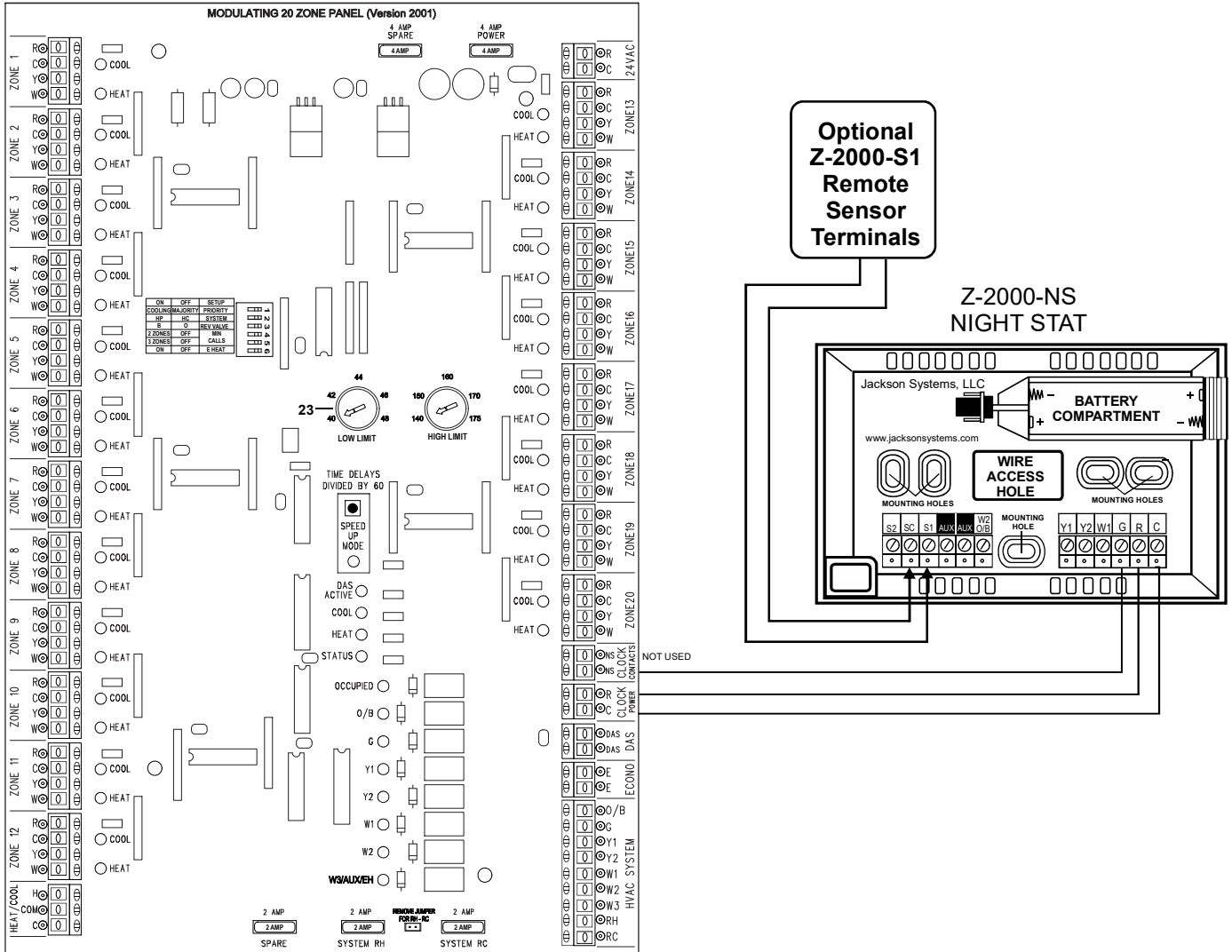


Z-2000-NS PROGRAMMABLE NIGHT STAT WIRING DIAGRAM (FOR Z-2000 PANEL (VERSION 2001))



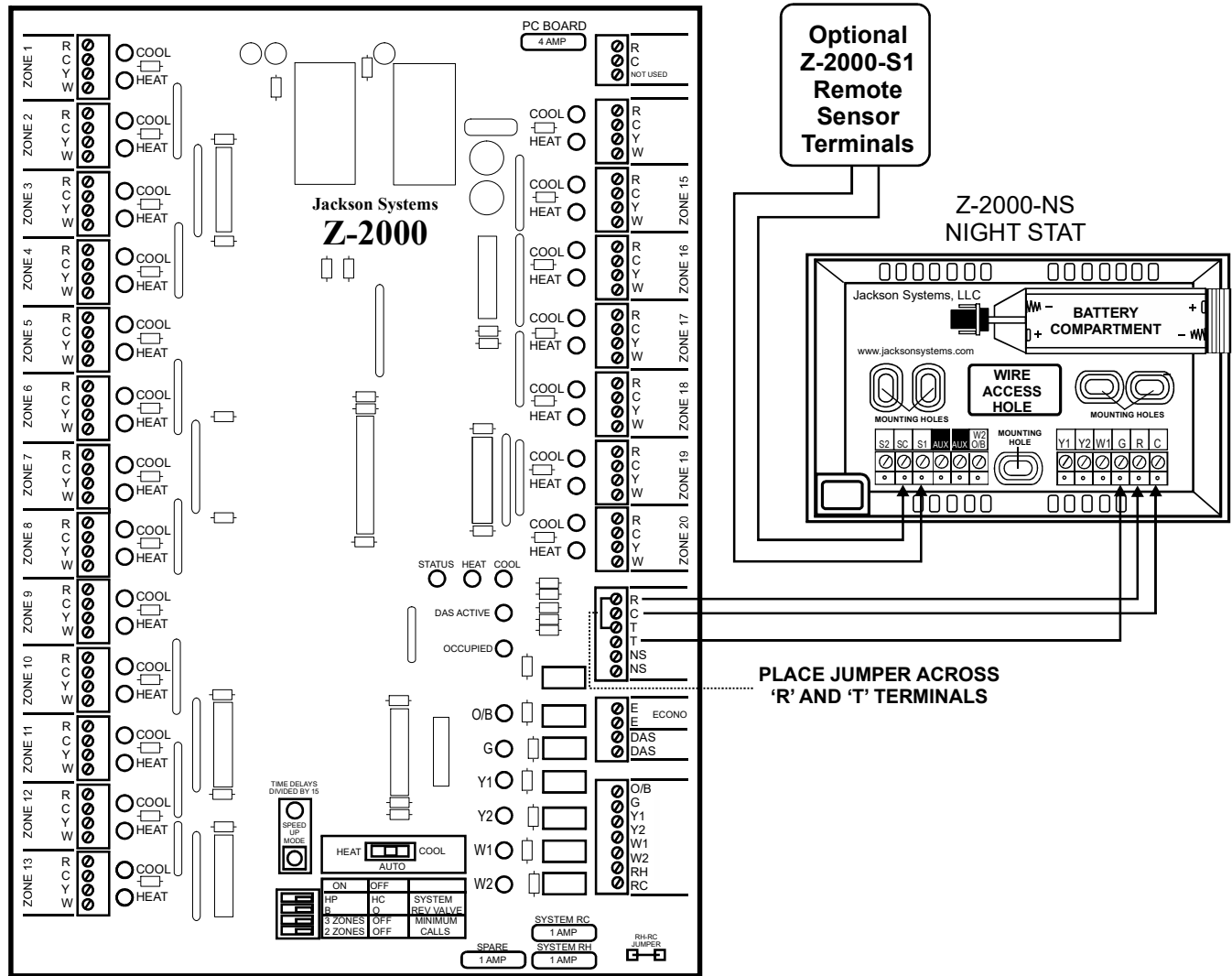
OVERVIEW:

The Z-2000-NS programmable touchscreen thermostat can be used for occupied and unoccupied scheduling of the Z-2000 (Version 2001) panel. When wired and configured properly, the thermostat takes the place of a separate 7-day clock, night stat and override timer. The Z-2000-NS Programmable Fan option is used to trigger the 'G' fan relay to open or close the Clock Contact 'T' terminals on the Z-2000 (Version 2001) panel that places the system in the occupied or unoccupied mode of operation. The thermostat can also be used with a Z-2000-S1 Indoor Remote Sensor. 24 volt power to the thermostat is supplied by the Z-2000 (Version 2001) panel through dedicated Clock Power terminals 'R' and 'C'. The thermostat also has battery backup to maintain the real-time clock in the event of a power failure. The thermostat can be configured to provide 7-day scheduling with 2 or 4 events per day. For commercial schedules, 2 events per day is typical.

WIRING:

Remove the factory jumper on the Z-2000 (Version 2001) panel from the NS CLOCK CONTACT terminals. Wire the Z-2000-NS Night Stat as shown in the wiring diagram. The Z-2000-NS Night Stat should be located in an area that represents the general load characteristics of the building. If the thermostat is located in an equipment room, a remote sensor may be required. In applications where 24 hour occupancy exists, a night stat may not be necessary. If an optional T-21-S1 remote sensor is used, use separate 18-2 wire and wire the sensor to the 'SC' and 'S1' terminals on the thermostat. (Polarity does not matter) Maximum wire distance between thermostat and sensor is 200 feet.

Z-2000-NS PROGRAMMABLE NIGHT STAT WIRING DIAGRAM (FOR Z2000 PANEL)



OVERVIEW:

The Z-2000-NS programmable touchscreen thermostat can be used for occupied and unoccupied scheduling of the Z-2000™ Comfort System™. When wired and configured properly, the thermostat takes the place of a separate 7-day clock, night stat and override timer. The Z-2000-NS Programmable Fan option is used to trigger the 'G' fan relay to open or close the Clock Contact 'T' terminals on the Z-2000 panel that places the system in the occupied or unoccupied mode of operation. The thermostat can also be used with a Z-2000-S1 Indoor Remote Sensor. 24 volt power to the thermostat is supplied by the Z-2000 panel through dedicated Clock Power terminals 'R' and 'C'. The thermostat also has battery backup to maintain the real-time clock in the event of a power failure. The thermostat can be configured to provide 7-day scheduling with 2 or 4 events per day. For commercial schedules, 2 events per day is typical.

WIRING:

Wiring the Z-2000-NS to the Z-2000 panel only requires 18 gauge thermostat wire. (See diagram) Wire the thermostat 'C' terminal to the Clock Power 'C' terminal on the Z-2000 panel. Wire the thermostat 'R' terminal to the Clock Power 'R' terminal on the Z-2000 panel. Jumper the 'R' terminal on the panel to one of the Clock Contacts 'T' terminals. Wire the thermostat 'G' terminal to the other Clock Contacts 'T' terminal. If an optional T-21-S1 remote sensor is used, use separate 18-2 wire and wire the sensor to the 'SC' and 'S1' terminals on the thermostat. (Polarity does not matter) Maximum wire distance between thermostat and sensor is 200 feet.

Z-2000-NS PROGRAMMING INSTRUCTIONS

HOW IT WORKS:

The Z-2000-NS does not control the HVAC equipment and only uses the 'G' fan relay to put the Z-2000 panel in either the occupied or unoccupied mode. This is accomplished by using the Programmable Fan option so that the fan relay is energized during occupied mode (Always On) and de-energized during unoccupied mode (Automatic). When in Automatic mode, the fan relay will only energize when the temperature rises above or falls below the programmed unoccupied heating and cooling setpoints.

RECOMMENDED SETUP:

Refer to the Installation Instructions to configure the thermostat. Leave all other setup menu items not shown below in factory default.

SYSTEM SWITCH SETTINGS:

The Z-2000-NS contains a set of four system switches located on the thermostat printed circuit board. Make sure the system switches are set as follows:

Sw 1 = OFF
Sw 2 = ON
Sw 3 = OFF
Sw 4 = OFF

INSTALLER SETUP MENU CHANGES:

After the thermostat is powered up, touch and hold both the **Clock** and **Mode** section for 5 second to enter the Installer Menu. Touch **Mode** to advance forward through the menu or touch **Fan** to backup.

MENU CHANGES: (LEAVE ALL OTHER OPTIONS AT FACTORY DEFAULTS)

02= 2 (Program Schedules)
04 = 1 (Programmable Fan)

After the above changes have been made, touch and hold **Mode** until the thermostat exits the Installer Setup menu.

SETTING THE CLOCK AND DAY OF WEEK:

It is important that the time of day and day of the week is set properly so that occupied and unoccupied programs start on time.

1. Touch the **Clock** until the hour week flashes. Tap the **UP** or **DOWN** arrow to select the hour. Note: Make sure hour is correctly set for AM or PM.
2. Touch **Clock** again and the minutes will flash. Tap the **UP** or **DOWN** arrow to select the correct minutes.
3. Touch **Clock** again and month will flash. Tap the **UP** or **Down** arrow to select the correct month.
4. Touch **Clock** again and the day will flash. Tap the **UP** or **Down** arrow to select the day of the month.
5. Touch **Clock** again and the year will flash. Tap the **UP** or **Down** arrow to select the year.
6. To exit the menu, touch **Clock** again. The proper day of the week will automatically be displayed with the clock and calendar.

DAYLIGHT SAVING TIME:

The Z-2000-NS automatically compensates for Daylight Saving Time.

PROGRAMMING EVENTS:

When the thermostat is configured to provide 2 schedules per day (Occupied/Unoccupied), 7 day per week, each event is displayed on the LCD as **DAY** (Occupied) and **NIGHT** (Unoccupied).

1. Touch **Program** until **Mon** (Monday) flashes.
2. Tap **Program** again until the hour flashes and **Day** is displayed on the LCD. Use the **UP** or **DOWN** arrow to set the hour start time. Note: Make sure hour is correctly set for AM or PM.
3. Tap **Program** again until the minutes flash. Use the **UP** or **DOWN** arrow to set the minutes.
4. Tap **Program** again and the heating setpoint will flash. Leave the setpoint at the factory default.
5. Tap **Program** again and the cooling setpoint will flash. Leave the setpoint at the factory default.
6. Tap **Program** again and the fan option **Automatic** will flash. Use the **UP** or **DOWN** arrow to set the fan option to **Always On**.

7. Tap **Program** again until the hour flashes and **Night** is displayed on the LCD. Use the **UP** or **DOWN** arrow to set the hour start time. Note: Make sure hour is correctly set for AM or PM.
8. Tap **Program** again until the minutes flash. Use the **UP** or **DOWN** arrow to set the minutes.
9. Tap **Program** again and the cooling setpoint will flash. You can use the **UP** or **DOWN** arrow to change the cooling setpoint or use the factory default of 82 degrees.
10. Tap **Program** again and the heating setpoint will flash. You can use the **UP** or **DOWN** arrow to change the heating setpoint or use the factory default of 60 degrees.
11. Tap **Program** again and the fan option **Automatic** will flash. Leave fan option set to **Automatic**.
12. Tap **Program** again and **CPY** (Copy) will appear on the LCD. If you wish to copy the Monday program to additional days of the week, use the **UP** or **DOWN** arrow to add additional days. Example: **Mon Tue Wed Thu Fri**
13. Once you have selected the days to be copied, touch **Program**. **CPY** will begin to flash and then the next programming day will flash. Example: If you copy the Monday schedule through Friday, **Sat** (Saturday) will flash. Simply repeat the programming steps for any day where the building will be unoccupied. The only required change is that both the **Day** and **Night** fan option should be set to **Automatic** and the heating and cooling setpoints for **Day** should reflect the unoccupied setpoints for **Night**.
14. Once programming is completed, make sure the thermostat is set in the **Auto** mode of operation.
15. Make sure the 2 AA batteries are installed in the thermostat even though it will be powered by 24 VAC. In the event of a power failure, the batteries will maintain the real time of day. Batteries should be replaced once a year or whenever the low battery symbol appears on the LCD.

TYPICAL 7-DAY SCHEDULE HAVING 2 EVENTS PER DAY WITH SATURDAY/SUNDAY UNOCCUPIED

PROGRAM	DAY	START TIME	HEAT SETPOINT	COOL SETPOINT	FAN
DAY	MON	7:00 AM	70	75	Always On
NIGHT		5:00 PM	62	83	

COPY MONDAY PROGRAM TO TUESDAY, WEDNESDAY, THURSDAY AND FRIDAY

DAY	SAT	7:00 PM	62	83	Automatic
NIGHT		5:00 PM	62	83	Automatic

COPY SATURDAY PROGRAM TO SUNDAY