

V200615

FCC ID:2ACLEAR-323D



V200615



Paste hole-sticker on the door properly and make cuts depending on hole-stickers dimension.

- (1) Only make "deadbolt knob hole" from inner door to mortise, don't cross to outer door.
- (2) Make sure accurate position & right hole direction of striker plate; before making cuts, latch bolt position can be made firstly.
- (3) Networking mode : Additional hinge cuts is required for PC connection.
- Take away mortise plate , embed mortise into door frame and fix it with screws properly.
 - (1) Check the correct direction of mortise with latch download before fixed.
 - (2) Prepare in advance connector of reader
 - (3) Wire the power and communication cable to the hole of the door



Install cylinder into mortise, use the screw to fix cylinder properly

(1) The depth of cylinder is not too deep or too shallow, we suggest to check inserted depth by the side of mortise, make sure that the position of lock picks must be over first screw and between screw and screw holes to ensure cylinder operate normally.

- (1) Make sure the key lock hole on the topside, and fixed
- tightly (2) Please confirm the key can control 2 bolt.
- Installation Mortise plate
- warning beep, all card data will be cleared.





Insert the spindle of handle separately into the handle hole of mortise.



Connect connector of reader to the front panel and the mortise lock.



The spindle of handle insert deadbolt knob hole, front and back panel clamped and fixed on the door with inner hexagon screw properly.

- (1) Please read "warning sticker" before install the rotated type of mortise, follow arrow direction to insert spindle of handle.
- (2) Spindle of handle are divided into longest and short edge, insert short edge to squre hole at the both sides of mortise.



(2) Plug in the connector of reader to the front panel

(1) The spindle of knob insert to deadbolt knob hole of back panel firstly, then insert to deadbolt knob hole of mortise; finally the spindle of handle insert handle hole of mortise.

- (2) Please insert the connector cable from the interior (CN2) into the hole that connected to interior door lock.
- (3) Connect the power and communication cable (CN1) to DC power and RS485 communication. (Refer to the cable description)



Use tools "Plastic PICK" to guide rubber pad to fit with front and back panel and then fixed them together with the screws.

(1) Before fix front and back panel with the screw , make sure to fit metal base and rubber pad on the door.



Installation front and back panel.

- $(\,1\,)\,$ Stand-alone: Install battery before the upper cover of back panel.
- $(\,2\,)$ Install the lower cover of back panel as above picture shown.
- (3) Install the lower cover of front panel.



Installation Strike and Strike box

12.

Paste hole-sticker on the doorframe properly and make cuts depending on hole-stickers dimension.

(1) Make sure position and right hole direction for Strike box.





Operation process A. Enter / Exit Program Mode

Enter the program mode
 Input ★123456 # or ★PPPPPP #
 [e.g.] The Default Value= 123456, if the Master Code is already changed= 876112, input ★ 876112 # → program mode entered

- Exit the program mode Input * #
- Master Code modification

Enter program mode \rightarrow 09 * PPPPPRRRRRR # [Input the 6-digit new master code twice.] [e.g.] Set the Master code to be 876112, input * 123456 # \rightarrow 09 * 876112876112 #

B. Change the Node ID of Controller

Enter program mode * 00 # NNN [Node ID: 001~254; if the access controller is connected to AR-716E, its Node ID will be 001~016.]

C.Set up M4/M6/M8

Enter program mode \rightarrow 04 *****N **#** [N=4/6/8]



D. Set up the password

• M4/M8: Private PIN

Card or PIN: Enter program mode \rightarrow 12 * UUUUU * PPPP # [e.g. User Address: 00001 and pass code: 1234, input 12 * 00001 * 1234 #] Card and PIN: Enter program mode \rightarrow 13 * UUUUU * PPPP # [e.g. User Address: 00001 and pass code: 1234, input 13 * 00001 * 1234 #]

M6: Public PIN

Card or PIN: Enter program mode \rightarrow 15 * PPPP # [Input 4-digit PIN, default value: 4321; PPPP=0000: cancel the function of simply inputting PIN to get access] **Card and PIN:** Enter program mode \rightarrow 17 * PPPP # [Input 4-digit PIN, default value: 1234; PPPP=0000: access mode will be "Card Only"]

E. Double Door Control (M4/M8)

Controller with a reader to perform the "Double Door Control". Enter program mode $\rightarrow 28 * 064 \#$ [064= Double Door Control]

F. Anti-pass-back (M4/M8)

Usually, anti-pass-back is commonly applied to parking areas in order to prevent from multi-entry with one card at a time, or to locations that need entry and exit control.

Enable controller

Enter program mode \rightarrow 20 * DDD # [128= Anti-pass-back(0=Disable; 1=Enable)/ 064=Entrance/Exit(0=Exit; 1=Entrance).]

- [e.g.] Enable Anti-pass-back, and set to Exit door= $(128 \times 1) + (064 \times 0) = 128$
- Enter program mode \rightarrow 20 \star 128 # (Please refer to function default value for details.)

Enable card

Enter program mode \rightarrow 26 ***** SSSSS ***** EEEEE ***** N **#**

- [SSSSS= Starting User Address; EEEEE= Ending User Address; N=0(control)/ 1(Not control)/ 2(reset)]
- [e.g.] Enable the anti-pass-back function of User Address from 00152 to 00684: 26 * 00152 * 00684 * 0 #

[e.g.] The anti-pass-back function of User Address 00154 has been enabled. After presenting the card to get in, the user doesn't present the card to leave. When s/he tries to present the card to get in again, since the in-in sequence violates the anti-pass-back rule, s/he will be rejected. To solve this problem, you can reset it as follows. Enter program mode $\rightarrow 26 * 00154 * 2 \# \rightarrow \text{Reset}$

G. Auto-Open Time Zone

Door will remain open after the first flashing card. There are 2 time zones supported when Standalone, and 63 time zones when connected to AR-716E.

Enable/Disable auto-open time zone

Enter program mode \rightarrow 20 * 004 # 004 enable Auto-Open Time Zone; 000= disable Auto-Open Time Zone

Enable/Disable auto open door without presenting card

Enter program mode \rightarrow 24 \star 001 # [001= enable Auto-Open Time Zone; 000= disable Auto-Open Time Zone]

Set up auto-open time zone

Enter program mode \rightarrow 08 * N * HHMMhhmm * 7123456H #

N: 2 sets of auto-open zone (N=0=1st set; N=1=2nd set)

HHMMhhmm=Staring time to ending time (e.g. 08301200=08:30 to 12:00)

7123456H= 7 days of a week (Sun/Mon/Tue/Wed/Thu/Fri/Sat) + Holiday (H= 0: disable; 1: enable); Holidays can be set via 701Client software. [e.g.] To set the second time zone as 9:30 AM to 4:20 PM, Monday, Wednesday and Friday: $08 \times 1 \times 09301620 \times 01010100 \# \rightarrow Done$

H. Lift control

Connect with AR-401-RO16 to control access floors of users.

Enable

Enter program mode $\rightarrow 24 \times 002 \#$ [002= enable lift control]

Single floor

Enter program mode \rightarrow 27 ***** UUUUU ***** FF **#**

UUUU=User Address FF=Floor number (01~32 floor)

[e.g.] User Address NO. 45, allowed to access the 24th floor: 27 *00045 * 24 #

Multi floors

Enter program mode → 21 ★UUUUU ★S ★ FFFFFFF #

[UUUUU=User Address S: 4 sets of lift control (Input: 0~3) FFFFFFF: 8 floors setting (F=0: Disable, F=1: Enable)

[e.g.] User Address NO. 168, only to the 6th and the 20th floor:

Enter program mode $\rightarrow 21 \pm 00168 \pm 0 \pm 00100000 \# \rightarrow 21 \pm 00168 \pm 2 \pm 00001000 \#$

Please refer to below floor chart

	Floc	or/ St	ор					
Set	F	F	F	F	F	F	F	F
0	8	7	6	5	4	3	2	1
1	16	15	14	13	12	11	10	9
2	24	23	22	21	20	19	18	17
3	32	31	30	29	28	27	26	25



I. Setting Up the Arming

Alarm conditions:

- 1. Arming is enabled
- 2.Alarm system connected

• Application:

- 1. Door open too long: Door is open longer than door relay time plus door close time.
- 2. Force open (Opened without a valid user card): Access by force or illegal procedure.
- 3. Door position abnormal: Arming is enabled and the power is suddenly off then on.

• Enable/Disable Arming status (for M4/M8; default value of arming PWD is: 1234) :

Standby Mode	
After door open	Do not open the door
The normal procedure to open door \rightarrow Input 4-digit arming PWD #	★ → Input 4-digit arming PWD → Present a valid card
Enter Program Mode	·
Enable: Enter program mode $\rightarrow (\star) (\#)$	Disable: Enter program mode → ★ #
※ [The normal procedure to open door] can refer to [Access Mode].	

Function Default Value

20 * DDD #				*Default Value
Function	Select	tion	Value	Application
Time Attendance	※ 0: Yes	1: No	001	Networking
Auto Relock	isable ∞0: ≫0: Disable	1: Enable	002	Networking/Standalone
Auto Open	※0: Disable	1: Enable	004	Networking/Standalone
Exit by RTE Button	0: Disable	※1: Enable	016	Networking/Standalone
Master Controller of Network	※0: Slave	1: Mater	032	Networking
Entrance/Exit	₩0: Exit	1: Entrance	064	Networking
Anti-pass-back	isable ∞0: ≫0: Disable	1: Enable	128	Networking

28 * DDD #				*Default Value
Function	Select	ion	Value	Application
Double Door Control	%0: Di <mark>sable</mark>	1: Enable	064	Networking/Standalone
Force Open Alarm Output	0: Disable	※1: En <mark>able</mark>	128	Net <mark>working/Sta</mark> ndalone

Select the desired function, Weighted Value = Selection Index (0 or 1) x Value. [e.g.] DDD (total weighted value of all functions): Enable "Auto Open" + "Exit by RTE Button" + "Anti-pass-back"=1*004 + 1*016 + 1*128=148; As a result of that, the command will be 20 * 148 #.

24 * DDD #							%Def	ault Value
Function		Selec	tion		V alue	Appli	cation	
Auto Open without Presenting	※ 0	: Disable	1: Er	able	001	Networ	king/Standa	llone
in Auto-open Time Zone								
Alarm Output/ Lift	※ 0:	Alarm Output	ut 1: Lift	Control	002	Networ	king/Standa	llone
Control								
Stop Alarm by pressing RTE	(): None	i ≫ 1: Ye	s	064	Networ	king/Standa	llone
Button or Closing the Door								
Doorbell	×0	: Disable	1: Er	able	128	Networ	king/Standa	llone

M4 / M6 / M8

Mode	Networking/ Standalone	User Capacity	Access Mode	Auto-show Duty time	Event log Capacity	120 Holidays	Duress Function	Time Zone	Lift Control	Anti-pass- back
M4	Networking/ Standalone	3,000	1.Card only 2.Card and PIN (4-digit PIN)+ # 3.User Address (5-digit) + PIN (4-digit Private PIN) + #	Yes	1,500	Yes	Yes	11	32	Yes
M6	Standalone	65,535	1.Card only (using 17* command to set Arming PWD as 0000) 2.Card and PIN (4-digit public PIN= Arming PWD)+ # 3.Card or PIN (4-digit public PIN= Duress code)	No	No	No	No	No	No	No
M8	Networking/ Standalone	3,000	1.Card only 2.Card and PIN (4-digit Private PIN)+ # 3.Card or PIN (4-digit Private PIN)	Yes	1,500	Yes	Yes	11	32	Yes
※ M6 :	the user cap	acity can be	65535 because it only reads 5-digits CARD CODE	, while in M4/N	18 it reads bot	n SITE COE	DE and CA	ARD CO	DE (10 dig	its).

Factory Reset by its commands

• When the device is Standalone (not networking)

Enter program mode \rightarrow 20 * 016 # \rightarrow 24 * 064 # \rightarrow 26 * 00000 * 01023 * 1 # \rightarrow 28 * 000 # \rightarrow 29 * 29 * # %Note: if the Master Code has been changed, factory reset won't restore the Master Code to 123456.



Command List			
Function	Command	Description	Mode
Enter program mode	* PPPPPP #	PPPPP=Master Code, default value=123456	M4/M6/M8
Exit program mode	* #		M4//M6M8
Exit program mode and enter arming mode	* * #		M4/M8
Node ID setting (Connected to 716E)	00 * NNN #	NNN=Node ID of Access Controller (range: 001~016)	M4/M8
Node ID setting (Connected to the PC directly	00 * NNN * VVV * nnn #	NNN=Node ID of Access Controller (range: 001~254)	M4/M8
without 716E)		VVV=Virtual 716E Node ID, nnn=Door number (range:001~254)	
Mifare tag / card format (Optional)	01 * N #	N: 0=ISO14443A; 1=ISO14443B; 2=ISO15693;	M4/M8
		3=I Code1; 4=I Code2	
		PS.1. Please select the transmission standard first.	
		2. Ensure both reader and card using the same transmission standard.	
Door Relay Time setting	02 * TTT #	TTT=Door relay time 000= Output continuously	M4/M6/M8
		001~600=1~600 sec.	
		601~609=0.1~0.9 sec.	
Alarm Relay Time setting	03 * TTT #	TTT=Alarm relay time 000= Output continuously 001~600=1~600 sec.	M4/M6/M8
Control mode setting	04 * N #	N=4: M4; N=6: M6; N=8: M8	M4/M6/M8
Arming Delay Time setting	05 * TTT #	TTT=the buffer time before entering arming mode 001~600=1~600 sec.	M4/M6/M8
Alarm Delay Time setting	06 * TTT #	TTT=the buffer time before the alarm is activated 001~600=1~600 sec.	M4/M6/M8
Master card (Administrator) setting	07 * SSSSS * EEEEE #	SSSSS-EEEEE=00000-01023 (00000-03000 for AR-725H);	M4/M8
		SSSSS=Starting User Address; EEEEE=Ending User Address	
Auto-open time zone setting	08 * N * HHMMhhmm * 7123456H #	N= 0 (1st time zone) / 1 (2nd time zone)	M4/M6/M8
		HHMM= Starting time; hhmm= ending time	
		(i.e.: 08301600=08:30 to 16:00)	
		7123456H= 7 days of we <mark>ek (Sun/Mon/Tue</mark> /Wed/Thu/Fri/Sat)+ Holiday	
		(H= 0: disable; 1: enable); Holidays can be set by 701Client software.	
Master code setting	09 * PPPPPPRRRRR #	PPPPP=6-digit new master code	M4/M6/M8
		RRRRR=Reconfirm the new master code	
Suspend / Delete tag	10 * SSSSS * EEEEE # (M6)	*=Suspend 9=Delete;	M4/M6/M8
	10 * SSSSS 9 EEEEE # (M4/M8)	SSSSS=Starting User Address, EEEEE=Ending User Address	
Add a batch of sequential cards by inputting card	11 * SSS <mark>SS * EE</mark> EEE #	SSSSS=Starting card number	M6
number (M6)		EEEEE=Ending card number	
Recover the suspended cards	11 *SSS <mark>SS *EE</mark> EEE #	SSSSS=Starting User Address	M4/M8
		EEEEE=Ending User Address	
Set the access mode of the user at the designated	12 * UUUUU * PPPP #	Access mode: Card or PIN; UUUUU=User Address;	M4/M8
User Address as "Card or PIN"		PPPP=4-digit private PIN (0001~9999); 0000=Card Only for this user	
Set the access mode of the user at the designated	13 * UUUUU * PPPP #	Access mode: Card & PIN; UUUUU=User Address;	M4/M8
User Address as "Card & PIN"		PPPP=4-digit private PIN (0000~9999)	
Arming Pulse Time setting	14 * TTT #	TTT=Arming output time; 000=output continuously 001~250=0.1~2.5 sec.	M4/M8
M4/M8:Duress code setting	15 * PPPP #	PPPP=4-digit duress code (0001~9999; default value=4321; 0000=disable	M4/M6/M8
M6:Public PIN setting for access mode "Card or PIN"		the function of simply inputting PIN to get access in M6)	
Card number modification		UUUUU= User Address; SSSSS=5-digit site code; CCCCC=5-digit card code	M4/M8
M4/M8:Arming PWD setting	17 * PPPP #	PPPP=4-digit Arming PWD (0001~9999; default value=1234; 0000= access	M4/M6/M8
M6:Public PIN setting for access mode "Card & PIN"		mode will become "Card Only" in M6)	
Door Close Time	18 * TTT #	TTT=Door Close Time: 001~600=1~600 sec.; default value: 15 sec.	M4/M6/M8
Add card by presenting(M4/M8)	19 * UUUUU * QQQQQ #	UUUUU=User Address; QQQQQ=Card quantity (00001: for adding a single	M4/M8
		card or a batch of random numbering cards)	
Reader additional setting	20 * DDD #	Please refer to function default value for details.	M4/M6/M8
Lift control setting: multi-floor	21 *UUUUU * S * FFFFFFF #	UUUUU=User Address, S=4 sets of lift control (0~3); FFFFFFF=8 assigned floor	M4/M8
		(F=0: Disable, 1: Enable)	
Add/Delete tag by presenting (M6 only)	22 * N #	N=0(Delete tag); N=1(Add tag)	M6
AR-401RO16 Lift Relay Activated TM	23 * NNN * TTT #	NNN=site number, I I I = relay time: 000~600=1~600 sec.	M4/M8
Controller parameter setting	24 * DDD #	Please refer to function default value for defails.	M4/M6/M8
Controller time clock setting	25 *YYMMDDHHmmss #	YYMMDDHHmmss: Year/ Month/ Day/ Hour/ Min./ Sec.	M4/M6/M8
Anti-pass-back (Enable user)	26 * SSSSS * EEEEE * N #	SSSSS=Starting User Address; EEEE=Ending User Address;	M4/M8
		N=U: Enable; N=1: Disable; N=2: Keset	
Litt control setting: single floor	27 * UUUUU * FF #	UUUUU=User Adaress; FF=Floor (U1~32 floor)	M4/M8
Double Door Control / Force Open Alarm	28 * DDD #	Prease refer to function default value for defails.	M4/M6/M8
Delete all tags	29 * 29 * #		M4/M6/M8



Command	Dese	cription				Mode
34 * DDD #	Change when ce Please	e the "Arming" (in 25) to ontroller is connected v refer to function defa	o the security trig vith AR-721RB. Fult value for de	iger signal tails.		M4/M6/M8
					*Default	Value
		Selectio	on	Value	Application	
to GND		%0: Deactivate	1: Activate	001	Networking/S	standalone
		%0: Deactivate	1: Activate	002	Networking/S	standalone
		※0: Deactivate	1: Activate	003	Networking/S	tandalone
		₩0: Deactivate	1: Activate	004	Networking/S	standalone
		%0: Deactivate	1: Activate	016	Networking/S	standalone
		%0: Deactivate	1: Activate	032	Networking/S	standalone
ed to models without relay bui	lt-in)	₩0: Deactivate	1: Activate	064	Networking/S	standalone
ed to models with relay built-in)	il ≫0: Deactivate	1: Activate	128	Networking/S	standalone
	Command 34 * DDD # to GND ed to models without relay bui ed to models with relay built-in;	Command Desc 34 * DDD # Change when complease to GND Please ed to models without relay built-in) ed to models with relay built-in)	Command Description 34 * DDD # Change the "Arming" (in E) to when controller is connected version of the "Arming" (in E) to	Command Description 34 * DDD # Change the "Arming" (in P) to the security trig when controller is connected with AR-721RB. Please refer to function default value for de Selection to GND %0: Deactivate 1: Activate ed to models without relay built-in) %0: Deactivate 1: Activate	Command Description 34 * DDD # Change the "Arming" (in 😰) to the security trigger signal when controller is connected with AR-721RB. Please refer to function default value for details. Nease refer to function default value for details. Selection Value to GND %0: Deactivate 1: Activate 001 %0: Deactivate 1: Activate 002 %0: Deactivate 1: Activate 003 %0: Deactivate 1: Activate 004 %0: Deactivate 1: Activate 016 %0: Deactivate 1: Activate 033 %0: Deactivate 1: Activate 044 %0: Deactivate 1: Activate 046 %0: Deactivate 1: Activate 046 %0: Deactivate 1: Activate 041 %0: Deactivate 1: Activate 042 %0: Deactivate 1: Activate 042 %0: Deactivate 1: Activate 042 %0: Deactivate 1: Activate 044 %0: Deactivate 1: Activate 044 %0: Deactivate 1: Activate 044 %0: Deactivate 1: Activa	Command Description 34 * DDD # Change the "Arming" (in) to the security trigger signal, when controller is connected with AR-721RB. Please refer to function default value for details. **DDD # **DDD # ***DDD # ***********************************

MASTER CARD Setting

laster Card	001	4096	24580		6	Node ID
daster Card	001	0	0		9	Bead
laster Card	001	0	0			Write
						Exit
COM Port						
⊙ COM1	O CO)	12	COM3	O COM4	⊖ COM5	O COM6
O COM7	() CO)	A8 (COM9	O COM10	O COM11	O COM12

Use the MASTER CARD software



- Input the MASTER CARD number, and press [Write].
- Cut off and tranmit the power. Activate master the card number.

Test

Present the card, and the reader will flash green light 3 times and sound 3 beeps. Then the card becomes MASTER CARD and accesses programming mode. If MASTER CARD is presented again, it will exit programming mode.

About Master Card / Master Card Adding Tag Deleting All Tags 1. Present Master Card 1. Present Master Card 3 З After 3 short beeps 2 2. After 3 short beeps [Access programming mode] [Access programming mode] 3. 1 long warning beep after 2sec. 3. Present one new card at a time (5 4. 5 short beeps after 5sec: cards cleared 4. Present Master Card [Exit programming mode] P.S. Once MASTER CARD is presented after one warning beep, all card data will be cleared. Ster Step.



V200615

FCC ID:2ACLEAR-323D

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- -- Reorient or relocate the receiving antenna.
- -- Increase the separation between the equipment and receiver.
- -- Connect the equipment into an outlet on a circuit different
- from that to which the receiver is connected.

-- Consult the dealer or an experienced radio/TV technician for help. The device has been evaluated to meet general RF exposure statement.

The device can be used in portable exposure condition without restriction

Warning: Changes or modifications to this unit not expressly approved by the part responsible for compliance could void the user's authority to operate the equipment

This device complies with Industry Canada licence-exempt RSS standard(s).

Operation is subject to the following two conditions:

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- (2) This device must accept any interference,

including interference that may cause undesired operation of the device.