**Operation Manual of 3 Axis Joystick LCD Keyboard
with 4 ch. Video input and LCD display**

VS-K300

Pleased read the manual carefully before using the product.

VS-K300   VOOK

INDEX

SAFETY MEASURE

Please observe the following safety measures, when install and use such product:

1. Please read and keep this manual.

2. The installation and maintenance of such product should be operate under the operation regulations by professional.

3. Please do not install the product on the table or bracket unstably.

4. Please read carefully and understand the all information of this manual before install and use this product, and keep it as a reference.

5. Please do not let any eyewinker or liquid matter filter to the product.

6. Use this product according to the warning sign and the direction.

7. Please pull out the power supply, before clear such product. Do not use the liquid or spray cleaner.

8. Only use the power supply style marked on the product: DC 12V/2.0A.

1. SUMMARIZE

Such Keyboard is a product supporting with Intelligent Dome, decoder and other terminal receivers. It connects to the receiver by EIA/RS-485 electric interface. Without the bus driver, one keyboard may control domes or decoders up to 32 sets, and the longest communication distance is 1.2Km. The intelligent dome camera can be controlled and setup instantly by such control keyboard, and it can also control the terminal decoder directly, reaching the controlling to Pan/Tilt, lens, IR torch, wiper and other image capture equipments.

2. SPECFICATION

- 5" color LCD screen, display of a quad picture
- Built in quad processor, free switching between cameras
- 3 Axis shift gear joystick
- OSD menu function
- Integrated 16 protocols, baud rate range: 2400bps ~ 19200 bps
- RS-485 and RS-232 output can control many front equipments, including intelligent dome camera, decoder, image processor etc.

3. TECHNICAL PARAMETER

- The communication mode from dome camera to keyboard: Asynchronous Interface Half Duplex Serial Communication
- Baud rate: 2400bps, 4800bps, 9600bps, 19200bps
- Communication distance:: upto 1200 meters
- Power supply: DC12V/2.0A
- Measure: 390×165×80 (mm)
- Weight: 2 Kg
- The amount to control the Pan/Tilt or Dome: at most 32 pcs.

4. BACK FACE PANEL
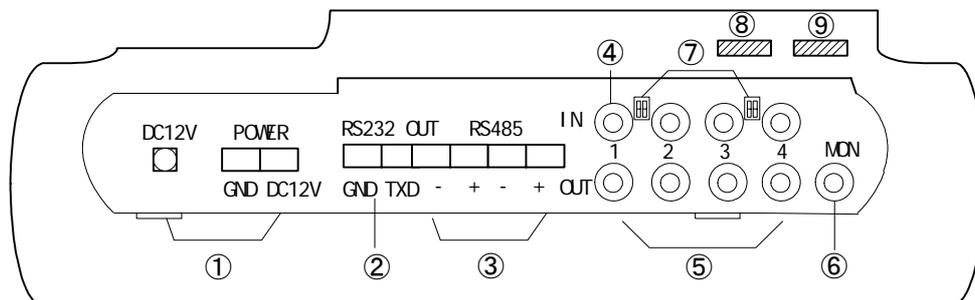
Figure 1

① DC power supply input: DC12V/2.0A.

② RS232 output: to control the exterior image processor.

③ RS485 output: to control the dome camera or the Pan/Tilt.

④ Video input: 4 video input end, to connect four camera or other standard video signal source.

⑤ 4-channel Looping camera video output: to connect to the assistant monitor

⑥ Monitor output: to connect to the output end of the monitor

⑦ Impedance matching switcher: the corresponding impedance matching switcher should be switched to the , when there is load of the looping output end

⑧ Brightness Knob

⑨ Contract Knob

5. FRONT FACE PANEL

Figure 2

6. EXTERIOR CONNECTION

Do not cross connect the keyboard to other equipment, they should be correctly connected as anode to anode and cathode to cathode.

Figure 3

7. OPERATION

When power on, there will be display of the address of working camera, baud rate, protocol code and version code, such information will be displayed for 10 seconds. User can bypass this by operating the keyboard directly, the information will be disappeared automatically.

For instance: Displaying information as following:

```
CAMERA ID：001
BAUD RATE：2400BPS
PROTOCOL ：P003
VERSION   ：V1.0
```

It means the current address is 001, the baud rate is 2400bps, the protocol code is P003（the corresponding

relations of the protocol code with the protocol will be listed in Table 2）, the version code is V1.0. After 10 seconds, it will be displayed on LCD, the content of input data buffer and the current address will be displayed at the very end bottom of the screen. As the following picture, the input data is 0000, and the current address is 001.

DATA：0000	ID：001

NB: Please setup the address, protocol and the baud rate of the keyboard same as the dome or Pan/Tilt, before control it, may the dome or Pan/Tilt will be out of control by communication failure.

7.1.1.   modify the dome address   CAM

- press number: "1-1024"
- press key: CAM

After modify, the area of current address will display the address # inputted

7.1.2.   lens become wide: WIDE

7.1.3.   lens become tele: TELE

7.1.4.   focus become far: FAR

7.1.5.   focus become near: NEAR

7.1.6.   aperture become opening: OPEN

7.1.7.   aperture become closing: CLOSE

7.1.8.   setup the preset position: PRESET

- press number: "1-128"
- press: PRESET

7.1.9.   call preset position   CALL

- press number: "1-128"
- press: CALL

7.1.10. start up tracking

- press number: "1-6"
- press: SHOT

7.1.11. setup the left point of the line scanning

- press: AUTO
- press: ON

7.1.12. setup the right point of the line scanning

- press: AUTO
- press: OFF

7.1.13. running the line scanning

- press: AUTO
- press: SHOT

Explain: some protocols do not need to setup the line scanning, just run the line scanning directly. After running, if

the dome or Pan/Tilt is out of control, probably the protocol adopted doses not support line scanning

7.1.14. open the assistant function

- press: FUNC
- press number: "1-10"   different # stands for different function, refer to the Table 1
- press   ON

Table 1（if the function is out of control, probably such protocol is not support such operation）

NUM	CONTROL OBJECT	KEYBOARD OPERATION	
		FUNC+N+ON	**FUNC+N+OFF**
0	Camera Power Supply/Reset	On/ Off Switchable	Back to the Initial Value of the Camera
1	Backlight Compensation	On	Off
2	Zero Lux（refer to camera function）	On	Off
3	Menu/Screen（refer to camera function）	On	Off
4	Digital Magnification	On	Off
5	Background Light of Sreen	On	Off
6	Focus	Auto	Manual
7	Iris	Auto	Manual
8		Auto	Manual
9	White Balance	Indoor	Outdoor
10		ATW	One Push WB

7.1.15. close the assistant function

- press: FUNC
- press: "1-10"   the function of different number refer the Table 1
- press: OFF

7.1.16. control of dome / Pan/Tilt

Move the joystick until the camera reaches desired position. To reach the fastest spin of camera, move the joystick utmost from center. Twist the joystick clockwise to zoom in and counterclockwise to zoom out.

7.1.17. the operation of keyboard menu

Press MENU to enter menu press again to exit menu. After enter the menu, move the joystick up or down to move the cursor up or down; move the joystick left or right to adjust the content of current menu. If the option of PASSWORD is ON, the screen will display: ENTER PASSWORD:[   ], to tip user input the 6-digit password; If the option of PASSWORD is OFF, press MENU, to enter the MAIN MENU directly:

```
        MAIN    MENU
  1. SYSTEM    SETTING
  2. CAMERA    SETUP
  3. PROGRAM
  4. CONTROL MODE DOME
  5. EXIT
         MENU 1
```
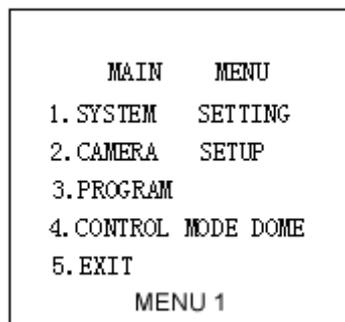
SYSTEM   SETTING   On "SYSTEM SETTING", move the joystick to right, display the submenu "SYSTEM SETTING". Move the joystick up or down to choose the menu item, and move the joystick right or left to setup the parameter.

```
       SYSTEM    SETTING
  1. PROTOCOL    A01
  2. BAUD RATE   1200BPS
  3. PASSWORD
  4. RETURN
          MENU 1.1
```
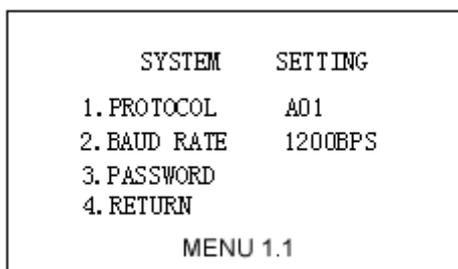
➢ PROTOCOL   At such item, move the joystick right or left to display: P000—P001—P002—P003—P004—P005—P006—P007—P008—P009—P010—P011—P012—P013—P014—P015 16 kinds of protocols. The corresponding of the protocol code and protocol name as following:

Table 2

CODE	NAME
P000	A01
P001	VOOK B01
P002	SANTACHI
P003	PELCO-D
P004	PELCO-P
P005	PANASONIC
P006	LONGCOMITY
P007	HD600
P008	LILIN
P009	VICON
P010	MOLYNX
P011	KALATE
P012	VCL
P013	RESERVED
P014	ALEC
P015	ULTRAK

➢ BAUD RATE   At such item, move the joystick right or left to choose the four baud rates: 2400bps—4800bps—9600bps—19200bps

➢ PASSWORD   At such item, move the joystick right or left to display the submenu as following:

```
          PASSWORD    SETTING
   1. PASSWORD    ON
   2. CHANGE      PASSWORD
   3. RETURN

              MENU 1.1.3
```
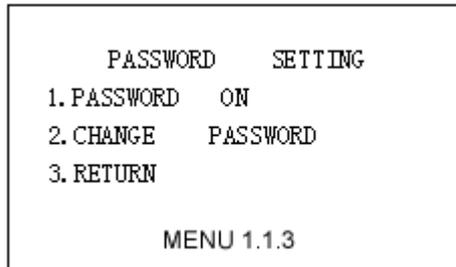
PASSWORD SETTING

➢ PASSWORD ON/OFF   At menu item "PASSWORD   ON", move the joystick right, to switch the ON/OFF of PASSWORD. If switch to ON, the user should input the 6-digit password to enter the menu next time.

➢ CHANGE PASSWORD   At menu item "CHANGE PASSWORD", move the joystick right, to display the submenu as following:

```
          CHANGE   PASSWORD

   1. NEW PASSWORD      ------
   2. CONFIRM           ------
   3. RETURN
              MENU 1.1.3.2
```
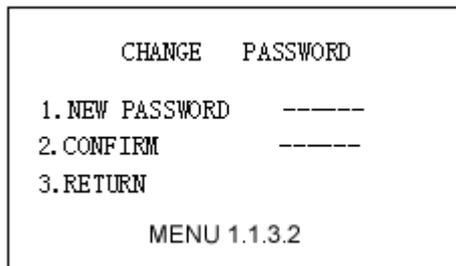
CHANGE PASSWORD

➢ NEW PASSWORD   input the 6-digit password

➢ CONFIRM   confirm the 6-digit password at such item, press OPEN to confirm the password after input. If the input 6-digit password same to the NEW PASSWORD, to display "PASSWORD CHANGED!", or to display "INVALID PASSWORD!" for 3 seconds.

➢ RETURN   move the joystick at such item, return to the menu (PASSWORD SETTING)

➢ RETURN   move the joystick at such item, return to the menu (SYSTEM SETTING)

➢ RETURN   move the joystick at such item, return to the menu (MAIN MENU)

CAMERA SETTUP   At the main menu item "CAMERA SETTUP", move the joystick right to display the submenu "CAMERA SETTUP". Move the joystick up or down to choose the menu item and move the joystick right or left to setup the parameter.

```
            CAMERA      SETUP
        1.BACKLIGHT      ON
        2.ICR SHOT       AUTO
        3.IRIS           AUTO
        4.D-ZOOM         ON
        5.FOCUS          AUTO
        6.WB SET         AUTO
        7.COLOR OF CAM   B/W
        8.MENU OF CAM    ON
        9.RETURN

             MENU 1.2
```

➢ BACK LIGHT   ON   move the joystick at such item right or left to switch the back light ON/OFF.

➢ ICR SHOT   AUTO   move the joystick at such item right or left to switch the ICR SHOT ON/OFF.

➢ IRIS   AUTO   move the joystick at such item right or left to switch the IRIS AUTO/MANUAL.

➢ D-ZOOM   ON   move the joystick at such item right or left to switch the Digital ZOOM ON/OFF.

➢ FOCUS   AUTO   move the joystick at such item right or left to switch the FOCUS AUTO/MANUAL.

➢ WB SET   AUTO   move the joystick at such item right or left to switch the WHITE BALANCE SET among AUTO—MANUAL—OUTDOOR—INDOOR—ATW—ONEPUSH.

➢ COLOR OF CAM   move the joystick at such item right or left to switch the camera image BW/COLOR.

➢ MENU OF CAM   switch the menu or screen ON/OFF.

➢ RETURN   move the joystick at such item right or left to return MAIN MENU

PROGRAM   At the main menu item "PROGRAM", move the joystick right to display the submenu "PROGRAM". Move the joystick up or down to choose the menu item, and move the joystick right or left to setup the parameter.

```
              PROGRAM

        1.AUTO PAN START POS
        2.AUTO PAN END POS
        3.RUN AUTO PAN NORMAL
        4.SET PATROL     01
        5.RUN PATROL     01
        6.RECORD PATTERN
        7.RUN PATTERN
        8.RETURN
             MENU 1.3
```

➢ AUTO PAN START POS   move the joystick at such item right or left to set the current position of Pan/Tilt or dome as the start point of the line scanning.

➢ AUTO PAN END POS   move the joystick at such item right or left to set the current position of Pan/Tilt or dome as the end point of the line scanning.

➢ RUN AUTO PAN NORMAL   move the joystick at such item right or left to run the line scanning from the start point to the end point.

➢ SET PATROL   move the joystick at such item right or left to change the tracking number among 01-06. To

press OPEN to enter the submenu of tracking edit. At such submenu, move the joystick right or left to move the active cursor right or left, and move the joystick up or down to add or reduce the content of current menu item. SEQ：XX（XX is the current editing tracking number）, after edit the tracking, press CLOSE to exit and save the current setup.

```
NO    POS   SP   TM   POS   SP   TM

01    –     –    –    –     –    –
03    –     –    –    –     –    –
05    –     –    –    –     –    –
07    –     –    –    –     –    –
09    –     –    –    –     –    –
11    –     –    –    –     –    –
13    –     –    –    –     –    –
15    –     –    –    –     –    –

SEQ:XX                       CLOSE:EXIT

              MENU 1.3.4
```

➢ RUN PATROL   move the joystick at such item right or left to change the tracking number among 01- 06. And press OPEN to run the tracking.

➢ RECORD PATTERN   move the joystick at such item right or left to enter the RECORD PATTERN.

➢ RUN PATTERN   move the joystick at such item right or left to run PATTERN.

➢ RETURN   move the joystick at such item right or left to return the MAIN MENU.

CONTROL MODE   At the main menu item "CONTROL MODE", move the joystick right, and the keyboard control will be switched between DOME and IMAGE PROCESSOR. Such function aims to the multiplex key: **ON/LIVE** and **OFF/TAPE**. Or press FUNC+NEXT（press such two keys together）to switch between DOME and IMAGE PROCESSOR too.

7.2.   the operation of image processor

7.2.1.   full screen   □

7.2.2.   picture in picture   ▱   （invalidation）

7.2.3.   four images   ⊞

7.2.4.   nine images   ⊞   （invalidation）

7.2.5.   sixteen images   ▦   （invalidation）

7.2.6.   display the former image   PREV

7.2.7.   display the after image   NEXT

7.2.8.   auto jumping   SEQ   press again to cancel it

7.2.9.   the menu operation of image processor

Notice: Device contents of menu have been setup before leaving factory, data changing on this device is prohibited. Any changing on the PROTOCOL and BAUD will lead the image processor out of control (refer to SYSTEM   SET option)。

7.2.9.1. the basic operation of menu

enter/ exit menu	press FUNC & □ together（for short FUNC+□）
move the menu cursor up	press FUNC & ⊡/∧ together（for short FUNC+⊡/∧ ）
move the menu cursor down	press FUNC & ⊞/∨ together（for short FUNC+ ⊞/∨ ）
enter the submenu	SEQ
modify the content of current menu	TAPE

the operation of entering password

       as input 1-------- input number 1, and press CAM

       as input 2-------- input number 2, and press CAM

       as input 3-------- input number 3, and press CAM

       as input 4-------- input number 4, and press CAM

7.2.9.2 the operation of menu

 press "FUNC+□", display to input the purview password, the image is as following:

      PASSWORD: [_   ]

Input the password: 1111, to enter the main menu:

```
                MAIN   MENU
    1.  SYSTEM SET
    2.  CAMERA  SET
    3.  SCREEN  SET
    4.  EVENT  LIST
    5.  RESET  DEFAULT

```

The system will exit the menu and return to the image before, after no operation for 3 mins.

SYSTEM SET select the item "SYSTEM SET" in main menu, and press "SEQ", to display the submenu

 "SYSTEM SET". Use FUNC+⊡/∧ ）（FUNC+ ⊞/∨ ） to move and choose the menu item, and use

 FUNC+⊞/< ） or（FUNC+⊞/> ） to setup the parameter.

```
                   SYSTEM   SET
    TIME:   2006/03/04   16:43:16
    FORMAT: ASIA   [YYYY/MM/DD]
    LIVE TIME DISP: TOP
    BORDER DISP: GRAY
    BACK COLOR: BLUE
    BUZZER: OFF
    ALARM TIME: 020 SEC
    FREEZE TIME: 010 SEC
    PASSWORD: 1111
    TV FORMAT: PAL
    PROTOCOL: PTC1   BAUD:9600(BPS)
    DEVICE ID: 01(HEX)
    QUTPUTFORMAT:CVBS
```

➢ TIME：system date，YYYY/MM/DD system time，HH/MM/SS.

➢ FORMAT：[ASIA；U.S.；EURO].

➢ LIVE TIME DISP: the position of live time displaying [TOP；TOP_LEFT；TOP_RIGHT；NON]

➢ BORDER DISP：border color [GRAY，WHITE，BLACK，OFF].

➢ BACK COLOR：background color [BLUE，BLACK].

➢ VFILTER：vision filter [ON: gentleness，OFF: clear].

➢ BUZZER：buzzer alart[ON，OFF].

➢ ALARM TIME：the holding time for alarm output。[003—255] seconds.

➢ FREEZE TIME：[000—255] seconds, 000 second is mean freeze for unlimited time.

➢ PASSWORD：manager password [1111—4444]，can setup any four-digit among 1—4.

➢ FORMAT：video format [PAL，NTSC]，PAL is the default.

➢ PROTOCOL：[PTC1,PTC2,PTC3,PTC4].

➢ BUAD：baud rate [1200,2400,4800,9600,19200]Bps.

CAMERA SET At main menu, choose the item "CAMERA SET", and press "SEQ", to display the submenu "CAMERA SET". Use （FUNC+□/∧ ）（FUNC+ 田/∨ ）to move and choose the menu item, and use （FUNC+田/< ）or（FUNC+田/> ）to setup the parameter.

```
                    CAMERA   MENU
CAM1
PICTURE   DISPLAY: YES
TITLE   DISPLAY: YES
CAMERA TITLE: CAM1
AUTO TIME: 02 SEC
MIRROR: OFF
PICTURE QUALITY   [ ]
SENSOR SWITCH: ON
SENSOR LEVEL: LOW
DETECT TIME:   00:00 – 23:59
MOTION SWITCH: OFF
MOTION SET:     [ ]
DETECT TIME:   00:00 – 23:59
ALARM OUT
LOSS NO     SENSOR:YES     MOTION:YES
```

- CAM：the serial number of the camera image [1—4].
- PICTURE DISPLAY：[YES ，NO] .
- TITLE DISPLAY：the switcher of the camera name   [YES: display，   NO: disappear].
- CAMERA TITLE：edit the camera name, can use any 10 letters, digits or symbol.
- AUTO TIME：time of auto jumping [0—99] seconds.
- PICTURE   QUALITY ：[refer to " setup the picture quality"].
- SENSOR SWITCH：[ON ，   OFF].
- SENSOR   LEVEL：the effective sensor level [HIGH: for high level，LOW: for low level].
- DETECT   TIME：the detect time of sensor alarm.
- MOTION SWITCH：motion alarm switcher [ON，   OFF].
- MOTION   SET ：the setup of motion alarm [refer to 详见"the setup of motion alarm"].
- DETECT   TIME：the detect time of motion alarm.
- ALARM OUT: (non)
- LOSS：the alarm output of the camera signal losing [YES ，   NO].   (non)
- SENSOR：the alarm output of the sensor [YES ，   NO]   (non)
- MOTION：the alarm output of the motion [YES ，   NO].   (non)

SCREEN SET(don't need to adjust such item)

```
                SCREEN   SET
OSD HORIZONTAL SET              : 03
OSD VERTICAL     SET            : 01
PICTURE HORIZONTAL SET         : 07
PICTURE VERTICAL     SET       : 03
PICTURE SCALE       SET        : 05
                              (DEFAULT)
```

EVENT   SET(don't need to adjust such item)

NO	CAM	DATE	TIME	EVENT
		EVENT LOG		
001	::	2006-3-1	14:07:01	P_ON
002	--	------------	----------	--------
003	--	------------	----------	--------
004	--	------------	----------	--------
005	--	------------	----------	--------
006	--	------------	----------	--------
007	--	------------	----------	--------
008	--	------------	----------	--------
009	--	------------	----------	--------
010	--	------------	----------	--------
PREVIOUS		NEXT		ERASE

➢ NO: the recorder number of the alarm event，001—100, amount 100.

➢ CAM: the camera image number of the alarm event.

➢ DATE: the date of the alarm event.

➢ TIME: the time of the alarm event.

➢ EVENT: the reason of the alarm event.[P_ON, boot-strap alarm；LOSS，camera signal losing alarm；MOTION，motion alarm；SENSOR，sensor alarm]

➢ PREVIOUS: previous page. Ten recorders one page, amount 10 pages. Press "SEQ" to turn over the page.

➢ NEXT: next page. Ten recorders one page, amount 10 pages. Press "SEQ" to turn over the page.

➢ ERASE: erase all the alarm recorders, and record from 001 newly.

RESET DEFAULT   press "SEQ" to confirm the YES to resume the setup left factory. And press "SEQ" to confirm the NO to cancel it.

CONFIRM	RESET
YES	NO

8. FAULT ELIMINATING

FAULT	Circumstance	Remedy
No image after boot-strap	No power supply	1. Check the connection of power line 2. If the power supply is DC12V?
Can not control the appoint dome or Pan/Tilt	1.Incorrect protocol 2．Incorrect baud rate 3．Incorrect address	1. If the protocol is same between keyboard and dome or Pan/Tilt? 2. If the baud rate is same between keyboard and dome or Pan/Tilt?
others		Send back to factory for service.