SPECIFIED CONTROLS

Night Stat
For SC-Z20 Zoning Panel
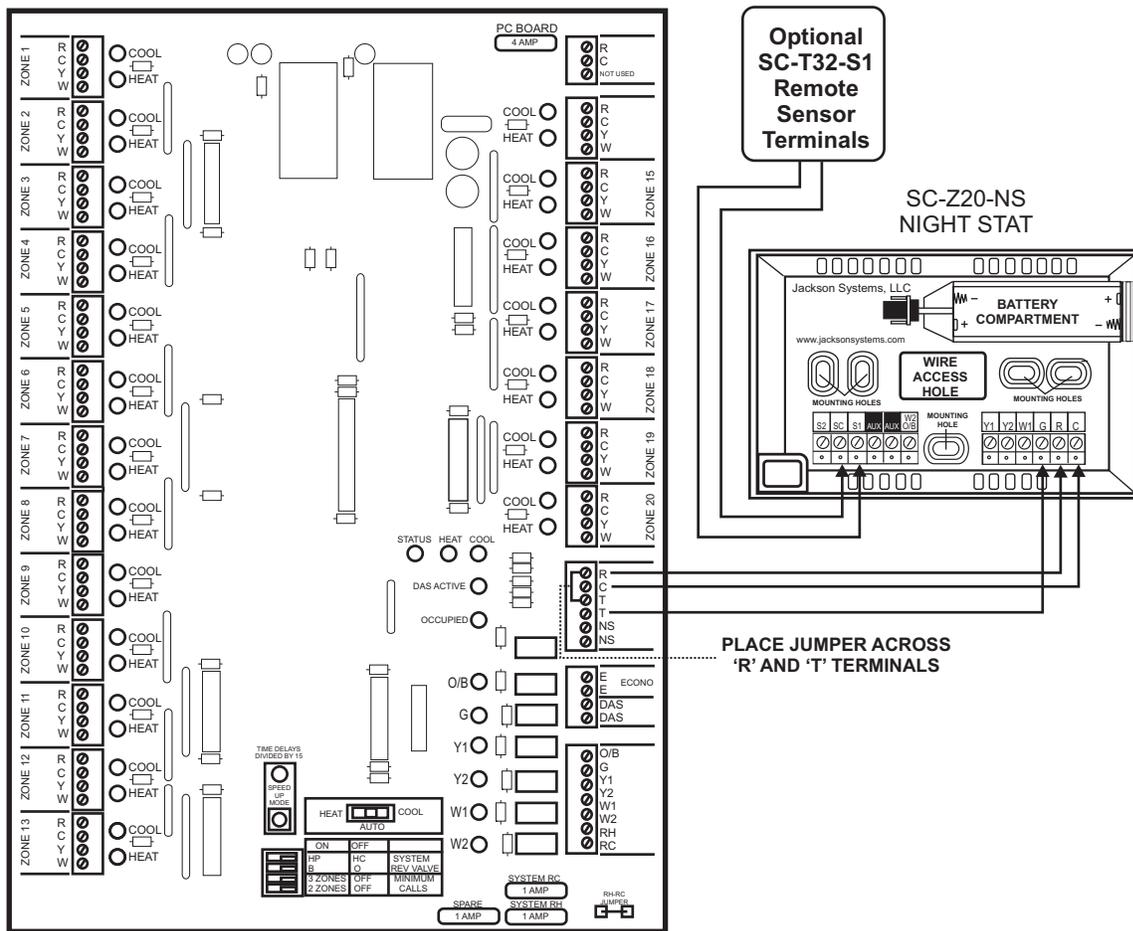### Programming Instructions

SC-Z20-NS

OVERVIEW:

The SC-Z20-NS programmable touchscreen thermostat can be used for occupied and unoccupied scheduling of the SC-Z20. When wired and configured properly, the thermostat takes the place of a separate 7-day clock, night stat and override timer. The SC-Z20-NS Programmable Fan option is used to trigger the 'G' fan relay to open or close the Clock Contact 'T' terminals on the SC-Z20 panel that places the system in the occupied or unoccupied mode of operation. The thermostat can also be used with a SC-T32-S1 Indoor Remote Sensor. 24 volt power to the thermostat is supplied by the SC-Z20 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 SC-Z20-NS to the SC-Z20 panel only requires 18 gauge thermostat wire. (See diagram) Wire the thermostat 'C' terminal to the Clock Power 'C' terminal on the SC-Z20 panel. Wire the thermostat 'R' terminal to the Clock Power 'R' terminal on the SC-Z20 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 SC-T32-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.

SPECIFIED CONTROLS

SC-Z20-NS PROGRAMMING INSTRUCTIONS

HOW IT WORKS:
The SC-Z20-NS does not control the HVAC equipment and only uses the 'G' fan relay to put the SC-Z20 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 SC-Z20-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   (2 schedules per day)
            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 day of the week flashes. Tap the **UP** or **DOWN** arrow to select the day of the week.

2. Touch **Clock** again and the hour will flash. Tap the **UP** or **DOWN** arrow to select the correct hour. Note: PM hours are indicated by **PM** on the LCD.

3. Touch **Clock** again and the minutes will flash. Tap the **UP** or **Down** arrow to select the correct minutes.

4. To exit the menu, touch **Clock** again.

DAYLIGHT SAVING TIME:
Refer to the User Manual and DST Chart for Daylight Saving Time option.

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: PM hours are indicated by **PM** on the LCD.

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 of 70 degrees.

5. Tap **Program** again and the cooling setpoint will flash. Leave the setpoint at the factory default of 75 degrees.

6. Tap **Program** again and the fan option **Always On** will flash. This is the correct setting for the Day mode. If not, use the **UP** or **DOWN** arrow to set the fan option from Automatic 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: PM hours are indicated by **PM** on the LCD.

8. Tap **Program** again until the minutes flash. Use the **UP** or **DOWN** arrow to set the minutes.

9. 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 62 degrees.

10. 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 83 degrees.

11. Tap **Program** again and the fan option **Automatic** will flash. This is the correct setting for the Night mode. If not, use the **UP** or **DOWN** arrow to set the fan option from Always On 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.

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	Automatic

COPY MONDAY PROGRAM TO TUESDAY, WEDNESDAY, THURSDAY AND FRIDAY

PROGRAM	DAY	START TIME	HEAT SETPOINT	COOL SETPOINT	FAN
DAY	SAT	7:00 PM	62	83	Automatic
NIGHT		5:00 PM	62	83	Automatic

COPY SATURDAY PROGRAM TO SUNDAY