1. MULTI-FUNCTION CAPABILITIES:

Operating features of the Ultimate Scanner and some of its capabilities.

The Ultimate Scanner is easy to operate. You can gain the basic operation of this

OPERATING INFORMATION
PROGRAMMING

1. **MANUAL PROGRAMMING MODE**

![Image of programming information]

Although programming may be new to some of you, programming the Climatronic is not as difficult as you may think. A few simple steps will have you enjoying all the features of your Climatronic.

**PROGRAMMING INFORMATION**

- **Teaching a New Feature:**
  - To add a new feature, simply turn on the power and press the "TEACH" button. The feature will then be stored in the Climatronic's memory.
  - To remove a feature, simply turn off the power and press the "DELETE" button. The feature will then be removed from the Climatronic's memory.

- **Setting the Temperature:**
  - The temperature can be set from 60°F to 90°F. The default temperature is 72°F.

- **Changing the Fan Speed:**
  - The fan speed can be changed from low to high. The default fan speed is medium.

- **Setting the Humidity:**
  - The humidity can be set from 30% to 90%. The default humidity is 50%.

2. **TECHNICAL SPECIFICATIONS**

- **Load Capacity:**
  - The Climatronic can handle up to 100,000 BTUs of load capacity.

- **Operating Temperature Range:**
  - The Climatronic operates between 60°F and 100°F.

- **Energy Efficiency:**
  - The Climatronic has an Energy Star rating of 9.0.

3. **PEAK LOCAL STATE SWITCH**

- **Operation:**
  - The Climatronic has a peak local state switch that allows the user to select between peak and local operation.

- **Peak Local Mode:**
  - In peak local mode, the Climatronic will operate at its highest efficiency.

- **Local Mode:**
  - In local mode, the Climatronic will operate at its lowest efficiency.

4. **HOTTEST CYLINDER INDICATOR**

- **Operation:**
  - The hottest cylinder indicator will display the temperature of the hottest cylinder in the Climatronic.

- **Alerts:**
  - If the hottest cylinder reaches a temperature of 120°F, an alert will be triggered.

5. **WARNING LIGHTS (CAUTIONARY SIGNALS)**

- **Teach Mode:**
  - The teach mode allows you to program the Climatronic to perform specific tasks.

- **Error Alerts:**
  - If an error occurs, the Climatronic will display an error message.

- **Maintenance:**
  - Regular maintenance is required to keep the Climatronic in optimal condition.

6. **BACK LIGHT CHANNEL INTEGRITY**

- **Testing:**
  - To test the back light channel integrity, turn on the power and press the "TEST" button. The back light channel integrity will then be tested.

- **Alerts:**
  - If the back light channel integrity test fails, an alert will be triggered.

NOTE: The Climatronic will store the last channel on which it operated.
There are two programming modes: Manual and Scan. In the Scan Mode you can program the following functions in the sequence listed below:

1. **Advance a Digit** - Use the Step position on the Mode Selector Switch to advance the digit to the desired location.
2. **Change Channels** - Use the Channel Selectors to change the channels in the Scan Mode.
3. **Change the Display Mode** - Use the Display Mode Selectors to change the display mode.
4. **Change the Setting** - Use the Setting Selectors to change the setting for each channel.
5. **Change the Units** - Use the Unit Selectors to change the units for each channel.

**Comment:**
- The Scan Mode is used for programming the scanner in a sequential manner.
- The channels are programmed in the following sequence:
  - Channel 1
  - Channel 2
  - Channel 3
  - Channel 4
  - Channel 5
  - Channel 6

**Note:**
- To exit the Scan Mode, press the Stop Button.
- To return to the Scan Mode, press the Scan Button.
The TIT 111s are the heart of the TIT 111 Oxygen Concentrator. The controller, located on the upper right corner of the main unit, is responsible for managing the operation of the TIT 111. The TIT 111 is designed to deliver high-quality oxygen to the patient at a flow rate of 1 to 5 liters per minute. The concentrator is designed to operate continuously, allowing for long-term use without the need for frequent maintenance. The TIT 111 is ideal for use in hospitals, clinics, and homes where oxygen therapy is required.

The concentrator is designed to be easy to use and maintain. The control panel is simple and intuitive, allowing users to adjust settings and monitor the status of the device. The concentrator is also equipped with a built-in alarm system to alert users to any malfunctions or maintenance requirements. The TIT 111 is backed by a comprehensive warranty and customer support, ensuring peace of mind for users and healthcare providers alike.

In conclusion, the TIT 111 Oxygen Concentrator is a reliable and efficient solution for oxygen therapy. Its design and features make it a valuable asset in the management of respiratory conditions, providing users with the confidence and support they need to live their best lives.
to the minimum allowed operating temperature limit for your aircraft. This is only a recommended limit. As you get to know your engine's normal operating temperatures you may want to adjust this limit accordingly.

5. OUTSIDE AIR TEMPERATURE:

The Ultimate Scanner has two features that make it a valuable tool when measuring Outside Air Temperatures. First is its superior accuracy and linearity over conventional gauges. Outside Air Temperatures have a big effect on your aircraft’s ability to lift and on engine horsepower. Accurate OAT readings are essential if you are looking for maximum performance from your aircraft.

Second is the Ultimate Scanner’s ability to detect small temperature changes (1°F).
This gives the pilot rate and trend information (in what direction and how fast the temperatures are changing) at a glance. This is valuable for detecting changing atmospheric conditions and avoiding thunderstorms and icing conditions. It can also help in warm weather to find cooler flying conditions.

Selecting the Higher and Lower OAT limits: If the High or Low OAT Limits are exceeded, the scan will stop and the appropriate “Temp Prob” light will come on.
For this reason you may want to disable the Higher and Lower OAT Limits.

6. CARBURETOR TEMPERATURE:

Venturi effect and atomization of fuel can cause temperatures in the carburetor to drop 25°F or more. When the atmospheric conditions are right, this temperature drop will cause icing in the carburetor.
As icing starts to form, the Ultimate Scanner will display a temperature near 32°F. To avoid carburetor icing, apply partial carburetor heat to bring the carb temp between 39°F and 49°F. Outside air temperatures below 10°F usually will not cause carb icing due to the lack of moisture in the air.

A) Selecting the High Carb Temp Limit: The High Carb Temp Limit can be used as a fire detector or detonation deterrent. Many aircraft engines can detonate at high throttle settings if the Carb Temp exceeds 150°F. This is normally only a problem for turbo-charged aircraft.

It is not uncommon for an aircraft engine to backfire on start. This is especially true when the battery is low. If this happens and a fire starts in the carburetor, it can cause extensive damage before the problem is noticed. The Ultimate Scanner can detect this problem almost immediately.

Set the High Carb Temp Limit for 150°F. This is only a recommended limit. As you get to know your engine’s normal operating temperatures you may want to adjust this limit accordingly.

B) Selecting the Lower Carb Temp Limit: You may want to set the Lower Carb Temp Limit for 37°F. This is just above the temperature where ice will form. There is, however, a disadvantage to setting the High Limit for 37°F. If you fly in very cold weather where ice cannot form, the Ultimate Scanner will show a “Temp Prob” until the Carb Temp is increased above 37°F. If this is the case, you may want to disable the Lower Carb Temp Limit.
EXTENSION CABLE INSTALLATION

As you proceed through the installation process, please ensure that you are following the instructions provided in this section. Failure to do so may result in damage to your equipment or other property.

NOTE: All OAT probes must be connected through a extension cable prior to their installation. This will ensure proper operation and functionality of the system.

1. CHF probe installation

Remove the CHF probe from its packaging and attach it to the appropriate location on your equipment. Ensure that it is securely fastened in place.

2. EGT probe installation

Follow the instructions provided in the manual to install the EGT probe correctly. Ensure that it is fully inserted and secured.

3. Oil Temperature Probe Installation

Carefully follow the instructions provided in the manual to install the oil temperature probe. Ensure that it is correctly seated and secure.

4. CARB TEMP Probe Installation

Remove the CARB TEMP probe from its packaging and attach it to the appropriate location on your equipment. Ensure that it is securely fastened in place.

5. OAT Probe Installation

As you proceed through the installation process, please ensure that you are following the instructions provided in this section. Failure to do so may result in damage to your equipment or other property.

NOTE: All OAT probes must be connected through a extension cable prior to their installation. This will ensure proper operation and functionality of the system.

6. EXTENSION CABLE INSTALLATION

As you proceed through the installation process, please ensure that you are following the instructions provided in this section. Failure to do so may result in damage to your equipment or other property.

NOTE: All OAT probes must be connected through a extension cable prior to their installation. This will ensure proper operation and functionality of the system.

7. Installation Instructions

Carefully follow the instructions provided in the manual to ensure proper installation and functionality of your equipment. Failure to do so may result in damage to your equipment or other property.

IMPORTANT: Always refer to the manual for detailed instructions before proceeding with installation. Failure to follow the instructions may result in damage to your equipment or other property.
The following wiring instructions are from the manual:

1. **Instrument Check Out**
   - **Instruments and Insulation**
     - A loose connection or a loose terminal may cause problems.
     - Check all connections for tightness.
     - The insulation must be in good condition before use.

2. **Troubleshooting Suggestions**
   - **Instrumentation**
     - Always check the instrument before using it.
     - Use a known good instrument for comparison.

3. **Wiring Specifications**
   - **Channels:**
     - Channel 1: Red and Black
     - Channel 2: Red and Brown
     - Channel 3: Red and Black
     - Channel 4: Red and Black
     - Channel 5: Red and Black
     - Channel 6: Red and Black
     - Channel 7: Red and Black
     - Channel 8: Red and Black
   - **Connections:**
     - Connect the white wire to the ground terminal.
     - Connect the red wire to the positive terminal.
     - Connect the black wire to the negative terminal.

4. **Poor Clamp**
   - If the clamp is loose, it may cause problems.
   - Ensure the clamp is tightened securely.

5. **Loose Connections**
   - Disconnect the instrument from the power source.
   - Check all connections for tightness.
   - Ensure the connections are secure before reconnecting the instrument.

6. **Faulty Connections**
   - Connect the instrument to the power source.
   - Check all connections for tightness.
   - Ensure the connections are secure before reconnecting the instrument.

7. **Installation of Connecting Wires**
   - Connect the red wire to the positive terminal.
   - Connect the black wire to the negative terminal.

8. **Instrument Installation**
   - Ensure the instrument is installed correctly.
   - Connect the instrument to the power source.
   - Check all connections for tightness.
   - Ensure the connections are secure before reconnecting the instrument.

9. **Wiring Diagram**
   - The wiring diagram is shown below.
   - Follow the diagram for correct wiring connections.

10. **Troubleshooting**
    - If the instrument does not work, check all connections.
    - Ensure the connections are secure.
    - If the problem persists, contact the manufacturer for assistance.

11. **Specifications**
    - **Channels:**
      - Channel 1: Red and Black
      - Channel 2: Red and Black
      - Channel 3: Red and Black
      - Channel 4: Red and Black
      - Channel 5: Red and Black
      - Channel 6: Red and Black
      - Channel 7: Red and Black
      - Channel 8: Red and Black
    - **Connections:**
      - Connect the white wire to the ground terminal.
      - Connect the red wire to the positive terminal.
      - Connect the black wire to the negative terminal.

12. **Warning**
    - Do not use this instrument longer than its specified time.
    - The instrument may overheat.
    - Use the instrument properly to avoid damage.

13. **Maintenance**
    - Regularly check the instrument for wear and tear.
    - Ensure all connections are secure.
    - Keep the instrument clean and free from dust.

14. **Support**
    - For any further assistance, contact the manufacturer.
    - Ensure the instrument is correctly installed and connected.

15. **Additional Information**
    - Always follow the manufacturer's instructions for correct use.
    - Use the instrument properly to avoid damage.
    - Keep the instrument in a cool and dry place.

16. **Safety Precautions**
    - Always wear safety gear when using the instrument.
    - Ensure the instrument is properly grounded.
    - Keep the instrument away from water and moisture.

17. **Certification**
    - The instrument is certified for safe use.
    - Ensure the instrument is properly certified before use.

18. **Service and Support**
    - Contact the manufacturer for service and support.
    - Ensure the instrument is properly maintained.
    - Follow all manufacturer's guidelines for service and support.

19. **Warranty**
    - The instrument is covered by a warranty.
    - Contact the manufacturer for warranty information.
    - Ensure the instrument is properly installed and connected.

20. **Legal**
    - The instrument is compliant with all local and national regulations.
    - Ensure the instrument is properly licensed and registered.
    - Follow all legal guidelines for the use of the instrument.
Specifications and Operating Features

6. Defensive Cabine

If the problem follows the above, you may have a defective cabine. Perform the following check:

Check the cabine by moving the joystick full left and full right. If there is a difference, the problem may be in the joystick. If there is no difference, it is likely that the cabine is the problem.
The approval of this change in type design and corresponding changes in type design of the model aircraft model US-8 and US-8A listed here are approved and the installation instructions are not primary equipment.

NOTE: The Model US-8 and US-8A listed here are not designed as engine analyzers and are not approved for use as engine analyzers.

Installation of the approved equipment must be carried out in accordance with the instructions contained in the Installation Instructions.

Model: US-8

Installation Instructions

Ultimate Scanner

US-8

2.58" Bezel

5.35" Scale View

Supplemental Type Certificate

Electronics International, Inc.
US-8 WIRING DIAGRAM

Wires for the back of the unit:

Red and Black Pair:

Red ---------------------------------- 12/24 Volt Bus
Black ---------------------------------- Ground

Brown and Red striped pair:

Brown striped ------------------------ 12 Volt back light rheostat
Red striped ------------------------- 24 Volt back light rheostat

Brown Pair --------------------------- Channel 1
Red pair ----------------------------- Channel 2
Orange pair -------------------------- Channel 3
Yellow pair --------------------------- Channel 4
Green pair --------------------------- Channel 5
Blue pair ---------------------------- Channel 6
Violet striped pair ------------------ Channel 7
Gray striped pair ------------------- Channel 8