

Frequency Synthesizer F-SCAN2 SATELLITE

SW Version S6 6.0

INSTRUCTION MANUAL

This symbol identifies the equipment as type B



ATTENTION: Consult accompanying documents



WARNING: Patients with **PACE MAKERS** or **PACE MAKER ELECTRODES** should consult a cardiologist prior to use of the device. The device could perhaps interfere with – or even damage – the **PACE MAKER**.
Never apply an electrode to an open wound.

NOTE: The device, all accessories, connectors and cables must be visually inspected for damages frequently. A complete functional test must be performed and documented by a professional once a year (see last page).

NOTE: The device generates frequencies. The use of cables, adapters or accessories other than the ones supplied or recommended by the manufacturer could destroy the device or cause burns or injuries to the user.

NOTE: The devices integrated functions allow to perform biological tests and treatments described by the author Dr. H. R. CLARK. They are also suitable for applications described by R. R. RIFE.
The device is used under the sole responsibility of its operator WITHOUT LIABILITY TO THE MANUFACTURER.

INTRODUCTION

The F-SCAN² SATELLITE – called SATELLITE for short - has been developed for stationary and „out of office“ use under the supervision of medical professionals and healing practitioners. The device can be „programmed“ for use by an out patient, or a trained practice employee, with the transfer of up to 10 frequency applications from an F-SCAN², F-SCAN TOUCH or from the special software delivered with the device.

The patient cannot alter the settings of the SATELLITE.

The therapist prepares the device and assigns the required application parts. The patient receives the hardware and instructions for its use. A brief Operating Instruction is printed on the lid of the carrying case of the SATELLITE..

The application cable – with appropriate electrodes attached – must be connected to the OUTPUT port. The program-switch (with positions 1 to 10) has to be set to the position of the application wanted. The unit switches ON, when the button POWER is pressed and held down until a clicking sound is heard after which the button must be released. The SATELLITE issues 20 clicking sounds before the application starts. This takes about 15 seconds and the electrodes must be positioned in time.

The green LED above the ON / OFF switch lights up when the unit is switched ON and flashes when a frequency is delivered. The green LED above the OUTPUT port lights up when a frequency is delivered. The unit signals the switch from one frequency to the next and switches OFF automatically at the end of the application.

If a second application should follow the first right away, the program-switch must be reset and the unit switched ON again.

Product information

The SATELLITE is powered by 4 AA batteries shipped with the unit from the factory. They support about 3 hours of continued operation. A set of rechargeable batteries, with an intelligent quick charger, is optional. They support about 7 hours of continued operation with a full charge.

The batteries must be inserted WITH THE RIGHT POLARITY. IF THE POLARITY IS REVERSED, THE SATELLITE OR THE BATTERIES, OR BOTH, CAN BE DAMAGED OR DESTROYED.

The SATELLITE generates the same signals as the „host unit“ and delivers them to the multi-signal OUTPUT port.

The device does not provide any external means of adjustment to the programmed settings for safety reasons.

How to switch the SATELLITE ON?

The unit switches ON, when the button POWER is pressed and held down until a clicking sound is heard after which the button must be released.

How to switch the SATELLITE OFF?

The unit switches OFF, when the button POWER is pressed and held down until a clicking sound is heard after which the button must be released.

The unit switches OFF too, when the program-switch is reset to a different position while the unit is ON.

The unit cannot be switched OFF during the sequence of the 20 clicking sounds.

The unit switches OFF after 2 minutes if the program-switch is set to a position without an application.

The unit switches OFF automatically after completing an application.

Ground rules for the transfer of an application to the SATELLITE

The F-SCAN device serving as a host unit must be equipped with a 3-pin RS232 communications interface. The data set of frequencies with their assigned application times (in full minutes) can be transferred to the SATELLITE. The software of the SATELLITE assigns square wave signals (DC-OFFSET positive), with an amplitude of 10Vpp, to frequency values below 65000Hz. Frequency values above 65000Hz are delivered with sine wave signals (DC-OFFSET positive) with an amplitude of 10Vpp.

The PC software transfers the data set of frequencies with their assigned application times (in full minutes) to the SATELLITE. Amplitudes used are the ones preset by the software of the SATELLITE.

Data transfer from a PC or Notebook to the SATELLITE

The SATELLITE comes with a “3 pin RS232 socket” and a cable (FTB206) that connects to this socket and to a “9 pin D-SUB socket” of the PC. A cable with a special USB plug on the PC side is optional (FTB222).

- Define the application with the PC software.
- Connect SATELLITE and PC, but leave the SATELLITE OFF.
- Set the program-switch of the SATELLITE (position 1 to 10).
- Start the PC software. A window *Connect* opens. Switch the SATELLITE ON (Press the button POWER and hold it down until a clicking sound is heard after which the button must be released). The software identifies the Satellite and the window *Connect* closes.

If the identification fails is either the connection between the two units faulty, or the COM port assignment incorrect. A correct COM port can be assigned manually or found after a click on the button *AUTO*.

- Next click on the TAB *TRANSFER* and on the button *Transfer*. The data set is moved to the SATELLITE and the task completed when the button switches back to the active state.
- Click the button *Satellite Data* if you want to check what data has been transferred. The software will read the SATELLITE position and display the data in a separate window.
- Switch the SATELLITE OFF or set the program-switch to a different position for another transfer.

Data transfer from an F-SCAN² / F-SCAN TOUCH to the SATELLITE

The host unit must be equipped with a “3 pin RS232 socket” and the optional cable (FTB221) used to connect host and SATELLITE. The cable has “3 pin RS232 plugs” on both ends. The host unit must be switched ON and the application to be transferred stored in its operating memory.

- Set the host unit back to its START window. DO NOT SWITCH IT OFF OR YOU LOOSE THE DATA TO BE TRANSFERRED.
- Set the program-switch of the SATELLITE (position 1 to 10).
- Switch the SATELLITE ON (Press the button POWER and hold it down until a clicking sound is heard after which the button must be released). The SATELLITE must not issue additional clicking sounds. If it does, the cable connection to the host unit must be checked and/or verified that the START window is set on the host unit.
- - Next touch in succession SETUP, NEXT, TRANSFER TO SAT on the F-SCAN²
 - Or touch in succession SETTINGS, SETTINGS 1, NEXT and TRANSFER on the F-SCAN TOUCH
- The SATELLITE signals audibly that the transfer has been completed. If the F-SCAN TOUCH is the host, a touch on the button READ SATELLITE displays the content of the program position of the SATELLITE for verification.
- Switch the SATELLITE OFF or set the program-switch to a different position for another transfer.

Stand alone use of the SATELLITE

- Connect the application cable with its plugs marked red and blue to the electrodes or other application parts assigned by the therapist.
- Connect the application cable with its plug marked black to the socket OUTPUT of the SATELLITE.
- Set the program-switch (SELECT) of the SATELLITE to the position (between 1 and 10) of the application to run.
- Switch the SATELLITE ON (Press the button POWER and hold it down until a clicking sound is heard after which the button must be released).
- The device issues 20 clicking sounds (takes about 15 seconds) and starts the application without a pause. The electrodes or other application parts must be positioned during that time. The green LED above the button POWER is lit permanently while the clicking sounds are issued and flashes when a frequency is active.

The device signals acoustically the changeover from one frequency to the next and switches OFF at the end of the application. The green LED above the OUTPUT is lit when a frequency is active.

Trouble shooting

When the green LED above the OUTPUT does not light after the 20 clicking sounds one of the following could be the cause:

- No application stored in the selected program position.
- The battery power is exhausted
- The application parts connected draw more current than usual (Magnetic coil adapter, UV-light adapter, Laser adapter) .
- The handheld electrodes touch and cause a short that drains the batteries.

Elements for operation

Top view

Green LED is lit when the device is ON and flashes when the device delivers an application.

ON / OFF button
(POWER)



Bottom view



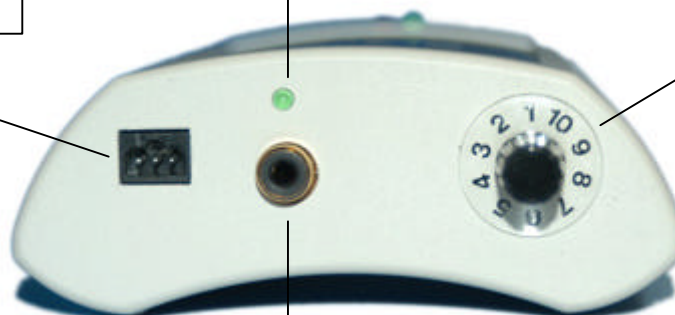
Battery compartment
(without lid)

Right side view

RS232-socket
for data cable to
F-SCAN2 or
F-SCAN TOUCH or
PC / Notebook

Green LED for visual
confirmation of signals
delivered from the OUTPUT
port.

Program switch
SELECTION of 1 of 10
program positions



Multisignal-OUTPUT port
All signal forms are delivered from
this port.

Technical data

Housing	Hard shell plastic
Dimensions	150mm x 100mm x 50mm
Min. frequency delivered	0.1Hz
Frequency stability	20 ppm
Memory	10 applications of up to 50 frequencies each, transferred from a host unit F-SCAN ² , F-SCAN TOUCH or from the software shipped with the device.
Power supply	Requires 4 AA batteries, or 4 rechargeable batteries (optional)
Multi signal OUTPUT	SINE WAVE, positive DC-OFFSET, amplitude 10Vpp SQUARE WAVE, positive DC-OFFSET, amplitude 10Vpp
Output range	0.1Hz to 15,000,000Hz
Connectors	Multi signal OUTPUT RS232 (for serial communication with F-SCAN ² , F-SCAN TOUCH or PC / Notebook)
Classification:	Medical device Class 1, Type B, EN60601, Regulation 93/42EEC

Changes to improve or simplify the product will be made without prior notice

Record of periodical inspection and test of F-SCAN² SATELLITE

Serial number: _____ Delivery Date: _____

Customer: _____

List of accessories: _____

Date: _____

Name of Professional: _____

Visual inspection

CONNECTORS & SWITCHES	<input type="radio"/> OK	<input type="radio"/> NOT OK
ACCESSORIES & CABLES	<input type="radio"/> OK	<input type="radio"/> NOT OK

Functional Tests

Verified with oscilloscope (with digital readout) - where applicable

☐ Test data set transferred from „host unit“.

☐ SATELLITE „ON“

☐ Oscilloscope connected to „OUTPUT“, Sine signal delivered automatically
Vss _____ f _____ ☐ OK ☐ NOT OK

☐ Oscilloscope connected to „OUTPUT“, Square wave signal delivered automatically
Vss _____ f _____ ☐ OK ☐ NOT OK

The unit is : ☐ OK ☐ NOT OK Signature: _____