Data, drawings, and other material contained herein are proprietary to Cross Technologies, Inc., but may be reproduced or duplicated without the prior permission of Cross Technologies, Inc. for purposes of operating the equipment.

When ordering parts from Cross Technologies, Inc., be sure to include the equipment model number, equipment serial number, and a description of the part.
INSTRUCTION MANUAL
MODEL 2000-318/324 SSPB Power Supply

TABLE OF CONTENTS

| Warranty | 2 |
| 1.0 General | 3 |
| 1.1 Equipment Description | 3 |
| 1.2 Technical Characteristics | 4 |
| 2.0 Installation | 5 |
| 2.1 Mechanical | 5 |
| 2.2 Rear Panel Inputs & Outputs | 6 |
| 2.3 Front Panel Indicators | 6 |
| 2.4 Operation | 7 |
| 2.5 Use Information | 8 |

WARRANTY - The following warranty applies to all Cross Technologies, Inc. products.

All Cross Technologies, Inc. products are warranted against defective materials and workmanship for a period of one year after shipment to customer. Cross Technologies, Inc.’s obligation under this warranty is limited to repairing or, at Cross Technologies, Inc.’s option, replacing parts, subassemblies, or entire assemblies. Cross Technologies, Inc. shall not be liable for any special, indirect, or consequential damages. This warranty does not cover parts or equipment which have been subject to misuse, negligence, or accident by the customer during use. All shipping costs for warranty repairs will be prepaid by the customer. There are not other warranties, express or implied, except as stated herein.

CROSS TECHNOLOGIES, INC.

6170 Shiloh Road
Alpharetta, Georgia 30005

(770) 886-8005
FAX (770) 886-7964
Toll Free 888-900-5588

WEB www.crosstechnologies.com
E-MAIL info@crosstechnologies.com
MODEL 2000-318/324 SSPB Power Supply

1.0 General

1.1 Equipment Description

The 2000-318/324 SSPB Power Supply is a switching power supply which provides regulated +18 VDC (-318) OR +24 VDC (-324) at 2.5 amps 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 2000-318/324 can be mounted on an optional 1 3/4” X 19” rack mount panel (option -R).

FIGURE 1.1 Front and Rear Panels

FIGURE 1.2 Block Diagram
# 1.2 Technical Characteristics

## TABLE 1.0  2000-318/324 SSPB 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**: 65 watts

### DC Output Characteristics
- **Voltage / Current**:
  - +18 VDC/ 2.5 amps (Model 2000-318)
  - +24 VDC/ 2.5 amps (Model 2000-324)
- **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), 50Ω/75Ω
- **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, R2, R3: Rack Mount Panel (1, 2, or 3 position)
- B: 75Ω BNC (RF)
- D: 50Ω BNC (RF)

---

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

2.1 Mechanical

The 2000-318/324 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>
</tr>
</thead>
<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 2000-318/324 SSPB 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 +18 VDC/+24 VDC 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 SSPB 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**
2.5 Environmental Use Information

A. Rack-Mounting - To mount this equipment in a rack, please refer to the installation instructions located in the user manual furnished by the manufacturer of your equipment rack.

B. Mechanical loading - Mounting of equipment in a rack should be such that a hazardous condition does not exist due to uneven weight distribution.

C. Elevated operating ambient temperature - If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack may be greater than room ambient temperature. Therefore, consideration should be given to Tmra.

D. Reduced air flow - Installation of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised. Additional space between unit may be required.

E. Circuit Overloading - Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of circuits could have on over current protection and supply wiring. Appropriate consideration of equipment name plate rating should be used, when addressing this concern.

F. Reliable Earthing - Reliable earthing of rack-mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connection to the Branch (use of power strips).

G. Top Cover - There are no servicable parts inside the product so, the Top Cover should not be removed. If the Top Cover is removed the ground strap and associated screw MUST BE RE-INSTALLED prior to Top Cover screw replacement. FAILURE TO DO this may cause INGRESS and/or EGRESS emission problems.