




## READ HOURMETERS

1. Press  for 5 seconds:
2. Automatically displays:




Un (unit)	Hr (hours)	XX XX XX (6 digits)
Cp (compressor)	Hr (hours)	XX XX XX (6 digits)
Cp (compressor)	Cy (cycles)	XX XX XX (6 digits)
Fr (freeze)	Cy (cycles)	XX XX XX (6 digits)

3. Automatically returns to normal operation.




## READ SENSORS MODE (Rev. 5.2 & Higher)

1. Press  for 5 seconds.
2. Press  to scroll through menu:

No.	Sensor	No.	Sensor
CO	RTS (return air)	C3	CDS (compressor)
C1	ATS (ambient)	C4	AS1 (aux sensor 1)
C2	CTS (evap coil)	C5	AS2 (aux sensor 2)

3. Press  or  to display actual reading
4. Unit continues to operate in the normal thermostat mode.
5. Press  to return to normal display mode.

## TEST MODE






1. Press  and  for 5 seconds.
2. Press  to scroll through menu:

### Test Description


AU	Auto Test	— automatically energizes each relay output one at a time, then repeats cycle.
dS	Display Test	— turns on all LED segments for 5 seconds

### Test Description

rL	Relay Test	— manually energizes each relay output, one at a time, allowing relays to be latched on.
L1	MCV1 Test	— manually energizes the MCV1 output using a variable (0 to 100%) PWM signal.
L2	MCV2 Test	— manually energizes the MCV2 output using a variable (0 to 100%) PWM signal.
L3	ESPD Test	— manually energizes the ESPD output using a variable (0 to 100%) 5 vdc signal.
L4	CSPD Test	— manually energizes the CSPD output using a variable (0 to 100%) 5 vdc signal.

3. Press  or  once to start the selected test.
4. Press  or  as required to sequence through the test.
5. Press  to stop the test in process and return to normal operation.
6. To run a new test, begin with step 1.

## READ SOFTWARE REVISION

1. Press  for 5 seconds.
2. Automatically displays:  
rE (revision) XX (i.e. 5.4) A (without diagnostics)  
b (with diagnostics)
3. Automatically returns to normal operation.



Thermo King Corporation  
Ingersoll-Rand Company  
314 West 90th Street  
Minneapolis, MN 55420-3693  
www.thermoking.com



SMART

CONTROLLER™

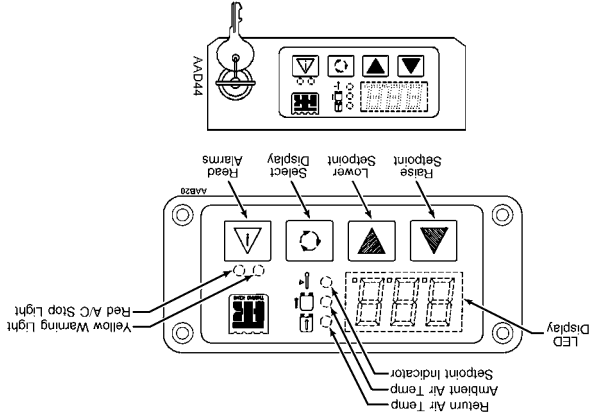
IntelligAIRE I

Diagnostic Procedures  
Pocket Guide

TK 41059-3-PC (Rev. 5, 08-02)



## DISPLAY PANEL



## DISPLAY PANELS

### Limited Access

1. Read inside, outside and setpoint temperatures.
2. Adjust setpoint temperature over a preset range.
3. Read alarm codes, but cannot clear.

### Full Access

1. Read inside, outside and setpoint temperatures.
2. Adjust setpoint temperature over a preset range.
3. Read and clear alarm codes.
4. Read alarm code history.
5. Read hourmeters.
6. Read sensors mode.
7. Read software revision.
8. Access setup mode.
9. Access calibration mode.
10. Access test mode.

### Keypad Switch

1. Insert key and turn clockwise.
2. Display will now function as Full Access.
3. Turn key counterclockwise and remove.
4. Display will now function as Limited Access.

## SETUP MODE

1. Press and for 5 seconds.
2. Press to scroll through menu:

Param	Setting	Default	Param	Setting	Default
rE**		(**)	Fr*		(27)
Pr		(01)	HC		(82)
dP*		(4)	LC		(62)
Un		(F)	HH		(82)
dr		(dc)	LH		(62)
EH*		(100)	Ab		(45)
EL*		(50)	Ht*		(-)
CH*		(100)	FH***		(-)
CL*		(50)	kc		(20)
CC		(th)	ki		(10)
ci*		(61)	kd*		(00)
co***		(45)	kF*		(05)
dF*		(05)			

\* These parameters not available with all versions of software.  
 Check schematic diagram for correct settings. For parameters not shown on schematic diagram, use the default values.  
 \*\* Parameter rE removed from setup mode on software revisions V3.5 and later (see READ SOFTWARE REVISION).  
 \*\*\* These parameters on software revisions V6.4b and later (see READ SOFTWARE REVISION).

## CALIBRATION MODE

1. Press and for 5 seconds.
  2. Press to scroll through menu:
3. Press or once to read current setting.
  4. Press or again to change setting.
  5. Press to return to normal operation.

No.	Sensor	No.	Sensor
CO	RTS (return air)	C4	AS1 (aux sensor 1)
C1	ATS (ambient)	C5	AS2 (aux sensor 2)
C2	CTS (evap coil)	C6	Not Used
C3	CDS (compressor)	C7	Not Used

## READ ALARM CODES

1. Press for 5 seconds.
2. Alarm codes are displayed automatically.
3. Press or to select SA (save) or CL (clear).
4. Press to return to normal operation.
5. Press to return to normal operation.

## Code Alarm

00	No Alarms
01*	Evaporator Coil Freeze (program 15 only)
02	Evap Coil Sensor (shorted, open or backwards)
03	Return Air Sensor (shorted, open or backwards)
04*	Aux Sensor 1 (only if installed)
05	Ambient Air Sensor (shorted, open or backwards)
06	Comp Discharge Sensor (open)
07	Low Heating Capacity (rev. 5.5 only)
08	High Compressor Temperature (warning)
09*	High Evaporator Coil Temperature (program 15 only)
10	High Discharge Pressure
11	Low Suction Pressure
12	High Compressor Temperature (shutdown)
13*	Cond. Electronic Drive Fault—brushless motor
14*	Evap. Electronic Drive Fault—brushless motor

\* These parameters not available on all programs. If these alarm codes appear, first check for proper setting of program.

## READ ALARM CODE HISTORY

1. Press and for 5 seconds.
2. Last 15 alarm codes with hourmeter readings are displayed.
3. Press at any time to return to normal operation, otherwise wait for automatic return.