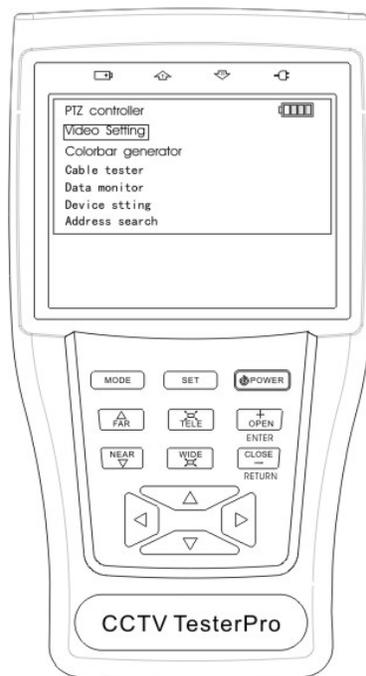




INSTRUCTION MANUAL

ST-F35TEST CCTV Test Meter



SAFETY INFORMATION



- ✓ The ST-F35TEST is intended for use in compliance with the local regulations for electrical equipment. The user is not to use the ST-F35TEST in environments or applications for which it is not intended.
- ✓ To prevent damage or failure the ST-F35TEST must not be exposed to water or moisture.
- ✓ The ST-F35TEST is not waterproof and must not be submerged in water or other liquids.
- ✓ Excessive vibration, knocking or dropping of the unit will result in component or product failure.
- ✓ During charging if the battery is found severely hot the ST-F35TEST should immediately be turned off and disconnected from the charger.
- ✓ The ST-F35TEST must not be charged for more than 8 hours.



- ✓ Do not use the ST-F35TEST where the humidity is high. Once the unit is damp, it must be powered off immediately and moved away from any connected cables.
- ✓ Do not use the unit with wet hands.
- ✓ The ST-F35TEST should not be used in any environment where there is flammable gas.
- ✓ Do not use the ST-F35TEST where there is strong electromagnetic interference.
- ✓ Do not disassemble the ST-F35TEST as disassembly may damage the unit and void the warranty. Contact your SecurityTronix dealer for assistance.
- ✓ Only use a slightly damp cloth to clean the unit. Do not use detergents or solvents.

PACKAGE CONTENTS

This package contains:

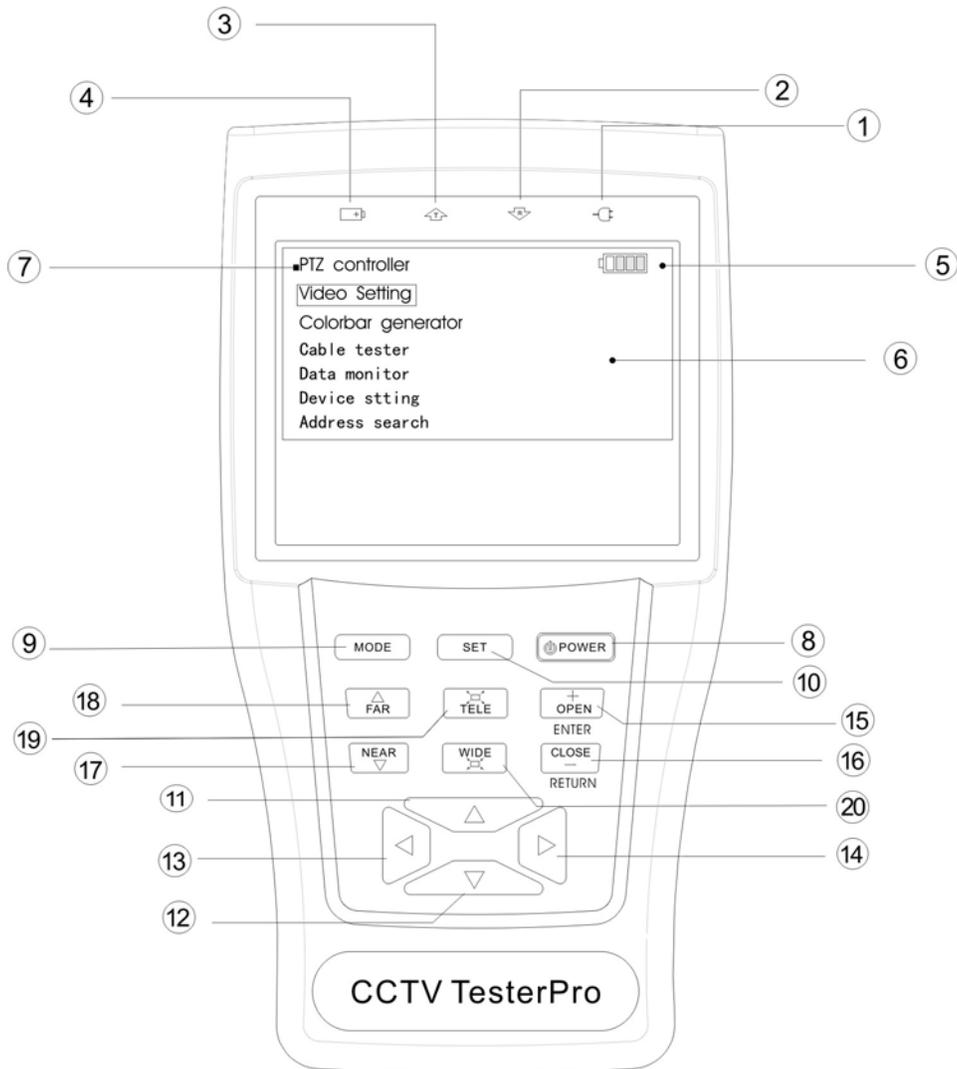
- One ST-F35TEST meter
- One LAN cable tester
- One 5V 2A power supply
- One lithium ion polymer battery
- One BNC cable
- One RS485 cable
- One safety cord
- One case
- One instruction manual

PRODUCT DESCRIPTION

The ST-F35TEST has been developed for the on-site installation and maintenance of video monitoring systems. It can be used for displaying video, controlling PTZ, generating images, capturing data via RS485 and testing LAN cables. Its functions, portability and ease of use make it an invaluable test device for the CCTV technician. Key features include:

- 3.5" TFT LCD display with 960x240 resolution
- Video Level testing, with video signals measured in IRE or mV
- DC 12V 1 A power output for camera
- Audio input testing
- PTZ control. Pan/tilts the P/T unit; zooms in/out of the lens; adjusts the focus and aperture; and sets and calls the preset position. Can perform PTZ address scanning with ID search of PTZ cameras.
- Automatically adapts and displays the video format of NTSC / PAL. Video display LCD brightness, contrast, color saturation are adjustable.
- NTSC / PAL multi-system colorbar video generator (seven system switchable; transmit, receive, seven-system color images).
- Captures and analyzes RS485 control data.
- Powerful LAN cable testing measuring the connecting status, displaying the sequence of connection and the NO. of the LAN cable.
- Supports RS232, RS485 and RS422 interfaces with baud rates ranging from 150, 600 to 19200bps.
- Supports more than twenty PTZ protocols, including PELCO-P, PELCO-D, SAMSUNG, etc.
- Advanced power control and protection circuit for its 3.7v DC3000mAh lithium ion polymer battery. Battery can last up to 12 hours for normal use after charging for 4 hours.

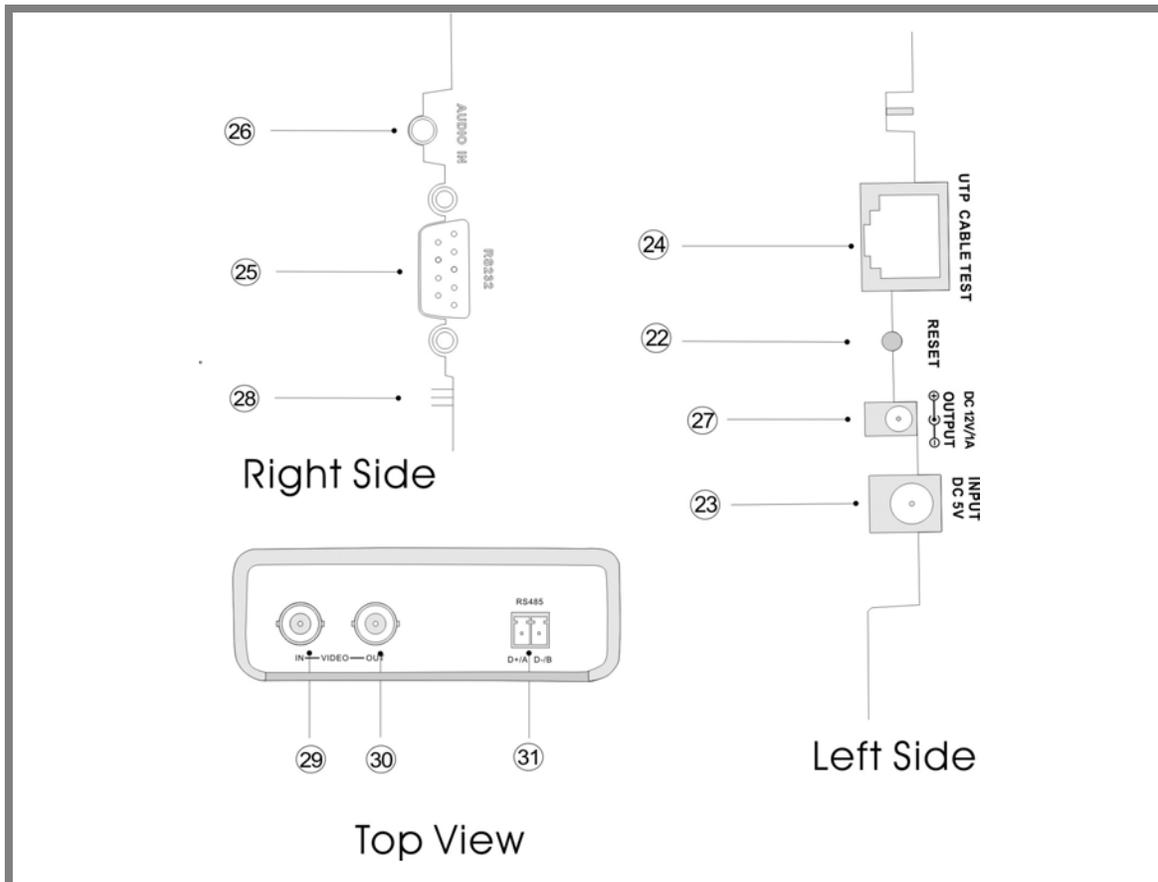
FRONT PANEL



1		Power Indicator: Lights green while powered on.
2		Data-Reception Indicator: Lights red while the data is being received.
3		Data-Transmission Indicator: Lights red while the data is being transmitted.
4		Charge Indicator: Lights red while the battery is being charged. When the charging is complete, the indicator turns off automatically.
5		Battery Level: Displays battery life on current charge.
6		Main-menu: Displays the ST-F35TEST's main functions.

7		Sub-Menu: Shows and sets the values of functions.
8		Press for more than 2 seconds to turn on/off the tester. Press for less than 2 seconds to turn on/off the PTZ controller menu displaying.
9		Menu Key: Pops up the main-menu; constant-press MODE or press the  or  key can shift between functions.
10		Setup Key: Press SET or press left or right key to enter sub-menu to set the function.
11		Up: Select the item that will be set or add the value of the parameter. Tilt the PTZ upward.
12		Left: Enter the sub-menu or select the parameter whose value will be changed. Reduce the value of the parameter. Pan the PTZ left.
13		Right: Enter the sub-menu or select the parameter whose value will be changed. Add the value of the parameter. Pan the PTZ right.
14		Down: Select the item that will be set or reduce the value of the parameter. Tilt the PTZ downward.
15		Confirm/Open: Confirm the setting of parameters; open the aperture.
16		Return/Close: Return or cancel while setting parameters of the menu; close the aperture
17		Near Focus: Focus the image nearby.
18		Far Focus: Focus the image faraway.
19		TELE: Zoom in the image.
20		WIDE: Zoom out the image.

SIDE and TOP VIEWS



22	Resets the default parameter settings.
23	External Power Supply (DC, 5V): Use the included power adapter.
24	UTP Cable Port: Use with the UTP LAN cable tester.
25	RS232 Interface: RS232 communication for the PTZ.
26	Audio Input: Test audio on the front end.
27	DC12V1A Power Output: output DC12V power for camera
28	ST-F35TEST Speaker
29	Video Input (BNC input interface): Inputs the video.
30	Video Output (BNC output interface): Outputs the video.
31	RS485/422 Interface: RS485/RS422 communication for the PTZ.

BATTERY INSTALLATION

The ST-F35TEST has a built-in lithium ion polymer rechargeable battery. The battery cable inside battery cabin should be disconnected for safety during transportation!



Prior to using the ST-F35TEST, the battery cables inside the battery cabin should be securely connected.



Usually it is unnecessary to disconnect the cable during normal use.



Pressing  key continuously will power the unit on or off.

Prior to using the unit for the first time be sure the batteries are completely exhausted and then recharge for 4 or 5 hours.



The Charge Indicator  lights red when charging the battery and will automatically turn off when charging is completed.

When the Charge Indicator  turns off, the battery is approximately 90% charged. The charging time can be extended for about 1 hour and the charging time within 8 hours will not damage the battery.

The ST-F35TEST can be used while charging. However, the charging time will be extended.

Press the RESET key to restore the default settings if the ST-F35TEST works abnormally.

OPERATION

POWER ON

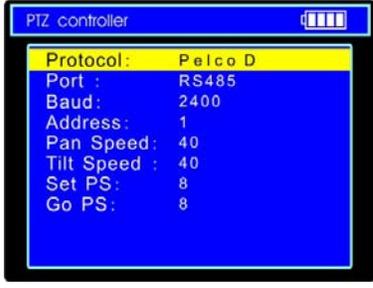
Continuously press the **POWER** key (at least 2 seconds) to power on / off the ST-F35TEST. When powered on, press the **MODE** key and the main menu will appear.

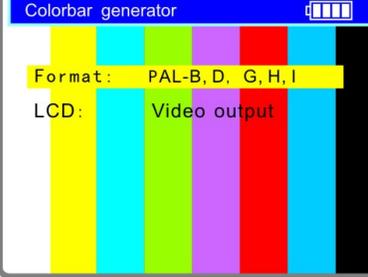
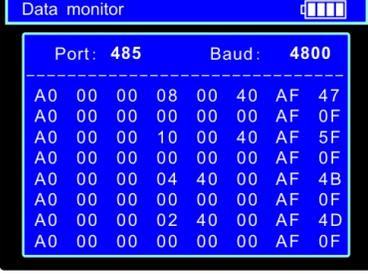


MENU and FUNCTIONS

Press the **MODE** key continuously or press the  or  key to select the function (PTZ Controller, Video Settings, Colorbar Generator, LAN Cable Tester, Data Monitors, Device Setting) and enter the corresponding function setting sub-menu. Press the **SET** key to set the parameters in the function sub-menu.

Note: When the ST-F35TEST is powered on, it will return to the function being operated before it is turned off.

	1. PTZ controller Display the input video images. Pan/tilt the P/T unit and zoom in/ out the image. Setup the controlling parameters (e.g., protocol, communication port, baud rate, PTZ ID, pan/tilt speed; set and call preset position).
	

 <p>Video setting</p> <p>Brightness: +0</p> <p>Contrast: +2</p> <p>Saturation: +09</p> <p>NO VIDEO INPUT</p> <p>Format:</p> <p>Amplitude:</p>	<p>2. Video Setting</p> <p>Adjust the LCD brightness, contrast, color saturation, video format and video level testing.</p>
 <p>Colorbar generator</p> <p>Format: PAL-B, D, G, H, I</p> <p>LCD: Video output</p>	<p>3. Colorbar Generator</p> <p>Output or receive seven different forms of video colorbar to tester monitor, cable or other equipment.</p>
 <p>Cable tester</p> <p>1 --- 3</p> <p>2 --- 6</p> <p>3 --- 1 Remote kit:</p> <p>4 --- 4 255</p> <p>5 --- 5</p> <p>6 --- 2</p> <p>7 --- 7</p> <p>8 X</p> <p>Cable: cross</p>	<p>4. Cable Tester</p> <p>Test LAN cable or telephone cable. The connecting condition and the sequence of wires will be displayed as well as the serial number of the cable tester kit.</p>
 <p>Data monitor</p> <p>Port: 485 Baud: 4800</p> <p>A0 00 00 08 00 40 AF 47</p> <p>A0 00 00 00 00 00 AF 0F</p> <p>A0 00 00 10 00 40 AF 5F</p> <p>A0 00 00 00 00 00 AF 0F</p> <p>A0 00 00 04 40 00 AF 4B</p> <p>A0 00 00 00 00 00 AF 0F</p> <p>A0 00 00 02 40 00 AF 4D</p> <p>A0 00 00 00 00 00 AF 0F</p>	<p>5. Data Monitor</p> <p>Captures the protocol from the controlling system and displays command data. A helpful tool to debug and maintain RS485 communications.</p>
 <p>Device setting</p> <p>Auto poweroff: 10 min</p> <p>Prompt sound: on</p> <p>Language: English</p> <p>Brightness: 7</p> <p>Address search: off</p> <p>Not saved</p> <p>Enter to apply</p>	<p>6. Device setting</p> <p>Set the parameters of the ST-F35TEST (Auto power off/ Keypad tone/Language/Brightness/Address search)</p>

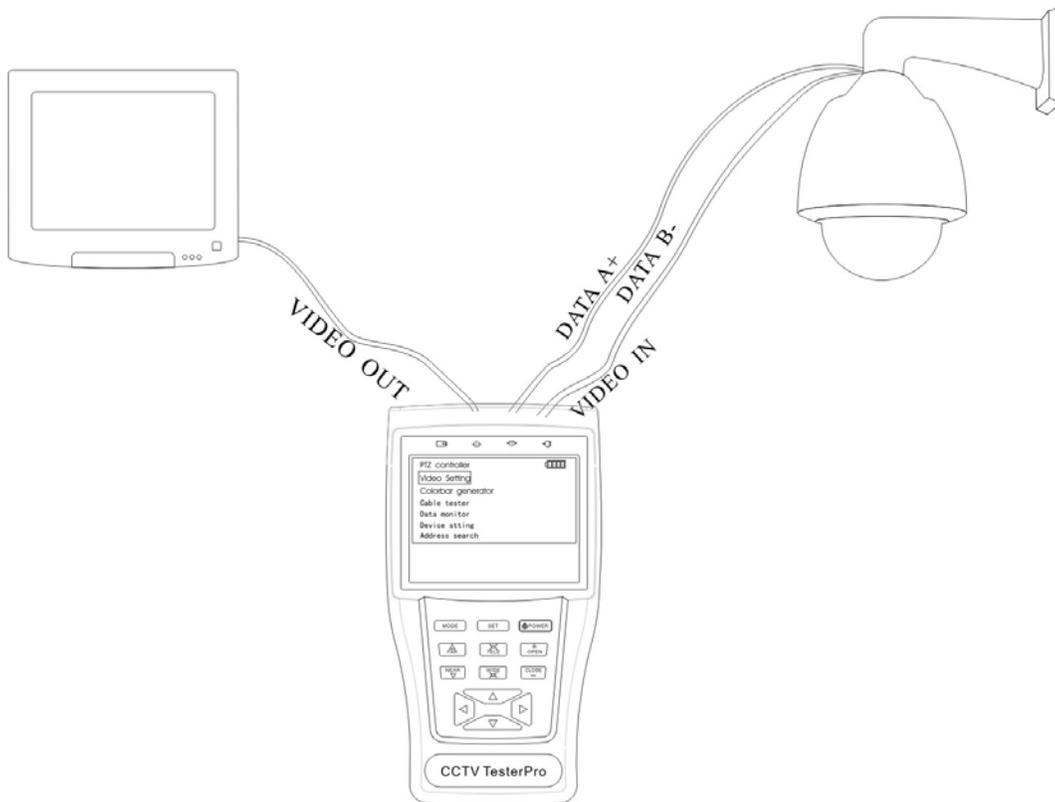
PTZ CONTROLLER

Display the input video images. Has pan/tilt the P/T unit and zoom in/ out the image capability. Setup the controlling parameters (e.g., protocol, communication port, baud rate, PTZ ID, pan/tilt speed; set and call preset position).

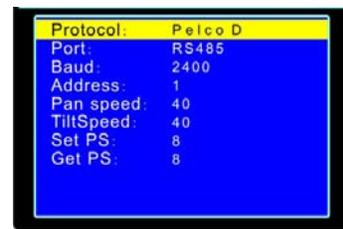
The following connections should be confirmed before use

- The Video In interface of the ST-F35TEST and the output interface of camera
- Data A+ of the ST-F35TEST and A+ of the PTZ camera or controlling device; data B- of the ST-F35TEST and B- of the PTZ camera or controlling device

Note: Do not connect the communications interface with a circuit having a voltage greater than 6V.



- Press the **SET** key to enter the PTZ controller sub-menu.
- Press the  or  key to select the parameter value to be changed.
- Press the  or  to select the new value.
- Press the **ENTER** key to save the change or press the **RETURN** key to escape the change.
- Press the **SET** key to exit the sub-menu.

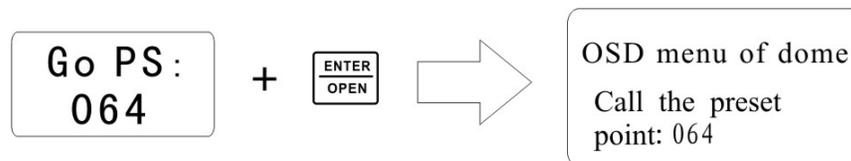


- Press the **POWER** key for a full-screen image.

- A. Protocol:** Select the protocol according to the PTC camera. Up to 21 popular protocols are available (e.g., Pelco P, Pelco D, Samsung, Yaan, LiLin, CSR600, etc.).
- B. Port:** Select the communications port for the PTZ camera (RS232, RS422, RS485).
- C. Baud:** Select the baud rate for the PTC camera.
- D. Address:** Set the PTZ camera's ID (0-254).
- E. Pan Speed:** Set the PTZ camera's pan speed (0-63).
- F. Tilt Speed:** Set the PTZ camera's tilt speed (0-63)
- G. Set PS:** Set the preset position (0-128)
 - a. **P/T/Z** the camera to desired position.
 - b. Press the **SET** key to enter PTZ controller sub-menu.
 - c. Move the yellow cursor to "Set PS" and then press  or  key to select the preset position number.
 - d. Press the **ENTER** key to complete preset position setting or press the **RETURN** key to escape the preset position setting.
- H. Go PS:** Call the preset position (0-128). The PTZ camera will go to the desired preset position.
 - a. Move the yellow cursor to "Go PS" and then press  or  key to select the preset position number.
 - b. Press the **ENTER** key to complete preset position calling or press the **RETURN** key to escape preset position calling.

The way of calling the OSD menu and preset of the PTZ camera may vary with control systems from different manufacturers. Read the control system manufacturer's operation manual for details. By way of example:

- a. Move the yellow cursor to "PTZ controller" to enter the PTZ controller mode.
- b. Press the **SET** key to enter the PTZ controller sub-menu. Press  or  key to move the yellow cursor to "Go PS".
- c. Press  or  key to select the preset number 64, then press the **ENTER** key to call the OSD menu of the PTZ controller.



OSD Menu of Dome (for reference only)

MAIN MENU	MAIN MENU
1. DISPLAY SETUP	1. Display configuration
2. CAMERA SETUP	2. Set camera parameters.
3. CONTROL SETUP	3. Set PTZ controlling
4. CAMERA MASK SET	4. Set privacy mask
5. PROGRAM	5. Set auto-running functions
6. PAL CAMERA	6. PAL/NTSC Switch
7. CAM DEFAULT SET	7. Restore the default settings
8. DOME RESET	8. Reset the dome
9. EXIT	9. Exit the main menu

■ Operate auto-running functions by calling preset position (effective for some brands of PTZ camera)

Call preset-33—Open Auto-flip function

Call preset-34—Reset zero point of PTZ camera

Call preset-64—Enter the main menu of the PTZ camera

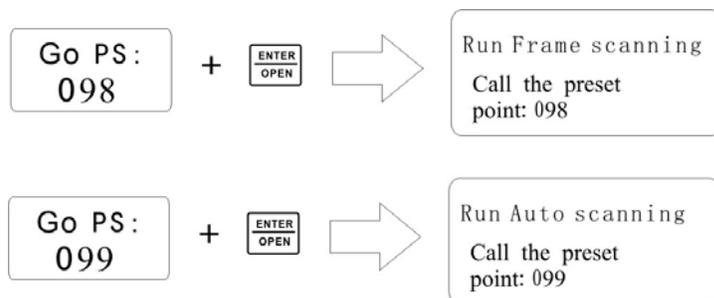
Call preset-95—Enter the main menu of the PTZ camera or stop the PATTERN recording.

Call preset-96—Run pattern-1

Call preset-97—Run preset tour-1

Call preset-98—Run frame Scan

Call preset-99—Run Auto scan



VIDEO SETTING

User can customize the brightness, contrast and saturation of the LCD according to the environment and display the format (PAL/NTSC) of video input.

- Press the  or  key to select the parameter for which you want to change the value.
- Press the  or  key to change the value. Press the **ENTER** key to save the change or press the **RETURN** key to escape.
- The Video Format and Video Level will be displayed in the lower portion of the screen. If there is no video signal at the Video IN port of the ST-F35TEST, the type of NTSC or PAL, and Video Level will not be displayed.

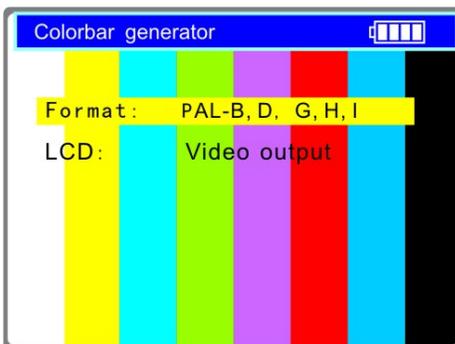


Depending on the type of camera connected to the ST-F35TEST, the Video “Format” will automatically change between NTSC and PAL, and the Video Level will automatically change between IRE (Institute of Radio Engineers) and mV. NTSC signals measured in IRE units, PAL signals measured in mV.

The Video Level should be within the indicated range. Levels that are too low will result in a dim picture with reduced dynamic range. A Video Level that is too high will result in washed out pictures. The ST-F35TEST will display “Normal” when video levels are $1000\text{mV}\pm 20\%$, “Exceed” or “Weak” will be displayed when video level out of $1000\text{mV}\pm 20\%$.

COLORBAR GENERATOR (Output Video in any mode)

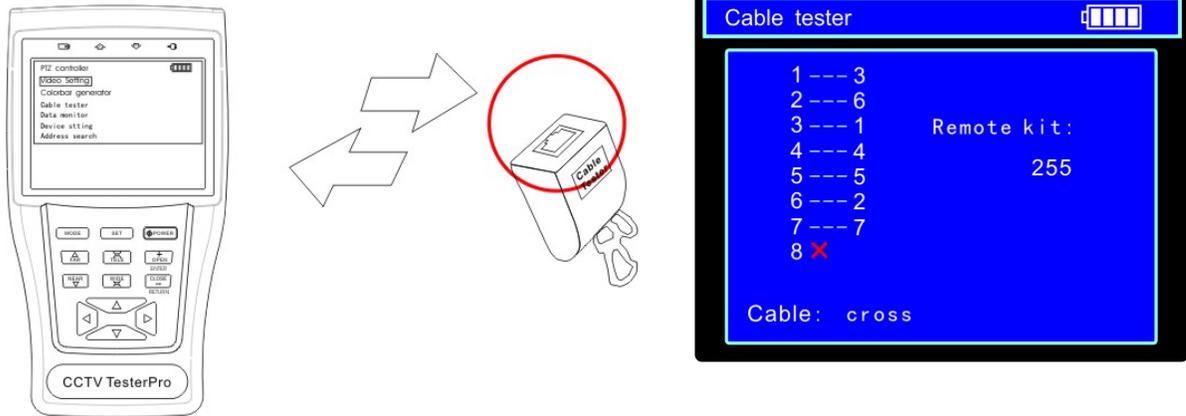
Output or receive seven different forms of video color bar to test monitor, video cable or other equipment.



- Press the  or  key to select the parameter for which you want to change the value.
- Press the  or  key to change the value.
- Press **ENTER** key to save the change or press **RETURN** key to escape.

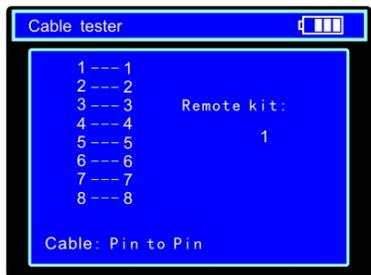
CABLE TESTER

Test LAN cable or telephone cable. Connect LAN cable or telephone cable to the ST-F35TEST and cable tester. The connecting status, cable type and the sequence of wires will be displayed, as well as the serial number of the cable tester kit.

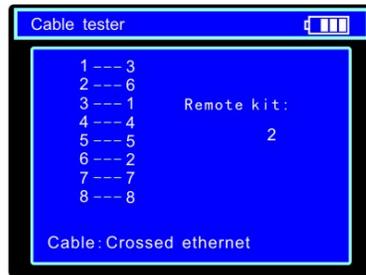


The right picture shows lines 1-7 are closed, line 8 is open and the number of the cable tester box is 255.

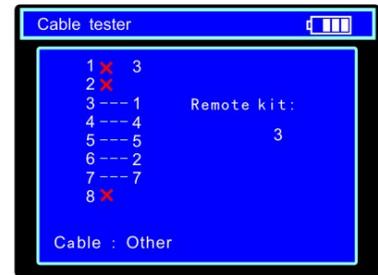
Straight-through Line



Cross Line



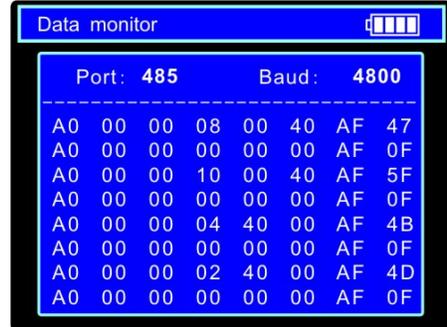
Open Line or Short



DATA MONITOR

Data Monitor captures the command data from the RS485 controlling system.

- Connect the RS485 or RS232 interface of the controlling system with the ST-F35TEST's RS485 or RS232 ports. In the case of RS485, A to A, B to B.
- Press the **SET** key and then press  or  key to select the communications port according to the system connection. Press the **SET** key to save the change.
- Press  or  key to select the baud rate according to the controlling system's baud rate. Press the **SET** key to save the change and capture the command data from the controlling system.
- Press the **RETURN** key to clear the screen.



DEVICE SETTING

Device Setting sets the ST-F35TEST's parameters.

Auto Poweroff: Sets the time for auto shut-down (Disable, 5, 10,...60). Disable: Disable the "Auto Poweroff" function. 5 means the unit will power off after 5 minutes of no operation.

Keypad Tone: Turn on or off the beep associated with pressing the keypad.

Language: Select language of the OSD menu.

Brightness: Sets the brightness of the OSD menu and background (0 – 7).

Address Search: Off / On. Open or close the PTZ address search menu.

- Press  or  key to move the parameter you want to change.
- Press  or  to change the value.
- Press the **ENTER** key to save the change or press **RETURN** to escape.

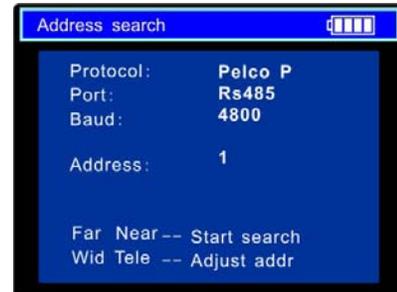


PTZ ADDRESS SCANNING

Device Setting allows the ID search of the PTZ camera. Note the PTZ camera to be searched must be isolated from other PTZ cameras before beginning the search. Not doing so will cause all PTZ cameras in the same system to pan at the same time.



- Press the **MODE** key to access the “Device Setting” menu.
- Scroll down to Address Search. Press  key to change from “off” to “on”. Press the **ENTER** key to save the change. Note the ST-F35TEST returns to “off” after shutdown and the scan sub-menu closes automatically. Set “on” again for the next use.
- Press the **MODE** key to enter the sub-menu.
- Press the **SET** key to set the protocol, communications port and communications rate consistent with the PTZ camera.
- Press the **NEAR** or **FAR** key to increase or decrease the address values.



NEAR: The ST-F35TEST will search up the ID list quickly and continuously (from 1 – 256). When the ID is found the PTZ camera will pan right. At this time press any key to stop the search.

FAR: The ST-F35TEST will search down the ID list quickly and continuously (from 256 – 1). When the ID is found the PTZ camera will pan left. Press any key to stop the search.

WIDE: The ST-F35TEST will search for the ID step-by-step (from 1 – 256). When the ID is found the PTZ camera will stop panning.

FAR: The ST-F35TEST will search for the ID step-by-step (from 256 – 1) . When the ID is found the PTZ camera will stop panning.

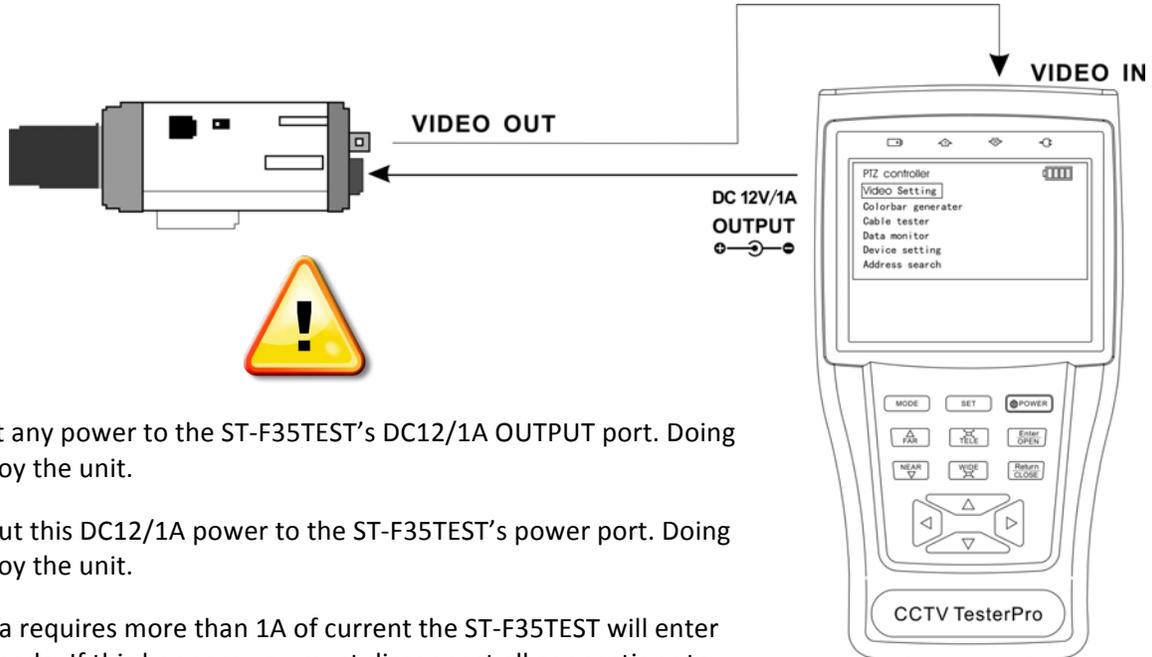
If you press the **NEAR** key the ST-F35TEST will search up for the ID quickly and continuously (from 1 – 256). When the ID is found the PTZ camera will pan right. Press any key to stop the search. Press **TELE** key for manual, single-step ID search step-by-step (from 256 – 1). When the ID is found the PTZ camera will stop panning.

If you press the **FAR** key the ST-F35TEST will search down for the ID quickly and continuously (from 256 – 1). When the ID is found the PTZ camera will pan left. Press any key to stop the search. Press the **WIDE** key for manual, single-step ID search step-by-step from (1 – 256). When the ID is found the PTZ camera will stop panning.

Press **MODE** key to quit the Address Scanning menu.

DC12V 1A POWER OUTPUT

A camera can be powered with DC12V 1A power from the ST-F35TEST.



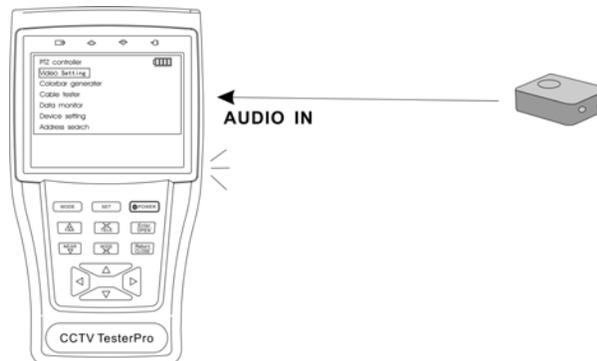
Do not input any power to the ST-F35TEST's DC12/1A OUTPUT port. Doing so will destroy the unit.

Do not output this DC12/1A power to the ST-F35TEST's power port. Doing so will destroy the unit.

If the camera requires more than 1A of current the ST-F35TEST will enter protection mode. If this happens you must disconnect all connections to the ST-F35TEST and then connect the unit to the included power supply to resume.

AUDIO INPUT TEST

The ST-F35TEST may be used to test audio input from pickup devices. Connect the unit to the pickup device with the included audio cable.



SPECIFICATIONS

MODEL

ST-F35TEST

Video Test

Signal Mode:	NTSC/PAL (Auto adapt)
Display:	3.5 inch digital TFT-LCD ,960 x 240 resolution
LCD Adjustment:	Brightness, Contrast, Saturation adjustable
Video IN/OUT:	1 channel BNC Input & 1 channel Output
Video Output Mode	1.0 Vp-p

Video Level Test

Level Test	Video signals measured in IRE or mV
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PTZ Controller

Communication:	RS232, RS422 simplex and RS485
PTZ Protocol:	Compatible with more than 20 protocols such as PELCO-D/P, Samsung, Panasonic, Lilin, Yaan, etc.
Baud Rate:	150,300,600,1200,2400,4800,9600,19200bps

Video Signal Generation

Colorbar Generation:	Output one channel PAL/NTSC colorbar video signal for testing monitor or video cable.
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UTP CABLE TEST

UTP Cable Test:	Test UTP cable connection status and display in the screen. Read the number of the test box.
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DC12V 1A Power Output

DC12V Power Output:	Output DC12V1A power for camera
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Audio Input Test

Audio Input Test:	Test the pickup and other audio equipments on the front-end
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RS485 Data Analyst

Data Monitor:	Captures and analyzes the command data from controlling device
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POWER

Power Adapter:	DC5V, 2A
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Battery:	Built-in 3.7V Lithium polymer battery, 3000mAh
Rechargeable:	After charging 3-4 hour, working time lasts 12 hours
Low Consumption:	Energy saving technology

General

Working Temperature:	-22°F to +158°F
Working Humidity:	30%-90%
Dimension/Weight:	7"x 3.7" x 1.4"/ 0.75lb.

SUPPORT

For technical support or assistance contact your SecurityTronix sales engineer at 1-800-688-9282