

CYGNUS 850 2 Mbps MODEM **Quick Start Installation Guide**

Before installing the modem, verify the leased line is of 2 Mbps (Unframed) or Nx64 kbps (Framed). If it is unframed 2 Mbps then you can directly connect the E1 and V.35 modem in the line as CYGNUS 850 modem factory default configuration is unframed 2 Mbps. Both end (Premises & Local Exchange) modems should have same configuration either framed or unframed but not different configuration.

- For configuring CYGNUS 850 modems, connect the PC Comm. port to the console port (9 pin Female) of the modem which is provided on the front panel.
- The PC Comm. port parameters should be as follows :
Speed - **9600 bps**
Databits – **8**
Parity - **None**
Stopbit - **1**
Flowcontrol – **None**
- When you access the supervisory functions through the console port, it is password protected and menu driven. The default password for logging in is the character “0”. When you log into the supervisory you reach its “Root ” menu.

1. Unframed configuration (2 Mbps)

- To configure the modems for unframed - 2 Mbps speed (factory default), navigate through the menus **to configure factory default parameters** (2.1.9 of flowchart diagram) and type “Y” to load the factory default parameters.
- When system prompts to ignore password, press enter and navigate through the menus **to store the parameters in NVRAM** (2.1.7 of flowchart diagram) and type “Y” to save the parameters. Restart the system manually by switching it OFF & ON or go **to reset the unit** (2.1.8 of flowchart diagram) and type “Y” to reset the system through software.
- Verify the same by entering into the menus and select **to view the unit status** (1.0 of flowchart diagram). Verify the **Framing** parameter, it should be **Unframed**.
- Both the units (V.35 & E1) should have same configuration i.e. Unframed.

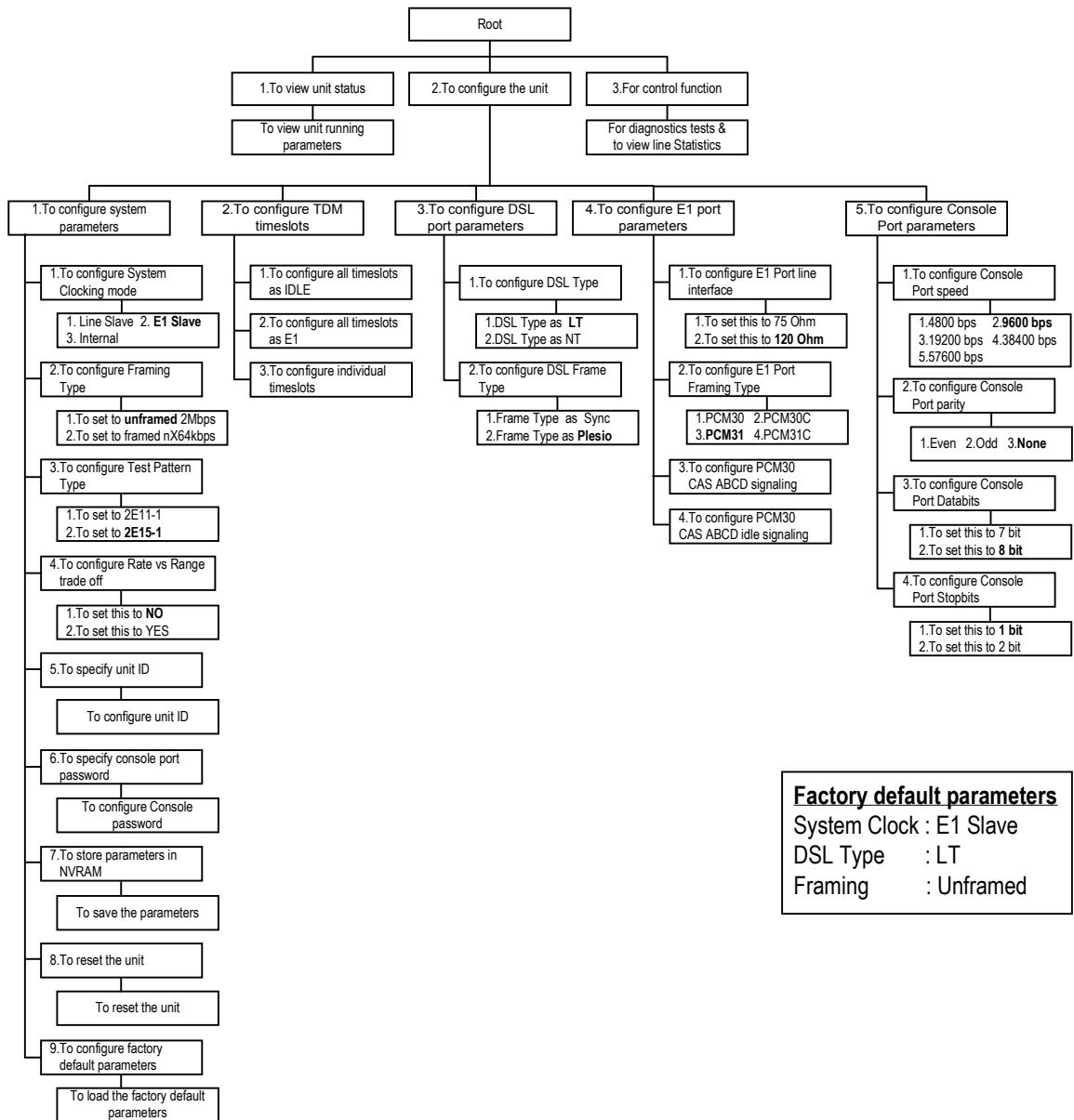
2. Framed (for 64 kbps, 128 kbps, 256 kbps, 512 kbps & 1 Mbps)

- If we need to configure the modems for other than 2 Mbps speeds (eg.: 128 kbps), follow the below procedure.
- To configure the modem for n x 64 kbps speed, you need to configure the framing type to framed and the number of timeslots (eg.: for 128 kbps, slot 1 & 2) as DTE for V.35 and E1 for E1 modem.
- To configure framing type, navigate through the menus **to configure Framing Type** (2.1.2 of flowchart diagram) and select as **Framed**.
- To configure timeslots, navigate through the menus **to configure TDM timeslots** (2.2 of flowchart diagram). Each slot is of 64 kbps.
- If your speed is 1984 kbps (i.e. 31 x 64 kbps), select **to configure all timeslots as DTE** in V.35 modem and **to configure all timeslots as E1** (2.2.2 of flowchart diagram) in E1 modem.

- If your speed is multiples of 64 kbps (eg.: 128 kbps i.e. 2 slots), then select **to configure individual timeslots** (2.2.3 of flowchart diagram) and you will get a prompt **to enter the timeslot**. Start with “1”, select it as **DTE** for V.35 modem & as **E1** for E1 modem and continue upto the number of timeslots you required as per the speed (for 128 kbps only 1 & 2 slots should be DTE/E1 and remaining slots should be IDLE). For 256 kbps speed 4 slots and for 512 kbps 8 slots should be DTE/E1 keeping all other slots as IDLE.
- All the changes done in the configuration will take effect only after the same has been saved and the unit is restarted.
- To save the parameters, navigate through the menus **to store parameters in NVRAM** (2.1.7 of flowchart diagram) and type “ Y ” to save.
- Then you can restart the unit manually or by selecting **to reset the unit** (2.1.8 of flowchart diagram) from the **system parameters** menu and typing “ Y ”.
- To see the configuration, select **to view unit status** and check **Framing**, it should be **Framed** for V.35 modem and **Framed:PCM31** for E1 modem.
- Both the units (V.35 & E1) should have same configuration i.e. framed.

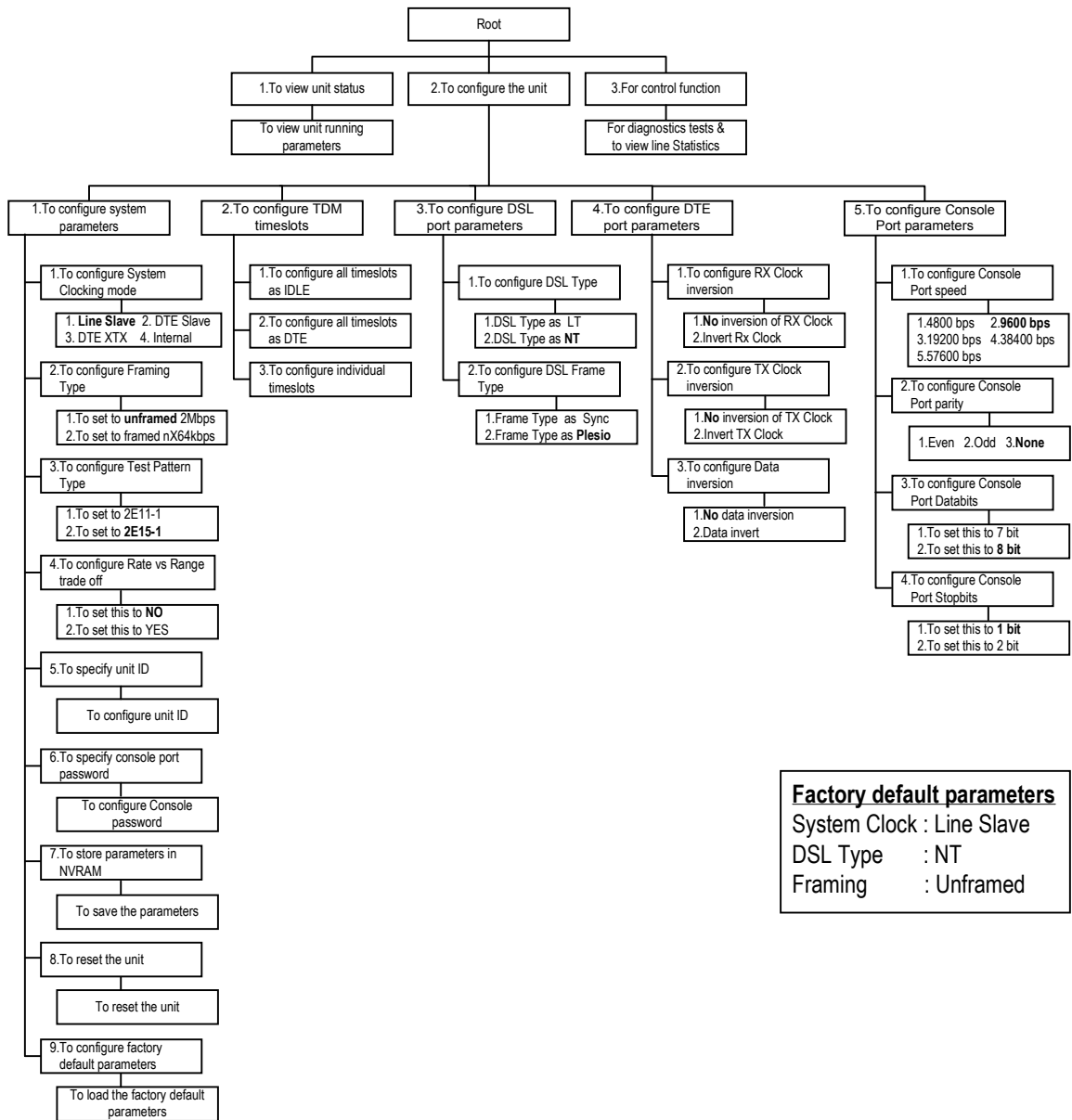
After following the above steps for configuring, the modem is ready to be connected on line.

Menus flow chart of CYGNUS 850 E1 Modem



Factory default parameters
 System Clock : E1 Slave
 DSL Type : LT
 Framing : Unframed

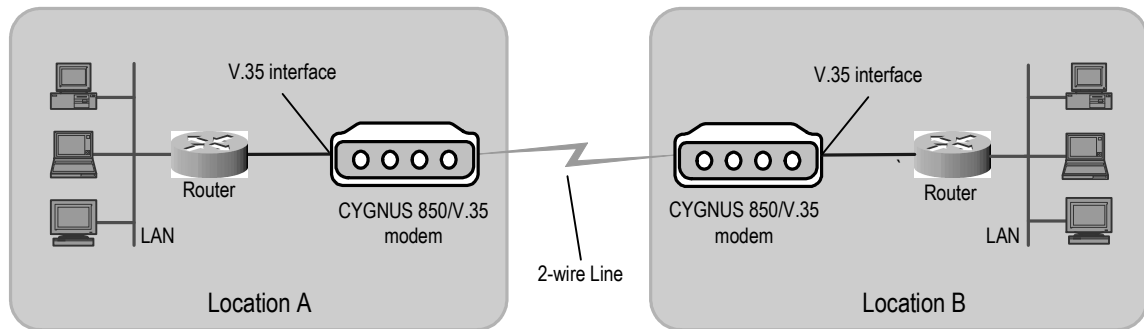
Menus flow chart of CYGNUS 850 V.35 Modem



Factory default parameters
 System Clock : Line Slave
 DSL Type : NT
 Framing : Unframed

Configuration for 2 V.35 modems connectivity

1. When two V.35 modems are used in the circuit to connect two premises, then one V.35 modem should be configured as LT with Internal clock mode and the other modem should be in factory default mode.
2. The diagram shows the connectivity of two V.35 modems.

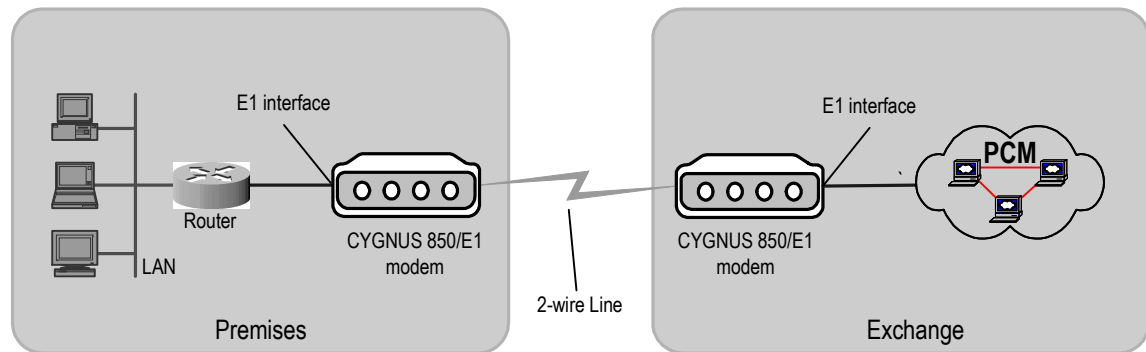


Connectivity using two V.35 Modems

3. To change the clocking mode, navigate through the menus **to configure System Clocking mode** (2.1.1 of flowchart diagram) and select **change** option. Then select **internal** clock mode.
4. To change the DSL type, navigate through the menus **to configure DSL Type** (2.3.1 of flowchart diagram) and then select **DSL Type as LT**.
5. After performing the above steps, save the parameters by navigating through the menus **to store parameters in NVRAM** (2.1.7 of flowchart diagram).
6. Then restart the modem manually and verify the parameters by navigating through the menu **to view unit status**. In that Clocking should be **Internal** and DSL Type should be **LT**.
7. Now the modems are ready to be connected in the line.

Configuration for 2 E1 modems connectivity

1. When two E1 modems are used in the circuit to connect local exchange and the customer premises, then one E1 modem should be configured as NT with Line Slave clock mode to connect at the customer premises and the other modem should be in factory default mode to be connected at local exchange.
2. The diagram shows the connectivity of two E1 modems.



Connectivity using two E1 Modems

3. To change the clocking mode, navigate through the menus **to configure System Clocking mode** (2.1.1 of flowchart diagram) and select change option. Then select **Line Slave** clock mode.
4. To change the DSL type, navigate through the menus **to configure DSL Type** (2.3.1 of flowchart diagram) and then select **DSL Type as NT**.
5. Before installing the modems, verify the leased line is of 2 Mbps (Unframed) or Nx64 kbps (Framed). If it is unframed 2 Mbps then you can directly connect the E1 modems in the line as default speed is 2 Mbps. If we need to configure the modems for other than 2 Mbps speeds (eg.: 128 kbps), refer page 1 for the configuration.
6. After performing the above steps, save the parameters by navigating through the menus **to store parameters in NVRAM** (2.1.7 of flowchart diagram).
7. Then restart the modem manually and verify the parameters by navigating through the menu **to view unit status**. In that Clocking should be Internal and DSL Type should be LT.
8. Now the modems are ready to be connected in the line.