

# InFocus IN124x, IN126x, IN128HDx, IN124STx, IN126STx, IN128HDSTx, IN2124x, IN2126x, IN2128HDx 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.

When Power Saving mode is enabled and the projector is turned off, the projector will echo commands. It will not echo commands when the projector is on or when Power Saving mode is disabled.

## RS-232 Command and Configuration

Baud Rate:9600 Parity Bit:none Data Bit:8 Stop Bit:1

Lamp Ignition delay = 10s

Power Down delay = 10s

Source change delay = 3s

Intercommand delay mininum = 5ms

Intercharacter delay mininum = 2ms

## Command Format

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 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).

## Read Requests

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

Function	Command	Returns
Volume	(VOL?)	(0-10, 8)
Source	(SRC?)	(0-22, 2)
Lamp hours	(LMP?)	(0-9999, 42)
Max lamp life	(LIF?)	("5000")

## Write Requests

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

<b>Power</b>		<b>return code (ok)</b>
Status ?	(PWR?)	(0-1,n) n=0,1
ON	(PWR1)	
OFF	(PWR0)	
ON & return	(PWR1!)	(0-1,1)
OFF & return	(PWR0!)	(0-1,0)
<b>Menu(OSD) Status</b>		<b>return code (ok)</b>
Status ?	(MNU?)	(0-1,n) n=0,1
ON	(MNU1)	
OFF	(MNU0)	
ON & return	(MNU1!)	(0-1,1)
OFF & return	(MNU0!)	(0-1,0)
<b>Key Pad</b>		<b>return code (ok)</b>
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)
<b>Auto Source</b>		<b>return code (ok)</b>
Status ?	(ASC?)	(0-1,n) n=0,1
ON	(ASC1)	
OFF	(ASC0)	
ON & return	(ASC1!)	(0-1,1)
OFF & return	(ASC0!)	(0-1,0)

<b>Blank Key</b>		<b>return code (ok)</b>
Status ?	(BLK?)	(0-1,n) n=0,1
ON	(BLK1)	
OFF	(BLK0)	
ON & return	(BLK1!)	(0-1,1)
OFF & return	(BLK0!)	(0-1,0)
<b>Blank Screen</b>		<b>return code (ok)</b>
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)
<b>Source</b>		<b>return code (ok)</b>
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)	
LightCast (selected models)	(SRC15)	
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)
LightCast & return (selected models)	(SRC15!)	(0-22,15)
<b>Auto Image</b>		<b>return code (ok)</b>
exec	(AIM1)	
<b>Keystone</b>		<b>return code (ok)</b>
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)
<b>Lamp Low Power(ECO Mode)</b>		<b>return code (ok)</b>
Status ?	(IPM?)	(0-1,n) n=0,1
ON	(IPM1)	
OFF	(IPM0)	
ON & return	(IPM1!)	(0-1,1)
OFF & return	(IPM0!)	(0-1,0)
<b>Volume</b>		<b>return code (ok)</b>
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
<b>Mute</b>		<b>return code (ok)</b>
Status ?	(MTE?)	(0-1,n) n=0,1
ON	(MTE1)	
OFF	(MTE0)	
ON & return	(MTE1!)	(0-1,1)
OFF & return	(MTE0!)	(0-1,0)
<b>Factory Reset</b>		<b>return code (ok)</b>
exec	(RST1)	
<b>Firmwave Version</b>		<b>return code (ok)</b>
Status ?	(FVS?)	(nnnn) n=x.x.xx
<b>Lamp ECO Hours</b>		<b>return code (ok)</b>
Status ?	(LME?)	(0-65535,n) n=lamp hours
<b>Lamp Normal Hours</b>		<b>return code (ok)</b>
Status ?	(LMO?)	(0-65535,n) n=lamp hours
<b>Lamp ECO Blank Hours</b>		<b>return code (ok)</b>
Status ?	(LML?)	(0-65535,n) n=lamp hours
<b>Lamp Hours</b>		<b>return code (ok)</b>
Status ?	(LMP?)	(0-65535,n) n=lamp hours
<b>Total ECO Hours</b>		<b>return code (ok)</b>
Status ?	(LTE?)	(0-65535,n) n=lamp hours
<b>Total Normal Hours</b>		<b>return code (ok)</b>
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 previous slide in powerpoint (sends PageUp via USB)	(KEY11)	
Moves to next slide in powerpoint (sends PageDown 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)
<b>AC Power On</b>		<b>return code (ok)</b>
Status ?	(APO?)	(0-1,n) n=0,1
ON	(APO1)	
OFF	(APO0)	
ON & return	(APO1!)	(0-1,1)
OFF & return	(APO0!)	(0-1,0)
<b>Auto Keystone</b>		<b>return code (ok)</b>
Status ?	(AVK?)	(0-1,n) n=0,1
ON	(AVK1)	
OFF	(AVK0)	
ON & return	(AVK1!)	(0-1,1)
OFF & return	(AVK0!)	(0-1,0)
<b>Brightness</b>		<b>return code (ok)</b>
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
<b>Closed Captions</b>		<b>return code (ok)</b>
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)

<b>Magnify</b>		<b>return code (ok)</b>
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
<b>OSD Position</b>		<b>return code (ok)</b>
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)
<b>Presets</b>		<b>return code (ok)</b>
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)
<b>Computer1 Audio input</b>		<b>return code (ok)</b>
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)
<b>Computer2 Audio input</b>		<b>return code (ok)</b>
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)

<b>Composite / SVideo Audio input</b>		<b>return code (ok)</b>
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)
<b>HDMI Audio input</b>		<b>return code (ok)</b>
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)
<b>Power saving mode</b>		<b>return code (ok)</b>
Status ?	(SPS?)	(0-1,n) n=0,1
ON	(SPS1)	
OFF	(SPS0)	
ON & return	(SPS1!)	(0-1,1)
OFF & return	(SPS0!)	(0-1,0)
<b>3D function</b>		<b>return code (ok)</b>
Status ?	(TD1?)	(0-5,0) n=0-5
Disabled	(TD10)	
Top-Bottom	(TD12)	
Frame-Sequential	(TD13)	
Frame-Packing	(TD14)	
Side-by-side	(TD15)	
Disabled & return	(TD10!)	(0-5,0)
Top-Bottom & return	(TD12!)	(0-5,2)
Frame-Sequetnial & return	(TD13!)	(0-5,3)
Frame-Packing & return	(TD14!)	(0-5,4)
Side-by-side & return	(TD15!)	(0-5,5)
<b>Color Temp</b>		<b>return code (ok)</b>
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)