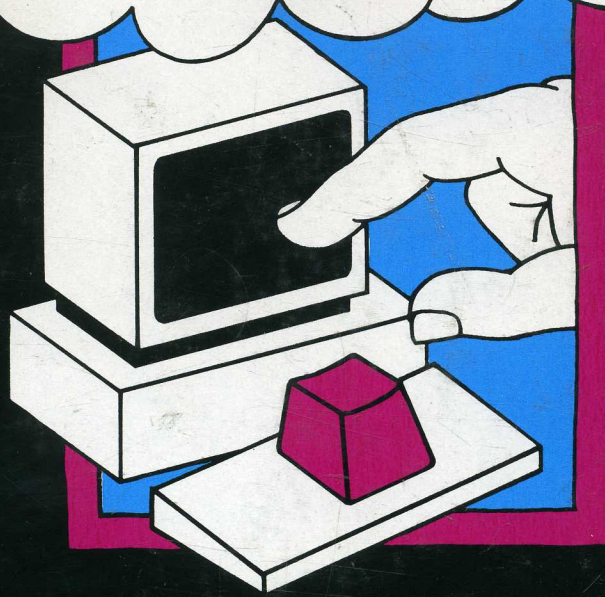


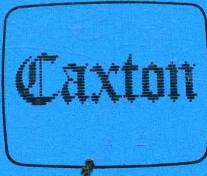
# SMART KEY



**The Stroke of Genius**

# SMART KEY

Lets you control  
your computer with  
a single keystroke



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## IMPORTANT NOTES FOR AMSTRAD USERS

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### CPC 6128 USERS

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Some of our products make use of the [Esc] key. If you experience difficulty using this key, hold down the [Control] key and type '[' whenever you need to use [Esc]

### PCW 8256 USERS

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Some of our products make use of the [Esc] key. This key is called [Exit] on the PCW 8256.

Some of our products make use of the [Control] key. This key is labelled [Alt] on the PCW 8256.

### THE OPERATING ENVIRONMENT - Very Important Note

---

This product only runs under the CP/M or CP/M Plus operating systems. Either one of these must be loaded before you can begin to use it. Please refer to the documentation you received with your computer to establish how you do this. On the Amstrad CPC-6128 you must call CP/M from within BASIC. On the PCW-8256 you must load a special diskette. On other systems, CP/M may already be up and running when you turn your computer on.

As a general guide, if you see the A> prompt displayed on your screen it usually means that the correct operating system is up and running.

FROM THIS POINT ON AND THROUGHOUT THE REST OF THIS MANUAL WE ASSUME YOU ARE OPERATING IN EITHER THE CP/M OR CP/M PLUS OPERATING ENVIRONMENT.

## Copying Your Master Diskette

To make a working copy of your Master diskette you must have properly formatted at least one other diskette (see above). Please ensure that this is available before you begin. Then, to see how you copy information from one diskette to another, make sure that your operating system is loaded and the A> prompt is displayed. Then follow the steps below:

- STEP 1 - Type 'PIP'
- STEP 2 - Press [Return]

*The following message (or similar) will appear on the screen:*

```
CP/M 3 PIP VERSION 3.0
*
```

If your computer has only one diskette drive (drive A:) put your Master diskette in it and have your formatted diskette ready. If your computer has two diskette drives put your Master diskette in drive A: and your formatted diskette in drive B: then:

- STEP 1 - Type 'B:=A.\*.\*[V]',
- STEP 2 - Press [Return]

**Note:** PIP is a CP/M utility program which enables you to copy files from one diskette to another. For further information on PIP refer to your Operating System Guide.

## A HELPFUL HINT

If you have not already done so, we strongly recommend that you take just a little time now to familiarise yourself with the basics of CP/M or CP/M Plus. It will be of immense help to you - because whatever application programs you are using, over time you will need to know precisely how to:

- (1) Format and copy diskettes (using the "DISCKIT", "FORMAT" or "COPY" programs).
- (2) Copy files (using the PIP program - this is the one you need to make a copy of your ScratchPad Plus Master diskette).
- (3) Find out information about diskette files (using the "SHOW", "DIR" or "STAT" programs).

and

## BEFORE YOU START

The diskette supplied is your Master diskette. Make a working copy of this diskette and then store the Master diskette away in a safe place.

The Master diskette is **not a bootable diskette**. This means if you put it in drive A: and then turn your computer on, some error messages will be displayed and you may damage the diskette.

For convenience, we suggest you make a **bootable** copy of your Master diskette. To be able to do this you will first need to understand how to format a blank diskette (with systems tracks) for use with CP/M or CP/M Plus. If you are not sure how to do this, please refer to your Operating System Guide or consult with your computer supplier.

*If your computer has two diskette drives it will copy all the files from the diskette in drive A: onto the diskette in drive B: and return you to the A> prompt. If your computer has only one diskette drive it will copy the files across section by section alternately displaying the following questions at the bottom of the screen:*

Please put the disc for B: into the drive then press any key

(Take out the Master diskette and put in the formatted diskette) and press any key

Please put the disc for A: into the drive then press any key

(Take out the formatted diskette and put in the Master diskette) and press any key

Repeat the above procedures until all the files have been copied and the asterisk is displayed. Pressing [Return] will take you back to the A> prompt.

In either case when the A> prompt appears on the screen once again, the copying procedure is complete. Now label the copy you have made identifying it as your working copy and use this diskette from now on. If anything untoward happens which makes this diskette unusable you can always run through this procedure again to make another working copy.

## PLEASE READ BEFORE USING SmartKey

## PLEASE READ BEFORE USING SmartKey

### SOME SPECIAL NOTES ON SmartKey

#### TAKE CARE

SmartKey is rather like a sophisticated combination of the CP/M 'SETKEYS' and 'SUBMIT' utilities. If you consider yourself an experienced microcomputer user it is extremely easy to use and very powerful. But if you are not fully conversant with your operating system it is better to use SmartKey with caution.

#### SmartKey and 'SETKEYS'

If you are using SmartKey with SETKEYS, SmartKey will receive the SETKEYS definition - not the key you press. But SmartKey only defines SINGLE keys, not strings of characters and some strange things may happen.

For example: If you use SETKEYS to redefine 'P' to '/S' and then you try to define 'P' with SmartKey, SmartKey will think you are trying to redefine '/' and will take 'S' as the first character of the definition.

It is better to use either SmartKey or SETKEYS, not both together. If you do use SmartKey and SETKEYS together (and bear in mind some of your application programs may use SETKEYS - ScratchPad Plus is a good example) then use SmartKey to redefine keys that have not already been defined with SETKEYS.

#### SPECIAL KEYS ON KEYBOARD

If you have other keys on your keyboard other than the standard typewriter letter and number keys, take care if you need to redefine them. Most of these keys are actually combinations of other keys on your keyboard. For example: on the Amstrad PCW-8256, the [WORD CHAR] key on the right is usually [Alt] W. If you redefine this key you will redefine [Alt] W as well. And some of your programs may require [Alt] W to perform a special command.

Always study the SmartKey message closely as you define a key. This will tell you PRECISELY which key you are redefining. You will then be able to establish whether there is going to be a conflict.

#### A USEFUL HINT

The SuperShift key on the Amstrad is set up as the left curly bracket {, not the backward slash \ as indicated in the manual (your keyboard does not have a backward slash available).

But if you have an [Extra] key on your keyboard, this in combination with other keys produces Supershift keys. It is much better to redefine either [Extra] keys OR Supershift key, BUT NOT BOTH.

We believe the best way to begin using SmartKey with real applications is to redefine the number keys 1-9 (not 0) on the TOP of your keyboard in combination with the [Extra] key. This should not produce a conflict either with SETKEYS or with any other key on your keyboard.

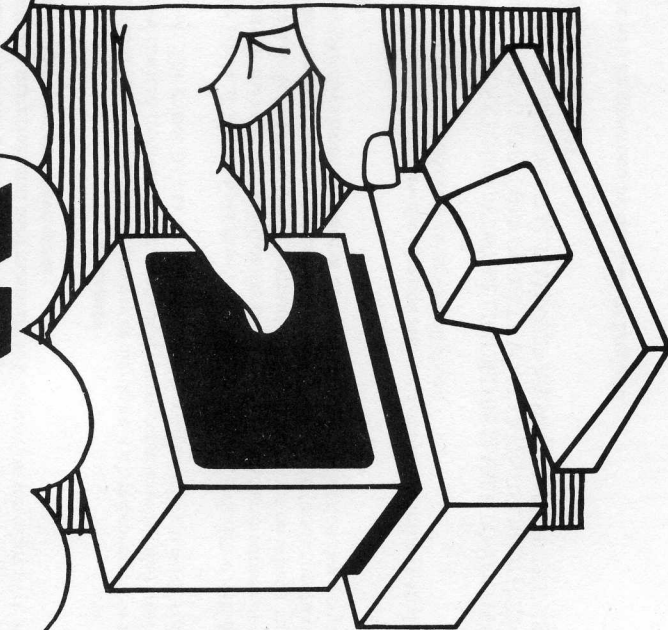
#### SOME OPERATING NOTES

SmartKey sits in memory all the time it is being used. It takes up 7k. The space available for any other memory-resident programs (eg ScratchPad Plus) will therefore be reduced by this amount.

Submit and FBNSUBJ do not work while SmartKey is resident on Amstrad computers. Please ignore any reference to these in the manual.

To copy your Master diskette, please refer to the procedure at the beginning of the ScratchPad Plus manual.

**SMART  
STROKE**



**The Stroke of Genius**

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## Licence Agreement

Caxton Software Limited licenses SmartKey for your personal use. You assume all responsibility for the installation, operation and results.

### Terms & Conditions

You are licensed to use SmartKey on a single computer and you may create a copy of SmartKey for backup on that single computer. You may not copy any part of the SmartKey User's manual. You may not transfer or assign this licence to any other third party. This licence is effective until terminated. You may terminate this licence by returning all program materials and user manuals to Caxton Software Limited, and destroying all backup copies you have made.

### Warranty

SmartKey is provided "As Is" without warranty of any kind, either expressed or implied, including, but not limited to the implied warranties of merchantability and fitness for a particular purpose. The entire risk as to the performance of SmartKey is with you.

Caxton Software Limited does not warrant that the functions of SmartKey will meet your requirements or that the operation of the program will be uninterrupted or error free. However Caxton Software Limited warrants that the diskettes on which SmartKey is furnished, to be free from defects in materials and workmanship under normal use for a period of ninety (90) days from the date of delivery to you as evidenced by a copy of your purchase receipt.

The entire liability of Caxton Software Limited and your exclusive remedy shall be replacement of any defective diskettes as explained above.

**IN NO EVENT WILL CAXTON SOFTWARE LIMITED BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY LOST PROFITS, LOST SAVINGS OR OTHER INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE SmartKey.**

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## INTRODUCTION

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### SMARTKEY II

**SmartKey II** is an electronic assistant in the form of a computer program available for today's business microcomputers.

It enables you to assign any long, repetitive or difficult-to-remember set of keystrokes to a single key. Press this key once, and **SmartKey II** (the electronic assistant) will do the work for you. It can be used with, and is invisible to, your other programs.

With word processors, you can type standard paragraphs, reformat text, find files, and change margins instantly. With spreadsheets, you can define keys to display windows, recalculate models, save files and print automatically. And with databases, you can find records, enter data and produce reports with just one keystroke.

With these and other software products, the possibilities are endless!

Your **SmartKey II** disk contains four main programs: **SMARTKEY.COM**, **SKPATCH.COM**, **FIXKEY.COM** and **FBNSUB.COM**. We will be explaining how to use these programs in the following pages.

### ADVANCED SMARTKEY II

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- Hardware Compatibility A-4
- Software Compatibility A-4



## IMPORTANT READING

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### THE REGISTRATION CARD

Please take a moment to fill out your Registration Card and return it to us. Without it, we won't be able to offer you support or advise you of updates as they become available.

### SUPPORT FROM CAXTON

We offer a support service to registered users of all our products. If you experience any difficulties using SmartKey II please telephone or write to us at the following address:

Customer Support Department  
Caxton Software Ltd  
10-14 Bedford Street  
Covent Garden  
London WC2E 9HE

Telephone: 01-379-6502  
Telex: 27950 ref 398

## BEFORE YOU START

The diskette supplied is your **SmartKey II** Master diskette. Make a working copy of this diskette and then store the Master diskette away in a safe place.

The Master diskette is not a **bootable** diskette. If you put it in drive A: and then turn your computer on, some error messages will be displayed and you may damage the diskette.

## COPYING YOUR MASTER DISKETTE

For convenience, we suggest you make a **bootable** copy of your Master diskette. To be able to do this, you will need to understand how to:

1. format a blank diskette
2. add the relevant operating system information to this diskette (to make it **bootable**)
3. copy files from one diskette to another

If you are not sure how to do this, please refer to your Operating System Guide or consult with your computer supplier.

To answer your questions on the telephone, we will need to know the following information:

1. Your name (and company name if relevant)
2. Your **SmartKey II** serial number and version number (see the Master diskette label)
3. What computer you are running **SmartKey II** on
4. Where you purchased **SmartKey II**
5. When you purchased **SmartKey II**

and

If you can be ready to provide us with this information straight away, it will help us to deal with your enquiry quickly and efficiently.

Please bear in mind the following:

1. Your questions may be answered in **APPENDIX 4**. We have listed several problems that we are aware of. Some of them are solvable and the solution is documented. Some of them sadly, are not.
2. It is our responsibility to help you with **SmartKey II**. It is not our responsibility to train you how to use your operating system or your computer. We are not equipped to do so.

## SmartKey II Special Keys

Some keys on your keyboard have special meanings assigned to them by SmartKey II. We represent these keys with upper case letters. For Example:

### SETUP SUPERSHIFT

Whenever you need to use one of these keys, press the single key we are referring to. Do not type the upper case letters.

### Following Instructions

We have done our very best to ensure that our instructions are clear, precise and easy to follow. It will be useful to remember the following:

1. When you need to type some letters or numbers we use the word "Type" and enclose the letters or numbers in single quotes. Do not type the single quotes.
2. When you need to type a special key, we use the word "Press".
3. We have used *italics* within instructions to tell you about something that is either happening or that is about to happen.

## CONVENTIONS USED IN THIS MANUAL

### Special Keys on Your Keyboard

Some keys on your keyboard have special uses. We represent these keys by enclosing them in square brackets. For example:

#### [Return]

This is the key used to let your computer know you have finished typing information. It is sometimes known as the [Carriage Return], [Enter] or <CR> key and may be labelled with a backward arrow.

#### [Tab]

This is most often used to jump a number of spaces in word processing software. It may have other uses in other programs, but has no special meaning in SmartKey II.

#### [Space]

This is the key used to type a space.

#### [Esc]

This key has a different meaning depending on the program you are using. It has no special meaning in SmartKey II.

Whenever you need to use one of these keys, press the single key we are referring to. Do not type the letters enclosed in square brackets.

This chapter introduces you to the basics of SmartKey II. We suggest you work through the examples given. You can then start using SmartKey II to help you use your other applications software.

#### THE SETUP KEY

This is the key that enables you to assign your complex set of keystrokes to a single key on your keyboard.

The SETUP key is the left hand square bracket ([). You can change the SETUP key to suit your own requirements and we will explain how to do this in the section entitled "SKPATCH".

If your keyboard does not have a left hand square bracket ([), please refer to this section now.

#### The A> Prompt

Throughout we have assumed that you will be using your SmartKey II diskette in the A: drive. You may wish to use SmartKey II in another drive or copy it onto a hard disk. In these cases the appropriate operating system prompt will be displayed (eg B>, C> etc). Please make the appropriate substitution when reading the text.

*We hope everything is clear and that you enjoy using this manual. Constructive comments are always welcome.*

Caxton Software Ltd

## USING SMARTKEY II - BASIC PRINCIPLES

### Defining a Key (One-for-One)

To see how this is done, make sure the A> prompt is displayed and follow the steps below:

- STEP 1 - Press the SETUP key (I)
- At this point a bell will sound
- STEP 2 - Type the character 'z'

The following message will appear on the screen:

```
A> SMARTKEY: redefine <z> to <
```

- STEP 3 - Type the character 'a'
- STEP 4 - Press the SETUP key (I) twice

This will take you back to the A> prompt

Now, every time you type 'z', the character 'a' will appear on your screen. Try it.

**SmartKey II** has assigned one keystroke <a> to the single key <z>. Put another way: The single key <z> has been defined as <a> and in this case, <a> is the definition.

## LOADING SMARTKEY II

To see how you load **SmartKey II**, put the working copy of your **SmartKey II** diskette in Drive A: make sure the A> prompt is displayed then follow the steps below:

- STEP 1 - Type 'SMARTKEY'
- STEP 2 - Press [Return]

The following message will appear on the screen:

```
SmartKey II version 1.1B Serial # SR8-1111  
Copyright (c) 1980/84 - FBN Software  
ready
```

This will take you back to the A> prompt

**Note:** Caxton Software Ltd is a software publisher. FBN Software is the author of **SmartKey II**

**SmartKey II** is now loaded and ready for use.

### Defining a Key (One-For-Many)

**SmartKey II** can also assign several keystrokes to a single key. To see how this is done, make sure the A> prompt is displayed and follow the steps below:

STEP 1 - Press the SETUP key ([])

STEP 2 - Type the character 'A'

**Note:** You must use the SHIFT key. **SmartKey II** recognises the difference between upper and lower case characters.

STEP 3 - Type 'Hello World'

STEP 4 - Press the SETUP key ([]) twice

*This will take you back to the A> prompt*

Now, every time you type 'A', 'Hello World' will appear on your screen. Try it.

**SmartKey II** has assigned several keystrokes <Hello World> to the single key <A>. Put another way: The single key <A> has been defined as <Hello World> and in this case, <Hello World> is the definition.

### Clearing a Definition

To see how you restore a key to its original status, make sure the A> prompt is displayed and follow the steps below:

STEP 1 - Press the SETUP key ([])

*At this point a bell will sound*

STEP 2 - Type the character 'z'

*The following message will appear on the screen:*

```
A>
SMARTKEY: redefine <z> to <
```

STEP 3 - Press the SETUP key ([])

*This will take you back to the A> prompt*

Now, when you type 'z', the character 'z' will appear on the screen. **SmartKey II** has cleared the definition <a> from the single key <z>.

### Mistakes While Entering a Definition

If you make a mistake while defining a key, do not try to correct it because the correction will be included in your definition. Simply exit the definition by pressing the SETUP key twice, and start again.

## General Format for Defining Keys

The general format for defining keys is as follows:

[**SETUP key**]**<KEY>****<definition>**[**SETUP key**][**SETUP key**]

where **<KEY>** represents the key you have chosen to define and **<definition>** represents any set of keystrokes.

You can now assign sets of keystrokes to single keys. This will enable you to carry out repetitive work with a single keystroke.

### A Note on "Special" Keys

Note that **^M** appeared each time you pressed [Return].

This is because [Return] is a "special" key and **SmartKey II** needs to display it in a special way. There are other "special" keys on your keyboard and they are all displayed in a special way. Below are some examples of "special" keys and the way **SmartKey II** displays them.

You may come across some others depending on your type of keyboard.

## Assigning Commands

**SmartKey II** can also assign commands to a single key. To see how this is done, make sure the **A>** prompt is displayed and follow the steps below:

STEP 1 - Press the SETUP key ([)

STEP 2 - Type the character '&'

**Note:** You can define most keys on your keyboard (upper or lower case)

STEP 3 - Type 'DIR \*.COM'

STEP 4 - Press [Return]

STEP 5 - Press the SETUP key ([) twice

*This will take you back to the A> prompt*

Now, every time you type '&', a display of all the files on drive A: will appear on your screen. Try it.

By assigning a set of keystrokes, **SmartKey II** has assigned the command **<DIR \*.COM[Return]>** to the single key **<&>**. In this case, **<DIR \*.COM[Return]>** is the definition.

These simple examples give you an understanding of the basics of **SmartKey II**.

## USING SMARTKEY II - FURTHER FEATURES

### Pause

SmartKey II is able to pause and request further instructions while undertaking any of your assignments.

For example, you may wish SmartKey II to assist you in listing a selection of program files on drive A: To see how this is done, make sure the A> prompt is displayed and follow the steps below:

STEP 1 - Press the SETUP key (F)

STEP 2 - Type the character ';'

STEP 3 - Type 'DIR'

STEP 4 - Press the [Space] bar

STEP 5 - Press the SETUP key (F)

STEP 6 - Type '.COM'

STEP 7 - Press [Return]

STEP 8 - Press the SETUP key (F) twice

*This will take you back to the A> prompt*

STEP 9 - Type the character ';'

*The command DIR will appear on the screen. SmartKey II has now paused and is awaiting your further instructions.*

Key	Displayed as
[Return]	^M
[Tab]	^I
[Esc]	^[
[Backspace]	^H
[Del]	<DEL>

### Some Useful Tips

#### Number Keys

1. When defining number keys, both the numbers on the QWERTY keyboard and the numbers on the numeric keypad are defined.

#### Special Keys

2. SmartKey II can define most keys on your keyboard including some "special" keys. It is probably not wise to define "special" keys. Other programs may need to use them as they are.

### Typing the SETUP Key Character

If you ever need to type the character used as the SETUP key (F), press the SETUP key (F) twice.



## Defining SUPERSHIFT Keys

As an example, you may wish to assign a set of keystrokes to <SUPERSHIFT 4>. To see how this is done, make sure the A> prompt is displayed and follow the steps below:

- STEP 1 - Press the SETUP key ([])
- STEP 2 - Press the SUPERSHIFT key (\)
- STEP 3 - Type the number '4'

The following message will appear on the screen:

```
A> SMARTKEY:<.4> to <
```

- Note:** <.4> is the shorthand for <SUPERSHIFT 4>
- STEP 4 - Type 'DIR'
  - STEP 5 - Press [Return]
  - STEP 6 - Press the SETUP key ([]) twice

This will take you back to the A> prompt

STEP 10 - Type 'S\*'

STEP 11 - Press [Return]

By pressing [Return] at this point you have told SmartKey II that you have completed your instructions.

*SmartKey II will then complete the assignment and a list of all program files on drive A: beginning with the letter S will appear on the screen.*

## General Format for Defining Keys With Pause

Any number of pauses can be included within a definition. The general format for defining keys with pauses included is as follows:

```
[SETUP key]<KEY><definition>[SETUP key]<definition>...  
...[SETUP key][SETUP key]
```

## The SUPERSHIFT key

The SUPERSHIFT key allows you to assign keystrokes to the keys on your keyboard without changing their original value. It provides you with a whole new set of keys by SUPERSHIFTing each existing key.

The SUPERSHIFT key is the backward slash (\). You can change the SUPERSHIFT key to suit your own requirements. We will explain how to do this in the section entitled "SKPATCH". If your keyboard does not have a backward slash (\), please refer to this section now.

## General Format for Using SUPERSHIFT Keys

The general format for using SUPERSHIFT keys is as follows:

[SUPERSHIFT key]<KEY>

### Typing the SUPERSHIFT Key Character

If you ever need to type the character used as the SUPERSHIFT key, press the SUPERSHIFT key twice.

## USING SMARTKEY II WITH OTHER PROGRAMS

SmartKey II should work with all your other standard CP/M programs.

To date, all our examples have begun at the A> prompt. The real benefits of using SmartKey II begin when you define keys that will help you reduce keystrokes while using your other applications software.

With word processors, you can define keys to type standard paragraphs, reformat text, find files, and change margins instantly. With spreadsheets, you can define keys to display windows, recalculate models, save files and print automatically. And with databases, you can define keys to find records, enter data and produce reports with one keystroke.

With these and other software, the possibilities are endless!

## Using SUPERSHIFT Keys

To see how this is done, make sure the A> prompt is displayed and follow the steps below:

STEP 1 - Press the SUPERSHIFT key (\)

STEP 2 - Type '4'

**Note:** The SUPERSHIFT key does not operate like the SHIFT key. Do not hold the SUPERSHIFT key down while typing the next key. Type the SUPERSHIFT key first, then type the next key.

*A list of all the files on drive A: will appear on the screen*

SmartKey II has assigned the command <DIR[Return]> to <SUPERSHIFT 4>. Put another way: <SUPERSHIFT 4> has been defined as <DIR[Return]>, and in this case, <DIR[Return]> is the definition.

### General Format for Defining SUPERSHIFT Keys

The general format for defining SUPERSHIFT keys is as follows:

[SETUP key][SUPERSHIFT key]<KEY><definition>  
[SETUP key][SETUP key]

Always create your definitions while at the A> prompt in the way that we have demonstrated. When you load your other programs the keys will still be defined and SmartKey II will undertake your assignments quicker than if you were typing the keys yourself.

---

**WARNING**

Remember, if you are using SmartKey II definitions while another program is running, SmartKey II is still active. **Do not press the SETUP key.**

If you accidentally press the SETUP key while another program is running, the SmartKey II 'define' message will appear on the screen and cannot usually be cleared. If this happens, press the SETUP key again and from then on ignore the message. Smartkey II has only affected your display, it has not affected your other program. It is advisable to save any files active at the time, exit the particular program, and start again.

If it is likely that you will need to type the SETUP key character while running other programs with SmartKey II, please refer to the section entitled "FIXKEY" to change the SETUP key temporarily. If you will need to use the SETUP key character often, please refer to the section entitled "SKPATCH" to change the SETUP key permanently.

This chapter introduces you to the basics of FixKey. FixKey is an important set of housekeeping routines which enable you to get the most out of SmartKey II. In particular, FixKey enhances SmartKey II by allowing you to work with definition files.

**DEFINITION FILES**

A definition file stores all the necessary information about a set of keys you have defined. It can be stored on diskette and retrieved for use in the future. Using definition files saves you having to define the same keys every time you load SmartKey II.

## USING FIXKEY - BASIC HOUSEKEEPING

To select the option you want to use, type the appropriate number (there is no need to press [Return]).

### Listing the Current Definitions

Let's use FixKey to list the keys that we have defined. To see how this is done, make sure the FixKey Command Menu is displayed and follow the steps below:

STEP 1 - Select option 4 from the FixKey Command Menu.

*The following table will appear on the screen:*

<A>	redefined to	<Hello World>
<&>	redefined to	<DIR *.COM^M>
<;>	redefined to	<DIR >.COM^M>
<.4>	redefined to	<DIR^M>
Table size:		bytes remain free
<space>	to continue	

**Note:** 1. FixKey lists the definitions in the order that you created them.

2. The table size is the amount of space available for creating definitions. You can change this to suit your requirements. We will explain how to do this in the section entitled "SKPATCH".

## LOADING FIXKEY

To see how this is done, make sure your SmartKey II disk (with FIXKEY.COM on it) is in drive A: and the A> prompt is displayed. Then follow the steps below:

STEP 1 - Type 'FIXKEY'

STEP 2 - Press [Return]

*The FixKey Command Menu will appear on the screen:*

COMMAND MENU	
0	Exit to CP/M
1	Pack and save current definitions
2	Load definition file
3	List definition file
4	List current definitions
5	Clear current definitions
6	Alter setup key
7	Terminate SMARTKEY
8	Compile definitions
9	Modify definitions
Enter selection:	

While FixKey is loading, it checks to see if SmartKey II has been loaded. If it has, FixKey responds with the full menu of options available. If it hasn't, it will only display options 0 and 3.

You can choose any name. It must begin with a letter (not a number) and can be up to eight characters in length (spaces are not allowed).

STEP 3 - Type 'TESTFILE'

STEP 4 - Press [Return]

FixKey will save the current definitions in a definition file called TESTFILE.DEF and take you back to the FixKey Command Menu.

Note: 1. .DTX files are external ASCII files which can be edited using a word processor or text editor. These files can be converted back to definitions usable by SmartKey II using FixKey option 8 (see later). For further information refer to the section entitled "ADVANCED SMARTKEY II".

2. FixKey automatically puts the extension .DEF or .DTX on all definition files. Unless a drive identifier is specified before the filename (eg. B:filename), files are loaded from, or saved to, the current drive.

3. The number of bytes free is the amount of space left for creating further definitions.

STEP 2 - Press the [Space] bar

*This will take you back to the FixKey Command Menu*

If you have created a lot of definitions, FixKey will list a screen-full at a time. To list further definitions press the [Space] bar. When you have listed all the definitions, pressing the [Space] bar will take you back to the FixKey Command Menu.

### Saving the Current Definitions

To see how you save the definitions we have created so far, make sure the FixKey Command Menu is displayed and follow the steps below:

STEP 1 - Choose option 1 from the FixKey Command Menu

*The following message will appear on the screen:*

Save as a Definition [.DEF] or Text [.DTX] file [D/T] ?

STEP 2 - Type 'D'

*FixKey will now ask you for the name of the definition file you want to save.*

STEP 4 - Press the [Space] bar

Remember. If there are a lot of definitions in your definition file, FixKey will display a screen-full at a time. To list further definitions in the file press the [Space] bar. When you have listed all the definitions in the definition file, pressing the [Space] bar will take you back to the FixKey Command Menu.

)  
Loading Definition Files

Saving files is only useful if you are able to retrieve them. To see how this is done, make sure the FixKey Command Menu is displayed and follow the steps below:

STEP 1 - Select option 2 from the FixKey Command Menu

STEP 2 - Type 'TESTFILE'

STEP 3 - Press [Return]

FixKey will load the definitions previously saved in TESTFILE.DEF and take you back to the FixKey Command Menu.

STEP 4 - Select option 0 from the FixKey Command Menu

This will take you back to the A> prompt

STEP 5 - Type 'A'

'Hello World' will appear on the screen

All the keys you defined earlier have been defined again automatically. Try them.

FIXKEY 4-7

Clearing the Current Definitions

By now, you should have saved your definitions in a file called TESTFILE.DEF.

To see how you clear all the current definitions, make sure the FixKey Command Menu is displayed and follow the steps below:

STEP 1 - Select option 5 from the FixKey Command Menu

STEP 2 - Select option 0 from the FixKey Command Menu

This will take you back to the A> prompt

The keys you defined using SmartKey II have now been restored to their original status. Try them.

Listing Definition Files

To see how this is done, make sure the FixKey Command Menu is displayed and follow the steps below:

STEP 1 - Select option 3 from the FixKey Command Menu

FixKey will ask you for the name of the definition file you want to list

STEP 2 - Type 'TESTFILE'

STEP 3 - Press [Return]

FixKey will list the definition file TESTFILE.DEF on the screen

FIXKEY 4-6

The following message will appear on the screen:

Current expansion speed delay is 7  
Enter new delay (0 [fast] to 9 [slow] or <CR> [same])

SmartKey II can type keys much faster than you can. Some programs cannot cope with very fast typists and they miss some of the keys typed. If this happens, you will need to tell SmartKey II to type more slowly and you do this by changing the Expansion Speed Delay.

STEP 3 - Press a number between 0 and 9, or press [Return] to leave the Expansion Speed Delay as it is.

### Modifying Definitions

You can reallocate, enter and compact definitions using FixKey. To be able to do this, you must first display the FixKey Modify Menu. Make sure the FixKey Command Menu is displayed and select option 9.

The FixKey Modify Menu will appear on the screen

R Reallocate definition  
E Enter definition  
P Pack definition table  
Q Quit command  
Enter selection:

## FIXKEY - FURTHER HOUSEKEEPING

### Changing the SETUP Key and Expansion Speed Delay

The SETUP key is currently the left hand square bracket ([). FixKey allows you to change the SETUP key, but only temporarily. Next time you load SmartKey II, the SETUP key will be restored to the left hand square bracket ([). You can change the SETUP key permanently and we will explain how to do this in the section entitled "SKPATCH".

To see how you change the SETUP key temporarily, make sure the FixKey Command Menu is displayed and follow the steps below:

STEP 1 - Select option 6 from the FixKey Command Menu

The following message will appear on the screen:

Current Setup key is [ (Hex code 5B)  
Enter new character (<CR> to leave as is)

Note: 1. Hex code '5B' is your computer's interpretation of the character '['. It is not necessary for you to understand or use Hex codes with FixKey.

2. <CR> is shorthand for [Return]

STEP 2 - Press the key you would like to use as your SETUP key

You have now changed the SETUP key temporarily.

STEP 6 - Select option 0 from the FixKey Command Menu

*This will take you back to the A> prompt*

Now, when you type 'p', 'Hello World' will appear on the screen. Try it.

The definition <HELLO WORLD> has been **reallocated** from the single key <A> to the single key <P>.

### Entering Definitions

It is usually best to create your definitions using **SmartKey II**. But there may be occasions when you need to define keys while using **FixKey**. And, by allowing you to backspace (which deletes the last character), **FixKey** provides you with a basic editing facility while defining a key.

Letters and numbers can be typed in the usual way, but to include "Special" keys (eg [Return]) you must type their ASCII representation. Please refer to the section entitled "**ADVANCED SMARTKEY II**" for more information.

To see how you enter definitions using **FixKey**, make sure the **FixKey Modify Menu** is displayed (see above), and follow the steps below:

- STEP 1 - Select option E from the FixKey Modify Menu
- STEP 2 - Press the key you would like to define
- STEP 3 - Type the definition
- STEP 4 - Press [Return]

*This will take you back to the FixKey Modify Menu*

### Reallocating a Definition

You can reallocate a definition from one single key to another single key elsewhere on your keyboard.

In our earlier example, we defined the single key <A> as <Hello World>. To reallocate the definition <Hello World> to the single key <P>. Make sure the **FixKey Modify Menu** is displayed and follow the steps below:

- STEP 1 - Select option R from the FixKey Modify Menu

*The following message will appear on the screen:*

Enter presently defined key:

- STEP 2 - Type 'A'

*The following message will appear on the screen:*

Enter new key for this definition:

- STEP 3 - Type 'p'

*This will take you back to the FixKey Modify Menu*

- STEP 5 - Select option Q from the FixKey Modify Menu

*This will take you back to the FixKey Command Menu*



## THE FULL FIXKEY OPTIONS

Below is a complete list of the options available in the FixKey Command Menu, followed by an explanation of each option:

**0 Exit to CP/M**  
This option terminates FixKey and returns you to the A> prompt.

### 1 Pack and Save Current Definitions

This option saves the definitions you are currently using to:

- 1. a specified **SmartKey II** definition file with the extension **.DEF**
- 2. an external ASCII file with the extension **.DTX** (see "Advanced SmartKey II").

### 2 Load Definition File

This option loads definitions from a specified file. It replaces any definitions previously used.

### 3 List Definition File

This option lists on the screen the definitions in a specified file.

### 4 List Current Definitions

This option lists on the screen the definitions currently in use.

## Packing Definitions

FixKey enables you to reduce the size of the Translation Table (where definitions are kept) to its most compact form. To do this, make sure the FixKey Modify Menu is displayed (see above) and select option P.

*The current table size and the amount of space available will appear on the screen. FixKey will then take you back to the FixKey Modify Menu*

## Compiling Definitions

Please refer to the section entitled "ADVANCED SMARTKEY II"

## Terminating SmartKey II

On occasions it may be inconvenient for SmartKey II to be active while other programs are running. To terminate SmartKey II, make sure the FixKey Command Menu is displayed and select option 7. This will take you back to the reduced FixKey Command Menu.

## THE FIXKEY SHORTCUT

When you are familiar with **FixKey** you can save time by executing **FixKey** commands. To see how you enter **FixKey** commands study the examples below:

A>FIXKEY 1 NEWFILE 0 [Return]

**FixKey** will save the current definitions in a file named "NEWFILE.DEF" and take you back to the A> prompt

A>FIXKEY 4 0 [Return]

**FixKey** will list the current definitions on the screen and take you back to the A> prompt

A>FIXKEY 2 OLDFILE 0 [Return]

**FixKey** will load the definitions from a file named "OLDFILE.DEF" and take you back to the A> prompt

## 5 Clear Current Definitions

This option clears the definitions currently in use.

## 6 Alter Setup Key

This option allows you to temporarily redefine the SETUP key.

## 7 Terminate SmartKey II

This option terminates SmartKey II and restores all keys to their original status.

## 8 Compile Definitions

This option reads and translates a definition file created by a word processor or text editor. The definitions can then be used directly or saved as a .DEF file using option 1. For further information, please refer to the section entitled "**ADVANCED SMARTKEY II**".

## 9 Modify Definitions

This option allows you to:

1. Move definitions from one single key to another.
2. Define a key from within **FixKey**.
3. Compact the memory space allocated to the current definitions.

### General Format of the FixKey Shortcut

The general format of the FixKey shortcut (from the A> prompt) is as follows:

**FIXKEY <parameters> 0 [Return]**

where <parameters> are menu selections and file names separated by spaces.

- Note:**
1. To be able to execute all the FixKey shortcut commands, SmartKey II must be loaded.
  2. FixKey Command Menu selections 6 and 9 cannot be executed as shortcut commands because they require your interaction.

We have now discussed all the basic functions of SmartKey II and FixKey. You should have a good understanding of how to create and use complex definitions. You should also be familiar with the concept of definition files and their advantages.

Of course, the real benefits of SmartKey II become apparent when you begin to use the standard definitions you have created with the other programs you use regularly.

This chapter introduces you to some advanced Smartkey II features which make life much easier if you intend to use long or complex definitions in conjunction with your other software.

A>SMARTKEY B:MYDEFS WS LETTER.DOC

will load **SmartKey II** and the definition file "MYDEFS.DEF" from drive **B:**. It will then load WordStar and take you straight into the WordStar document "LETTER.DOC" ready for editing.

You can also include the **SmartKey II** shortcut in submit files along with other commands, but do make sure the command **SMARTKEY** is the first entry in any submit file.

### CREATING DEFINITIONS USING A WORD PROCESSOR OR TEXT EDITOR

**FixKey** adds a further dimension to **SmartKey II** by including a simple compiler (see later) which allows you to convert definitions created with a standard word processor or text editor into **SmartKey II** definitions. This is very useful if you need to create and edit long or complex definitions.

To see how you create definitions with a word processor or text editor, follow the steps below:

#### STEP 1

Use a word processor or text editor which will create documents (files) containing standard ASCII characters only. Many word processors add extra non-ASCII characters to documents to cater for wrap-around, bold, justification etc etc. **SmartKey II** will not accept these characters. For example, if you are using WordStar, you must create your definitions using the non-document option.

### THE SMARTKEY II SHORTCUT

The **SmartKey II** shortcut enables you to load **SmartKey II** itself, a definition file previously saved with **FixKey** and another program in one operation.

With the A> prompt displayed, the general format of the **SmartKey II** shortcut is as follows:

**SMARTKEY[Space]<filename>[Space]<command>[Return]**

where <filename> is the name of a definition file previously saved with **FixKey** and <command> is any command used to instigate another program. Both <filename> and <command> are optional and can be loaded or run respectively from any drive.

For example:

A>SMARTKEY

will only load **SmartKey II** and take you back to the A> prompt.

A>SMARTKEY MYDEFS

will load **SmartKey II**, the definition file "MYDEFS.DEF" and take you back to the A> prompt.

A>SMARTKEY MYDEFS WS

will load **SmartKey II**, the definition file "MYDEFS.DEF" and WordStar.

### Note the Following Rules:

1. Each key being defined must be enclosed in diamond brackets at the beginning of a new line.
2. Each definition must be enclosed in diamond brackets **after** its assigned key.
3. Definitions can be longer than one line. When you press the [Return] key within a definition it is ignored. Each definition is terminated with the right hand square bracket.
4. Each key to be defined and its definition must start on a new line.
5. SUPERSHIFT keys must be represented with a leading full-stop.
6. "Special" keys must be typed as they appear on the screen (eg for [Return] within a definition type '^M' using the circumflex character, do not type '[Ctrl] M').
7. Any characters not enclosed in diamond brackets will be ignored by SmartKey II. This means you can add comments to your file without affecting the definitions.

### STEP 7

Save your file to disk with the extension **.DTX**

This file is now ready to be compiled by FixKey for use with SmartKey II or saved to a **.DEF** file using FixKey.

### STEP 2

Create a few definitions using **SmartKey II** in the usual way. Include a good selection of "special" keys (ie [Return] [Tab] etc) in your definitions. Define some SUPERSHIFT keys and create at least one long definition.

### STEP 3

List these definitions to the screen using **FixKey**.

### STEP 4

Look carefully at the way the definitions are displayed on the screen. Study the format of each definition and the group of definitions in total. Note particularly the way your "special" keys and SUPERSHIFT keys are represented.

### STEP 5

Leave **FixKey** and load your word processor or text editor.

### STEP 6

Type the same definitions into a file making sure they appear exactly as they did when you listed them on the screen with **FixKey**. Give the file a name of your choice, but it must have the extension **.DTX**.

## SKPATCH

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This chapter introduces you to the basics of Skpatch. Skpatch enables you to customise SmartKey II permanently to your own requirements.

You must refer to this chapter if you need to:

1. permanently change the characters used as the SETUP or SUPERSHIFT keys (see options K and S respectively)
- or 2. increase the amount of space reserved for the definitions Translation Table (see option T).

Generally speaking, you will only need to refer to other options if you are experiencing difficulty using SmartKey II with your other hardware or software. If this is the case, please refer to APPENDIX 4 first. It may offer you some guidance.

SmartKey II should not be in memory while you are using SKpatch. Either completely reboot your system or use FixKey to terminate SmartKey II.

## COMPILING DEFINITIONS WITH FIXKEY

To convert your definitions created in the above way into SmartKey II definitions, load FixKey and select option 8 from the FixKey Command Menu. Type the name of your .DTX file and press [Return] - there is no need to add the extension.

Your definitions are now in memory and ready for use. Terminate FixKey and try them.

- Note:**
1. These definitions will overwrite any existing duplicate definitions already in memory.
  2. If some of your definitions do not conform to the rules (above), they will not be compiled.
  3. You can load these definitions each time you want to use them by compiling them with FixKey in the above way - or you can now save them to disk using option 1 from the FixKey Command Menu (this will enable you to load them in the future using the SmartKey II shortcut).

## THE FULL SKPATCH OPTIONS

### K Alter Setup Key

This option allows you to permanently change the SETUP key to one of your own choice.

For example, you may want to use the plus sign (+) as your SETUP key. To see how this is done, make sure the Installation Option Menu is displayed and follow the steps below:

STEP 1 - Select option K from the Installation Option Menu

*The Setup Key Menu will appear on the screen:*

Alteration of Setup Key:  
The default setup key is [ (Hex code: 5B)  
data entry choices:  
C: Enter character directly  
H: Enter character as Hex value  
D: Enter character as Decimal value  
Select one:

STEP 2 - Select option C from the Setup Key Menu

*The following message will appear on the screen:*

Hit Key:

## LOADING SKPATCH

To see how you load SKpatch, make sure that your SmartKey II disk (with SKPATCH.COM on it) is in drive A: and the A> prompt is displayed. Then follow the steps below:

STEP 1 - Type 'SKPATCH'

STEP 2 - Press [Return]

STEP 3 - Type 'Y'

STEP 4 - Press [Return]

*The Installation Option Menu will appear on the screen:*

Installation Option Menu

K	alter setup Key
S	set SUPERSHIFT character
F	set Function key recognition
I	set special Input provision
7	reset/ignore bit 7 characters passed to system
C	set Console status when expanding definitions
W	specify action on Warm boot
T	set maximum translation Table size
E	set expansion speed delay
H	enable/disable Hexadecimal mode
M	modify program and quit
Q	Quit without modifying program

Enter selection:

**Note:** the current settings are enclosed in square brackets following the relevant option.

**S Set the Supershift character**

This option allows you to enable or disable the SUPERSHIFT facility and to select the character you want to use for the SUPERSHIFT key. (The SUPERSHIFT key is currently the backward slash (\) ).

For example. If you would like to use the minus sign (-) as the SUPERSHIFT key, make sure the Installation Option Menu is displayed and follow the steps below:

STEP 1 - Select option S from the Installation Option Menu

STEP 2 - Type 'N'

or - Type 'Y' if you would like to disable this facility

The SUPERSHIFT Key Menu will appear on the screen:

data entry choices:  
C: Enter character directly  
H: Enter character as Hex value  
D: Enter character as Decimal value  
Select one:

STEP 3 - Type '+'

The following message will appear on the screen:

New setup key is + (Hex code: 2B)  
OK (y/n)?

STEP 4 - Type 'Y'

SKpatch will ask you how you wish your Pause to end (with a [Return] or with the SETUP key) and the following message will appear on the screen:

Do you want to use Return or Setup Key to end variable strings during definition pauses (R/S)?

STEP 5 - Press [Return]

This will take you back to the Installation Option Menu

You will see this change reflected in Installation Option Menu.



## F Set Function Key Recognition

This option enables SmartKey II to recognise your computer's special function keys. We recommend that unless SmartKey II has problems recognising your special function keys you do **not** use this option.

Most computers and terminals have special function keys which send the computer a short string of characters very quickly.

These special function strings usually consist of three parts:

1. a leading character or string at the beginning
2. a single function character that is unique to each key
3. a trailing character or string at the end

SmartKey II can learn to redefine these strings as if they were a single character, but in order to do so, it must be told what to look for.

STEP 2 - Select option C

*The following message will appear on the screen:*

Hit Key:

STEP 3 - Type '-'

*The following message will appear on the screen:*

Supershift character is now - (Hex code: 2D)  
OK (y/n)?

STEP 4 - Type 'y'

*This will take you back to the Installation Option Menu*

You will see this change reflected in the Installation Option Menu

STEP 4 - If your terminal has a second set of function keys Type 'Y' and follow the steps above. Otherwise, type 'N'.

*This will take you back to the Installation Option Menu*

**Note:** Many Televideo computers (and possibly others) have two sets of function keys which generate entirely different strings of characters. SKpatch can install both sets, but to do so you will have to disable the SUPERSHIFT facility (see option S on the Installation Option Menu above).

#### **A Note on Function Key Character Sequences**

SmartKey II translates SUPERSHIFTed and special function keys identically. Each of your function keys is using up a potential SUPERSHIFTed key and this may cause duplication elsewhere on your keyboard.

To discover what character sequences your function keys are using up make sure the A> prompt is displayed and follow the steps below:

STEP 1 - Press the SETUP key

STEP 2 - Type the function key under investigation

*The function key character sequence will appear on the screen*

STEP 3 - Make a note of it

STEP 4 - Press the SETUP key

*This will take you back to the A> prompt*

To enable SmartKey II to recognise special function keys, make sure the Installation Option Menu is displayed and follow the steps below:

STEP 1 - Select option F from the Installation Option Menu

*The following message will appear on the screen:*

#### **Special Terminal Strings:**

Does your terminal have special function keys which generate a string rather than a single character (eg: Televideo 920) (y/n)?

STEP 2 - Type 'Y'

*SKpatch will instruct you to type two function keys*

Step 3 - Type two of the function keys (one after the other)

*The following message will appear on the screen:*

Does your terminal have a second set of keys which generate a string rather than a single character (eg: Televideo 920) (y/n)?

## 7 Reset/Ignore Bit 7

This option enables SmartKey II to recognise bit 7. It caters for custom software in which bit seven needs to be recognised. Unless this situation specifically occurs please do not install this option.

CP/M versions 1.4 and 2.2 and most software require that bit seven be reset to zero on any key that is typed. SmartKey II does this so there's no problem. If however, you are using some custom software that needs bit seven to remain unchanged, then make sure the Installation Option Menu is displayed and follow the steps below:

STEP 1 - Select option 7 from the Installation Option Menu

*The following message will appear on the screen:*

Specification of characters returned to CP/M:

Do you want Smartkey to reset 7 of each character passed to the system? (y/n)?

STEP 2 - Type 'Y'

*This will take you back to the Installation Option Menu*

You will see this change reflected in the Installation Option Menu.

## I Special Input Provision

This option enables you to set SmartKey II to recognise eight bit codes directly received from the keyboard. It is for use by computer experts only. We recommend that you carry out the basic installation procedures and become familiar with SmartKey II before attempting to install this feature.

CP/M versions 1.4 and 2.2 will normally reset any eight bit codes that they receive. Your keyboard may have keys that can transmit all eight bits. SmartKey II may be able to receive only seven, but you can remedy this by making sure the Installation Option Menu is displayed and selecting option I. Then run through the questions asked.

## S Specify Action on Warm Boot

This option caters for non standard CP/M actions on a warm boot sequence. The CP/M Warm Boot that accompanies a change in software or diskettes should have no effect on **SmartKey II** and unless you are having problems we recommend that you do not install this option.

Normally **SmartKey II** will allow the system to reload during a warm boot sequence. Once **SmartKey II** has been loaded it will stay in memory until you press the reset switch or use **FixKey** to terminate it.

But on some computers which do not adhere fully to the CP/M standards (some Superbrain, North Star and Osborne 1 models for example) you may need to prevent the system reloading for **SmartKey II** to operate properly. On these computers **SmartKey II** appears to load correctly but will not respond to the SETUP key and it may get terminated. Even worse, the system may 'hang' during a Warm Boot. If you have this problem you can install this option to let **SmartKey II** trap requests for a Warm Boot and handle things it's own way.

To see how this is done, make sure the installation Option Menu is displayed and follow the steps below:

- STEP 1 - Select option W from the Installation Option Menu
- STEP 2 - Type 'Y'

*This will take you back to the Installation Option Menu*

## C Set Console Status When Expanding Definitions

This option enables **SmartKey II** to send a 'not ready' signal to your system while it is undertaking an assignment. Almost all software packages require a 'ready' signal. Unless you specifically require **SmartKey II** to send a 'not ready' signal, please do not install this option.

**Note:** Some versions of dBase II require the 'not ready' signal. If it isn't received, one or more characters will be lost from the definition and you may need to install this option.

To enable **SmartKey II** to send a 'not ready' signal, make sure the Installation Option Menu is displayed and follow the steps below:

- STEP 1 - Select Option C from the Installation Option Menu
- STEP 2 - Type 'N'

*This will take you back to the Installation Option Menu*

## E Set Expansion Speed Delay

This option enables you to change the expansion speed delay. SmartKey II can type keys much faster than you can. Some programs cannot cope with very fast typists and they miss some of the keys typed. If this happens, you will need to tell SmartKey II to type more slowly and you do this by changing the Expansion Speed Delay.

To see how this is done, make sure the Installation Option Menu is displayed and follow the steps below:

STEP 1 - Select option E from the Installation Option Menu

STEP 2 - Type a number between '0' and '9'

*This will take you back to the Installation Option Menu*

## T Set Maximum Translation Table Size

This option enables you to adjust the size of the translation table. When you create definitions they are stored in a translation table in the computer's memory. SmartKey II allows a minimum of 0.5K bytes of space for the translation table and a maximum of 7.5K bytes.

For example, to see how you enlarge the translation table by 3k bytes, make sure the Installation Option Menu is displayed and follow the steps below:

STEP 1 - Select option T from the Installation Option Menu

*Information about the Translation Table will appear on the screen:*

STEP 2 - Type '3'

*This will take you back to the Installation Option Menu*

**Note:** SKpatch only asks you how much space you want to add. If you want to reduce the size of a large table you have created, set the table back to the original size by typing '0' and then add the amount required by following the steps above.

## H Enable/Disable Hexadecimal Mode

This option enables you to enter the hexadecimal value of characters while creating definitions. It caters for keyboards which cannot generate all ASCII codes and is mainly of interest to programmers.

To see how you enable the hexadecimal mode, make sure the Installation Option Menu is displayed and follow the steps below:

STEP 1 - Select option H from the Installation Option Menu

STEP 2 - Type 'Y'

*This will take you back to the Installation Option Menu*

Please see **APPENDIX 2** for information on how to use this option once it has been installed.

**Note:** With the hexadecimal option enabled, you will not be able to type the SETUP key character. Make sure the SETUP key character is one that you will not want to use regularly (preferably not at all). Refer to option K above.

## Modify Program and Quit

This option will install the changes you have made in the SmartKey II program and take you back to the A> prompt.

## Quit Without Modifying Program

This option will take you back to the A> prompt without installing any of the changes.

**SmartKey II** is a utility program designed to provide intelligent keyboard facilities for computers using the CP/M operating system. By intercepting calls to the Basic I/O System (BIOS), it allows individual keys on the console keyboard to be redefined to represent different character codes from those produced by the hardware.

Characters which are not available on a particular keyboard can be defined to little used keys. Non ASCII keyboards can be redefined to produce ASCII key codes. With **SmartKey II's** unique SuperShift feature, the effective number of keys on the keyboard can be greatly increased.

Keys can be defined to represent a character string of any length, thus providing a form of keyboard macro facility.

## DEFINITION TABLE SIZE

In the distributed version of the program, 0.5K bytes are allocated for definitions. This allows a total of about 250 characters for all the redefined keys. SmartKey II may be adapted to allow a larger area in increments of 1K up to a maximum of 7.5K bytes. This extra allocation is at the expense of memory occupied by the program. In systems with 48K or more this should not be a problem.

## PROGRAM COMPATIBILITY

SmartKey II is compatible with any transient program which complies with the standard CP/M conventions for input and output, and for determining the size of the available memory.

## MEMORY REQUIREMENTS

The residual portion of the standard SmartKey II program, that part of the program which remains permanently in memory, occupies 2.25K bytes at the top of the Transient Program Area. Under CP/M 2.2 SmartKey II loads below the Console Command Processor and prevents this being overlaid. The effective reduction in memory size is therefore 4.25K bytes.

## DEFINITION FILE STRUCTURE

A SmartKey II definition file consists of two sections:

1. A 512 byte Key Table
- and 2. A Definition area which may range from the standard 0.5K to 7.5K bytes in length, the standard is 0.5K

The key table contains one word for each of the 256 possible key codes returned by the BIOS. The FixKey pack function may be used to compact the table by removing definitions which are no longer valid.

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**FBNSUB UTILITY PROGRAM**

XSUB, the Digital Research extended submit utility distributed with CP/M Version 2.2 is incompatible with SmartKey II and other non-transient programs. FBNSUB, which is distributed with SmartKey II performs an identical function to XSUB and will operate with SmartKey II loaded.

FBNSUB is executed by including the command FBNSUB in a submit file before any program reading input from the submit sequence is invoked. It will remain in memory, sending an "FBNSUB active" message to the console at each warm boot, until the end of the submit sequence when it is automatically terminated.

Note that although SmartKey II can be loaded by a submit sequence, the SMARTKEY command should appear before the FBNSUB command in the submit file.



STEP 2 - Press [Return]

*This will take you back to the A> prompt*

Step 3 - Press the SETUP key

Step 4 - Type the key you want to define

Step 5 - Type a hex value (two characters range 0 - E)

*Nothing will appear on the screen*

STEP 6 - Press [Return]

*The ASCII representation of the hex value will now appear on the screen*

STEP 7 - Repeat steps 5 and 6 until all hex values have been entered

STEP 8 - Press the SETUP key twice

**Note:** Each hexadecimal value must be delimited by [Return]. When you type each value IT WILL NOT APPEAR ON THE SCREEN! The ASCII representation of each value will appear only when you press [Return].

To return to normal operation, make sure the A> prompt is displayed. Press the SETUP key twice and then press [Return].

APPENDIX 3 displays a translation table for hexadecimal values and ASCII characters.

### HEXADECIMAL INPUT

To cater for keyboards which cannot generate all ASCII codes, an optional hexadecimal input mode is provided with SmartKey II. This mode is not enabled in the distributed program as it will only be of use to a limited number of users. To enable the hexadecimal input option, please refer to the section entitled "SKPATCH".

With this option installed, you can toggle between normal input and hexadecimal input while creating your definitions. Each definition can be entered straight from the keyboard or as hexadecimal values but not a mixture of both.

To see how this is done, make sure that SmartKey II is loaded, that you have installed the hexadecimal input option using SKpatch, that the A> prompt is displayed and follow the steps below:

STEP 1 - Press the SETUP key twice

*The following message will appear on the screen:*

```
SMARTKEY: hex mode
[
```

**Note:** If you have changed the SETUP key to some other character other than the left hand square bracket, this will appear in its place.



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## SOFTWARE

### Word Processors and compiling definitions

When using a word processor to create definitions, make sure you are creating a standard ASCII file with only ASCII characters in it. Some word processors create non-ASCII characters to files to cater for word-wrap, justification etc. SmartKey II cannot accept definitions with these characters in them.

### dBaseII

Almost all software packages require SmartKey II to send a ready signal to your computer. Some versions of dBaseII require a not ready signal. If it is not received some characters may be lost from your definition.

Please refer to FixKey option C.

### Perfect Writer

Because of memory requirements, SmartKey II will only work with Perfect Writer if you are creating small documents (two pages or less) or if you use double spacing (regardless of length). In all other cases SmartKey II will not work with Perfect Writer.

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