



**Operators Manual  
For Signal Level Analyser Meters  
SLAM96 & SLAM96s**

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- Introducing the SLAM96

Swires Research have been making instruments for the cable TV industry for over 20 years, and aims to provide instruments that allow cable and satellite engineers to do their job better and more efficiently. With more than 60% of the major cable franchise operators in Britain using Swire's instruments.

As well as being a signal level meter, the SLAM96 allows the user to see at a glance up to 64 channels on a spectrum display, there by allowing variations across a large number of channels to be readily seen.

As with the Swires range of spectrum analyser the SLAM96 has enhanced software correction built into Erasable Programmable Memory (EPROM) for greater accuracy; giving a built in 'error correction table'.

Using low loss displays and innovative power management battery life is approximately 5 hours of continuous use (excluding use to power an LNB). The meter also closes down after 5 minutes if no key is pressed to save battery life.

The SLAM96s covers the extended satellite IF frequencies and gives a frequency range between 10 and 2150 MHz. This model also supplies +14V to an LNB, therefore eliminating the need for a receiver to be present on the initial setting up of the dish.

Internal construction of the SLAM96 uses surface mount technology. The case of the meter is made from extremely strong, glass reinforced poly-carbonate material; providing great strength and reduced weight.

- The tone function

When setting up equipment which needs to be accurately aligned, it is not always possible to watch the screen to find the best alignment. In these instance the tone function is very useful.

After pressing the Tone key (f), the instrument will emit a low tone, which varies it pitch in proportion to the strength of the signal.

To turn this function off press the key again.

- Specifications:

- Frequency Range: SLAM96: 10 to 1000 MHz.  
SLAM96s: 10 to 2150 MHz.
- Response Accuracy: 10 to 1000 MHz:  $\pm 1$  dB.  
1000 to 2150 MHz:  $\pm 2$  dB.
- Input Level Range: -25 dBmV to +58 dBmV.
- RF input connector: 75  $\Omega$  BNC type.
- IF Band Width: 360 kHz @ -3 dB point.
- LNB Supply Voltage: SLAM96s: +14 V 250 mA max.
- Optional Extras: Ever ready *ordeluxe* nylon carrying cases.
- Battery Pack: NiCad, giving 5 hours continuous use.
- Weight: 1.1 kg, including batteries.
- Dimensions: 275 mm x 115 mm x 63 mm.

- Powering an LNB.

The SLAM96s meter can power an LNB with +14 volts, at amaximum current of 250mA. To operate line powering press the LNB V and "." keys simultaneously (i + l) - "Wok On" will appear on the display. If the batteries have a low charge, line powering will immediately switch off.

To switch off this facility press the LNB V key again.

- Carrier to Noise ratio (C/N).

An indication of C/N is available on this meter. On pressing the C/N key (e), the meter will momentarily change to a frequency selected by the user as the noise reference and then the C/N level in dB will be displayed for 5 seconds.

To select the frequency which the instrument will use to take the noise measurement;

Select a clear frequency, away from active channels. Press the Option (n) and "1 Noise Frq Here". The instrument will use this frequency until altered.

- Changing the signal level units: dBmV or dB $\mu$ V

Signal levels can be displayed in either dBmV and dB $\mu$ V, toggle between them by using the mV/ $\mu$ V key (t). The bar graph of the display is always in dBmV.

- Recharging the internal batteries

To recharge the NiCad batteries plug the charger into the 9 pin 'D' connector at the base of the meter. To fully charge the batteries 15 hours is required, while an overnight charge should normally be all that is required.

- Saving screen shots

Press the Save key (j) to store the current screen to memory for downloading to a PC later. Up to 99 screens can be saved

- Instructions for Use

- Switching On and Off

The On (s) key switches the instrument on. The start-up screen shows the date as the instrument runs through a series of internal checks, the screen then reverts to the measurement display ready to take readings.

The Off (q) key switches it off.

- Help pages

The Help key (k) followed by any other key will give a brief description of the function of that key in normal use. To exit the help pages press the Help key again time.

- Changing the frequency

To change to any frequency in the band:

*Either,* press the Freq key (p) then the Shift key (o) and enter the frequency using the key pad, finishing with Enter (m). If the frequency includes a decimal point, eg 123.5 MHz, there is no need to press Enter. For example, to examine frequency 690.5 MHz, press keys 6, 9, 0, "." & 5.

*Or,* press Freq key (p) and scroll to the desired frequency using the Arrow keys (a - d).

- Changing to a preset channel

The SLAM96 can store 500 channels. To change to a stored channel:

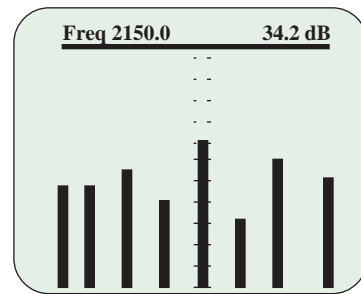
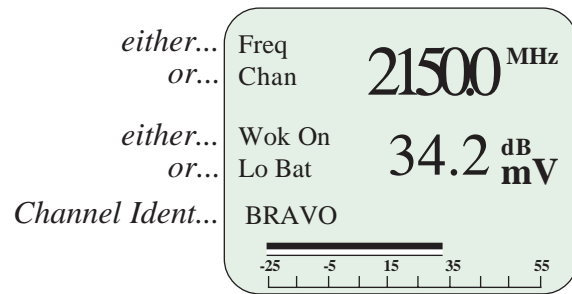
*Either,* press the Chan key (g) and use the arrow keys (a - d).

*Or,* press the Chan key, followed by the Shift key (g, o), enter the channel at the prompt, using the numerical keys and the Enter (p) key to finish.

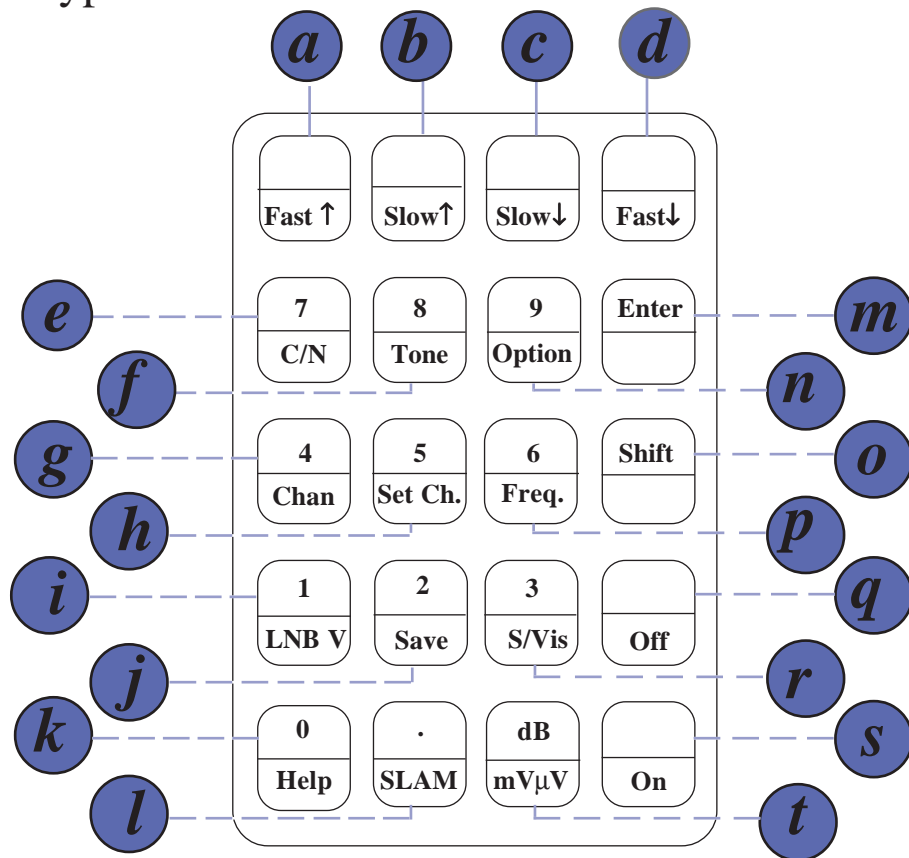
- Displays

- Measurement.

- Spectrum.



- Keypad



- Allocating a frequency to a channel.

To change the frequency of a presets. Press the Chan key and then the Shift keys (g, o), the prompt will change to "Chan?". Use the numeric keypad to select the channel number to be allocated, eg "0001" and then press the Enter key. To enter the new frequency press the Set Ch key (h) and input the desired frequency, e.g. 1,2,3 & Enter key.

To allocate frequencies to other presets, press the Shift key again and repeat the steps.

Channels can be locked when a channel plan is uploaded from a PC using the *Virtual* package, to ensure the frequencies of channels cannot be changed.

- Using the spectrum display

The SLAM96 can display upto 64 channels at once, and so allow the engineer to quickly see variations in many channels. Either 64, 32, 16 or 8 channels can be viewed.

To toggle between the spectrum display and measuring screen display press the "SLAM" key (l). The shift key (o) cycles through the 64, 32 16 or 8 lines options.

In the spectrum display screen, the two middle cursor keys (b, c) change the gain of the display, whereas the two outer keys (a, d) select the line.

- Sound to Vision ratio (S/Vis).

The S/Vis key (r) gives, for 5 seconds, the difference between the sound and vision carriers in dB.

The Sound to Vision spacing can be changed by pressing the Option key (n) and then selecting "2 S-V Gap MHz". Enter the spacing required, from 4.0 - 8.5 MHz, by using the cursor keys (a - d), and pressing Enter (m) when finished. The meter will remain on the new S - V ratio until altered.