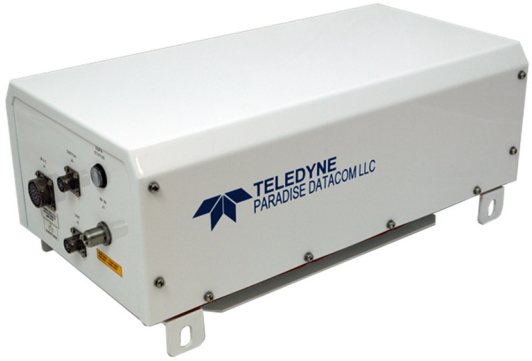
TELEDYNE
PARADISE DATACOM
A Teledyne Technologies Company

Quick Start Guide
Compact Outdoor SSPAs



Teledyne Paradise Datacom manufactures a wide array of Compact Outdoor amplifiers with output power levels ranging from 20 Watts to 500 Watts, depending on the frequency band.

Mounting

An optional mounting kit is available for the Compact Outdoor SSPA. Redundant systems utilizing two or three Compact Outdoor SSPAs are typically shipped as complete assemblies on uni-strut frames suitable for mounting outdoors. Refer to the specifications of your antenna boom to determine if it can support the weight of the amplifier and mounting frame.

The Compact Outdoor SSPA should **never** be mounted in such a way that the fans face up. Doing so will void the warranty.

Never enclose the Compact Outdoor SSPA in any manner that prevents air from circulating, or that restricts airflow. The fans require at least a 6-inch clearance at the bottom of the amplifier and to either side. Normal operating temperature range is -40 to +60 °C.

Connect RF Input and Output

The RF Input connector is a Type N (F) connector. The RF Output connector is band specific. Before applying power, ensure the RF Output connector is properly terminated to a load capable of handling the saturated output power of the amplifier, or to an antenna feed.

WARNING! Radiation hazards exist when not terminated. Do not operate the amplifier without terminating the RF Output (J2). NEVER look directly into the RF Output waveguide.

Follow proper installation and maintenance procedures for all waveguide connected to the amplifier. For pressurized waveguide, install a pressure window at the output of the amplifier.

Providing Prime Power

The prime power connector at port J7 is a 3-pin circular connector, MS3102E20-3P. The mating connector (MS3106E20-3S) is shipped with the unit. The AC line input connector pin-outs are shown below:

J7 Pin #	Connection
A	L1
B	GND
C	L2/N

WARNING! The protective earth pin B must be connected to AC mains earth for both safety and EMC regulation compliance.

For the connection to earth ground, use a 12 AWG cable, UL rated for outdoor use. Connect to the chassis ground stud using the supplied hardware. Tighten all hardware securely with a wrench.

The specification sheet, which may be downloaded from the web site, lists the prime input power required to operate the amplifier.

Sealing Connectors

All cable connections should be properly sealed against water intrusion. The slightest amount of moisture in a microwave coaxial connection will have adverse effect on equipment operation.

Apply self-amalgamating tape or putty from the plug/socket connection (MS-type) to as close as possible to the cable sheath. Cover all connector junctions (N-type; SMA) so that no water can creep into the thread between the plug and socket.

Prior to taping a connector, remove all traces of oil or grease from the connector by using an alcohol-based cleaning solution. Ensure the connector is clean and dry.

Remote Communication

The SSPA offers a wide range or remote communication capability, including serial interface over RS485 or RS232, and an Ethernet interface which supports IPNet, SNMP and a HTTP web interface. Download the Operations Manual from the web site for a complete description of the remote

control interface, including the serial communication protocol.

Most units are shipped with a quick-start cable which connects between port J4 of the amplifier and a RJ45 Ethernet jack of a computer, and is used in conjunction with Teledyne Paradise Datacom's free Universal Monitor and Control software.

Before connecting to the amplifier, the PC must be set up with the following Local Area Connection parameters: TCP/IP v4; IP address 192.168.0.1; Subnet Mask: 255.255.255.0.

Connect the quick-start cable between the PC and amplifier, ensure the RF input and output are properly terminated, then provide power to the amplifier. When the amplifier is powered up with the quick-start cable connected, these default conditions apply to the unit:
Also shipped with the amplifier is a mating connector (MS3116F18-32P) for Port J4, with which the operator may construct a cable for remote M&C.

Refer to the Operations Manual for proper cable construction and required pin-outs for interface selection and start-up mute state.

Parameter	Default	Parameter	Default
Interface	IPNET	Web password	paradise
IP Lock	255.255.255.255	Read Community	pubic
Gateway	192.168.0.1	Write Community	private
Subnet Mask	255.255.255.0	Local Port	1007
IP Address	192.168.0.9	Unit Starts Up	Unmuted

Maintenance

While the Compact Outdoor SSPA has been designed to operate in the most severe environmental conditions, regular maintenance is still required.

The fans and heatsink must be cleaned at regular intervals (suggested monthly). Failure to keep the fans and heatsink free of debris will void the warranty.

Safety Considerations

Potential safety hazards exist unless proper precautions are observed when working with this unit. To ensure safe operation, the operator must follow the information, cautions and warnings provided in the Operations Manual, and observe the warning labels placed on the unit itself.

RF Transmission Hazards

RF transmissions as high power levels may cause eye damage and skin burns. Prolonged exposure to high levels of RF energy has been linked to a variety of health issues. Use proper safety procedures when operating the unit.

High Voltage Hazards

High voltage is any voltage in excess of 30V. Voltages above this value can be hazardous and even lethal under certain circumstances. Care should be taken when working with devices that operate at high voltage.

Electrical Discharge Hazards

An electric spark can not only create ESD reliability problems, it can also cause serious safety hazards. Follow all ESD precautions when working with this unit.

High Current Hazards

Many high power devices are capable of producing large surges of current. This is true at all voltages, but needs to be emphasized for low voltage devices. Low voltage devices provide security from high voltage hazards, but also require higher current to provide the same power. High current can cause severe injury from burns and explosion.

Leakage Current Hazards

Leakage current may exceed 3.5 mA.
A connection to earth ground must be made prior to connecting AC mains. Likewise, when removing AC mains, keep earth ground connected.

Warranty

Refer to the manufacturer's warranty document for specific warranty coverage by product. The warranty does not apply to any goods that, upon examination by the manufacturer, are found to have been (i) mishandled, misused, abused, or damaged by the Buyer or Buyer's customer, (ii) altered from their original state, (iii) repaired without the manufacturer's prior written approval, or (iv) improperly stored, installed, operated, or maintained in a manner inconsistent with the manufacturer's instructions. This warranty does not apply to defects attributed to normal wear and tear.

Use and Disclosure of Data

This product is classified as EAR99 and is subject to U.S. Department of Commerce regulations. Export, reexport or diversion contrary to U.S. law is prohibited. Specifications are subject to change without notice.

Teledyne Paradise Datacom
11361 Sunrise Park Drive
Rancho Cordova, CA 95742 USA
Tel: (814) 238-3450

www.paradisedata.com

Teledyne Paradise Datacom Ltd.
106 Waterhouse Lane,
Chelmsford, Essex, England, CM1 2QU
Tel: +44(0)1245 847520