SecuriTEST™ PRO

Model 33-892

User's Manual Supplement

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Thank you for your purchase of the IDEAL SecuriTEST™ PRO CCTV multi-tester. This manual supplement describes the additional features and functions that are available with the SecuriTEST PRO. Refer to the user's manual for the standard SecruiTEST for a description of the features and functions that are common to both models.
Operation of the video monitor, PTZ controller, protocol analyzer, test pattern generator, wire map tester and digital multimeter are idententical between the SecuriTEST and SecuriTEST PRO.

The additional functions and features of the SecuriTEST PRO model are:

- Video level and Sync level testing
- Audio testing of cameras with built-in microphones
- Change from standard AA batteries to a lithium polymer battery pack.

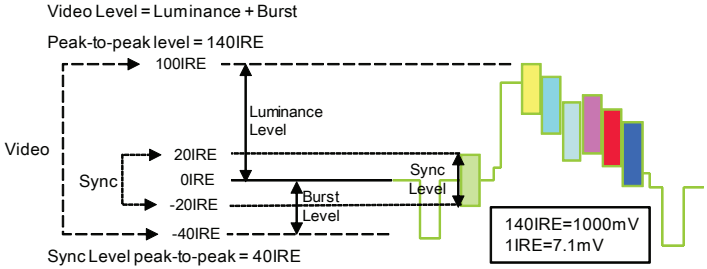
Video, Sync and Audio Level Testing

Press the MODE button repeatedly to change the the Video Tester screen indicated by “VIDEO” in the upper-left corner of the screen.

By default the Video and Sync levels will be displayed in the lower-left portion of the screen. If there is no video signal at the VIDEO IN port of the SecuriTEST PRO no information will be displayed.

Press the IRE button on the keypad to toggle the Video and Sync level off and on. The Audio Level information is always displayed, even if there is no signal input at the Audio IN port.

Depending on the type of camera connected to the tester the Video and Sync level will automatically change between IRE (Institute of Radio Engineers) and mV. NTSC signals that are used in North America are measured in IRE units, PAL signals that are common throughout the rest of the world are measured in mV (milivolts).



Understanding Video and Sync Level

SecuriTEST PRO measures the combined Luminance and Burst levels of a composite video signal as the Video Level. The Sync signal is embedded between the Luminance and Color Burst signals. See the following chart for a description of the levels that are expected.

NTSC	Luminance Level	100 ± 10 IRE
	Color Burst Level	40 ± 5 IRE
	Video Level	**140 ± 15 IRE**
	Sync Level	**40 ± 5 IRE**
PAL	Luminance Level	700 ± 140 mV
	Color Burst Level	300 ± 35 mV
	Video Level	**1000 ± 175 mV**
	Sync Level	**300 ± 35 mV**

Video, Sync and Audio Level Testing

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 with decreased definition .

The Sync Level controls the drawing of each line on the monitor. Sync Levels that are too low will cause the picture to breakup or roll while Sync Levels that are too high will result in a picture with reduced grey colors and dynamic range.

In an installtion with multiple cameras, the video and sync levels should be matched as closely as possible at the head-end to prevent noticible picture quality differences when switching between cameras on a single monitor. Values outside the recommended tolerances can cause the operators to experience eye fatigue.

The Audio Level indicator does not provide actual signal level information about the audio connected to the Audio IN port. Instead the white bar graph indicator will move to indicate the presence of an audio signal. Additionally the audio can be heard through the internal speaker of the SecuriTEST PRO. Pressing the

UP and DOWN arrow keys adjusts the volume of the internal speaker.

Power switch and charging port

Charge LED (green)

The SecuriTEST PRO features an internal lithium polymer rechargable battery pack. The benefits of the lithium polymer battery are that it holds more energy while weighing less than other types of battery technologies such as nickel cadmium (NiCd) or nickel metal hydride (NiMH).

Lithium Polymer vs. Lithium Ion Batteries

There are two primary types of rechargable lithium batteries used in comercial devices. Lithium ion battery cells resemble standard dry cells in that they are packaged in cylindircal metal housings which provide protection against punctures which can cuase lithium batteries to short-circuit and catch on fire. Lithium polymer cells are soft and usually packed inside of a housing for protection. This is the most common type of battery for devices like laptop computers and cell phone because the soft cells can be formed

into a variety of shapes for virtually any application. SecuriTEST PRO uses a polymer battery pack that is housed inside the case of the tester for protection. The back cover of the tester can be removed to access the battery for replacement after its useful life. When replacing the battery take care not to puncture the metal foil or crush the cell. Damaged battery packs should be properly disposed of. Never attempt to charge a damaged battery pack.

Battery Charging

SecuriTEST PRO incorporates a smart charging circuit that prevents overcharging which can reduce the lifetime of the battery pack.

To charge the battery set the main power switch to the ON position and connect the charging supply to the tester. The green CHG LED will indicate the status of the charge.

LED Status	Condition (Main Switch ON)
ON	Battery charge <90%, charging
OFF	Battery charge 90-100%, not charging
Blinking	Batery charge >100%, not charging
LCD Disp.	**Condition**
Low Battery	Battery is low, connect charger to recharge

Lithium batteries do not suffer from the "memory effect" that is common to other battery technologies,

however they do have a limited number of charge cycles (300-500) before they begin to loose capacity. Additionally, all lithium batteries loose about 20% of their capacity per year, even if unused.
Contrary to the procedure with NiCd and NiMH batteries, lithium batteries give the best performance and longevity when they are charged before they are run completely down.