

PJLink test manual





Change log

| Revision | Change log | Date |
|----------|---------------|-------------|
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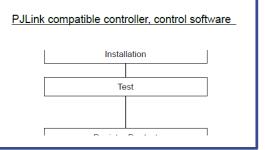
ノアドレン 一般社団法人ビジネス機械・情報システム産業協会 Japan Business Machine and Information System Industries Association

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1. About this document

• This document explains about requisite procedure to execute "Test".



 Enter the test results(Pass/Fail) and communication logs in Excel(PJLinkTestSheet.xlsx)

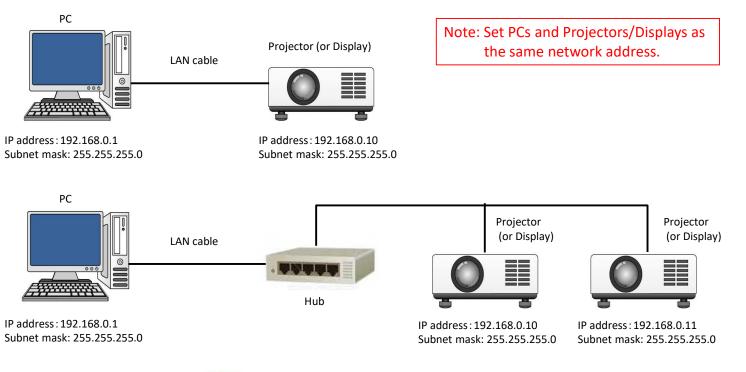
| ommand fur | nctions | | | | | |
|------------|----------------------|-----------|-------------------------------|-----------------------------|---------------------------|-----------|
| | PJLinkTEST4PJ button | Parameter | Command from PJLinkTEST4PJ | Sample replyt | Remark/Projector behavier | Pass/Fail |
| | GET_ALL | - | %1POWR ? | %1POWR=1 | | Pass |
| | | - | %1INPT ? | %1INPT=14 | | Pass |
| | | - | %1AVMT ? | %1AVMT=31 | | Pass |
| | | - | %1ERST ? | %1ERST=000000 | | Pass |
| | | - | %1LAMP ? | %1LAMP=8253 1 13442 1 | | Pass |
| | | - | %1INST ? | %1INST=11 22 33 44 1A 2Z 3E | | Pass |
| | | - | %1NAME ? | %1NAME=PJLinkProjector | | Pass |
| | | - | %1INFO ? | %1INFO=PJLink | | Pass |
| | | - | %1INF1 ? | %1INF1=JBMIA | | Pass |
| | | - | %1INF2 ? | %1INF2=PJLinkProjector | | Pass |
| | | - | %1CLSS ? | %1CLSS=2 | | Pass |
| | | - | %2INPT ? | %2INPT=14 | | Pass |
| | | - | %2INST ? | %2INST=11 22 33 44 1A 2Z 3E | | Pass |
| | | - | %2SNUM ? | %2SNUM=1234AbcD | | Pass |





2.1 Environment: Connection diagram

Connection diagram







2.1 Tool setup Environment

i. Start PJLinkTEST4PJ.exe

PJLinkTES T4PJ.exe

| | ii. Select Network | | i. ii. | Start PJLinkTEST4PJ.exe Press "Set up" tab and |
|---|--|--|-------------|--|
| File Set up Help Sing Network C Test set up E Out of parameter POWR ON POWR OFF O.O.P POWR? LAMP? INST? | PJLinkTEST4PJ (pj,pjf) | Class2 Input switch instruction RGB v 1 v INPT Nonexistent INPT? INST? SNUM? SVER? | iii. iv. | select "Network"button. Input Projector/display's IP address Select Local IP address for Search and Status Notifications. |
| NAME? INFO? INF1? INF2? CLSS? GET ALL | Error status ERST? Fan Lamp Temp. Cover open Filter Others Clear log | RGB V 1 V INNM? O.O.P INNM? IRES Network IRES Projector Projector IP Address :1 PFEZ Password FREZ Password FREZ Local IP address ISU 192.168.10.101 FUIT Prohibit the dialog display of notification MVOL OK Cancel | | Input Projector/display's IP address iv. Select Local IP address |





3.1.1. GET_ALL Get commands

Please confirm all of the query commands work correctly as specified by PJLink specifications.

| PJLInkTEST4PJ (pj.pjf) Elle Set up Help Single Test Total Test Search(Class2) Class1 Power control instruction POWR ON POWR OFF O.O.P RGB 1 I INPT POWR? NOPT? Nonexistent | Class2 Input switch instruction RGB V I V INPT Nonexistent INPT? |
|---|---|
| LAMP? Mute instruction Mute instruction VIDEO mute ON NST? AVMT NAME? Error status INFO? Error status INF1? Fan INF2? Fan CLSS? Filter Others GET ALL Push "Get_ALL" button Clear log | INST? SNUM? SVER? RGB INNM? IRES? RRES? RLMP? FREZ ON FREZ OFF FREZ OFF |
| Please check communication log to confirm the reply from projector is correct or not. | Class2(option) FILT? SVOL UP SVOL DOWN SVOL 0.0.P MVOL UP MVOL DOWN MVOL 0.0.P |
| Query button Reply | Communication log |



- i. Push "GET_ALL" button.
- ii. Confirm each reply and communication log.
- iii. If there are any errors or unexpected reply had come, please check the command behavior one by one with each query button.



3.1.2 INNM? Get commands

Input terminal name query (INNM?)

This command has many parameters. It related to the reply of "INST?" Query command.

| 🛃 PJLinkTEST4PJ (j | oj-pjf) | | | | | | ÷ | n x | | M2 co | mmar | nd nar | amotor is | different in | oach |
|--------------------|---------------------|---------|--------------------------|-------------|------------------|--------------|-------------|----------|-----------|----------|----------|----------|----------------|-------------------|-----------|
| File Set up Help |) | | | | | | | | | | | | | | |
| Single Test Total | Test Search(Class2) | | | | | | | | | | | | | m the reply | |
| Class1 | | | | | Class2 | | | | | | | | ind to kno | ow the supp | orted |
| Power control in | struction | | Input switch instruction | | Input switch | instruction | | | para | amete | r at fir | st. | | | |
| POWR ON | POWR OFF | 0.0.P | RGB v 1 | ~ INPT | RGB | ~ <u>1</u> ~ | INPT Non | existent | The reply | of "INS | Т?" | | | | |
| POWR? | | | INPT? | Nonexistent | INPT? | | | <u> </u> | | | | | | | |
| - | ř. | | | | | | ~ | | e.g. |) If the | e reply | of "IN | IST?" is | | |
| LAMP? | | ~ ~ | Mute instruction | | INST? | | | | | No.1 | 11 | | No.2 | 12 | |
| | | ~ | VIDEO mute ON | ~ AVMT | SNUM? | | 1 | | | No.3 | 31 | | No.4 | 32 | |
| INST? | | | AVMT? | 0.0.P | SVER? | | | | | No.5 | 51 | | No.6 | 52 | |
| NAME? | L | | | | | | INNM? O.O.P | 1 | The | n, the | follow | ving IN | INM? par | ameters are | available |
| | | | Error status | | DIGITAL INNM? | | INNM? 0.0.P | | | RGB 1 | | - | RGB 2 | | |
| INFO? | | | ERST? | | | HDMI3 | | | | DIGITA | AL 1 | | DIGITAL 2 | | |
| INF1? | | | | | IRES? | | | | | NETW | ORK 1 | | NETWORK | 2 | |
| INF2? | | | Fan Lamp | Temp. | RRES? | | | | | * Pleas | se refer | to "Guid | lelines for Ir | iput Terminals" i | n details |
| CLSS? | | | Cover open Filter | Others | RLMP? | | | | The reply | of "INN | IM?" | | | | |
| | | | | | RFIL? | | | Ľ | | | | - | | | |
| GET ALL | | | | | FREZ ON | FREZ OFF | FREZ O.O.P | | i. | Duc | h "INI | 11/12/1 | huttonw | ith each para | motor |
| | | | | Clear log | FREZ? | | | | 1. | | | | display su | | ameter |
| | | | | | Class2(option) | | | | | • | • • | - | • • | • • | / |
| Please ch | ieck commu | nicatio | n log to confirm | the | FILT? | | | | ii. | | | | | he projector | |
| | m projector | | - | | SVOL UP | SVOL DOW | N SVOL 0.0 | P | | | | - | - | mmunicatio | n log. |
| | | | | | L. | | | | iii. | Pus | h "INI | VM? 0 |).O.P" bu | tton. | |
| | | | | | MVOL UI | MVOL DOV | WN MVOL O.C | 7.5 | iv. | Cor | nfirm t | he rec | olv from t | he projector | /displav |
| Qu | ery button | | Reply | | | Comm | unication | log | | | | | | mmunicatio | |
| | | | | IDAA | 一般社团 | 法人ビジネ | ネス機械・情 | 報シス | テム産業協会 | | | | | | |

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3.2.1 POWR Set commands

Power control instruction command (POWR)

| ss1 ower control instruction | Input | switch instr | ruction | | Class2 Input switch inst | ruction | |
|---------------------------------|------------------|------------------|---------|-----------|-----------------------------|-----------|---------------|
| POWR ON POWR OFF | 0.0.P RGB | | ▼ 1 ▼ | INPT | RGB | | NPT Nonexiste |
| POWR? | I | VPT? | Nor | nexistent | INPT? | [| |
| LAMP? | ÷ Mute | instruction | | | INST? | | |
| INST? | · | O mute ON MT? | 1 - | AVMT | SNUM? | | |
| | * | 192.4 : | l | 0.0.1 | SVER? | | |
| NAME? | Error | status | | | RGB INNM? | ▼ 1 ▼ 1 | NNM? O.O.P |
| INFO? | | RST? | | | IRES? | | |
| INF1? | | Fan | Lamp | Temp. | RRES? | | |
| INF2? CLSS? | Co | er open | Filter | Others | RLMP? | | |
| CL35? | | | | | RFIL? | | |
| GET ALL | | | | | FREZ ON | FREZ OFF | FREZ O.O.P |
| | | | | Clear log | FREZ? | | |
| | | | | | Class2(option) | | |
| lease check cor | mmunication | log to | confirn | n the | FILT? | | |
| eply from proje | ector is correct | orn | ot. | | SVOL UP | SVOL DOWN | SVOL O.O.P |

- i. Push POWR ON button.
- ii. Confirm the projector turn on correctly.
- iii. Confirm the reply from projector/display is correct by checking communication log.
- iv. Push POWR OFF button.
- v. Confirm the projector/display turn off correctly.
- vi. Confirm the reply from projector/display is correct by checking communication log.
- vii. Push O.O.P button
- viii. Confirm the projector/display do nothing.
- ix. Confirm the reply from projector/display is "ERR2" by checking communication log.

Instruction button

Reply

Communication log





3.2.2. INPT(CLASS1) Set commands

Input switch instruction command (INPT)

This command has many parameters. It related to the reply of "INST?" Query command.

| lass1 Power control instruction | Input switch instruction | Class2 Input switch instruction |
|------------------------------------|-----------------------------|------------------------------------|
| POWR ON POWR OFF 0.0. | P RGB • 1 • INPT | RGB I INPT Nonexisten |
| POWR? | INPT? Nonexistent | INPT? |
| LAMP? The reply | of "INST?" | INST? |
| INST? | VIDEO mute ON | I SNUM? |
| | - AVMT? 0.0.P | SVER? |
| NAME? | | RGB ▼ 1 ▼ INNM? 0.0.P |
| INFO? | Error status | INNM? |
| INF1? | ERST? | IRES? |
| INF2? | Fan Lamp Ten | RRES? |
| CLSS? | Cover open Filter Oth | ers RLMP? |
| | | RFIL? |
| GET ALL | | FREZ ON FREZ OFF FREZ O.O.P |
| | Clear log | FREZ? |
| | | Class2(option) |
| Please check commur | nication log to confirm the | FILT? |
| eply from projector i | - | SVOL UP SVOL DOWN SVOL O.O.P |
| | | _ MVOL UP MVOL DOWN MVOL 0.0.P |

INPT command parameter is different in each projector/display. Please confirm the reply of "INST?" query command to know the supported parameter at first.

| e.g.) | If the | reply of ' | 'INST?" is | | |
|-------|---------|---------------|------------------|-------------|----------------|
| | No.1 | 11 | No.2 | 12 | |
| | No.3 | 31 | No.4 | 32 | |
| | No.5 | 51 | No.6 | 52 | |
| The | n, the | following | INPT param | neters are | available. |
| | RGB 1 | | RGB 1 | | |
| | DIGITA | L 1 | DIGITAL 2 | | |
| | NETW | ORK 1 | NETWORK | 2 | |
| | * Pleas | e refer to "G | uidelines for In | put Termina | ls" in details |
| | | | | | |

- i. Push "INPT" button with each parameter your projector/display support.
- ii. Confirm the reply from the projector/display is correct by checking communication log.
- iii. Push "Nonexistent" button
- iv. Confirm the reply from the projector/display is "ERR2" by checking communication log.





3.2.3. INPT(CLASS2) Set commands

Input switch instruction command (INPT)

This command has many parameters. It related to the reply of "INST?" Query command.

| PJLinkTEST4PJ (pj.pjf) Elle Set up Help Single Test Total Test Search(Class2) | | | INPT command parameter is different in each projector/display. Please confirm the reply of "INST?" query command to know the supported |
|---|--|--|--|
| Class1 Power control instruction POWR ON POWR OFF O.O.P POWR? LAMP? INST? NAME? INFO? INFO? INF1? INF2? | Input switch instruction RGB I INPT INPT? Nonexistent Mute instruction VIDEO mute ON AVMT AVMT? O.O.P Error status ERST? Fan Lamp Temp. | Class2 Input switch instruction RGB • 1 • INPT Nonexistent INPT? INST? SNUM? SVER? RGB • 1 • INNM? O.O.P INNM? IRES? RRES? | "INST?" query command to know the supported parameter at first. The reply of "INST?" e.g.) If the reply of "INST?" is No.1 11 No.3 31 No.5 51 No.6 52 Then, the following INPT parameters are available. RGB 1 RGB 2 DIGITAL 1 DIGITAL 2 NETWORK 1 NETWORK 2 |
| GETALL Please check communicative reply from projector is communicative from projector is comm | • | RLMP? RFL2 FREZ ON FREZ OFF FREZ O.O.P FREZ? Class2(option) FILT? SVOL UP SVOL DOWN SVOL O.O.P MVOL UP MVOL DOWN MVOL O.O.P | * Please refer to "Guidelines for Input Terminals" in details i. Push "INPT" button with each parameter your projector/display support. ii. Confirm the reply from the projector/display is correct by checking communication log. iii. Push "Nonexistent" button. iv. Confirm the reply from the projector/display is "ERR2" by checking communication log. |





3.2.4. AVMT Set commands

Mute instruction command (AVMT)

This command has 6 parameters. Not all parameters are supported.

| ass1 ower control ir | istruction | Input switch instr | ruction | | Class2 Input switch in | istructio | m | | |
|-------------------------|--------------------|------------------------|---------|---------------|---------------------------|-----------|---------|--------|------------|
| POWRON | POWR OFF 0.0.P | RGB | • 1 • | INPT | RGB | • | 1 • | INPT | Nonexisten |
| POWR? | | INPT? | Nor | nexistent | INPT? | | | | |
| LAMP? | | Mute instruction | | | INST? |] | | | - |
| INST? | * | VIDEO mute ON AVMT? | 4 - | AVMT 0.0.P | SNUM? | j — | | | |
| | * | AVM1? | | 0.0.1 | SVER? | | | | |
| NAME? | | | | | RGB | • | 1 • | INNM? | 0.0.P |
| INFO? | | Error status | | | INNM? | | | | |
| INF1? | | ERST? | | | IRES? | | | | |
| INF2? | | Fan | Lamp | Temp. | RRES? |] | | | |
| CLSS? | | Cover open | Filter | Others | RLMP? | | | | |
| | | 1 | | | RFIL? | | | | |
| GET ALL | | | | | FREZ ON | FR | EZ OFF | FREZ O | D.O.P |
| | | | C | Clear log | FREZ? | | | | |
| | | | | | Class2(option) | - | | | |
| lease c | check communica | tion log to | confirm | n the | FILT? | | | | |
| eply fro | om projector is co | rrect or no | ot. | | SVOL UP | 51 | OL DOW | N SV | OL O.O.P |
| | | | | | + MVOL UP | M | VOL DOW | N M | OL O.O.P |

This command has following parameters.

Video mute ON Video mute OFF Audio mute ON Audio mute OFF Video and Audio mute OFF

Supported parameters depends on the projector/display.

If the projector/display doesn't support the parameter,

The projector shall reply "ERR2".

- i. Push AVMT button with each parameter. (total 6 trial)
- Confirm the reply from projector/display is correct by checking communication log.





3.2.5 SVOL/MVOL Set commands

Speaker/Microphone volume adjustment command (SVOL/MVOL)

| 1 | | | | | | Class2 | | |
|---------------|------------|-----------|--------------------|---------|-----------|------------------|------------|----------------|
| er control in | struction | | Input switch instr | uction | | Input switch ins | truction | |
| OWR ON | POWR OFF | 0.0.P | RGB | ~ 1 ~ | INPT | RGB | ~ 1 ~ | INPT Nonexiste |
| POWR? | _ | | INPT? | Nor | existent | INPT? | | |
| LAMP? | | Ç | Mute instruction | | | INST? | | ^ _ |
| INST? | | ^ | VIDEO mute ON | · · · · | AVMT | SNUM? | | |
| | | v. | AVMT? | | 0.0.P | SVER? | | |
| NAME? | | | | | | RGB | ~ 1 ~ | INNM? O.O.P |
| INFO? | | | Error status | (c) | | INNM? | | |
| INF1? | | | ERST? | | | IRES? | | |
| INF2? | | | Fan | Lamp | Temp. | RRES? | [| |
| CLSS? | | | Cover open | Filter | Others | RLMP? | | |
| | | | | | Vic | RFIL? | | |
| ETALL | | | | | | FREZ ON | FREZ OFF | FREZ O.O.P |
| | | | | | Clear log | FREZ? | [<u>.</u> | |
| | | ····· | | | | Class2(option) | | |
| | | | ion log to c | | he | FILT? | | |
| eply fro | om project | tor is co | rrect or not | • | | SVOL UP | SVOL DOW | N SVOL O.O.P |

Push "SVOL UP" button.

i.

- ii. Confirm the reply from the projector/display is correct by checking communication log.
- iii. Push "SVOL DOWN" button.
- iv. Confirm the reply from the projector/display is correct by checking communication log.
- v. Push SVOL O.O.P button.
- vi. Confirm the reply from the projector/display is "ERR2" by checking communication log.
- vii. Push "MVOL UP" button.
- viii. Confirm the reply from the projector/display is correct by checking communication log.
- ix. Push "MVOL DOWN" button.
- x. Confirm the reply from the projector/display is correct by checking communication log.
- xi. Push MVOL O.O.P button.
- xii. Confirm the reply from the projector/display is "ERR2" by checking communication log.

If the projector/display doesn't support Speaker or Microphone, the projector/display shall reply "ERR1".





4. Search function

| Total Test Search(Class2) | | | | | |
|--|--|-----------|---------------------|-----------------------------|---|
| control instruction | Input switch instruction | | | | |
| R ON POWR OFF 0.0.1 | RGB • 1 | | | | |
| PJLinkTEST4PJ (pj.pjf) | | | | X | |
| File Set up Help Single Test Total Test Search(Class2) | | | | | |
| ongie rest Total rest | 01 | | | | 1 |
| 42:78:F8:DA:BE:4E | | | * | | |
| | | | | | |
| Sea | rch Result | | | Search | |
| | | | | Search remaining time (sec) | |
| | | | | | |
| | | | | 18 | |
| | | | | 18 | |
| | | | | 18 | |
| | | | | 18 | |
| | | | | 18 | |
| | | | | 18 | |
| | | | | 18 | |
| | | | | 18 | |
| | | | | 18 | |
| | | | | 18 | |
| | | Clear log | Clear search screen | 18 | |
| [2017.12.15 10:07:40.496] Open UDP n | | Clear log | Clear search screen | 18 | |
| [2017.12.15 10:07:48.173] Start UDP se [2017.12.15 10:07:48.206] SEND:%2SR | irch. CH | Clear log | Clear search screen | 18 | |
| [2017.12.15 10:07:48.173] Start UDP se | rrch. CH vadcast address: 192.168.10.255 | Clear log | Clear search screen | 18 | |
| [2017.12.15 10:07:48.173] Start UDP se [2017.12.15 10:07:48.206] SEND:%2SR [2017.12.15 10:07:48.271] IPV4 local br | rrch. CH vadcast address: 192.168.10.255 | Clear log | Clear search screen | 18 | |

File

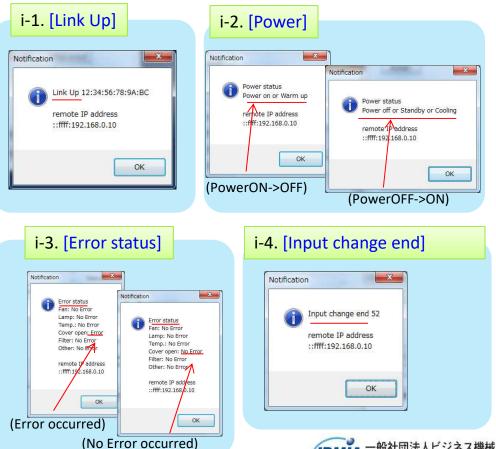
- Push Search(CLASS2) button.
- ii. It changes to Search function mode.
- iii. Push search button.
- iv. Search function starts.
- v. Results are indicated by MAC address.
- vi. Search doesn't restart until Search remaining time is zero.
- vii. Push Clear log button.

Associatio

- viii. It clears the communication log.
- ix. Push Clear search screen button.
- x. It clears the search results.



5. Status Notification function



Confirm the following notifications displayed on your computer screen

i-1. [Link Up]

Connects the projector/display to the network.

i-2. [Power]

Switches projector/display's power status. (ON ->OFF / OFF -> ON)

i-3. [Error status]

Switches projector/display's error status.

(Error -> No error / No Error -> Error)

Example: Open the projector/display's cover to cause the cover open error.

i-4. [Input change end]

Changes the projector/display's input source.





6. Authentication function

| 1 : - | Toot | c o t | |
|-------|------|-------|----|
| | est | set | up |

| File Set up Help | PJLinkTEST4PJ (pj.pjf) | - • • | i Salact Tast sat un |
|---|---|---|---|
| Sing Network | | Class2 | i. Select Test set up |
| Out of parameter POWR ON POWR ON POWR OF OWR? LAMP? INST? NAME? INF0? INF1? INF2? CLSS? | Input switch instruction RGB I INPT? Nonexistent Mute instruction VIDEO mute ON AVMT AVMT? O.O.P Error status ERST? Fan Lamp Cover open Filter Others | Input switch instruction RGB V I V INPT Nonexistent INPT? INST? SNUM? SVER? RGB V I V INNM? O.O.P INNM? IRES? RRES? RLMP? | ii. Password to tran ii-1 Match with the ii-2 Mismatch with iii. Password to tran iii-1 Match with the iii-2 Mismatch with |
| GET ALL | Clear log ii. set to Add itton Communication | Character conversion | Random Random Il letter |
| | | IDAATA 一般社団法人ビジネ | ncel ネス機械・情報システム産業協会 ad Information System Industries Association |

up... of PC Application

ransmit set to Add the projector/display 's password vith the projector/display 's password

transmit set to NoAdd the projector/display 's password with the projector/display 's password