?)	(0-3,n) n=0,1,2,3
Front table	(CELO)	
Front ceiling	(CEL1)	
Rear table	(CEL2)	
Rear ceiling	(CEL3)	

Front table & return	(CELO!)	(0-3,0)
Front ceiling & return	(CEL1!)	(0-3,1)
Rear table & return	(CEL2!)	(0-3,2)
Rear ceiling & return	(CEL3!)	(0-3,3)
Color space		return code (ok)
Status ?	(CSM?)	(0-4,n) n=0-4
Auto	(CSM0)	
RBG	(CSM1)	
REC709	(CSM2)	
REC601	(CSM3)	
RGB Video	(CSM4)	
Auto & return	(CSM0!)	(0-4,0)
RBG & return	(CSM1!)	(0-4,1)
REC709 & return	(CSM2!)	(0-4,2)
REC601 & return	(CSM3!)	(0-4,3)
RGB Video & return	(CSM4!)	(0-4,4)
Keypad		return code (ok)
Status ?	(KPE?)	(0-1,n) n=0,1
Enable	(KPE1)	
Locked	(KPE0)	
Enable & return	(KPE1!)	(0-1,1)
Locked & return	(KPE0!)	(0-1,0)
Max Lamp Life		return code (ok)
Status ?	(LIF?)	("nnnn") n=lamp hours
KEY Command		return code (ok)
Menu	(KEY2)	
Increases Brightness	(KEY3)	(0-100,n)
Decreases Volume	(KEY4)	(0-10,n)
Decreases Brightness	(KEY7)	(0-100,n)
Increases volume	(KEY8)	(0-10,n)
Toggles help menu	(KEY10)	
Moves to next slide in powerpoint (sends PageDn via USB)	(KEY11)	
Moves to previous slide in powerpoint (sends PageUp via USB)	(KEY12)	
Toggles freeze state on or off	(KEY14)	
Selects next available source	(KEY16)	
Moves menu cursor left	(KEY17)	
Moves menu cursor right	(KEY18)	
Moves menu cursor up	(KEY19)	
Moves menu cursor down	(KEY20)	
Toggles power state on or off	(KEY23)	
Selects next available computer source	(KEY25)	
Selects next available video source	(KEY26)	
Increases keystone	(KEY32)	
Decreases keystone	(KEY33)	
Increases Magnify ratio	(KEY38)	
Decreases Magnify ratio	(KEY39)	
Toggles Magnify state on or off	(KEY40)	
Toggles audio mute state on or off	(KEY41)	

Toggles Audio Video mute	(KEY42)	
Performs programmed action of Custom Key	(KEY43)	
Toggles through available presets	(KEY44)	
Toggles state of blank screen on or off	(KEY49)	
Selects current menu item	(KEY50)	
Activates automatic image re-acquisition	(KEY51)	
Toggles through available resize modes	(KEY52)	
Toggles overscan state on or off	(KEY53)	
Increases contrast	(KEY54)	(0-100,n)
Decreases contrast	(KEY55)	(0-100,n)
Commands the system to power down	(KEY57)	(0-1,0)
Commands the system to power up	(KEY58)	(0-1,1)
Selects the Native aspect ratio	(KEY59)	(0-6,1)
Selects the 16:9 aspect ratio	(KEY60)	(0-6,3)
Selects the 4:3 aspect ratio	(KEY61)	(0-6,2)
Selects the Letterbox aspect ratio	(KEY62)	(0-6,4)
Turns off the blank screen	(KEY67)	
Turns on the blank screen	(KEY68)	
Selects the Auto aspect ratio	(KEY69)	(0-6,0)
Selects the 16:10 aspect ratio	(KEY71)	(0-6,6)
AC Power On		return code (ok)
Status ?	(APO?)	(0-1,n) n=0,1
ON	(APO1)	
OFF	(APO0)	
ON & return	(APO1!)	(0-1,1)
OFF & return	(APO0!)	(0-1,0)
Auto Keystone		return code (ok)
Status ?	(AVK?)	(0-1,n) n=0,1
ON	(AVK1)	
OFF	(AVK0)	
ON & return	(AVK1!)	(0-1,1)
OFF & return	(AVK0!)	(0-1,0)
Brightness		return code (ok)
Status ?	(BRT?)	(0-100,nn) n=0~100
Brightness +	(BRT+)	
Brightness -	(BRT-)	
Set Brightness & return	(BRTnn) n=0 ~ 100	
Brightness + & return	(BRT+!)	(0-100,nn) n=0~100
Brightness - & return	(BRT-!)	(0-100,nn) n=0~100
Set Brightness & return	(BRTnn!) n=0 ~ 100	(0-100,nn) n=0~100
Closed Captions		return code (ok)
Status ?	(CLC?)	(0-2,n) n=0,1,2
Disabled	(CLC0)	
CC1	(CLC1)	

CC2	(CLC2)	
Disabled & return	(CLC0!)	(0-2,0)
CC1 & return	(CLC1!)	(0-2,1)
CC2 & return	(CLC2!)	(0-2,2)
Contrast		return code (ok)
Status ?	(CON?)	(0-100,nn) n=0~100
Contrast +	(CON+)	
Contrast -	(CON-)	
Set volume	(CONnn) n=0 ~ 100	
Contrast + & return	(CON+!)	(0-100,nn) n=0~100
Contrast - & return	(CON-!)	(0-100,nn) n=0~100
Set Contrast & return	(CONnn!) n=0 ~ 100	(0-100,nn) n=0~100
Programmed Dimming		return code (ok)
Status ?	(DCR?)	(0-1,n) n=0,1
OFF	(DCR0)	
ON	(DCR1)	
OFF & return	(DCR0!)	(0-1,0)
ON & return	(DCR1!)	(0-1,1)
Custom key		return code (ok)
Status ?	(EFK?)	(0-9,n) n=0-9
Auto image	(EFK0)	
Freeze	(EFK1)	
Source info	(EFK2)	
Project info	(EFK3)	
Over scan	(EFK4)	
AV mute	(EFK5)	
Closed captions	(EFK6)	
Blank screen	(EFK7)	
Mute	(EFK8)	
Source	(EFK9)	
Auto image & return	(EFK0!)	(0-9,0)
Freeze & return	(EFK1!)	(0-9,1)
Source info & return	(EFK2!)	(0-9,2)
Project info & return	(EFK3!)	(0-9,3)
Over scan & return	(EFK4!)	(0-9,4)
AV mute & return	(EFK5!)	(0-9,5)
Closed captions & return	(EFK6!)	(0-9,6)
Blank screen & return	(EFK7!)	(0-9,7)
Mute & return	(EFK8!)	(0-9,8)
Source & return	(EFK9!)	(0-9,9)
Internal Speaker		return code (ok)
Status ?	(INT?)	(0-1,n) n=0,1

ON	(INT1)	
OFF	(INT0)	
ON & return	(INT1!)	(0-1,1)
OFF & return	(INT0!)	(0-1,0)
Language		return code (ok)
Status ?	(LAN?)	(0-24,n) n=0-24
ENGLISH	(LAN0)	
FRENCH	(LAN1)	
GERMAN	(LAN2)	
ITALIAN	(LAN3)	
KOREAN	(LAN5)	
NORWEGIAN	(LAN6)	
PORTUGUESE	(LAN7)	
RUSSIAN	(LAN8)	
SIMPLIFIED_CHINESE	(LAN9)	
SPANISH	(LAN10)	
TRADITIONAL_CHINESE	(LAN11)	
SWEDISH	(LAN12)	
DUTCH	(LAN13)	
POLISH	(LAN14)	
TURKISH	(LAN15)	
DANISH	(LAN16)	
FINNISH	(LAN17)	
BAHASA_INDONESIAN	(LAN18)	
ARABIC	(LAN19)	
VIET	(LAN20)	
HUNGARIAN	(LAN21)	
CZECH	(LAN22)	
ROMANIAN	(LAN23)	
FARSI	(LAN24)	
ENGLISH & return	(LAN0!)	(0-24,0)
FRENCH & return	(LAN1!)	(0-24,1)
GERMAN & return	(LAN2!)	(0-24,2)
ITALIAN & return	(LAN3!)	(0-24,3)
KOREAN & return	(LAN5!)	(0-24,5)
NORWEGIAN & return	(LAN6!)	(0-24,6)
PORTUGUESE & return	(LAN7!)	(0-24,7)
RUSSIAN & return	(LAN8!)	(0-24,8)
SIMPLIFIED_CHINESE & return	(LAN9!)	(0-24,9)
SPANISH & return	(LAN10!)	(0-24,10)
TRADITIONAL_CHINESE & return	(LAN11!)	(0-24,11)
SWEDISH & return	(LAN12!)	(0-24,12)
DUTCH & return	(LAN13!)	(0-24,13)
POLISH & return	(LAN14!)	(0-24,14)
TURKISH & return	(LAN15!)	(0-24,15)
DANISH & return	(LAN16!)	(0-24,16)
FINNISH & return	(LAN17!)	(0-24,17)
BAHASA_INDONESIAN & return	(LAN18!)	(0-24,18)
ARABIC & return	(LAN19!)	(0-24,19)
VIET & return	(LAN20!)	(0-24,20)

HUNGARIAN & return	(LAN21!)	(0-24,21)
CZECH & return	(LAN22!)	(0-24,22)
ROMANIAN & return	(LAN23!)	(0-24,23)
FARSI & return	(LAN24!)	(0-24,24)
Magnify		return code (ok)
Status ?	(MGL?)	(0-100,nn) n=0~100
Magnify +	(MGL+)	
Magnify -	(MGL-)	
Set Magnification	(MGLnn) n=0 ~ 100	
Magnify + & return	(MGL+!)	(0-100,nn) n=0~100
Magnify - & return	(MGL-!)	(0-100,nn) n=0~100
Magnify & return	(MGLnn!) n=0 ~ 100	(0-100,nn) n=0~100
OSD Position		return code (ok)
Status ?	(OFF?)	(0-4,0) n=0-4
Top Left	(OFF0)	
Top Right	(OFF1)	
Center	(OFF2)	
Lower Left	(OFF3)	
Lower Right	(OFF4)	
Top Left & return	(OFF0!)	(0-4,0)
Top Right & return	(OFF1!)	(0-4,1)
Center & return	(OFF2!)	(0-4,2)
Lower Left & return	(OFF3!)	(0-4,3)
Lower Right & return	(OFF4!)	(0-4,4)
Presets		return code (ok)
Status ?	(PST?)	(0-13,n) n=0-13
User	(PST1)	
Presentation	(PST5)	
Video	(PST7)	
Bright	(PST10)	
Whiteboard	(PST11)	
Blackboard	(PST12)	
Beige Wall	(PST13)	
User & return	(PST1!)	(0-13,1)
Presentation & return	(PST5!)	(0-13,5)
Video & return	(PST7!)	(0-13,7)
Bright & return	(PST10!)	(0-13,10)
Whiteboard & return	(PST11!)	(0-13,11)
Blackboard & return	(PST12!)	(0-13,12)
Beige Wall & return	(PST13!)	(0-13,13)
Computer1 Audio input		return code (ok)
Status ?	(SA0?)	(1-2,n) n=1,2
Audio input 1	(SA01)	
Audio input 2	(SA02)	
Audio input 1 & return	(SA01!)	(1-2,1)
Audio input 2 & return	(SA02!)	(1-2,2)
Computer2 Audio input		return code (ok)
Status ?	(SA1?)	(1-2,n) n=1,2

Audio input 1	(SA11)	
Audio input 2	(SA12)	
Audio input 1 & return	(SA11!)	(1-2,1)
Audio input 2 & return	(SA12!)	(1-2,2)
Composite / SVideo Audio input		return code (ok)
Status ?	(SA2?)	(1-2,n) n=1,2
Audio input 1	(SA21)	
Audio input 2	(SA22)	
Audio input 1 & return	(SA21!)	(1-2,1)
Audio input 2 & return	(SA22!)	(1-2,2)
HDMI Audio input		return code (ok)
Status ?	(SA4?)	(1-3,n) n=1,2,3
Audio input 1	(SA41)	
Audio input 2	(SA42)	
HDMI audio	(SA43)	
Audio input 1 & return	(SA41!)	(1-3,1)
Audio input 2 & return	(SA42!)	(1-3,2)
HDMI audio & return	(SA43!)	(1-3,3)
Power saving mode		return code (ok)
Status ?	(SPS?)	(0-2,n) n=0-2
High	(SPS2)	
ON	(SPS1)	
OFF	(SPS0)	
High	(SPS2!)	(0-2,2)
ON & return	(SPS1!)	(0-2,1)
OFF & return	(SPS0!)	(0-2,0)
3D function		return code (ok)
Status ?	(TDI?)	(0-5,0) n=0-5
Disabled	(TDI0)	
Top-Bottom	(TDI2)	
Frame-Sequetnial	(TDI3)	
Frame-Packing	(TDI4)	
Side-by-side	(TDI5)	
Disabled & return	(TDI0!)	(0-5,0)
Top-Bottom & return	(TDI2!)	(0-5,2)
Frame-Sequetnial & return	(TDI3!)	(0-5,3)
Frame-Packing & return	(TDI4!)	(0-5,4)
Side-by-side & return	(TDI5!)	(0-5,5)
Color Temp		return code (ok)
Status ?	(TMP?)	(0-4,0) n=0-4
Warmest	(TMP0)	
Warm	(TMP1)	
Cool	(TMP2)	
Bright	(TMP4)	
Warmest & return	(TMP0!)	(0-4,0)
Warm & return	(TMP1!)	(0-4,1)
Cool & return	(TMP2!)	(0-4,2)
Bright & return	(TMP4!)	(0-4,4)