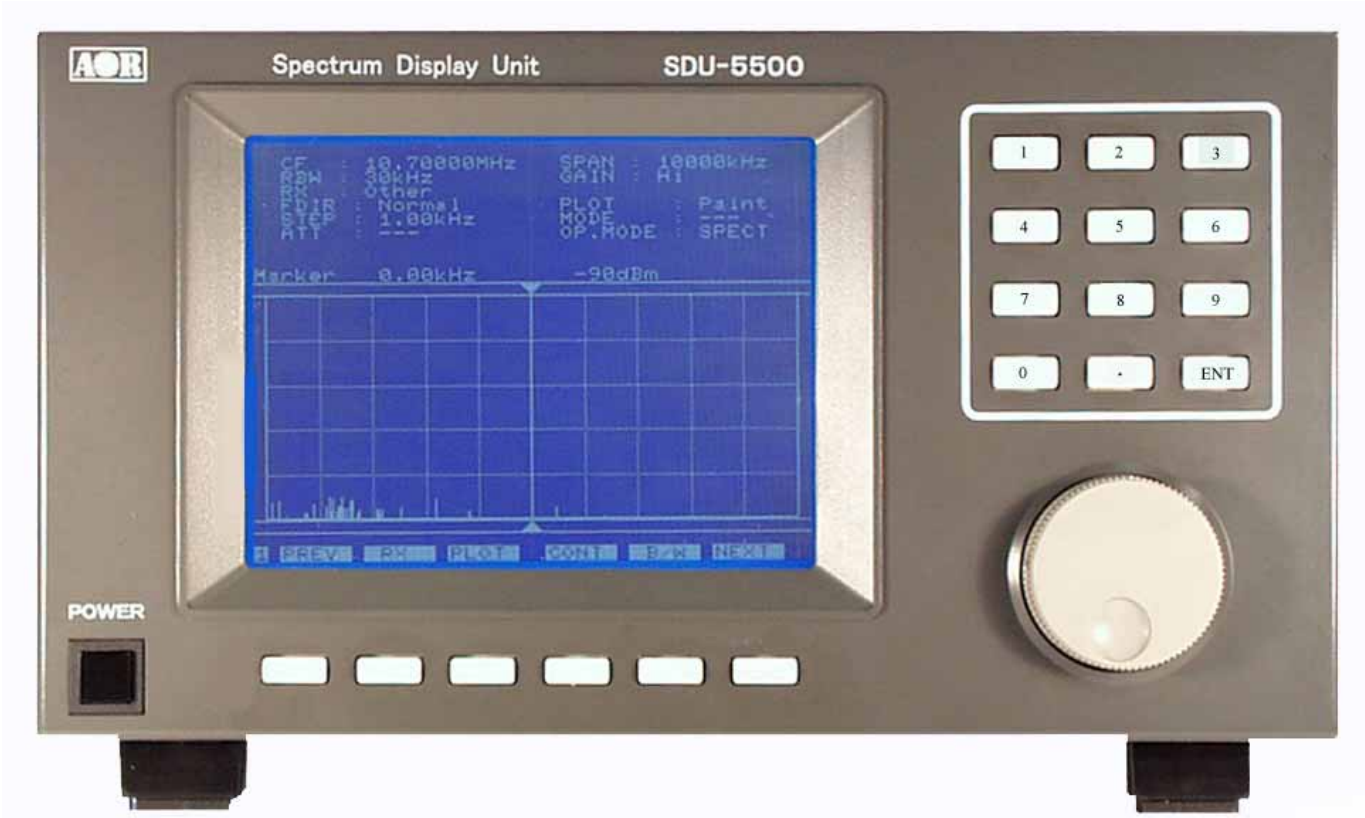
SDU5500

Spectrum Display Unit for use with a companion radio receiver

The SDU5500 is an 'all new' Spectrum Display Unit and a worthy successor to the SDU5000 (which offered practical and cost effective monitoring). It has never been so easy to locate those brief elusive transmissions, coupled to the AR5000 receiver, the SDU5500 provides a spectrum display of 10 MHz bandwidth anywhere between 10 kHz and 2600 MHz.



Already pressed into commercial usage by government departments, the professionalism of the unit has truly been grasped. The SDU5500 has a high resolution monochrome 4.7inch (white/blue) LCD with improved status read-out on the top-half of the display, a spin wheel tuner controlling the marker position and on-screen programming similar to a dedicated high-priced spectrum analyser. There are six program keys in addition to the ten-key pad. It gets even better... compared to its predecessor, several new facilities have been provided:

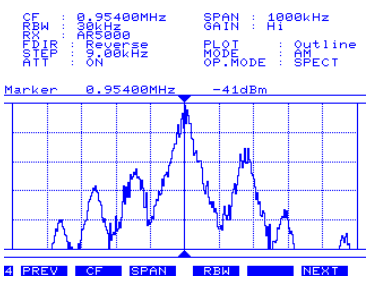
- Step resolution mode, plots the wanted channel steps and ignores the gaps for more efficient analysis.
- Channel step mode, plots the wanted channels for close in use on channelised bands.
- Spectrum mode is of course available with peak, max, average etc.
- On screen support for AOR AR5000/5000+3, AR3000A, ICOM IC-R7100, IC-R8500, IC-R9000 and 'Other' companion radio.

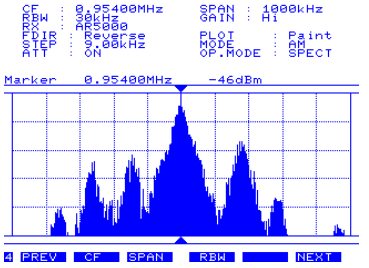
Frequency accuracy is typically around ± 600Hz with a usable dynamic range of 50dB and acceptable input level between -10dB to -90dB with selectable gain control.

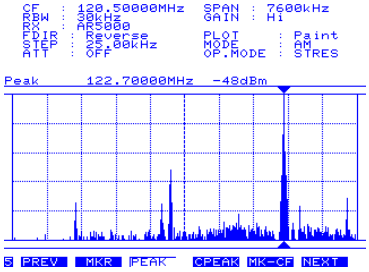
The SDU5500 truly adds a variety of features to extend your receiver's capabilities, such as visually identifying new active frequencies and taking measurements. Multiple process functions allow average level, peak detection, maximum hold and much more. The SDU5500 may be connected directly to a computer for hands-off control. Built-in support is provided for a number of AOR and ICOM receivers which have a 10.7 MHz I.F. output (AOR AR5000/+3, AR3000A and ICOM R7100, R8500 & R9000).

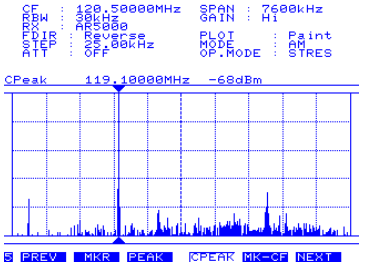
A spectrum bandwidth up to ± 5 MHz in 1 kHz increments is provided with a resolution of 5 kHz or 30 kHz. In particular, when using selected AOR and ICOM receivers, the frequency, mode (& attenuator with some sets) may be controlled from the SDU5500. The SDU5500 may also be used with receivers which have an I.F. output 'close' to 10.7MHz (in the range 5.7 to 15.6 MHz with reduced bandwidth) such as the Kenwood TS870S where the SDU5500 makes an excellent companion **band scope** so that adjacent channel activity may be constantly monitored. Powered from 12V d.c. means that these advanced facilities may be taken almost anywhere, especially useful for short term on-site applications.

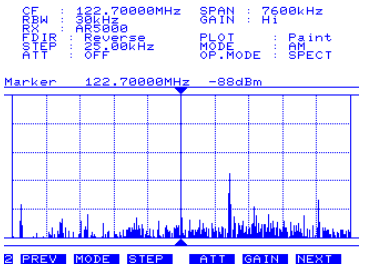
- **Menu driven operation:** All facilities are within easy access through each dedicated function key and on-screen menu.
- **Full interconnection with the AR5000:** The AR5000 can be operated from the SDU5500 enabling selection of centre frequency, receive mode, etc. Any frequency spotted and monitored by the SDU5500 can be received by the AR5000 straight away.
- **Direct reading of the receiving frequency and input level:** By placing the cursor on any spot frequency you can read its frequency and input level on screen. When connected with the AR5000 the SDU5500 virtually works as a spectrum analyser over 10 kHz to 2600 MHz range as the centre frequency always becomes the receive frequency.
- **Wide spectrum coverage:** The SDU5500 covers a maximum of +/-5 MHz spread against the input frequency.
- **Dual frequency resolution:** Selectable, either 5kHz or 30kHz resolution.
- **Wide input range:** -10dBm to -90dBm by using two selectable gain settings.
- **Highly accurate frequency management:** Through the DDS controlled local oscillator circuit.
- **Wide variety of displays:** Graphical display and statistical analysis.
- **Remote control via PC:** All keyboard operations of the SDU5500 can be mimicked by PC.
- **Ready-to-go:** Supplied with 9-9pin radio connector for the AR5000, BNC-BNC patch lead (either d.c. lead or suitable a.c. power unit depending upon world market area) and operating manual.
- **Compatibility with non-AOR radios:** Any radios which are equipped with a 10.7 MHz I.F. output can work with SDU5500. Sweep direction is selectable depending on the heterodyne configuration of the radio. Sweep span may be narrower subject to the I.F. characteristics of the radio.

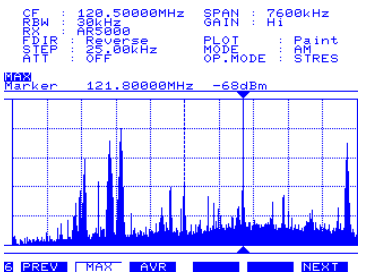


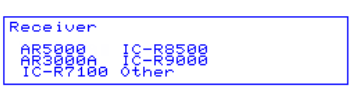












Requirements

AR5000/+3 receiver. *Everything is supplied for straight forward connection of the radio control and I.F. interconnections.*

AR3000A receiver. *A small modification is required to the AR3000A in order to provide a 10.7 MHz I.F. output and AGC control. A 9-25 way RS232 type lead or 9-25 way adapter will be required for connection to the radio, a BNC-BNC patch lead is provided for I.F. connection.*

ICOM R8500. *This unit provides direct radio (RS232) connection so that the lead provided (with the SDU5500) connects straight from the SDU5500 to the rear panel RS232 socket of the R8500. The I.F. patch lead will require the changing of one BNC plug as the ICOM I.F. input uses phono.*

ICOM R7100 & R9000 receivers. *The optional ICOM CT17 communication interface (or equivalent) is required to connect between the SDU5500 and ICOM receiver. A 9-25 way RS232 type lead or 9-25 way adapter will be required for connection to the CT17. The I.F. patch lead will require the changing of one BNC plug as the ICOM I.F. input uses phono.*

Other receivers. *It is also possible to connect the SDU5500 to other receivers which provide a suitable (wide) I.F. output at 10.7 MHz. In fact the SDU5500 centre frequency is programmable from the front panel of the SDU5500 when using other receivers which use different I.F. frequencies (Kenwood, Yaesu etc) in the range of 5.7 to 15.6 MHz, however see the note at the end of the specification... in practical terms the I.F. should be between 8.2 - 13.2 MHz for a 5 MHz span. In the case of the* ***Kenwood TS870S*** *set the I.F. frequency to 8.83 MHz and span to 5 MHz, it works very well over a range of around 50dB with good accuracy.*

PC Windows based control software is currently under consideration, please keep an eye on our web sites and press releases

Specification

Model	SDU5500
Input Frequency	10.7 MHz
Sweep Width	1 kHz to 10 MHz (1 kHz step)
Frequency Accuracy	± 600 Hz
Resolution Bandwidth	5/30 kHz
Reference Level	-10, -40dBm
Maximum Input Level	-10dBm
Dynamic Range	50dBm min
Level Accuracy	Linearity within ± 2dB (within -40dB from reference level)
Band Ripple	± 4dB@10.7 MHz ± 5 MHz
Temperature	± 6dB(0°C~40°C)
Marker Mode	Direct read-out for frequency and level
	Peak Detect + Continuous Peak Detect
	Averaging (2 to 32 times sampling adjustment)
Plot Mode	Outline, Paint
Display Mode	SPECT / STRES / CHANL
Input Impedance	20k Ohm
Display Type	4.7" dot matrix STN LCD
Display resolution	304 x 128 dots
Screen Refresh	500mSec
Backup	From primary d.c. 12V supply
Dimensions	225 x 124 x 240mm (W.H.D.) approx. excluding projections
Weight	3.02kg (approx.)
Power requirements	Nominal 12V d.c. @ 1A
Supported companion radio	AR5000/AR5000+3, AR3000A, IC-R7100, IC-R8500,
	IC-R9000 and other radios with 10.7 MHz IF output
	(non active band-scope)

Note when used with other receivers: *The centre frequency is programmable in the approx range of 5.7 to 15.6 MHz but the offset from 10.7 MHz will reduce the available frequency span... i.e. if the centre frequency is set to 7.5 MHz, the maximum span will be reduced by twice the offset 10.7 - 7.5 = 3.2 x 2 = 6.4, therefore the maximum available bandwidth span is 10 - 6.4 = 3.6 MHz.*

Supplied accessories

1 x 9m-9m way connection lead for AR5000
1 x BNC-BNC I.F. patch lead
1 x illustrated operating manual
1 x a.c. power unit or d.c. lead depending upon world market area

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