4 Front Panel Operation

4.1 Introduction

This section describes the front panel operation of the EXPEDIO digital radio/modem. This includes:

- LCD display (including all screen menus)

- Cursor and screen control buttons

- LED status indicators

4.2 Front Panel Operation

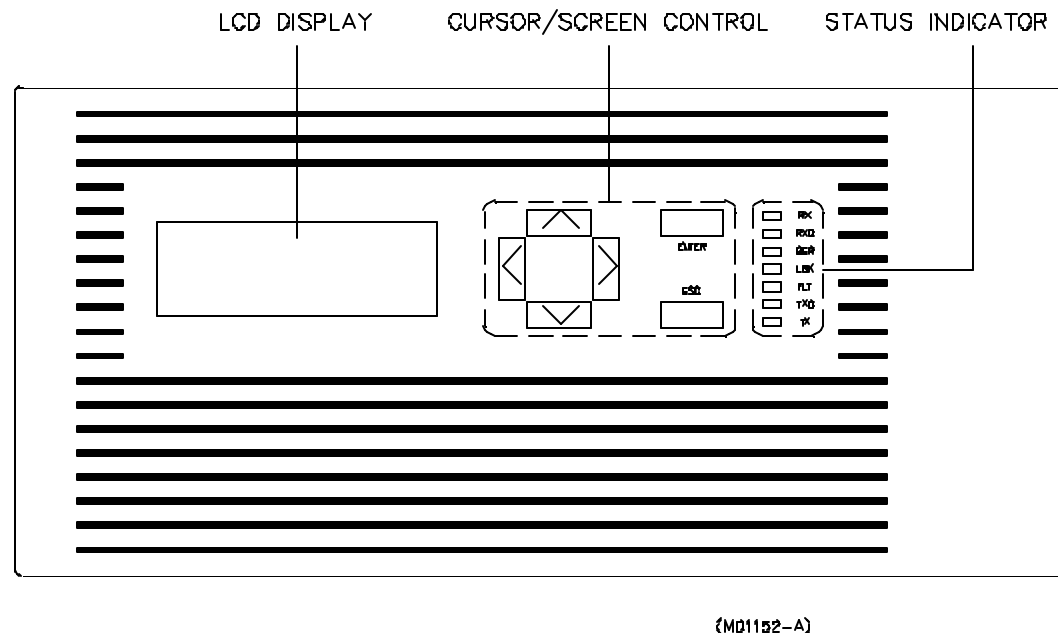A picture of the EXPEDIO front panel is depicted in Figure 14 below.

Figure 14: EXPEDIO Front Panel

4.2.1 LCD Display

The Liquid Crystal Display (LCD) on the EXPEDIO front panel is the primary user interface and provides status, control, configuration, and calibration functionality. The menu navigation and various screens are explained in detail later in this section.

Backlight:

An automatic backlight is built-in to the LCD for better clarity under low-light conditions. This backlight is enabled on power-up and will automatically turn off if there is no button activity by the user. The backlight will automatically turn on as soon as any button is pressed.

Contrast Adjustment:

Internal adjustment on board (in back of front panel button PCB).

4.2.2 Cursor and Screen Control Buttons

The buttons on the EXPEDIO front panel are used for LCD screen interface and control functions:

ENT	<ENTER>	Used to accept an entry (such as a value, a condition, or a menu choice).
ESC	<ESC>	Used to "back up" a level in the menu structure without saving any current changes.
▲ ▼	<UP>,<DOWN>	Used in most cases to move between the menu items. If there is another menu in the sequence when the bottom of a menu is reached, the display will automatically scroll to that menu.
◀ ▶	<LEFT>,<RIGHT>	Used to select between conditions (such as ON/OFF, ENABLED/DISABLED, LOW/HIGH, etc.) as well as to increase or decrease numerical values.

4.2.3 LED Status Indicators

Table 3-1. LED Status Indicator Functions

LED	Name	Function
RX	Receiver	Green indicates that the receiver is enabled, the synthesizer is phase-locked, and a signal is being received.
RXD	Receive Data	Green indicates that valid data is being received.
BER	Bit Error Rate	Flashes red for each data error detected.
FLT	Fault	General fault light (red). Consult the STATUS menus for out of tolerance conditions.
LBK	Loopback	Red indicates analog or digital loopback is enabled.
TXD	Transmit Data	Green indicates the modem clock is phase-locked and data is being sent.
TX	Transmitter	Green indicates the transmitter is radiating, and the RF output (forward power) is above the factory-set threshold.

4.2.4 Screen Menu Tree Structure

Figures 3-2a, b and c, located on pages 3-7, 3-8, 3-9 and 3-10, show the tree structure of the screen menu system. The figures group the screens into functional sets. There may be minor differences in the purchased unit, due to software enhancements and revisions. The current software revision may be noted in the **SYSTEM** sub-menu (under **INFO**).

In general, <**ENTER**> will take you to the next screen from a menu choice, <**UP**> or <**DOWN**> will scroll through screens within a menu choice, and <**ESC**> will take you back up one menu level. Certain configuration screens have exceptions to this rule, and are noted later in this section.

CAUTION

DO NOT change any settings in the CONFIGURE or CALIBRATE screens. The security lock-out features of the software may not be fully implemented, and changing a setting will most likely render the system non-operational!

4.3 Main Menu

```
NXE1     MAIN MENU
..........................................
        □ METER
        □ QAM RADIO
        □ SYSTEM
..........................................
        □ ALARMS/FAULTS
```
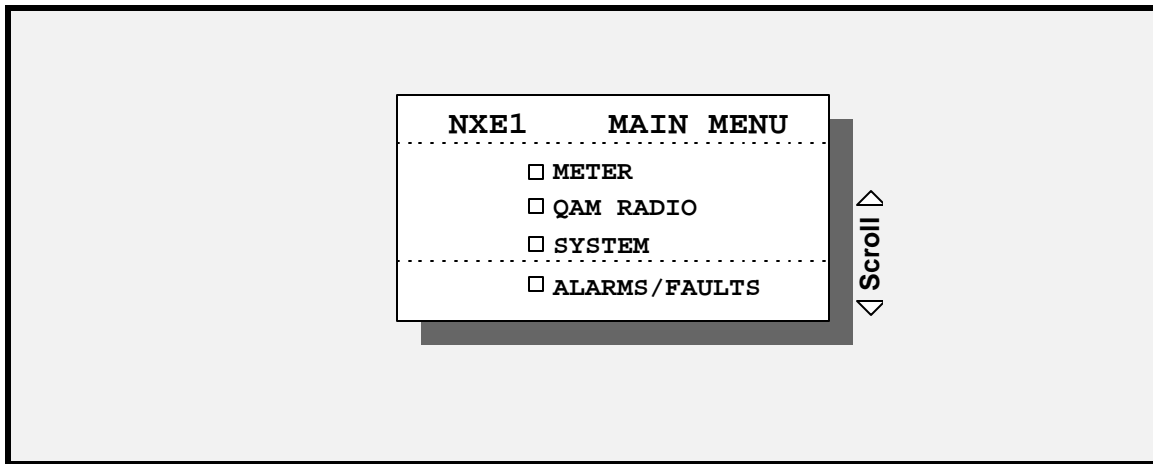
△ Scroll ▽

The main menu appears on system boot-up and is the starting point for all screen navigation. Unlike most other screens in the software, the main menu scrolls up or down, one line item at a time.

4.3.1 Launch Screens

The **LAUNCH** screen allows the user to quickly get to a particular screen within a functional grouping in the unit. The logic is slightly different than other screens. Figure 15 below contains a "Launch Screen Navigation Guide" to assist the user in locating the desired Radio screen.

```
                    ┌──────────────────────┐
                    │  NXE1    MAIN MENU    │
                    │----------------------│
                    │     METER            │
                    │   ✹ QAM RADIO        │    Scroll
                    │     SYSTEM           │
                    │----------------------│
                    │     ALARMS/FAULTS    │   ▽
                    └──────────────────────┘
```

Cycle through STATUS, CONTROL,
CONFIGURE choices:

```
┌────────────────────┐        ┌────────────────────┐        ┌────────────────────┐
│ QAM Radio Launch   │        │ QAM Radio Launch   │        │ QAM Radio Launch   │
│                    │   ►    │                    │   ►    │                    │
│  ✹ STATUS          │        │  ✹ CONTROL         │        │  ✹ CONFIGURE       │
│    MODEM           │   ◄    │    MODEM           │   ◄    │    MODEM           │
└────────────────────┘        └────────────────────┘        └────────────────────┘
```

▼ Move cursor to next line

Cycle through MODEM,
TX, RX choices:

```
┌────────────────────┐        ┌────────────────────┐        ┌────────────────────┐
│ QAM Radio Launch   │        │ QAM Radio Launch   │        │ QAM Radio Launch   │
│                    │   ►    │                    │   ►    │                    │
│    STATUS          │        │    STATUS          │        │    STATUS          │
│  ✹ MODEM           │   ◄    │  ✹ TX              │   ◄    │  ✹ RX              │
└────────────────────┘        └────────────────────┘        └────────────────────┘
```

ENT TX STATUS chosen, press ENTER to view.

```
┌────────────────────┐
│ QAM Radio TX Status│
│                    │
│ FreqA 948.0000  MHz│
└────────────────────┘
```

▲
▼ Page down/up with down or up arrow.

```
┌────────────────────┐
│  More Screens      │
│  (see Menu Flow    │
│  Diagram)          │
└────────────────────┘
```
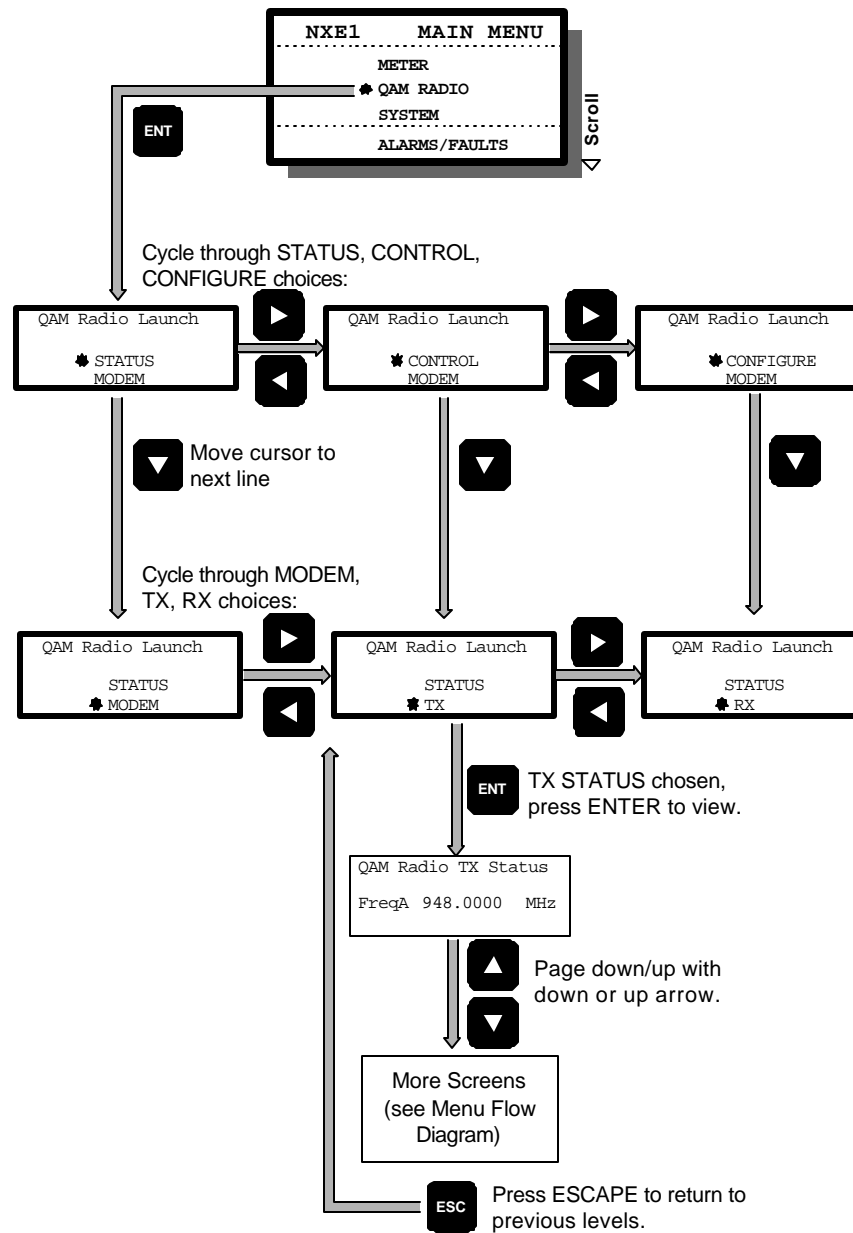
ESC Press ESCAPE to return to previous levels.

Figure 15: Launch Screen Navigation Guide