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Part Number: LM01970

TP04300 Series ThermoStream[®]



Operator's Manual

Revision C.
January 2005

TP04300A

ThermoStream®

Operator

"BASIC" Access Level

60 Hz	50 Hz
SA144984	SA144985
SA152904	SA152905
SA152906	SA152907

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Manual Number: LM01970

Contents

Certificates of Conformity 5

Section 1 - Safety Precautions 8

- 1-1 English 8
 - 1-1.1 Warnings (Safety Precautions) 8
 - 1-1.2 Cautions (Safety Precautions) 9
- 1-2 Français 10
 - 1-2.1 Avertissements (Mesures de sécurité) 10
 - 1-2.2 Mises en garde (Mesures de sécurité) 11
- 1-3 Deutsch 12
 - 1-3.1 Warnungen (Sicherheitsvorkehrungen) 12
 - 1-3.2 Vorsichtsmaßregeln (Sicherheitsvorkehrungen) 13
- 1-4 Español 14
 - 1-4.1 Advertencias (Precauciones de seguridad) 14
 - 1-4.2 Precauciones (Precauciones de seguridad) 15
- 1-5 Swedish 16
 - 1-5.1 SÄKERHETSFÖRESKRIFTER OCH VARNINGAR 16
 - 1-5.2 Försiktighet och Varsamhet 17

Section 2 - Scope of Basic Manual 19

- 2-1 Front Panel (Local) Operation 19
- 2-2 "Basic" Access Level Functions 19

Section 3 - Startup & Shutdown 20

Section 4 - Jumbo Temperature Screens 21

Section 5 - Run To / Cycle: Hot, Ambient, Cold 22

Section 6 - Test Setups: Load 24

Section 7 - Cycle Screen 26

- 7-1 Fields, Buttons (Cycle Screen) 27
- 7-2 Commands (Cycle Screen) 28

Section 8 - Run To Selected Segment Only 29

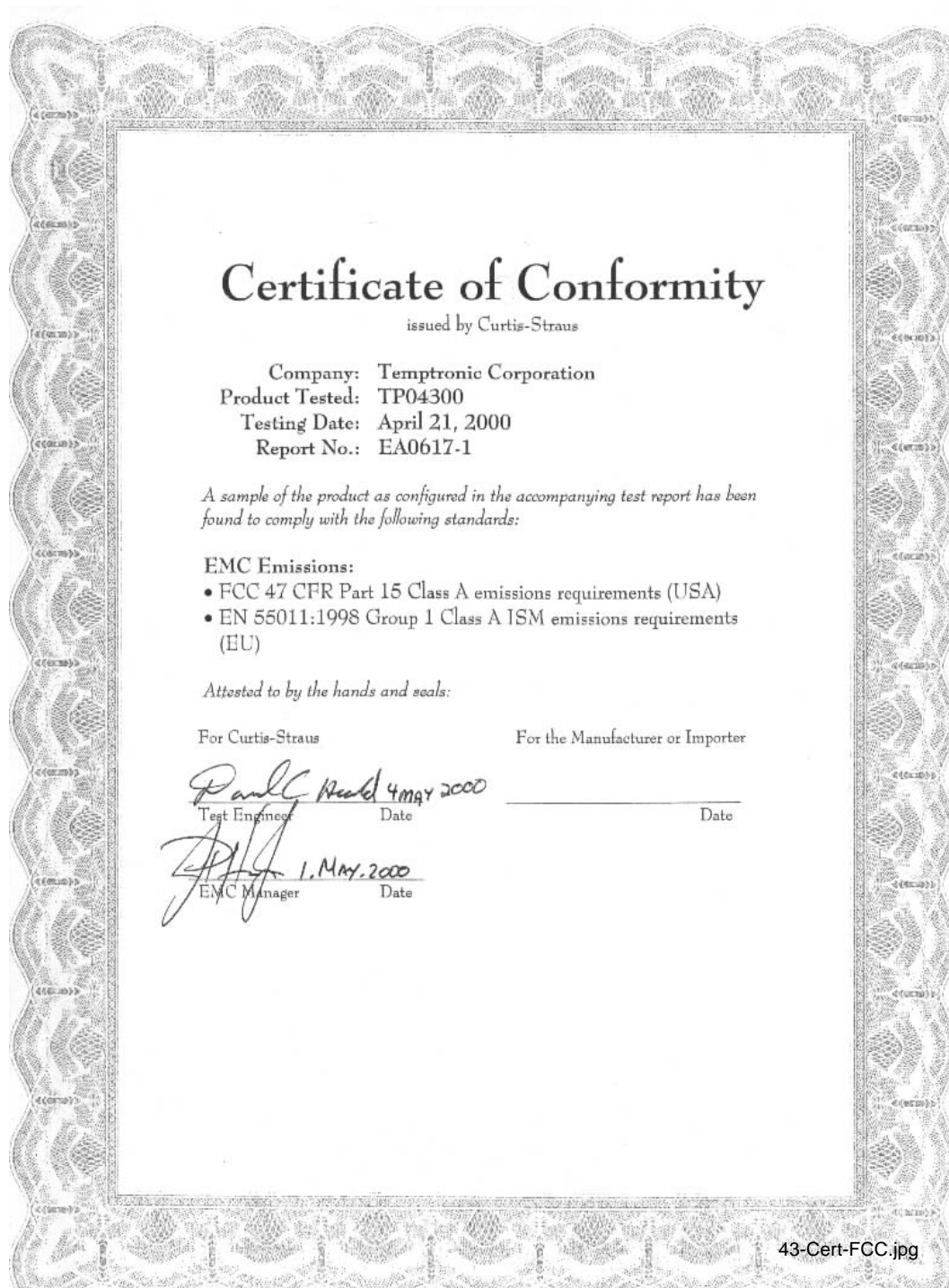
Section 9 - Cycle To Multi-Setpoints 29

Warranty, Registration, Performance Report, User Comments

Document Control

Revision	Pages Changed
Rev. B 06/25/2002	<ol style="list-style-type: none"> 1. Section 1, SAFETY PRECAUTIONS: --added FRENCH, GERMAN, SPANISH, SWEDISH 2. Table 2-1, Basic Functions: added "Run to / Cycle: Hot, Ambient, Cold" 3. Section 5, retitled to "RUN TO / CYCLE: HOT, AMBIENT, COLD:" --Figure 5-1, OPERATOR SCREEN: inserted new Operator Screen --Table 5-1, Operator Screen, COMMANDS, updated --Table 5-2, Operator Screen, SETTINGS, updated 4. Section 7, CYCLE SCREEN, updated: --Figure 7-1, Cycle SCREEN: added "Go to Basic;" and re-lettered the callouts to read left-to-right --Table 7-1, Cycle Screen FIELDS: added "Go to Basic" --Table 7-2, Cycle Screen COMMANDS: added "Go to Basic" 5. Table 9-1, Cycle Multi-Setpoints, updated cross-references: --"run to single setpoint ...or, cycle Hot, Ambient, Cold" 6. Added BACKMATTER: --Warranty, Registration, Performance Report, User Comments
Rev. C 01/19/2005	<ol style="list-style-type: none"> 1. Section 3, Startup & Shutdown - New On/Off switch - CB2 obsoleted. CB1 is now the only rear panel breaker. 2. Section 5, Run To/Cycle: Hot, Ambient, Cold - new operator's screen and descriptions. 3. New Front Cover - includes manual part number and revision.

Certificates of Conformity



Certificate of Conformity
issued by Curtis-Straus



Company: Temptronic Corporation
Product Tested: TP04300
Testing Date: April 21, 2000
Report No.: EA0617-1

A sample of the product as configured in the accompanying test report has been found to comply with the following standards:

EMC Emissions:

- FCC 47 CFR Part 15 Class A emissions requirements (USA)
- EN 55011:1998 Group 1 Class A ISM emissions requirements (EU)

Attested to by the hands and seals:

For Curtis-Straus	For the Manufacturer or Importer
 Test Engineer	_____
Date	Date
 EMC Manager	_____
Date	

43-Cert-FCC.jpg

Certificate of Conformity: EMC Emissions (TP04300): USA & EU



Certificate of Conformity
issued by Curtis-Straus

Company: Temptronic Corporation
Product Tested: ThermoStream System
Model No: TP04300A
Serial No: Not Labeled

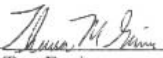
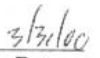
A sample of the product has been found to comply with the following Low Voltage Directive standard.

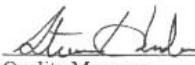
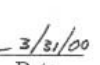
EN 61010-1 : 1993 " Safety requirements for electrical equipment for measurement, control and laboratory use", incorporating Amendments Nos. 1 & 2

Furthermore, the manufacturer may declare that the product is in conformity with the above standard.

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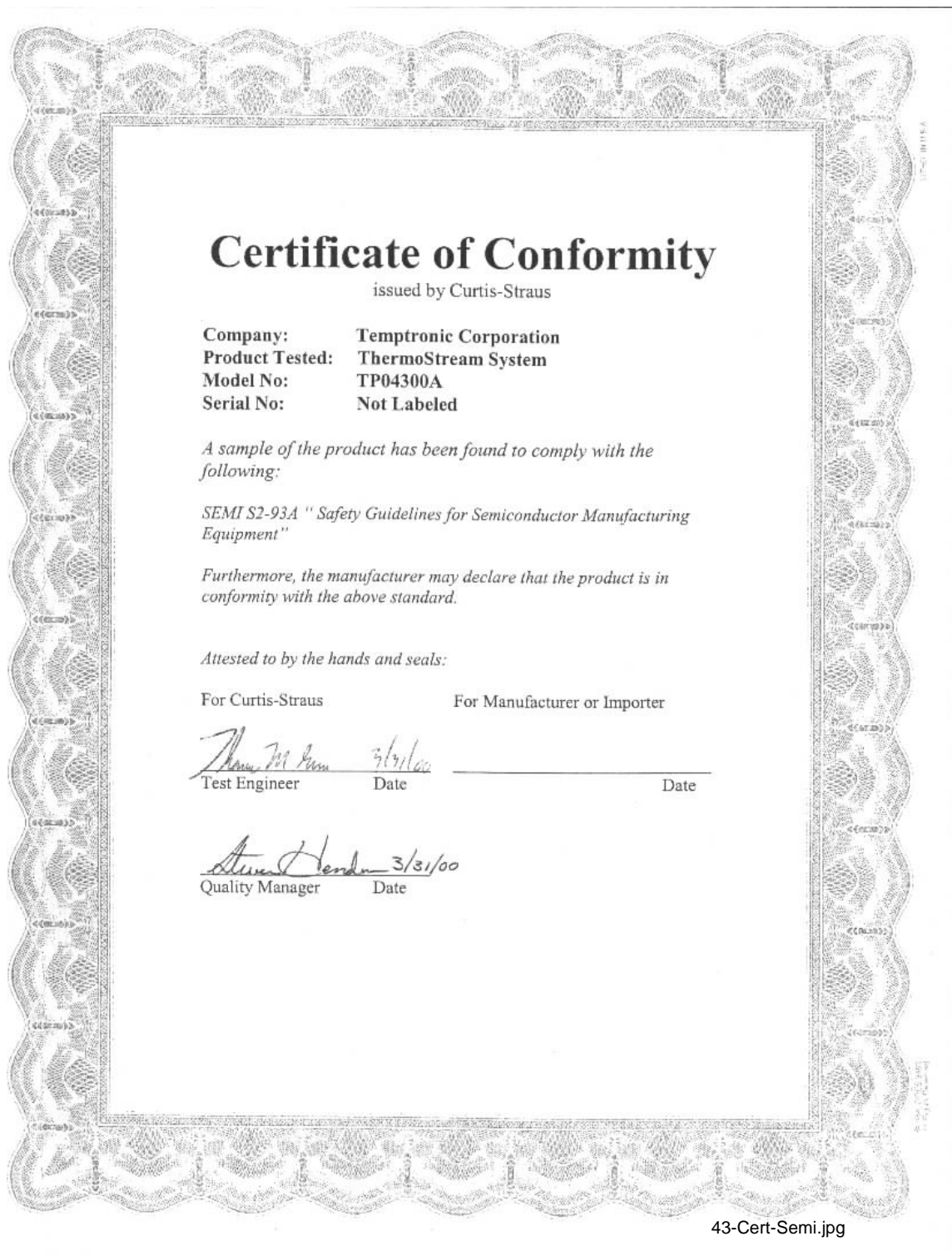
For Curtis-Straus For Manufacturer or Importer

 
 Test Engineer Date Date

 
 Quality Manager Date Date

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Certificate of Conformity: Low Voltage (TP04300): EN 61010-1



Certificate of Conformity
issued by Curtis-Straus

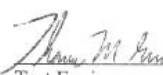

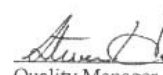

Company: Temptronic Corporation
Product Tested: ThermoStream System
Model No: TP04300A
Serial No: Not Labeled

A sample of the product has been found to comply with the following:

SEMI S2-93A " Safety Guidelines for Semiconductor Manufacturing Equipment"

Furthermore, the manufacturer may declare that the product is in conformity with the above standard.

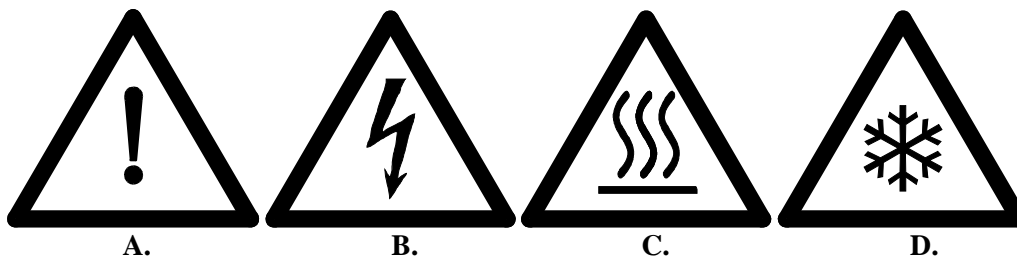
Attested to by the hands and seals:

For Curtis-Straus	For Manufacturer or Importer
 Test Engineer	 Date
 Quality Manager	 Date

43-Cert-Semi.jpg

Certificate of Conformity: SEMI S2-93A (TP04300)

Section 1 - Safety Precautions



Symbols: A. Caution, B. High Voltage, C. Hot Surface, D. Cold Surface

1-1 *English*

1-1.1 Warnings (Safety Precautions)

WARNING 1: Operating personnel should perform only the procedures described and recommended in this manual. Only qualified service personnel familiar with the electrical shock hazards present inside the equipment should perform any disassembly or corrective maintenance of the equipment.

WARNING 2: To avoid shock hazard, the equipment must be grounded with an adequate earth ground per local electrical codes.

WARNING 3: The locations of potentially dangerous voltages and other hazards are labeled and described on the equipment. Carefully observe these warnings when installing, operating, maintaining, or servicing the equipment. Observe all warnings given in this manual. Only use the equipment for the intended usages specified by the manufacturer.

WARNING 4: Make sure you turn off the ~ (ac) power and the compressed air to the TP04300 System before attempting to access or service the air filters. Do not perform this service unless you are qualified to do so.

WARNING 5: During the up/down motion of the TP04300's head, keep your fingers out of the space between the thermal cap on the head and the DUT site.

1-1.2 Cautions (Safety Precautions)

CAUTION 1: Some of the packing materials in the TP04300 shipment may be a source for ESD potential. Do not unpack in the vicinity of ESD sensitive components.

CAUTION 2: Observe the precautions given on the equipment and within this manual to prevent damage to the equipment. Only use the equipment for the intended usages specified by the manufacturer.

CAUTION 3: When making the system air connection to the TP04300, hold the AIR INPUT fitting with a second wrench while tightening the barb fitting to prevent the AIR INPUT fitting from rotating in the panel.

CAUTION 4: Before connecting the TP04300 to its electrical source, check that the ~ (ac) voltage and frequency to be supplied to the TP04300 are correct for those listed on its data plate (located on rear system panel).

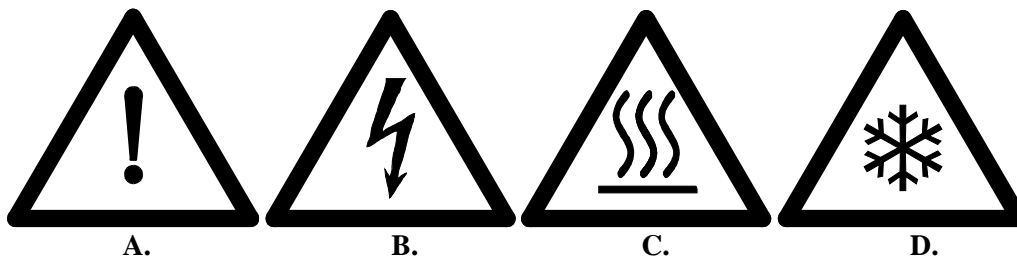
CAUTION 5: Always hold the handle grips firmly on the head module while positioning the head and or arm.

CAUTION 6: Use proper handling and packaging procedures for static-sensitive circuit boards. Assume that all circuit boards are the static-sensitive type.

CAUTION 7: Unauthorized personnel should not remove from the equipment those panels that are provided for cooling and protection and/or require a tool to remove.

1-2 Français

1-2.1 Avertissements (Mesures de sécurité)



Symboles : A. Mise en garde, B. Haute tension, C. Surface chaude, D. Surface froide

AVERTISSEMENT 1 : Le personnel d'exploitation ne doit exécuter que les procédures décrites et recommandées dans ce manuel. Seul du personnel d'entretien qualifié, au courant des risques de choc électrique que présente l'équipement, doit procéder à une quelconque opération de démontage ou de dépannage de l'équipement.

AVERTISSEMENT 2 : Pour éviter tout risque de choc électrique, l'équipement doit être mis à la terre par une mise à la masse conforme aux codes électriques locaux.

AVERTISSEMENT 3 : Les endroits où se trouvent les tensions potentiellement dangereuses et d'autres dangers sont indiqués et décrits sur l'équipement. Bien tenir compte de ces avertissements lors de l'installation, de l'utilisation, de la maintenance ou de l'entretien de l'équipement. Se conformer à tous les avertissements énoncés dans ce manuel. N'utiliser l'équipement qu'aux fins spécifiées par le fabricant.

AVERTISSEMENT 4 : Veiller à couper l'alimentation c.a. et l'admission d'air comprimé du système TP04300 avant d'accéder aux ou d'entretenir les filtres à air. Seul du personnel qualifié doit procéder à cet entretien.

AVERTISSEMENT 5 : Pendant le déplacement vers le haut ou vers le bas de la tête du TP04300, ne pas mettre les doigts dans l'espace compris entre le capuchon thermique de la tête et le site de l'appareil à tester (Device Under Test [DUT]).

1-2.2 Mises en garde (Mesures de sécurité)

MISE EN GARDE 1 : Certains éléments de l'emballage du TP04300 peuvent être des sources de décharges électrostatiques. Ne pas déballer le TP04300 à proximité de composants sensibles aux décharges électrostatiques.

MISE EN GARDE 2 : Appliquer les mesures de précaution qui figurent sur l'équipement et celles énoncées dans ce manuel pour éviter d'endommager l'équipement. N'utiliser l'équipement qu'aux fins spécifiées par le fabricant.

MISE EN GARDE 3 : Lorsqu'on raccorde l'alimentation en air du système au TP04300, tenir le raccord d'ADMISSION D'AIR avec une deuxième clé afin de l'empêcher de tourner dans le panneau lors du serrage du raccord cannelé.

MISE EN GARDE 4 : Avant de raccorder le TP04300 à l'alimentation électrique, s'assurer que la tension ~ (c.a.) et la fréquence que l'on va fournir au TP04300 correspondent à celles indiquées sur sa plaque signalétique (fixée au panneau arrière du système).

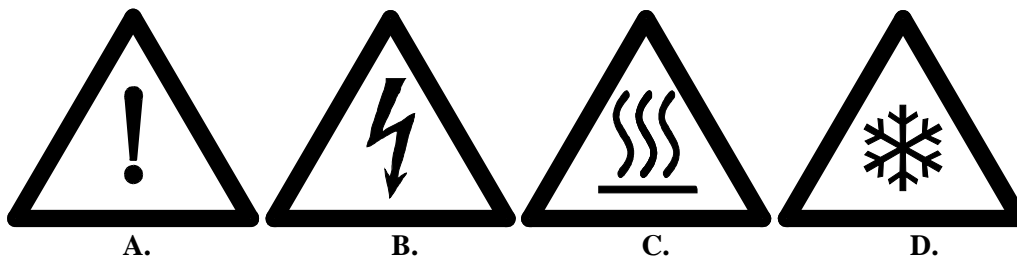
MISE EN GARDE 5 : Toujours tenir fermement les poignées du module de tête lors du positionnement de la tête et/ou du bras.

MISE EN GARDE 6 : Suivre les procédures de manutention et d'emballage appropriées pour les cartes de circuit imprimé sensibles à l'électricité statique. Considérer que toutes les cartes de circuit imprimé sont de type sensible à l'électricité statique.

MISE EN GARDE 7 : Seul le personnel qualifié peut déposer ces panneaux prévus pour le refroidissement et la protection et/ou dont la dépose exige l'emploi d'un outil.

1-3 Deutsch

1-3.1 Warnungen (Sicherheitsvorkehrungen)



Symbole: A. Vorsicht, B. Hochspannung, C. Heiße Oberfläche, D. Kalte Oberfläche

WARNUNG 1: Bedienungspersonal sollte nur die in diesem Handbuch beschriebenen und empfohlenen Vorgänge durchführen. Demontage und behebende Wartung am Gerät dürfen nur von qualifiziertem Servicepersonal durchgeführt werden, das die elektrischen Schockgefahren am Gerät kennt.

WARNUNG 2: Das Gerät muss lokalen Vorschriften entsprechend angemessen geerdet sein, um Elektroschockgefahren zu vermeiden.

WARNUNG 3: Potentielle Hochspannungsstellen und andere Gefahrenzonen sind am Gerät markiert und mit einer Kurzbeschreibung versehen. Diese Warnungen müssen bei der Installation, beim Betrieb, der Instandhaltung und Wartung des Geräts genau beachtet werden. Alle im vorliegenden Handbuch gegebenen Warnungen müssen beachtet werden. Das Gerät darf nur für die vom Hersteller angegebenen Verwendungszwecke benutzt werden.

WARNUNG 4: Sicherstellen, dass vor Zugang zu den Luftfiltern oder Wartungsarbeiten daran die Wechselspannung und Druckluft zum TP04300 System abgeschaltet sind. Dieser Service darf nur von qualifiziertem Personal durchgeführt werden.

WARNUNG 5: Während der Auf- und Abbewegung des TP04300 Kopfes die Finger vom Zwischenraum zwischen der Thermalkappe am Kopf und dem DUT fern halten.

1-3.2 Vorsichtsmaßnahmen (Sicherheitsvorkehrungen)

VORSICHT 1: Verpackungsmaterial im Lieferumfang des TP043004300 ruft u.U. elektrostatische Ablenkempfindlichkeit hervor. Das Gerät darf daher nicht in der Nähe von Komponenten ausgepackt werden, die elektrostatische Ablenkempfindlichkeit aufweisen.

VORSICHT 2: Die am Gerät und in diesem Handbuch gegebenen Vorsichtsmaßnahmen beachten, um Geräteschäden zu vermeiden. Das Gerät darf nur für die vom Hersteller angegebenen Verwendungszwecke benutzt werden.

VORSICHT 3: Beim Herstellen der Luftanschlüsse zum TP04300 den AIR INPUT (Lufteinlass-) Anschluss mit einem zweiten Schraubenschlüssel halten, während der Steckanschluss befestigt wird, um zu vermeiden, dass sich der Lufteinlass-Anschluss dreht.

VORSICHT 4: Vor Anschluss des TP04300 an das Elektronetz sicherstellen, dass Wechselspannung und Frequenz den auf dem Datenschild des TP04300 (an der Rückseite des Systems) angegebenen Werten entsprechen.

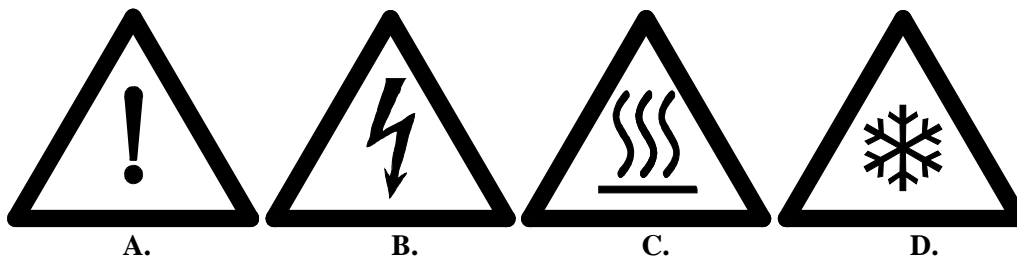
VORSICHT 5: Die Handgriffe am Kopfmodul beim Anbringen des Kopfes bzw. Arms immer sicher fest halten.

VORSICHT 6: Statikempfindliche Leiterplatten immer angemessen handhaben und verpacken. Alle Leiterplatten sollten als statikempfindlich angesehen werden.

VORSICHT 7: Schutz- und Kühlabdeckungen sowie Abdeckungen, die mit einem Werkzeug abgenommen werden müssen, dürfen nur von dazu befugtem Personal vom Gerät entfernt werden.

1-4 *Español*

1-4.1 Advertencias (Precauciones de seguridad)



Símbolos: A. Precaución, B. Alta tensión, C. Superficie caliente, D. Superficie fría

ADVERTENCIA 1: El personal de operaciones debe ejecutar solamente los procedimientos de mantenimiento o reparación descritos y recomendados en este manual. Únicamente personal calificado, que conozca los riesgos de choques eléctricos que se podrían presentar dentro del equipo, debe ser permitido efectuar cualquier procedimiento de desmontaje o mantenimiento correctivo.

ADVERTENCIA 2: Para evitar riesgos de choques eléctricos, el equipo deberá estar puesto a tierra con una conexión adecuada a tierra física, de acuerdo con los códigos eléctricos locales.

ADVERTENCIA 3: Los lugares donde existen tensiones peligrosas y otros riesgos están señalados con etiquetas y descripciones en el equipo. Observe cuidadosamente estas advertencias durante la instalación, operación, mantenimiento o al efectuar reparaciones del equipo. Observe también todas las advertencias contenidas en este manual. Use el equipo únicamente para los fines especificados por el fabricante.

ADVERTENCIA 4: Asegúrese de haber desconectado la corriente ~ (CA) y el aire comprimido del Sistema TP04300, antes de intentar el acceso o reparar los filtros de aire. No efectúe este procedimiento a menos que esté calificado para hacerlo.

ADVERTENCIA 5: Durante el movimiento de arriba abajo de la cabeza del TP04300, mantenga sus dedos apartados del espacio entre la tapa térmica de la cabeza y el sitio del DUT (dispositivo en prueba).

1-4.2 Precauciones (Precauciones de seguridad)

PRECAUCION 1: Algunos de los materiales de empaque para el embarque del TP04300, podrían ser una fuente potencial de ESD (carga de electricidad estática). No desempaque cerca de componentes sensibles a la ESD.

PRECAUCION 2: Observe las precauciones indicadas en el equipo y en este manual, para evitar causar daños al equipo. Use el equipo únicamente para los fines especificados por el fabricante.

PRECAUCION 3: Cuando vaya a hacer la conexión de aire de sistema al TP04300, sujete el conector de AIR INPUT (entrada de aire) con una segunda llave, cuando está apretando el conector de púa, para evitar que el conector de AIR INPUT gire dentro del panel.

PRECAUCION 4: Antes de conectar el TP04300 a su fuente de alimentación eléctrica, verifique que la tensión de ~ (CA) y la frecuencia a ser alimentada al TP04300 son las correctas de acuerdo con las listadas en su placa de datos (ubicada en el panel posterior del sistema).

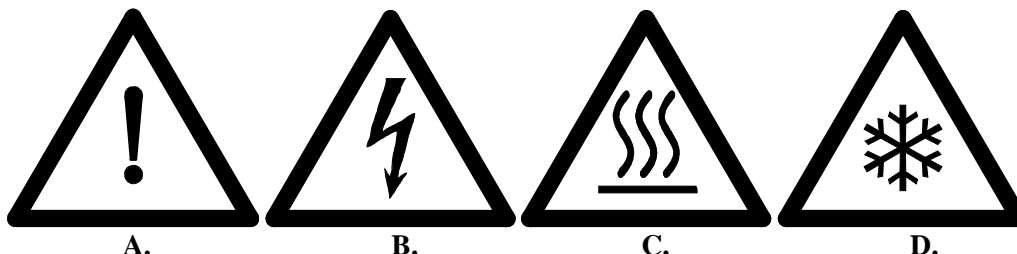
PRECAUCION 5: Cuando esté posicionando la cabeza y/o brazo, siempre sujete con firmeza los agarradores que están sobre el módulo de la cabeza.

PRECAUCION 6: Use los procedimientos correctos para la manipulación y empaque de placas de circuitos sensibles a la estática. Considere que todas las placas de circuitos son sensibles a la estática.

PRECAUCION 7: Personal no autorizado no deberá quitar del equipo los paneles de enfriamiento y protección, o que necesitan una herramienta para quitarlos.

1-5 Swedish

1-5.1 SÄKERHETSFÖRESKRIFTER OCH VARNINGAR



Symboler: A. Varningar, B. Högspänning, C. Varmt underlag, D. Kallt underlag

Varning 1: Personal som använder maskinen skall enbart följa procedurer beskrivna och rekommenderade i systemets manual. Enbart kvalificerad service personal, som är familjär med de högsända elektriska farligheter som finns inne i utrustningen, skall avmontera eller utföra underhåll på utrustningen.

Varning 2: För att undvika strömstötter, skall utrustningen vara väl jordad genom att varje elektrisk kabel har härför avsedda jordanslutning.

Varning 3: Lokalisering av eventuella farliga spänningar och farligheter är märkta och beskrivna på utrustningen. Iakttag och lokalisera dessa varningar vid installation, användning och underhåll eller service av utrustningen. Läs och förstå alla varningar skrivna i utrustningens manual. Enbart använd utrustningen för sitt ändamål och specificerat från tillverkaren.

Varning 4: Före varje försöka att utföra underhåll på TP043XX, försäkra er om att komprimerad luftanslutning och spänningsmatningen är avslaget. Stäng först av luftanslutningen och låt det uppbyggda lufttrycket i den inbyggda lufttorkaren mynna ut (lufttorkaren behöver tillslagen spänning för att torka ut), därefter stäng av spänningsmatningen till utrustningen. Utför inte dessa rutiner om inte kvalifikation för ändamålet finnes.

Varning 5: Vid upp/ner rörelse av temperaturhuvudet på TP043XX, håll fingrar och föremål utanför den termiska koppen och komponenttest arean.

1-5.2 Försiktighet och Varsamhet

Varsamhet 1: Viss del av utrustningens packningsmaterial för serie TP043XX transporten, kan vara ESD laddat. Packa inte upp utrustningen i närheten av ESD känsliga komponenter.

Varsamhet 2: Iakttag upp-packnings instruktioner angivna i bifogad dokumentation och utrustningens manual, för att undvika skador på utrustningen.

Varsamhet 3: ...

Varsamhet 4: Innan TP043XX anslutes till elektriskt spänningsuttag, kontrollera att rätt växelspanning (ac) och frekvens (Hz) överensstämmer med specifikationen noterad på utrustningens märkplatta, lokaliserad på baksidan av utrustningen.

Varsamhet 5: Använd alltid härför avsedda handtag på temperaturhuvudet vid positionering av huvudet och dess arm.

Varsamhet 6: Använd alltid ESD godkända packmaterial och tillbehör vid hantering av elektroniska komponenter och kort. Uppmärksamma att alla systemets elektronikkort är ESD känsliga.

Varsamhet 7: Personal som ej är aktualiserad för ändamålet skall inte avlägsna skydd eller paneler på utrustningen som är avsedda för skydd eller kylning eller är behov av verktyg för borttagande.

NOTES:

Section 2 - Scope of Basic Manual

2-1 *Front Panel (Local) Operation*

This manual contains instructions for front panel (local) operation of the Model TP04300 ThermoStream Systems by operating personnel assigned to "Basic" level Access.

Remote system operation is discussed in the *TP04300 Interface & Applications Manual*, as is general and advanced assembly, interfacing, interconnecting, routine preventive maintenance, and operating in "Medium" and "Full" Access levels, in which tests are set up and datalogged.

Familiarity with front panel operation is recommended before attempting remote operation.

2-2 *"Basic" Access Level Functions*

This manual explains how to operate the "Basic" Access level functions:

"Basic" Functions: TP04300
Run to / Cycle: Hot, Ambient, Cold (see Table 5-2 on page 23)
Run to Active Segment Setpoint (see Table 8-1 on page 29)
Cycle Multi-setpoints (see Table 9-1 on page 29)
Load, Run, a Test Setup (see Figure 6-1. on page 24)

Table 2-1. "Basic" Access Level Functions: TP04300

Note: Functions not available in Basic Access are displayed on the screen "grayed out" (in lighter colors) and do not execute when pressed.

Section 3 - Startup & Shutdown



Figure 3-1. Startup Screen

To startup the TP04300 System initially or after it has been shutdown:

1. Check that the system is connected to the specified air source and the air is turned on.
2. Check that the system is connected to the specified ~ (ac) power source and the back panel circuit breaker CB1 is turned on.
3. Check that the Vertical Stand lock is unlocked, to allow Stand/Manipulator Arms to travel up/down and to allow air flow (located where Stand meets frame).
4. Toggle the front panel ON/Off switch downward to start operation of the TP04300.
5. The *Start Screen* (see Figure 3-1) then displays: "Please wait until the system initializes"
6. The TP04300 ThermoStream Control Software (TSCS operating system) will then boot, displaying functional screens. The air dryer will quietly "whoosh" every 60 seconds.
7. If the *Operator Screen* is not displayed, then press the "Operator" tab at the screen bottom to display it (see Figure 5-1 "Operator Screen" on page 22).

To shut down the System:

1. Press the main ON/Off switch OR press the "Off" button on the upper right corner of the Status Bar (see Figure 5-1. on page 22).
2. Alternatively, press the front panel, round, red, EMO switch to trip (open) back panel Circuit Breaker CB1, to interrupt the high voltage power (shut down the compressor) and to initiate an orderly software log off. Note, that CB1 must be reset to restart the system.

Section 4 - Jumbo Temperature Screens

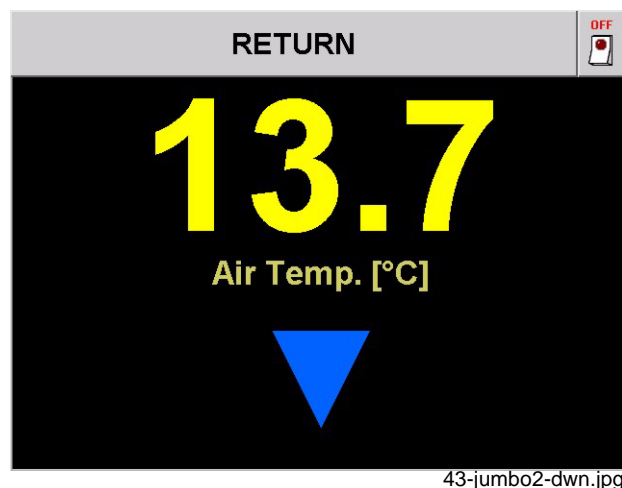


Figure 4-1. Jumbo Temperature Screen: Air Mode, Ramping Down

Jumbo Temperature Screen	
ACCESS JUMBO SCREEN (Air mode, or DUT mode): Press the Status Bar on any screen (see Figure 5-1) to toggle to the Jumbo Temperature Screen For a detailed explanation of Status Bar displayed values, see <i>TP04300 Interface & Applications Manual</i>	
EXIT JUMBO SCREEN: Press "Return" Bar, at top of Jumbo Screen, to toggle back to the original screen	
Air Temp °C: (fluctuating) Main Air temperature, measured at main output nozzle, if in Air mode; Air Temp is a real time, system supplied value	
DUT Temp °C: (fluctuating) DUT temperature, measured at sensor interfaced to DUT, if in DUT mode; DUT Temp is a real time, system supplied value	
Ramp Icons: Displayed at Jumbo Screen bottom: -Solid square icon: system Air Temp (or DUT Temp) is At Temperature -Red triangle, pointing up: system Air Temp (or DUT Temp) is heating -Blue triangle, pointing down: system Air Temp (or DUT Temp) is cooling (see Figure 4-1) "Flow: OFF" displayed if no main air flow Cycling: empty Circle: transition; "S"oaking, in circle; "T"esting, in circle; "H"olding in circle (cycles paused)	
Off: Click "Off", to display "Are you sure?" prompt; click "OK" to shut down hardware and log off	

Section 5 - Run To / Cycle: Hot, Ambient, Cold

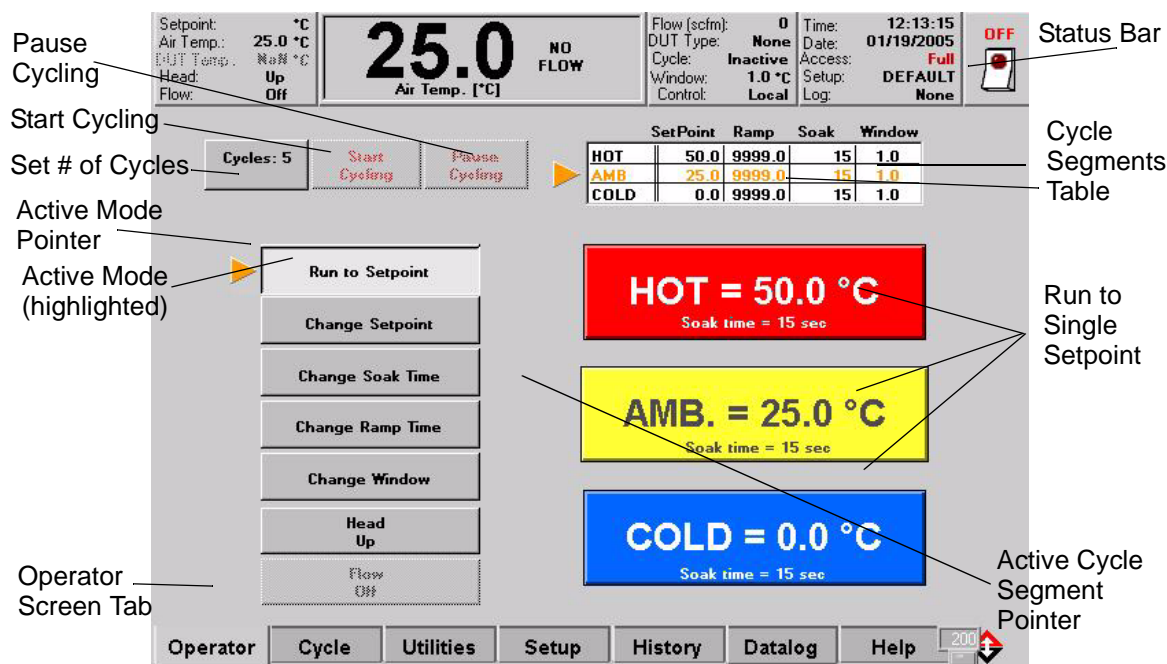


Figure 5-1. Operator Screen

OPERATOR SCREEN (Basic Access)	
FUNCTION	Run to 3 programmed Setpoints, or Cycle Setpoints: Hot, Ambient, Cold; Change values of: 3 Setpoints, 3 Soak times, 3 Ramp times
ACCESS	Press "Operator" Screen tab (see Figure 5-1)
STATUS BAR	System supplied values at screen's top
COMMANDS	DESCRIPTION
(Active Mode)	The selected, Active Mode, is highlighted (see Figure 5-1)
RUN TO SETPOINT	Press Run to Setpoint and then either HOT, COLD, or AMBIENT to run the system to 1 setpoint.
CHANGE SETPOINT	Not available in Basic Access
CHANGE SOAK TIME	Not available in Basic Access
CHANGE RAMP TIME	Not available in Basic Access
CHANGE WINDOW	Not available in Basic Access
HEAD UP/DOWN	Press to toggle the Thermal Head up or down.
FLOW ON/OFF	Press to toggle the main air flow on or off.

Table 5-1. Operator Screen: Commands (Basic Access)

Commands	OPERATOR SCREEN (Basic Access)
START/STOP CYCLING	(When this mode is selected, it is highlighted: see Figure 5-1)
START (STOP) CYCLING	Press Start Cycling (displays Stop Cycling) --to cycle Hot, Ambient, Cold with a Ramp/Soak set greater than 0; --as cycling progresses, the "Active Cycle Segment Pointer" moves, to point to the temperature ramps/soaks being actively cycled
STOP (START) CYCLING	Press Stop Cycling (displays Start Cycling) to end Cycling. System runs to Selected Setpoint, then maintains temperature at that setpoint.
RUN TO SETPOINT	(When this mode is selected, it is highlighted: see Figure 5-1) ("Active Cycle Segment Pointer" moves during cycling: see Figure 5-1)
--HOT °C	Press Hot to drive system to displayed "Hot = ###.#" Setpoint;
--AMBIENT °C	Press Ambient to drive system to displayed "Amb. = ###.#" Setpoint
--COLD °C	Press Cold to drive system to displayed "Cold = ###.#" Setpoint
CHANGE SETPOINT	Not available in Basic Access
CHANGE SOAK TIME	Not available in Basic Access
CHANGE RAMP TIME	Not available in Basic Access
To Run to one setpoint segment of a multi-setpoint <i>Cycle Screen</i> cycle, see Table 8-1 on page 29	
To Run to multi-setpoints, on <i>Cycle Screen</i> , see Table 9-1 on page 29	

Table 5-2. Run / Cycle: Hot, Ambient, Cold (Operator Screen) (Basic Access)

Section 6 - Test Setups: Load

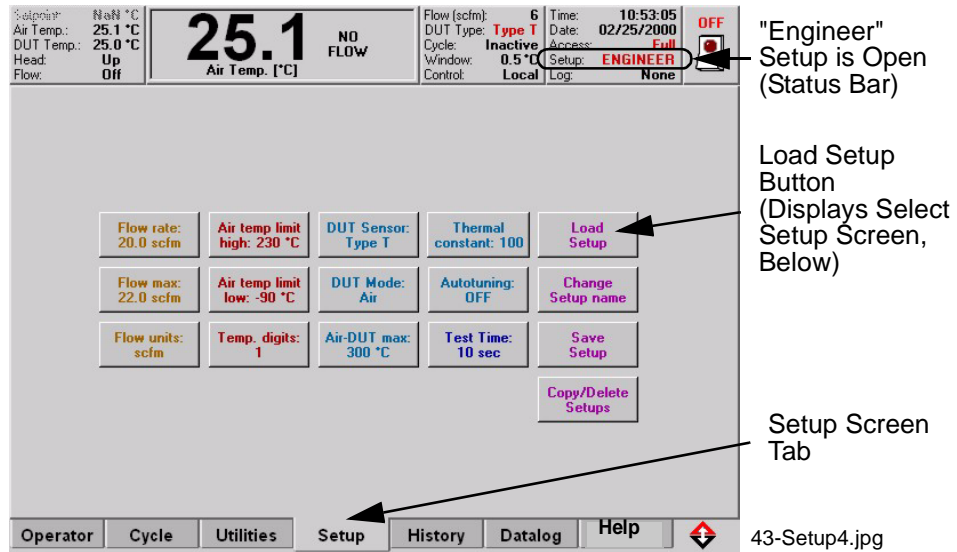


Figure 6-1. Load Test Setup (Setup Screen)

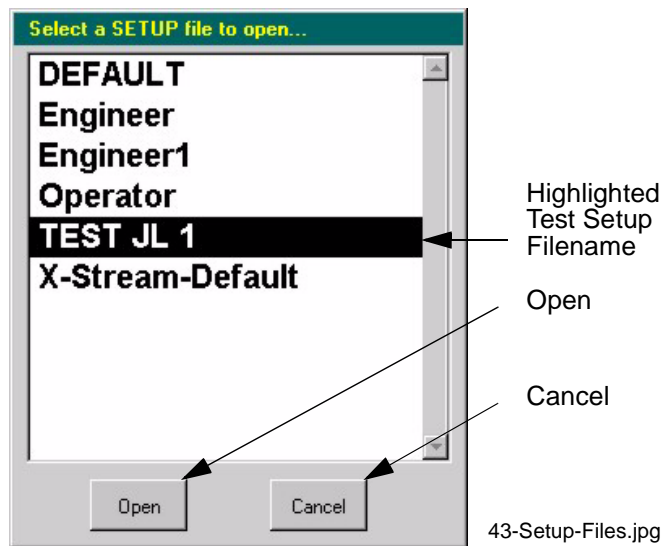


Figure 6-2. Select Setup Screen

To load a pre-programmed test Setup:

1. Press the *Setup Screen* Tab to display *Setup Screen* (see Figure 6-1. on page 24).
2. Press "Load Setup" button to display *Select Setup Screen* (see Figure 6-2. on page 24).
3. Press a Setup Filename to highlight (select) the file.
4. Press "Open" to load (display/enable running) the highlighted Test Setup file.
5. The "Setup" field in the Status Bar (at top of screen) will display the newly opened Setup Filename.
6. Certain settings (buttons) on the *Setup Screen* will change to reflect the newly opened Setup.
7. The Cycle Segments Table (and the Ideal Cycle Profile) on the *Cycle Screen* (see Figure 7-1. on page 26) will reflect the newly opened Setup.
8. To exit the *Select Setup Screen* without opening a Setup, press "Cancel." The highlighted Setup will not be loaded, and the display exits back to the *Setup Screen*, where the original Setup remains open.
9. If in Basic Access, then certain buttons are "grayed out" and do not execute.

Section 7 - Cycle Screen

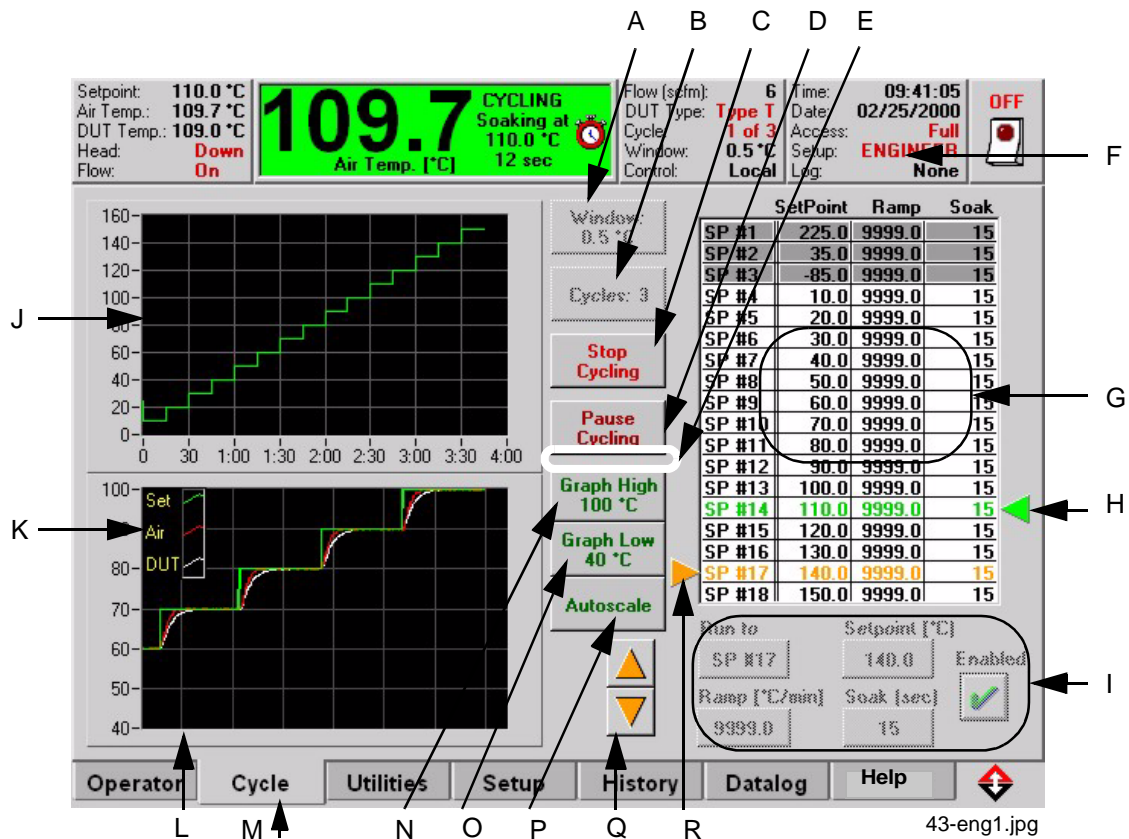


Figure 7-1. Cycle Screen

7-1 Fields, Buttons (Cycle Screen)

Cycle Screen: Fields, Buttons	
A	Window [°C]: Not Available in Basic Access
B	Cycles: #: set number of cycles. Not Available in Basic Access
C	Start (Stop) Cycling Button
D	Pause (Resume) Cycling
E	Go To Basic (button not pictured): displays <i>Basic Screen</i> --to exit <i>Basic Screen</i> , press "Go to Cycle"
F	Status Bar (system supplied values) Press Status Bar to display <i>Jumbo Temperature Screen</i> (Figure 4-1. on page 21)
G	Cycle Segments Table (reflects "I" below)
H	Active Segment Pointer (displays, moves, during Cycling)
I	Selected Segment Settings (see Run Tests, Table 8-1 on page 29) --Run To: runs to Selected Segment setpoint only; no cycling Not Available in Basic Access: --Setpoint °C: input setpoint. --Ramp [°C/minute]: set ramp rate. --Soak [seconds]: set soak time. --Enabled (Disabled): cycle sequencing.
J	Profile, Ideal Cycling (derived from "G" above)
K	Graph, Temperature Legend: Set(point), Air, DUT
L	Graph, Runtime: Time/Temperature (real time)
M	Cycle Screen Tab
N	Graph High (°C): set vertical (y axis) maximum temperature scale
O	Graph Low (°C): set vertical (y axis) minimum temperature scale
P	Autoscale Graph (item "L") to optimum view
Q	Segment Pointer: Up/Down (selects Segment)
R	Selected Segment Pointer

Table 7-1. Cycle Screen: Fields, Buttons (Basic Access)

7-2 Commands (Cycle Screen)

Run Tests: Cycle Commands (Cycle Screen): Basic Access	
FUNCTION	For Air mode and DUT mode. Manually run to 1 setpoint; or automatically Cycle up to 18 setpoints. (To load a prior saved test Setup, see Figure 6-2. on page 24)
ACCESS	Press "Cycle" Screen tab (see Figure 7-1)
STATUS BAR	System supplied values displayed at screen's top (see Figure 5-1. on page 22)
COMMANDS	DESCRIPTION
WINDOW: °C	Not Available in Basic Access
CYCLES: #	Press Cycles to display Numeric Keypad. Input number of iterations: how many times a complete Cycle (all Enabled Segments) will run
START (STOP) CYCLING	Press Start Cycling (displays Stop Cycling) to execute CYCLES: # above; as cycling progresses, the Active Segment Pointer moves, to point to the temperature ramps/soaks being actively cycled
STOP (START) CYCLING	Press Stop Cycling (displays Start Cycling) to end Cycling. System runs to Selected Setpoint, then maintains temperature at that setpoint.
PAUSE (RESUME) CYCLING	Press Pause (displays Resume) to interrupt cycling at present enabled segment; system maintains present segment setpoint
RESUME (PAUSE) CYCLING	Press Resume (displays Pause) to restart cycling. From present enabled segment, system proceeds to (cycles to) next enabled segment
GO TO BASIC	Press Go to Basic to display <i>Basic Screen</i> (to exit <i>Basic Screen</i> , press "Go to Cycle")
GRAPH HIGH: °C	Press Graph High to display Numeric Keypad. Set graph vertical (y axis) maximum temperature scale
GRAPH LOW: °C	Press Graph Low to display Numeric Keypad. Set graph vertical (y axis) minimum temperature scale
AUTOSCALE	Press Autoscale to display optimum graph view of plot line(s)
ENABLED (DISABLED)	Not Available in Basic Access
DISABLED (ENABLED)	Not Available in Basic Access

Table 7-2. Cycle Commands (Cycle Screen): Basic Access

Section 8 - Run To Selected Segment Only

RUN TESTS	Run To Selected Segment Only
ONE SEGMENT: MANUALLY RUN TO SETPOINT	For <i>Cycle Screen</i> fields, and buttons, see Figure 7-1. Use Up/Down Segment Pointer to choose Selected Segment; Press "Run To" (Temperature Display window shows: ramp/soak/"At Temp")
To run to a single Setpoint (Hot, or Cold, or Ambient) see Table 5-2 on page 23	
To cycle to multi-setpoints, see Table 9-1 on page 29	

Table 8-1. Run To Selected Segment Only (Cycle Screen): Basic Access

Section 9 - Cycle To Multi-Setpoints

RUN TEST	Cycle to Multi-Setpoints
MULTI-SETPOINTS: AUTO CYCLE	For <i>Cycle Screen</i> fields, and buttons, see Figure 7-1. Press START CYCLING (Temperature Display window shows ramps/soaks). Active Segment Pointer moves down, points to Segment being ramped/soaked. ENABLED segments cycle in top-to-bottom order; then restart at top. If more than one cycle is programmed, then system advances to begin the next cycle until the set number of CYCLES is completed or CYCLES STOP pressed
To run to a single Setpoint (Hot, or Cold, or Ambient), or, to cycle the Hot, Ambient, Cold setpoints: see Table 5-2 on page 23	
To Run to one selected Segment, only, see Table 8-1 on page 29	

Table 9-1. Cycle to Multi-Setpoints (Cycle Screen): Basic Access

NOTES:



FAX

To: Temptronic Corporation

Fax to: 781-688-2301

Attn: Customer Service Dept.

Date: _____

USER INTERFACE PERFORMANCE REPORT

To suggest any product enhancements or to report problems with the system hardware or software, please complete all pertinent information, including any additional information, and fax to **Temptronic, (781) 688-2301**, Attention: Customer Service Dept.

We recommend that you also copy this blank form and save it as a master to record all pertinent information.

If you require an immediate response, contact the Customer Service Department directly:

Tel: (800) 558-5080 (calling from USA only)

Tel (781) 688-2341 (worldwide)

FAX: (781) 688-2541

Email: service@temptronic.com

Customer Information:

Name

Company

Street

Dept / Mail Stop

City State Zip Code

Telephone

Email

Thank you for your participation in our Product Assurance Program!!

Product Information

System model number **TP** _____

System serial number _____

System code number _____

Software disk number **PG** _____

Software disk revision _____

ROM part number **PG** _____

ROM Revision _____

Product Enhancement:

Yes No

Is this a suggested product enhancement? ☐ ☐
(See page 2)

Problem Determination:

Has service been requested? ☐ ☐

Is the system useable? ☐ ☐

Is the problem repeatable? ☐ ☐

Does the problem occur with other identical units (if available?) ☐ ☐

Is the problem related to the front panel user interface? ☐ ☐

Is the problem related to the system to tester interface? ☐ ☐

Does the problem occur when the system is disconnected from all peripherals and operated in local mode? ☐ ☐

INTERNAL USE ONLY

ORIGINATOR: _____

Date recorded ____/____/____

Copy to:

☐ Manufacturing ☐ Sales/Marketing

☐ Quality Control ☐ Engineering

Additional Information

Please provide a brief description of the suggested enhancement or problem condition:

If you are reporting a problem, please provide the following:

1) Describe the operation being performed in detail:

2) Provide keystroke sequence:

3) Describe suspect module or component operation associated with the problem.

Name _____

Date _____

Company _____



Cut or Copy



FAX

To: Temptronic Corporation
Attn: User Group Administrator
Date: _____

Fax to: 781-688-2301

USER / OWNER REGISTRATION CARD

Please help us to keep you up-to-date on all information regarding your system (feature updates, upgrades, and more..) by completing the following form and **faxing this to Temptronic at (781) 688-2301.**

Thank you!

User Name _____
Title: _____
Dept. _____ Mail Stop _____
Company : _____
Street: _____
City : _____ State _____ Zip _____
email : _____
Telephone : _____ Fax: _____

System model number(s) : TP _____

☐ ThermoStream® ☐ ThermoFixture® ☐ ThermoChuck® Other _____

System serial number(s) _____

First Time User? ☐ Yes ☐ No

I also use Temptronic :

☐ ThermoStream® Model (s) _____
☐ ThermoFixture® Model (s) _____
☐ ThermoChuck® Model (s) _____
☐ ThermoSocket® / Liquid Crystal Kit / Other _____

Other individuals who should also receive product updates:

Name _____ Dept. _____

Company and address (if different from above) _____

Thank you! We wish you great success in all your test endeavors. If you have any questions about your system, please call Temptronic at (781) 688-2300 and we will be happy to assist you.

Warranty

Temptronic warrants all equipment from its manufacture to be free from defects in materials and workmanship for a period of one year from the date of shipment to the original buyer. The liability under this warranty is limited to replacement parts and labor on equipment when the equipment is returned prepaid to the factory or its authorized service center with prior authorization from Temptronic Corporation, and upon examination by Temptronic Corporation, is determined to be defective. At Temptronic Corporation's option, a service representative may be dispatched to the equipment location.

As an additional protection, Temptronic warrants that for a period of 90 days from the date of shipment to the original buyer, there will be no charge for service-related shipping of parts and/or equipment or for authorized travel of a service representative to the equipment location. After 90 days, all costs incurred for shipping the equipment or parts thereof or for travel, are the responsibility of the buyer. Our warranty for this equipment is rendered void if the unit has been repaired, taken apart or modified, or attempted to be, unless such actions have been taken in accordance with written instructions received from Temptronic Corporation. The warranty is also void if the equipment has been subject to abuse, accident or other abnormal conditions.

IF ANY FAULT DEVELOPS, THE FOLLOWING STEPS SHOULD BE TAKEN:

1. Notify Temptronic by calling **781-688-2300**. (When calling from within the continental USA, call **800-558-5080**). Overseas customers should contact the local Temptronic authorized service center. Please be prepared with the model number, serial number and full details of the difficulty. Upon receipt of this information, service data or shipping instructions will be provided by Temptronic Corporation. Do not return the unit for repair without first contacting the factory or its representative for instructions.
2. After the initial 90 day period, on receipt of shipping instructions, forward the equipment prepaid to the factory or its authorized service center as instructed. If requested, an estimate of the charges will be made before work begins, especially with those cases where the Temptronic Corporation product is not covered by the warranty.
3. If the original carton and packing are not available, the product should be packed in a container with a strong exterior and surrounded by a protective layer of shock-absorbing material. Temptronic Corporation advises returning the equipment at full value to the carrier.

Temptronic reserves the right to make changes in design at any time without incurring any obligation to install the same changes on units previously purchased.

This warranty states the essence of the obligations and liabilities on the part of Temptronic Corporation. THE FORMAL, COMPLETE and EXCLUSIVE STATEMENT OF TEMPTRONIC CORPORATION'S WARRANTY IS CONTAINED IN ITS QUOTATIONS, ACKNOWLEDGEMENTS, AND INVOICES. Temptronic neither assumes nor authorizes any person to assume for it, any liability in connection with the sale of its equipment other than those set forth herein.

