

Inkbird ITC-306T

Inkbird ITC-306T Digital Temperature Controller User Manual

Model: ITC-306T

1. INTRODUCTION

The Inkbird ITC-306T is a pre-wired digital temperature controller designed for heating applications. It features a timer function with dual time cycle settings, allowing for different temperature controls during day and night. This device is suitable for various applications such as reptile breeding, plant cultivation, greenhouse temperature management, and other scenarios requiring precise heating control. It operates on AC 110V with a maximum power output of 1200W. Please read this manual thoroughly before operation to ensure safe and correct usage.

2. SAFETY INFORMATION

- Ensure the power supply voltage matches the device's requirements (AC 110V).
- Do not exceed the maximum load capacity of 1200W.
- Keep the device and probe away from water or excessive moisture, unless the probe is specifically designed for immersion.
- Do not disassemble or modify the device.
- Always unplug the device from the power outlet before cleaning or performing maintenance.
- This device is for heating control only; it does not provide cooling control.

3. PRODUCT OVERVIEW

3.1 Components

- Main Controller Unit with Digital Display
- Temperature Probe (6.56 feet immersion depth)
- Power Cord with US Plug

- Dual Heating Outlets

3.2 Device Layout



Image 1: Overview of the Inkbird ITC-306T Digital Temperature Controller, showing the main unit, temperature probe, power plug, and the dual heating outlets.



Image 2: Front and side views of the controller unit, highlighting the digital display and control buttons.



Image 3: Detailed view of the metallic temperature probe, which is designed for immersion.



Image 4: Close-up of the US standard 3-prong power plug for the controller.



Image 5: View of the dual heating outlets and the back of the controller unit, showing the 'Made in PRC' label.



Image 6: Dimensions of the Inkbird ITC-306T controller unit, indicating a height of 19cm and width of 10.5cm.

4. SETUP INSTRUCTIONS

1. **Placement:** Position the main controller unit in a dry, stable location, away from direct heat sources or excessive moisture.
2. **Probe Installation:** Place the temperature probe in the desired monitoring area. Ensure the probe is fully immersed if used in liquid, or securely positioned in the air for ambient temperature control. The probe has an immersion depth of 6.56 feet.
3. **Connect Heating Devices:** Plug your heating devices (e.g., heat mats, ceramic heaters) into the two heating outlets on the controller. Ensure the total wattage of connected devices does not exceed 1200W.

4. **Power Connection:** Plug the controller's power cord into a standard AC 110V power outlet. The display will illuminate.

5. OPERATING INSTRUCTIONS

5.1 Display Overview

The controller features a dual LCD display. The upper display (PV) shows the current measured temperature, and the lower display (SV) shows the set temperature value.

5.2 Setting Temperature Unit (Celsius/Fahrenheit)

1. With the device powered on, press and hold the "SET" button for approximately 3 seconds until the display changes.
2. Use the Up (▲) or Down (▼) buttons to navigate through the settings. Look for the parameter related to temperature unit (often indicated by 'CF' or similar).
3. Press "SET" again to enter the unit selection. Use Up (▲) or Down (▼) to choose between Celsius (°C) or Fahrenheit (°F).
4. Press and hold "SET" for 3 seconds to save the setting and exit, or wait for the device to automatically exit after a few seconds of inactivity.

5.3 Setting Desired Temperature (SV)

1. Press the "SET" button once briefly. The SV display will flash.
2. Use the Up (▲) or Down (▼) buttons to adjust the desired temperature value.
3. Press "SET" again briefly to confirm the setting, or wait for the device to automatically save and exit.

5.4 Dual Time Cycle Setting (Day/Night Temperature)

The ITC-306T allows for two different temperature settings over a 24-hour period, suitable for day and night cycles. This feature is crucial for environments like reptile enclosures or plant growth where temperature needs vary.

1. Press and hold the "SET" button for approximately 3 seconds to enter the parameter setting mode.
2. Use the Up (▲) or Down (▼) buttons to navigate through the parameters until you find the time-related settings (e.g., 'PT', 'DT', 'ST'). Refer to the full user manual for specific parameter codes.
3. Set the start time for the day temperature, the day temperature value, the start time for the night temperature, and the night temperature value.
4. After adjusting each parameter, press "SET" briefly to confirm and move to the next.
5. Once all time cycle parameters are set, press and hold "SET" for 3 seconds to save and exit.

5.5 Temperature Hysteresis (Differential Temperature)

Hysteresis (often labeled 'HD' or 'DIF') prevents rapid cycling of the heating element. It defines the temperature difference between when the heater turns off and when it turns back on.

1. Press and hold the "SET" button for approximately 3 seconds to enter the parameter setting mode.
2. Use the Up (▲) or Down (▼) buttons to navigate to the hysteresis parameter.
3. Press "SET" briefly, then use Up (▲) or Down (▼) to adjust the hysteresis value. A smaller value means more precise control but more frequent switching.
4. Press and hold "SET" for 3 seconds to save and exit.

5.6 Temperature Calibration

If the measured temperature (PV) does not match a known accurate thermometer, you can calibrate the device.

1. Press and hold the "SET" button for approximately 3 seconds to enter the parameter setting mode.
2. Use the Up (▲) or Down (▼) buttons to navigate to the calibration parameter (often labeled 'CA' or 'PTC').
3. Press "SET" briefly, then use Up (▲) or Down (▼) to adjust the offset value. For example, if the controller reads 25°C but an accurate thermometer reads 26°C, set the calibration to +1°C.
4. Press and hold "SET" for 3 seconds to save and exit.

6. MAINTENANCE

- **Cleaning:** Wipe the controller unit with a soft, dry cloth. Do not use abrasive cleaners or immerse the unit in water.
- **Probe Care:** Regularly inspect the temperature probe for any signs of damage or corrosion. Clean the probe gently if necessary.
- **Storage:** When not in use, store the device in a cool, dry place.

7. TROUBLESHOOTING

- **Display Not On:** Ensure the power cord is securely plugged into a live outlet. Check for power outages.
- **Heater Not Activating:** Verify that the heating devices are properly plugged into the controller's outlets and are functional. Check the set temperature (SV) against the current temperature (PV) and hysteresis settings. Ensure the controller is in heating mode (this model is heating-only).
- **Inaccurate Temperature Reading:** Check the probe's placement and ensure it is not damaged. Perform a temperature calibration as described in Section 5.6 if necessary.
- **Difficulty Programming:** Programming requires precise button presses and timing. If settings are not saving, ensure you hold the "SET" button for 3 seconds to confirm and exit, or that you complete the sequence before the device times out. Refer to the detailed instructions in Section 5.
- **Settings Lost After Power Outage:** While the device has a capacitor to retain settings for a period, prolonged power outages or issues with the capacitor can lead to settings being lost. Reprogram the device if this occurs.

8. SPECIFICATIONS

Feature	Specification
Model	ITC-306T
Input Voltage	AC 100-265V, 50/60Hz
Output Voltage	AC 100-265V, 50/60Hz
Max Load	10A (1200W at 110V)

Temperature Control Range	0-99°C (32-210°F)
Temperature Resolution	0.1°C / 0.1°F
Temperature Accuracy	±1°C / ±2°F
Probe Type	NTC Sensor
Probe Cable Length	Approx. 6.56 feet (2 meters)
Immersion Depth (Probe)	6.56 feet
Display Type	Digital LCD
Connectivity	None (Standalone Unit)
Power Source	AC Power
Indoor/Outdoor Usage	Indoor
Dimensions (Main Unit)	Approx. 19cm (H) x 10.5cm (W) x 8.7cm (D)
Weight	14.4 ounces

9. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the official Inkbird website or contact their customer service directly. Keep your purchase receipt for warranty claims.

Manufacturer: Inkbird Tech

Model Number: ITC-306T