# TouchMe

## User's manual

TouchMe User's manual

Version 1.0

July 2002

[ TIPRO ]

keyboards focusing on your future needs.

# 1 Introduction

## 1.1 Description

TouchMe is a fully modular family of programmable keyboards, ID-modules, card readers, LCD screens, pointing devices and other modules.
A composition of up to 14 TouchMe modules and one Controller, mechanically and electrically connected, is referred to as a TouchMe configuration.
TouchMe configurations can be divided into three categories;

- one built around a Touch module,
- another one built around a keyboard module and
- one based on the Chameleon.

The first one has the Controller built into the Touch module, the second one has the Controller (Master module) in the keyboard, the last option has the controller in the Chameleon.

## 1.2 History

TouchMe is the successor of TIPRO's successful MID generation.
MID started in 1997 as a revolutionary idea for modular and programmable keyboards.
A master module as base, making a combination of slave devices possible.
In 2002 this line is continued and expanded with TouchMe.
The master is now a Controller and slaves are called modules, the principle stays.
Totally new is the Touch module, a low profile design LCD touch screen, which can act as a base for a configuration.
Also new is the Chameleon, an innovative keyboard with colored LCD key switches.
The Touch family is growing, as constantly new modules and features are under development.

## 1.3 Features

A variety of modules can be combined with TouchMe.
Keyboards ranging from 32 to 128 keys with straight-xy matrix or QWERTY layout can be side by side with magnetic card readers, identification modules (keylock or iButton®), barcode readers and pointing devices.
The Touch screen and Chameleon can be used stand-alone or can act as a base for a configuration.
All keys are fully programmable with ChangeMe software.
Keys can contain

- a sequence of codes or a string like “SOLUTION” or
- special keys like CTRL+F11
- functions like Beep and Delay
- a combination of all

This makes TouchMe excellent suited for

- POS, where every key means an item
- special office applications, where every programmable key replaces a combination of keys or mouse actions (e.g. CAD, editors, bookkeeping programs)
- dedicated applications where very few commands are needed or where low introduction time is essential (e.g. telephone control system, label printers, industrial machines)

Because of TouchMe’s elegant design it is not needed to hide the keyboard and because of the touch screen’s low profile there is less barrier between the client and the salesperson or receptionist.

## 1.4 For whom is this manual

This manual is intended for the novice TouchMe user. It contains the basic instructions to connect and program the modules.
More experienced users should also look at the Advanced user’s manual and the help files.
There is a section at the end of this document for MID products.
For extensive MID information see the MID user’s manual.

# 2 Installation of TouchMe hardware

The TouchMe Controller is connected to the PC with a cable that has an 8-pins mini DIN on the controller side and splits in PS/2 and RS232(serial) at the PC side.
You can use PS/2, RS232 or both, depending on your need.
PS/2 is the easiest and fastest connection for communication towards the PC.
RS232 is designed bi-directional and is faster in communication towards the Controller than PS/2.

Note: When connecting to RS232 keep also the PS/2 connected. This is needed for the power supply to the TouchMe configuration. If you don't have a PS/2 port, you will need a special cable and external power supply

There is a PS/2 pass-through port to connect a standard IBM PS/2 compatible keyboard or a barcode scanner with PS/2 output.
A RS232 pass-through port, to connect a barcode scanner with RS232 output, is optional.
External TouchMe modules, like a front keyboard or a customer's PINpad unit, are connected to the 5 pins mini DIN external Tipro-bus connector.

The LCD screen of the Touch module and the LCD keys of the Chameleon need external power supply.

BE CAREFUL: The Touch module uses 12Volt and the Chameleon 5Volt!

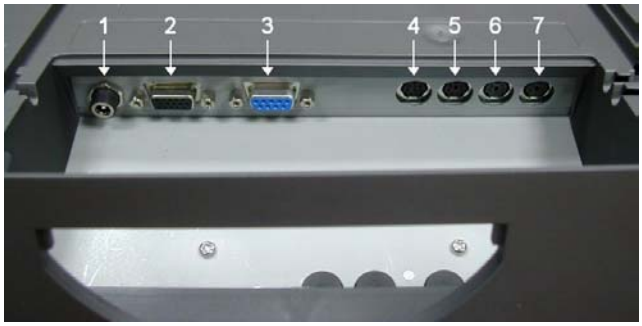
## 2.1 Connect a Touch based configuration

### 2.1.1 Connections

There are 7 sockets:

1. Power supply (12V)
2. VGA display
3. Touch screen serial
4. PC connection
5. Connector for secondary keyboard

6&7. Connectors for external TouchMe modules




### 2.1.2 Installation

- Make sure your computer is turned off.
- Place the Touch module up side down Be careful not to damage the screen!
- Open the cover at the rear side.
- The cables to the computer go first through the hole in the cover, then to the connectors.
- Start with the VGA cable. Insert it and fasten the 2 screws.
- Next: do the same with the RS232 connector.
- Connect the PS/2 cable.
- Now you can connect a standard keyboard.

- If you have any external Touch modules, like a front keyboard, connect the 5 pins connector to one of the 2 rightmost connectors and guide the cables through the canals to their intended direction. (front, back or side)
- Connect the 12 V adapter.
- Gently arrange the cables so that the cover can be closed.
- Connect the cables to your computer.
  - VGA to your graphic card.
  - The serial cable from the Touch screen to on of your COM ports. (remember which one)
  - Connect the TouchMe to the PS/2 keyboard connector and/or COM port.
- Insert the main power supply into the power outlet and turn on your computer.

## 2.1.3 Display adjustment

Position of the display adjustment keys :



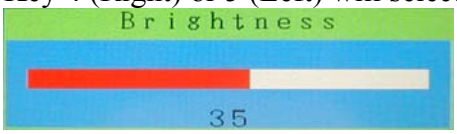
**Description of the keys** :

1. Menu-Up
2. Menu-Down
3. Standby
4. Right
5. Left

note: be aware, left and right are swapped!

Press key 1 (Menu-Up) or 2 (Menu-Down) to enter the display adjustment menu.


Use keys 1 and 2 to travel through the list of menu items. Key 4 (Right) or 5 (Left) will select the menu item.



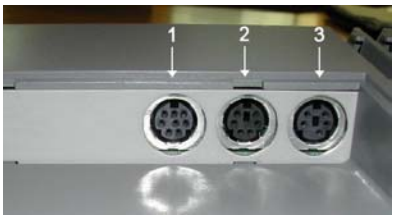

Next, use keys 4 and 5 to adjust the value. Key 1 or 2 will bring you back to the menu. After making the changes, the new settings will only be saved if you choose "`Save Exit`" from the main menu. "`Cancel Exit`" will discard any changes.

**important**: Key 3 puts the display in standby mode. If you accidentally press the key during display adjustment, just press key 3 again and wait a few seconds.

## *2.2 Connect a Keyboard based configuration*

### 2.2.1 Connections

1. Connection to PC
2. Connector for secondary keyboard
3. External TouchMe module connector




### 2.2.2 Installation

- Make sure the computer is turned off.
- Connect the PC cable.
- Connect a standard keyboard to the pass-through port (2).
- Connect an external Tipro module, if present.

- Connect the PC-Cable to the computer (PS/2 and/or RS232).

## *2.3 Connect a Chameleon based configuration*

### 2.3.1 Connections

The Controller in Chameleon has only one cable, which ends in three connectors;

1. Power 5V
2. PS/2
3. RS232 (serial)

### 2.3.2 Installation

- Check that the computer is turned off.
- Make the connection to the computer (PS/2 and/or RS232).
- Connect the 5V power supply.

# 3 Installation of TouchMe software

## 3.1 General

There are three types of modules: Display, touch screen and programmable modules.

- The display modules don't need any software to be installed.
- The touch screen needs software for specific features like calibration.
- Programmable modules need ChangeMe to be configured. They don't need any software or special drivers once they are programmed. (An exception is when MidAPI is used by an application)

Insert the Tipro CD into the CD drive. A startup screen will appear. (If there is no startup screen, go to the CD drive in explorer and double-click "install")
Click on "Install ChangeMe (MIDWIN4)".
Follow the on-screen directions.

Standard Installed software

- ChangeMe (MIDWIN4)
  ChangeMe is Tipro's keyboard configuration utility, previously known as MIDWIN.
  Use ChangeMe to program your keyboards, card readers, key locks etc.

- LabelMe
  LabelMe is a program to print labels. These labels can be placed under transparent keycaps on the keyboard.
- MIDAPI
  MIDAPI is the library of functions that can be used by other software to directly access the keyboard.
  MIDAPI installed together with ChangeMe.

You can also choose to install just one or two of the components.
On a computer where you don't program the keyboard and don't print labels, ChangeMe and LabelMe are not needed.
Additionally, if your software doesn't use MIDAPI, you don't need to install anything! Just plug the -programmed- Keyboard to the computer and it works.

## 3.2 Touch screen

If you have a Touch module based configuration with a touch screen (TM-TVR) you also need to install the drivers for the touch screen.
Insert the CD with touch screen drivers into the CD drive, a startup screen will appear.
Choose "Install drivers for this computer", "Install serial driver", then select the COM port to which the Touch module is connected.
It is important to choose the right COM port and to calibrate the touch screen.
After installation the touch screen can be calibrated by going to
**Start > Settings > Control panel > Touch screen**.

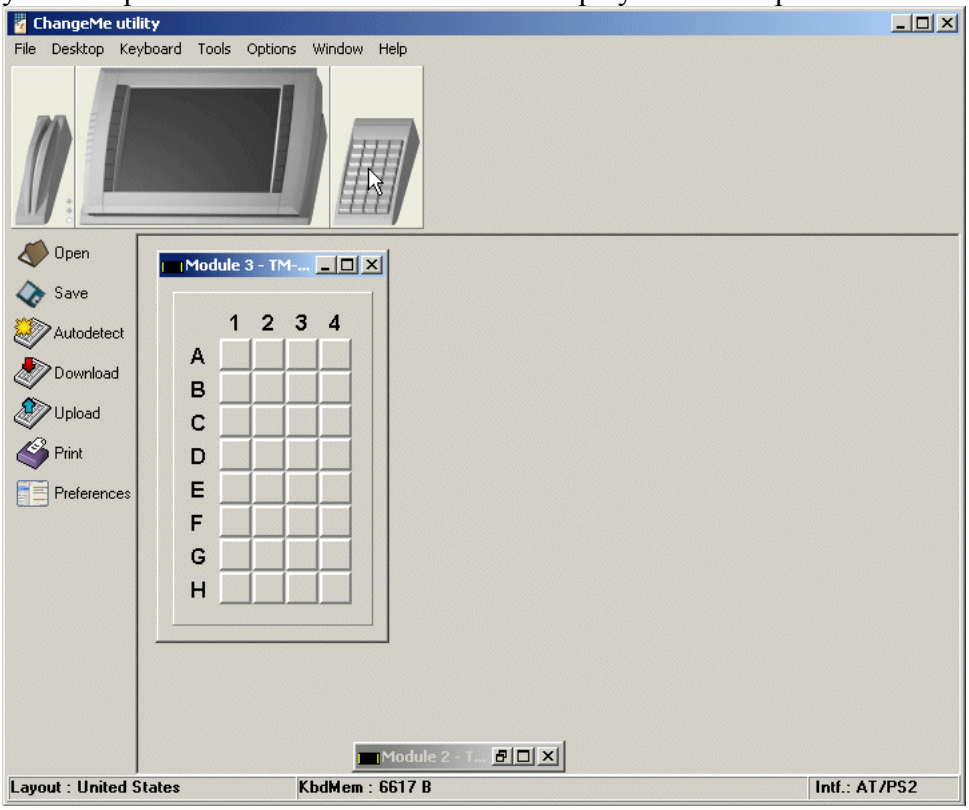
# 4 Using ChangeMe – programming the modules

ChangeMe is the configuration tool for all TouchMe (and MID) modules.

## *4.1 General*

### 4.1.1 Autodetect

When you start the program, autodetect will find the TouchMe configuration connected to your computer. The detected modules are displayed at the top of the window.




Alternatively you can manually define your configuration by adding or deleting modules. Go to Menu: **Desktop > Add module**.
Desktops can be saved and (re-)opened.

### 4.1.2 Select a module

A module can be selected by clicking it with the mouse. Depending on the module, different windows can open. Programming of the different modules will be discussed below.

### 4.1.3 Save a configuration

Save a configuration so you can use it more than once. The information is stored in a .lay file, which can be opened again.

### 4.1.4 Download

After you are finished defining your TouchMe, download the configuration to the Controllers memory. Once the configuration is downloaded the keyboard can be used independently from ChangeMe.

### 4.1.5 Upload

Use **Upload** to get the definition from an already programmed configuration.

### 4.1.6 Preferences

In the **Preferences** you can set several visual options like the appearance of buttons and text and the presence of the key preview.
Key editor settings can be changed as well as keyboard settings and the frequency for update checks.

| note: these settings were in previous versions found under Keyboard > Settings and Editor > Options |
|---|

### 4.1.7 Print

Under the **Print** button is a link to the LabelMe editor. Labels defined with ChangeMe will be automatically imported into LabelMe. After import they can be edited and printed.

### 4.1.8 Testing

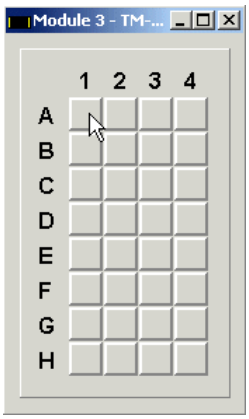
At Menu: **Tools** you can find 2 options for testing; one for AT-PS/2 and the other one, a terminal, for RS232.

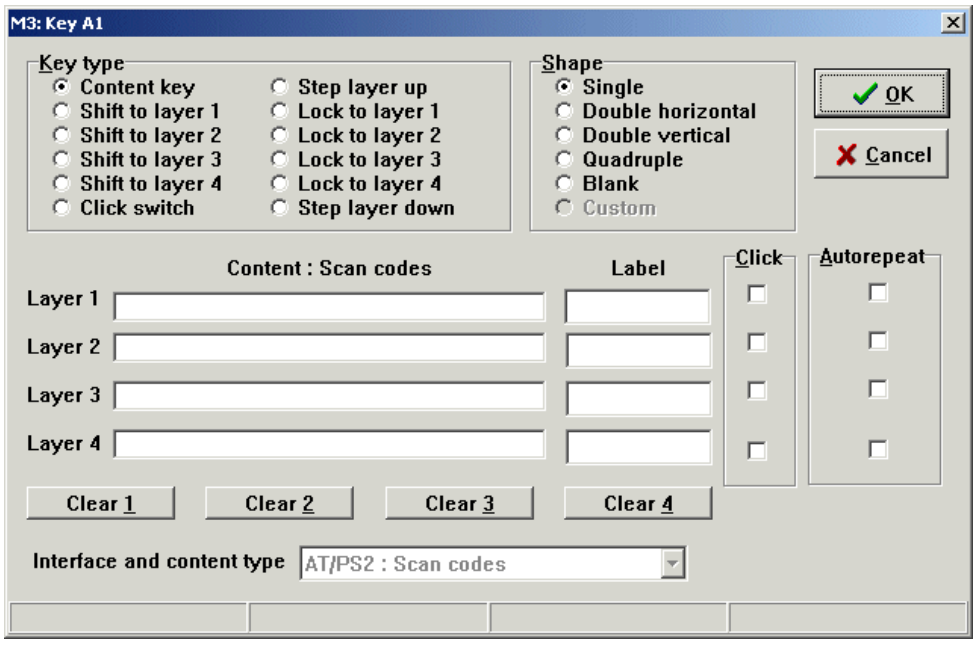
## *4.2 Programming a keyboard*

Each keyboard can have up to 4 layers of key definitions. This means that each key can have –but does not need to have- 4 different contents. (Think of the Shift-, Control-, Alt- and Alt gr. layers on a standard keyboard)

After clicking on the picture of the keyboard, a window opens with the keyboard layout.
Each key can now be programmed.

Clicking on a key will open the key definition window






There are 4 important sections on this page:

- Key type — A content key will send its content to the computer when pressed. The other options are to choose how to change the layer. Shift to layer works like shift and control and alt on a standard keyboard; you press them together with another key. Lock to layer and layer up or down work more like the Caps Lock key; they are not pressed together with another key.
- Shape — When double or quadruple keys are placed on the keyboard, they also have to be programmed. The key(s) that are combined with the current one have to be empty.
- Contents — This is where you program the contents of the key. You can define 4 layers. The contents can be one of the following:
  - a number
  - a string
  - a special key
  - a combination of one or more of the above


- Interface type — Can be AT/PS2 or RS232. This depends on how your TouchMe will be connected.

## 4.3 Programming the Chameleon

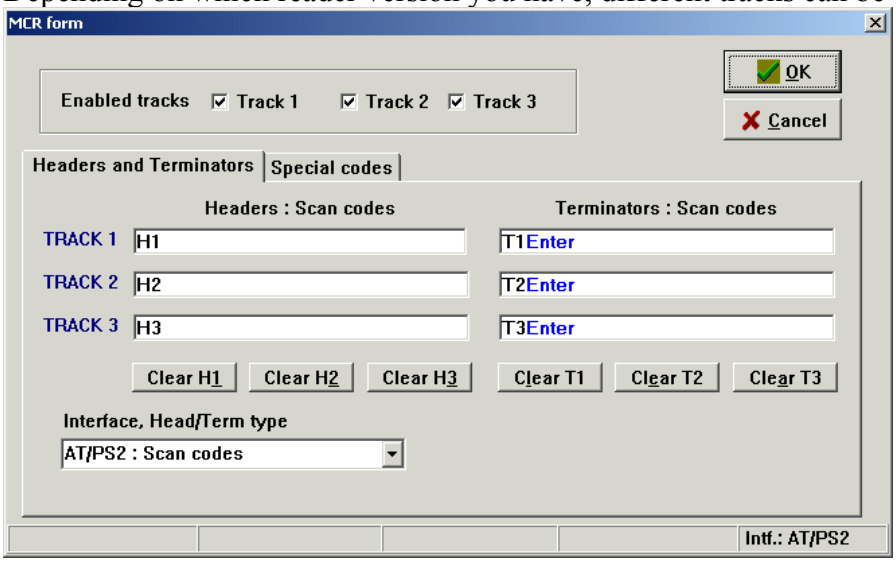
See the Chameleon's user's manual for detailed information about programming the Chameleon.

## 4.4 Programming a card reader

There are two types of card readers, magnetic card readers and barcode readers.

### 4.4.1 Magnetic card reader

After clicking on the icon for the card reader the following window appears. Depending on which reader version you have, different tracks can be disabled.




You can assign codes that will be sent before (header) and after (terminator) the content of the track is transmitted to the computer.

sent to the system for each track:

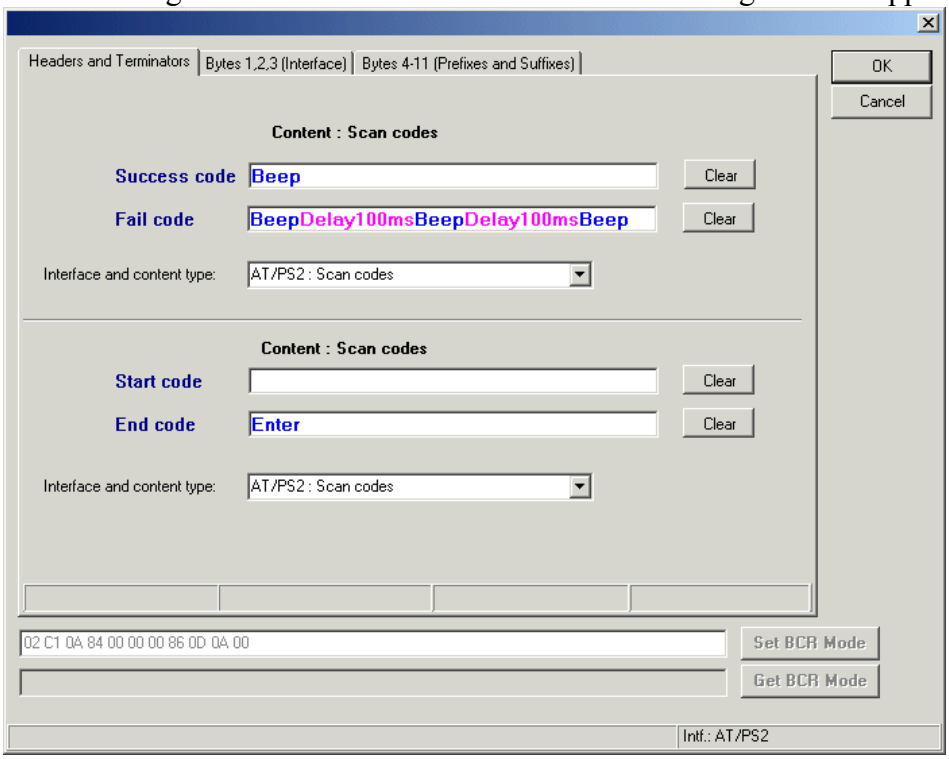
| header | track contents | terminator |
|---|---|---|

If needed one or more tracks can be disabled; information on this track will be ignored.
When the reader is connected to the computer's COM port, you need to change the interface type.

### 4.4.2 Barcode slot reader

This cofiguration applies to the barcode slot reader as well as the RS232 pass-trough port (e.g. barcode scanner input).

After clicking on the icon for the card reader the following window appears.




You can assign codes that will be sent before (Start code) and after (End code) the content of the track is transmitted to the computer.

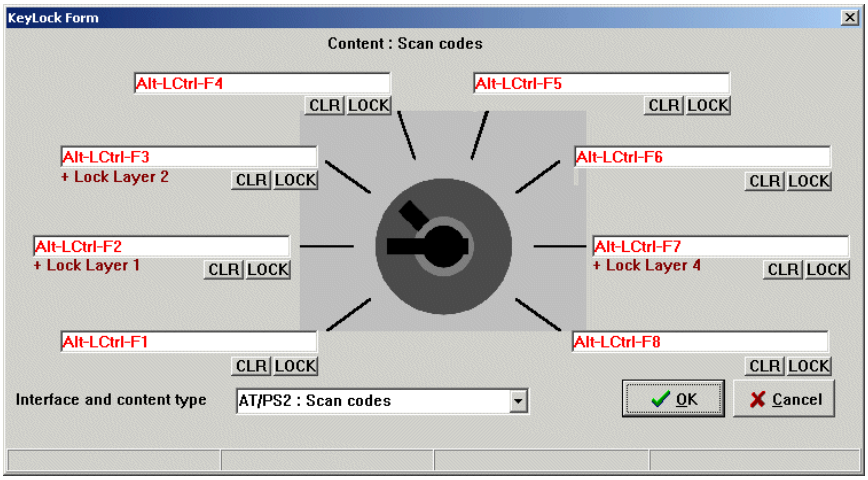
| | | | | |
|---|---|---|---|---|
| successful read : | success code | startcode | bar code data | end code |
| unsuccessful read : | fail code | | | |

Also the codes that will be sent when the card couldn't be read or was read successfully can be changed.

## 4.5 programming an ID module

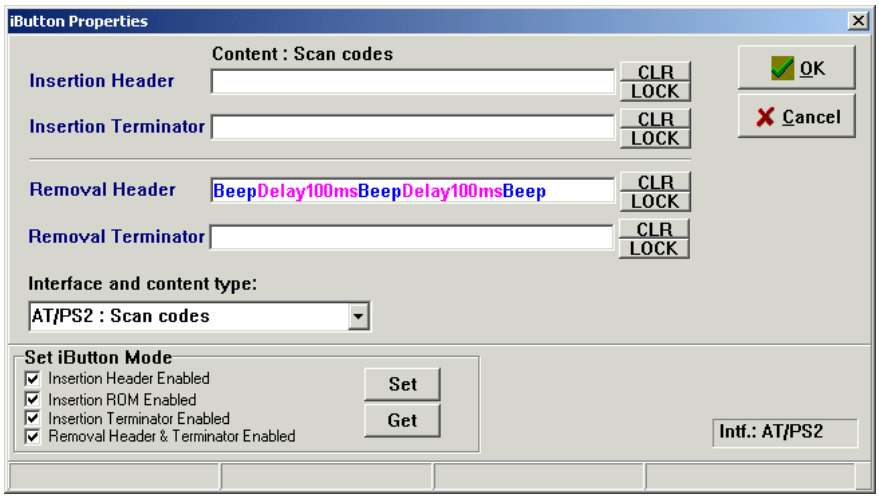
There are several types of ID modules. All have 2 programmable keys. These keys can be programmed like normal keys on a keyboard (see Programming a keyboard)

### 4.5.1 Keylock




For every key position content *and* a lock to layer can be defined. To clear the contents press CLR, to remove the lock to layer, press LOCK and set to content only.
Interface depends on the connection to the computer; PS2 or RS232.

### 4.5.2 iButton




The content of the iButton® is sent after the insertion header and is followed by the insertion terminator.

| | iButton inserted | | | iButton removed | |
|---|---|---|---|---|---|
| sent to the system: | insertion header | ID number | insertion terminator | removal header | removal terminator |

When the iButton is removed, just the removal header and terminator are sent. To send a code to the system and lock a layer, define the header to send the code and the terminator to lock to layer.

# 5 Other software utilities

## 5.1 LabelMe

LabelMe is the label printing utility for TouchMe. It can be used stand-alone or together with ChangeMe.
Labels defined with ChangeMe can be imported into LabelMe or can be inserted manually.
Labels can be edited by changing font, size, color or text direction. Also bitmaps can be added.
Labels can be printed on precut paper custom sized for TouchMe transparent keycaps

More information can be found in the LabelMe user's manual and the program's help file.

## 5.2 API

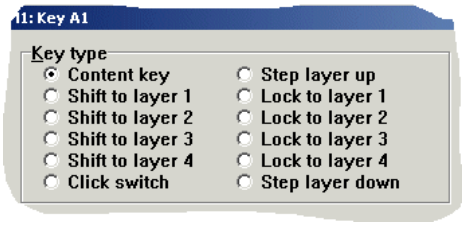
MIDAPI is the programmers interface for TouchMe and MID products.
It is a library of functions to access the functions of the modules from programming languages like C, Delphi or Visual Basic.
Documentation, help file and examples are included

# 6 How do I?

## 6.1 Program special content

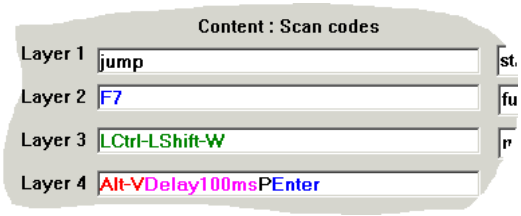
### 6.1.1 Multiple layer key

Each key can have up to 4 layers of content defined. Depending on which layer the keyboard is in, visible by the LED's L1-L4, different contents can be sent to the system.




To access different layers –at least – one key has to be programmed to change layers.
Shift to layer works like a shift, control or alt key; it has to be pressed together with a content key.
Lock to layer works like a Caps lock key; after pressing it the keyboard stays in that layer till another lock to layer key is pressed

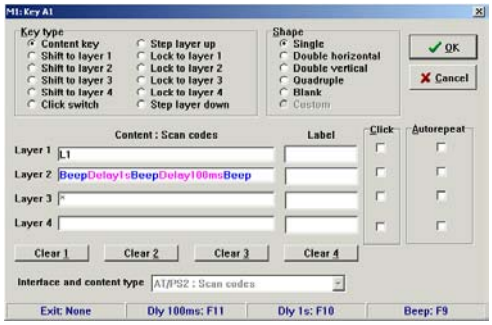
Now keys can be programmed with different contens in different layers




After programming, when this key is pressed it will send the string "jump" to the system.
Pressing a shift to layer 2 key together with this key will send F7 to the system.
The same key pressed after a lock to layer 4 was pressed sends Alt-V and then, after a 100ms delay, P and Enter.

### 6.1.2 Beep and delay

To use the special contents Beep and Delay, you have to reserve some keys for this. This can be done by menu: **Options > Preferences, Key content editor**. In the section **scan line enter keys** you can define keys for the beep and different delays.




At the bottom of the key definition window you can see in the status bar which keys are reserved for the special functions.

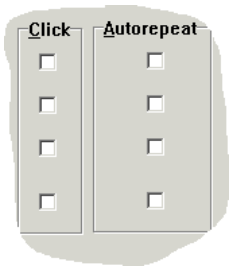

note: if you want to send Beep for success or failure, the interface must be AT/PS2

## 6.2 Change national layout

In menu: **Options > Preferences, Keyboard settings**, you can change the layout of the keyboard.
Since the keyboard sends IBM codes, different contents can be sent when a different layout is selected.

example:
"y" pressed on a US keyboard will send "z" when pressed on a German keyboard.
This means that a key programmed to send "y" with US layout will actually send "z" when the layout setting is changed to German.

## 6.3 Click and autorepeat

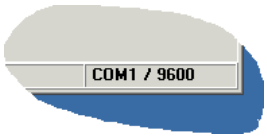



When **click** is selected the key will give a clicking sound when pressed.
The default setting can be changed in menu:
**Options > Preferences, Advanced KBD settings**.

**Autorepeat** defines if the key will repeat to send its contents when the key is pressed for a longer time.

## 6.4 Program through COM port

When you want to communicate with Tipro modules through RS232 instead of PS/2, you have to change the following settings:
In menu: **Options > Communications port** select the port your cable is connected to.
The statusbar will show in the lower right corner what interface is currently used.




Tip: When you have problems using ChangeMe on a notebook, connect the TouchMe configuration to the COM port.
Run ChangeMe with commandline option –com. This way autodetection will look only at the COM port, not at the PS/2 port.
**Start > Run**, type: "C:\Tipro\MID40\ChangeMe.exe –com"
(or change the path when you installed in a different directory)

note: Keep PS/2 connected, this is needed for the power supply.

# 7 Appendix A – MID specific information

MID products will be recognized by ChangeMe and can be configured in the same way as TouchMe.
Labels for MID keyboards should be printed with **print labels**, not with LabelMe. The size of the keys is different.
The MID user's manual is still available for detailed information.

# 8 Copyrights and technical support

## 8.1 Copyright



## 8.2 Software distribution

The software that is distributed with TouchMe or MID is free software and may be used by any number of systems.

Modification of the programs or their resources is strictly forbidden. Any modification of any component of TouchMe software is a breach of intellectual property laws in most countries and will be pursued vigorously to the full extent of the law.

## 8.3 No liability for consequential damages

Tipro keyboards and its suppliers shall be in no event liable for any damage (including without limitation, special, incidental, consequential, or indirect damages for personal injury, loss of business profits, loss of business information, or any other pecuniary loss) arising out of the use of or inability to use this product.

## 8.4 WIN Keys

The key marked  is pre-programmed to emulate the Microsoft® Windows® Logo Key found on many standard 'QWERTY' devices that is used to launch the start menu in the Microsoft® Windows® Operating Systems normally marked with the copyright Microsoft®  logo. We no longer apply this logo to our keyboards as part of the mandatory approval demands the fixed location of this key and it is felt that this is contrary to our policy of programmability.

## 8.5 Technical support

Your first port of call for technical support for TouchMe and ChangMe is this manual, the helpfile and the list of frequently asked question on the Internet. The address of the Tipro Technical support web site is:

**http://www.tipro.net/tehnical.htm**

If these sources do not give satisfactory answers you may contact our technical support by **Email** or **Fax**. We endeavour to answer questions within 48 hours (except on holidays, weekends and working free days).

Contact Tipro keyboards

| Via | At |
|---|---|
| Internet | support@tipro.si |
| Fax | +386 1/78 88 299 |
| Mail | Tipro keyboards d.o.o.<br>Ljubljanska cesta 64<br>SI-1290 Grosuplje<br>Slovenia |

## 8.6 Updating software

The configuration utility ChangeMe, will be regularly updated on our www home page. If you need to install a new version of the download program you have to get the ChangeMe setup program from the Tipro site and run it as described in this manual.

web: **www.tipro.net** *(follow **Support**)*