

# Alcohol Tester Communication

## Instructions: Communication Interface:

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+DC5-24V GND TX RX

Communication Protocol:

Serial Port Settings: Baud rate 9600, Data bits 8, Stop bits 1 (RS232) Data Format

1. Start: Power-on communication command. After the alcohol tester is powered on, it sends a start command every 5 seconds until it receives an ok command from the peripheral device. It then enters a test waiting state. If no ok command is received after 30 seconds, the alcohol tester automatically enters the test procedure "Please blow".

2. Blow Begin: Blowing wait command. If no breath is produced after 180 seconds, the alcohol tester automatically shuts down.

3. Blow Success: Blowing success command. After blowing continuously for more than 5 seconds, the alcohol tester detects sufficient flow and begins to detect the alcohol concentration in the breath.

4. Blow Fail: Blowing failure command. If there is an interruption during the blowing process or the flow rate is insufficient, a command is sent to the peripheral device, and the alcohol tester automatically shuts down.

5. Blow Over Time: If no breath is detected within 180 seconds, the breathalyzer automatically shuts down after sending a command to the external device.

6. Camera: Sends a command to the external device to capture an image one second before a successful breath test.

7. Alcohol = 20.0mg/100ml: Breath test result command. Driving under the influence (DUI) threshold:  $\geq 20.0\text{mg}/100\text{ml}$ ; Drunk driving threshold:  $\geq 80.0\text{mg}/100\text{ml}$ . Breathalyzer Test Flowchart: Power On

start

blow begin

blow success

camera

alcohol=20.0m

Power Off

blow fail

blow over

30s If no OK command is received from the external device, the device automatically enters the test procedure. Please blow.

[Power On]



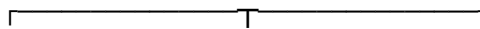
[Start]



[Within 30 seconds, press any key to enter alcohol test mode]



[Blow Begin]



[Blow Fail] [Blow Success] [Blow Over]



[Camera]



[Alcohol  $\geq$  20 mg]



[Power Off]