

Pilot Generator 99045 / 99046

APPLICATION

Pilot generator 99045 and 99046 are used for adjustment of amplifiers in the cable network. The pilot generators supply a constant signal (a pilot tone). The pilot tone can be placed in the following frequency ranges:

- 99045: 70.00-469.95 MHz
- 99046: 470.00-863.95 MHz

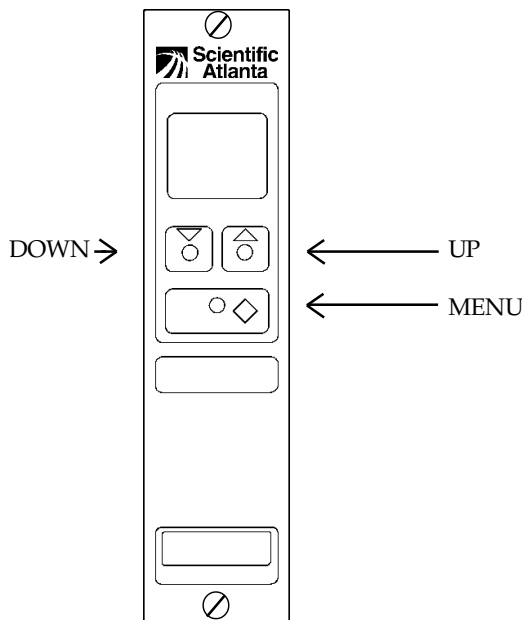


Fig. 1 Pilot generator front view

IMPORTANT! The pilot generator should not be electrically connected via the power rail with the FM modules 94130, 94131, 94134, 94135, 94139, 94140 and 94141 because the FM modules and TNCS are using the same connections. The FM modules use the connections to communicate with the master unit, and TNCS uses the connection for the data bus.

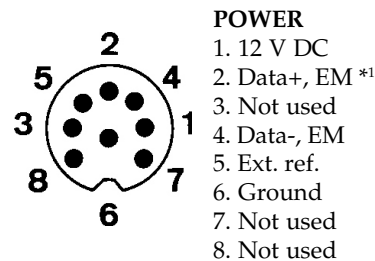


Fig. 2 Connections power plug.

*1 EM, Element Management

MONTAGE

If the pilot generators are connected to the DC supply voltage the software version number will be displayed for a couple of seconds.

A bar (RF Unlock) at the top of the display flashes until the pilot generator is locked and a bar at the bottom of the display then indicates whether the pilot generator applies internal or external reference oscillator.

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ID MENU

The module hardware and software can be identified via the module ID menu.

The MENU key opens and closes the menu and UP and DOWN are used for changing between the menu items as shown in fig 3.

The ID menu contains the following menu items:

1. Product number
2. Serial number (hardware)
3. Production code
4. Software number
5. Neuron ID

Product number, serial number and production code indicate the module hardware.

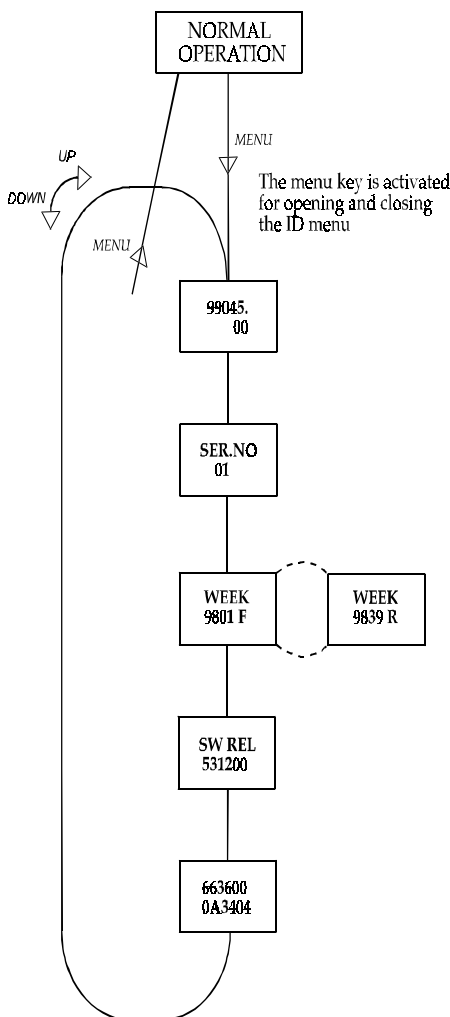


Fig. 3 ID Menu

If the module is upgraded or repaired an upgrade/repair code is entered. The code is displayed under the menu item for the production code.

The production code indicates year and week of production. The „F“ after year and week indicates the production code, and „R“ indicates an upgrade/repair.

The software number indicates the software version of the module. The neuron ID is a unique number, which makes it possible to distinguish between two identical modules (applied in connection with TNCS).

OPERATION

The pilot generator is operated/set by the three keys UP, DOWN and MENU, see fig. 1. The parameter name appears at the top of the display and the selected value/function appears at the bottom of the display.

Procedure for setting parameter:

1. To enable the programming of the pilot generator the keys UP and DOWN have to be pressed at the same time for a few seconds until the text “PROG MODE” appears in the display.
2. The pilot generator will now be in the menu item **FREQ** as illustrated in fig. 4.
3. If the parameter value has to be changed, activate the key MENU, and the parameter name will start flashing. *Settings can be made only as long as the parameter name is flashing.*
4. The setting itself is executed with UP and DOWN. Once the wanted value/function has been set, activate MENU, and the menu will be left.
5. Then continue to the next menu item with UP or DOWN, and repeat items 3 and 4.
6. When all settings have been completed, data are saved by activating the keys UP and DOWN at the same time for a few seconds until the text “STORE DATA” is displayed.

If the keys have not been activated for two minutes the values set will be saved and the pilot generator will leave “PROG MODE”.

Main menu

The menu structure is shown in fig. 4.

Setting of output frequency [FREQ]

Factory set: 250 MHz (99045)

Factory set: 650 MHz (99046)

Range: 70 to 469.95 MHz (99045)

Range: 470 to 863.95 MHz (99046)

Step: 50 kHz

The output frequency can be adjusted within the mentioned ranges.

Setting of output level [LEVEL]

Factory set: 113 dB μ V

Range: 105 to 115 dB μ V

Step: 64

The output level can be adjusted in 64 steps in the range 105 to 115 dB μ V.

A bar in the display indicates the level. The length of the bar indicates the size of the level in proportion to the input level.

Lowest level is an open box in the left-hand side of the display and maximum 6 full boxes in the display.

Select external reference [EX REF]

Factory set: 2.5 MHz

Range: 0.5 to 10.0 MHz

Step: 0.1 MHz

The frequency setting is only of importance if the pilot generator has been connected to an external reference oscillator. Is the pilot generator connected to an external reference the pilot generator will automatically choose the reference oscillator when the reference frequency has been adjusted. Is the reference removed the pilot generator will automatically switch to the internal oscillator. It will take some time before the display is updated.

PROGRAMMING OF 99045/46

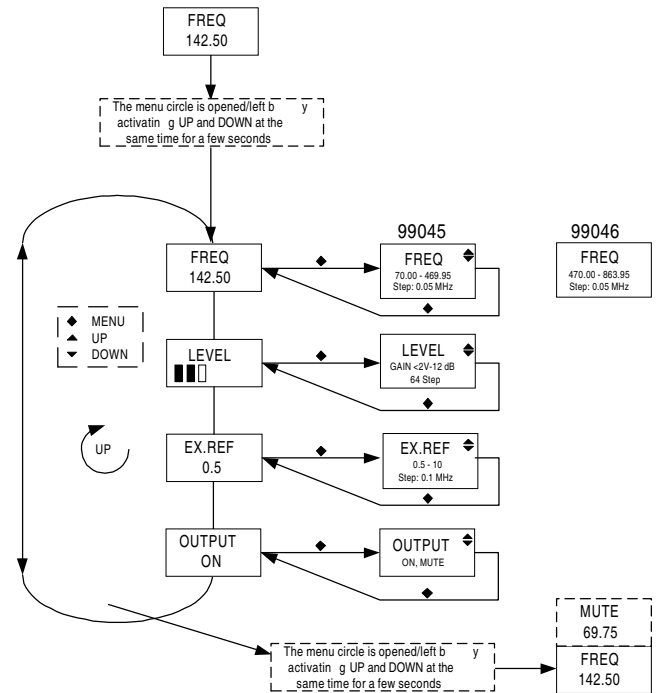


Fig. 4 Menu structure

Choosing output signal [OUTPUT]

Factory setting: ON

Settings: ON, MUTE

The signal at the output can be removed by choosing Mute. In Mute position the frequency is automatically placed at 69.75 MHz for 99045 and 865.00 MHz for 99046. During operation the set frequency and the mute frequency are shown. However, the must frequency may be placed differently if the system has been equipped with TNCS.

MAIN SPECIFICATIONS

Output frequencies

Frequency step	50 kHz
99045	70.00-469.95 MHz
99046	470.00-863.95 MHz

Output level

Level step	0-63
Level	105-115 dB μ V

Reference oscillator

Range	0.5-10 MHz
Step	100 kHz

General

Temperature	-10 - +55°C
Power supply	+12 V DC/4 W

Connections

RF output	F-connector
Power input	8-pin DIN connector

Dimensions

Height	3 U
Width	6 HP
Depth	195 mm