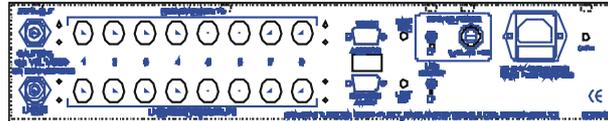
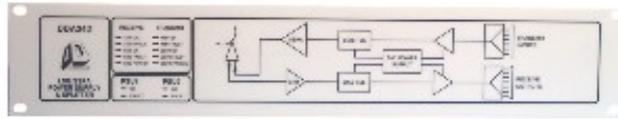




DOUBLE D ELECTRONICS LTD

DDA242 LNB/SSPA Power Supply and Splitter

- * Powers one LNB via signal cable
- * Powers one SSPA via signal cable
- * 8-way splitter on LNB output
- * 8-way combiner on transmit input
- * Simple setup - no presets
- * 950-2150MHz operation
- * System Diagram on Front
- * Unity gain RF paths
- * Option for d.c. path on transmit
- * Comprehensive failure monitoring
- * Optional Remote Monitoring & Control Port
- * 2U 19" rack mount
- * Summary alarm output



The DDA242 provides power and signal distribution facilities for single thread satellite transmit/receive subsystems in earth stations.

On the transmit side the unit accepts up to eight signals which are combined into a single output. A fixed supply of +48V d.c. (Or, optionally, +24V d.c.) at up to 3A is then added on to this output through a bias tee.

On the receive side the DDA242 generates a regulated supply, typically at 18V d.c., to power the LNB.

All supply voltages and currents for both the LNBs and the internal amplifiers are monitored using a microprocessor to filter and process the readings, and simplify setup. Parameters monitored include LNB voltage and current, internal amplifier voltage and current, and primary power supply voltages. These are then filtered and averaged before comparing against limits.

All nominal values for a channel are set up by a single press of a rear panel pushbutton. A range of tolerances may be set for the LNB current, using an internal DIP switch.

The RF path covers the full extended L-Band of 950-2150MHz, and uses robust N-type connectors for all external connections (with an option for BNC connections on the RF receive outputs). The transmit path also passes 10MHz. As an option the transmit path can be supplied with a 4-way combiner able to pass signals in the d.c. to 10MHz band. (This is intended for BUCs which use 650kHz for RC&M). Terminators are supplied for the receive outputs and the transmit inputs. Both transmit and receive paths have a nominal unity gain, except when the d.c. transmit path option is selected.

An optional RC&M port gives access to the full status of the unit, as well as facilitating remote configuration.

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SPECIFICATION

- Physical: 19" rack, 2U high, 360mm deep (excluding connectors).
- Power: 90-250V a.c., 200VA max. (via IEC inlet)
- LNB Power: +18V d.c., 500mA maximum (may be disabled by rear panel switch)
- SSPA Power: +48V d.c. 3A maximum (-0X, -1X units - preferred option)
+24V d.c. 3A maximum (-4X, -5X units)
(May be disabled by rear panel switch)
- Rx RF Gain: 0dB nominal, ± 3 dB
- Rx RF level: Max -15dBm input
- Tx RF Gain: 0dB nominal, ± 3 dB (-0X, -4X - 8 input combiner, no d.c. path)
-7dB nominal, ± 2 dB (-1X, -5X - 4 input combiner, d.c. path)
- Tx RF level: Max 0dBm input
- RF connectors: N-type (50 Ω)
- Host Serial: 4-wire RS-422/RS-485, fixed 9600,7,e,1. Supports "Printable ASCII" and "STX/ETX" protocols.
- Alarm Output: Volt-free relay contact signals alarm on any monitored voltage or current out of tolerance.

Ordering Information

Part number DDA242-XX, where the option code XX is determined from the following table:

Version	RC&M	transmit d.c. power	transmit combiner inputs	nominal transmit path gain	Lower transmit path frequency
-01	No	+48V	8	0dB	10MHz
-02	Yes	+48V	8	0dB	10MHz
-11	No	+48V	4	-7dB	d.c.
-12	Yes	+48V	4	-7dB	d.c.
-41	No	+24V	8	0dB	10MHz
-42	Yes	+24V	8	0dB	10MHz
-51	No	+24V	4	-7dB	d.c.
-52	Yes	+24V	4	-7dB	d.c.

(See separate data sheet for DDA242-8X version)