

Portable Signal Generator User's Guide Revision 1/15/02

1. LCD Display
2. UP Key
3. DOWN Key
4. LEFT Key
5. RIGHT Key
6. FUNCTION Key
7. ON/OFF Key
8. RF Output Connector
9. AC Adapter Port
10. RS232 Serial Interface



Installing Batteries

The PSG operates on 4 'C' Alkaline batteries. Remove the 4 Philips head screws from the back of the unit to access the battery compartment. It is normal for the unit to power up automatically after batteries are installed.

Powering the unit

To power the unit up, simply press the ON/OFF key.

Normal Operation

In normal operation the unit produces the desired frequency at the desired output power level. These are displayed on the LCD. The user can increase and decrease output power using the UP and DOWN keys respectively. The user can increase and decrease frequency using the RIGHT and LEFT keys respectively.

Sweep Mode

Units equipped with Sweep Mode allow the user to sweep the entire band of the unit or any portion stepping in any multiple of the unit's step size. Sweep mode can be activated using either the serial interface or the front panel. The user must set the Sweep Start and Sweep Stop frequencies as well as the Sweep Step Size and Sweep Delay prior to activating Sweep Mode. Sweep Mode Delay is an added delay that can be used to slow the sweep causing the unit to pause momentarily at each frequency. Once Sweep Mode is activated the serial interface and front panel keys will be locked out, the display will not be updated. The unit must be powered off and on to return to Normal Operation.

The FUNCTION key

Pressing the FUNCTION key during Normal Operation for less than 5 seconds displays the status of the RF output. The unit will display ON or OFF and a LOCKED condition. Pressing the FUNCTION key for more than 5 seconds during Normal Operation will put the unit in Setup Mode. The first menu in setup mode is always Contrast. In the event that the Contrast of the LCD becomes unreadable, the user can follow this simple procedure to restore proper Contrast to the LCD.

Contrast Restore

1. Power the unit up
2. Press and hold the FUNCTION key for 5 seconds.
3. Press the UP or Down Keys to Adjust Contrast

Pressing the FUNCTION key for more than 5 seconds during Setup Mode will return the unit to Normal Operation. If while in Setup Mode no keys are pressed for 10 seconds the unit will automatically return to Normal Operation.

Setup Mode

Pressing the FUNCTION key for less than 5 seconds during Setup Mode will toggle the user through the various Setup Menus.

1. Contrast Control
2. RF On/Off
3. Battery Life Display
4. Sweep Mode Start Frequency
5. Sweep Mode Stop Frequency
6. Sweep Mode Step Size
7. Sweep Delay
8. Sweep Mode Activate
9. Frequency Step Size Adjust (available on PSG-10 and PSG-10H only)

Setup Mode - Contrast

In this mode, the user can increase and decrease LCD Contrast using the UP and DOWN keys respectively.

CONTRAST (0-15) 7

Setup Mode – RF On/Off

In this mode, the user can turn the output on or off using the UP and DOWN keys respectively.

RF : ON

Setup Mode – Battery Life

In this mode, the LCD displays the estimated life in percent of the batteries.

BATTERY 100%

Setup Mode – Sweep Mode Start Frequency

In this mode, the user can increase and decrease the Sweep Mode Start Frequency using the RIGHT and LEFT keys respectively.

SW START 800.000

Setup Mode – Sweep Mode Stop Frequency

In this mode, the user can increase and decrease the Sweep Mode Stop Frequency using the RIGHT and LEFT keys respectively.

```
SW STOP  
1000.000
```

Setup Mode – Sweep Mode Step Size

In this mode, the user can increase and decrease the Sweep Mode Step Size using the UP and DOWN keys respectively. The Sweep Mode Step Size can be any multiple of the unit's Step Size and is the unit Step Size by default.

```
SW STEP  
100 kHz
```

Setup Mode – Sweep Mode Delay

In this mode, the user can increase and decrease the Sweep Mode Delay using the UP and DOWN keys respectively. The Sweep Mode Delay can be any value from 0 to 255.

```
SW DELAY  
100 ms
```

Setup Mode – Sweep Mode Activate

In this mode, the user can activate the Sweep Mode by pressing the UP key. See Sweep Mode for details.

```
SWEEP:  
PRESS ^
```

Setup Mode – Firmware Version

In this mode, the LCD displays the estimated life in percent of the batteries.

```
VERSION:  
1.0
```

Setup Mode – Frequency Step Size Adjust (available on PSG-10 and PSG-10H only)

In this mode, the user can toggle the Step Size using the UP and DOWN keys.

```
STEPSIZE  
25 kHz
```

RS232 Serial Interface

Every PSG is equipped with an RS232 Serial Interface for connection to a PC. The interface operates at 9600 bits per second, 8 Data bits, No Parity, and 1 Stop bit with Flow Control set to none.

RS232 Command Set

Frequency Commands	
FREQ#####	Sets FREQ in kHz, Returns FREQ
FREQDOWN	Decrements FREQ by STEP, Returns FREQ
FREQUP	Increments FREQ by STEP, Returns FREQ
FREQ	Returns FREQ
Amplitude Commands	
POWER#####	Sets POWER in .1 dBm, Returns POWER
POWERDOWN	Decrements POWER by .1 dBm, Returns POWER
POWERUP	Increments POWER by .1 dBm, Returns POWER
POWER	Returns POWER
Sweep Commands	
SWSTART#####	Sets Sweep Mode Start in kHz, Returns SWSTART
SWSTOP#####	Sets Sweep Mode Stop in kHz, Returns SWSTOP
SWSTEP#####	Sets Sweep Mode Step Size in kHz, Returns SWSTEP
SWDELAY###	Sets Sweep Mode Delay in ms, Returns SWDELAY
SWEEP	Initiates Sweep Mode
CW Commands	
RFOFF	Turns off RF output
RFON	Turns on RF output
RF	Returns status of RF (on/off)
Step Commands *	
STEP###	Sets STEP in kHz (25 or 30), Returns STEP
STEP	Returns STEP
Contrast Commands	
CONTRAST##	Sets the CONTRAST level (0 - 15), Returns CONTRAST
CONTRAST	Returns CONTRAST

* STEP commands only available in PSG-10, PSG-10H, and PSG-10H30.

Every command sent to the unit will return 20 characters, CR + LF followed by 16 character response followed by CR + LF. Extra characters sent to the unit will be ignored.

Examples:

FREQ913025 Sets Frequency to 913.025 MHz

POWER80 Sets Output POWER to 8 dBm

If you require technical assistance, or service to your PSG unit, please contact:

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