



MULTISTACKER INSTALLATION MANUAL

PRODUCT CODE: DS/MS





MULTISTACKER INSTALLATION MANUAL

SAFETY PRECAUTIONS



WARNING: Avoid personal injury and product damage by complying with the following important operating and maintenance instructions.

Avoid Electric Shock



WARNING: To reduce the risk of an electric shock, perform only the instructions that are included in this instruction manual. Refer all servicing to a qualified service technician.



Do not apply power to the Multistacker until all components have been installed and all of the wiring has been properly terminated. Failure to do so may result in damage to the product and this will void the manufacturer's warranty.

Do not attempt to terminate, change or un-install any of the wiring without first switching off the unit and unplugging the power cord/s from the Multistacker. Be sure to follow the correct shutdown procedure.

The power supply voltage must not exceed the supplier recommended VDC, otherwise the Multistacker could suffer irreparable damage and subsequent invalidation of the warranty.

Note:

- Do not connect the Multistacker to the power if the power cord/s or power adaptor are damaged
- Do not plug the Multistacker into the mains supply until all cables have been connected correctly
- Do not cut the power cord or extend the power cord

Servicing



WARNING: Avoid electric shock! Opening or removing the cover may expose you to dangerous voltages. Do not open the cover of this product and attempt service unless instructed to do so in the operating instructions. Refer all servicing to qualified personnel only.

Cleaning, Water, Moisture, Open Flame



WARNING: Do not expose any component to moisture. Doing so can create electrical hazards or render the component unusable. Exposure to moisture will also void the warranty on the system. To protect this product against damage from moisture and open flames, do the following:

- Before cleaning, unplug this product from the AC outlet. Do not use liquid or aerosol cleaners. Use a dry cloth for cleaning
- Avoid placing the Multistacker next to central heating components and in areas of high humidity
- Do not expose this product to moisture
- Do not place this product on a wet surface or spill liquids on or near this product
- Do not place or use candles or other open flames near or on this product





MULTISTACKER INSTALLATION MANUAL

Ventilation



WARNING: To protect this product against damage from overheating, do the following:

- This product has a heat sink to protect it from overheating. To ensure product reliability, do not block or cover the heat sink, allow for air to flow with sufficient ventilation



- Do not open this product

- Do not push objects through openings in the product or enclosure

- If the Multistacker has been kept in cold conditions for a long time, keep it in a warm room no less than 2 hours before plugging it into the mains.



- Do not place the Multistacker on top or underneath another device, as this could cause overheating

Placement



WARNING: Avoid personal injury and damage to this product! An unstable surface may cause this product to fall. To protect this product against damage from breakage, do the following:

- Place this product close enough to a mains AC outlet to accommodate the length of the product power cord / power adaptor unless using remote powering option
- Route all power supply cords so that people cannot walk on, or place objects on, or lean objects against them. This can pinch or damage the cords. Pay particular attention to cords at plugs, outlets and the points where the cords exit the product
- Make sure the mounting surface is stable and can support the size and weight of this product
- Move any appliance combination with care. Quick stops, excessive force, and uneven surfaces may cause the appliance combination to overturn



Grounding Terminal



WARNING: This product is equipped with an external grounding terminal, attach one end of a 2.5mm to the grounding terminal; then, attach the other end of the wire to an earth ground, such as an equipment rack that is grounded or to the CET.





MULTISTACKER INSTALLATION MANUAL

CONTENTS

SAFETY PRECAUTIONS	2 - 3
INTRODUCTION	4
1.1 Product Overview	4
1.2 Features	4
1.3 Multistacker Specifications	5
1.4 Front Panel	5
1.5 Input Configuration	5
1.6 Installation	6
1.7 Multistacker Five Way Switch Configuration	6
1.8 Installation Example [Small MDU]	7

INTRODUCTION

1.1 Product Overview

The DS/MS is a static-mode dCSS multistacker with built-in DVB-S/S2 tuner and decoder. Whenever the satellite transponders change, FOXTEL will only need to broadcast the new transponder list in NIT. The DS/MS can then receive the NIT and parse the new frequency list information. The DS/MS then self-updates the frequency list to the dCSS chip and operates with the latest transponder frequency list without bothering the existing STB in the home or office.

1.2 Features

- Small wall mountable design, simple installation
- High quality housing with heat sink
- Quad SAT IF inputs: 1 H + 22 KHz, 2 V + 22 KHz, 3 H and 4 V
- Dedicated F female connector input for 12 VDC local powering
- RF output can be used to remote power the Multistacker
- Grounding screw for CET [Earthing]
- Five way switch [For state channel allocation by FOXTEL]



MULTISTACKER INSTALLATION MANUAL

1.3 Multistacker Specifications

Specifications		DS/MS
Input Frequency Band	1 H / 22 KHz	950 MHz ... 2150 MHz
	2 V / 22 KHz	
	3 H	
	4 V	
Output Frequency Band	dCSS Output Port	250 MHz ... 2350 MHz
Input Return Loss	75 Ω System, over 950 MHz ... 2150 MHz	> 10 dB
Output Return Loss	75 Ω System, over 250 MHz ... 2350 MHz	> 10 dB
Input Power Level	Per Carrier (UB) with an AGC Range of 20 dB	- 45 ... - 24 dBm [63.75 ... 84.75 dBμV]
Output Power Level	Per Carrier (UB)	- 29 ... - 24 dBm [79.75 ... 84.75 dBμV]
Aggregate Output Power Level	Up to 32 (UB's)	< - 5 dBm
Tuner Frequency Range	Internal DVB-S/S2 Tuner	950 MHz ... 2150 MHz
Tuner Carrier Acquisition Range	Internal DVB-S/S2 Tuner	± 5 MHz
Operating Voltage		12 ± 0.5 VDC
Power Consumption	All UB ON, 12 VDC Supply without LNB	< 9.5 W
Operating Temperature	- 20 °C ... + 60 °C [Indoor]	- 30 °C ... + 70 °C
	- 30 °C ... + 70 °C [Outdoor]	

1.4 Front Panel



1.5 Input Configuration

No.	Function
1.	1 H / 22 KHz
2.	2 V / 22 KHz
3.	3 H
4.	4 V
5.	Five Way Switch
6.	Grounding Screw [Earth]
7.	Local Power [12 VDC]
8.	Output RF [Remote Power 12 VDC Input]

1.6 Installation

Ensure JONSA approved RG6 Quad Shield or RG11 Quad Shield coaxial cables are used to connect your LNBF to the DS/MS Multistacker along with our approved FOXTEL PCT compression universal locking F connectors for that ultimate secure connection.

To determine the correct input ports for installing and connecting the DS/MS Multistacker to an LNBF, please check the type of LNBF that will be used for the installation, for example:

- A) Twin LNBF: Use the 3 H port (3) and 4 V port (4) to connect to the LNBF’s output ports.
The 1 H / 22 KHz port along with the 2 V / 22 KHz port must be terminated with 75 ohm capacitive terminators when not used.
- B) Quad LNBF: Use all four input ports (1 - 4) to connect to the LNBF’s output ports to the DS/MS Multistacker.

Five Way Switch (5): The default settings of the five-way switch combinations are 0. Installers shall determine the switch combinations based on the location of where the Multistacker shall be installed, please refer to the Multistacker Five Way Switch Configuration table below.

Grounding screw [Earth] (6): Connect the ground wire from the CET for example directly to the grounding screw.

Local powering port (7): The DS/MS is equipped with a dedicated F Connector input port for local DC powering. Connect the 12 VDC / 5 Amp power adapter that is supplied with the DS/MS directly into this local power port.

Output port (8): The output port can be connected into amplifiers, taps &/or splitters based on the system design required to meet FOXTEL approval requirements. This port can also be used to remote power the Multistacker when the local powering option is not available.

1.7 Multistacker Five Way Switch Configuration

The dip switches on the Multistacker are switched to match the state of Australia where it shall be installed. The table also shows the dip switch settings and the STB state settings.

Switch Number	1	2	3	4	5	STB Setting
National	OFF	OFF	OFF	OFF	OFF	National 01
NSW	ON	OFF	OFF	OFF	OFF	NSW 02
VIC	OFF	ON	OFF	OFF	OFF	VIC 03
QLD	ON	ON	OFF	OFF	OFF	QLD 04
SA	OFF	OFF	ON	OFF	OFF	SA 05
WA	ON	OFF	ON	OFF	OFF	WA 06
TAS	OFF	ON	ON	OFF	OFF	TAS 07
NT	ON	ON	ON	OFF	OFF	NT 08



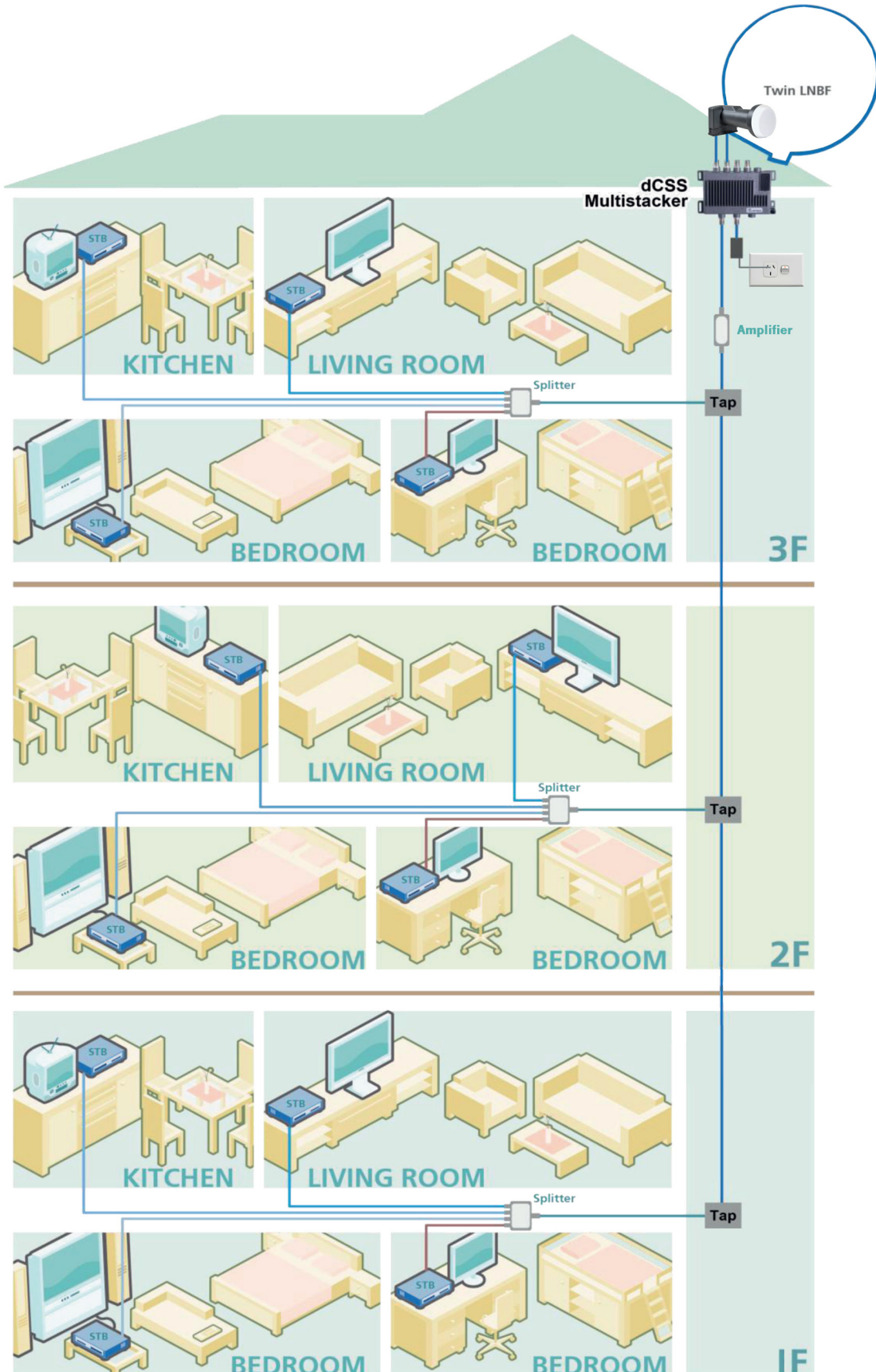
Dip switch image of the Multistacker. Set as dip switch 1 ON for NSW as an example.



MULTISTACKER INSTALLATION MANUAL

1.8 Installation Example [Small MDU]

In this installation example, only one amplifier is required. Depending on the system, additional line amplifiers or a launch amplifier might be required. Calculate the design correctly to ensure the system is balanced and the frequencies at each outlet meet FOXTEL installation requirements.



Specifications within this instruction manual are subject to change without notice. V1.6



Head Office

Lidcombe Business Park,
Unit D2,
3 - 29 Birnie Avenue,
Lidcombe
NSW 2141
Australia

PO Box 6147,
Silverwater
NSW 1811
Australia

WA branch

Unit 1,
7 Mallaig Way,
Canning Vale
WA 6155
Australia

✉ saleswa@jonsa.com.au

