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INSTRUCTION MANUAL

MODEL 2000-2XX LNB Power Supply

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MODEL 2000-2XX LNB Power Supply

1.0 General

1.1 Equipment Description

The 2000-2XX LNB Power Supply is a switching power supply which provides either regulated +12 VDC (-212) at 1 amp, +15 VDC (-215) at 1 amp, +18 VDC (-218) at 0.5 amps OR +24 VDC (-224) at 1 amp through RF connectors for insertion on an RF line. Also provided is a BNC connector for insertion of a 10 MHz reference signal on the RF line. The input AC connector is IEC 320 C13. The 2000-2XX is powered by a 100-240 ± 10% VAC power supply and can be mounted on an optional 1 3/4” x 19” rack mount panel (option R, R2, or R3).

![Front and Rear Panels](image.png)

**FIGURE 1.1** Front and Rear Panels

![Block Diagram](image.png)

**FIGURE 1.2** Block Diagram
1.2 Technical Characteristics

**TABLE 1.0 2000-2XX LNB Power Supply Specifications***

**RF Input/Output Characteristics**
- Impedance/Return Loss: 75Ω/14 dB
- Frequency: 950 - 2150 MHz
- Insertion Loss: 1 ± 0.5 dB
- Frequency Response: ±1.0 dB

**AC Input Characteristics**
- Voltage: 100-240 ±10% VAC
- Frequency: 47 - 63 Hz
- Power, maximum: 20 watts

**DC Output Characteristics**
- Voltage / Current:
  - +12 VDC/ 1 amp - (Model 2000-212)
  - +15 VDC/ 1 amp - (Model 2000-215)
  - +18 VDC/ 0.5 amps - (Model 2000-218)
  - +24 VDC/ 1 amp - (Model 2000-224)
- Load Regulation, max.: ± 5%
- Power Supply type: Switcher
- Switching Frequency: 50 kHz, typical

**Indicators**
- DC Power (front): Green LED
- DC Power Insertion (rear): Yellow LED

**Other**
- AC Input Connector: IEC 320 C13
- RF Connectors: Type F (female)
- 10MHz REF Connector: BNC (female), 75Ω works with 50 or 75 ohms
- Size, Bench Top: 4.7” wide X 1.75” high X 8.5” deep
- Size, Rack Mount: 19 inch Standard Chassis 1.75”high X 9.0” deep (Option R)

**Options**
- R-: Rack Mount Panel (1 position)
- R2-: Rack Mount Panel (2 position)
- R3-: Rack Mount Panel (3 position)
- Connectors/Impedance: See Table 2.2

*+10˚C to +40˚C; Specifications subject to change without notice.*
2.0 Installation

2.1 Mechanical

The 2000-2XX is packaged in an aluminum extrusion. The **-R option** is mounted on a 1 3/4” X 19” panel that can be mounted to a rack using the 4 holes at the ends.

---

**FIGURE 2.1  Mechanical Assembly (Rack Mounting)**
2.2 Rear Panel Input/Output Signals - Figure 2.2 shows the input and output connectors on the rear panel.

![Figure 2.2 Rear Panel I/Os]

**TABLE 2.1 Connector Options**

<table>
<thead>
<tr>
<th>Option</th>
<th>RF</th>
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<tbody>
<tr>
<td>STD</td>
<td>Type F, 75Ω</td>
</tr>
<tr>
<td>-B</td>
<td>BNC, 75Ω</td>
</tr>
<tr>
<td>-D</td>
<td>BNC, 50Ω</td>
</tr>
</tbody>
</table>

2.3 Front Panel Indicators - The following are the front panel indicators.

![Figure 2.3 Front Panel Indicators]
2.4 Operation

2.4.1 Installing and Operating the 2000-2XX LNB Power Supply

1. Connect an RF signal to RF connector, J2 (Figure 2.2).
2. Connect RF+DC connector, J1, to the external equipment (Figure 2.2).
3. To insert +12VDC, +15VDC, +18VDC or +24VDC on the RF signal insert a 1 amp fuse (provided) in fuse holder, F1 (Figure 2.2).
4. To insert a 10MHz reference signal on the RF signal connect a 10MHz source to the REF IN, J3 (Figure 2.2).
5. Connect 100-240 ±10% VAC, 47 - 63 Hz to AC on the back panel (Figure 2.2).
6. Be sure DS2 (green, DC Power) is on (Figure 2.3).
7. If fuse, F1, is inserted check that LNB Power LED, DS1, is on (Figure 2.2).
8. AC Fuse - The AC fuse is a 5 mm X 20 mm, 2 amp slow blow (Type T) and is inserted in the far slot in the drawer below the AC input as shown in Figure 2.4. There is a spare fuse in the near slot. If a fuse continues to open, the power supply is most likely defective.

FIGURE 2.4   Fuse Location and Spare Fuse