

ControlTec  
Communications Board  
Operators Manual

FCC Notice:

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

The user is cautioned that changes or modifications not approved by the Manufacturer could void the user's authority to operate the equipment.

"Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device."

**Note to Installer: This system must be professional installed in a fixed location at least 20 cm from the user. No user serviceable parts in this product.**

The ControlTec communications board provides a communications path from the AS-20 controllers to a PC. The AS-20 and Communications board are for use where commercial freezer units are used, such as grocery stores and food warehouses.

The AS-20 system is design to control the door heaters in commercial freezer units to prevent the freezer doors from condensing water. The comm. board communicates with the AS-20 over a hardwired proprietary communications line, and the comm. board stores information from the AS-20 to upload to a PC at a later date. The AS-20 and the communications board will to be installed in or on with the freezer units.

**This product is not intended for home or in office use.**

- . The functions that the communications board provides are as follows:
  - Communicates to up to 15 AS-20 controllers that can be attached, in a serial communication chain. A proprietary bus utilizing standard Cat-3 LAN cables provides the communications to and from the AS-20.
  - The Communications to the PC is done in one of two ways;
    - 1 - The RS-232 bus hard wire,
    - 2.- The 802.11 wireless. For location of the connectors see figure 1.
  - Stores case temperature and heater cycle data for downloading to the PC
  - The communications board also has a low voltage (less than 25V) alarm output , this is the 3 pin connector, located next to the power input.

#### Step 1 Connecting the Communications Board to the AS-20s

1. Connect the Cat-3 LAN cable from the AS-20 controller output port to the RJ-45 connector on the Communications Board.
2. Connect any additional AS-20 controllers to serial communication chain. See Figure 2.

If the Communications Board is set up for a hardwired serial port continue with step 2, if the Communications Board is configured for wireless communications proceed to step 4.

#### Step 2 - Connect the Serial PC communications

1. Attach the 9 pin RS-232 serial null modem cable to the PC com connector.
2. Attach the other end of the cable to the communications board, using the 9 pin RS-232 connector.
3. If the PC does not have a 9 pin com connector there are USB to serial adapters available.
4. Apply power to the AS-20s, if they are not already powered .
5. Apply power to the Communications Board.

### Step3 – Configure PC

1. Start PC and load the ControlTec PC Program
2. Open the ControlTec PC program
3. At the start screen click on the *Comm Config* button.
4. Select the Com port to use for this PC. ( Com1, Com2, Etc) Press *OK* to exit the configure screen.
5. Click on the *Comm Port* button to start the program.
6. Refer to the ControlTec Software manual.

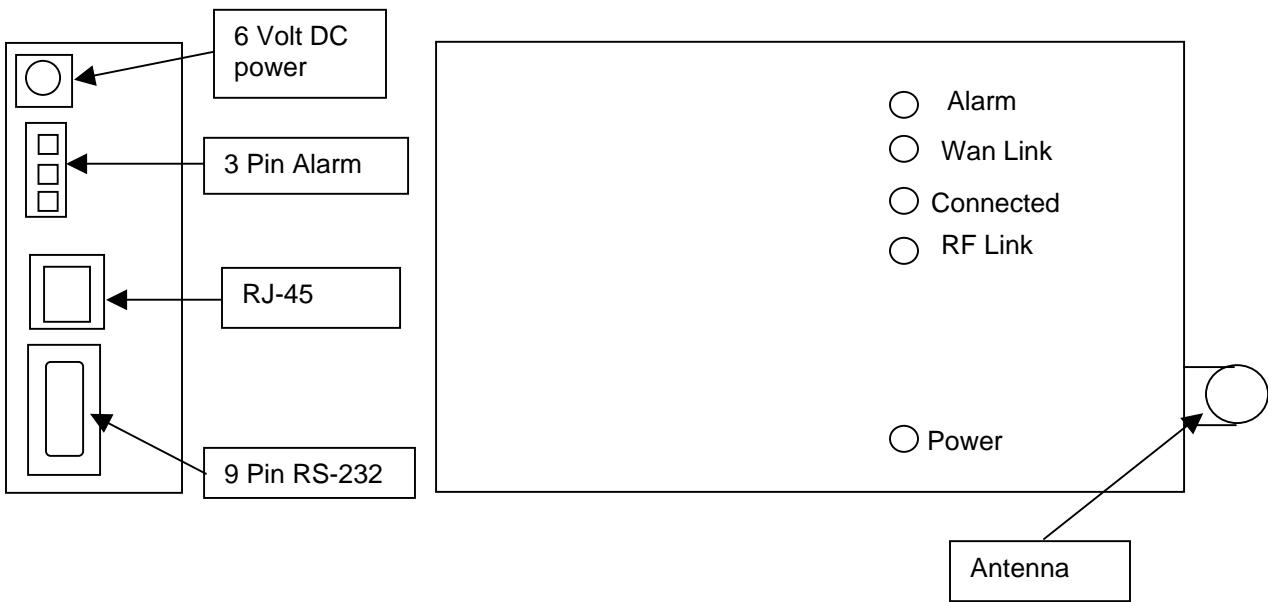
Note: The comm. port should be set for the following parameters:

- a. Baud rate – 9600
- b. Data bits - 8
- c. Stop Bits – 1
- d. Parity – None
- e. Flow control – None

Using Control Panel, and Device Manager on your PC can adjust the comm. settings.

### Step 4 Setting up the wireless communications

1. Set up and attach the access point to the PC per the access point manufacture's instructions.
2. The IP address for the Access point should be set to 192.168.1.45.
3. Resetting this IP address could cause you to have to exit the access point and re-enter using the IP address.
4. Attach the antenna to the comm. board
5. Apply power to the communication board.
6. Check the communications board for the IP address of the board. Record this address.
7. The WAN Link and RF Link green LEDs should light on the comm. board. The center green LED will only light once the program has connected to the comm. board. Refer to figure 1 for the location of the LEDs.
8. Load the ControlTec software on the PC
9. Open the ControlTec software
10. Click on the Wireless Config button
11. Click on the edit button
12. For each comm. board enter the Description and IP address for the board. Click *OK* to exit.
13. Click *OK* on the Select wireless connection screen.
14. Click on the Wireless Network button to start the program.
15. Refer to the ControlTec software manual.



**Figure 1**  
**Communications Board**

**Figure 2**  
**AS-20 setup**

