Glamo Inc.

Version 1.2

IRM-01L Commands Reference

i Remocon

glamo

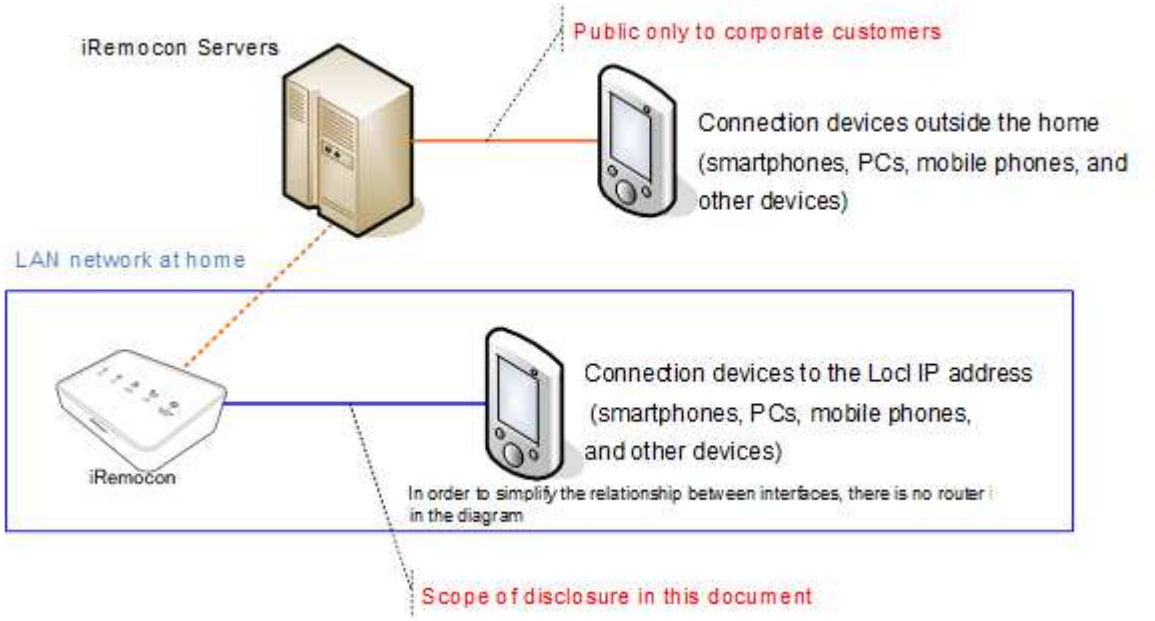
1. Revision

Issue	Description	Owner	Date
1.0	Initial version	Glamo Inc.	2011/08/07
1.1	・Modified “execution examples” for each command ・Modified response to ic command	Glamo Inc.	2013/08/14
1.2	・Modified images	Glamo Inc.	2014/08/05
	・		

2. Overview

This document describes the commands specification for the control of IRM-01L through LANs at home.

IRM-01L can be controlled by sending commands to a local IP address which is configured on IRM-01L over a TCP/IP protocol. The commands are defined in this document.



2.1. Obtain or set an IP address on IRM-01L

With regard to obtaining or configuring an IP address on IRM-01L, please refer to Settings on the “iRemocon” application released by our corporation.

Currently, we do not publish instructions for obtaining or configuring settings directly on IRM-01L for end-users. If you are a corporate customer, please contact us from our product page.

2.2. Control of IRM-01L outside the home

The specifications for controlling IRM-0L outside the home is published only to corporate customers.

If you are a corporate customer and wish to use this service, please contact us from our product page.

3. Connection to IRM-01L

Connection to IRM-01L uses the following port over those that TCP/IP sockets.

Note: Please refer to “2.1 Obtain or set an IP address on IRM-01L” regarding to a destination IP address.

3.1. Port number

Connect to the following TCP/IP port.

Port：51013

3.2. KeepAlive

If there is an idle state for 300 secs, IRM-01L will disconnect from the connection.

If you wish to keep the state alive, use the [au] command (4.2.1 [au]：Confirmation of connection) to stay connected.

4. Sending Commands Reference

4.1. Overview

The basic commands of IRM-01L are structured in the following formats.

Please use the commands in ASCII to IRM-01L.

Note: Once a command is begun, if the command is not completed and no input is received for 5 seconds in a row, the command will fail with a timeout error.

*XX;yyyy\r\n

* : String to clear command buffers

XX : Commands

; : Parameter specifier

yyyy : Parameters

\r\n : Strings to execute a command

4.1.1. String to clear command buffers

If there are invalid characters before a command, the command will not be recognized. The command buffer must be cleared with a '*' character if there are invalid characters in the command buffer. If the command buffer has a valid command, the '*' character will end that command and force it to return an error.

For example, if you input "@@@@*au" then the "au" command is executed. But if you input "@@@@au" the command will not be recognized. If you input "au*" the au command will end and return an error.

Note: We recommend you always add a '*' character at the beginning of a line when you type commands.

4.1.2. Commands

Actual commands are consist of two characters.

4.1.3. Parameter specifier

If a command requires parameters, a ';' needs to be added to the beginning of each parameter.

Depending on the command, multiple parameters may be required.

4.1.4. Parameters

Specify parameters for a command.

4.1.5. Strings to execute a command

Commands are stored in the command buffer until the execution string is received. The execution string consists of a carriage return and line feed. That is, ASCII characters \r\n or 0x0A 0x0D.

4.1.6. Command timeout

If a parameter specifier is not received within 5 seconds after a command is sent to IRM-01L, a timeout error will be returned.

Note: Please do not pause for more than 5 seconds in a row after you begin typing a command.

4.2. Commands list

Command	Description	Parameters
au	Confirmation of the connection	
is	Send IR (Infrared ray)	;1 to 1500 Note: Some machines receive between 1 and 800.
ic	Start learning remote control	;1 to 1500 Note: Some machines receive between 1 and 800.
cc	Stop learning remote control	
tm	Set timers	;1 to 1500 ;Current time + 60 to 4102444800 ;0 to 31536000
tl	Get timers list	
td	Reset timers	;1 to 500
ts	Set time	;1293775200 to 4102444800
tg	Get current time	
vr	Get the frrmware version	

4.2.1. [au] : Confirmation of connection

4.2.1.1. Function

When the command is sent, [ok\r\n] will automatically be returned.

This command is used to check that the connection is OK or to keep the connection alive (keepAlive).

4.2.1.2. Parameters

N/A

Executable format: *au\r\n

4.2.1.3. Return code

The following code is automatically returned.

[ok\r\n]

4.2.2. [is] : IR Luminance

4.2.2.1. Function

Send the remote control code associated with the remote control number given in the specified parameter.

4.2.2.2. Parameters

Parameter	Value	Description
num1	1 to 1500 Note: Some equipment receives between 1 and 800.	The remote control number associated with the remote control code you want to send.

Executable format : is;*num1*\r\n

Example : *is;1\r\n

4.2.2.3. Return code

The following code is returned.

Success : [is;ok\r\n]

Failure : [is;err;xxx\r\n]

Note: xxx represents an error code.

4.2.2.4. Warnings

Please type a command after a return code to the original command has been returned.

Please do not use IR transmission continuously for long hours as this could cause a breakdown.

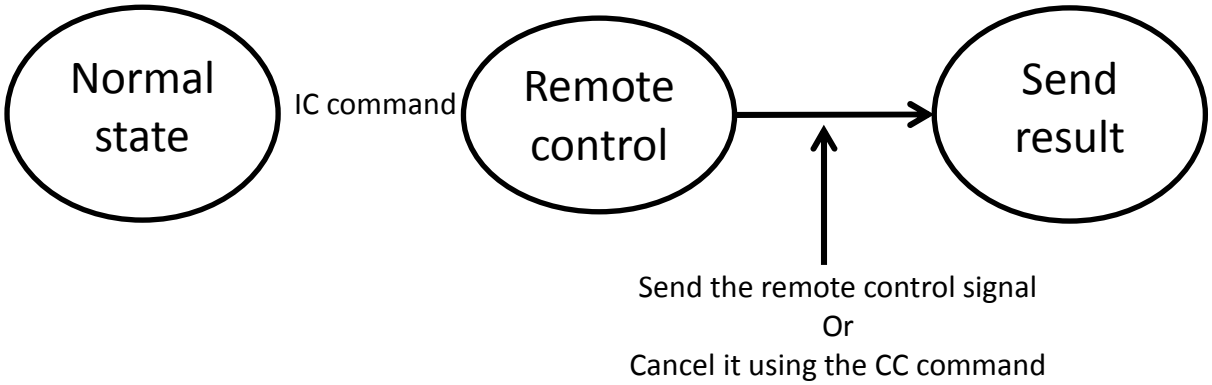
4.2.3. [ic] : Start teaching your remote control

4.2.3.1. Function

To begin recording a remote control code and associate it with the remote control number specified as a parameter.

When the command is executed, the learning LED on the main unit will switch on then the main unit will switch to the remote control learning mode.

During the remote control learning mode, only remote control signals or [cc] commands is accepted.



4.2.3.2. Parameters

Parameter	Value	Description
num1	1 to 1500 Note: Some equipment receives between 1 and 800.	The number to associate with your remote control code.

Executional format : ic;*num1*\r\n

Example : *ic;1\r\n

4.2.3.3. Return code

Note: No response is returned when the ic command is executed.

After a remote control signal is sent to the iRemocon while the iRemocon is in remote control code learning mode, the following code is returned.

Success : [ic;ok\r\n]

Failure : [ic;err;xxx\r\n]

Note: xxx is an error code.

4.2.4. [cc]：Cancel to learn the remote control

4.2.4.1. Function

Reset the remote control learning mode that was enabled with the [ic] command.

This will allow the main unit to return to the standby status by cancelling the learning mode of your remote control.

Note: This command is only valid in the remote control learning mode.

4.2.4.2. Parameters

N/A

Executional format：*cc\r\n

4.2.4.3. Return code

The following code is returned.

Success：[cc;ok\r\n]

Failure： [cc;err;xxx\r\n]

Note: xxx is an error code.

Note: If the cancellation is successful, a return code for the canceled [ic] command will be returned after the return code for the cancellation.

As a result, the actual return code will be [cc;ok\r\nic;err;002\r\n]

4.2.5. [tm]：Timer setting

4.2.5.1. Function

Set timers on IRM-01L.

4.2.5.2. Parameters

Parameter	Value	Description
num1	1 to 1500	A number where the remote control code to be sent is registered.
num2	Current time+60 to 4102444800	The time that the code will be sent. Note: Set time in seconds from 01/01/1970 09:00:00 (UTC+0900). e.g. 1/1/2020 00:00:00 is 1577804400.
num3	0 Or 60 to 31536000	Specify a repetitive time in seconds from the execution time. 0 means that there will be no repetitive action. Note: Please set to a value greater than 60. If an interval is too short, it could cause a breakdown, freeze, or shorten the product lifetime.

Execution format：tm;*num1*;*num2*;*num3*\r\n

Example：*tm;1;1577804400;360\r\n

4.2.5.3. Return code

The following code is returned.

Success：[tm;ok\r\n]

Failure： [tm;err;xxx\r\n]

Note: xxx represents an error code.

4.2.5.4. Warnings

Please make sure that the timer setting and its interval should be greater than 60 seconds.

Please do not send continuous IR transmissions because the interval of the timer settings will be too short and this could cause a breakdown.

4.2.6. [tl] : Get Timer settings

4.2.6.1. Function

Obtain the list of timer settings that are configured by the [tm] command.

4.2.6.2. Parameters

N/A

Executional format : *tl \r\n

4.2.6.3. Return code

The following code is returned.

Success : [tl;ok;*num1*;*num2*;*num3*;*num4*;*num5*;*num2*;*num3*;*num4*;*num5*;*num2*;*num3*;*num4*;*num5* ・・・・ \r\n]

Number	Value	Description
num1	1 to 500	Total number of timer records returned. Each record is of the format num2;num3;num4;num5; The records are returned sequentially until all records are returned.
num2	1 to 500	Timer number
num3	1 to 1500	Remote control number as configured by the [tm] command
num4	Current time+1 to 4102444800	Programmed time as configured by the [tm] command.
num5	0 to 31536000	Repetition interval (in seconds) as configured by the [tm] command.

Note: example of the return code: If three timer settings records are programmed.

[tl;ok;3;1;100;1577804400;0
;2;200;1577805500;360
;3;300;1577806600;3600\r\n]

Failure : [tl;err;xxx\r\n]

Note: xxx represents an error code

4.2.7. [td]：Reset timer

4.2.7.1. Function

Reset a timer configured by the [tm] command.

4.2.7.2. Parameters

Number	Value	Description
num1	1 to 1500	A timer number that obtained by the [tl] command.

Executional format：td;*num1*\r\n

Example：*td;1\r\n

4.2.7.3. Return code

The following code is returned.

Success：[td;ok\r\n]

Failure： [td;err;xxx\r\n]

Note: xxx represents an error code

4.2.8. [ts]：Set current time

4.2.8.1. Function

Set the time on IRM-01L using parameters.

4.2.8.2. Parameters

Number	Value	Description
num1	1293775200 to 4102444800	Current time Note: Set time in seconds from 01/01/1970 09:00:00 (UTC+0900) e.g. 1/1/2020 00:00:00 is 1577804400.

Executional format：ts;*num1*\r\n

Example：*ts;1577804400\r\n

4.2.8.3. Return code

The following code is returned.

Success：[ts;ok\r\n]

Failure： [ts;err;xxx\r\n]

Note: xxx represents an error code

4.2.9. [tg]：Get current time

4.2.9.1. Function

Obtain the time that is currently configured on IRM-01L.

4.2.9.2. Parameters

N/A

Executional format：*tg\r\n

4.2.9.3. Return code

The following code is returned.

Success：[tg;ok;*num1*\r\n]

Number	Value	Description
num1	1293775200 to 4102444800	Current time Note: Set time in seconds from 01/01/1970 09:00:00 (UTC+0900) e.g. 1/1/2020 00:00:00 is 1577804400.

Example: If three timer records are configured.

[tg;ok;1577804400\r\n]

Failure： [tg;err;xxx\r\n]

Note: xxx represents an error code

4.2.10. [vr] : Get a firmware version

4.2.10.1. Function

Return the IRM-01L firmware version.

4.2.10.2. Parameters

N/A

Executional format : *vr\r\n

4.2.10.3. Return code

A firmware version is returned.

[1.0.0\r\n]

5. List of error codes

Command	Error code	Error description	Note
au	010	Syntax error	Command Syntax is incorrect
	020	Timeout error	5 seconds of idle time has passed.
is	001	Invalid Remote Control Number	Valid Remote Control Numbers are between 1 and 1500
	002	Remote Control Number Unused	This command only works with used remote control numbers
	003	Transmission error	Attempted to send bad data
	010	Syntax error	Syntax of the command is incorrect
	020	Timeout error	5 seconds of idle time has passed.
ic	001	Invalid Remote Control Number	Valid Remote Control Numbers are between 1 and 1500
	002	Operation canceled	The operation was canceled by the cc command
	003	Receive error	Received bad remote control data
	010	Syntax error	Syntax of the command is incorrect
	020	Timeout error	5 seconds of idle time has passed.
cc	001	Execution error	The cc command only works when the iRemocon is in learning mode.
	010	Syntax error	Syntax of the command is incorrect
	020	Timeout error	5 seconds of idle time has passed.
tm	001	Invalid Remote Control Number	Valid Remote Control Numbers are between 1 and 1500
	002	Invalid Time	Valid times are between the current time +1s and +4102444800s
	003	Invalid Repetition Interval	Valid repetition intervals are either 0 through 31536000
	004	Timer already set	Only one signal can be sent at a given time, duplicate timers are not allowed.
	005	Too many timers	The iRemocon can hold a maximum of 500 timers
	006	Remote Control Number Unused	The tm command only works with Remote Control Numbers that are in use.
	010	Syntax error	Syntax of the command is incorrect.
	020	Timeout error	5 seconds of idle time has passed.
tl	001	No timers registered	No timers are registered.
	010	Syntax error	Syntax of the command is incorrect.
	020	Timeout error	5 seconds of idle time has passed.
td	001	Invalid timer number	Valid timer numbers are between 1 and 1500.
	002	No registered timer	There is no timer to be deleted.
	010	Syntax error	Syntax of the command is incorrect
	020	Timeout error	5 seconds of idle time has passed.
ts	001	Not a configurable time	Configurable times are between 1293775200 and 4102444800.
	010	Syntax error	Syntax of the command is incorrect
	020	Timeout error	5 seconds of idle time has passed.
tg	010	Syntax error	Syntax of the command is incorrect
	020	Timeout error	5 seconds of idle time has passed.
vr	010	Syntax error	Syntax of the command is incorrect
	020	Timeout error	5 seconds of idle time has passed.