

## Getting Started with TDSVNM

You can use this side of the quick reference to start taking measurements with the TDSVNM CAN and LIN Timing and Protocol Decode software. The other side contains a complete menu tree for TDSVNM software.

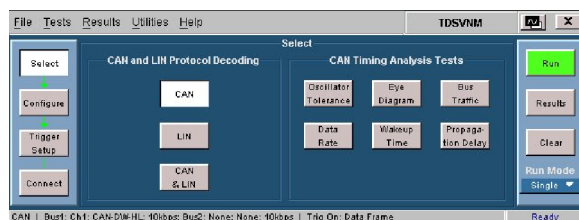
**NOTE.** For complete operating instructions and general safety information, refer to the online help for the application.

The TDSVNM CAN and LIN Timing and Protocol Decode software and the ATM-1 Automotive Trigger Module transform a digital oscilloscope into an analysis tool to capture and decode CAN and LIN messages.

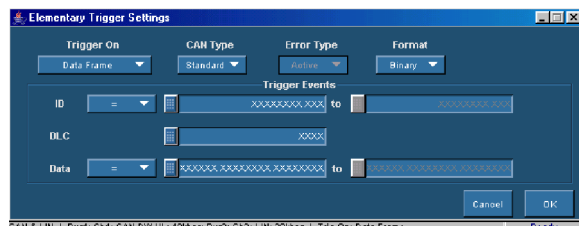
### Decoding CAN and LIN Protocols

To decode the CAN and LIN messages, follow these steps:

- To start the application, do one of the following:
  - Select File > Run Application > in the oscilloscope menu bar. Then select CAN and LIN Timing and Protocol Decode Software
  - App > CAN and LIN Timing and Protocol Decode Software
  - Analyze > CAN and LIN Timing and Protocol Decode Software
- Select Tests > Select from the application menu. Select CAN & LIN.



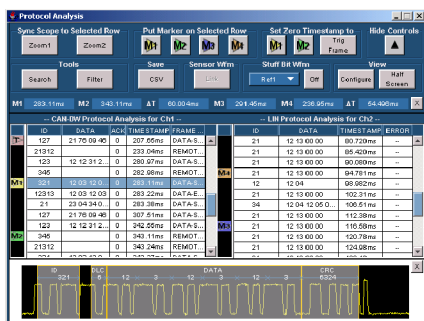
- Connect the probes to the device under test as shown in the following illustration.



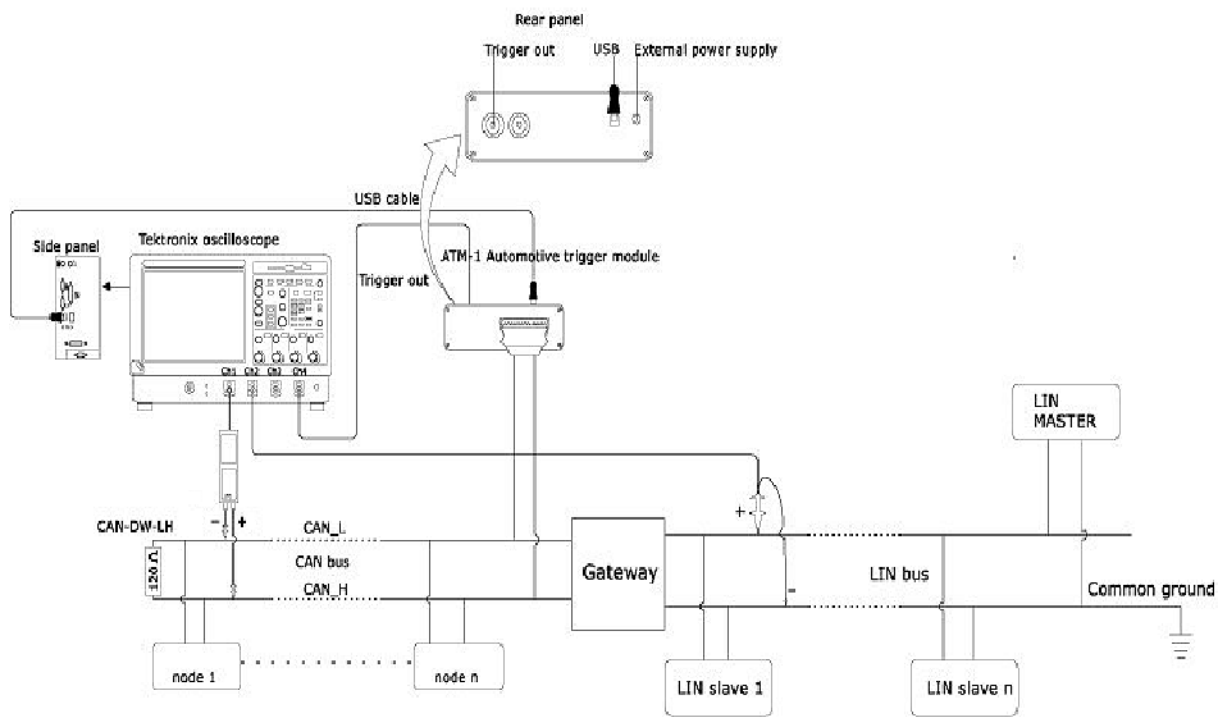
- Set ACK to No.
- Push the Run button to start taking measurements. When the measurement is completed successfully, the application automatically displays the results. You can also view the results by selecting Results > Details from the application menu bar.



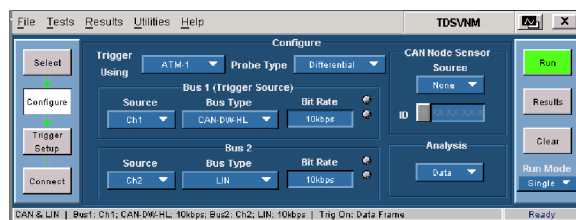
- The application displays the measurement results.



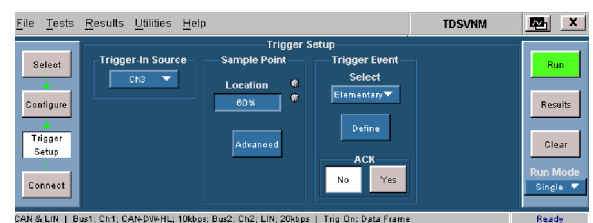
### CAN and LIN probe connection



- Select Tests > Configure from the application menu, and then set the following parameters:
  - Set the Trigger Using to ATM-1.
  - Set the Probe Type to Differential.
  - Set the Bus 1 (Trigger Source) parameters: Source to Ch1, Bus Type to CAN-DW-LH, and Bit Rate to the bit rate of the selected bus type.
  - Set the Bus 2 parameters: Source to Ch2, Bus Type to LIN, and Bit Rate to the bit rate of the selected bus type.
  - Set the CAN Node Sensor to None.
  - Set Analysis to Data.



- Select Tests > Trigger Setup from the Application menu. Set the Trigger-In source and the Sample Point Location as appropriate. Set the Trigger Event to Elementary with Trigger Using set to ATM-1.



**NOTE.** DPO-CAN is available only on DPO oscilloscopes when CB:CANBus Trigger option is enabled.

- Click Define. Define the trigger settings and click OK.

**NOTE.** To define trigger events, you must have the ATM-1 Automotive Trigger Module or the DPO oscilloscope with CB:CANBus Trigger option enabled.

For up-to-date information on Tektronix oscilloscope solutions for TDSVNM, access the [www.tektronix.com/Masurement/scopes/](http://www.tektronix.com/Masurement/scopes/) Web page.

### TDSVNM Ordering Information

Supports the TDS5000B, TDS7054, TDS7104, TDS7000B, and DPO7000 Series oscilloscopes; refer to the *Optional Applications Software on Windows-Based Oscilloscopes Installation Manual* for a complete list of supported models. The applications CD includes a PDF file of the installation manual.

If you order the Option VNM along with a TDS5000B, TDS7054, TDS7104, TDS7000B; Option LSA for DPO7000 Series oscilloscope, the TDSVNM CAN and LIN Timing and Protocol Decode Software will already be installed and enabled.

To order the ATM-1 Automotive Trigger Module, contact a Tektronix representative.

To order an upgrade for an existing oscilloscope:

- Opt. VNM - TDS5BUP
- Opt. VNM - TDS7UP
- Opt. VNM - TDS7BUP
- Opt. LSA - DPO7UP

### Recommended Products and Accessories

- Opt. 3M for TDS5000B
- Opt. 18 for TDS5000B
- Opt. 2M or 3M for TDS7054/7104
- Opt. 2M or 3M or 4M or 5M for TDS7000B series
- TCA-1MEG probe adapter, while using with TDS7000B
- TPA-BNC, TEKPROBE™ BNC Adapter while using with DPO7000
- P5205, P5210, P5200 and ADA400A differential probes

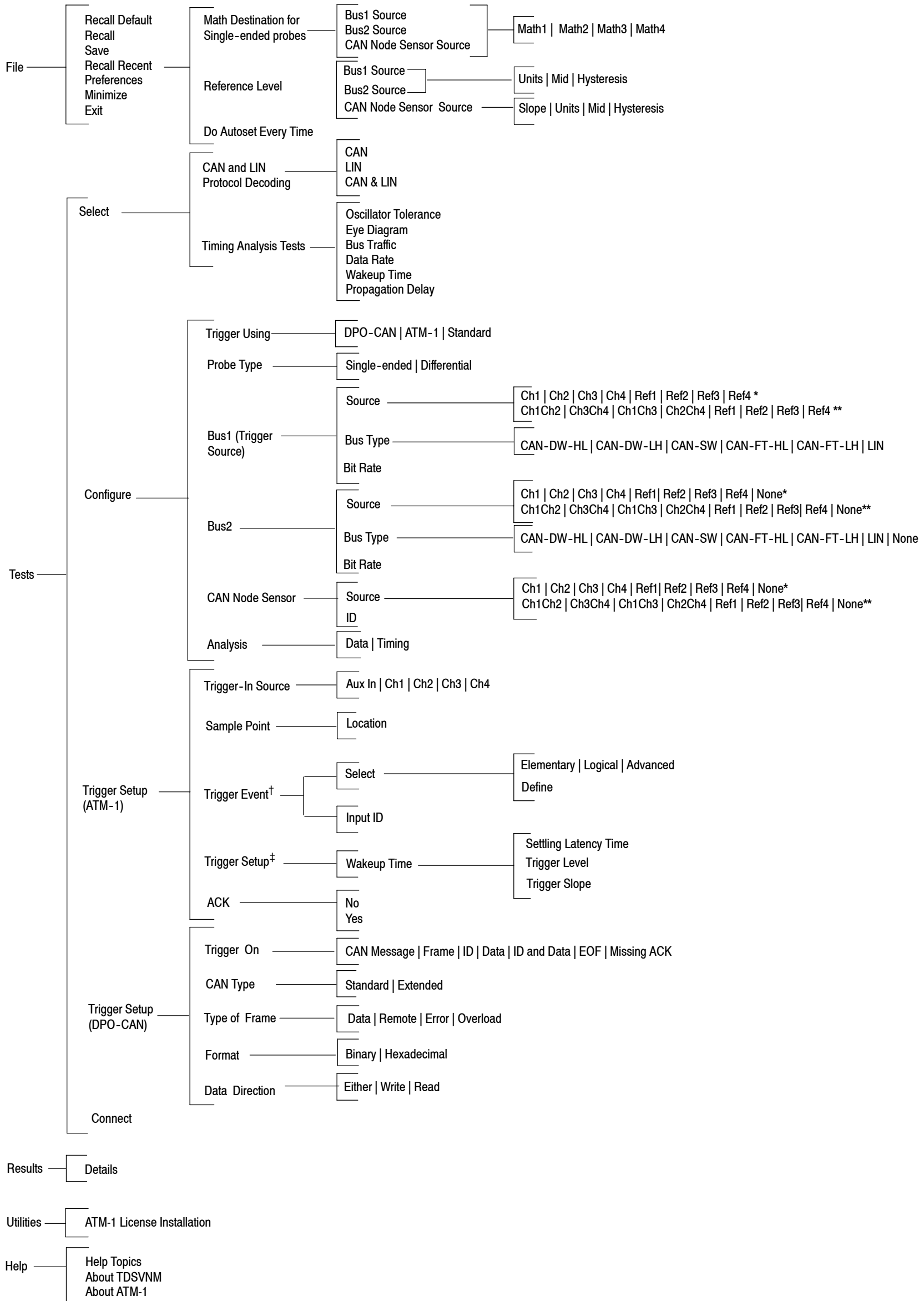
## TDSVNM CAN and LIN Timing and Protocol Decode Software Reference

www.tektronix.com



071-1880-00

TDSVNM Menu Tree



\* Displayed when the Probe Type is Differential.

\*\* Displayed when the Probe Type is Single-ended.

† Available only for protocol decoding.

‡ Available only for Wakeup Time test.