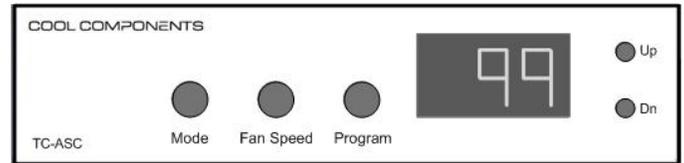


GENERAL OVERVIEW

This is an extremely advanced controller featuring, Temperature Display with On-screen Programming, Fahrenheit or Celsius Display, Auto & Manual Modes, Low Voltage Trigger, Automated On & Off and Variable Speed based on Temperature, Auto or Manually Set Fan Speeds, Alarm with Contact Closures, both NC and NO, and an audible alarm that can also be disabled. It is fully programmable, easy to install and configure, and is extremely reliable.



NOTE: This is exclusively a low voltage (12 V DC), controller so for high voltage or ventilation systems, use the Advanced Ventilation Controller. Even for low voltage ventilation applications, the TC-AVC would be more appropriate.

Standard Application: For the most common applications, one or more low voltage fan units would be connected to the controller. This unit will work with all 12V DC fan systems. Typically the unit will be set to auto and use default settings for on, high speed, and alarm set points (On - 85°F, High - 105°, Alarm - 115°). With this in mind, the unit takes just a few minutes to install and configure. Appropriate uses would be to control fan units that directly cool equipment or for venting racks or cabinetry. For control of multiple fan systems, consider using the TC-ASC-2 which features 2 controllers, is rack mountable, and has additional DC power outputs to reduce the number of transformers in more complex systems.

Advanced Features: The trigger and alarm features are the most advanced features with this unit. Rarely would we recommend using the trigger feature to turn the fans on as temperature, thus Auto mode, is the most effective and efficient way to turn fans on and off. The alarm contact closures provide the ability to connect the controller to a whole house controller and provide notification of a potential problem. Depending on the control system, commands could then be sent to volume down or power off the system and by having both NC and NO options, it is compatible with most automation systems utilizing contact closures.

LOCATING THE UNIT

The unit can be located most anywhere within a system. Placement considerations include the 3' long temperature sensor as well as easy access to read the display and adjust the programming. Since the unit is very compact, it can be placed on top of a receiver or amplifier, just do not block ventilation.

CONNECTING THE UNIT

Note: Connecting the unit is very easy and straightforward but note that some features will not be used, thus some terminals will not be utilized and nothing further needs to be done with them.

Sensor MUST be connected before powering the unit on or the alarm will sound and the unit will not function.

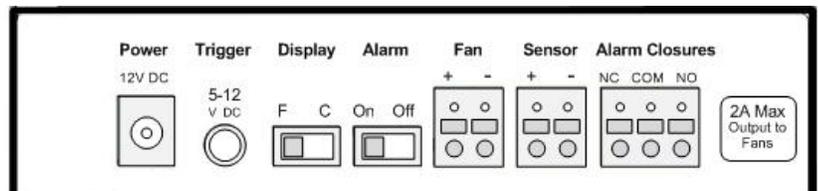
Power: The power jack is a 2.1mm coax jack and the unit requires 12V DC, up to 2A.

Trigger: This jack is a 3.5 mono jack and accepts low voltage connections to equipment to turn fans on and off based on the trigger.

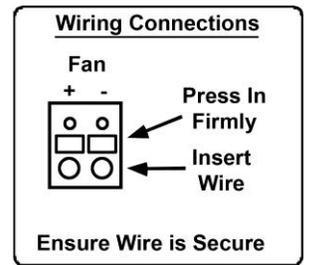
We however recommend using Auto which turns fans on and off based on temperature. Using triggers is for advanced users only!

Display: This is for selecting between Fahrenheit and Celsius to be displayed. You MUST power the unit off and than back on for the setting to take affect.

Alarm: This is to disable the audible alarm only. This would normally only be used if connecting a contact closure having a separate means of monitoring alarm situations. With the alarm properly set, it should be a very effective means of notification and to prevent system failures. **NOTE: When the alarm activated, the triggers will 'de-activate' when the temp drops below the alarm set point, HOWEVER, the audible alarm will continue to sound until it is disabled by pressing the up or down button.**



Fan: This is the connectors for the fan/s. For Cool Components products, use the supplied fan cable and connect the wire with the white stripe to positive (+). For other fan units, ensure connection is correct as not all fans are polarity protected and damage may occur to the fan (All CCI fans are protected, fans from other manufacturers may not be).

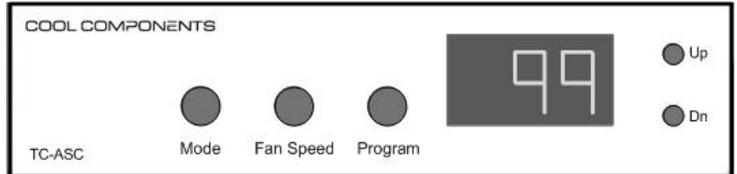


Sensor: While there is a positive and negative indicated, this connection is not polarity sensitive. The sensor **MUST** be connected prior to powering the unit on. Damage will not occur, it simply will sound an alarm and not function.

Alarm Closures: Only for advanced users. The unit activates contact closures on alarm. Both Normally Open (NO) and Normally Closed (NC) closures can be used. Simply connect the common wire to the center connector, and the other wire to the NC or NO connector as desired. Closures restore 'normal' position when temperature drops 2° below alarm setpoint.

PROGRAMMING THE UNIT

Normal Settings: It is recommended to use the following settings for most applications: **Mode - Auto, Fan Speed - Auto, Default Programming: On - 85°F, High - 105°, Alarm - 115°.**



Mode: This is to determine if the unit will function automatically based on temperature or turn on and off based on the low voltage trigger. To change the setting, simply press the button until the desired setting is displayed. The image to the right translates each setting with what is displayed on the screen to the right.

Fan Speed: When the fans turn on, their fan speed can be controlled automatically which means that as the temperature increases, the fan speed will also increase. Three other speeds can be selected which means the fans will run at a constant speed, low, medium, or high, depending on the setting selected.

Programming: Programming is usually a dreaded task but with this unit it is very easy. Press the program button once to enter programming mode. The first mode displayed is the Fan On setting as displayed by SP.O, meaning, Set Point On. Wait approximately 1 second and then the set point is displayed and flashing. Using the Up or Down buttons, change to the desired setting. If the display stops flashing, the unit has timed out, simply repeat the steps but work more quickly! ☺ Note that when installing components in cabinets, a low setpoint will lead to fans potentially never turning off. For most cabinet applications, we recommend a setpoint of 86-90°F.

The next setting is the temperature where the fans will run at full speed. What this is providing for is the range in which the fans will increase in speed. The display will read SP.H, meaning Set Point High. In applications where fans need to remain silent, use a higher setting so the fans run slower and increase more gradually. A normal 'high range' would be 100° to 110°F but for aggressive cooling, 90° to 95°F.

The final setting is for the alarm. When reach setting SP.A, Set Point Alarm, select a reasonable set point considering that the alarm is very loud and should only come on in extreme circumstances. Alarm should be set no less than 110°F with a normal setpoint 115°+. If using contact closures for notification, you may disable the audible alarm. To do this, on the back of the unit, simply move the Alarm switch to the Off position. **As per previous note, the only way to disable the audible alarm once triggered is to press the Up or Down buttons. This is to ensure that it is known that the system had entered into an alarm situation.**

DISPLAY CHARACTERS	
<u>Mode</u>	
AUTO	AUF
TRIGGER	TAG
OFF	OFF
<u>Fan Speed</u>	
AUTO	FSA
LOW	FS.1
MEDIUM	FS.2
HIGH	FS.3
<u>Programming (Set Points)</u>	
ON TEMP	SP.O
FULL SPEED	SP.H
ALARM	SP.A

Unit Not Working? Do not Return Damaged or Defective Products to Point of Purchase. If the unit arrived non-functional or damaged, we will resolve the issue quickly and hassle-free. Proof of Purchase may be required. Contact us on the web at; www.coolcomponents.com/warranty

Warranty Information This unit is guaranteed to be free of defects for a period of one year from the date of purchase. This warranty excludes damage caused by misuse or for applications other than the intended use of the products