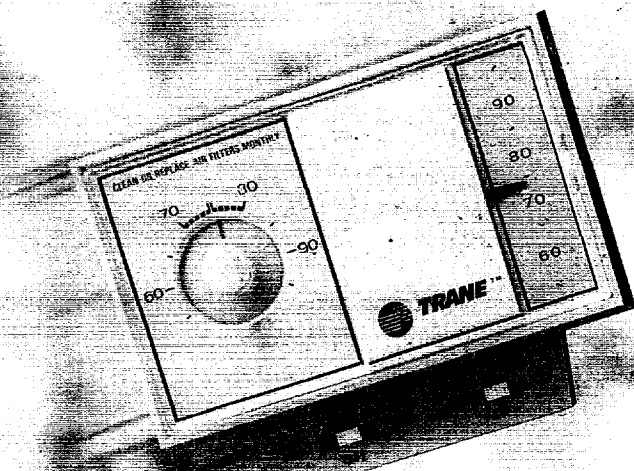


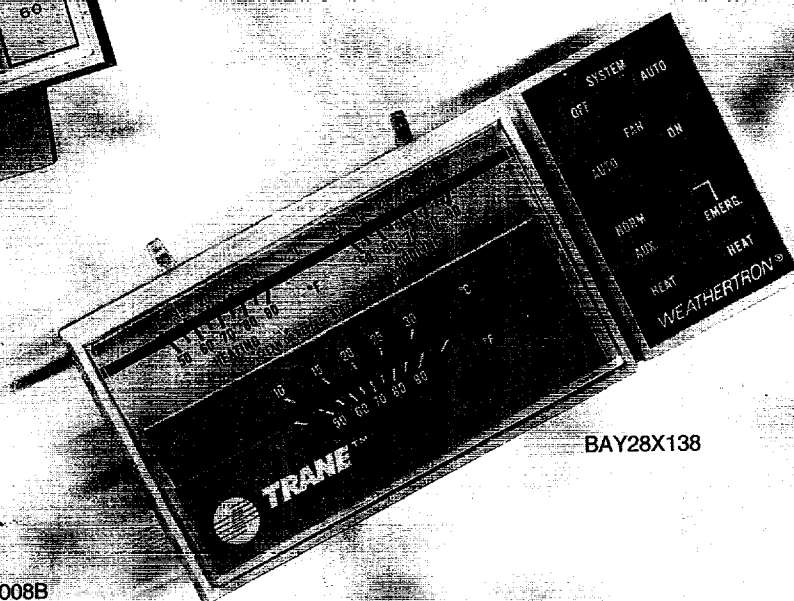
FEBRUARY, 1996

# TRANE

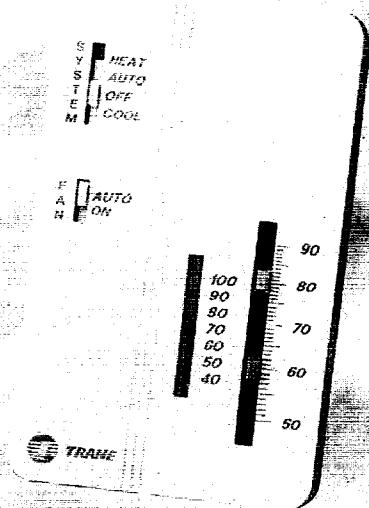
**NEXT ISSUE:**  
XL1600  
Package Unit



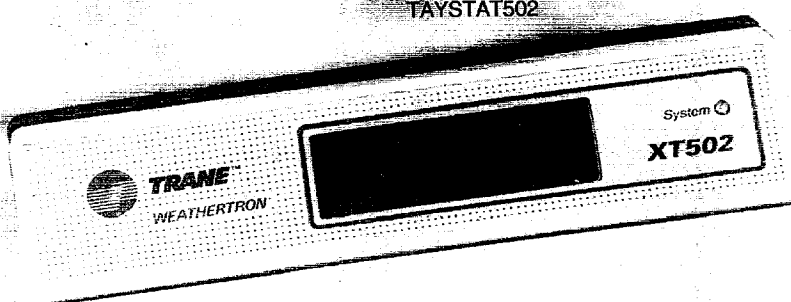
AY28X092



BAY28X138



BAYSENS008B



TAYSTAT502

**Thermostats...  
On The Move!**



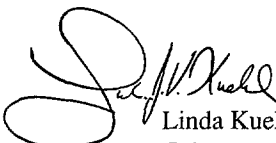
# A Letter From The Publisher


This Thermostat guide will help you identify and select residential and light commercial thermostats for replacements or new installations.

Also included is a matrix that matches old and new systems with Trane thermostats. It easily allows you to select the right thermostat for the product.

This PLM can be ordered in quantity for \$2.50 each

using Pub. No. 22-8650-24. Obsolete summary list included separately with this PLM mailing.

  
Linda Kuehl,  
Tyler  
Product Marketing

  
Betsy Ignacio,  
Clarksville  
Product Marketing

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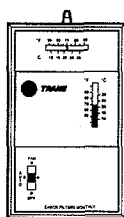
### Legend

THT = Trane Part Number  
for Replacement

WW28/WY28 = Old GE/Trane  
Part Number for  
Thermostats

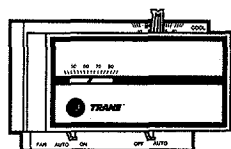
BAS = Subbase

## Cooling Only Thermostats



**BAYSTAT304**

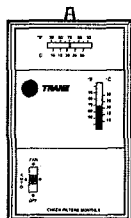
- 0 Heat/1 Cool
- Off/Auto Fan System Switch
- Clear Plastic Set Point Lever
- Vendor: GE/Morrison 3AAT77B1B1
- Finish: Beige and Gold
- Replacement: THT0715 (WY28X0904)
- Installation (Schematic) – 18-HD06D8-1  
– THER-IN-24A
- Responsible: Tyler



**BAY28X186**  
187 Subbase Required  
(Shown with 187 Subbase)

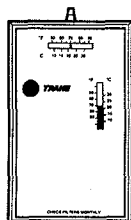
- 0 Heat/2 Cool
- Can be Used for Economizer Operation
- Use with BAY28X187 Subbase only
- Off/Auto System Switch
- Auto/On Fan Switch
- Clear Plastic Set Point Lever
- Thermometer can be Calibrated
- Vendor: Honeywell (T874E1081)-Stat  
(Q674C1033)-Base
- Finish: Beige and Gold
- Replacement: THT0448 (WW28X186)  
BAS0429 (WW28X187)
- Installation (Schematic) – 18-HD19D6
- Responsible: Tyler

## Heating Only Thermostats



**BAYSTAT303**

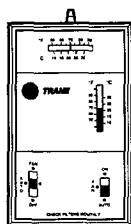
- 1 Heat/0 Cool
- Off/Auto/Fan System Switch
- Clear Plastic Set Point Lever
- Not Electric Heat Compatible
- Requires BAY24X042 Relay for Indoor Fan Operation when used for Electric Heat
- Adjustable Heat Anticipator
- Vendor: GE/Morrison (3AAT78B1A65)
- Finish: Beige and Gold
- Replacement: THT0777 (WY28X0903)
- Installation (Schematic) – 18-HD06D7-1  
– THER-IN-23A
- Responsible: Tyler



**BAYSTAT388**

- 1 Heat/0 Cool
- No System or Fan Switch
- Clear Plastic Set Point Lever
- Not Electric Heat Compatible
- Requires BAY24X042 Relay for Indoor Fan Operation when used for Electric Heat
- Adjustable Heat Anticipator
- Vendor: GE/Morrison (3AAT74A1A65)
- Finish: Beige and Gold
- Replacement: THT0776 (WY28X0900)
- Installation (Schematic) – 18-HD02D5-1  
– THER-IN-22A
- Responsible: Tyler

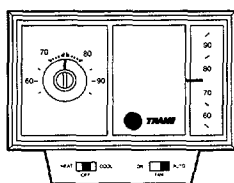
# Single Stage Heat/Cool Thermostats



**BAYSTAT305**

- 1 Heat/1 Cool
- **Manual Changeover**
- Heat/Off/Cool System Switch
- On Auto Fan Switch
- Clear Plastic Set Point Lever
- Adjustable Heat Anticipator

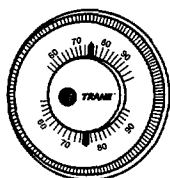
- Vendor: GE/Morrison (3AAT76A1B55)
- Finish: Beige and Gold
- Replacement: THT0715 (WY28X0905)
- Installation (Schematic) – 18-HD06D9-1  
– THER-IN-25A
- Responsible: Tyler



**AY28X092**

- 1 Heat/1 Cool
- **Manual Changeover**
- Heat/Off/Cool System Switch
- On Auto Fan Switch
- Set Point Dial
- Calibrate by Adjusting the Cam Rider Screw

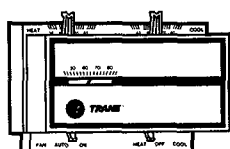
- Adjustable Heat Anticipator
- Vendor: GE/Morrison (3AAT50A284)
- Finish: Beige and Gold
- Replacement: THT0714 (WY28X0992)
- Installation (Schematic) – 18-HD03D1-1  
– THER-IN-34
- Responsible: Tyler



**BAYSTAT008**

- 1 Heat/1 Cool
- **Manual Changeover**
- Includes Stat and Subbase
- Set Point Dial
- Calibrate with Honeywell Calibration Wrench (Part #104994A)
- Cool/Off Heat System Switch
- Auto/On Fan Switch
- Adjustable Heat Anticipator

- Requires BAY24X042 Relay for Indoor Fan Operation when used for Electric Heat
- Vendor: Honeywell (T87F1990)-Stat (Q539A1022)-Base
- Finish: Gold
- Replacement: THT0583 (WY28X0212) BAS0432
- Installation (Schematic) – Honeywell #60-2222-2
- Responsible: Clarksville

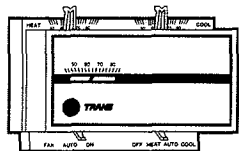


**BAY28X182**  
Subbase Required,  
Shown with 185 Subbase

- 1 Heat/1 Cool
- **With BAY28X185 Subbase:**  
**Manual Changeover**  
Instant On Fan (for Electric Heat)  
Heat/Off/Cool System Switch  
Auto/On Fan Switch
- **With BAY28X187 Subbase:**  
**Automatic Changeover**  
Off/Auto System Switch  
Auto/On Fan Switch
- Requires BAY24X042 Relay for Indoor Fan Operation when used for Electric Heat
- Clear Plastic Set Point Levers

- Adjustable Heat Anticipator
- Thermometer can be Calibrated
- Finish: Beige and Gold
- Vendor: Honeywell (T874A1184)-182 Stat (Q674E1080)-184 Base (Q674B1141)-185 Base (Q674E1033)-187 Base
- Replacement: THT0447 (WW28X182) BAS0426 (WW28X185) BAS0429 (WW28X187)
- Installation (Schematic) – 18-HD19D4
- Responsible: Tyler

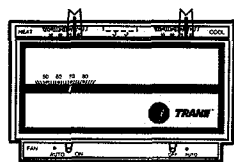
## Multiple Stage Heat/Cool Thermostats



**BAY28X183**  
Subbase Required,  
Shown with 184 Subbase

- 2 Heat/2 Cool-Can be Used for Economizer Operation
- With BAY28X184 Subbase:  
Automatic or Manual Changeover  
Off Heat/Auto/Cool System Switch  
Auto/On Fan Switch
- Requires AY24X042 Electric Heat Relay
- With BAY28X185 Subbase:  
Manual Changeover  
Instant On Fan (for Electric Heat)  
Heat/Off/Cool System Switch  
Auto/On Fan Switch
- With BAY28X187 Subbase:  
Automatic Changeover  
Off/Auto System Switch  
Auto/On Fan Switch

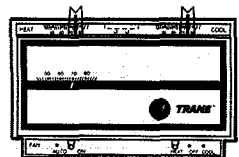
- Requires AY24X042 Electric Heat Relay
- Clear Plastic Set Point Levers
- Adjustable Heat Anticipator
- Thermometer can be Calibrated
- Finish: Beige and Gold
- Vendor: Honeywell (T874D1173)-183 Stat  
(Q674E1080)-184 Base  
(Q674B1141)-185 Base  
(Q674E1033)-187 Base
- Replacement: THT0447 (WW28X183)  
BAS0434 (WW28X184)
- Installation (Schematic) – 18-HD19D5
- Responsible: Tyler



**BAYSTAT010**

- 2 Heat/2 Cool-Can be Used for Economizer Operation
- Automatic Changeover
- Includes Stat and Subbase
- Off/Auto System Switch
- Auto/On Fan Switch
- Clear Plastic Set Point Levers
- Thermometer can be Calibrated

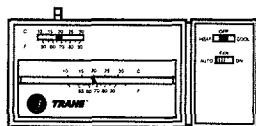
- Adjustable Heat Anticipator
- Vendor: Honeywell (T874D1082)-Stat  
(Q674C1009)-Base
- Finish: Beige and Gold
- Replacement: THT0447 (WY28X0213)  
(COV1596)
- Installation (Schematic) – Not Available
- Responsible: Clarksville



**BAYSTAT012**

- 1 Heat/2 Cool-Can be Used for Economizer Operation
- Manual Changeover
- Includes Stat and Subbase
- Heat/Off/Cool System Switch
- Auto/On Fan Switch
- Clear Plastic Set Point Levers
- Thermometer can be Calibrated
- Adjustable Heat Anticipator

- Vendor: Honeywell (T874B1035)-Stat  
(Q674B1018)-Base
- Finish: Beige and Gold
- Replacement: THT0447 (WY28X0248)  
BAS0427
- Installation (Schematic) – Not Available
- Responsible: Clarksville

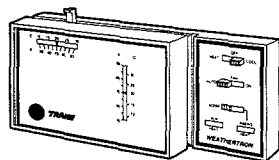


**TAYSTAT241**

- 2 Heat/1 Cool
- Manual Changeover
- For 2-stage  
Gas Furnaces
- Heat/Off/Cool System Switch
- Auto/On Fan Switch
- Clear Plastic Set Point Lever

- Vendor: GE/Morrison (3AAT86B1C1)
- Finish: Medium Bronze and Beige
- Replacement: THT0969
- Installation (Schematic) – 18-HD25D6-2
- Responsible: Tyler

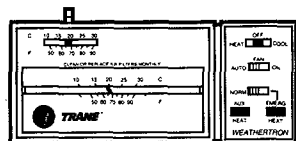
# Heat Pump Thermostats



**BAYSTAT239**

- 2 Heat/1 Cool
- Manual Changeover
- 1 Piece Construction
- Heat/Off/Cool System Switch
- Auto/On Fan Switch
- Normal/Emergency Heat Switch
- Auxiliary and Emergency Heat Indicator Lights

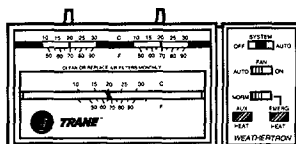
- Thermometer can be Calibrated
- Clear Plastic Set Point Lever
- Vendor: GE/Morrison (3AAT86B1A1)
- Finish: Beige and Gold
- Replacement: THT0461 (WY28X0119)
- Installation (Schematic) – 18-HD14D4-1 – THER-IN-35
- Responsible: Tyler



**BAYSTAT240**

- 2 Heat/1 Cool
- Manual Changeover
- Heat/Off/Cool System Switch
- Auto/On Fan Switch
- Normal Emergency Heat Switch
- Auxiliary and Emergency Heat Indicator Lights
- Thermometer can be Calibrated

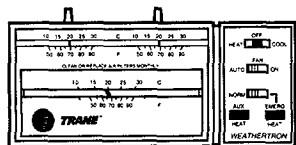
- Clear Plastic Set Point Lever
- Vendor: GE/Morrison (3AAT80A1A1)
- Finish: Beige, Gold and Brown
- Replacement: THT0461 (WY28X0907)
- Installation (Schematic) – 18-HD14D3
- Responsible: Tyler



**BAY28X138**

- 2 Heat/1 Cool
- Automatic Changeover
- Off/Auto System Switch
- Auto/On Fan Switch
- Normal/Emergency Heat Switch
- Auxiliary and Emergency Heat Indicator Lights
- Clear Plastic Set Point Levers
- Deluxe Clear Plastic Cover

- Minimum differential between Heating and Cooling is 4°F
- Thermometer can be Calibrated
- Vendor: GE/Morrison (3AAT80B1A1)
- Finish: Beige, Gold, and Brown
- Replacement: THT0460 (WY28X0906)
- Installation (Schematic) – 18-HD14D1
- Responsible: Tyler

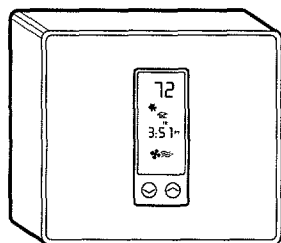


**BAY28X153A**

- 3 Heat/2 Cool
- Automatic or Manual Changeover
- Can be Used for Economizer Operation
- Auto Heat/Off/Cool System Switch
- High Auto Low Fan Switch
- Normal Emergency Heat Switch
- Auxiliary and Emergency Heat Indicator Lights
- Deluxe Clear Plastic Cover

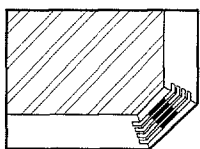
- Clear Plastic Set Point Levers
- Minimum differential between heating and cooling is 4°F
- Thermometer can be Calibrated
- Vendor: GE/Morrison (3AAT83F1B2)
- Finish: Beige, Gold and Brown
- Replacement: THT0754 (WY28X108)
- Installation (Schematic) – 18-HD16D2
- Responsible: Tyler

# Programmable Thermostats



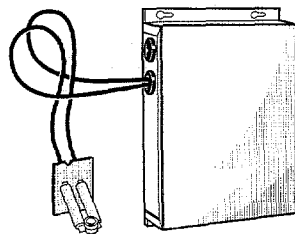
**BAYSTAT036A  
BAYSTAT037A  
BAYSTAT038A**

- **BAYSTAT036A: Single Stage**  
1 Heat/1 Cool
- **BAYSTAT037A: Multi Stage**  
2 Heat/2 Cool-Can be Used for Economizer Operation
- **BAYSTAT038A: Multi Stage Heat Pump**  
3 Heat/2 Cool-Can be Used for Economizer Operation
- Digital display indicating the time of day, the day of the week, room temperature, current program operating mode, and current active stage
- Instant override, continuous or temporary 3 hour timed
- Automatic adjustment of temperatures up to four times a day
- L.C.D. readout in F or C (Celsius) and 12 or 24-hour clock
- Preferential Rate Control (PRC) minimizes overshooting and prevents room temperature deviating from setpoint under varying load conditions (zero droop)
- PRC provides smart recovery from offset to minimize use of supplemental electric heat
- Keyboard disable to prevent tampering
- 100% solid state
- No outdoor thermostat required, utilizes computer controlled staging (multistage)
- Auto fan during setback (optional)
- No anticipator required
- Automatic or Manual changeover
- Built-in minimum on-off time delays ensure short cycle protection
- Lockable cover
- Equipment short cycle protection against power outages longer than 1/2 second. Equipment turns off for 6 minutes
- No accessories required. Each unit is complete and ready for installation
- Vendor: Enerstat STAT036 (SHC-7), STAT037 (SMS-1), STAT038 (SHP-2)
- Finish: White
- Replacement: STAT036 (THT-1503) STAT037 (THT-1504) STAT038 (THT-1505)
- Installation – 18-HD60D45
- Responsible: Clarksville



**BAYSENS025A**

- **Remote Sensor for use with BAYSTAT036, 037, 038A**
- Allows convenient thermostat location and optimum temperature sensing location
- Maximum distance from thermostat to sensor = 300 ft.
- Up to six sensors can be daisy chained
- Use 3 conductor (18-26 AWG) shielded and insulated cable
- Vendor: ENERSTAT (56-IDS-R)
- Finish: White
- Replacement: SEN-0497
- Installation – 18-HD60D44
- Responsible: Clarksville

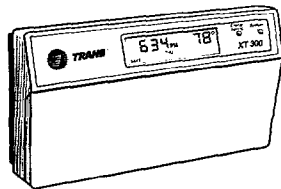


**THT1248  
(OIL FURNACE)  
ORDERED  
SEPARATELY**

**TAYPLUS103A**

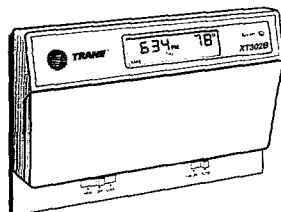
- **Dual Fuel Heat Pump Control Kit**
- **TAYPLUS103A Gas, Oil and Electric Furnaces only**
- Applicable to all furnaces with 35VA or larger low voltage transformer
- Separate high voltage power not required
- U.L. listed
- Labeled terminal board for simplified wiring
- Factory wired for NON-RESTRICTED MODE, can be wired for RESTRICTED MODE
- Replacement: KIT2503 (TAYPLUS103A)
- Installation (Schematic) – 18-BH15D7-2
- Responsible: Tyler

# Programmable Thermostats



TAYSTAT300  
XT300

- **Single Stage Heating/Cooling Systems**
- **Manual Changeover**
- **Adaptive Intelligent Recovery™** or **Conventional Recovery** assures that desired temperature is achieved at programmed time and maintained regardless of weather conditions; optimizes energy savings
- Easily programmed in hand or on the wall
- Provide up to four temperature settings per daily schedule
- Selectable daily schedules for weekdays, Saturday, and Sunday (5-1-1)
- Temporary program override available by using: WARMER and COOLER keys SKIP next period, or CHANGE to last program key
- Uses AAA Alkaline Batteries (included)
- **HOLD TEMP** key provides indefinite program override for vacations and holidays
- LCD clock continuously indicates time-of-day, day of week, current program period, and room temperature
- ENRG. SAV. and SYSTEM status indication LEDs
- Battery backup maintains clock and memory during power failures
- Adjustable cycling rates can be permanently set to fit different heating applications for optimum performance
- Installer self-test provides quick checkout of thermostat; manual bypass of time delay to checkout system
- Vendor: Honeywell (T8600C1147)
- Finish: White/Beige
- Replacement: THT0594 (WY28X0213)
- Installation – 18-HD25D1-2
- Responsible: Tyler
- Use and Care: Pub. No. 22-5127-03

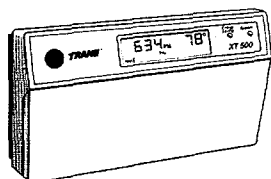


TAYSTAT302B  
XT302B

- **2 Heat/2 Cool Room Thermostat**
- **Manual Changeover: Heat/Off/Cool**
- **For XL80/90 2-stage Furnace II<sup>+</sup> Cooling/Heating Systems XL1600 Packaged Units**
- 5-1-1 Programmability
- Switch Selectable Furnace or Electric Heat Fan Operation, No Relays Required
- **Adaptive Intelligent Recovery™** assures that desired temperature is achieved at programmed time and maintained regardless of weather conditions; optimizes energy savings
- Easily programmed in hand or on the wall
- Provide up to four temperature settings per daily schedule
- Temporary program override available by using: WARMER and COOLER keys SKIP next period, or CHANGE to last program key
- Uses AAA Alkaline Batteries (included)
- **HOLD TEMP** key provides indefinite program override for vacations and holidays
- LCD clock continuously indicates time-of-day, day of week, current program period, and room temperature
- **ENERGY SAVING** and **SYSTEM** status indication LEDs
- Battery backup maintains clock and memory during power failures
- Adjustable cycling rates can be permanently set to fit different heating applications for optimum performance
- Installer self-test provides quick checkout of thermostat; manual bypass of time delay to checkout system
- Vendor: Honeywell (T8624D1063)
- Finish: White/Grey
- Replacement: THT1511
- Installation (Schematic) – 18-HD25D7-4
- Responsible: Tyler
- Use and Care: Pub. No. 22-5144-03

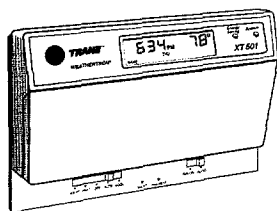


# Programmable Thermostats



TAYSTAT500  
XT500

- **Single Stage Heat Pump Systems**
- **Manual Changeover**
- **Adaptive Intelligent Recovery™** assures that desired temperature is achieved at programmed time and maintained regardless of weather conditions
- Easily programmed in hand or on the wall
- Provide up to four temperature settings per daily schedule
- Selectable daily schedules for weekdays, Saturday, and Sunday (5-1-1)
- Temporary program override available by using: WARMER and COOLER keys, SKIP next period, or CHANGE to last program key
- HOLD TEMP key provides indefinite program override for vacations and holidays
- Includes LED indication for ENERGY SAVING and SYSTEM
- LCD clock indicates time-of-day, day of week, current program period, and room temperature
- Battery backup (batteries included), with low battery indication, maintains clock and memory during power failures
- Installer self-test provides quick checkout of thermostats; manual bypass of time delay to checkout system
- Adjustable second stage cycling allows use of thermostat with plus one kit while providing maximum comfort
- Vendor: Honeywell (T8611R1091)
- Finish: White
- Replacement: THT0764 (WY28X0211)
- Installation (Schematic) – 18-HD25D2-1
- Responsible: Tyler
- Use and Care: Pub. No. 22-5128-01



TAYSTAT501  
XT501

- **Single Stage Heat Pump Systems**
- **Automatic changeover:**  
**Heat/Off/Auto/Cool**
- **Adaptive Intelligent Recovery™** assures that desired temperature is achieved at programmed time and maintained regardless of weather conditions
- Easily programmed in hand or on the wall
- Provide up to four temperature settings per daily schedule
- Selectable daily schedules for weekdays, Saturday, and Sunday (5-1-1)
- Temporary program override available by using: WARMER and COOLER keys, SKIP next period, or CHANGE to last program key
- HOLD TEMP key provides indefinite program override for vacations and holidays
- Includes LED indication for ENERGY SAVING and SYSTEM
- LCD clock indicates time-of-day, day of week, current program period, and room temperature
- Battery backup (batteries included), with low battery indication, maintains clock and memory during power failures
- Installer self-test provides quick checkout of thermostats; manual bypass of time delay to checkout system
- Adjustable second stage cycling allows use of thermostat with plus one kit while providing maximum comfort
- Vendor: Honeywell
- Finish: White
- Replacement: THT0850
- Installation (Schematic) – 18-HD25D5-1
- Use and Care: Pub. No. 22-5142-01

# Thermostat (

The following symbols indicate thermostat/unit code

● Standard Application

■ Recommended application with economizer (single compressor system)

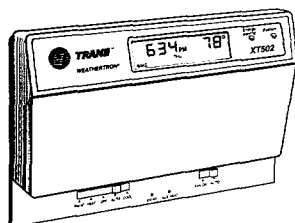
▲ Standard application with or w

FOOTNOTES				GAS FURNACE		SPLIT COOLING		SPLIT HEAT PUMP		
① Terminals 1 and 2 must be jumpered on the thermostat for electric heat. ② Requires BAY24X042 relay for electric heat. (Fan motor Hi Volt Switch on directly) ③ Requires BAY24X042 relay to prevent feedback to compressor during heating cycle. ④ Required for twinning (2-unit) application for 2-stage operation. ⑤ Requires Subbase or Control Panel. ⑥ Standard thermostat for XL 80 "R" and "V". ⑦ Can be used for II <sup>+</sup> system applications. ⑧ Instant on fan for electric heat applications. ⑨ Must be used with ZSCNTRAL010. ● Where 2 reference numbers appear both notes apply.				XE 80, 90 1 STAGE	XL/XV 80, 90 2 STAGE	TT (A, B, N, P, X, Y) 1 STAGE COOLING 1-10 Tons	TTA120-240B 2 STAGE COOLING 10-20 Tons	TW (A, B, N, P, X, Y) 1 STAGE HEAT PUMP 1-10 Tons	TWA180-240B 2 STAGE 15-20 Tons	
Cooling Only Thermostats		Replacement No.	Page							
0H/1C . . . . .	BAYSTAT304	THT0713	TLR 3			●				
0H/2C . . . . .	BAY28X186/187	THT0465 ⑤	TLR 3			●④	●			
Heating Only Thermostats										
1H/0C . . . . .	BAYSTAT303	THT0777	TLR 3	ALL GAS FURNACES →		HEATING ONLY THERMOSTATS				
1H/0C . . . . .	BAYSTAT388	THT0776	TLR 3	ALL GAS FURNACES →		HEATING ONLY THERMOSTATS				
Heat/Cool and Heat/Cool/Auto Thermostats										
1H/1C . . . . .	AY28X092	THT0714	TLR 4	●		●①				
1H/1C . . . . .	BAYSTAT305	THT0715	TLR 4	●		●①				
1H/1C . . . . .	BAY28X182/185	THT0447 ⑤	TLR 4	●		●⑧				
1H/1C . . . . .	BAY28X182/187	THT0447 ⑤	TLR 4	●		●②				
1H/1C . . . . .	BAYSTAT008	THT0583	CLK 4	●						
2H/2C . . . . .	BAY28X183/184	THT0463 ⑤	TLR 5		●	●②⑦	●②			
2H/2C . . . . .	BAY28X183/185	THT0463 ⑤	TLR 5			●⑦	●			
2H/2C . . . . .	BAY28X183/187	THT0463 ⑤	TLR 5		●	●②⑦	●②			
2H/2C . . . . .	BAYSTAT010	THT0447 ⑤	CLK 5							
1H/2C . . . . .	BAYSTAT012	THT0447 ⑤	CLK 5							
2H/1C . . . . .	TAYSTAT241	THT0969 ⑥	TLR 5		●	●⑥				
Heat Pump Thermostats										
2H/1C . . . . .	BAYSTAT239	THT0461	TLR 6					●		
2H/1C . . . . .	BAYSTAT240	THT0461	TLR 6					●		
2H/1C . . . . .	BAY28X138	THT0460	TLR 6					●		
3H/2C . . . . .	BAY28X153A	THT0754	TLR 6					●⑦	●	
Programmable Thermostats										
1H/1C . . . . .	BAYSTAT036A	THT-1503	CLK 7			●				
2H/2C . . . . .	BAYSTAT037A	THT-1504	CLK 7			●	●④			
3H/2C . . . . .	BAYSTAT038A	THT-1505	CLK 7					●	●	
Remote . . . . .	BAYSENS025A	SEN-0497	CLK 7							
— . . . . .	TAYPLUS103A	KIT2503	TLR 7							
1H/1C . . . . .	TAYSTAT300	THT0594	TLR 8	●		●②				
2H/1C . . . . .	TAYSTAT302B	THT0981	TLR 8		●	●⑥⑦	●			
1H/1C . . . . .	TAYSTAT500	THT0764	TLR 9					●		
1H/1C . . . . .	TAYSTAT501	THT0850	TLR 9					●		
3H/2C . . . . .	TAYSTAT502	THT1512	TLR 12					●⑦	●	
Sensors for Trane ComfortLink™ Systems										
— . . . . .	ZUSTATAL030	THT1239 ⑨	TLR 13	●	●	●	●	●	●	
— . . . . .	ZUSTATALS50	THT1410 ⑨	TLR 13	●	●	●	●	●	●	
— . . . . .	ZUSTATALP50	THT1411 ⑨	TLR 13	●	●	●	●	●	●	
Remote . . . . .	ZZSENSAL0100	SEN0594 ⑨	TLR 13	●	●	●	●	●	●	
Electronic Zone Sensors Voyager™										
— . . . . .	BAYSENS006B	SEN-0410	CLK 14							
— . . . . .	BAYSENS007B	SEN-0411	CLK 14							
— . . . . .	BAYSENS008B	SEN-0408	CLK 14							
— . . . . .	BAYSENS009B	SEN-0412	CLK 14							
— . . . . .	BAYSENS010B	SEN-0413	CLK 14							
— . . . . .	BAYSENS011B	SEN-0414	CLK 15							
Remote . . . . .	BAYSENS017B	SEN-0435	CLK 15							
Integrated Comfort™ System Sensors Voyager™										
— . . . . .	BAYSENS013C	SEN-0495	CLK 15							
— . . . . .	BAYSENS014C	SEN-0496	CLK 15							
Electronic Programmable Zone Sensors Voyager™										
— . . . . .	BAYSENS019A	SEN-0415	CLK 16							
— . . . . .	BAYSENS023A	SEN-0416	CLK 16							

★ Remote sensor option can be used

11

## Programmable Thermostats



TAYSTAT502  
XT502

- 3 Heat/2 Cool Room Thermostat
- Automatic changeover:  
Heat/Off/Auto/Cool/Emergency Heat
- For II<sup>+</sup> Heat Pump Systems  
XL1600 Packaged Heat Pump Units
- Adaptive Intelligent Recovery™ assures that desired temperature is achieved at programmed time and maintained regardless of weather conditions
- Easily programmed in hand or on the wall
- Provide up to four temperature settings per daily schedule
- Seven (7) Day Programming
- Temporary program override available by using: WARMER and COOLER keys, SKIP next period, or CHANGE to last program key
- HOLD TEMP key provides indefinite program override for vacations and holidays
- Includes LED indication for ENERGY SAVING and SYSTEM
- LCD clock indicates time-of-day, day of week, current program period, and room temperature
- Battery backup (batteries included), with low battery indication, maintains clock and memory during power failures
- Installer self-test provides quick checkout of thermostats; manual bypass of time delay to checkout system
- Vendor: Honeywell (T8611M7073)
- Finish: White
- Replacement: THT1512
- Installation (Schematic) – 18-HD25D9-1
- Responsible: Tyler
- Use and Care: Pub. No. 22-5179-01

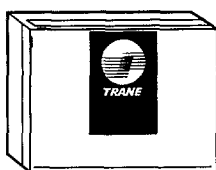
## Trane ComfortLink™ System

### The System Controller

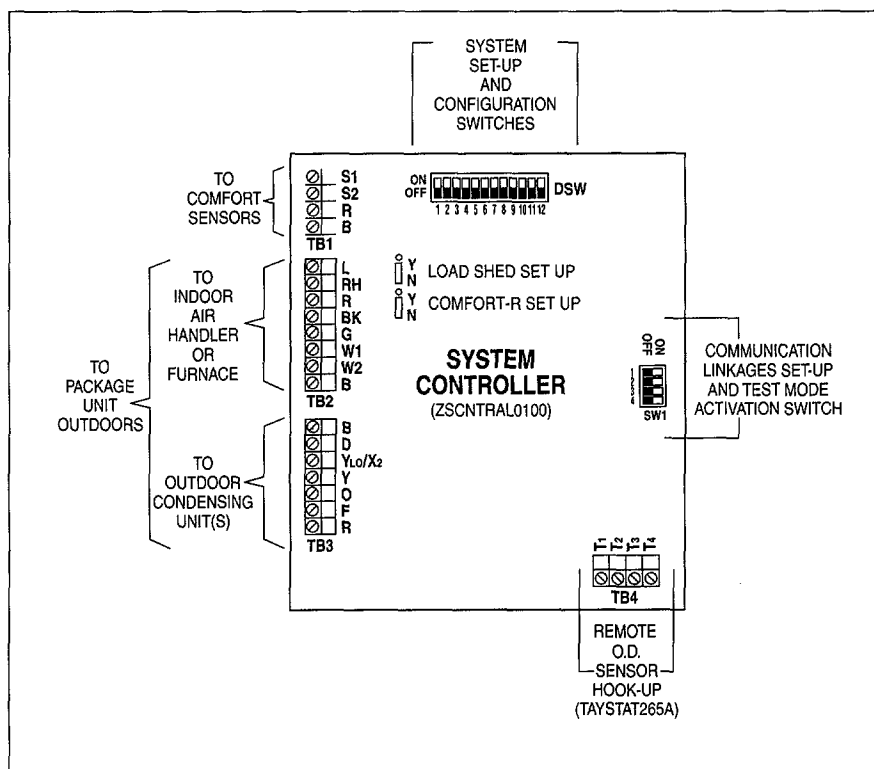
The Controller is the master and center hub of the system. It acquires information. From the information it gathers, it establishes the systems operation. The main functions of the controller are communications, computation, activation and control. Used with Sensors, on next page.

Use:

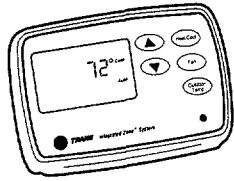
- Two Piece Thermostat
- Home Automation Interface  
"Open Protocol"
- Extensive Diagnostics and Monitoring System



ZSCNTRAL010

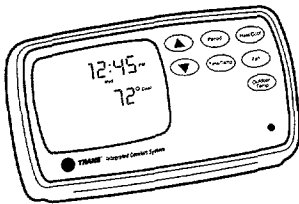


# Sensors for Trane ComfortLink™ Systems



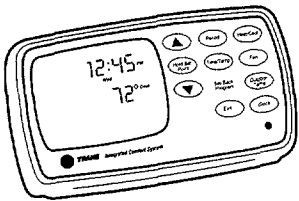
**ZUSTATAL030**  
Temperature Only

- **Communicating Comfort Sensor**
- Continuously Displays:
  - Indoor Temperature
  - Thermostat Mode
  - Fan Mode
- Outdoor Temperature Display upon request (TAYSTAT265A Sensor required)
- Vendor: Trane
- Finish: Shell White
- Replacement: THT1239
- Installation: 18HH08D9-1
- Use and Care: Pub. No. 22-5178-01
- Responsible: Tyler



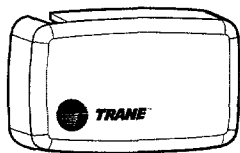
**ZUSTATALS50**  
Time and Temperature

- **Non-Programmable Sensor**
- Continuously Displays:
  - Indoor Temperature
  - Thermostat Mode
  - Fan Mode
  - Time-of-Day
  - Day-of-Week
  - System Staging
- Battery backup
- Outdoor Temperature Display upon request (TAYSTAT265A Sensor required)
- Vendor: Trane
- Finish: Shell White
- Replacement: THT1410
- Installation: 18HH08D9-1
- Use and Care: Pub. No. 22-5153-01
- Responsible: Tyler



**ZUSTATALP50**  
Time and Temperature

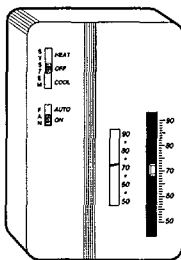
- **Programmable Sensor**
- Continuously Displays:
  - Indoor Temperature
  - Thermostat Mode
  - Programmable
  - Fan Mode
  - Time-of-Day
  - Day-of-Week
  - System Staging
  - Active Program
- Battery backup
- Programmable setback (two setpoints)
- Schedules for weekdays, Saturday/Sunday (5-2)
- Temporary program override
- Hold setpoint
- Outdoor Temperature Display upon request (TAYSTAT265A Sensor required)
- Vendor: Trane
- Finish: Shell White
- Replacement: THT1411
- Installation: 18HH08D9-1
- Use and Care: Pub. No. 22-5154-01
- Responsible: Tyler



**ZZSENSAL0100**  
Remote Sensor

- **Room/Remote Sensor**
- Remote Sensor for:
  - ZUSTATALS50
  - ZUSTATALP50
- Vendor: Trane
- Finish: Shell White
- Replacement: SEN0594
- Installation: 18HH08D6-1
- Responsible: Tyler

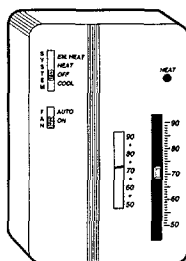
# Electronic Zone Sensors for Voyager™ Units



**BAYSENS006B**

- **Single Setpoint**
- **Manual Changeover**
- Use With:  
3 – 25 Ton Units YCD\YCH and TCD\TCH
- Heat/Off/Cool System Switch
- Auto/On Fan Switch
- Blue Cool/Red Heat Setpoint Levers

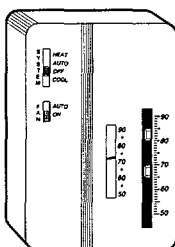
- Single Setpoint requires 4 wires for Electric/Electric
- Vendor: Sunne (62822)
- Finish: Pantone Cool Gray #2C
- Replacement: SEN-0410
- Installation – 18-HD60D28
- Responsible: Clarksville



**BAYSENS007B**

- **Single Setpoint**
- **Manual Changeover**
- Use With:  
3 – 20 Ton Units WCD\WCH
- Heat/Off/Cool System Switch
- Auto/On Fan Switch
- Normal/Emergency Heat Switch
- Heat Indicator Light

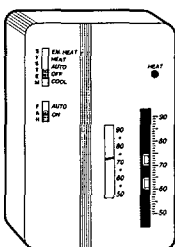
- Blue Cool/Red Heat Setpoint Levers
- Single Setpoint for heat pumps systems requires 6 wires
- Vendor: Sunne (62821)
- Finish: Pantone Cool Gray #2C
- Replacement: SEN-0411
- Installation – 18-HD60D33
- Responsible: Clarksville



**BAYSENS008B**

- **Dual Setpoint**
- **Manual or Auto Changeover**
- Use With:  
3 – 25 Ton Units YCD\YCH and TCD\TCH
- Heat/Auto/Off/Cool Switch
- Auto/On Fan Switch

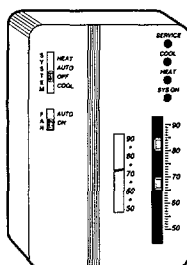
- Blue Cool/Red Heat Setpoint Levers
- Vendor: Sunne (62826)
- Finish: Pantone Cool Gray #2C
- Replacement: SEN-0408
- Installation – 18-HD60D34
- Responsible: Clarksville



**BAYSENS009B**

- **Dual Setpoint**
- **Manual or Auto Changeover**
- Use With:  
3 – 20 Ton Units WCD\WCH
- Heat/Auto/Off/Cool Switch
- Auto/On Fan Switch
- Normal/Emergency Heat Switch

- Heat Indicator Light
- Blue Cool/Red Heat Setpoint Levers
- Vendor: Sunne (62825)
- Finish: Pantone Cool Gray #2C
- Replacement: SEN-0412
- Installation – 18-HD60D35
- Responsible: Clarksville

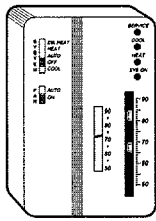


**BAYSENS010B**

- **Dual Setpoint**
- **Manual or Auto Changeover**
- Use With:  
3 – 25 Ton Units YCD\YCH and TCD\TCH
- Heat/Auto/Off/Cool Switch
- Auto/On Fan Switch
- System On/Heat/Cool/Service

- Indicator Lights
- Blue Cool/Red Heat Setpoint Levers
- Vendor: Sunne (62823)
- Finish: Pantone Cool Gray #2C
- Replacement: SEN-0413
- Installation – 18-HD60D36
- Responsible: Clarksville

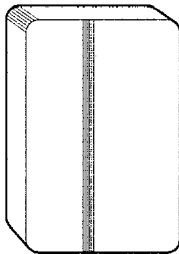
## Electronic Zone Sensors for Voyager™ Units



BAYSENS011B

- Dual Setpoint
- Manual or Auto Changeover
- Use With:  
3 – 20 Ton Units WCD\WCH
- Heat/Auto/Off/Cool Switch
- Auto/On Fan Switch
- Normal/Emergency Heat Switch
- System On/Heat/Cool/Service Indicator Lights

- Blue Cool/Red Heat Setpoint Levers
- Vendor: Sunne (62824)
- Finish: Pantone Cool Gray #2C
- Replacement: SEN-0414
- Installation – 18-HD60D37
- Responsible: Clarksville

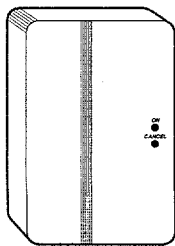


BAYSENS017B

- Remote Zone Sensor
- Use With:  
BAYSENS006, 007, 008, 009, 010B, 011B
- Allows remote zone monitoring with standard electronic zone sensors
- Vendor: Sunne (62828)

- Finish: Pantone Cool Gray #2C
- Replacement: SEN-0435
- Installation – 18-HD60D41
- Responsible: Clarksville

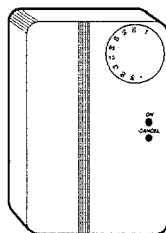
## Integrated Comfort™ System Sensors for Voyager™ Units



BAYSENS013C

- Room Sensor with Timed Override
- Use with Integrated Comfort™ Systems
- Use With:  
3 – 25 Ton Units YCD\YCH and TCD\TCH  
3 – 20 Ton Units WCD\WCH
- Timed Override Buttons

- Vendor: Sunne (65464)
- Finish: Pantone Cool Gray #2C
- Replacement: SEN-0495
- Installation – 18-HD60D38
- Responsible: Clarksville

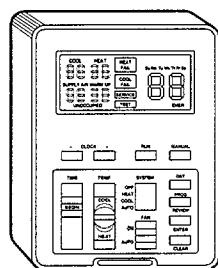


BAYSENS014C

- Room Sensor with Setpoint Adjustment
- Used with Integrated Comfort™ Systems
- Use With:  
3 – 25 Ton Units YCD/YCH and TCD/TCH  
3 – 20 Ton Units WCD/WCH
- Timed Override Buttons
- Thumbwheel Setpoint

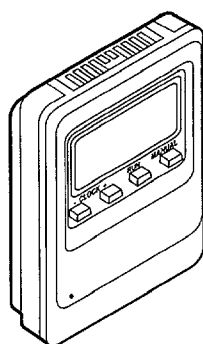
- Vendor: Sunne (65465)
- Finish: Pantone Cool Gray #2C
- Replacement: SEN-0496
- Installation – 18-HD60D39
- Responsible: Clarksville

# Electronic Programmable Zone Sensors for Voyager™ Units



**BAYSENS019A**

- **Automatic or Manual Changeover with System Lights**
- Use With:  
3 – 25 Ton Units YCD\YCH and TCD/TCH
- Digital display indicating the time of day, the day of the week, room temperature, current program operating mode, and current active stage
- Continuous or 3 hour timed override
- Two occupied, two unoccupied programs per day
- L.C.D. readout in F or C (Celsius) and 12 or 24-hour clock
- Keyboard disable to prevent tampering
- Programming on a 7-day basis
- Status indication lights displayed in Digital Display
- Auxiliary relay (Form 1C)
- Auto Fan During Setback
- No Anticipator Required
- No Battery Required
- No accessories required. Each unit is complete and ready for installation
- Remote Room Sensor (BAYSENS017B)
- Vendor: Heatcraft 63J74
- Finish: Pantone Cool Gray #2C
- Replacement: SEN-0415
- Installation: 18-HD60D29
- Responsible: Clarksville



**BAYSENS023A**

- **Heat Pump**
- **Automatic or Manual Changeover with System Lights**
- Use With:  
3 – 20 Ton Heat Pump Units WCD/WCH
- Digital display indicating the time of day, the day of the week, room temperature, current program operating mode, and current active stage
- Status indication lights displayed in Digital Display
- Continuous or 3 hour timed override
- Two occupied, two unoccupied programs per day
- L.C.D. readout in F or C (Celsius) and 12 or 24-hour clock.
- Programming on a 7-day basis
- Auxiliary relay (Form 1C)
- Auto Fan During Setback
- No Anticipator Required
- No Battery Required
- No accessories required. Each unit is complete and ready for installation
- Remote Room Sensor (BAYSENS017B)
- Vendor: Heatcraft 63J76
- Finish: Pantone Cool Gray #2C
- Replacement: SEN-0416
- Installation: 18-HD60D31
- Responsible: Clarksville



## Zone Sensor Unit Installation

The zone sensor provides the operator control and zone temperature sensing functions for use with electronic unit controls. Refer to the appropriate unit installation manual for interconnecting wiring instructions.

### Zone Sensor Location

To ensure proper operation, select a location on an interior wall, at a height approximately 5 feet above the floor, with freely circulating air of average temperature.

#### Avoid locations:

- Behind doors or in corners where air does not freely circulate.
- On an outside wall or any wall with unheated (uncooled) areas behind the zone sensor.
- Where direct sunlight or any source of radiant heat could affect the temperature measurements.
- In line with the discharge air from the unit being controlled.

Mount the zone sensor base on the wall or optional mounting plate with the wires routed through the wire access hole in the base of the zone sensor. See Figure 1.

### Zone Sensor Operator Controls

#### Emergency Heat/Heat/Auto/Off/Cool

This switch determines whether the unit operates in emergency heat (EM. HEAT – for heat pumps only), heating (HEAT), automatically changing from heating to cooling as required (AUTO), heating and cooling functions disabled (OFF), or cooling (COOL).

#### Fan Auto/Fan On

This switch determines whether the indoor fan operates during cooling and heating cycles only (FAN AUTO) or runs continuously (FAN ON).

#### Temperature Adjustments

One or two temperature adjustment controls are provided to set the desired

temperature or temperature range (for unit mode AUTO). If two controls are present, the blue control sets the desired temperature for cooling and the red control sets the desired temperature for heating.

### Temperature Indicator

This indicates the temperature in the zone. The indicator has been factory calibrated and should not normally require adjustment. If adjustment is needed, it can be accomplished by slowly rotating a small screwdriver in the slot on the back of the indicator until the correct temperature is obtained.

### Optional Remote Sensor

When using the optional remote sensor (BAYSENS017B), it should be located in the space that is to be controlled. Wire according to the interconnecting wiring diagrams in the unit IOM.

Installation: 18-HD60D41

Responsible: Clarksville

## Definitions

**Calibration** – The relationship of the dial setting and the cut-in temperature of the thermostat.

**ComfortLink™** – An open architecture communications bridge for reliably interfacing to automation and energy management systems.

**Cut-in Point** – The temperature at which the thermostat calls for system operation.

**Cut-out Point** – The temperature at which the thermostat stops calling for heating or cooling.

**Cycle Rate** – The number of times per hour that the heating or cooling equipment is cycled on at half load conditions.

**Droop** – An indoor temperature control condition where the room remains below the thermostat setting. This control occurs in mild cooling conditions and is

caused by the cooling anticipator resistor which provides a false heat source for the thermostat to maintain relative humidity control.

**Heat Anticipator** – (Sometimes called a Preheat Resistor.) A bias heater that shuts off the thermostat **Before** the room reaches the thermostat setting. The heat anticipator minimizes overshoot.

**Manual or Mechanical Differential** – The difference (Degrees F) between cut-in and cut-out temperature with **No** electrical load connected to the thermostat.

**Operating Differential** – The difference (Degrees F) in cut-in and cut-out temperature when the thermostat is actually operating equipment. Operating differential is less than mechanical differential.

**Programmable Sensor** – A sensor with the capability to assign setpoints to selectable periods of time.

**Range** – Minimum to maximum temperature scale shown on dial.

**Sensor** – A device that measures and communicates temperature of the conditioned space in which it is located to a system controller.

**Set Point** – The temperature at which the thermostat indicator is set.

**Two Piece Thermostat** – System consisting of a sensor mounted in the controlled space communicating to a controller which establishes the systems operation.

# Thermostat Problem Identification Sheet

**80% of Thermostat returns are related to installation and service errors.  
Use this handy troubleshooting guide to pinpoint problem areas!**

Customer Name: \_\_\_\_\_ Date: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_

Dealer Name: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_

Phone: ( \_\_\_\_\_ ) \_\_\_\_\_ - \_\_\_\_\_

## Equipment Model Numbers

Installation Date: \_\_\_\_\_

Indoor: \_\_\_\_\_

Serial No.: \_\_\_\_\_

Outdoor: \_\_\_\_\_

Serial No.: \_\_\_\_\_

Thermostat: \_\_\_\_\_

## House Information

\_\_\_\_\_ Single Level \_\_\_\_\_ Two or more stories

\_\_\_\_\_ Split Level

Thermostat Serves: \_\_\_\_\_ Single Floor \_\_\_\_\_ Two or more floors

Thermostat Location: \_\_\_\_\_

Room Thermostat Set-Point: \_\_\_\_\_ °F Outdoor Temp: \_\_\_\_\_ °F

Mode of Operation: ☐ Cooling ☐ Heating

Thermostat Wire Gauge: \_\_\_\_\_ Wire Length: \_\_\_\_\_ Ft.

Describe Complaint: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

☐ Cracked Bulb (Mercury Dull)

☐ Slide-Switch Not Working (Describe)

☐ Out of Calibration \_\_\_\_\_ °F Above/Below Set-point

☐ Short Cycling \_\_\_\_\_ minutes on \_\_\_\_\_ minutes off

## Obsolete Equipment

Old Model Number	Description	New Substitute Number	Direct Replacement or Changeover Kit Number	From PLM
BAYSTAT009	Single Stage Heat/Cool Thermostat	—	THT0447, BAS0427	Dec. '88, June '90
BAYSTAT011	Multiple Stage Heat/Cool Thermostat	—	THT0447, BAS0433	Dec. '88, June '90
BAYSTAT013	Multiple Stage Heat/Cool Thermostat	—	THT0447, BAS0431	Dec. '88, June '90
BAYSTAT339	Heat Pump Thermostat	— —	WY28X0112 – Stat WY28X0113 – Base	Dec. '88
BAYSTAT001	Heat Pump Thermostat	—	THT0505 (WY28X0244)	Dec. '88, June '90
BAYSTAT002	Heat Pump Thermostat	—	THT0505 (WY28X0245)	Dec. '88, June '90
BAYSTAT003B	Programmable Thermostat	BAYSTAT037A	THT0691 (WY28X0207)	Dec. '88, June '90, April '93
BAYSTAT004B	Programmable Thermostat	BAYSTAT036A	THT0692 (WY28X0206)	Dec. '88, June '90, April '93
BAYSTAT024B	Programmable Thermostat	BAYSTAT038A	THT0690 (WY28X0246)	Dec. '88, June '90, April '93
BAYSTAT021	Programmable Thermostat	—	SEN0497 (WW28X0225)	Dec. '88, June '90
BAYSTAT021A	Programmable Thermostat	BAYSENS025A	SEN0497 (WW28X0225)	April '93
TAYSTAT261	Programmable Thermostat	—	THT0763 (WY28X209)	June '90
TAYSTAT262	Programmable Thermostat	—	THT0825	June '90, April '93
TAYSTAT263	Programmable Thermostat	—	THT0826	June '90
TAYPLUS102A	Heat Pump Control Kit	—	CNT1327	April '93
BAYSTAT253	Programmable Thermostat	—	SEN0242	April '93
AYVSTAT100A	Variable Speed Thermostat	—	THT1186	April '93
AYVSTAT101A	Variable Speed Thermostat	—	THT1203	April '93
TAYSTAT302	Programmable Thermostat	TAYSTAT302B	THT1227	April '93
TAYSTAT302A	Programmable Thermostat	TAYSTAT302B	THT1227	April '93
BAYSTAT015	Cooling Only Thermostat	— —	THT0448 (WY28X0239) BAS0429	Dec. '88, June '90
BAYSTAT028A	Central Control Panels & Thermostats	—	PNL9986 (WY28X0240)	Dec. '88, June '90
BAYSTAT005	Central Control Panels & Thermostats	—	PNL6778 (WY28X0241)	Dec. '88, June '90
BAYSTAT006	Central Control Panels & Thermostats	— —	THT0447 (WY28X0242) BAS0430	Dec. '88, June '90
BAYSTAT007	Central Control Panels & Thermostats	— —	THT0447 (WY28X0243) BAS0430	Dec. '88, June '90
BAYSENS006A	Electronic Zone Sensor	BAYSENS006B	SEN0279	April '93
BAYSENS007A	Electronic Zone Sensor	BAYSENS007B	SEN0286	April '93
BAYSENS008A	Electronic Zone Sensor	BAYSENS008B	SEN0280	April '93
BAYSENS009A	Electronic Zone Sensor	BAYSENS009B	SEN0287	April '93
BAYSENS010A	Electronic Zone Sensor	BAYSENS010B	SEN0281	April '93
BAYSENS011A	Electronic Zone Sensor	BAYSENS011B	SEN0288	April '93
BAYSENS017A	Electronic Zone Sensor	BAYSENS017B	SEN0063	April '93
BAYSENS013A	Integrated Comfort System Sensor	BAYSENS013C	SEN0283	April '93
BAYSENS014A	Integrated Comfort System Sensor	BAYSENS014C	SEN0284	April '93
BAYSENS012A	Electronic Programmable Zone Sensor	BAYSENS019A	SEN0282	April '93
BAYSENS018A	Electronic Programmable Zone Sensor	BAYSENS023A	SEN0305	April '93

## Thermostat Check and Information List

- ☐ Voltage between R&B (Red and Blue wires) at thermostat

System off \_\_\_\_\_ volts

System running \_\_\_\_\_ volts

Check for wire insulation under screws

- ☐ Voltage at outdoor unit

\_\_\_\_\_ Volts between R&B (Red and Blue) wires

\_\_\_\_\_ Volts between T&B (Brown and Blue) wires

- ☐ Hole in wall behind thermostat sub-base sealed.

- ☐ System running 4 or more hours.

At start-up, a temperature variation of 10 – 15°F may occur for several hours until the thermostat and house reach a balance.

- ☐ Thermostat in return-air stream.

Airflow across thermostat in excess of 50 FPM may effect operation.

- ☐ Free flow of air around thermostat.

Is thermostat located behind a door or curtain or in a dead-air space unable to properly sense temperature?

- ☐ "T" circuit hooked up and energized.

Without the "T" circuit energized, 6° or more from set-point out of calibration can be expected.

- ☐ Thermostat level

- ☐ Locations effecting thermostat operation and performance

- Hot or cold air from supply grills or registers
- Radiant heat from sunlight, appliances or fireplaces
- Concealed pipes and chimneys
- Open wall chase
- Unconditioned room on opposite side of wall partition
- Kitchen range on opposite side of partition
- Heat from nearby lamps, radios, coffee pots or television sets
- Drafts from stairwells or outside doors
- Air current paths from radiators
- Outside wall too near
  - Thermostat must be a minimum of 18 inches from an exterior wall

**Call your Local Distributor Technical Representative  
if these tips can't solve the problem.**

## Relay Hook-up

### Accessory Relay Hook-up

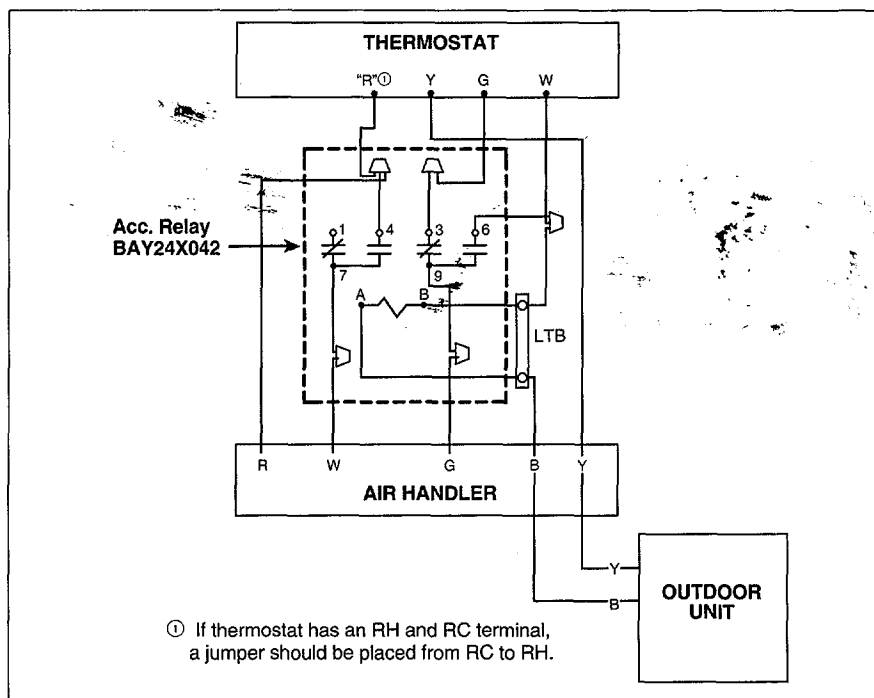
BAY24X042 relay for fan operation when using electric heat.

Relay required on thermostats with footnote ②, see Thermostat Quick Reference on pages 8 and 9.

This sample hook-up diagram illustrates Field Connections for cooling only units, electric heat and automatic change over thermostat.

On a call for heat, the relay provides for instant fan-on. Without the relay, you will get no airflow or heat! Relay is not needed with Fossil Fuel on Heat Pump applications.

Responsible: Tyler



## Service Tips

### Adjusting Heat Anticipators

The heat anticipator is sometimes called a preheat resistor. It causes the thermostat to cycle off before the room adjusts to the set point temperature. The heat anticipator expects residual heat in the system will satisfy the thermostat set point.

Setting the anticipator is not difficult, and will only take a few minutes. An improper setting will cause the furnace to either short cycle or run too long, exceeding the thermostat setting. An improper setting can also shorten the life of a heat exchanger. Set the anticipator to match the current draw of the primary electrical load. If a two-stage heating thermostat is used, set both heat anticipators to their respective primary electrical loads.

#### To Set The Anticipator: (with gas or oil furnaces)

The Installers Manual will give settings.

1. Take a piece of thermostat wire and make a ten-loop coil of wire.
2. Connect the ends of the coil of wire to the red and white wire terminals on

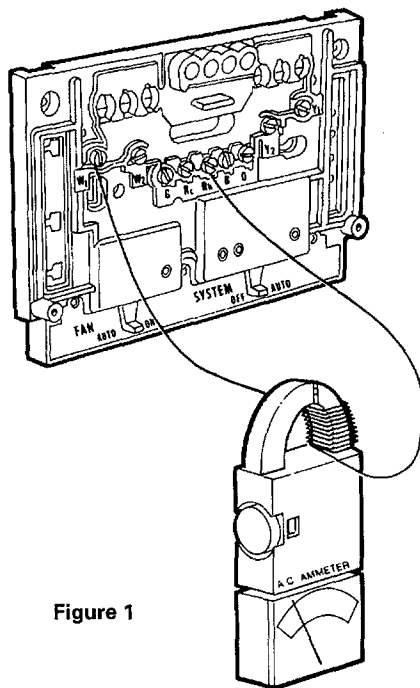


Figure 1

the thermostat subbase (See Figure 1). With one-piece thermostats, remove the red and white wires from the thermostat. Join the two wires to the looped coil completing the circuit to the primary load.

3. Set the amp probe on its lowest scale. After the system establishes steady state, take the current reading and divide by ten. This will yield the heat anticipator current set point. On older furnaces, it used to be a common practice to set the anticipator by the rating on the gas valve nameplate. However, on today's more energy efficient furnaces with their additional components, this will not yield the correct value.
4. Set heat anticipator (See Figure 2).

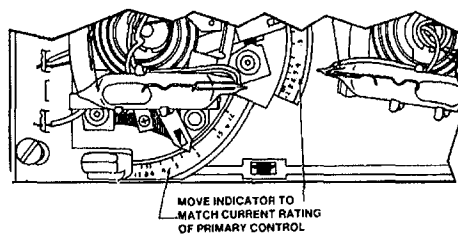


Figure 2

When the anticipator is properly set, the residual heat from the furnace will be enough to bring the room temperature up to the thermostat set point with no overshoot.