





TE#1 Configuration

Temp Set Point0

Serial Port

VISA resource name

Enabled?

baud rate

timeout (ms)

data bits

input buffer size

parity

End read on termination character?

End write on termination character?

stop bits

flow control

termination char

XON Char

XOFF Char

TE#2 Configuration

Temp Set Point0

Serial Port

VISA resource name

Enabled?

baud rate

timeout (ms)

data bits

input buffer size

parity

End read on termination character?

End write on termination character?

stop bits

flow control

termination char

XON Char

XOFF Char

Capnometer Configuration

DeviceNone

Baro Pressure0mmHg

Serial Port

VISA resource name

Enabled?

baud rate

timeout (ms)

data bits

input buffer size

parity

End read on termination character?

End write on termination character?

stop bits

flow control

termination char

XON Char

XOFF Char

DAQx Settings

DAQ Device

Frequency0

Duty Cycle0.0

Analog Output Settings (Volts)

05555

Chart X axis Timescale0

Temp Seq

Start

current time

LEDsON

Saving

Ready

Filename

Prefix

Insp Tank

Sequence Filename

Collecting

Cal Status

Skip

Capture (Cal)

Characterization Filename

Queue Cluster

DAC Current 2

DAC Current

Raws

DataLogger String

Header String

Array

Second DAC Resp

DAC Settings

DOs

Pump

semaphore

User Refs

Last Calibration

last cal time

Time Since last Zero

main loop rate

last zero time

Data File Path

Exp Tank

starttime

Saving File

Zero Status

Time Since last Cal

Cal Required

Zero Required

zcount

target

target

standard deviation

Monitoring Time since last Zero

Capnogram

RTMode

raws(V)

Test Info

Film Sample Name

start mS time

stored time

InitializeFile

stop time

[Run](#)

[Waveforms](#)[Waveforms]

[WaveformA1](#)[WaveformA1]

[WaveformA1](#)[WaveformA1]

[WaveformA1](#)[WaveformA1]

[WaveformA1](#)[WaveformA1]

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[WaveformA1](#)[WaveformA1]

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[ExitProgram](#)

breath start time

[Insp Tank](#)

[Zero](#)

Set Point1

[Set Point2](#)

[Whole Pulse](#)

Raw DAQ Channels 2

[Raw DAQ](#)

[String](#)

Value

[Numeric](#)

[SetDac Button](#)

Off

[Status](#)[HomeMode]

[Zero 2](#)

Record Button

[Last Calibration](#)

[Last Cal Date](#)

[Last Cal Time](#)

[View Cal Details](#)

[Store_Cal](#)

Open Cal

[Prefix](#)

[Humidifier](#)

Cal Required

[Zero Required](#)

[LEDsON](#)

Offset Adjust

[AirPump Controls](#)

[Air Pump PWM](#)

[Solenoid #1](#)

[Solenoid #2](#)

[Air Pump On](#)

Short tubing

[Loflo Connected](#)

[Flow\(ml\)](#)

Wait Active

+

-

Daq Needed

[DAQ](#)

[Raw DAQ Channels](#)

DAQ Current 2

[SetDAC Button](#)

[DAC Return](#)

DAQ Raw Samples

[WFChart Refnum](#)

[WFChart Refnum 2](#)

[Raws](#)

[TE](#)

[TE Data](#)

[Set Point Changed](#)

[Set Point1](#)

[Set Point2](#)

[TE Ports](#)

[Set Temp](#)

[Loflo](#)

[Loflo](#)

[Saving Data](#)

[Zero](#)

[Zero 2](#)

[Ready to Log 2](#)

[sequence](#)

[Loflo Status](#)

[Aux CO2 Port](#)

[Miscellaneous](#)

[Air Pump Controls](#)

[Application Info](#)

[Detector Channels](#)

[Cluster](#)

[Cluster2](#)

[Cluster3](#)

[Cluster4](#)

[Cluster 5](#)

[Cluster 6](#)

[Cluster 7](#)

[Logging](#)

[Cluster 10](#)

[Cluster 8](#)

[DAQ Cluster 3](#)

[RunTime Mode Settings 2](#)

[Individuals](#)

[Baro Pressure](#)

[Raw \(Torr\)](#)

[digital out](#)

[PMW OK](#)

[Enable Simulated Breaths](#)

[Status Lights](#)

[BD](#)

[breath start time](#)

[HomeMode](#)

[start time](#)

[Sensor Under Test](#)

[Gas Tank#](#)

[Play Button](#)

[Sequence Stop](#)

[DOs](#)

[Pump Flow Rate](#)

[Char Notice](#)

[Exit](#)

[Settings](#)

[Humidifier](#)

[Humidity Error](#)

[Pump](#)

[Waveforms](#)

Current Settings

[Loaded Settings File](#)

Test Settings

Dual Channel

[Air Pump](#)

[Optical Drive](#)

Pulsed Drive

[Calibration Mode](#)

[Test Sensor ID](#)

Test Chamber

[Test Operator](#)

[Sample Descriptor](#)

Notes

[Calibration Settings](#)

[Cal. Average](#)

Cal Averaging

[Tolerance #0](#)

[Tolerance #7](#)

Tolerance #6

[Tolerance #5](#)

[Tolerance #4](#)

Tolerance #3

[Tolerance #2](#)

[Tolerance #1](#)

Gas Tank Settings

[Gas Conc. #0](#)

[Gas Conc. #1](#)

Gas Conc. #2

[Gas Conc. #3](#)

[Gas Conc. #4](#)

Gas Conc. #5

[Gas Conc. #6](#)

Gas Conc. #7

DataLogging Settings

[Data File Path](#)

[Data File Duration \(Minutes\)](#)

Log Filename

[Config Path](#)

[DAQx Settings](#)

DAQ Device

[Frequency](#)

[Duty Cycle](#)

Analog Output Settings (Volts)

[AO.Max](#)

Capnometer Configuration

Serial Port

termination char

termination char calls for termination of the read operation. The read operation terminates when the termination char is read from the serial device.

[End read on termination character?](#)

This enables the serial port to end the read operation when it detects the termination character.

[Enabled?](#)

This enables the serial port to end the read operation when it detects the termination character.

VISA resource name

A string that uniquely identifies the resource to be opened and written to as well as read from. The grammar for the resource name is shown below. Optional string segments are shown in square brackets ([])

Interface Syntax

VXI VXI[board]::VXI logical address[::INSTR]
GPIB-VXI GPIB-VXI[board]::VXI logical address[::INSTR]
GPIB GPIB[board]::primary address[::secondary address][::INSTR]
Serial ASRL[board][::INSTR]

The following table shows the default value for optional string segments.

Optional String Segments	Default Value
board	0
secondary address	none

The following table shows examples of address strings.

Address String	Description
VXI0::1	A VXI device at logical address 1 in VXI interface VXI0.
GPIB-VXI::9	A VXI device at logical address 9 in a GPIB-VXI controlled system.
GPIB::5	A GPIB device at primary address 5.
ASRL1	A serial device attached to interface ASRL1.

baud rate

data bits

parity

stop bits

stop bits specifies the number of stop bits used to indicate the end of a frame.

flow control

flow control sets the type of control used by the transfer mechanism.

timeout (ms)

Input buffer size

End write on termination character?

This enables the serial port to end the read operation when it detects the termination character.

XON Char

termination char calls for termination of the read operation. The read operation terminates when the termination char is read from the serial device.

XOFF Char

termination char calls for termination of the read operation. The read operation terminates when the termination char is read from the serial device.

Baro Pressure

Device

TE#1 Configuration

Temp Set Point

Serial Port

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GPIB-VXI GPIB-VXI[board]::VXI logical address[:INSTR]
GPIB GPIB[board]::primary address[:secondary address][:INSTR]
Serial ASRL[board][:INSTR]

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TE#2 Configuration

Temp Set Point

Serial Port

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stop bits

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RunTime Mode Settings

Resp Rate Brpm

I:E Ratio

Insp. Gas Tank

Exp. Gas Tank

Chart X axis Timescale

Pump

Temp Seq

Start

current time

LEDsON

Saving

Ready

Filename

Prefix

Insp Tank

Sequence Filename

Collecting

Cal Status

Skip

Capture (Cal)

Characterization Filename

Queue Cluster

[DAC Current 2](#)

[DAC Current](#)

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[DataLogger String](#)

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[Second DAC Resp](#)

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User Refs

[Last Calibration](#)

[last cal time](#)

[Time Since last Zero](#)

[main loop rate](#)

[last zero time](#)

[Data File Path](#)

[Exp Tank](#)

[starttime](#)

[Saving File](#)

[Zero Status](#)

[Time Since last Cal](#)

[Cal Required](#)

[Zero Required](#)

[zcount](#)

[target](#)

[target](#)

[standard deviation](#)

[Monitoring Time since last Zero](#)

[Capnogram](#)

[RTMode](#)

[raws\(V\)](#)

[Test Info](#)

[Film Sample Name](#)

[start mS time](#)

[stored time](#)

[InitializeFile](#)

[stop time](#)

[Cluster 3](#)

[\(pk\)\[pk\]](#)

[\(V\)\[RawCO2\]](#)

[\(uncald\)\[Uncal'd\]](#)

[\(avg\)\[Avg_Hum\]](#)

[Avg'd CO2](#)

[CO2\[Home_CO2\]](#)

[Ref_CO2\[Home_Ref\]](#)

[Humidity\[Home_Hum\]](#)

[Film Temp\[Home Temp\]](#)

[ml/min\[Pump Flow Rate\]](#)

[ml/min\[I:E Ratio\]](#)

[Brpm](#)

[Sim Breaths](#)

[GasTank](#)

Cluster 5

- ETCO2 %
- RR (brpm)
- Inhale Time
- Exhale Time
- Enable Simulated Breaths
- Use Channel

Cluster 6

- Characterisation Filename
- Sequence Filename
- Set Temp
- Actual
- Capture (Cal)
- Stable Counter
- Time
- Step
- of
- InRange
- Cal Status
- Collecting
- Saved
- Skip

Cluster 7

- Start
- Filename
- Ready to Log 2
- x = 0?
- File Duration
- Time Remaining

Cluster 8

- Display Uncal'd
- Display Ref
- Ch 1
- Ch 2
- Ch 3
- Ch 4

Cluster 9

- RTMode
- Sensor Under Test
- Cluster 2
 - Operator
 - Chamber
 - Drive
 - Channels
- Sequence Stop
- Play Button
- Settings
- Advanced
- Exit

Logging

- Data File Path
- Log Filename
- Data File Duration (Minutes)

Cluster 2

- Chamber Temp
- Source
- Bath Source

Cluster 12

DAC Setting

Numeric Control

DAC Setting (ma)

Numeric Control

RunTime Mode Settings 2

Resp Rate Brpm

ml/min[I:E Ratio]

Insp. Gas Tank

Exp. Gas Tank

Waveform Chart[Waveform Chart]

Saving Data[Ready]

Indicates if the Express VI is saving the data.

DAQ Raw Samples

loop counter

Tab Control[Tab Control]

current time

stop time

start time

Notes

Actual dt

Waveform Chart[Waveform Chart 2]

Raw (Torr)

If a Serial Port Read operation is performed, the Bytes to Read control dictates the bytes to read from the serial port.

Film Sample Name

Baro Pressure

Saving

Reset[InitializeFile]

Specifies whether you want to reset the data file when you run this Express VI iteratively. LabVIEW ignores this input when you run this Express VI in the first iteration. During the second and subsequent iterations, if the value is FALSE, this Express VI appends data to a file if the file already exists. Depending on your configuration for this Express VI, if the value is TRUE, this Express VI renames, overwrites, or skips a file if the file already exists. The default is FALSE.

DAC Setting

AO.Max

stored time

Aux CO2 Port

Port

Source

Active

Baro Pressure

SerialRxBuffer

Raw CO2 (Torr)

If a Serial Port Read operation is performed, the Bytes to Read control dictates the bytes to read from the serial port.

bytes read

If a Serial Port Read operation is performed, the Bytes to Read control dictates the bytes to read from the serial port.

Status

Numeric

Status Message

TE Ports

TE Port 1

TE Port 2

ProcessedData

read buffer

Bytes Read

bytes read 2

If a Serial Port Read operation is performed, the Bytes to Read control dictates the bytes to read from the serial port.

TE OK? 2

DO_1 3

Loflo Status

Exp Tank

Ticks Interval Time

TE Data

read buffer

sequence

all rows is the data read from the file.

all rows is the data read from the file.

Gas Tank#

start mS time

Digital Output

Cluster

Boolean

String

String 2

Set Point Changed

Raw DAQ Channels

Raw DAQ

String

Value

Numeric

Capnogram

BD

Raws

Detector Chl 1

Humidity

Film Temperature

Detector Chl 2

Ref CO2

Detector Chl 3

Detector Chl 4

Det. Temperature

Bath Temperature

Ambient Temperature

rt Baro Pressure

Chamber Temperature

Zero Status

Saving File

starttime

standard deviation

standard deviation is the standard deviation calculated from the values in the input sequence X.

target

zcount

Humidity Error

Time Since last Cal

Time Since last Zero

last zero time

last cal time

Monitoring Time since last Zero

CalTab

digital out[digital out]

Hz[main loop rate]

Loflo

System #

Saving Data

Tank[Tank]

Boolean

Sequence Count

raws(V)
Detector Chl 4
DAC[DAC current 2]
AO.Max
Return[DAC return]
AO.Max
Pump Meter Use (mins)
mins
Numeric
secs
Numeric
Char Notice
Pump
DAQ sampling rate
#samples
Trigger rate (Hz)
LED ontime (mS)
LED offtime (mS)
Cluster
DAQ Device Ind.
ProductCategory
ProductType
ProductNum
DevSerialNum
Application Info
SW Phase
SW Revision
Build Time / Date
Config Path
Detector Channels
CO2% (1)
CO2% (2)
CO2% (3)
CO2% (4)
Chl 1 (V)
Chl 2 (V)
Chl 3 (V)
Chl 4 (V)
Cluster 4
Ref CO2
Humidity
TE #1
TE #2
Film `C
Bath `C
Det. `C
Ambient
Chamber C
Status Lights
InUserMode
SimMode
Loop Active
PWM OK
task done? indicates if the measurement or generation completed.
Saving Data[Running]
Indicates if the Express VI is saving the data.