HOW TO SET CODE

Your TELSAR is field programmable. That means you can change codes quickly and easily, without having to disconnect the unit and take it into the shop. All you need is a screwdriver to unlatch TELSAR housing from backplate.

The TELSAR code is determined by the order in which the color-coded jumper pins are plugged into the first four connector holes (labeled "A" through "D") in the unit's PC board (see photo). There are nine of these color coded jumper pins, one for each pushbutton number on the TELSAR keyboard. The color codes and corresponding keyboard numbers are as follows:

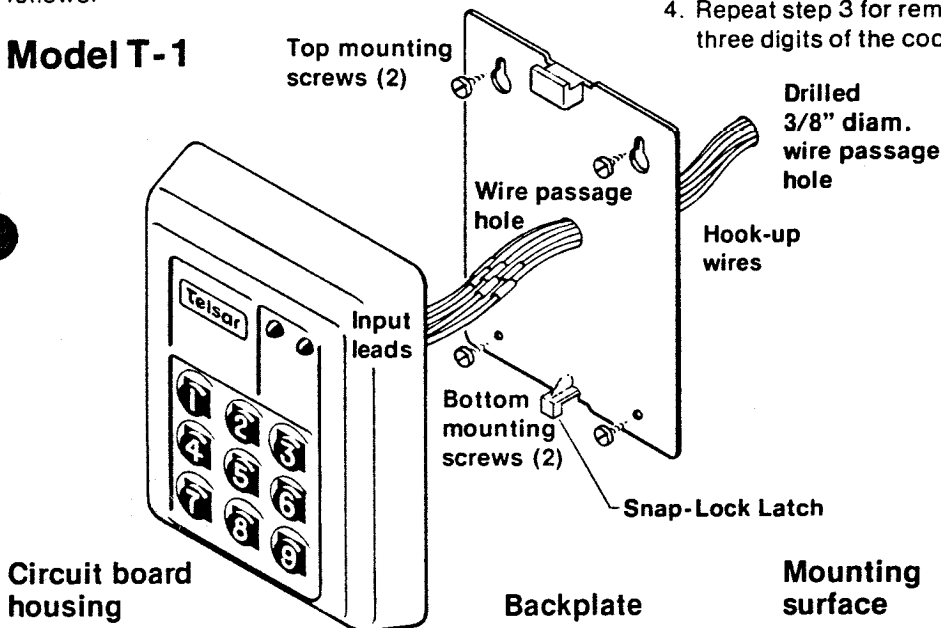| Brown | 1 |
Red	2
Orange	3
Yellow	4
Green	5
Blue	6
Violet	7
Gray	8
White	9

To set the code:

1. Select a four-digit code combination. This can be any sequence of four **different** digits. You **cannot repeat digits** because there is only one jumper pin for each of the nine push buttons on the keyboard. (**Example:** The code 4628 can be used, but not the code 4642 because the number 4 is repeated.)
2. Unplug the nine color-coded jumper pins from the PC board by grasping each pin individually and pulling its end directly out of the connector hole (see drawing).
3. Take color-coded pin corresponding to the first digit in your code and plug it into the PC board connector hole labeled "A".
4. Repeat step 3 for remaining three digits of the code—

inserting pin for second digit of code into connector hole "B," third-digit pin into hole "C," and fourth-digit pin into hole "D." (**Example:** For the code 4628, yellow jumper pin would go to hole "A," blue pin to hole "B," red pin to hole "C," and gray pin to hole "D.")

5. Plug remaining five jumper pins into remaining five (unlabeled) connector holes. The pins can go in any order, as long as all jumper pins are plugged into connector holes. Otherwise, your TELSAR will not operate.

To change the code: Simply remove TELSAR from its mounting backplate and repeat the above procedure, using a different sequence of jumper pins in the first four connector holes ("A" through "D").

Model T-1

Top mounting screws (2)

Drilled 3/8" diam. wire passage hole

Wire passage hole

Hook-up wires

Input leads

Bottom mounting screws (2)

Snap-Lock Latch

Circuit board housing

Backplate

Mounting surface

EASY INSTALLATION

TELSAR is extremely easy to install. All wiring connections are color coded, and you can use the backplate as a handy mounting template. Here's all you do:

1. Insert screwdriver blade into slot at bottom of housing to unlatch housing from backplate.
2. Using backplate as template, mark locations of mounting screws and wire-passage hole on mounting surface. (**Note:** For concrete or other hard-to-drill mounting surfaces, TELSAR can be mounted by adhesive, such as fast-cure epoxy, contact cement, or double-faced tape, rather than screws. It

will be necessary, however, to notch the TELSAR housing to allow for wire passage. See drawing for "Hard-Surface Mounting.")
3. Drill 3/8 in. diameter hole in mounting surface for wire passthrough. Drill holes for four mounting screws. Size of these holes will depend on type of mounting hardware used (wood or metal screws, toggle bolts, etc.), and this will depend on the type of mounting surface.
4. Snake hook-up wires from alarm system or door strike to TELSAR mounting location and pull through

wire-passage hole. Continue wires through hole in TELSAR backplate, sliding backplate up wires to mounting surface and aligning with screw holes.
5. Mount backplate by inserting screws into upper and lower mounting holes and tightening securely.
6. Connect TELSAR input lead wires as follows:
- Red to positive 6 to 15 VDC power source (panel power OK).
- Black to negative or DC common.
- White with red stripe (two wires) to panic/tamper circuit (normally open).
- Green to green LED (positive)

- Blue to green LED (negative)
- Orange to red LED (negative)
- Brown to red LED (positive)
- White to relay common
- Yellow to N.O. relay contacts
- Violet to N.C. relay contacts

(**Note:** You do not have to connect all eleven input leads. For example, you may only need to use one of the relay contacts, or you may not wish to use both LEDs.)

7. Set TELSAR code as instructed. (Remember, code can be changed any time after mounting simply by removing unit from mounted backplate and rearranging plug-in order of jumper pins. There's no need to disconnect input wiring.)
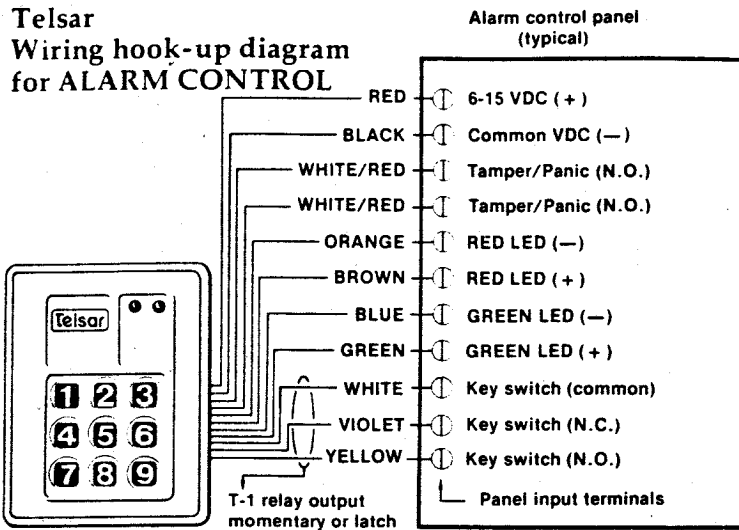
8. Carefully push input wires back into mounting surface. Fit housing to top latch and insert screwdriver blade in bottom slot and press until your TELSAR housing snaps onto mounted backplate.

9. Check to insure housing is secured to backplate by snap-lock latch.

LED Wiring

TELSAR comes with two independently wired light emitting diodes (one red, one green). Use these LEDs to indicate loop/alarm status, door position (open/closed), etc. LEDs have current-limiting resistors and operate 6 to 15 VDC (observe polarity). If the alarm panel you use already has current limit resistors, TELSAR's LEDs may not be bright enough. You can short out TELSAR's LED resistors by adding a small amount of solder across LED resistor bridge (see photo). This will increase brightness of TELSAR's LEDs.
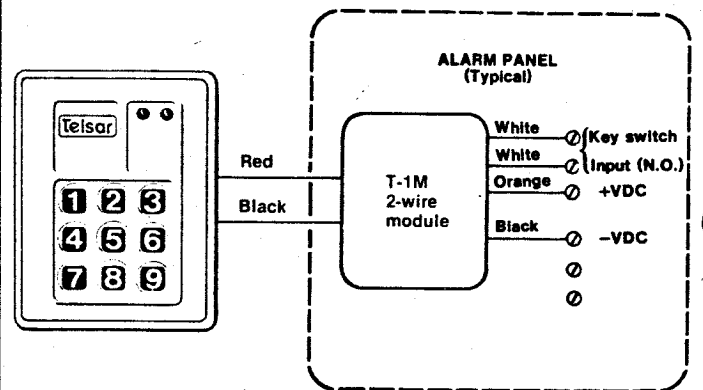
Typical Hookups

Telsar
Wiring hook-up diagram for ALARM CONTROL

	Alarm control panel (typical)
RED	6-15 VDC (+)
BLACK	Common VDC (—)
WHITE/RED	Tamper/Panic (N.O.)
WHITE/RED	Tamper/Panic (N.O.)
ORANGE	RED LED (—)
BROWN	RED LED (+)
BLUE	GREEN LED (—)
GREEN	GREEN LED (+)
WHITE	Key switch (common)
VIOLET	Key switch (N.C.)
YELLOW	Key switch (N.O.)

T-1 relay output momentary or latch
Panel input terminals

Wiring hook-up diagram for ACCESS CONTROL

12 VDC at 350 mA plug in transformer or supply

Red
Black
White
Blue
Orange
Brown
Violet
Green
Yellow

Red LED "on" door locked
Green LED "on" door unlatched (strike operate)

Electric strike

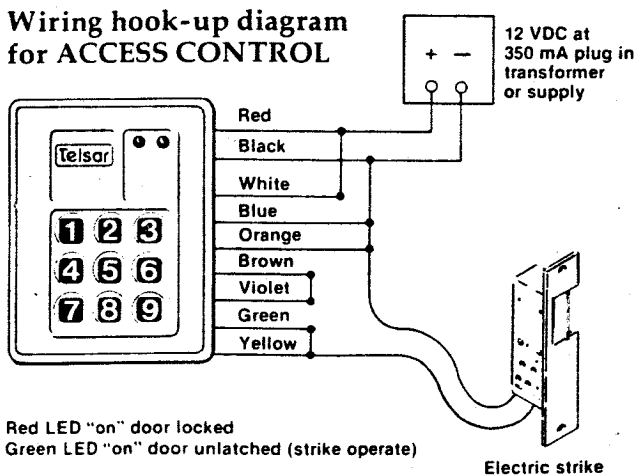## T-1M 2-Wire Module

- Converts Telsar to 2 wire operation
- Each module will operate up to 10 Telsar key pads
- For momentary and shunt operation

	ALARM PANEL (Typical)	
Red		White — Key switch
Black	T-1M 2-wire module	White — Input (N.O.)
		Orange — +VDC
		Black — —VDC

TELSAR T-1M allows installation with only 2 conductor wire. T-1M will operate up to 10 TELSAR key pads for momentary operation or 1 key pad for shunt operation. T-1M installs at alarm panel and uses panel power for operation. LED's can be internally wired for indication or additional conductors may be provided for actual alarm panel arm/loop status. T-1M is easy to install, simply connect module to alarm panel and route 2 conductor wiring to TELSAR key pad. To install additional key pads, simply connect 2 conductor wires in parallel at module and route to TELSAR key pads.

Specifications

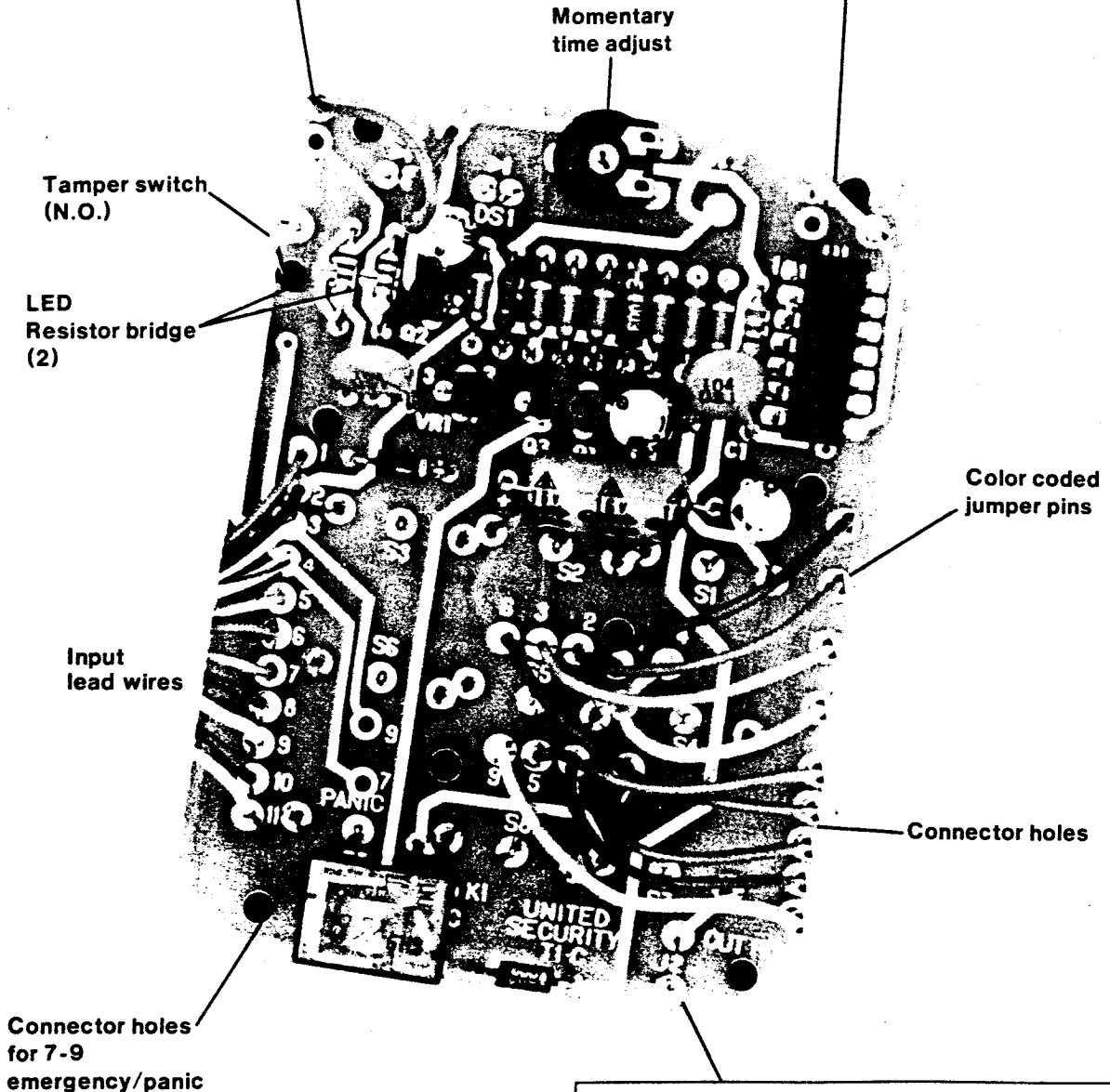|			
Input voltage: (program)	4.5 to 18 VDC (panel power OK).	Code Combinations:	5024 possible combinations (four-digit, non-repeating).
Power consumption:	Less than 5 mA (continuous) at 12 VDC.	Code change:	Field programmable via jumper pins.
Output contacts:	Form "C" (SPDT) rated at 1 A.	Temperature limits:	— 18°C to 55°C (0°F to 131°F).
Indicators:	Two independently wired LEDs (one red, one green) 6-15 VDC.	Construction:	High-impact ABS (beige color), solid-state electronics.
Panic/Tamper switch: (program 7-9 panic)	Normally open	Dimensions:	3-1/2 in. wide, 4-1/2 in. high, 15/16 in. deep.
Keyboard:	Nine, tactile-feel, snap-action push buttons.	Mounting:	Surface or flush.
		Weight:	Approx. 5 ounces.

INPUT VOLTAGE

6V

12V
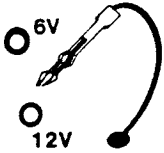
T-1 comes factory set for 12 VDC operation. For 6 volt operation insert connector pin from 12V to 6V hole position on P.C. Board.
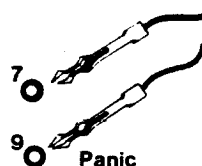
MOMENTARY OR LATCH MODE OUTPUT
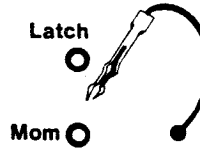
T-1 comes factory set for momentary operation. For Latch mode operation, insert connector pin from Mom. To Latch hole position on P.C. Board.

Latch

Mom

Note: When in Latch mode press code to "Latch On" - press code to "Latch Off"

Momentary
time adjust

Tamper switch
(N.O.)

LED
Resistor bridge
(2)

Input
lead wires

Color coded
jumper pins

Connector holes

Connector holes
for 7-9
emergency/panic

7-9 EMERGENCY/PANIC KEYS

7

9 Panic

To program 7 & 9 keys for emergency/panic operation, cut J-2 Jumper, and insert 7 (violet) and 9 (white) jumper pins from code strip locations to 7-9 panic hole positions on P.C. Board.**

Emergency/Panic is N.O. and requires simultaneous operation of 7 & 9 keys

J-2

Cut

**(T-2 Panic keys are 3 & 9)