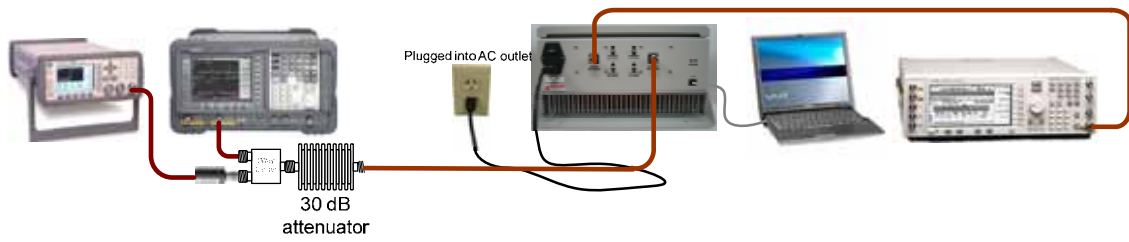


RSN-iDEN-25

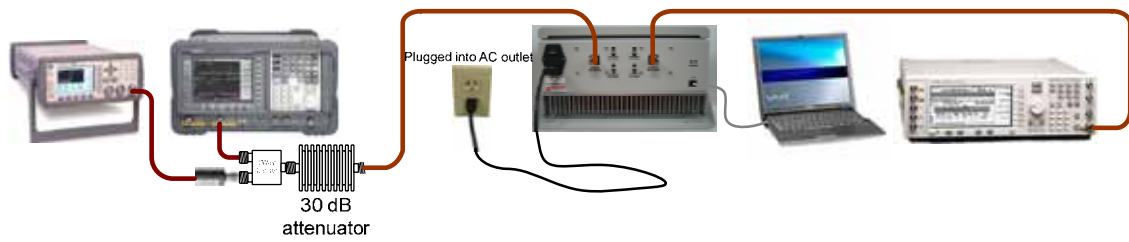
Tune up Procedure



* Test configurations



Tx test



Rx test



<Switch On>

1 – Setting for Command and Control through the Hyper Terminal

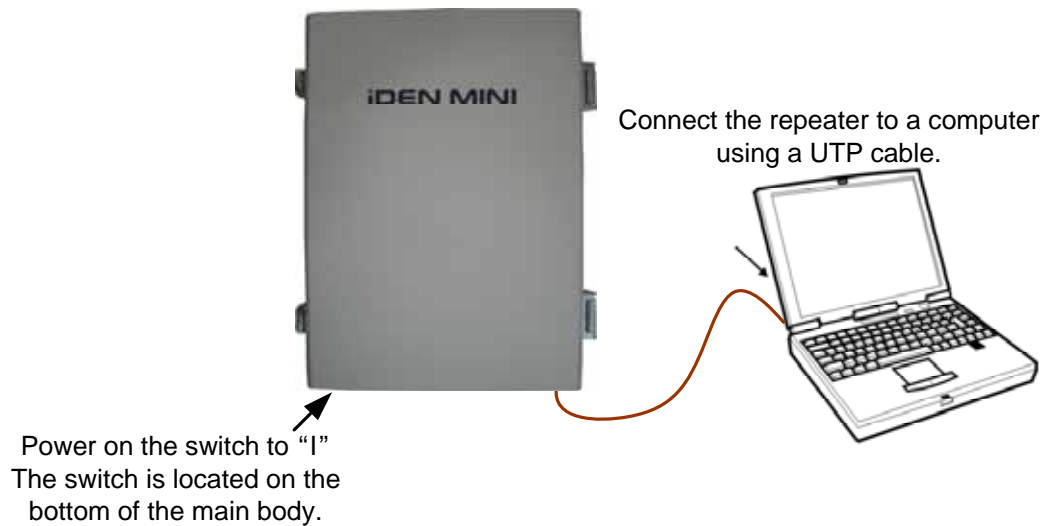


Figure 1.1 Local connection to the R-tron Mini 30-C system

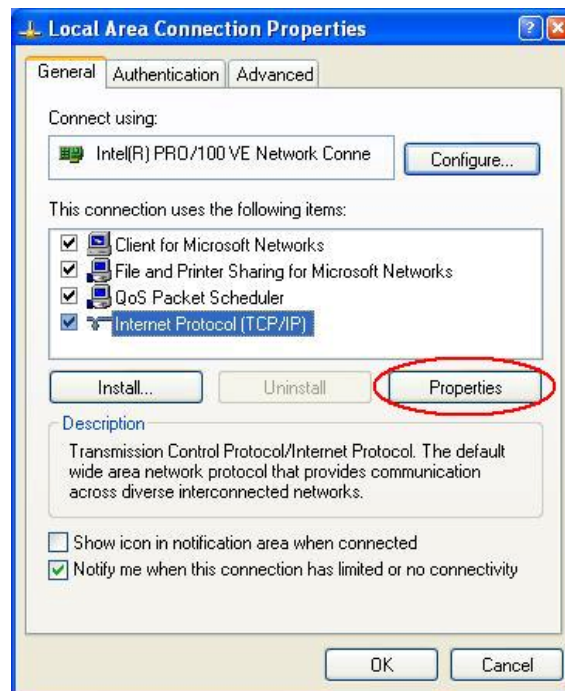
Step 1 Open My Network Places.



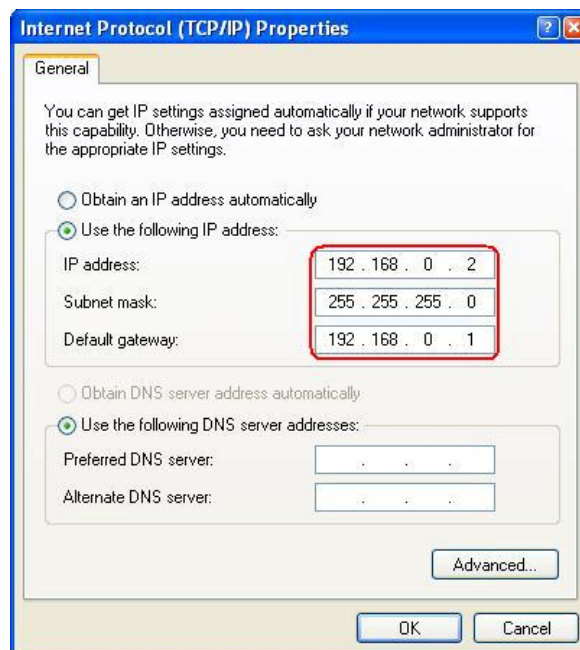
Step 2 Push the right button of mouse and select the properties.



Step 3 Click the properties of TCP/IP.



Step 4 Set the values and OK as the following. Close all windows.



Step 5 Execute the Hyper Terminal.



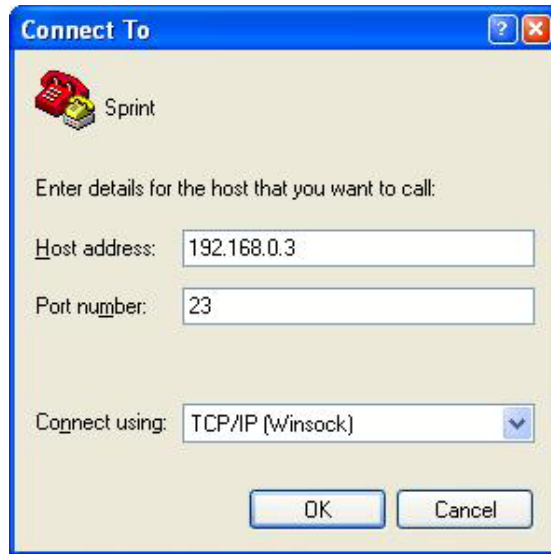
Step 6 Name what you desire and OK.




Step 7 Select the TCP/IP(Winsock).



Step 8 Set the values as the following below and OK.



Connect To

 Sprint

Enter details for the host that you want to call:

Host address: 192.168.0.3

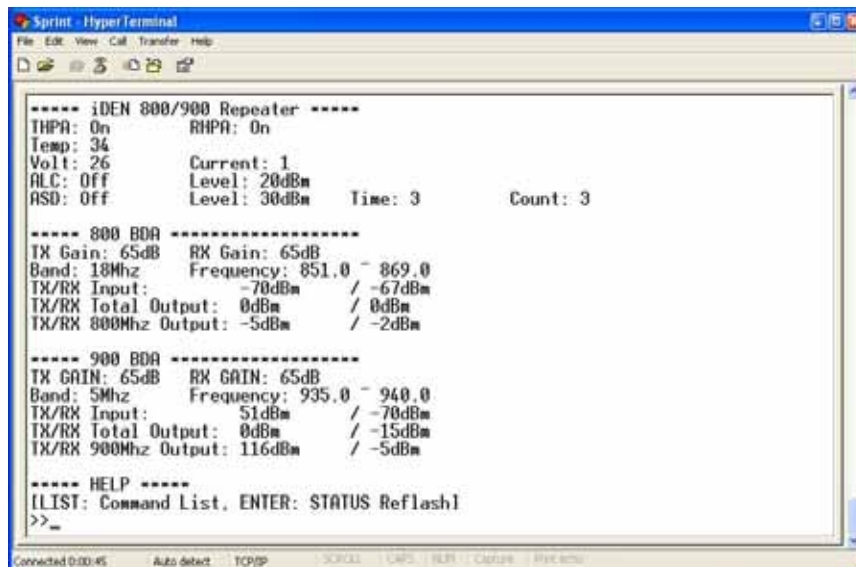
Port number: 23

Connect using: TCP/IP (Winsock)

OK Cancel

2- Command and Control through the Hyper Terminal

Step 1 Pushing “Enter” key without any commands displays the current information of repeater.



The screenshot shows a HyperTerminal window titled "Sprint - HyperTerminal". The main display area contains the following text:

```
***** iDEN 800/900 Repeater *****
THPA: On      RHPA: On
Temp: 34
Volt: 26      Current: 1
ALC: Off      Level: 20dBm
ASD: Off      Level: 30dBm    Time: 3      Count: 3

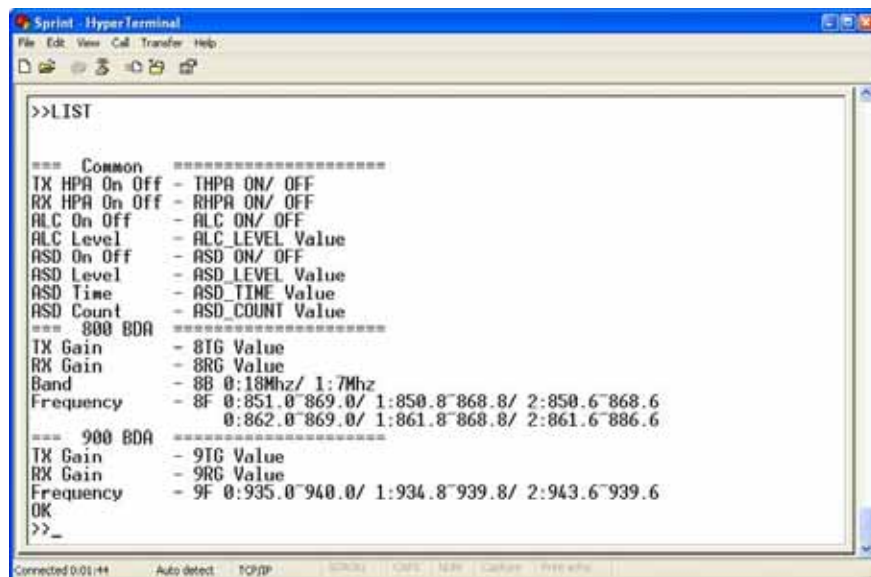
***** 800 BDA *****
TX Gain: 65dB  RX Gain: 65dB
Band: 18Mhz    Frequency: 851.0 ~ 869.0
TX/RX Input:   -70dBm      / -67dBm
TX/RX Total Output: 0dBm    / 0dBm
TX/RX 800Mhz Output: -5dBm  / -2dBm

***** 900 BDA *****
TX GAIN: 65dB  RX GAIN: 65dB
Band: 5Mhz     Frequency: 935.0 ~ 940.0
TX/RX Input:   51dBm       / -70dBm
TX/RX Total Output: 0dBm    / -15dBm
TX/RX 900Mhz Output: 116dBm / -5dBm

***** HELP *****
[LIST: Command List, ENTER: STATUS Refresh]
>>_
```

The status bar at the bottom indicates "Connected 0:00:45", "Auto detect", "TCP/IP", and various keyboard shortcuts like [CTRL], [CAPS], [ALT], [Capture], and [Print screen].

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



The screenshot shows the same HyperTerminal window after the user has entered the command ">>LIST". The main display area now shows a list of commands and their descriptions:

```
>>LIST

==== Common =====
TX HPA On Off - THPA ON/ OFF
RX HPA On Off - RHPA ON/ OFF
ALC On Off    - ALC ON/ OFF
ALC Level     - ALC_LEVEL Value
ASD On Off    - ASD ON/ OFF
ASD Level     - ASD_LEVEL Value
ASD Time      - ASD_TIME Value
ASD Count     - ASD_COUNT Value

==== 800 BDA =====
TX Gain       - 8TG Value
RX Gain       - 8RG Value
Band          - 8B 0:18Mhz/ 1:7Mhz
Frequency     - 8F 0:851.0~869.0/ 1:850.8~868.8/ 2:850.6~868.6
               0:862.0~869.0/ 1:861.8~868.8/ 2:861.6~886.6

==== 900 BDA =====
TX Gain       - 9TG Value
RX Gain       - 9RG Value
Frequency     - 9F 0:935.0~940.0/ 1:934.8~939.8/ 2:943.6~939.6
OK
>>_
```

The status bar at the bottom shows "Connected 0:01:44", "Auto detect", "TCP/IP", and the same keyboard shortcuts as the previous screenshot.

Example) Operating condition example.

(1) Setting of operating frequency in iDEN 800:

861.8MHz ~ 868.8MHz (7MHz-bandwidth)

Setting of operating frequency in iDEN 900:

943.6MHz ~ 939.6MHz (5MHz-bandwidth)

(2) ALC condition: 18dBm

(3) ASD conditions:

Level: 30dBm, Time: 3sec, Count: 10

(4) Gain of iDEN 800:

Tx Gain: 65dB, Rx Gain: 65dB

(5) Gain of iDEN 900:

Tx Gain: 65dB, Rx Gain: 65dB

(6) ALC On

(7) ASD On

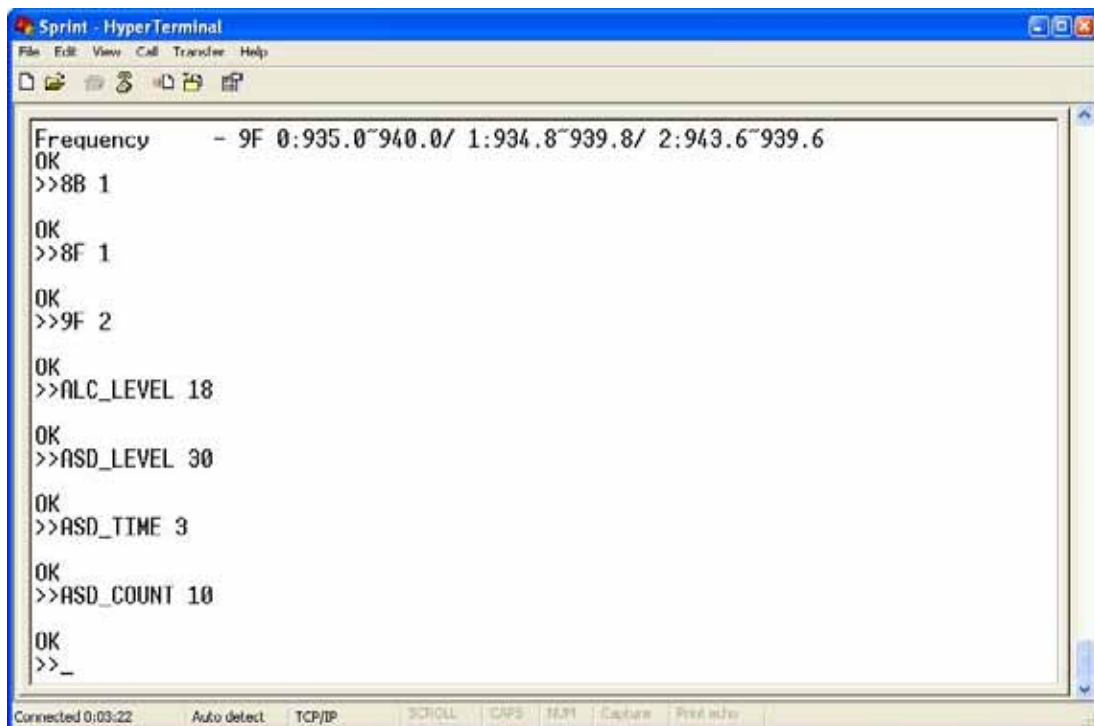
(8) Tx HPA On

(9) Rx HPA On

A given example shows how to set the repeater for adequate operating. Just follow the procedures as the below.

[Procedure]

- (1) "8B 1" Enter, "8F 1" Enter,
"9F 2" Enter
- (2) "ALC_LEVEL 18" Enter
- (3) "ASD_LEVEL 30" Enter,
"ASD_TIME 3" Enter,
"ASD_COUNT 10" Enter



The screenshot shows a HyperTerminal window titled "Sprint - HyperTerminal". The window contains a series of AT commands and their responses. The status bar at the bottom indicates "Connected 0:03:22", "Auto detect", "TCP/IP", and other settings.

```
Frequency - 9F 0:935.0~940.0/ 1:934.8~939.8/ 2:943.6~939.6
OK
>>8B 1
OK
>>8F 1
OK
>>9F 2
OK
>>ALC_LEVEL 18
OK
>>ASD_LEVEL 30
OK
>>ASD_TIME 3
OK
>>ASD_COUNT 10
OK
>>_
```


- (4) "8TG 65" Enter, "8RG 65" Enter
- (5) "9TG 65" Enter, "9RG 65" Enter
- (6) "ALC ON" Enter
- (7) "ASD ON" Enter
- (8) "THPA ON" Enter
- (9) "RHPA ON" Enter

```
Sprint - HyperTerminal
File Edit View Call Transfer Help

Frequency - 9F 0:935.0~940.0/ 1:934.8~939.8/ 2:943.6~939.6
OK
>>8TG 65
OK
>>8RG 65
OK
>>9TG 65
OK
>>9RG 65
OK
>>ALC ON
OK
>>ASD ON
OK
>>THPA ON
OK
>>RHPA ON_

Connected 0:07:14 Auto detect TCP/IP SCROLL GPRS NBT Capture Print echo
```

Note

The text in " " is the command to control the repeater. Type the commands on the window of hyper terminal and then you must push the Enter key to control the repeater. If the commands and controls are successful, "OK" message is signed, otherwise, "ERROR" message is shows up on the window.

Type "RESET" and Enter resets the MCU of repeater.

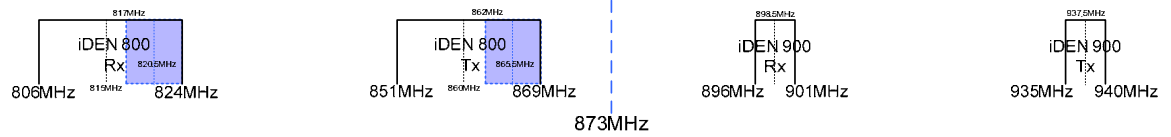
The maximum output power for operating is +25 dBm on both Tx and Rx.

During the test, AGC and ASD must be off.

* Reference

The Operating Bandwidth & Frequencies

iDEN 800 & 900



Operating bandwidth and Frequencies of iDEN