



Compact Numeric Keypad MP3393 Kit

Contents and Instructions for Use
Micropace EPS320
Cardiac Stimulators Family



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Contents of MP3393 Kit

- 1 x MP3474 Compact Numeric Keypad
- 1 x MP3406 Instructions for Use (this document)

Features and Specifications

- 21 multi-function keys enabling full stimulator control when used in combination with a Micropace Touch Screen (MP3114).
- High quality mechanical switches with ~20 million keystroke lifetime.
- Weight: 220g (0.48 lb)
- Dimensions: 13 x 9 x 3.4cm (5.20" x 3.54" x 1.34)
- Cable length: 1.75 m
- UL, CE, FCC, and RoHs approvals.

Introduction

The Compact Numeric Keypad, MP3474, is intended for use as an alternative, more compact input device to the standard keyboard MP3016 with Micropace Diagnostic Cardiac Stimulator family members, EPS320, StimLab™ and StimCor™.

MP3474 is to be connected to the PS2 keyboard input at the rear of the Micropace Lex Bona Computer, MP3093, or keyboard connection cables on StimCor and StimLab models.

The user may then use the touch screen or the Keypad arrow keys (NumLock OFF) to select pacing protocols, stimulation channels and required extra stimuli, and may use the Keypad number keys (NumLock ON) for rapid adjustment or entry of numeric values. Starting and stopping stimulation / pacing can be done with the dedicated PACE key.

This Numeric Keypad is intended for use as a permanent replacement to the Standard Keyboard. It is designed, however, to replace the keyboard without any software configuration required. Therefore, the Numeric Keypad and the Standard Keyboard can be swapped as necessary depending on your needs.

Note that the three setup functions of naming protocols, pace sites and user setups require use of the alpha keys on the Standard Keyboard.

Compatibility

1. Numeric Keypad MP3474 is compatible with EPS320 Stimulator Software 4.0.
2. Numeric Keypad MP3474 may be used with EPS320BT, StimLab™ (Local Touch Screen) and StimCor™ products.
3. The Keypad may be connected using up to 10 metre extension PS/2 cable, such as is contained in MP3403 (StimLab local 10m Cable bundle) and MP3169-10 StimCor Local 10m extension cable bundle.

Note: StimLab™ Remote (trunk) Cable, MP3164-17 does not have a provision for connecting a keyboard, including this keypad. The StimLab has an on-screen keypad.

Cautions

1. In order to prevent unreliable and unpredictable key operation:
 - a) Use only with Micropace EPS320 software 3.21 or 4.0.
 - b) Use only in combination with Touch Screen (MP3114) that is enabled in software.
 - c) Do not use concurrently with keyboard (either with 'Y' splitter or by simultaneous use of PS2 and USB ports).
 - d) Do not exceed maximum PS2 cable extension length 10m. Longer extensions require special extender equipment.

- e) Do not use with a PS2 to USB adaptor, as unexpected actions, including inadvertent toggling of pacing, may result.
- f) Do not use with computer other than the Bona Light PC (MP3093).
- g) Do not remove keypad labels or replace with custom labeling. If labels detach, discontinue use and obtain replacement label(s).
- h) In order to comply with FCC regulations regarding electromagnetic interference, only use cables supplied by Micropace.

Installation of MP3474 Numeric Keypad

1. Verify that the system has software 3.21 or higher before installation. This can be verified by:
 - a. Boot the system as normal using the Standard Keyboard. Clear any informational messages by pressing ESC until the main stimulator screen is displayed.
 - b. Press “H” on the keyboard or the “Help” menu on the upper right of the Touch Screen.
 - c. The context help menu will be displayed. Press ESC once to exit this and reach the green coloured “Top Help Menu” screen shown
 - d. Press “a” or touch “About the EPS320” on the Touch Screen.

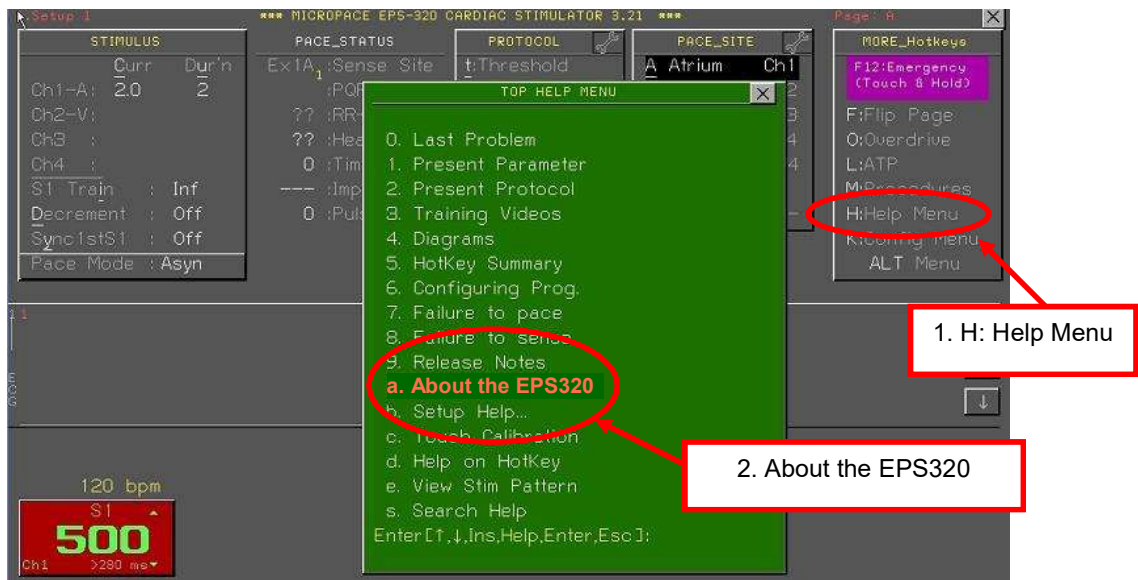


Figure 1 Determining Software Version – Help Menu

- e. Verify that the resulting message specifies “Software: 3.21.XXXX”, where XXXXcan be any characters, as show below:



Figure 2 Determining Software Version – About EPS320

Compact Numeric Keypad - MP3393

2. Turn off the Bona PC computer MP3093 before connecting this Keypad.
3. Connect the Keypad's PS/2 connector where your keyboard is plugged in; it may be into the purple Keyboard PS/2 socket on the rear of the Bona Light Computer, or into the extension cable PS/2 in-line socket as shown.



Figure 3: PS/2 port on Bona PC

OR



Figure 4: PS/2 extension cable

4. Note: For initial installation of EPS320 Family of Cardiac Stimulators, you will need to connect the full sized keyboard supplied with the stimulator.

Using the Numeric Keypad

The MP3474 Numeric Keypad is a great way to reduce your desktop footprint and streamline the usage of Micropace Cardiac Stimulator. The keypad is designed to behave almost identically to the Micropace Standard Keyboard and has the following features:

1. Dedicated PACE key for easy, intuitive usage. "Press and hold" burst pacing is enabled just as in the Standard Keyboard (which uses the Space Bar to PACE).
2. Dedicated ENTER key for numerical entry. Note that Enter is not needed since numerical values will be automatically accepted into most fields after a brief pause, but the Enter key is provided for convenience and those that desire very rapid numerical entry.
3. Dedicated HOME (Esc) key for exiting menus and returning to the home screen quickly and easily.
4. NumLock allows you to select numerical entry mode or navigation with the arrows.
5. - / + keys are reversed, so increment '+' key is above the decrement '-' key. Always keep the installed Micropace key labels on the keypad to avoid confusion.

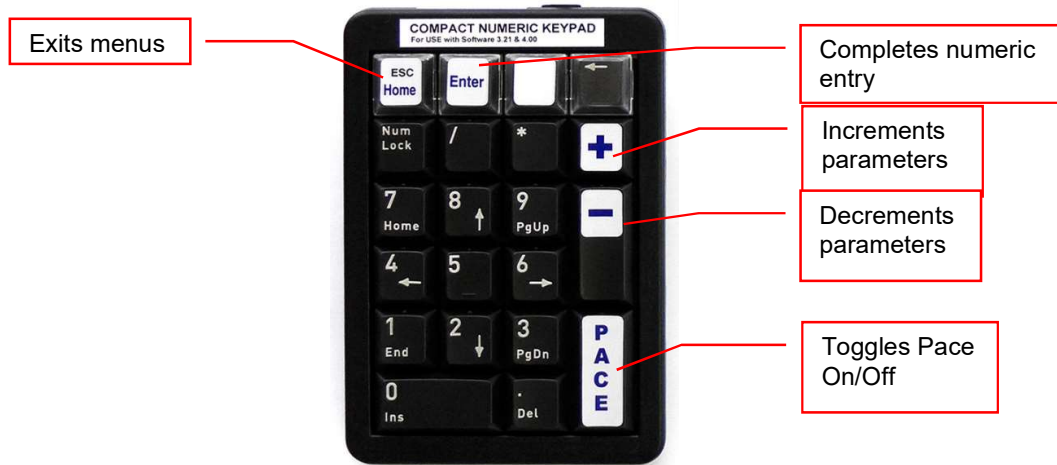


Figure 5: The Keypad Labels

Summary of Key function description

Key:	Name:	Operation:
1-9	Digit entry for S1-S7 and other parameters.	
← / →	Move focus	With NumLock off, move focused (red) zone left/right.
↑ / ↓	Move focus	With NumLock off, move focused (red) zone up/down.
+ / -	Change value.	Increment / Decrement value of focused parameter.
PACE	Pace	Brief press toggles pacing On / Off; prolonged (>300ms) press paces only while pressed.
ESC	Escape.....	Exits from menus and returns focus to Protocol-specific screen Home position.
BSP ←	Undo	Step back in decrementation to previous value – in SNRT, Nodal_ERP, Multi_Sx.

Table 1: Key function description

Re-Installation of Standard Keyboard

1. Disconnect the Numeric Keypad PS/2 connector and connect the Standard Keyboard.

Troubleshooting

Symptom	Potential Cause	Remedy
Enter key toggles pacing On/Off	'Config Service Var 20 Enable Keypad Input' has been incorrectly set to '1'	Config Service Var 20 "En Keypad Input" should not be used. Set it to '0' for both Keypad or Keyboard input. To correct, use the Standard Keyboard and press "k" to enter the User Config Menu (password 'henry'). Then press PgDn for the Service menu ('service'). CSV20 is at the lower left. Set it to '0' and exit.
Engaging touchscreen buttons and entering numbers occasionally toggles pacing On/Off	You are using the Numeric Keypad with Software 3.21 and have Service Configuration Variable 20 Enable Keypad incorrectly set to '1'	Set CSV20 to '0' or contact your Distributor.
Keypad does not work	Disconnection at extension cable or at PC	Check and reconnect.
Keypad keys behave unexpectedly – arrows instead of digits or vice versa	NumLock is disengaged or engaged.	Keypad behaves as a standard PC input device. NumLock On: Numeric input enabled. NumLock Off: Arrow input enabled.
Numeric Keypad keys behave unexpectedly – wrong digits, NumLock unresponsive, etc.	You are using the Numeric Keypad with Software 3.21.04 or previous	Upgrade Software to Ver 3.21. Contact your Distributor.
	You may be using an extension cable longer than 10m	Ensure you use extension cable less than 10m long.

Table 2 Troubleshooting

Maintenance

Inspect keypad once a month and do not use if it appears damaged. Clean cable with soft cloth lightly moistened with ethyl alcohol or similar non-aggressive solvent. Do not use water, strong solvents or abrasive cleaning agents.





MicroPace Numeric Keypad Kit #200MP3393 Installation Checklist

(Upon completion of the upgrade forward this completed document to your company's records department for retention or fax to MicropaceEP on 714 258 7280)

Serial Number of Micropace StimCor, StimLab, or EPS320: _____

Serial Number of Micropace MP3474 Keypad (located on rear): _____

Facility Name: _____ Address: _____

Installed by: _____ Date: _____

Verify Compatibility

_____ Boot the system using a Standard Keyboard and clear any info messages by pressing ESC.

_____ Access Help menu and select "About the EPS320"

_____ Software is verified as **3.21** or above. Refer to IFU above for help.

Install the MP3474 Compact Numeric Keypad

_____ Turn off the system and connect the MP3474 Numeric Keypad.

Verify Installation & Training

_____ Verify correct installation by pressing "PACE" on the keypad. Pacing should commence.

NOTE: If pacing does not commence, see "Troubleshooting" in this IFU.

_____ Verify that the local Touch Screen (MP3114) is enabled and accepting touch input correctly.

_____ No Y-Splitter or PS/2 to USB adapter is installed and the Keypad is connected only to a Micropace Bona PC MP3093.

_____ Keypad labels are attached, visible, and correct (refer to product picture in IFU).

_____ No extension cable(s) longer than 10m is connected to the Numeric Keypad.

_____ User(s) has been provided with the Instructions for Use.

Signed: _____ Date: _____