# AT6SD KEYBOARD CONTROLLER

Instruction manual



(ref. Mi 3146) Please read carefully and completely this manual before install the product and keep for future reference





# CONTENTS

1. Advisement 4	,
2. Confirming the Contents of the Package	5
3. Main Features and Functions7	,
4. Appearance and Function Key 8	
5. Functions and Operations 10	)
1) Initial Setup of Keyboard	
2) Choice of Camera	
<ol><li>Joystick and the Manual operation of Camera</li></ol>	
<ol><li>Camera Setup (How to enter into OSD menu)</li></ol>	
5) Preset Point	
6) Swing	
7) Group	
8) Tour	
9) Spiral Function	
10) PTZ trace	
11) Camera Remote Reset	
12) Brightness Control of LCD	
13) Alarm On / Off	
6. Maintenance and Mending 19	
7. Connections	)
8. General Specifications	i
1) Controller	
2) JUNCTION DOX	
3) DC Power Supply	
4) Camera Control Interface	
5) Constitution of pin between Controller and Junction bev	,
O Outek Deference	•
9. QUICK REIEIENCE	



# 1. Advisement

#### Always have the unit installed by the store it was purchased from.

• Improper connections and/or installation could result in electrical shack, fire or other serious injury or damage.

#### Do not place the unit on an unstable surface.

- Always checks the strength and stability of the installation location.
- A falling unit will result in damage and could cause serious injury

#### Never disassemble or attempt to repair or modify the unit.

• Disassembly by untrained personnel could result in serious electrical shock, fire and/or malfunction.

#### Never use in locations where combustible materials are used.

- The unit should never be used where combustible materials, such as gases, are being used.
- Fire, explosion or other serious accidents could occur.

#### Never touch electrical connections with wet hands.

• Touching electrical connections with wet hands could result in serious electrical shock.

#### Never expose the unit to water.

- If the unit becomes wet, turn off the power and unplug it immediately.
- Stop using the unit if it becomes wet and contact your nearest dealer.

#### Never use the unit if there is an abnormality.

- Turn off the power and unplug the unit immediately if there is any type of abnormality, such as a strange smell or smoke.
- Continuing to use a unit that is not operation properly could result in serious injury or damage ta the unit.

#### Always use the designated power supply.

- Failure to use the proper power supply could result in fire, electrical shock, serious injury and/or damage.
- Always uses the designated power supply.

#### Always handle the connecting cords properly.

- Never damage or modify the connecting cords.
- Never pull on the connecting cord, expose them to extreme heat and/or place heavy objects on top of them.
- Failure to follow these warnings could result in fire, electrical shock or other damage or injury.

# 

ACIFARFIS/

#### Always use the unit indoors.

- The unit should never be used outdoors, or in any place where it will be exposed to rain or other extremes of moisture.
- Direct exposure to water will result in rust and will damage the unit.

# Never use in environments that have heavy concentrations of dust, smoke, steam or humidity.

• Environments such as these could result in fire, electrical shock or other serious damage or injury.

#### Never place the unit in extremes of high or low temperatures.

- Extreme temperatures will damage the unit.
- Always use within an operating range of 0 °C to 40 °C.

#### Never mount in areas exposed to direct sunlight.

- Direct sunlight can also discolor the unit and cause other damage. Never expose the unit to impact.
- Strong impact may seriously damage the unit.

# $\triangle$ FOR PROPER OPERATION

#### Never install the unit yourself.

• The unit should be installed by trained personnel.



This product has been designed and manufactured in accordance with the harmonized European standards, following the provisions of the below stated directives.

**Electromagnetic Compatibility Directive 89/336/EEC** (EN 61000-3-2:1995, EN 61000-3-3:1995, EN 50081-1:1992, EN 50082-1:1997).

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



2. Confirming the Contents of the Package.

## 1) Control keyboard unit 1EA.



## 2) Junction box 1EA.



#### 3) Connection cable (modular jack) 1EA.



4) Instruction manual.

# 3. Main Features and Functions

#### Synopsis

This controller is for exclusive use for pan / tilt / zoom dome camera and speed dome camera.

This is able to control a maximum of the 255 cameras, and several controllers are able to control a camera at the same time.

Dome camera can set and fulfil the surveillance connected with preset, swing, group and tour.

#### Features

- Control up to maximum 255 cameras
- Several keyboards can be used to simultaneous control of a camera
- Easy operation of pan/tilt with the joystick
- Same effect as 64 fixed surveillance camera by setting a maximum of 64 preset points
- Pan/tilt swing function
- Group surveillance function (select preset points routinely and repeatedly)
- Tour surveillance function (repeated practice of many groups)
- PTZ (Pan-Tilt-Zoom) trace function
- OSD (On-Screen-Display) function
- Spiral surveillance function
- Easy setup of functions by using LCD (Liquid-Crystal-Diode) module

\*\* This keyboard was designed for various applications. So all the functions described in this manual could not be available.\*\*





#### 4. Appearance and Function Key 1) Controller function button

#### ALL Button AUX (Auxiliary) Buttons **GROUP** Button Simultaneous on/off of These buttons are used to control This button is used to monitor cameras, lights and AUX1. of Auto-Pan (AUX1) and other unit the preset pionts sequentially. (only for receiver unit) (AUX2). (Only for receiver unit). TOUR Button **RUN Button** ALARM Buttons This button is used to monitor This button is used to on/off of # the groups sequentially. registered video motion detection. Numeric Kevpad (0-9) These keys are used to SWING Button Z/I (Zoom In), Z/O (Zoom Out) Button make input for settings and Operate the zoom control of This button is used to move the other functions. camera between two preset points. camera. P-Set (Preset) Button HOLD Button \_ This button is used to input and # SET Button confirmation of preset points. (Max. This button is used to start the 64 positions each camera). setting mode of various function ENTER Button MON (Monitor) Button This button is used to save MENU Button when camera or program is CAM (Camera) Button This button is used to set up inputted This button is used to the function with number button select a camera. CLR (Clear) Button (Refer to function guide). View Button This button is used to clear F/F (Focus Far), F/N (Focus Near) # wrong number of function. Button **ON Button** Operate the focus control of L/P (Light Power) Button This button is used to camera. This button is used to on/off the execute the functions. STATUS Button light. (only for receiver unit) This button is used to freeze OFF Button C/P (Camera Power) Button on/off of Video-out signal. This button is used to This button is used to on/off the stop the functions. Jovstick camera. (only for receiver unit) This stick is used to control pan/tilt and move the cursor in

#: This button is allowed to be used only for the control of matrix system. Not allowed for speed dome camera control.

## 2) Setting method of Junction box

#### - Camera controls 1

This is the input and output terminal. Connect 485+ to data + and 485- to data –.

When you communicate with RS-485, the left switch of Junction box must be set backward.

When you communicate with RS-422, the left switch of Junction box must be set forward.

#### - Camera controls 2

Same as camera control 1.

#### - Sub Keyboard

Sub keyboard must be used only with sub keyboard and linked with same line.

n communicating with RS-485, the right switch of Junction box must be set backward (DC Jack direction).

In communicating with RS-422, the right switch of Junction box must be set forward.

#### - Junction box's input and output terminal

This terminal informs you that the data in/out in electronic transmission of long distance, can be used as a data in/out transmission signal in communicating with RS-485.

In transmitting from keyboard to camera, you have to exteriorly pull up because, the camera receive reversely, such as when you send "high", you get "low", so pull up outside.

#### "Exteriorly pull up" is?

Don' t put pull up resistance to collector of Transistor and make 'The line driver' pull up, then it can function normally.

#### Ascertain

The check voltage of GND and RTS should be over 5V.

#### Caution

Sub keyboard can function only in general control.

Under the situation that alarm is on in main keyboard, you can hear alarm sound when something is in disorder.

Data line using for control of camera only connected to main Junction box, can makes sub keyboard function.

5

the OSD menu.





# 5. Functions and Operations

Main keyboard is setup for normal products. So sub keyboard needs to be setup. (If you want to use sub keyboard, please ask to the supplier of it.) First, switch "on" of dome camera, let the keyboard supply with electricity.

#### 1) Initial Setup of keyboard

Supply the power first (put in connected power line) and then the menu screen (Figure 1-1) appears on LCD with a sound.



# 2) Choice of camera



Select camera: Keypad 1-255 + CAM

## 3) Joystick and the manual operation of camera

The camera used in "2) the choice of camera" can be operated manually by joystick. You can make up pan and tilt by joystick.

#### 1 Upward Tilt

When joystick is operated upwardly, it will make the camera move up and the upper part of the color monitor can be viewed.

#### ② Downward Tilt

When joystick is operated downward, it will make the camera move down and the lower part of the color monitor can be viewed. ③ Left Pan

#### When joystick is operated to leave, it will make the camera move to left and the left part of the color monitor can be viewed.

#### **4 Right Pan**

When joystick is operated to right, it will make the camera move to right and the right part of the color monitor can be viewed.

#### **(5)** Simultaneous operation of pan/tilt

Operating joystick the direction of diagonal, lead pan and tilt to work at the same time. The velocity of joystick varies according to the tilting angle.

#### 6 F/F button

"Focus Far" button as a manual makes the focus lens of camera drive drawing a circle. Also, it is used as a "ENTER" button in OSD menu. **(7) F/N button** 

"Focus Near" button as manual makes the focus lens of camera move. Also, it is used as "ESCAPE" button in OSD menu.



## 4) Camera setup (How to enter into OSD menu)

#### - OSD (On Screen Display) control

This controller can be used to control speed dome camera, ptz dome camera with OSD menu.

Please, refer also to camera OSD menu to avoid conflict in settings.

#### - How to enter into OSD Menu



Pressing numeric keypad 1 and MENU button respectively enable OSD (On Screen Display) Menu to mark on the monitor.

• The delay time between push 1 button and MENU button is about 2-3 sec.

#### - The shift of cursor in OSD is as follows.

- ① Left cursor Joystick pan left (For speed dome camera only)
- <sup>(2)</sup> Right cursor Joystick pan right (For speed dome camera only)
- ③ Up cursor Joystick tilt up (For speed dome camera only)
- Down cursor Joystick tilt down (For speed dome camera only)
- ⑤ Enter F/F button (For speed dome camera, ptz dome camera)
- $\odot$  ESC F/N button (For speed dome camera, ptz dome camera)
- O Up cursor Z/I button (For ptz dome camera only)
- ⑧ Down cursor Z/O button (For ptz dome camera only)

#### - How to save and quit in OSD.

#### Keypad "1" + "MENU"

After setup or change parameters, press again numeric keypad 1 and MENU button respectively enable OSD(On Screen Display) Menu to mark on the monitor.

• The delay time between push 1 button and MENU button is about 2-3 sec.

# 5) Preset Point

The controller makes to memorise 64 sets of the individual preset position for each camera.

The memorised preset point is available in resetting of power, and it can be changed.



# - Starting the preset mode

#### SET + Keypad 1-64 + PST

This mode enable pan/tilt and zoom/focus far/near work by joystick. Thus it can move the point of setting. After put and stop it in place you want to surveillance, and set it following these orders.

Appoint preset point no. of the present position with keypad. Operate with joystick and zoom, focus button, and press the PST button, then it memorises the number 1 Preset. At this moment, it also memorises brightness, BLC, WDR, S-BLC. If you want to memorise another position with preset point, move to the joystick and repeat. The input will be ignored, if preset no. Input is out of range between 1-64.

#### - Movement to a preset point

Appoint preset point number with numeric keypad. Appoint the number of preset of 1-64  $\rightarrow$  Pressing the PST button automatically enable it to move to appointed point.

When the error occurs, two times of beep sound.

#### - Deleting each preset

Press the CLR button for a while (more then 3sec)

Keypad 1-64  $\rightarrow$  PST button  $\rightarrow$  ENT button

Ex) deleting the number 5 of preset:

CLR (more then 3sec)  $\rightarrow$  Keypad 5  $\rightarrow$  PST button  $\rightarrow$  ENT button

#### - Deleting all preset

Press the CLR button for a while (more then 3sec)  $\rightarrow$  PST button  $\rightarrow$  ENT button.





#### 6) Swing

This function can setup of making repetitive movement of pan or tilt swing between 2 preset point set. When setup pan swing between preset point A (first preset point)  $\leftrightarrow$  B (second preset point), it will execute a pan swing right from "A" point to "B" point. When executing tilt swing, it also starts from preset point "A". At this moment, it moves to B in brightness. At this point, operating joystick stop swing.



When setting swing, In two setting screen like 6-1, decide five parameter such as pan/ tilt swing, end start no., end no., swing time, swing speed.

#### - Set swing mode starting

#### SET + SWING

Choose the "SET" button and press the "SWING" buttons, then it converts to the mode "SetSwing".

#### - Select the types of swing operation

#### 1(Pan)/2(Tilt) + ENT

From pan/ tilt setting screen to numeric keypad Input 1 or 2 and choose pan/ tilt.

#### - Setting of swing preset

Start preset number + ENT → End preset Number + ENT

Swing time (Standby time during swing operation)

Keypad 1-127 + ENT

# - Swing speed (Moving speed of swing)

#### Keypad 1-64 + ENT

- Swing time: The standby time (dwell time) before starting from A or B (sec.).
- Swing speed: The moving speed from A to B (1/sec.-64/sec.).
- Start and stop of swing
- Execution: 1(Pan)/2(Tilt) + SWING
- Stop: SWING or Joystick

#### 7) Group

It is repetitive surveillance function which sequentially switch to multiple of preset points with the speed and standby time designated. 64 preset points in maximum can be registered to a group if only one group is used. 6 sets of individual group in maximum it can be set per a camera.

-SET GROUP-	-SET GROUP-	-SET GROUP-
Group No? 1-6	Preset No? 1-64	Move Speed? 1-64
Camera:001	Camera:001	Camera:001
Input? ■	Group-1	Group-1
Picture 7-1	Picture 7-2	Picture 7-3

-SET GROUP- Dwell Time?1-127sec Camera:001 Group-1
---

Picture 7-4

#### - Set group mode starting

#### SET + GROUP

#### - Group setup

Keypad 1-6 + ENT

#### - Group preset appointment

Input an appointed preset, move speed, and set the dwell time. If you try to input an additional preset point, you can input again. After setting press "SET" button for ending.



- Group operation and stop
- Execution: Keypad 1-6 + GROUP
- Stop: GROUP or Joystick

If you try to stop the group of working dome camera, press "Group" button or control joystick.

Move speed: Moving speed from A to B. (64=High, 1=Low) Dwell time: Standby time before starting.

#### - All group clear

Press the button of CLR for a while (more then 3sec) → Group → ENT

# 8) Tour

This function is binding 6 groups into one tour, and fulfilling of continual group working.

-SET TOUR-	-SET TOUR-	-SET TOUR-
Group No? 1-6	Group No? 1-6	Group No? 1-6
Camera:001	Camera:001	Camera:001
Input? ■ [MAIN]	Save-1	Save-6
Picture 8-1	Picture 8-2	Picture 8-3

#### - Set tour mode starting

#### -SET → TOUR

#### - Tour setup

① Using numeric keypad, setup group number 1-6, Input group with pressing ENT button.

<sup>2</sup> When adding group number, repeat the process of 1

③ Press "SET" button when finishing the set of tour

#### - Tour operation and stop

**Execution: TOUR** 

Stop: TOUR or Joystick

#### - All tour clear

Press CLR button for a while (more then 3sec) → TOUR + ENT

# 9) Spiral Function

Keypad 7 + MENU + ON/OFF

This function will be supported only at speed dome camera: the fixed pan speed and tilt speed is operated at the same time that can make a spiral function.

## 10) PTZ trace

The controller is made to meet to the function in speed dome camera. This function makes to memorise P/T/Z movement for about 120 seconds and play that trace movement.

-CCTV TRA	NSMITTER-
Trace ON/OF	F? 1-6
Camera:00	1
Input? 8	[MAIN]

-CCTV TRANSMITTER-Trace Set/Delete? ■ Camera:001 Input? 9 [MAIN]

Picture 10-1

Picture 10-2

#### - Practising and stop of PTZ trace Keypad 8 + MENU + ON (Practicing)/OFF (Stop)

#### - Memory of PTZ trace Keypad 9 + MENU + MENU+ ON (Memory)/OFF (Delete)

When manipulating according to this rule, the message of "Trace Memory" appears on the monitor. At this moment, It can operate pan and tilt by joystick.

If the time expire, the memorising stop automatically and memorised PTZ is registered.

# 11) Camera Remote Reset

#### Keypad 1-255 + CAM + Keypad 10 + MENU + ENT

This is same as the action switching power on, and doesn't influence preset data.





#### 12) Brightness control of LCD

#### Keypad 20 + MENU + Joystick up/down + CLR

This function is controlling the brightness of LCD and being able to be used where there is the difference of brightness.

#### 13) Alarm on / off

In setting Alarm on, the camera with setting MD on can result in buzzer.

When MD perceive sense, MD flickers with the sound of buzzer. When setting Alarm off, buzzer and tlickering vanish.

# 6. Maintenance and Mending

If the surface of the controller unit becomes dirty, turn off the power and wipe the surface with a soft, dry cloth.

# 

- Never use strong cleaners, such as alcohol, benzene or paint thinner to clean the surface of the unit. They will damage the surface and could cause fire or other accidents.
- Cleaning and inspecting of the internal components should only be performed by authorized technicians. Contact your nearest representative for details.



# 7. Connections (Junction box)

# FOR PROPER OPERATION

#### Never install the unit yourself.

• The unit should be installed by trained personnel.



#### 8. General Specifications 1) Controller

ltem	Specification
In/ Output terminal	Modular jack
I/F between Junction box	TTL
Working temperature	0 °C - 40 °C
Storage temperature	-5 °C ~ +50 °C
Working humidity	10-75%
Storage humidity	10-95%
Dimension	338(L) x 180(W) x 45(H)
Weight	about 1.2 Kg

#### 2) Junction box

Item	Specification
Power supply In/output terminal	DC 9V, 500mA Adapter
In/output terminal	Modular jack
Control I/F between camera and controller	RS-485 / RS-422
Working temperature	0 °C ~ +40 °C
Storage temperature	- 5 °C ~ +55 °C
Working humidity	10-75%
Storage humidity	10-95%
Dimension	109(L) x 66(W) x 27(H)
Weight	about 0.3 Kg

#### 3) DC power supply

Voltage: DC9V (± 20%) Current: 500mA (min)



# ACIFARFISA-



#### 4) Camera control interface

ltem	Specification
	Asynchronous serial interface
Synchronization system & word lenght	1 Start bit
	8 Data bit
	No Parity
	1 Stop bit
	11 Byte command
Signal polarity	Mark logic "1"
	Space logic "0"
Transmit direction	Half duplex
Transmit speed	9600 BPS
Hardware	3 cable (twist+ground)

#### 5) Constitution of Junction box pin

ltem	Input/Output		
	Camera $\leftrightarrow$ Junction box $\leftrightarrow$ Sub key		
	RS-485+	Camera data +	
Camora control 1	RS-485-	Camera data -	
Camera control 1	RS-422 In+		
	RS-422 In-		
	GND		
Item   Camera control 1   Camera control 2   Sub keyboard	RS-485+	Camera data +	
	RS-485-	Camera data -	
Camera control 2	RS-422 In+		
	RS-422 In-		
	GND		
	RS-485+	RS-485+	
	RS-485-	RS-485-	
Sub keyboard	RS-422 In+	RS-422 In+	
	RS-422 In-	RS-422 In-	
	GND		
	SK RTS		
	RX RTS		
	GND		

• Camera control 1 and 2 compose each separate drive circuit internally

6) Constitution of pin between controller and Junction box (modular jack)

Pin No.	Controller ↔ Junction box
1	RX-TXD
2	B +9V
3	RX-RXD
4	RX-RS
5	GND
6	SK-TXD
7	SK-RS
8	SK-RXD



# 9. Quick Reference

Operation	Function	Fund	ction out
		Main	Sub
[Keypad 1-255]+[CAM]	Select camera	۲	۲
Power supply ON + [SET]	First stage controller setting	۲	۲
[SET] [SET]+[J.S Stop]+[Keypad 1-64]+[PST] [Preset No]+[PST] [CLR+3sec.]+[Keypad 1-64]+[PST]+[ENT] [CLR+3sec]+[PST]+[ENT]	Start set mode Input and set the preset point Move to preset point Partial deletion of preset Whole deletion of preset	۲	۲
[SET]+[SIWING] [1/2]+[ENT] [Keypad 1-64]+ [ENT]+[Keypad 1-64]+ [ENT] [Keypad 1-127]+[ENT] [Keypad 1-64]+[ENT] [112]+[SWING] [SWING]/Joystick	Start set swing mode Select of pan or tilt swing Set up of two preset point Set up of swing speed Set up of stop time Start pan or tilt swing Stop swing	۲	۲
[SET]+[GROUP] [Keypad 1-6]+[ENT] [Keypad 1-64]+[ENT] [Keypad 1-64]+[ENT] [SET] [SET] [Keypad 1-6]+[GROUP] [GROUP]/Joystick	Start set group mode Select of group number Select of preset point Set up the move speed of group between presets Set up the dwell time of group Complete setting of group Start group surveillance Stop group surveillance	۲	۲
[SET]+[TOUR] [Keypad 1-6]+[ENT] repeat [SET] [TOUR] [TOUR]/Joystick	Start set tour mode Set up tour Ending of setting up Tour Start tour surveillance Stop tour surveillance	۲	۲
[MENU] [1]+[MENU] [F/F]/Joystick [F/N]	Start menu mode Mark of OSD Menu OSD Menu enter OSD Menu escape	۲	۲

Operation	Function	Function input	
		Main	Sub
[2]+[MENU]+[ON/OFF]	Set motion detect ON or OFF	۲	
[3]+[MENU]+[ON/OFF]	Place of detection display ON/OFF	۲	
[4]+[MENU] Joystick [7/  7/0]/[E/E E/N]	Mode of set up zone size displayed Expansion of zone size (up/down, right/left) Reduction of Zone size (up/down,	۲	
[5]+[MENU] (Keypad 1-10)+[ENT]	right/left) Motion sensitivity control mode Motion sensitivity highest 10 Motion sensitivity lowest 1	۲	
[6]+[MENU] [keypad 1-64]+[ENT]	Motion preset set up mode Motion preset set up	۲	
[7]+[MENU]+[ON] [7]+[MENU]+[OFF]	Spiral function practice Spiral ending	۲	
[8]+[MENU]t[ON] [8]+[MENU]+[OFF]	P/T/Z Trace practice P/T/Z Trace ending	۲	
[9]+[MENU]+[ON] [9]+[MENU]+[OFF]	P/T/Z Trace memorising Deleting memorised P/T/Z Trace	۲	
[Keypad 1-255]+[CAM]+[10]+[MENU]+[ENT]	Reset of chosen camera	۲	۲
[20]+[MENU] Joystick up/dow n +[CLR]	LCD brightness mode Ending brightness control	۲	۲
[STATUS] [STATUS]	Freeze practice Freeze discharge	۲	۲
[1]+[STATUS]	Confirmation of MD set camera	۲	
[ALARM] [ALARM]	Go into alert mode Out of alert mode	۲	

#### ACI srl Farfisa Intercoms

Via E. Vanoni,3 - 60027 - OSIMO - AN - Italy Tel. (+39) 071 7202038 - Fax (+39) 071 7202037 Email: info@acifarfisa.it http://www.acifarfisa.it

