



## **NE IBOC**

# **Network Configuration**

**IS05007**

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# IS05007 NE IBOC Network Configuration

## INFORMATION SHEET

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### 1 INTRODUCTION

This document describes how to configure custom network settings on the NE IBOC.

#### 1.1 Equipment Affected

This procedure involves the NE IBOC-AM or FM exciter and its associated PC interface equipment.

#### 1.2 Responsibility for Implementation of Procedure

This procedure should be carried out by suitably qualified station maintenance personnel.

#### 1.3 Scheduling

This procedure may be implemented at the convenience of station maintenance personnel. Note that it is necessary to discontinue the IBOC (digital) portion of the transmission during this procedure.

#### 1.4 Manpower Requirements

This procedure requires approximately 30 minutes to complete.

#### **NOTE**

*This document makes frequent reference to operations and checks on the NE IBOC exciter. Refer to its Technical Instructions Manual for detailed information.*

### 2 PRE-INSTALLATION REQUIREMENTS

Perform the following steps before installing the software:

(a) For AM transmitter systems:

- If possible, initiate a changeover to the backup analog exciter or transmitter.
- Disconnect the Magnitude and Phase cables from the rear panel of the NE IBOC-AM exciter.

(b) For FM+HD (hybrid) transmitter systems:

- Remove the HDR Data cable from the back of the NE IBOC-FM. The M50 exciter will indicate **No HD Data** in its status log screen.
- Verify the transmitter is still operating in analog mode.
- (c) For HD (digital) transmitter systems:
  - Turn off the transmitter.
  - Remove the HDR Data cable from the rear panel of the NE IBOC-FM.

### 4 CONFIGURING CUSTOM NETWORK SETTINGS

The factory default network configuration settings should be suitable for most users. The following procedure allows you to reconfigure the NE IBOC to suit your own network requirements. You will require the supplied keyboard for this procedure.

#### **NOTE**

*For NE IBOC exciters shipped before July 1, 2005, the IP address is set to 192.168.1.240 and the host name is set to [SERIAL #].NAUTEL.COM.*

*For NE IBOC exciters shipped after July 1, 2005, the IP address is set to 10.10.10.10 and the host name is set to NEIBOC.NAUTEL.COM.*

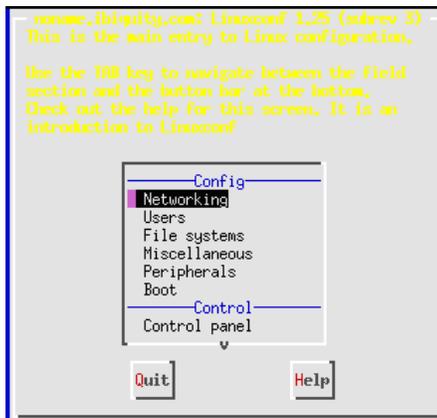
- (a) Check the following with your network administrator:
- that no other PC or network device occupies the NE IBOC's intended IP address.
  - that the intended IP address cannot be dynamically assigned to another PC through DHCP (Dynamic Host Configuration Protocol).
  - which netmask to use



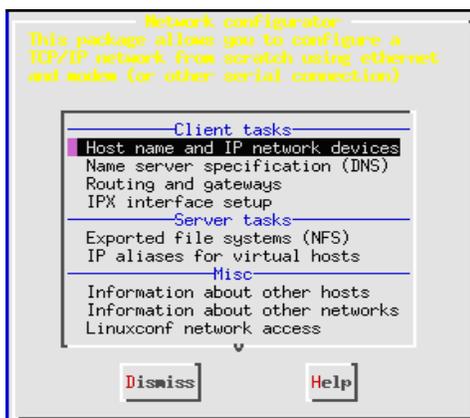
## NOTE

If you are using a dedicated subnet to connect for the NE IBOC and the host PC, the only condition is that NE IBOC's IP address must differ from the PC's IP address. A netmask of 255.255.255.0 will normally suffice.

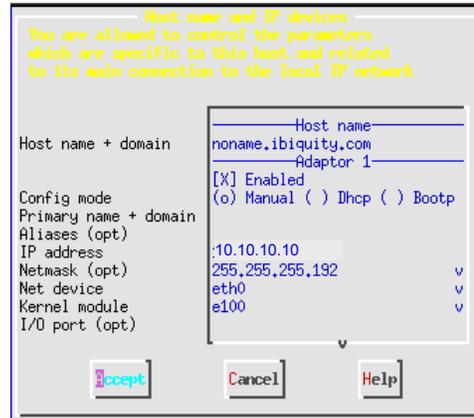
- (b) Switch to console mode from the System | Shutdown menu. Log in as root using the password "password" and type "linuxconf" at the command prompt. You should see the following screen.



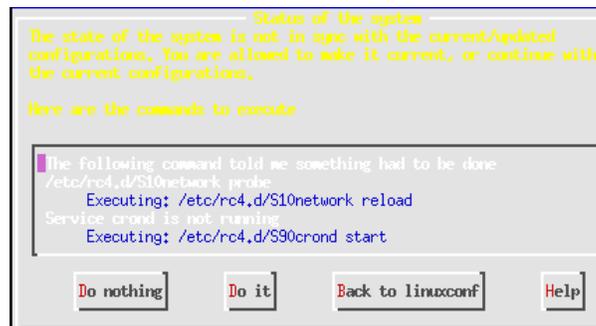
- (c) Within linuxconf you cannot use the touch screen or the mouse. Select text buttons or input fields by pressing the TAB key and navigate menu items by using the arrow and enter keys on your keyboard. Select the Networking menu item:



- (d) Select the Host name and IP network devices menu item and change the IP address and subnet mask to the new desired IP address and network mask:



- (e) Select the "Accept" button and then select the "Dismiss" button on the next screen to return to the initial linuxconf menu. Select "Quit". You should see the following screen:



- (f) Select the "Do it" button for the new networking information to take effect.
- (g) At the command prompt type 'reboot'. The NE IBOC will automatically reboot and return to the operating GUI.
- (h) Connect the NE IBOC to a host PC using an Ethernet cross-over cable. Configure the host PC to an IP address on the same subnet, but a different IP address (e.g., 10.10.10.12, if the NE IBOC is configured for 10.10.10.10). Test the new network configuration by issuing the following ping command from the host PC's command prompt:



```
Command Prompt
Approximate round trip times in milli-seconds:
  Minimum = 0ms, Maximum = 0ms, Average = 0ms
C:\>ping 192.168.1.240
Pinging 192.168.1.240 with 32 bytes of data:
Reply from 192.168.1.240: bytes=32 time<1ms TTL=64
Ping statistics for 192.168.1.240:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
      Minimum = 0ms, Maximum = 0ms, Average = 0ms
C:\>
```

- (i) Return the NE IBOC to service and verify that the transmitter system, both analog and digital, is fully operational and within required limits. Check the audio delay matching (see the NE IBOC Technical Instruction manual).

