MCP2
Remote Control Protocol Specifications

Version 1.0.0

This specification document applies to MCP2 V1.0.0 and later.

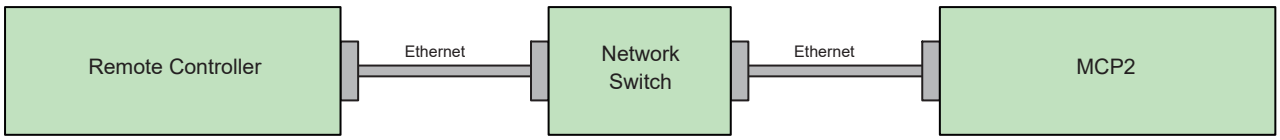
Table of contents

0. Revision History

Version	Date	Section	Description
V1.0.0	Feb. 1, 2026	–	Initial version

1. Setup

1.1. Connection Procedure



1.2. Configuring the Remote Controller

MCP2 can be controlled from an external controller through the Ethernet (NETWORK) connector.
IP Address: Specify the IP address of the device to be controlled.
TCP Port: 49280

1.3. Device Configuration

Up to five remote controller devices can connect simultaneously to an MCP2.

2. Command List

2.1. Commands from a device sent to a remote controller

No.	Notification details		Reply from device	Remarks
1-1	Device status change notification	Device run mode notification	NOTIFY devstatus runmode…	
1-2		Device error status notification	NOTIFY devstatus error…	
1-3	Preset change notification	Current preset number change notification	NOTIFY sscurrent…	
1-4		Preset recall notification for the specified number	NOTIFY ssrecall…	
1-5		Preset data change notification for the specified number	NOTIFY ssupdate_ex…	
1-6	Event processing change notification	Alert Notification	NOTIFY event CTL:Alert…	

2.2. Commands for controlling a device

No.	Notification details		Reply from device	Remarks
2-1	Device status query	Device run mode query	devstatus runmode	
2-2		Device error status query	devstatus error	
2-3	External control protocol run mode setting	Result and change notification character encoding setting	scpmode encoding…	
2-4		Keepalive activation setting	scpmode keepalive…	
2-5	Preset processing	Query for the current preset number and if any changes are made	sscurrent_ex…	
2-6		Preset recall for the specified number	ssrecall_ex…	

2.3. Extended commands

No.	Notification details		Reply from device	Remarks
3-1	Product information query request	External control protocol version query	devinfo protocolver …	
3-2		Firmware version query	devinfo version	
3-3		Product name query	devinfo productname	
3-4		Product manufacturer name query	devinfo manufacturer	
3-5		Serial number query	devinfo serialno	
3-6		Device category query	devinfo category	
3-7		Device ID query	devinfo deviceid	
3-8		Device name query	devinfo devicename	
3-9	Preset information query request	Preset number query	ssnum_ex…	
3-10		Preset data query for the specified number	ssinfo_ex…	
3-11	Identify	Change target device Identify display mode	identify…	

3. Command Specifications

3.1. Basic Command Specifications

Below is the syntax of commands exchanged between a device and remote controller.

<command name> <option 1> <option 2> . . . <option n> <new line>

- Each command must end with LF (0x0A).
- LF (0x0A) code can be sent as a heart-beat command.
- At least one space is necessary between a command name and an option and between options.
- Commands must be expressed using ASCII characters. Other characters are not allowed.

3.2. Commands a Device Sends to a Remote Controller

3.2.1. Device status change notification

1-1) Device run mode notification

Command	Option 1	Option 2	Description
NOTIFY devstatus	runmode	“update”	Update mode
		“normal”	Normal run mode

Example: Notification: NOTIFY devstatus runmode “normal”
Meaning: The run mode was changed to normal mode.

1-2) Device error status notification

Command	Option 1	Option 2	Description
NOTIFY devstatus	error	“none”	No alert
		“fault”	Fault alert
		“error”	Error alert
		“warning”	Warning alert

Example: Notification: NOTIFY devstatus error “fault”
Meaning: An alert (fault) has occurred.

3.2.2. Preset change notification

1-3) Current preset number change notification

Command	Option 1	Option 2	Option 3	Description
NOTIFY sscurrent_ex	(category)	(index)	unmodified	Current preset number change notification

Details: (category) = Use “config”
(index) = Preset index number used for the current preset

Example: Notification: NOTIFY sscurrent_ex config 3 unmodified
Meaning: The current preset has been changed to index 3 (Preset 3).

1-4) Preset recall notification for the specified number

Command	Option 1	Option 2	Description
NOTIFY ssrecall_ex	(category)	(index)	Current preset recall start notification

Details: (category) = Use “config”
(index) = Preset index number

Example: Notification: NOTIFY ssrecall_ex config 3
Meaning: Preset recall processing for index3 (Preset 3) has started.

1-5) Preset data change notification for the specified number

Command	Option 1	Option 2	Description
NOTIFY ssupdate_ex	(category)	(index)	Preset information update notification

Details: (category) = Use “config”
(index) = Preset index number

Example: Notification: NOTIFY ssupdate_ex config 0
Meaning: The information of index 0 (current preset) has been modified.

3.2.3. Event processing change notification

1-6) Alert Notification

Command	Option 1	Option 2	Description
NOTIFY event	CTL:Alert	“(alertid):(message),(type)”	An alert has been triggered

Details: (alertid) = Alert Number (Hex)
(message) = Alert message
(type) = warning/error/fault

Example: Notification: NOTIFY event CTL:Alert “01:SYSTEM ERROR,fault”
Meaning: Fault Type 01 SYSTEM ERROR alert has occurred.

3.3. Commands for controlling a device

3.3.1. Device status query

2-1) Device run mode query

Command	Option 1	Description
devstatus	runmode	Queries the run mode

Response

Response string	Description
OK devstatus runmode “update”	Update mode
OK devstatus runmode “normal”	Normal run mode

Example: Command: devstatus runmode
Response: OK devstatus runmode “normal”
Meaning: Query the run mode.
The device is currently in normal run mode.

2-2) Device error status query

Command	Option 1	Description
devstatus	error	Queries the error status

Response

Response string	Description
OK devstatus error “none”	No alerts
OK devstatus error “fault”	Fault alert
OK devstatus error “error”	Error alert
OK devstatus error “warning”	Warning alert

Example: Command: devstatus error
Response: OK devstatus error “fault”
Meaning: Query the alert status.
An alert (fault) has occurred.

3.3.2. External control protocol run mode setting

2-3) Result and change notification character encoding setting

Command	Option 1	Option 2	Description
scpmode	encoding	ascii	ASCII encoding mode (default setting)
		utf8	UTF-8 encoding mode

Response

Response string	Description
OK scpmode encoding ascii	ASCII encoding mode change complete
OK scpmode encoding utf8	UTF-8 encoding mode change complete

Example: Command: scpmode encoding utf8
Response: OK scpmode encoding utf8
Meaning: Change the result and change notification encoding mode to UTF-8.
The encoding mode was changed to UTF-8.

2-4) Keepalive activation setting

Command	Option 1	Option 2	Description
scpmode	keepalive	(interval)	Maximum interval for a client to send some kind of message, including heart beats (default setting = disabled)

Details: (interval) = Timeout value (msec) * Timeout value should be more than 1000.
* The actual timeout value will be increased by 1 second.

Response

Response string	Description
OK scpmode keepalive xxxx	Keepalive activated notification

Example: Command: scpmode keepalive 2000
Response: OK scpmode keepalive 2000
Meaning: Set the timeout value to 2000 msec (2 seconds).
The timeout value was set to 2000 msec (2 seconds).

Note: When unexpected disconnection happens, remote controller can't finish communication with closing process. In such case, device has to keep status "connected" and remote controller can't establish new connection after that.

In order to prevent the situation above, device watches keepalive command if connection with remote controller is still alive. If device doesn't receive keepalive command within timeout value which is set by this command, device terminates connection by itself.

After the Keepalive activation command has been activated, the Remote controller must send any command or LF(0x0A) code as a heart beat to the device within the timeout value.

3.3.3. Preset processing

2-5) Query for the current preset number and if any changes are made

Command	Option 1	Description
sscurrent_ex	(category)	Queries the current preset number in the specified category

Details: (category) = Use “config”

Response

Response string	Description
OK sscurrent_ex (category) (index) unmodified	The current preset number

Details: (index) = Current preset number

Example: Command: sscurrent_ex config
Notification: OK sscurrent_ex config 3 unmodified
Meaning: Query the last index number (preset number) that was recalled.
The index number (preset number) is index 3 (preset 3).

2-6) Preset recall for the specified number

Command	Option 1	Option 2	Description
ssrecall_ex	(category)	(index)	Preset recall request

Details: (category) = Use “config”
(index) = Preset number

Response

Response string	Description
OK ssrecall_ex (category) (index)	Requested index number

Example: Command: ssrecall_ex config 1
Notification: OK ssrecall_ex config 1
Meaning: Recall the index 1 preset (preset 1).
The preset of index 1 (preset 1) was recalled.

3.4. Extended commands

3.4.1. Product information query request

3-1) External control protocol version query

Command	Option 1	Description
devinfo	protocolver	Queries the external control protocol version

Response

Response string	Description
OK devinfo protocolver “xxxx”	External control protocol version

Details: xxxx = Version

Example: Command: devinfo protocolver
Notification: OK devinfo protocolver “1.4.0”
Meaning: Query the protocol version.
Protocol version = V1.4.0

3-2) Firmware version query

Command	Option 1	Description
devinfo	version	Queries the firmware version

Response

Response string	Description
OK devinfo version “xxxx”	Firmware version

Details: xxxx = Version

Example: Command: devinfo version
Notification: OK devinfo version “1.0.0”
Meaning: Query the firmware version.
Firmware version = V1.00

3-3) Product name query

Command	Option 1	Description
devinfo	productname	Queries the product name

Response

Response string	Description
OK devinfo productname “xxxx”	Product name

Details: xxxx = Product name

Example: Command: devinfo productname
Notification: OK devinfo productname “MCP2”
Meaning: Query the product name.
Product name = “MCP2”

3-4) Product manufacturer name query

Command	Option 1	Description
devinfo	manufacturer	Queries the prudut manufacturer name

Response

Response string	Description
OK devinfo manufacturer “xxxx”	Product manufacturer name

Details: xxxx = Product manufacturer name

Example: Command: devinfo manufacturer
Notification: OK devinfo manufacturer “Yamaha Corporation”
Meaning: Query the manufacturer name.
Manufacturer name = “Yamaha Corporation”

3-5) Serial number query

Command	Option 1	Description
devinfo	serialno	Queries the serial number

Response

Response string	Description
OK devinfo serialno “xxxx”	Serial number

Details: xxxx = Serial number

Example: Command: devinfo serialno
Notification: OK devinfo serialno “VJA0620YE3040000”
Meaning: Query the serial number.
Serial number = “VJA0620YE3040000”

3-6) Device category query

Command	Option 1	Description
devinfo	category	Queries the device category

Response

Response string	Description
OK devinfo category “xxxx”	Device category

Details: xxxx = Device category
MCP2: “controller”

Example: Command: devinfo category
Notification: OK devinfo category “controller”
Meaning: Query the device category.
Device category = “controller”

3-7) Device ID query

Command	Option 1	Description
devinfo	deviceid	Queries the device ID

Response

Response string	Description
OK devinfo deviceid “xxx”	Device ID

Details: xxx = Device ID
* 3-digit hexadecimal

Example: Command: devinfo deviceid
Notification: OK devinfo deviceid “001”
Meaning: Query the device ID.
Device ID = “001”

Note: The device ID corresponds to the UNIT ID.

3-8) Device name query

Command	Option 1	Description
devinfo	devicename	Queries the device name assigned by the user

Response

Response string	Description
OK devinfo devicename “xxxx”	Device name assigned by the user

Details: xxxx = Device name
* Device names are represented as Y<Device ID>-Yamaha-MCP2-<Last 6 digits of MAC address>.

Example: Command: devinfo devicename
Notification: OK devinfo devicename “Y001-Yamaha-MCP2-112233”
Meaning: Query the device name.
Device name = “Y001-Yamaha-MCP2-112233”

Important: The character encoding for the device name conforms to the setting specified by the scpmode encoding command.

3.4.2. Preset information query request

3-9) Preset number query

Command	Option 1	Description
ssnum_ex	(category)	Queries the number of presets

Details: (category) = Use “config”

Response

Response string	Description
OK ssnum_ex (category) (num)	Number of presets

Details: (num) = Number of presets

Example: Command: ssnum_ex config
Notification: OK ssnum_ex config 8
Meaning: Query the number of presets.
The number of presets is 8.

3-10) Preset data query for the specified number

Command	Option 1	Option 2	Description
ssinfo_ex	(category)	(index)	Queries the information of the specified preset within the preset list.

Details: (category) = Use “config”
(index) =Requested Index Number

Response

Response string	Description
OK ssinfo_ex (category) (index) “xxxx” “yyyy” “zzzz” (attrib)	Nth preset information within the preset list

Details: “xxxx” = Text expressing the relevant preset number
“yyyy” = Title text of the relevant preset
“zzzz” = Comment text of the relevant preset. (Reserved for future use. Since MCP2 does not currently use comments, “” will be returned.)
(attrib) = Relevant preset attribute
preinst = Preinstalled preset
user = User preset available
empty = Empty

Example: Command: ssinfo_ex config 3
Notification: OK ssinfo_ex config 3 “3” “Preset 3” “” user
Meaning: Query the contents of the index 3 preset (preset 3).
The preset at index 3 (preset 3) contains:
display number = “3”
title = “Preset 3”
comment = “”
and is a stored preset.

Important: The character encoding for preset titles and comments conforms to the setting specified by the scpmode encoding command.

3.4.3. Identify

3-11) Change target device Identify display mode

Command	Option 1	Description
identify	Duration (sec)	Enter the identify display mode for specified seconds

Response

Response string	Description
OK identify (duration)	The device enters identify mode for <duration> seconds.

Details: (duration) = Decimal number

Example: Command: identify 10
Notification: OK identify 10
Meaning: The device entered the identify mode for 10 seconds.

3.5. Command Errors

3.5.1. Command Error Notifications

Error notification that indicates errors in commands.
If an error is found when the command is sent, this notification is returned instead of the normal successful notification.

[Notification syntax] ERROR <command name> <error code>

Command name	Alphanumeric	Name of the command that caused the error
Error code	Alphanumeric	Error description * See the error codes below.

Error code

Error code	Description
UnknownCommand	Ignored because it was an unknown command.
WrongFormat	Ignored because the command parameter format was wrong and could not be interpreted. Examples: The number of parameters is wrong. The parameter syntax is wrong.
InvalidArgument	Ignored because the command parameter content was outside the appropriate range and could not be interpreted. Examples: The parameter value is outside the range. The parameter syntax does not comply with the specifications. The letter case of the parameter is wrong.
UnknownAddress	Ignored because the specified address does not exist.
UnknownEventID	Ignored because the specified event ID does not exist.
TooLongCommand	Could not be interpreted because the command was too long.
AccessDenied	Procedure rejected because the peer device is not in an normal running state. Examples: Rejected because an ssrecall command was received in emergency run mode.
Busy	The device is busy processing; it can't receive commands.
ReadOnly	Ignored because an attempt was made to set a parameter at a read-only address.
NoPermission	Ignored because you do not have access permission.
InternalError	An internal error may have occurred. Examples: Failed to process the command.

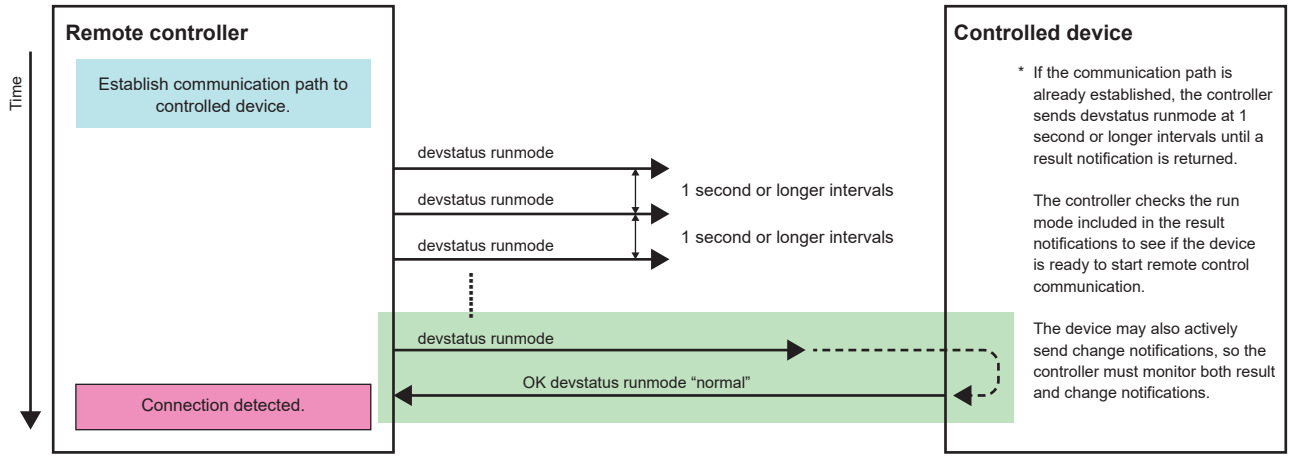
4. Command Sequence

4.1. Communication start sequence

The amount of time for the controller and the controlled device to start is different.
Remote control is an act of controlling the controlled device from the controller, so the controller must wait for the controlled device to become ready.

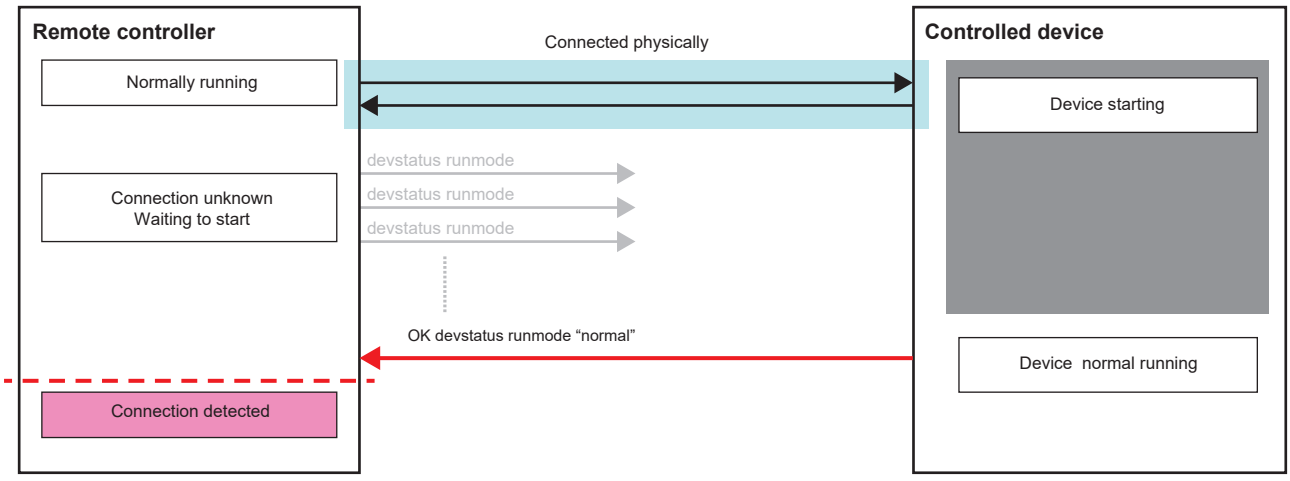
The controller needs to wait using the sequence below.

- If an Ethernet connection is required, the remote controller needs to establish a logical session.
- After the session is established, the controller sends devstatus commands at 1 second or longer intervals.
- If “OK devstatus runmode” is returned, the controller should check the information.
- If the controller determines that the controlled device is in normal running mode, the controller can start sending command strings to change parameter value and preset etc. If the controlled device is not in normal running mode, the controller continues trying.

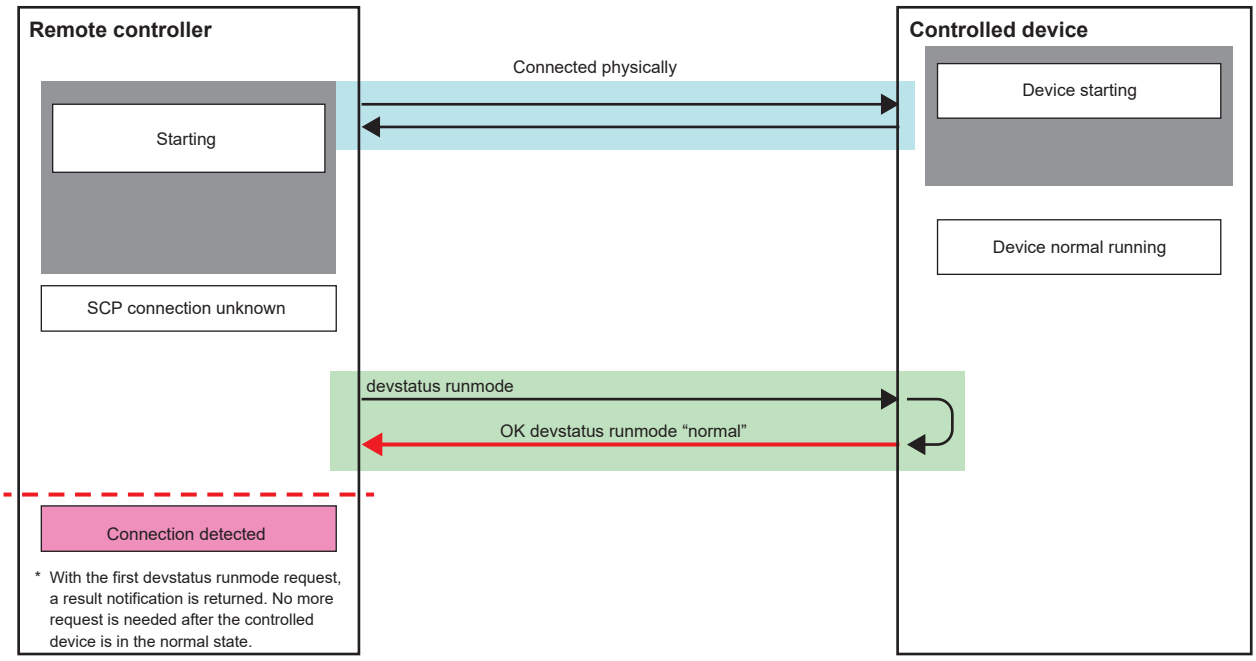


The reason for using such a sequence is provided below.

Example when the controller starts earlier than the controlled device



Example when the controlled device starts earlier than the controller



The controller can recognize that the controlled device is ready to receive commands when there is response for “devstatus runmode” command.