

# **Raylogic GO PROTOCOL 0.4**

# Table of Contents

AREA LOAD SCENE .....	2
AREA CHANNEL DIRECT .....	4
RELAY PAIR ON .....	6
RELAY PAIR OFF .....	8
KEEP ALIVE SEND.....	10
QUERY DEVICE .....	11
QUERY DEVICE REPLY .....	12

# AREA LOAD SCENE

*	A	R	=	0	0	0	F	0	1	0	1	0	0	CR

\*AR=abcdefghij\r

ab	= Unused	= 00
cd	= Function Number	= 0F
ef	= Area	= 01
gh	= Scene	= 01
ij	= Unused	= 00
\r	= Delimiter	= CR

ad,cd,ef,gh,ij are 2 digit ASCII HEX values

\r = 1 character = CR or hex 0x0D

Size of command = 15 bytes

\*AR=000F010100\r

1. Sending this command loads all channels assigned to Area 1 to SCENE 1, in all connected units
2. Valid Area values are 0x01 [1] to 0x10 [16].
3. Valid Scene values are 0x01 [1] to 0x3C [60] for all non LDX series products.
4. Scenes 0x3D [61] to 0x44 [68] recall SEQUENCES [1]-[8] in LDX-403.
5. Scenes 0x3D [61] to 0x4C [76] recall SEQUENCES [1]-[16] in LDX-300.
6. Dimmers / Relays / Fans already assigned to the given Area all affected by this command.
7. Sending this command to the TCP-HUB will evoke a +AR40.... response from all

mods running dev f/w version 1.79 & above after 28/07/2020.

8. This allows instant channel type & level feedback from MODS in the area where the scene has been applied.

## AREA CHANNEL DIRECT

*	A	R	=	0	0	1	A	0	1	0	1	0	1	CR

\*AR=abcdefghij\r

ab	= Unused	= 00
cd	= Function Number	= 1A
ef	= Area	= 01
gh	= Level	= 01
ij	= Channel	= 01
\r	= Delimiter	= CR

ad,cd,ef,gh,ij are 2 digit ASCII HEX values

\r = 1 character = CR or hex 0x0D

Size of command = 15 bytes

\*AR=001A010101\r

1. Sending this command sets channel 1 in Area 1 to level 1
2. The command will execute only if Channel 1 is assigned to Area 1, else will not execute.
3. Valid Area values are 0x01 [1] to 0x10 [16].
4. Valid Channel values are 0x01 [1] to 0xFF [255].
5. The Level parameter will behave differently for various channel types.
6. For Dimmer channels Level 0x01 is maximum brightness, Level 0xFF is OFF.
7. For Switching channels [Relays] Level 0x01 = OFF, Level 0x02 = ON, Level

0x03 - 0xFF = ON for a duration [1] to [252] seconds. The relay will automatically switch OFF after this duration.

8. For Fan channels Level 0x01 = OFF, Level 0x02 = Speed 1, Level 0x03 = Speed 2, Level 0x04 = Speed 3, level 0x05 = Full Speed.
9. Sending this command to a MOD via the TCP HUB will evoke a +AR=..... response as a confirmation from all mods running dev f/w version 1.79 & above after 28/07/2020. The command sent will be an echo of the command received.

# RELAY IN A PAIR ON

*	A	R	=	0	0	2	7	0	1	0	1	1	4	CR

\*AR=abcdefghij\r

ab = Unused = 00

cd = Function Number = 27

ef = Relay Pair = 01

gh = Relay No = 01

ij = Duration = 14

\r = Delimiter = CR

ad,cd,ef,gh,ij are 2 digit ASCII HEX values

\r = 1 character = CR or hex 0x0D

Size of command = 15 bytes

\*AR=0027010114\r

1. Sending this command sets Relay 1 in Pair 1 ON for a duration of 20 seconds.
2. Valid Relay Pair values are 0x01 [1] to 0x7F [127].
3. Valid Relay No. values are 0x01 [1st Relay] or 0x02 [2nd Relay].
4. Valid Duration values are 0x01 [1] to 0xFF [252] seconds. The relay will automatically switch OFF after this duration.
5. This command is used to OPEN or CLOSE curtain / screen motors by putting either of the relays ON for a duration.
6. This command will directly trigger channels irrespective of Area Channel

assignment.

7. Sending this command to a MOD via the TCP HUB will evoke a +AR=..... response as a confirmation from all mods running dev f/w version 1.79 & above after 28/07/2020. The command sent will be an echo of the command received.



## RELAY PAIR OFF

*	A	R	=	0	0	2	6	0	1	0	0	0	0	CR

\*AR=abcdefghij\r

ab = Unused = 00

cd = Function Number = 26

ef = Relay Pair = 01

gh = Unused = 00

ij = Unused = 00

\r = Delimiter = CR

ad,cd,ef,gh,ij are 2 digit ASCII HEX values

\r = 1 character = CR or hex 0x0D

Size of command = 15 bytes

\*AR=0026010000\r

1. Sending this command sets both relays in Pair 1 to OFF state.
2. Valid Relay Pair values are 0x01 [1] to 0x7F [127].
3. This command is used to instantly STOP curtain / screen motors.
4. This command will directly trigger channels irrespective of Area Channel assignment.
5. Sending this command to a MOD via the TCP HUB will evoke a +AR=..... response as a confirmation from all mods running dev f/w version 1.79 & above after 28/07/2020. The command sent will be an echo of the command

received.

## KEEP ALIVE SEND

*	K	A	=	0	1	CR		

\*KA=01\r

Size of command = 6 bytes

\*KA=01\r

1. The TCP Hub must receive this command from every 3rd party automation system that is connected on PORT 5050
2. All 3rd Party automation systems receiving the KEEP ALIVE packet must send the same back to the server to maintain a persistent connection.
3. If the 3rd Party automation system does not receive this command, after initial connection to the server, it shall close its connection and reconnect to the server.
4. If the TCP HUB Server listening on PORT 5050 does not receive a KEEP ALIVE packet from a connected client the server will close the connection after 15-18 seconds and shift back to listen mode waiting for new connections.

## QUERY DEVICE

?	A	R	4	0	=	0	1	CR						

?AR40=abc

ab = Start Address of GO device = 01

c = Delimiter (\r) = CR

adb is a 2 digit ASCII HEX values

\r = 1 character = CR or hex 0x0D

Size of command = 9 bytes

?AR=01\r

1. The 3rd party automation system may query a Raylogic GO device by sending this query.
2. The comand must contain the start address of the GO device being queried.
3. The start address is in a 2 digit ASCII HEX value
4. The GO device being queried will send a rreply using the QUERY DEVICE  
REPLY format.

## QUERY DEVICE REPLY

+	A	R	4	0	=	0	1	0	1	0	4	0	1	0	2	0	1	0	2	0	1	0	2	0	1	0	2	CR

+AR40=abcdefghijklmnopqrtsuvwxyzAAX

ab	= Start Address of GO device	= 01
cd	= Current Scene of GO device	= 01
ef	= Channel count of GO device	= 04
gh	= Channel 1 type	= 01
ij	= Channel 1 level	= 02
kl	= Channel 2 type	= 01
mn	= Channel 2 level	= 02
op	= Channel 3 type	= 01
qr	= Channel 3 level	= 02
st	= Channel 4 type	= 01
uv	= Channel 4 level	= 02
wx	= Current running scheduler	= 00
yz	= Current running timer	= 00
AA	= current running timer activity	= 00
X	= Delimiter (\r)	= CR

ab,cd,ef,gh,ij,kl,mn,op,qr,st,uv,uv,wx,yz,AA are 2 digit ASCII HEX values

X = 1 character = CR ( \r ) or hex 0x0D

Size of command = For MOD2 27 bytes

Size of command = For MOD2F 23 bytes

Size of command = For MOD4 35 bytes

?AR40=01\r

MOD 4 reply -> +AR40 =0101040102010201020102000000\r

MOD 2 reply -> +AR40 =01010201020102000000\r  
MOD 2F reply -> +AR40 =0101010102000000\r

1. The GO device that is queried with the QUERY DEVICE command will reply using this format.
2. The reply contains the start address of the modules, current scene, number of channels and type and level for each channel.
3. The start address is a 2 digit ASCII HEX value. Valid values 01 to FF.
4. The current scene is a 2 digit ASCII HEX value. Valid values 01 to 3C ( 1 to 60 )
5. The channel count is a 2 digit ASCII HEX value . MOD 4 sends 04, MOD 2 sends 02, MOD2F sends 01
6. The channel type is a 2 digit ASCII HEX value. 01 = Dimmer, 02 = Relay, 03 = Fan, 04 = Curtain pair
7. The channel level is a 2 digit ASCII HEX value.
8. For Dimmer channels Level 0x01 is maximum brightness, Level 0xFF is OFF.
9. For Switching channels [Relays] Level 0x01 = OFF, Level 0x02 = ON, Level 0x03 - 0xFF = ON for a duration [1] to [252] seconds. The relay will automatically switch OFF after this duration.
10. For Fan channels Level 0x01 = OFF, Level 0x02 = Speed 1, Level 0x03 = Speed 2, Level 0x04 = Speed 3, level 0x05 = Full Speed.