



West Virginia State Police Forensic Laboratory
INTOX EC/IR II Operators Manual



INTOX EC/IR II OPERATOR'S MANUAL



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Revision History

<i>Revision #</i>	<i>Effective Date</i>	<i>History</i>
<i>1</i>	<i>06/01/23</i>	<i>Initial Creation of Manual</i>
<i>2</i>	<i>06/06/23</i>	<i>Removal of highlights, no content change</i>



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West Virginia State Police Forensic Laboratory Breath Alcohol Section

The Breath Alcohol Section of the laboratory is responsible for the maintenance and calibration of preliminary and secondary chemical (evidential), breath alcohol testing instruments for the state of West Virginia. Presently, the Commission on Drunk Driving Prevention (CDDP) provides the WVSPFL with breath testing instruments for use by all law enforcement officers throughout the state.

In order to operate both the preliminary and secondary chemical breath alcohol testing instruments for the state of West Virginia, the operator must become certified. Certification can be obtained through the WVSP Academy. In this manual, a brief overview of the operation and functions of the instruments are given, however, this manual is not all inclusive and serves as a guide for operators who have already obtained certification.

The secondary chemical breath alcohol testing instrument currently approved and in use in the state of West Virginia is the Intox EC/IR II, manufactured by Intoximeters, Inc. As such, the Intox EC/IR II is the only evidential breath testing instrument that will be calibrated, maintained, and repaired by the WVSPFL Breath Alcohol Section. This instrument meets the National Highway Traffic Safety Administration (NHTSA) performance criteria set forth in their model specifications for breath test devices, and is on the Conforming Products List (CPL). The Intox EC/IR II meets the State of West Virginia's statutory requirements for chemical testing of breath, as stated in Chapter 17C of the West Virginia Code and Title 64 Legislative Rule Bureau for Public Health, Series 10, Methods and Standards for Chemical Tests for Intoxication (64CSR10).

The instrument should be housed in a clean, smoke-free environment. Special care should be taken to avoid the use of any aerosols, hand sanitizers, or cleaning supplies that contain alcohol, in the vicinity of the instrument. If an issue should arise with the instrument, contact the area WVSP District Sergeant or the Breath Alcohol Section. The Breath Alcohol Section can be contacted at breathalcohol@wvsp.gov or 304-746-2183 for any questions.

Glossary of Terms

Dry Gas Standard- A sealed, pressured tank/cylinder that contains gas at a known ethanol concentration.

Operator- A law enforcement officer who is certified by West Virginia Bureau for Public Health to operate a Preliminary Breath Test Instrument or to perform a subject test using a Secondary Breath Test Instrument.



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Secondary Breath Test Instrument- A breath alcohol testing instrument that meets the standards set forth in 64CSR10. This provides evidential test results.

Subject Test- A function of the Intox EC/IR II that is used in the field by operators when they have a subject in custody, to obtain an evidential test result. This function is also used by laboratory personnel and other authorized personnel for diagnostic purposes and performance checks.

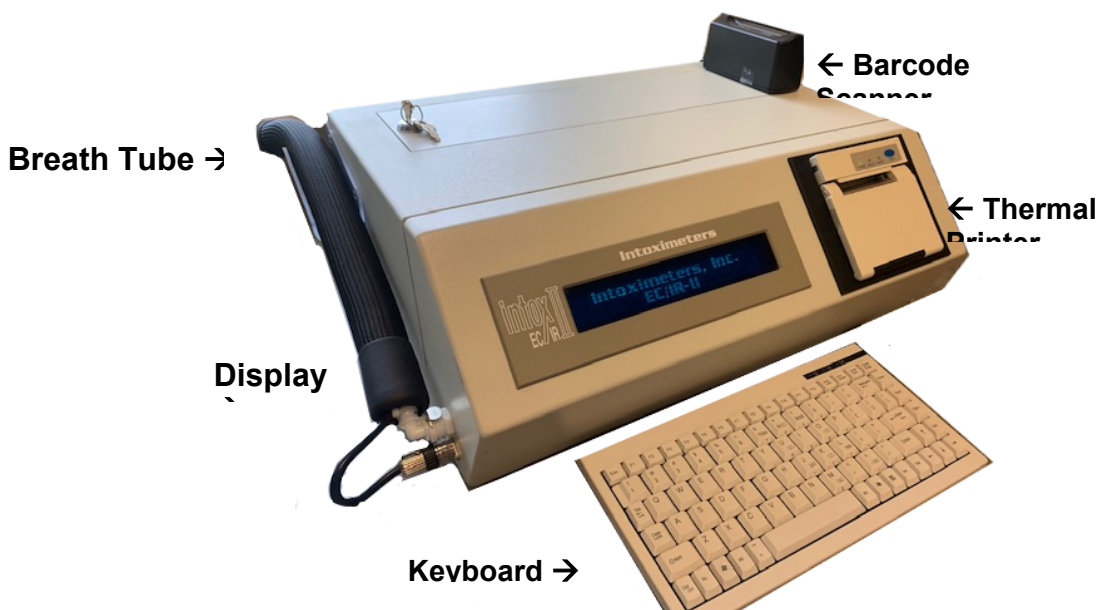
Secondary Breath Test Instrument

Intox EC/IR II

Performance Range: 0.000 – 0.440 grams of ethanol /210 Liters of breath

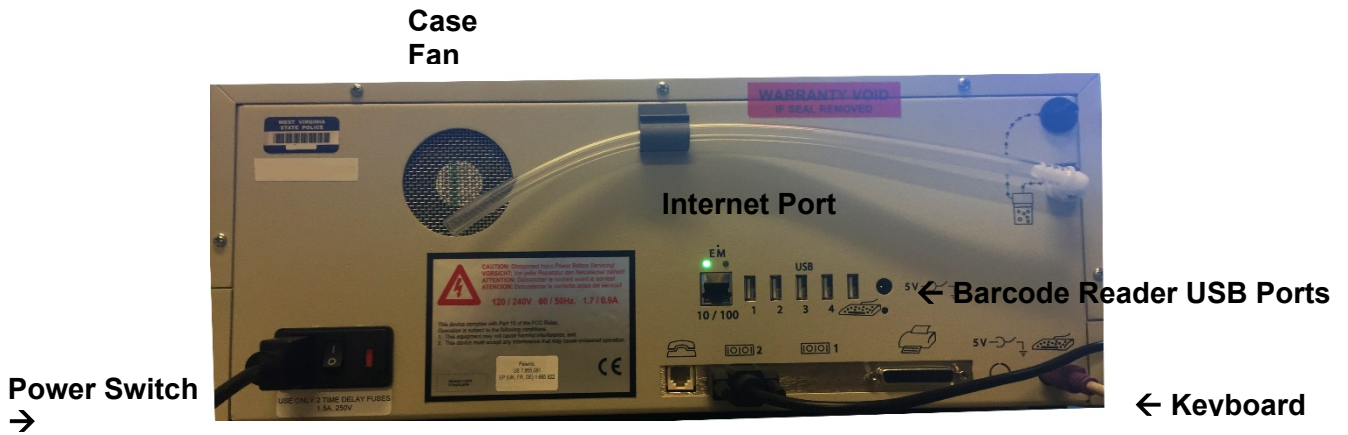
Basic Operation

A new, disposable mouthpiece should be used for each test performed. Contact the area WVSP District Sergeant, or the Breath Alcohol Section to obtain additional mouthpieces, as needed.





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Instrument Components

- Display
- Keyboard
- Driver's License Barcode Scanner
- Internal Thermal Printer
- Breath Tube

Intox EC/IR II Keyboard Functions

ENTER	Starts a subject test during scroll Loads data during data entry
P	Prints the last test performed
ESC	Aborts the test sequence
SPACE BAR	Can be used to toggle between options during data entry To start a test after data entry

To perform a Subject Test:



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1. After observing the 20-minute waiting period, press **Enter** to start a subject test.
2. Enter the required information as prompted by the instrument.
Note: Once all the information has been input, changes can be made by pressing Enter.
3. Press the space bar to begin the evidential test sequence.
Note: Do not insert mouthpiece until prompted.
4. Once prompted to provide a sample, insert mouthpiece into the breath tube and instruct the subject on how to provide a proper sample.
5. When the evidential test sequence is complete, a ticket will be printed with the breath test result.
Note: If a test needs to be reprinted, pressing "P" will print the last test performed. If a test record cannot be retrieved this way, a request in writing can be submitted to the Breath Alcohol Section to obtain a test report.

Running a Subject Test

The following prompts will be displayed after pressing **Enter** to start a Subject Test:

Note: "Esc" pressed anytime will result in an "Operator Abort" status message. The test results will automatically print one test ticket as "Operator abort". The instrument will return to scrolling and NO test will be saved.

Data Entry

Not all fields are required. If the field is required, the operator will not be able to proceed until the required data is entered.

Scan License Now or Press ENTER

Point the barcode down and to the left. Insert and remove the card. Verify the data scanned.

OR

Press **Enter** to input Subject's information manually.

Subject Last Name

Subject First Name

Subject Middle Initial

Note: May combine automatically with first name when scanning license

Subject Sex

If typing manually, the default is *Male*. Use the space bar, or type first letter, to select either *Male* or *Female*.



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Subject D.O.B

MM/DD/YEAR

Subject Age

Calculated from Date of Birth entered

D.L. Number

D.L. State of Issue

Subject SSN

Citation Number

XXX-XXXXXXX

Type of Vehicle

Default is *Car*. Press the space bar to toggle vehicle type.

The available options are:

Car

Pick-Up

SUV

Van

Motorcycle

ATV

Commercial Vehicle

Other

Vehicle License Number

V.L. State of Issue

Auto completed from driver's license input

Scan Operator Card Now or Press ENTER

Press **Enter** to input Operator's information manually.

OR

Point the barcode down and to the left. Insert and remove the card. Verify the data scanned.



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Operator Last Name

Operator First Name

Operator Middle Initial

Operator Agency Type

Default is SO, press the space bar to toggle agency type.

SO-Sheriff's Office

PD- Police Department

WVSP- West Virginia State Police

DNR- WV Division of Natural Resources

PSC- Public Service Commission

UCP- University/Campus Police

Other - Maximum of 20 alphanumeric characters

Operator Agency Name

Type in first character. The instrument will display the closest alphabetical match. Will only allow a selection from the Agency type selected table.

SO- Uses a county database

PD- Uses a city database

WVSP- Uses a WV State Police database

DNR- Uses a county database NRP

PSC- Uses a county database

UCP- Maximum of 20 alphanumeric characters

Other- Maximum of 20 alphanumeric characters

Arresting Officer Last Name

Defaults to what was entered in the Operator Last name. Press **Enter** if correct or type over if different than the operator.

Arresting Officer First Name

Defaults to what was entered in the Operator Last name. Press **Enter** if correct or type over if different than the operator.



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Arresting Officer M.I.

Defaults to what was entered in the Operator Last name. Press **Enter** if correct or type over if different than the operator.

Arresting Agency Type

Defaults to what was entered in the Operator Agency Type. Or use the spacebar to toggle through the rest of menu:

SO- Sheriff's Office

PD- Police Department

WVSP- West Virginia State Police

DNR- WV Division of Natural Resources

PSC- Public Service Commission

UCP- University/Campus Police

Other

Arresting Agency

Defaults to what was entered in Operator Agency name, unless the Arresting Agency Type above was changed from the Operator Agency Type.

Type in first character. The instrument will display the closest alphabetical match. Will only allow a selection from the Agency type selected table.

SO- Uses a county database

PD- Uses a city database

WVSP- Uses a WV State Police database

DNR- Uses a county database

PSC- Uses a county database

UCP- Maximum of 20 alphanumeric characters

Other- Maximum of 20 alphanumeric characters

Date of Arrest



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MM/DD/YYYY

Time of Arrest

HH:MM- 24 hour format

Type of Arrest

Default is DUI, press the space bar to toggle arrest type.

DUI- Driving Under the Influence

DUI-Fatality- Driving Under the Influence with Fatality

DUI-Injury- Driving Under the Influence with Injury

DUI-Fleeing- Driving Under the Influence with Fleeing

DWMA- Driving with Measurable Alcohol

PI- Public Intoxication

Test- This option should only be used when checking the instrument and *not* on a subject

VHC- Violation of Home Confinement

Other

Crash Involved? [Y/N]

Default is yes. Press the space bar to toggle *Yes* or *No*.

County of Arrest

Type the first character or use backspace to remove entries. The instrument will display the closest alphabetical match. Will only allow a selection from the Agency type selected table.

Highway Type

Default is Interstate. Press the space bar to toggle the highway type.

Interstate

US

State

County

Street

Other



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Route Number

Street Name

Maximum of 24 alphanumeric characters. Abbreviations should not be used.

Milepost

Near City

Direction of Travel

Default is North. Press the spacebar to toggle direction or type the first character.

Longitude

Latitude

20 Minutes Observed

Serves as a reminder for the 20 minute waiting period. Be sure to note any time difference if using a different device than the instrument to record the waiting period start time.

Press **Enter** to continue. Any other response is not accepted. There is a 25 minute timeout for this prompt.

Once all data has been entered the instrument will prompt:

Starting Test Sequence:

SPACE = Begin ENTER = Verify

If **Enter** is selected the operator will be able to verify or modify the input data. Modify data if necessary or press **Enter** if correct.

If the space bar is pressed, the instrument will start the testing sequence.

Testing Sequence

Evidential test sequence consists of one adequate blank analysis, one adequate reference standard analysis, one adequate blank analysis, one adequate breath sample analysis, one adequate blank analysis, a second adequate reference standard analysis, and one adequate blank analysis.

Blank check:

The instrument will display:

Purging Remove Mouthpiece then Blank Check.

Blank check passed will appear if no alcohol is detected.



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Standard:

The instrument will display:

Taking gas sample

Evaluating Sample

Check: .XXX g/210L

If an Accuracy Check result of $> .005$ away from the target value, instrument will display *Standard out of range / Test aborted*. Automatically prints the test results as "Standard out of range."

Blank check:

The instrument will display:

Purging Remove Mouthpiece then Blank Check.

Blank check passed will appear if no alcohol is detected.

Please blow: Press 'R' for refusal

Insert mouthpiece and instruct subject to blow.

Keep blowing until the beep is displayed.

Once an adequate sample is provided *Evaluating Sample* will be displayed followed by:

Subject: *.XXX g/210L*

OR

R = "Refusal? [Y/N]"

"Y" = "Test refused". The test will abort and will print test results as "Test refused"

"N" = returns to "Please blow" / "Press 'R' for refusal". Does not reset the 3 minute Breath Timeout Timer.

If a sample is not provided within 3 minutes, *Breath timeout / Test aborted* will be displayed. The test will abort and the test result will be printed as "Breath timeout - No sample provided."

Insufficient sample will be displayed if the instrument detects the subject stop delivering a sample. The instrument will rest but will abort if this occurs after 3 attempts. The test will abort and the test result will be printed as "Insufficient sample."

Blank check:

The instrument will display:

Purging Remove Mouthpiece then Blank Check.



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Blank check passed will appear if no alcohol is detected.

Standard

The instrument will display:

Taking gas sample

Evaluating Sample

Check: .XXX g/210L

If an Accuracy Check result of $> .005$ away from the target value, instrument will display *Standard out of range / Test aborted*. Automatically prints the test results as "Standard out of range."

Blank check:

The instrument will display:

Purging Remove Mouthpiece then Blank Check.

Blank check passed will appear if no alcohol is detected.

Once the testing is complete a **Subject Test Ticket** will be printed.

Sample Subject Test Printout

Subject Test

SHERIFF'S OFFICE

Serial Number: 012345

Test Number: 125

Test Date: 07/25/2022

Test Time: 12:41 EST

Subject Name:

TEST, SUBJECT

Subject D.O.B:

02/01/1976

D.L. Number: 1234567

D.L. State of Issue: WV

Subject SSN: 555-55-5555

Operator Name:

Test, Operator



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Operator Agency Type:
SO

Operator Agency Name:
COUNTY

Arresting Officer Name:
Test, Operator

Arresting Agency Type:
SO

Arresting Agency Name:
COUNTY

Date of Arrest: 07/25/2022

Time of Arrest: 12:30 EST

Type of Arrest: TEST

Crash Involved: No

Dry Gas Target: .082

Lot Number: 12345678

Tank Number: 15

Exp Date: 01/24/2024

Tank Pressure: 1115

Barometric Pressure:

741 mmHg

System Check: Passed

Test	g/210L	Time
BLK	.000	12:42
CHK	.082	12:43
BLK	.000	12:45
SUBJ	.123	12:46
BLK	.000	12:47
CHK	.082	12:49
BLK	.000	12:50

Test Status: Success



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Changing Printer Paper

The internal printer attached to the EC/IR II is a thermal printer. Since the paper is thermal, it can break down over time, some chemicals can degrade it, and it will only print on one side. It should not be exposed to sunlight. When replacing the paper, insert the new roll and pull the paper over the printer lid and close. The paper should roll over the top when installed. If the test prints but no information is visible on the ticket, the paper may be installed incorrectly; flip the paper over so that it rolls over the top.





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Intox EC/IR II Error Messages

The following status messages are those most commonly encountered. This list is not all inclusive. Contact the Breath Alcohol Section if any of these errors persist or requires attention.

Status Message/Error	Common Causes
Breath Timeout	A subject sample was not provided within 3 minutes of prompt.
Check Ambient Conditions or High Blank	<p>There could be alcohol in the detector chamber, repeat test. The instrument will do 3 blank cycles before it detects high blank.</p> <p>Keep subject's mouth away from breath tube during purge/blank check cycle.</p> <p>Make sure there is no alcohol odor in the air or near the instrument.</p> <p>Remove mouthpiece before purge/blank check cycle to see if this corrects problem.</p> <p>High blanks can persist if the ventilation in the room is poor and alcohol concentrations are allowed to build up in the air. Hand sanitizer and cleaning supplies can cause this. The room will need adequate time for the alcohol in the air to dissipate.</p> <p>Purge fan possibly not working. Listen for the fan during a purge cycle.</p>
Dry Gas Pressure Low	Dry gas tank pressure <100 psi
Dry Gas Tank Empty	Dry gas tank pressure <50 psi
Instrument Locks Up	<p>Restart the instrument.</p> <p>If the problem reoccurs, disconnect the barcode reader and restart the instrument.</p>



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<p>Instrument Warming Up</p>	<p>Check the temperature settings by depressing the SPACE BAR. If any of the temperatures listed are highlighted, they are not in range. It takes approximately 15 minutes from cold startup for the EC/IR II to reach its ready temperature.</p> <p>If the breath tube (BT) does not come to temperature after 20 minutes, check the breath tube connections to see if they are connected properly. If the breath tube was disconnected, restart the instrument to clear error.</p>
<p>Insufficient Sample</p>	<p>Ensure subject is capable of providing adequate sample. Instrument allows three attempts before aborting test.</p> <p>Ensure subject is sitting or standing with upright posture during submission of sample.</p> <p>Check breath tube connection for any obvious kinks or blockages.</p> <p>Check the mouthpiece or replace it.</p>
<p>Intoxnet Login Required</p>	<p>The instrument has disabled after not being contacted for a download within the designated amount of time (usually three months). Instrument requires download to enable functionality. Contact the Breath Alcohol Section should this error occur.</p>
<p>Mouth Alcohol</p>	<p>The presence of mouth alcohol was detected. wait at least 20 minutes and repeat test.</p>
<p>Operator Abort</p>	<p><i>Esc</i> was pressed during the subject test</p>
<p>Printer prints paper after a test but no text is visible</p>	<p>The paper is installed backwards. Remove the paper and install it with the paper rolling over.</p>



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Printer does not print after a test	Printer paper is empty. The printer door is not latched.
RFI detected	Radio frequency interference detected. Make sure there are no transmitters in the area - repeat test.
Standard out of Range	The accuracy check result fell outside of the WVSPFL acceptable range of 0.077-0.087 g/210L.
Standard 1 Expired	Date is passed the dry gas standard entered