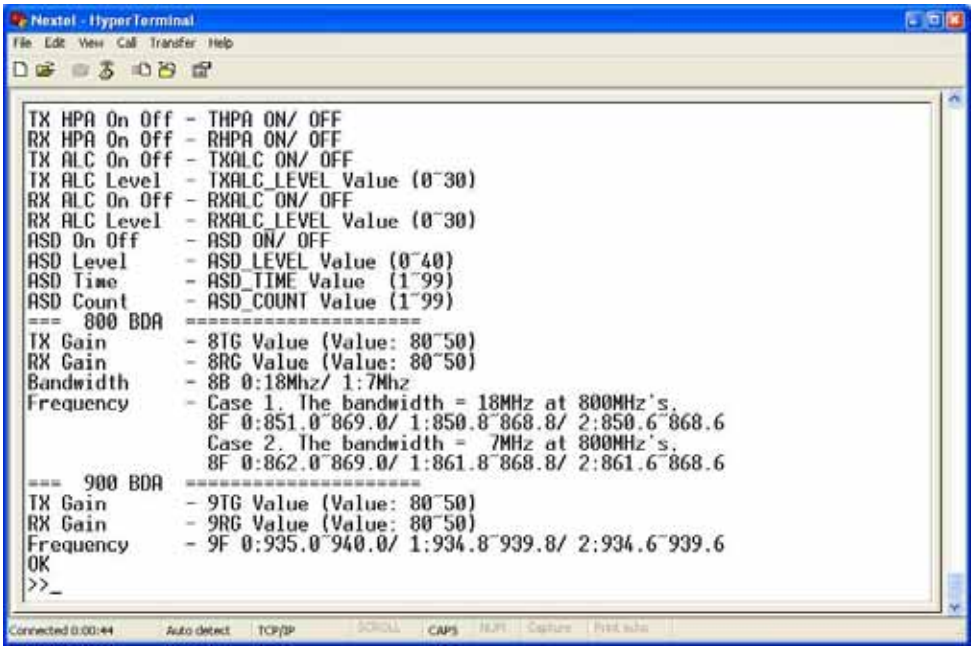
Step 2. Type “HELP” in and hit “Enter” key to look up the list of commands.



Step 3.

- To execute a command, “Enter” key must be hit.
- If the command is successful, “OK” is displayed but if not, “ERROR” is displayed.
- To reset a MCU (Main Control Unit), type “RESET” in.

```
Command: >>RESET↵
```

Examples

1 Frequency Setup

1.1 iDEN 800,

1.1.1 If the bandwidth is 18MHz,

```
>>8B 0↵
```

1.1.1.1 If the frequency range is 851.0MHz ~ 869.0MHz,

```
>>8F 0↵
```

1.1.1.2 If the frequency range is 850.8MHz ~ 868.8MHz (200KHz shift),

```
>>8F 1↵
```

1.1.1.3 If the frequency range is 850.6MHz ~ 868.6MHz (400KHz shift),

```
>>8F 2↵
```

1.1.2 Otherwise, the bandwidth is 7MHz

```
>>8B 1↵
```

1.1.2.1 If the frequency range is 862.0MHz ~ 869.0MHz,

```
>>8F 0↵
```

1.1.2.2 If the frequency range is 861.8MHz ~ 868.8MHz (200KHz shift),

```
>>8F 1↵
```

1.1.2.3 If the frequency range is 861.6MHz ~ 868.6MHz (400KHz shift),

```
>>8F 2↵
```

1.2 iDEN 900 (5MHz fixed bandwidth→Bandwidth setup is not necessary),

1.2.1 If the frequency range is 935.0MHz ~ 940.0MHz,

```
>>9F 0↵
```

1.2.2 If the frequency range is 934.8MHz ~ 939.8MHz (200KHz shift),

```
>>9F 1↵
```

1.2.3 If the frequency range is 934.6MHz ~ 939.6MHz (400KHz shift),

```
>>9F 2↵
```

2 Gain Setup

2.1 iDEN 800

✓ TX Gain: 80dB, RX Gain 80dB

```
>>8TG 80↵
>>8RG 80↵
```

2.2 iDEN 900

✓ TX Gain: 80dB, RX Gain 80dB

```
>>9TG 80↵
>>9RG 80↵
```

* Please, turn off the ALC and ASD by the commands “TXALC OFF”, “RXALC OFF”, and “ASD OFF” before the gain setup.
Factory defaults are specified in ALC ON and ASD ON.
While the ALC and ASD are on, the gain setup is not available and an Error may be occurred.

3 ALC (Automatic Level Control) Level Setup: 30dBm

```
>>TXALC_LEVEL 30↵
>>TXALC ON↵
```

```
>>RXALC_LEVEL 30↵
>>RXALC ON↵
```

* ALC (Automatic Level Control) maintains the specific TX and RX output power by the setup parameter. Do not set the ALC value over 30.

4 ASD* (Automatic Shut Down) Setup:

- ✓ Level: 33dBm, Time: 3sec, Count: 10

* If the output power gets higher than “ASD_LEVEL”, the repeater will shut down for “ASD_TIME” time and then turn on the amp and measure the output power again. If this repeats “ASD_COUNT” times, the repeater will shut down completely.

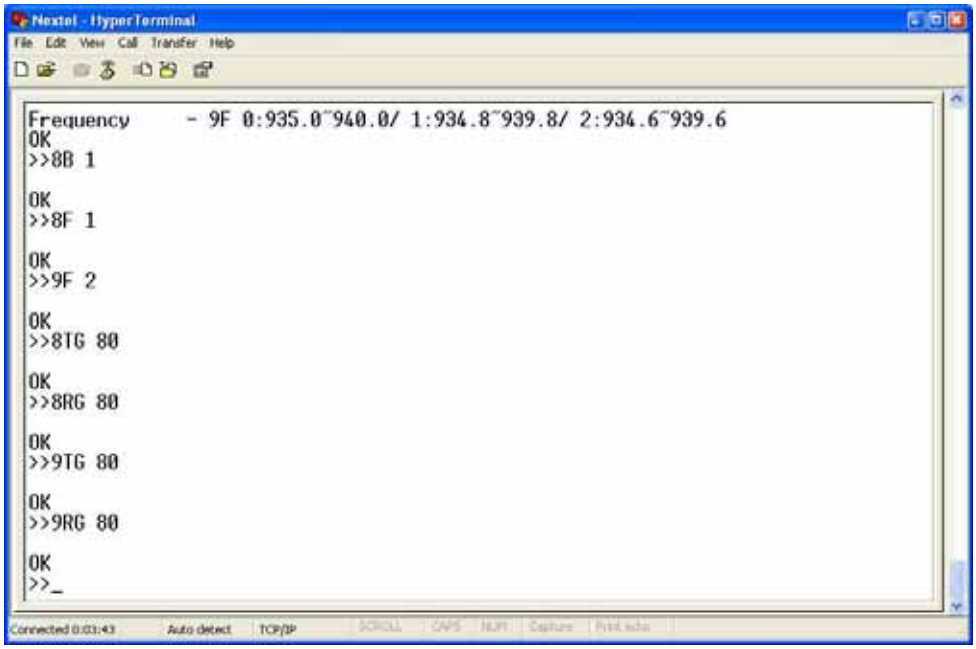
```
>>ASD_LEVEL 33↵
>>ASD_TIME 3↵
>>ASD_COUNT 10↵
>>ASD ON↵
```

5 Tx HPA On

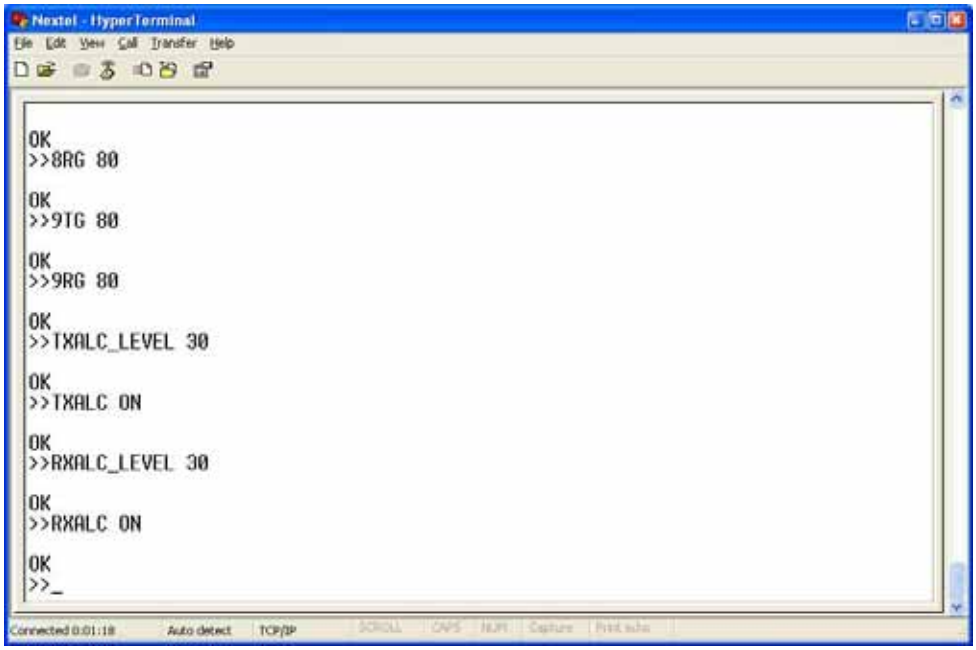
```
>>THPA ON↵
```

6 Rx HPA On

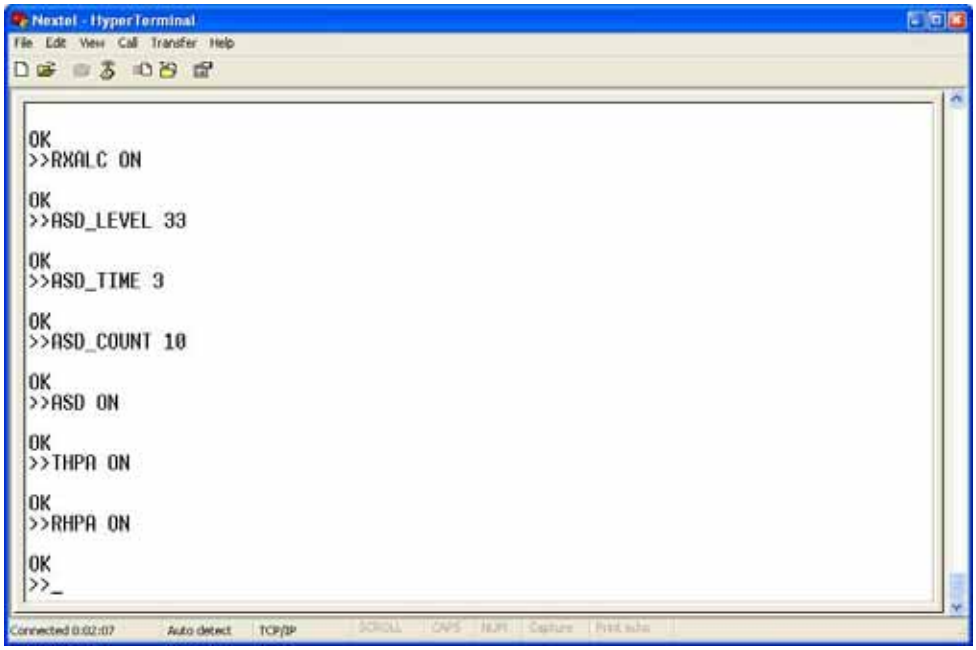
```
>>RHPA ON↵
```



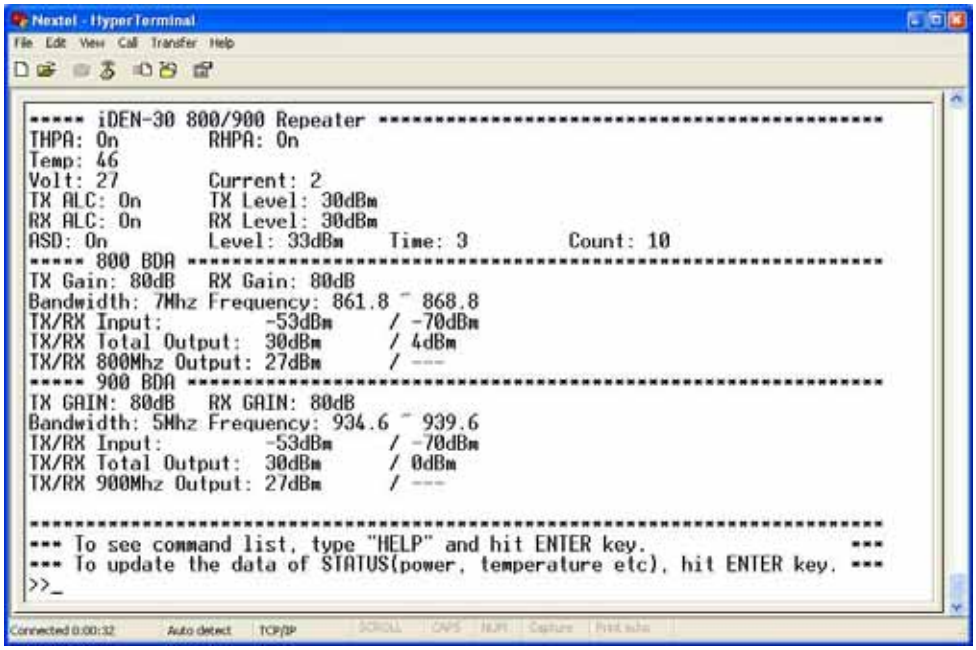
<Specifying of the operating frequencies, bandwidth, and gains>



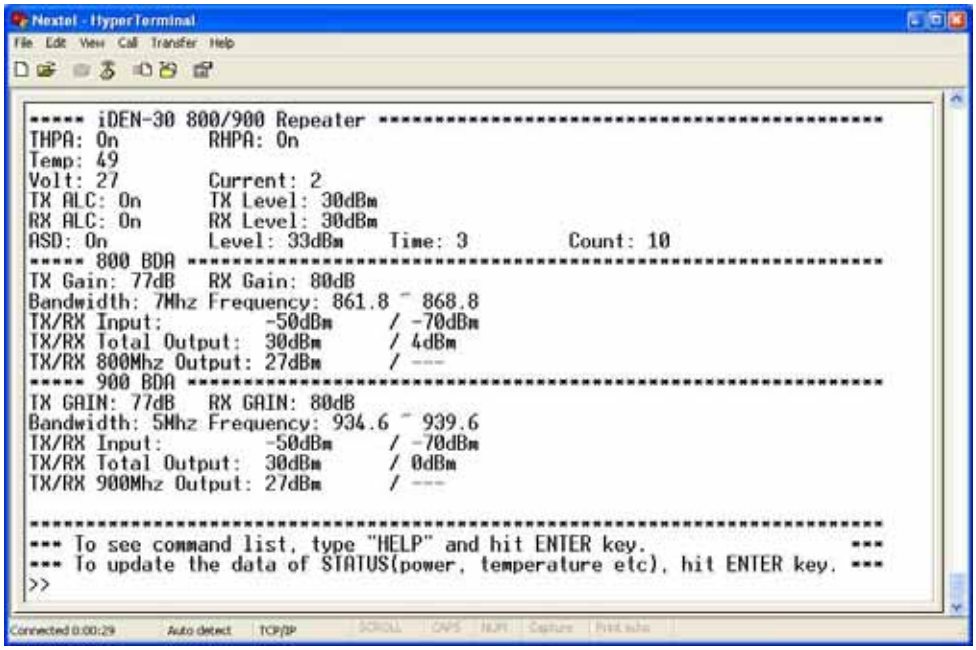
<Specifying of the ALCs>



<Setting of the ASD parameters>



<The screenshot of the example setting>

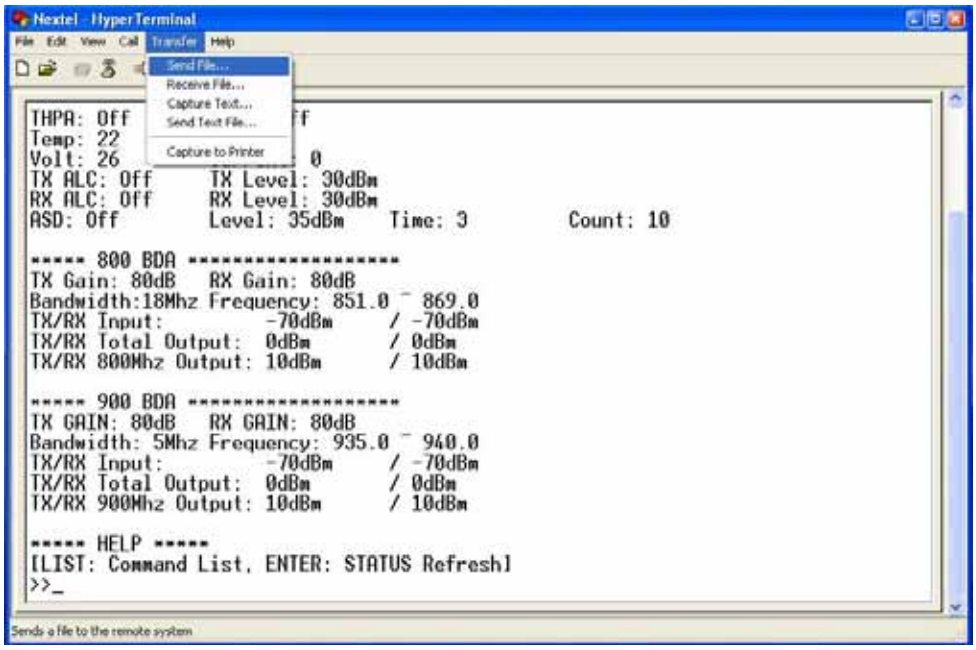


<The screenshot of the ALC Operating>

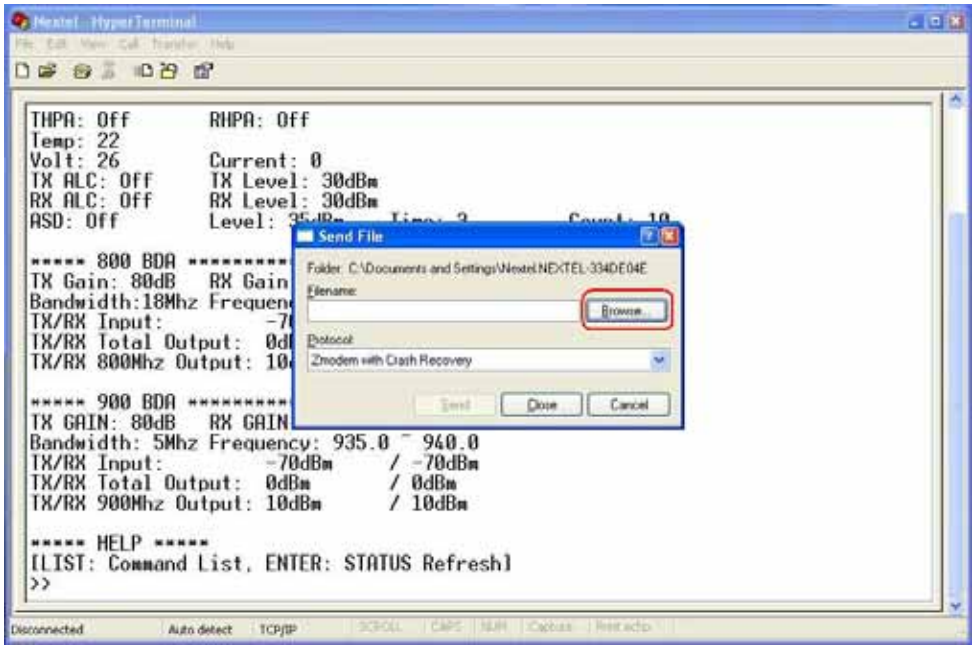
The maximum output power for operating is +30 dBm on both Tx and Rx.

4.3 Downloading of the latest firmware

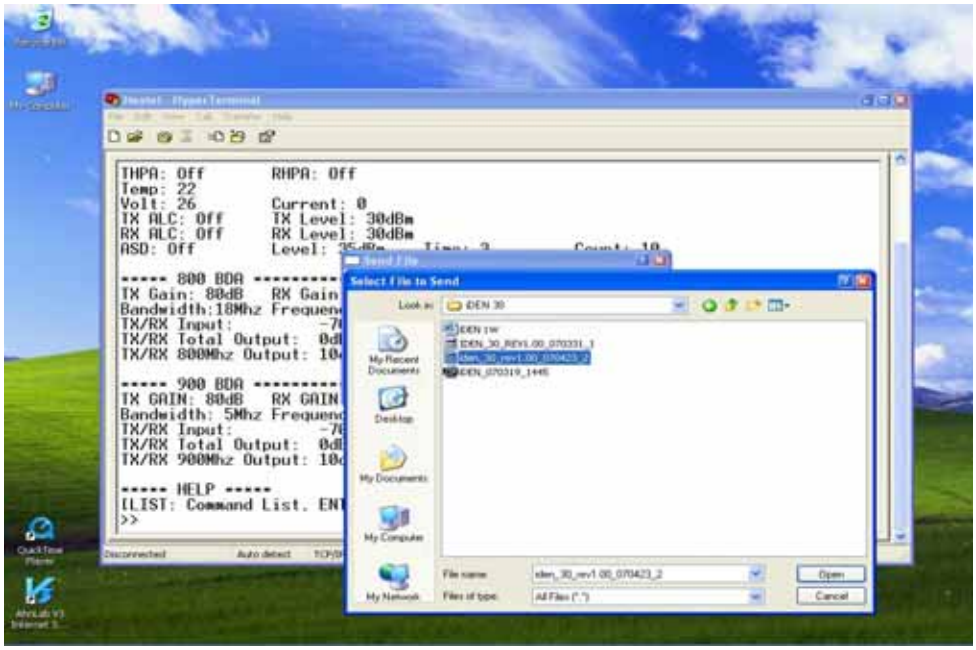
Step 1. Click the “Send File...” of Transfer menu.



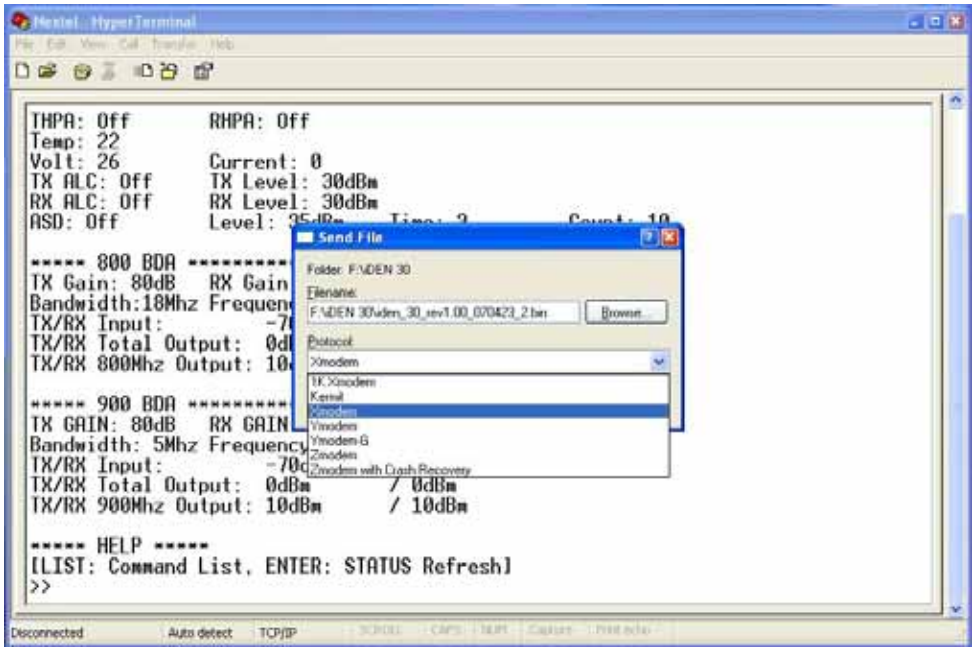
Step 2. Browse the latest firmware file.



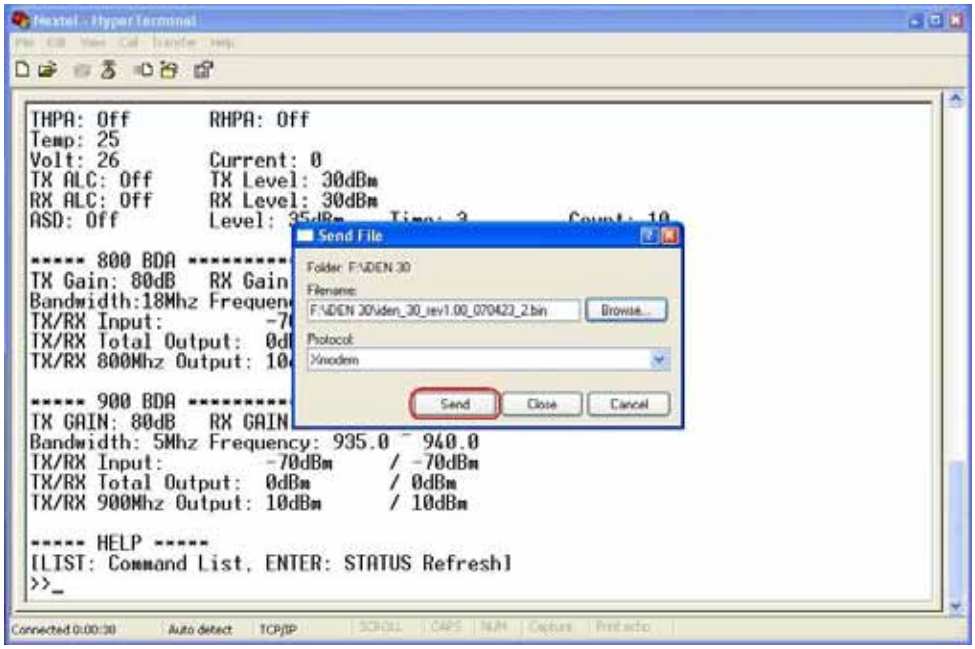
Step 3. Select file to send.

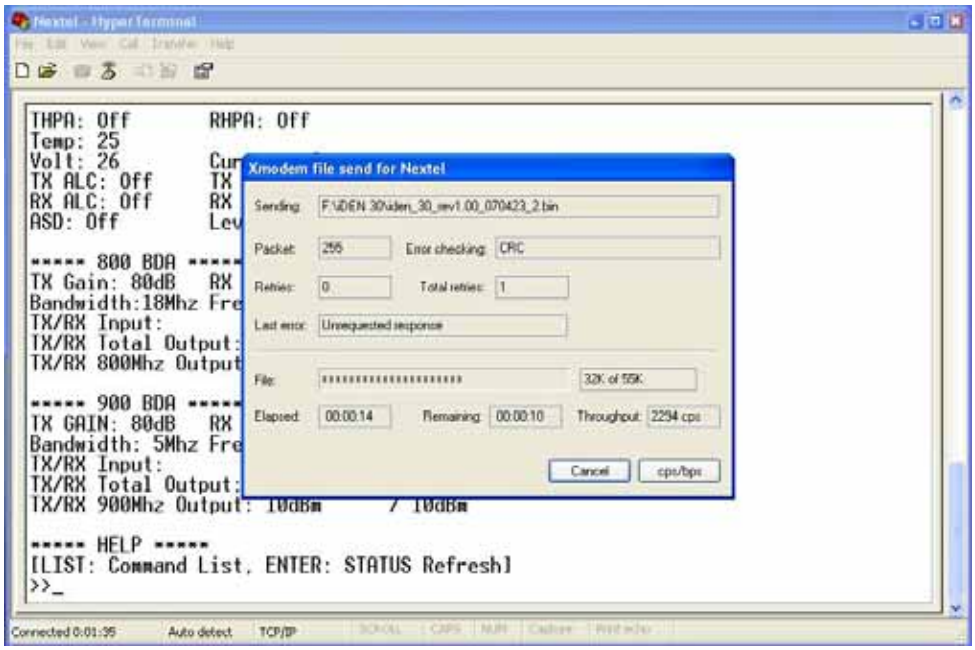


Step 4. Send the file on the “Xmodem” protocol.

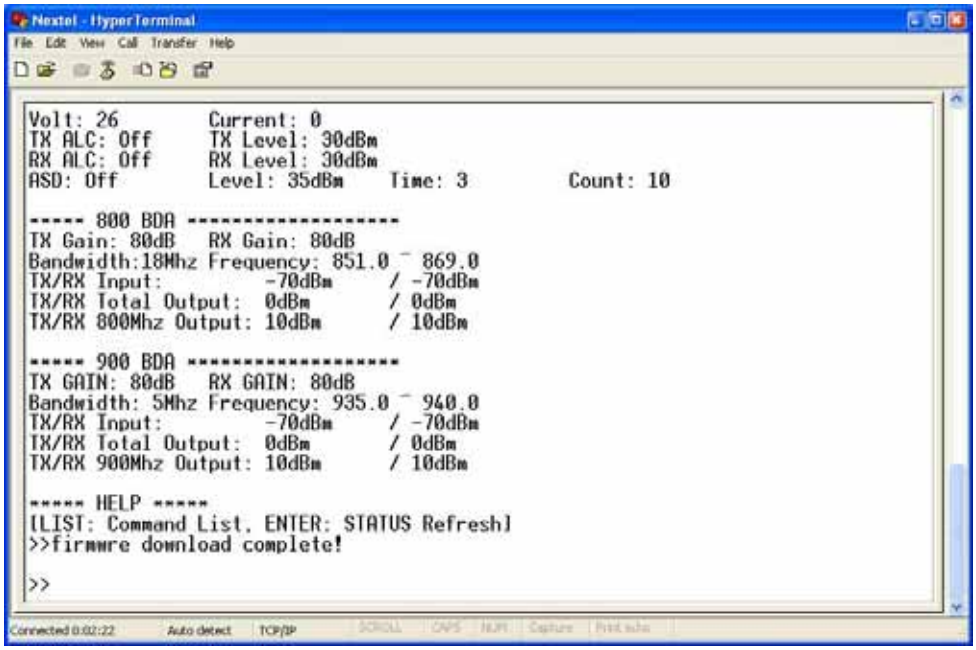


Step 5. Push the “Send” button.



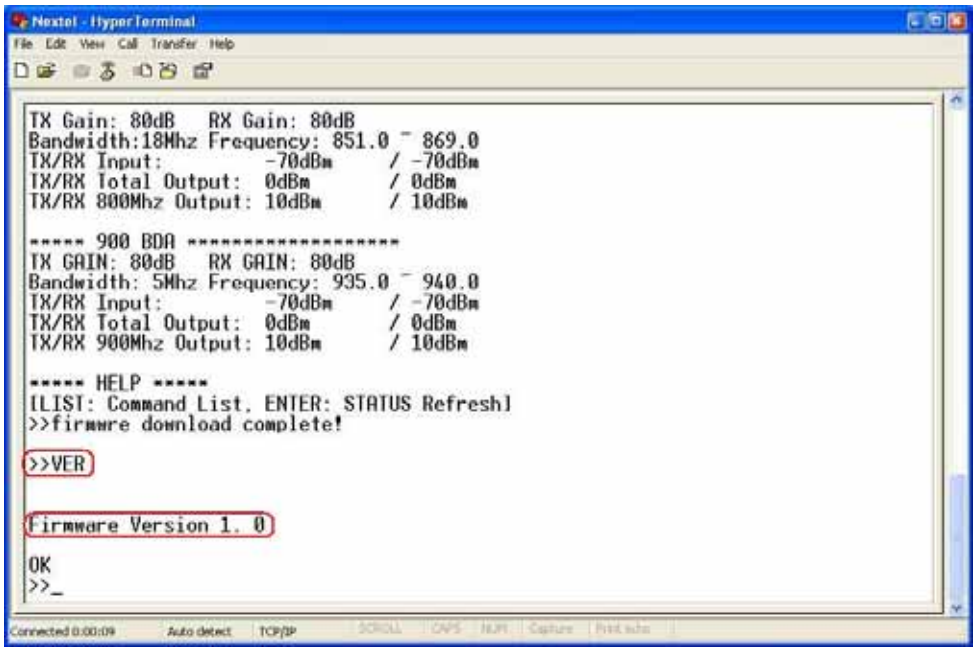


<The screenshot of the Xmodem file send>



<The screenshot of firmware download completed>

Step 6. Type “VER” and hit the “Enter” key to check the version of firmware.



* Reference

The Operating Bandwidth & Frequencies

	Bandwidth	Operating Frequency	
iDEN 800	18MHz-bandwidth	Downlink	851~869MHz 850.8~868.8MHz 850.6~868.6MHz
		Uplink	806~824MHz 805.8~823.8MHz 805.6~823.6MHz
	7MHz-bandwidth	Downlink	862~869MHz 861.8~868.8MHz 861.6~868.6MHz
		Uplink	817~824MHz 816.8~823.8MHz 816.6~823.6MHz
iDEN 900	5MHz-bandwidth	Downlink	935~940MHz 934.8~939.8MHz 934.6~939.6MHz
		Uplink	896~901MHz 895.8~900.8MHz 895.6~900.6MHz

Operating bandwidth and Frequencies of iDEN

5. Troubleshooting

5.1 RF Connection Check

Problem

Either the downlink output power or the uplink output power (=Input Power to the repeater) is too weak.

Solution

Check if the following RF connections are loose:

1. The cable connection from the donor antenna to the donor antenna port
2. The cable connection from the service antenna port to the service antenna

5.2 Power Connection

Problem

All LEDs at the bottom are turned off.

Figure 17. LEDs Off

Solution

Check if the power cord is connected correctly and the green LED at the bottom is on.

Figure 18. AC power cord Check

5.3 Red Light on the Alarm LED

Problem

Red light LED turns on the Alarm LED after applying AC power.

Figure 19. Red Light on Alarm LED

* **Check points**

The red LED can be turned on due to out of range as the following below:

Alarms	Lower	Upper
Tx Input	-70dBm	-30dBm
Tx/Rx Output	0dBm	35dBm
Temperature	-10°C	80°C
DC Voltage	20V	30V
DC Current	0A	5A

Solution

If the red light LED is steady in the range of critical values, request a technical support.

6. Glossary

6.1 ALC (Automatic Level Control)

* ALC feature prevents the repeater from exceeding its maximum output power, by reducing the gain automatically.
ALC is used to adjust the gain to an appropriate level for a range of input signal levels.

[Example]
[For the repeater with 30dBm Maximum Output power, 80dB Maximum Gain /30dB Gain control range, ->
If input signal is -30Bm and ALC is set as 30dBm, the gain will be 60dB to adjust to the level.
If input signal is -55dBm, the output power will be 25dBm by the limitation of the maximum gain even though the ALC is set as 30dBm.]

6.2 ASD (Automatic Shutdown)

* Automatic shut down protects the repeater itself from the oscillation or excessive input signal and eliminates any degradation to the network.
There are three parameters, ASD_LEVEL, ASD_TIME and ASD_COUNT.
If the output power gets higher than “ASD_LEVEL”, the repeater will shut down for “ASD_TIME” time and then turn the amp back on and measure the output power again. If this repeats “ASD_COUNT” times, the repeater will shut down completely.

[Example]
[For the repeater with 30dBm Maximum Output power, 80dB Maximum Gain /30dB Gain control range,
Assuming ASD_ LEVEL: 35dBm, ASD_TIME: 3sec, ASD_COUNT: 3

If the output power is 35dBm [ASD_LEVEL] and higher for some reasons,
the repeater will have shut down for 3 seconds [ASD_TIME]. If this repeats 3 times [ASD_COUNT], the repeater will shut down completely.]

M E M O

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iDEN MINI

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