

SECTION 1

OPERATOR INTERFACE



SECURE-TECH.com

DETENTION ELECTRONIC SYSTEMS

ETECH CONTROLS CORPORATION - MANUFACTURER
4051 ALVIS COURT #3, ROCKLIN, CALIFORNIA, USA 95677
TEL (916) 630-1300 • FAX (916) 630-1100 • FREE (800) 800-2523

MODEL TK-ALL

COMPLETE TURN-KEY SECURITY ELECTRONICS PACKAGES

FEATURES:

- MULTIPLE OPERATOR INTERFACE CHOICES
- MULTIPLE ELECTRONIC LOGIC CHOICES
- APPLICATION CONFIGURATION CONSULTATION
- ENGINEERED SYSTEM SUBMITTAL PACKAGE
- FACTORY PROGRAMMING AND CONSTRUCTION
- FACTORY TESTED AND **NEC COMPLIANT**
- SHIPPED READY FOR INSTALLATION
- PRODUCT DOCUMENTS AND FACTORY TRAINING
- ON-SITE POWER-UP AND TESTING SUPERVISION
- 2 YEAR WARRANTY

FUNCTIONAL DESCRIPTION:

The TK-ALL series of integrated turn-key detention controls packages provide all of the core security electronic system features required for your project application needs.

APPLICATION CONSULTATION:

Secure-Tech consulting engineers will work with you, explaining the various security electronic solutions that are available to meet your application needs, and help you to select a configuration that will best fit your current and long-term needs.

You may select from any of the operator interface types that we offer, and utilize a combination of different types of operator interfaces, as best works to meet your project application needs.

Secure-Tech engineers will explain the various types of relay or electronic logic systems that best support the selected operator interface type(s). You may select from discrete modular electronics, Programmable Logic Controllers, and computer logic systems, or a combination of the different types of electronic logic.

The evaluation of other factors, such as the availability of technical personnel with the training required to provide the long-term maintenance support needed on the electronic logic type(s) chosen, and the associated long-term costs, will be explained to assist you in making the most appropriate choices of equipment.



SUBMITTAL DOCUMENTATION:

Secure-Tech's engineering group will prepare a package of submittal documentation, for review and comment, providing an opportunity to modify the pre-established feature requirements prior to construction.

Please note that all products are designed and manufactured to be NEC (National Electrical Code) compliant.

PRODUCT DOCUMENTS / FACTORY TRAINING:

Upon completion of factory construction and testing, complete systems documentation will be provided. At your option, and at additional cost, Secure-Tech will provide factory instruction to your field installation personnel on the recommended methods to be utilized for installation, hook-up, and power-up testing of the products about to be shipped to the project site.

ON-SITE POWER-UP AND TESTING SUPERVISION:

Secure-Tech offers on-site supervision of the power-up and testing process, performed by the installing contractor's personnel, and owner personnel product operation and maintenance training, at additional cost.

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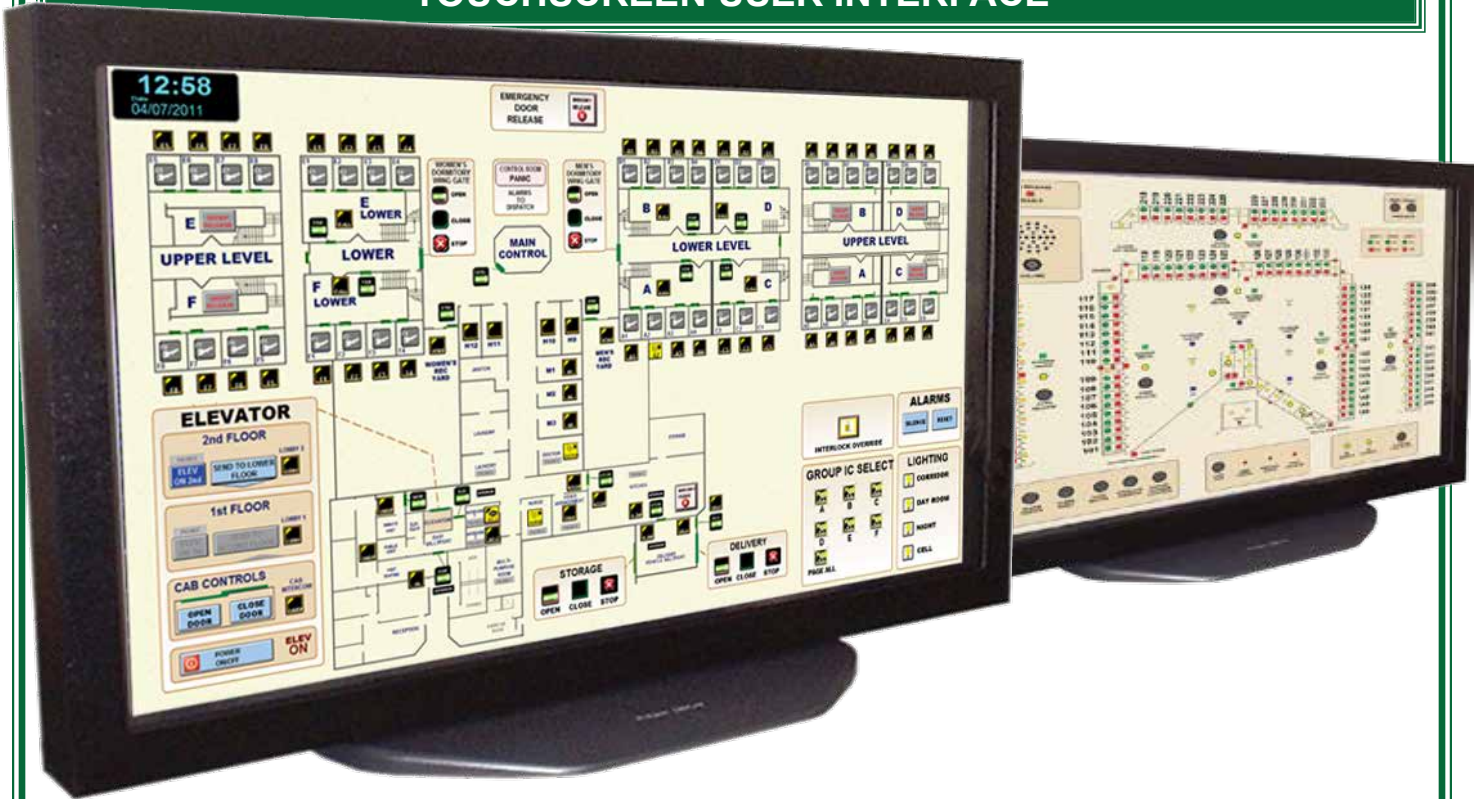
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MODEL GCP-TOUCH

TOUCHSCREEN USER INTERFACE



42 INCH DIAGONAL PLASMA SCREEN SHOWN
(16:9 ASPECT RATIO)
ALL DISPLAYS ARE SIZED AS APPROPRIATE
TO SUIT THE APPLICATION
DISPLAY - 42" SIZE (RECOMMENDED)

INTERCOM DESK MASTER - SEE PAGE 2-11

FEATURES: (AS SPECIFICATIONS)

- QUAD-CORE PROCESSOR
- 4-8 GB RAM
- 500 GB HARD DRIVE
- DVDR DRIVE
- HIGH SPEEDVIDEO/GRAPHICS CONTROLLER
- END USER DEVELOPMENT SOFTWARE
- HIGH SPEED COMMUNICATIONS
- WINDOWS XP PRO OPERATING SYSTEM
- OPTIONAL INMATE DATA BASE MANAGEMENT
- COLOR TOUCHSCREEN MONITOR,
SIZE AS SPECIFIED

FUNCTIONAL DESCRIPTION:

A touchscreen based graphical user interface designed specifically for detention facility applications. This type of management system allows for an unlimited amount of doors, intercoms and other devices to be controlled and monitored from a single station or from multiple shared duty stations.

SYSTEM CONFIGURATION:

Unless specifically otherwise specified, each station utilizes the reliable Microsoft Windows XP PRO operating system in order to provide the flexibility and operating speeds demanded by our customers. Each station consists of a PC with mouse, keyboard and high resolution touchscreen color monitor. Functions may be controlled by using either the touchscreen or the mouse. Multiple stations are interconnected via a high-speed Ethernet network to assure facility wide updating without delays. The system communicates with Secure-Tech HC-0682 System Controllers, Omron or other Programmable Logic Controllers via RS-485.

All touchscreen user interface systems are custom designed to meet the application.

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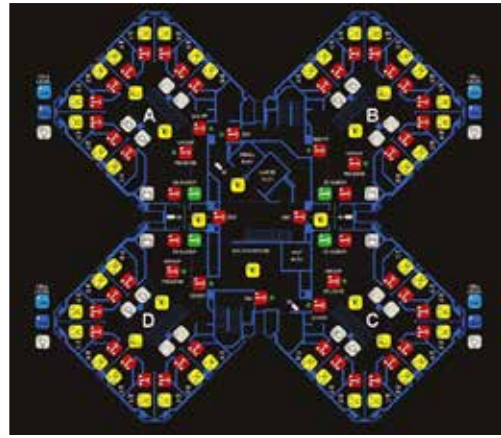
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**MODEL
GCP-MEMBRANE**

MEMBRANE SWITCH PANEL ASSEMBLY

FEATURES:

- HARDCOATED POLYESTER OVERLAY
- LONG LIFE OVERLAY, SWITCHES AND LEDS
- REAR REPLACEABLE SWITCHES AND LEDS
- HIGH RESOLUTION GRAPHICS
- FULLY ASSEMBLED AND TESTED
- 2 YEAR WARRANTY



FUNCTIONAL DESCRIPTION:

The membrane switch panel interfaces the operator with separate control electronics equipment, providing both LED status indication and audible switch activation feedback upon operation. A switch activation "blip" tone signal is provided either by an HC-0701 Remote Panel Controller or via separate remote logic operation.

LAMINATED CONSTRUCTION:

A hardcoated polyester working surface, aggressive intermediate adhesive layer, intermediate vinyl, low tack "Post-It" type adhesive layer, and an aluminum baseplate material are carefully laminated together to produce a control panel that provides the best combination of flexibility, durability, scratch resistance, and textured non-glare features.

The low tack adhesive layer allows the plastic overlay to be removed and replaced with a new overlay years later if desired to update the graphics. The laminated plastic overlay material has been tested to well over 5 million underlying switch activations with no perceivable material degradation.

The laminated plastic overlay is typically 18 mil thickness and the aluminum baseplate is 3/16" thickness. A continuous plastic edge trim finishes the assembly and prevents de-lamination at the panel edges.

HIGH RESOLUTION GRAPHICS:

High resolution graphics are provided, in up to 16.7 million photo-realistic colors, and are protected inside the plastic overlay laminations.

SWITCHES / LEDS:

Membrane panel switches are models HC-0841 (single) and HC-0842 (dual), with an operational life of one million actuations minimum. LEDs are T-1 size high intensity, and provide an 11 year average (MTB) life. All switch and LED connections are quick disconnect for ease of maintenance service.

WIRING:

Hardwired panels are connected with custom stranded 25 pair cables and telephone type quick disconnect plugs. Audio signals are connected via twisted / shielded pair cables. Miniature plastic wiring ducts and cable strain-reliefs are provided to securely retain the wiring while providing complete accessibility for ease of maintenance service.

Panels can also be provided with HC-0701 Control Panel Communicator(s) for RS-485 communication with Programmable Logic Controllers and / or computers. Four HC-0731 16 Point Adapters, or two 25 pair telephone type cables, are required to connect from an HC-0701 to 128 switches and 128 LEDs. A single twisted / shielded data pair cable connection provides for full communication. The modules are mounted on the backside of the panel when space allows, or on a separate backpanel that must be mounted directly under the facepanel.

OPTIONS:

1. HC-0701 Remote Panel Controller(s) for PLCs
2. HC-0806 LED supervision (hardwired panel only)
3. Other features as required

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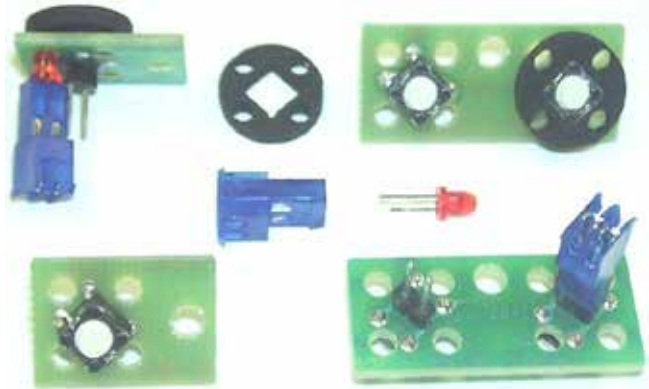
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**MODEL
HC-0841 &
HC-0842**

SINGLE AND DUAL MEMBRANE SWITCH PACKAGES

FEATURES:

- RAPID CUSTOM PANEL DEVELOPMENT
- 1 MILLION ACTUATION LIFE SWITCHES (MIN)
- FOR HIGH DENSITY LONG LIFE APPLICATIONS
- ACCEPTS UP TO 4 LEDS PER SWITCH
- 1 LED(S) LIGHT ALIGNMENT DISK PER SWITCH
- REAR MOUNTED FOR EASY REPLACEMENT
- ALL PLUG CONNECTION (NIC)
- 2 YEAR WARRANTY
- REPLACE FROM THE BACK OF PANEL



FUNCTIONAL DESCRIPTION:

These membrane switch ASSEMBLIES provide an effective and highly reliable means, to allow the easy and efficient production of custom membrane style control panels, with a very high density of switch and indication functions.

These switch ASSEMBLIES are designed to screw (4-40UNC x 1/4") attach to the backside of a 3/16" thick subplate for ease of panel wiring and maintenance service, AVOIDING the painstaking maintenance removal of the membrane panel faceplate overlay material, in order to access underlying components that are mounted to the face side of the subplate, as required in the construction methods utilized by some other manufacturers.

Each switch location is provides four holes LED mounting locations, designed for interference-fit installation of tapered T-1 size LEDs. The four separate LED mounting holes allow the switch packages to be rotated at four different 90° angles, to facilitate close location to adjacent switch ASSEMBLIES, while maintaining the LED locations in relationship to the switche, i.e. top left, etc.. Four LEDs can be mounted to indicate multiple functionality associated with each switch.

A formed LED projection disk is provided with each switch assembly. The disk slip-fits around the switch and up to four LEDs projecting each LED's illumination precisely through the membrane panel overlay material. "Bleeding" is restricting from other LED locations, providing a crisp pattern.

A 0.563" diameter hole must be provided in your 3/16" thick panel (normally aluminum) subplate, centered on each switch location. It is recommended that the hole be chamfered at a shallow (10° to 30°) angle from the face surface to remove any sharp edge that the membrane overlay material will flex against during switch operation. This should prevent any long-term use cracking of the overlay material at the flex points. Also provide one 4-40UNC threaded hole per HC-0841 or HC-0842 membrane switch assembly for attachment.

Membrane switch spacing is 0.75" (19.05mm) center to center. Do not space membrane switch packages at any smaller dimension.

SWITCH RATINGS:

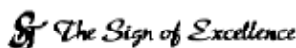
Maximum load	50 ma @ 24 vdc (resistive)
Minimum load	1 ma @ 5 vdc (resistive)
Contact resistance	100 milliohm max
Service life (minimum)	1 x 10 ⁶ mechanical / electrical

SIZE:

HC-0841	0.56" W x 0.81" L x 0.56" D 14.28mm W x 20.64mm L x 14.28mm D
HC-0842	0.56" W x 1.31" L x 0.56" D 14.28mm W x 33.34mm L x 14.28mm D

MODELS:

HC-0841	Single Membrane Switch Package
HC-0842	Dual Membrane Switch Package





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MODEL OVERLAY

GRAPHIC PANEL OVERLAY

FEATURES:

- HARDCOATED POLYESTER OVERLAY
- HIGH RESOLUTION GRAPHICS
- UP TO 16.7 MILLION COLORS
- EXTREMELY DURABLE MATERIAL
- TEXTURED NON-GLARE FINISH
- NON-TEXTURED WINDOWS AVAILABLE
- CLEAR WINDOWS AVAILABLE
- AGGRESSIVE OR LOW TACK TYPE ADHESIVE
- 2 YEAR WARRANTY



FUNCTIONAL DESCRIPTION:

The Graphic Panel Overlay provides a working surface for your control panels that protects both the high resolution graphics that are contained inside the multi-layer laminate and the underlying control panel baseplate material. The surface is resistant to many chemicals and oils, and may be washed with mild household cleaners.

LAMINATED CONSTRUCTION:

The outside working surface is a 6 mil thick hardcoated polyester sheet material with a velvet non-glare texture on the front side. High resolution graphics are ink printed on the backside of this material. An aggressive 5 mil thick adhesive layer attaches the working surface material to a 4 mil thick substrate layer of polyester. The substrate material provides a translucent white color to the overlay. The white backing color also brightens the ink colors, making them quite vivid.

This three part laminated assembly can be provided with a final backside laminate of aggressive adhesive, with a protective paper release layer, to allow you to permanently attach the overlay product to a baseplate or other surface.

An alternative low tack type adhesive layer can be provided that will allow you to repeatedly attach and remove the overlay material for access to underlying components or to replace the overlay with a new one that presents different high resolution graphics.

HIGH RESOLUTION GRAPHICS:

Secure-Tech has selected special UV resistant graphic inks and developed a process of application to provide our customers with ability to present photo-realistic graphics, in up to 16.7 million colors, and with very high resolution. It doesn't get any better than that!

POLYESTER PROPERTIES:

Hardcoated polyester has an exceptional life expectancy; resistance to scratches; resistance to solvents, chemicals and household cleaning agents; and is used almost exclusively in overlays for membrane switch panels because of its' superior flexibility characteristics. The polyester material we utilize has been tested to greater than 5 million underlying switch actuations with no adverse effect.

OPTIONS:

1. Polycarbonate, or other compatible thermoplastic materials, can be provided for your special applications. Alternate thermoplastic materials are available to obtain increased non-glare textures, resistance to ultraviolet light, etc. The use of alternate materials may also reduce our ability to provide you with photo-realistic graphics and vivid colors. Please consult with our material specialists to obtain the best combination of materials for your special application requirements.
2. Clear LED or LCD display windows and / or areas without the non-glare texturing are available, only with the polyester material laminated product.

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**CONTROL
PANEL PARTS**

PUSHBUTTONS - LEDS

TAMPER RESISTANT STAINLESS STEEL PUSHBUTTON:

STLC-TPB-037 Marine grade stainless steel, low profile, panel displacement .875" diameter. Mounting hole .75" diameter. Contact rating 1A @ 50 volt, screw terminals, front panel sealed to Specification IP68, SPST, available with imbedded 2VDC LEDs. - if replacing AML21 or ALM 22, use round bezel to cover the four corners of a .75" square hole.

- STLC-TPB-037 STAINLESS STEEL, FLUSH (REPLACES STLC-TPB-031)
- STLC-TPB-037-R DOT RED LED STLC-TPB-037-Y DOT YELLOW LED
- STLC-TPB-037-G DOT GREEN LED STLC-TPB-037-B DOT BLUE LED
- STLC-TPB-037-RR RING RED LED STLC-TPB-037-RY RING YELLOW LED
- STLC-TPB-037-RG RING GREEN LED STLC-TPB-037-RB RING BLUE LED



LOW VOLTAGE PUSHBUTTON:

EAO 19 Series, panel displacement, .354" diameter or square. Mounting hole .314" diameter. Contact rating 2A @ 50 volt, blade terminals, SPST, with or without LEDs. Front panel protection to Specification IP40, SPST, front mounting, front replaceable LEDs. Colors are determined by lenses and LEDs (ordered separately). Mechanical lifetime 2 million operations, 1 NO contact. Continuous current DC contact rating @72V 1A silver contacts.
19-159.015 Square Momentary 19-289.015 Square Maintained
19-139.015 Round Momentary 19-279.015 Round Maintain



AML LOW VOLTAGE PUSH BUTTON:

LED:

Only Industry generic standard LEDs are used.

LOW VOLTAGE PUSHBUTTON: Recommended for replacement only. Pushbutton Not Pictured

AML 21/22 Series, panel displacement .8" square. Mounting hole .75" square. Contacts 2A @ 50 volt, quick connect blade terminals, 1, 2 and 4 "C" contacts. Front mounting, LED in AML22 is not replaceable, requires switch replacement. Mechanical lifetime 25,000 operations. Continuous current DC contact not rated at 12VDC, silver contacts. Also available in two and three position "rocker" switches.

PANEL INTERCOM DESK CONTROL STATION :

(see Section 2 for Touch Screen operation - typical)

Models match the volume control requirements of various brands/models of amplifiers.

When using a Secure-Tech desk top turret with the HC-0826 amplifier use turret CT105.

CT105 TURRET, 45 OHM SPKR, 500 OHM 2 Watts volume pot, knob

CT106 TURRET, 8 OHM SPKR, 500 OHM 2 Watts volume pot, knob

SECURE-TECH ENGINEERED - DESIGN - MEMBRANE PUSHBUTTON SWITCHES:
(see PAGE 1-4 this Section 1)
Rear replaceable, unnecessary to remove (roll back) faceplate to gain access to pushbutton.

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