

## **KNOW YOUR BSNL-BROADBAND**

In our endeavor, to improve customer satisfaction and serve you better, one more value addition in the form of "Know Your Broadband" note is being presented to you. This note enables you to know the common and trivial information about broadband in a simple way. This brochure may be preserved for repeated readings as and when required. We invite your valuable comments and suggestions, which may kindly be mailed to [janardanap@bsnl.co.in](mailto:janardanap@bsnl.co.in)

### **1. Check the wires:**

The leading-in cable (drop-wire) from the junction box (DP box) to your house, should be as straight as possible, should be a single length without any joints. The wires should not be coiled anywhere and should be away from electrical lines. With these types of irregularities, your phone might work fine but the DSL link will not hold and work satisfactorily.

### **2. Splitters and Parallel telephones:**

The splitter does the job of separating the high frequency ADSL signals from low frequency telephone signals. If the splitter is not installed correctly, the broadband connection may go down every time the phone rings. Parallel phone connections, if a must, should be after the splitter and not before. The line from the exchange should first enter into the splitter's line jack. The phone should be connected only to the phone jack of the splitter. A two-way jack may be connected to this phone jack to install your parallel telephones. Please note the parallel connections are never recommended as this will upset the line/splitter output impedances and result in a poor SNR (Signal to Noise Ratio). The wire leading into the modem should not be running parallel or close to electrical wiring to avoid noise interferences.

### **3. Signal to Noise Ratio (SNR):**

Signal to Noise Ratio (SNR) gives an idea about the signal strength of your ADSL broadband connection. To check your line SNR, first you need to enter into the Modem's built-in web page by typing <http://192.168.1.1> in your browser (say, internet explorer). The modem might ask for user-name and password. The default user-name / password is admin / admin (except for the modem Utstar300R where it is admin / utstar). Under the heading Device Info / Statistics / ADSL, you will be able to see the SNR Margin and Attenuation. (Please refer the modem manual for exact navigation details). The overall SNR will be normally higher than 20 dB, though anything above 12 dB is just enough. **Parallels will reduce the SNR, as we pointed out already, resulting in frequent disconnections.** The Line-Attenuation should be as low as possible. But if the attenuation starts going higher than 40 dB and SNR going down below 12 dB, it is time to complain about the line condition to our help-lines on **1504 or 12678 or 1500**

### **4. To know the mode of connection:**

You should be aware of whether you are using the **Broadband modem in bridge mode or in PPPoE mode (router mode).**

In the bridge mode, you will use a dialer (say, Dial-Up Adaptor, a built-in component of Windows OS), which will contain your UserID and password. You need to double-click the icon to get connected to broadband and open your explorer to view the web sites.

In PPPoE/router mode your user-id and password will be stored (configured) in the modem itself. In this case, you will simply switching-on the modem, wait for the DSL (Link) to become steady, and will start browsing straightaway. We recommend you to first switch on your modem and then switch on your PC/Laptop. Your user-id will be either in dataone.in domain or in bsnl.in domain. You may visit our website [www.dataone.in](http://www.dataone.in) and click the appropriate links like to check your usage or to change your password. Please note that whenever you change the password by visiting [www.dataone.in](http://www.dataone.in), the same password change must also be done inside the modem (for PPPoE/router mode) or in the dialer (for Bridge mode).

## 5. How to change the password?

### o In case bridge (Dialer) mode:

- Connect your computer to Internet through the browser by clicking the DataOne Connection Icon, which was created and placed on the Desktop during the initial configuration.
- Open Internet Explorer or any other browser.
- Type the address [www.dataone.in](http://www.dataone.in) in the address bar.
- Click the link "Dataone Account Administration" if your user id ends with @dataone.in or "Usage Detail Portal" if your user id ends with @bsnl.in
- Give your user ID/ Portal ID and existing password and click on Login button.
- Click the link "Change Password".
- Give your old password and the new password. Confirm the new password.. Click on the "Change password" button. Wait for the message of successful completion.
- Update the changes in the dialer, when you connect the next time.

### o In case router (PPPoE) mode:

- In case of router mode, do all steps above except the last one.
- Now update the password in the modem too, by going to <http://192.168.1.1>
- Enter UserID and password as found in the modem manual (eg; admin/admin)
- Go to connection settings and change the password. (settings: PPPOE with PVC 0, VPI/VPI as 0/35, for any type of ADSL modem)
- Save and reboot the modem (using control buttons in the modem web-page).

## 6. DNS Servers:

DNS servers are used to resolve the URLs like [www.google.co.in](http://www.google.co.in) into an IP addresses like 209.85.153.103, which is required by routers to take you to the website. The DNS server IP will automatically be available in the Modem for PPPoE mode of working. For Bridge mode of working, your PC will be getting the DNS IP automatically. You may check it by giving the command ipconfig /all in the command prompt. It will always be better to assign an IP address to your Ethernet/USB/Wifi adapter to which the modem is connected. To set this, go to control panel, click Network connections and under the "LAN or High-Speed Internet " there will be icons like Local Area connection, Wireless Network Connection showing the NIC card, USB port, Wireless adapter to which your modem is connected. Right click on the icon, select Properties, click on Internet Protocol (TCP/IP), click on Properties, click on "Use the following IP address" put the IP address as 192.168.1.10, subnet mask as 255.255.255.0 and default gateway as 192.168.1.1 and Preferred DNS as 192.168.1.1. Click OK and then again OK and close every thing, reboot your machine to the take the settings.

One can use the public DNS like 208.67.222.222 or 208.67.220.220 also, but if some sites are not opening using this DNS, BSNL cannot take the responsibility. On the contrary, if some sites are not opening with BSNL DNS but opening with the public DNS, the matter may be reported to our helpline so as to analyse and resolve the case.

#### **7. Positioning of Wi-Fi Router:**

Though the wireless signals from the Wi-Fi router (Type-2 modem) can reach Wi-Fi enabled laptop/pc within a max range of around 100 meters, walls and other obstructions will prevent the transmission signals. It will be better to place the Wi-Fi Modem (Router) at a higher place to avoid physical obstructions. Another main source of interference is the cordless phone. Keep the router as far away from the cordless phone or choose cordless phones that use different frequencies. To increase the wireless range, one can also use a wireless repeater purchased from local market. Before purchasing, ensure from the vendor, it supports the Wi-Fi router you have.

#### **8. Wi-Fi Security:**

The security options of wireless router should be utilized to avoid someone from your neighborhood accessing your modem. The wireless signals might reach the neighboring houses, and if the security options are not enabled, there is every chance of misuse of your broadband connection. Hence it is advised to change the modem-login password and also check whether the security options are enabled or not. Customers can visit the modem webpage (<http://192.168.1.1>) as stated earlier and check the wireless security options. The very basic level of security is by giving the wireless key, which will be asked by the modem when a Laptop/PC is trying to access the modem for the first time. There are two types security key algorithm. One is WEP (Wired Equivalent Privacy) and another WPA (Wi-Fi Protected Access). The WPA is more secured and recommended by BSNL. The next (advanced) level of security is MAC Filtering by which only your Laptop/PC will be permitted to access the modem, even if someone knows your security key. The default SSID (Service Set Identifier) of the modem may also be changed as per your desire and the SSID may also be made hidden (turn-off SSID broadcasting) so that others will not even know about your wireless modem. In this case of Hidden SSID, your PC/Laptop will be connected to the modem as you have already configured for the connection in your machine. However some times your machine may not be able to get connected and in such case, you may just right-click on the Wireless Network Connection icon either in the task bar or in Network connections under Control panel and select 'Repair' option.

#### **9. Watch-out for bandwidth overhead:**

Many applications like Windows updates, anti-virus updates and other software updates will be using the broadband connection in the background. Some of these updates might ask for confirmation before downloading, many may not even ask and will be simply running in the background, which will affect your browsing/download speed. One can find-out the applications, which are running, by going to the Task Manager (Press Ctrl-Alt-Del keys together to get into the Task Manager). Windows updates, Anti-virus updates etc could be scheduled to run when your system is free and your not browsing. This will help in utilizing the bandwidth effectively.

#### **10. The nuisance of VIRUS:**

You might some time feel that your broadband was quite good few days back, but it is a bit slow nowadays. One of the major reasons for this may be the infection of VIRUSES or Trojans into your machine. Ad-wares and Spy-wares too will affect your speed. All of these are software applications designed to harm/misuse your system. Hence it is very important to have good anti-virus software and spy-ware, ad-ware detectors in your system. Regular updates to these software and Windows updates are also a must. Many free software and tools are offered by

many websites. But be careful in selecting these software as some of these software will overload your operating system, some may act as spy-ware, and some may eat away your bandwidth.

#### **11. Crossing the Free-usage (Applicable for Multiplay Customers only)**

At present for Multiplay Broadband customers (customers of bsnl.in domain) for certain plans, you will receive an intimation when crossing the monthly free usage limit. You may kindly press the button, "I Agree" to continue to enjoy the broadband which is chargeable as per your plan. We request you to kindly switch-off and switch-on the modem after pressing the "I Agree" button.

#### **12. Trouble Shooting:**

The error types shown below happen for a dialup kind of connection (ie, modem in bridge mode). (You may put the modem in bridge mode for diagnosing).

##### **Error-678**

This is most common of problems. It is due to poor connectivity. Problem can be anywhere between B.RAS - Tier 2 - DSLAM –Splitter - Modem - PC of the customer.

##### **Error-691**

UserID/Password mismatch/problem. In other words this is an authentication failure due to a wrongly typed userid/password or due to a disabled account (eg; Non-Payment disconnection or wrong port-binding).

##### **Error-769**

LAN card (NIC) not enabled. The LAN Card has to be enabled by following the steps given below.

Go to Desktop, right-click on "My Network Places", select Properties, right-click on "Local Area Connection" icon and click "Enable".

##### **Error- 797**

This is Modem or LAN driver problem. Reset the Modem by pressing button available in the backside hole of the modem and wait for 2 minutes and then log on. If the problem is not solved, check LAN Card driver. If required, reinstall the driver.

##### **Error-718**

Peak Hour Issue- This is basically a time out error and occurs when number of customer requests exceeds the call handling capacity of BRAS. Please try after some time to get connected.

##### **Error - 630-633**

This is a LAN Card (NIC) problem. LAN Card may be changed.

**Some more details:**

SI	Indication/observation	Suggested Action
1	ADSL/DSL link not glowing or blinking and goes off	Check for any loose connection in splitter and modem. Ensure that ADSL/Modem port of splitter connected to DSL port of Modem. Remove parallels, if any. Check for line noise.
2	DSL is steady, but not able to browse (PPPOE mode)	Go to modem webpage and check the WAN Status of your Modem for a possible "Authentication failure"
3	DSL is steady, and no authentication failure but you are not able to browse (PPPOE & Bridge mode).	Bring your browsers security-settings to your default level. Check the DNS settings in LAN card. Check for proxy settings. Remove proxy, firewall, anti-spy-ware, pop-up blocker etc temporarily and see whether the problem is solved. Check for any other blocking software.
4	You are able to 'ping" a site successfully, but not able to browse it. (PPPOE & Bridge mode).	Do the above steps. Connection is all right, except for the PC issues. Try restarting the browser, clearing the cache, allow session cookies (if required) etc.
5	Modem & PC are connected via USB. But USB light in the modem is not glowing. (PPPOE & Bridge mode).	Check the USB cable for loose connection. Reinstall Modem's USB driver. If problem persists, call our helpline.
6	Modem & PC connected via Ethernet but Ethernet/LAN light is not glowing. (PPPOE & Bridge mode).	Check the Ethernet cable for loose connection. Check whether Local Area Connection icon is available under Network Connections in "Control Panel". If not available, reinstall driver of the Ethernet card.
7	Unable to open the modem webpage <a href="http://192.168.1.1">http://192.168.1.1</a>	Go to LAN settings; assign IP address 192.168.1.10, subnet 255.255.255.0, and gateway as 192.168.1.1. Reset the security settings of the browser into default level. Reboot PC and try again. Do steps detailed in 3, if required.

**13. Our Help-Line (Kerala Telecom Circle):**

In case of any issue not sorted out your end, please call **1504 or 12678 or 1500** and book the complaint for further assistance! Happy browsing!

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