



DataMaster DMT Operating Protocol

July 2006



Procedure for When and How to change a Guth 34CNP Simulator for a State of Vermont
DataMaster

LC
To correctly identify if a simulator needs to be changed ?
Purpose; to correctly identify Simulators for Change to another Simulator and what test
to perform to insure the change is for the better. in order to insure proper performance

A Simulator change should be performed if one or more of the following conditions are Present.

- a) The Simulator leaks down from 100mm/m to 0mm/m in 5 Seconds or Less
- b) The Simulator motor has stopped turning.
- c) The Simulator Temperature is not controllable
- d) The Simulator is being upgraded
- e) The simulator has been designated to be replaced by trained VDH Staff.

Remove OLD simulator from Simulator compartment.

Place Old and NEW simulators on a work surface.

Remove NEW simulator head from empty Jar and place on work surface.

Remove OLD simulator head and place in Empty Jar.

Place New Simulator Head on to Jar with OLD solution.

Perform Simulator Pressure Test

Place new Simulator and Old jar in simulator Compartment, attach all connections.

After about Fifteen (15) minutes Check Temperature, With Temperature probe.

Adjust DataMaster read out as needed to Match Temperature Probe plus Correction Factor of the temperature Probe.

Run a Diagnostic Test [TST] on the DataMaster; ensure the Simulator Temperature is 33.5 – 34.5 deg C.

Run a supervisor Check on the DataMaster, use the last Sim Change or RPC paper work and after your name enter /SIM to indicate this is a Simulator Change.

Run a Zero Alc two test Sequence, in the Location Field enter Your Location and [OLD Gxxxx / New Gxxxx] Gxxxx is the simulator Serial Number.

Enter your actions into the DataMaster Log Book at the Location, including the Simulator Numbers. (Maintenance and Operator Logs)



Vermont Department of Health Laboratory

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DataMaster Site Evaluation Checklist

Reference D-Alc 005 Datamaster supervisor Manual

Agency Information

Name: _____

Address: _____

Phone: _____

Fax: _____

Personnel Information

Chief or C.O.
Head of Site: _____

DataMaster Supervisor (s): _____

Proposed DataMaster Environment:

Limited Controlled Access:	Y	N
Low Activity Area:	Y	N
Access:		
Other agency 24x7	Y	N
Vermont Department of Health	Y	N
Air Conditioned	Y	N
Room Temperature 65-85 35 F	Y	N
Ventilation is adequate	Y	N
Free of Cleaning Supplies Other volatile files	Y	N
Clean	Y	N

(A)

Proposed DataMaster Connection(s):

Power:		
Min 15 Amp	Y	N
Low limited low power sharing:	Y	N
UPS	Y	N
Power Conditioner	Y	N
Phone Line Connection Type	_____	
	Phone # _____	

Proposed DataMaster Supervisor(s):

Number that Need Training: _____

Number all ready Trained: _____

Proposed DataMaster Site Maintenance:

Will Notify VHD Lab of Maintenance and Supplies needs promptly:	Y	N
Will Notify VDH Lab of Changes in Building Conditions or Moves As Soon As Possible:	Y	N
Will Notify VDH Lab of Changes in Personnel At Site e.g. Chief, Datamaster Supervisor, Ect.	Y	N

VDH Representative Name and Date _____

Head of Site or Representative _____

DATAMASTER SITE EVALUATION CHECKLIST

Site Location: _____ Site Evaluation Date: _____
 Requesting Agency: _____ Responsible individual: _____
 Agency Phone Number: _____ Fax number: _____
 Email address: _____

ENVIRONMENT:

(VDH Technician please circle appropriate response)

Limited, Controlled Access (No unauthorized persons at any time): YES NO (please specify)

Low activity area: YES NO (please specify)

Access 24 hrs/day, 7 days/wk: YES NO (please specify how access will be accommodated)

VDH Access: YES NO (please specify) Other Agency Access: YES NO (please specify)

Stable, Flat, Hard Surface within 6 feet of approved outlet: YES NO (please specify)

DataMaster to be bolted to surface: YES NO

Minimum surface dimensions 36" wide X 23" deep: YES NO

Working Height 29" to 36": YES NO

Space available to right of instrument: YES NO

Space available in front of instrument: YES NO

Storage space for logs and supplies close to instrument: YES NO

Room Temperature maintained between 60° - 85°F: YES NO

Air Conditioned: YES NO

Adequate Ventilation: YES NO

Free of cleaning compounds and solvents: YES NO

Combine into 1 criterion

DATAMASTER SITE EVALUATION CHECKLIST cont.

Site Location: _____ Site Evaluation Date: _____

Clean with little or no dust:	YES	NO
Designated a "NO SMOKING AREA":	YES	NO
Phone line for DataMaster connection:	YES	NO
Dedicated:	YES	NO
Goes through a Switchboard or transfer:	YES	NO
Proposed DataMaster phone Number: _____		

DATAMASTER POWER:

Continuous 110 - 120 VAC 60 Hz (\pm 5%):	YES	NO
15 amp capacity:	YES	NO
Dedicated line:	YES	NO
Limited, Low power applications:	YES	NO (please specify)

Approved Uninterruptable Power Supply:	YES	NONE	NO (please specify)
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Approved Surge Protector:	YES	NONE	NO (please specify)
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MAINTENANCE:

Provide trained Instrument Supervisors:	YES	NO
Onsite Instrument Supervisors:	YES	NO
Shared Instrument Supervisors:	YES	NO (please specify)

Already trained:	YES	NO
Number trained: _____		

Will perform designated tasks:	YES	NO
Will contact VDH for Service in timely manner:	YES	NO

MODIFICATIONS:

Will notify VDH prior to modifications or renovations:	YES	NO
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Completed by: _____ Date: _____

Reviewed by: _____ Date: _____

PREPARATION:

- STEP 1:** If the screen saver is active, tap the screen to remove the DataMaster DMT from standby mode.
- STEP 2:** Confirm that the DataMaster DMT displays "READY, PUSH RUN." If the instrument is turned off or if it displays "NOT IN SERVICE," proceed to a different DataMaster site.
- STEP 3:** Check the subject for any evidence of food, gum, tobacco or any other foreign matter in the mouth. Have anything in the mouth removed prior to starting the next step. Tongue piercings and dentures may remain.
- STEP 4:** The DataMaster DMT is programmed with a mandatory 15 minute timer for the observation period. Press the "START TIMER" button to start the timer. The timer may also be started after data entry.
- STEP 5:** Observe the subject for 15 uninterrupted minutes. The subject must be within visual and audio proximity for the entire 15 minutes preceding the test. If at any time the subject burps, belches or vomits, the observation period must be restarted. If at any time the subject puts something into their mouth, the item must be removed and the observation period started again.

OPERATING THE INSTRUMENT:

- 1: Push "RUN" to begin the test process.
- 2: Select "DUI" from the "TYPE OF TEST? DUI or CHECK-IN" window.
- 3: Complete the data entry fields.
- 4: Review the information entered.
- 5: If the 15 minute timer was not started prior to pressing the "RUN" button, press "OK" now to start the timer. The test sequence will automatically begin once the 15 minute timer is satisfied.
- 6: The instrument will display the following.
 - "PURGING"
 - "AMBIENT ZEROING"
 - "BLANK TEST"
 - "CALIBRATION CHECK"
 - "SIMULATOR VAPOR" *The results should be within +/- 5% of the certified solution concentration.
 - "PURGING"
 - "AMBIENT ZEROING"
 - "BLANK TEST"
- 7: "SUBJECT TAKE TEST? YES or NO"
 - A) If the subject consents to provide a breath test select "YES" or press [Y] on the keyboard
 - B) If the subject refuses to provide a breath sample select "NO" or press [N]. The instrument will then prompt "REFUSAL or INCAPABLE." If the subject is physically incapable of providing a sample, select "INCAPABLE." If the subject refuses to provide a sample, select "REFUSAL." In both instances another box will pop up asking for a reason. Type in a reason why the subject did not provide a sample. The breath testing sequence will automatically end and the evidence report will print.
- 8: If YES is selected, the display will flash "PLEASE BLOW" and an intermittent tone will be heard.
- 9: Insert a new mouthpiece into the breath tube. For sanitary purposes, avoid directly touching the mouthpiece.
- 10: Instruct the subject to provide a slow, continuous breath sample. Do not allow the subject to hold the breath tube.
- 11: After an adequate breath sample is obtained, immediately remove the mouthpiece and discard it.
- 12: Inform the subject of the result of the evidentiary test and ask the subject if they wish to have a second test.
- 13: The following displays will then appear on the screen:
 - "PURGING"
 - "SUBJECT TAKE SECOND TEST? YES or NO"
 - A) If the subject declines the second test, select "NO" and an evidence report will print.
 - B) If a second test is requested, select "YES." The DMT will then rerun its quality control checks (step 6).
 - C) Following completion of the blank test the instrument will again display:
 - "SUBJECT TAKE SECOND TEST? YES or NO"
 - D) If the subject again consents to a second test select "YES." The instrument will display:
 - "PLEASE BLOW"
 - E) Insert a new mouthpiece into the breath tube and instruct the subject to provide a breath sample as before.

- F) Once the sample is accepted the operator should immediately remove the mouthpiece and discard it.
- 14: The evidence report is printed in triplicate at completion of the test sequence.
- A) One copy of the report should go with the rest of the case paperwork to the State's Attorney.
 - B) One copy of the report is retained by the arresting officer.
 - C) One copy of the report should be given to the subject.
- 15: Enter the simulator vapor result(s) in the DataMaster Operator Use log book as well as your own personal Infrared log, if one is maintained.

POSSIBLE PROBLEMS

Subject Sample → INCOMPLETE

If the subject PHYSICALLY CAN NOT provide a sample, a blood test can be requested.
If the subject WILL NOT provide a sample, you may consider deeming the subject to have refused.

Subject Sample → INTERFERENCE

Have the subject provide another sample. It is NOT necessary to wait an additional 15 minutes. If you get the message a second time, take the subject for a BLOOD TEST. This message indicates that there may be a chemical other than ethanol present in the sample and the DataMaster cannot report an ethanol result.

****NOTE** If INTERFERENCE results on a SIMULATOR SAMPLE, this is an instrument error, use a different instrument ****

Subject Sample → INVALID

Have the subject provide another sample. It is REQUIRED that you wait another 15 minutes. Remind the subject to provide one steady continuous breath; huffing and puffing into the instrument CAN cause an INVALID sample.

RF DETECTED

A radio frequency has been detected. Ensure all radio transmitters are turned off in or around the processing room and try the test again.

BLANK ERROR or AMBIENT FAIL

Move the subject away from the instrument and draw fresh air into the room, then try the test again.

For all other issues, please contact your DataMaster DMT Supervisor
or refer to
"Infrared Breath Testing Device Student Manual: DMT Addendum."

Please be as detailed as possible when relaying errors to your DMT Supervisor.

DataMaster DMT Supervisor: _____

Voltage settings in the DMT have been changed slightly due to a noticeable increase in efficiency across the board. Additionally, a change to a 2 mm x 2 mm PbSe detector was made due to the fact that the 2 mm x 2 mm detector is more readily available and there is no measurable difference in the sensitivity or performance in the two detectors. The 2 mm x 2 mm detector requires only a bias voltage of 80 Vdc.

In the DMT, aside from the RFI sensitivity adjustment, there are only three voltage settings that can be made and this is done using digital potentiometers via the Technician Mode screen. These are settings for the detector bias, TE cooler and IR source (lamp) intensity. The procedure for setting these voltages is as follows:

How Is a 2mm² Going To Be Id'ed

Set the bias to 80 Vdc for a 2 mm x 2 mm detector or 120 Vdc if 3 mm x 3 mm.



This information should appear on the tag attached to the detector cable. The tolerance on this setting is ± 5 Vdc.

Start with a cooler voltage of 1.5 Vdc and a lamp voltage of 1.5 Vdc. See what the detector voltage is at these settings. If the detector voltage is more negative than -0.100 , contact NPAS. If it is between -0.100 and $+0.100$, leave these settings as is. If the detector voltage is > 0.100 , increase the cooler voltage no more than 0.1 Vdc. If this is enough to bring the detector voltage down to the acceptable range, save these settings. If not, increase the Lamp voltage no more than 0.1 Vdc. If this is enough to bring detector voltage within range, save these settings. If not, go back to the cooler and increase it no more than, 0.1 Vdc. Continue this alternating the increase of no more than 0.1 V dc of the cooler and lamp voltages until the detector voltage is within range. Remember to save these settings.

Suggest A Table or A Flow Chart for This

need TICor copy for central file

If you get to the point that both the lamp and cooler are around 2.0 V dc and the detector voltage is still not down to around zero, increase the lamp only. The maximum allowable lamp voltage for the IR source is 3.0 Vdc. If it is required to set the lamp above 2.6 Vdc to get the detector voltage within range, the unit more than likely requires service.

→ what service 1 Clean SL, 2 Align Detector Block 3 ---

Any questions regarding these instructions can be directed to NPAS at 800-800-8143.

around zero = $> -0.100 < 0.100$