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T800 Programming Software
User's Manual

PGM800Win Version 1.0

For Windows

439-80001-01

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About This Manual

Welcome to PGM800Win v1.0, the Tait programming software for T800 series base station equipment. This software provides an easy way to enter frequency information into T800 series equipment, using a standard IBM PC (or compatible). This introductory section provides background information that you should read before using this manual.

Overview

This manual is intended as an installation guide and overall reference for the programming software. It provides the following information:

■ An overview of the software.

■ Basic usage instructions.

■ A reference manual for all parameters and settings.

Who Should Read This Manual?

This manual is designed for use by Tait retailers, distributors and customers who are programming T800 base station equipment.

What Do You Need To Know?

Users of the Tait radio programming software should be familiar with the following:

■ Radio system and radio network settings and parameters.

■ General PC and Windows operation.

What's Included?

This manual has an introduction, six chapters, one appendix and the Tait Software Licence Agreement.

Chapter	Description
About This Manual (pages 1 to 8)	Introduces the manual and explains how to use it. Also includes a Table of Contents.
Chapter 1 (pages 1-1 to 1-4)	Introduces the software and gives basic hardware requirements.
Chapter 2 (pages 2-1 to 2-4)	Explains how to install the software.
Chapter 3 (pages 3-1 to 3-4)	Gives basic information on how to operate in a Windows environment.
Chapter 4 (pages 4-1 to 4-10)	Gives instructions on how to use PGM800Win v1.0 by means of an example which can also function as a tutorial.
Chapter 5 (pages 5-1 to 5-14)	Gives detailed descriptions of all commands.
Chapter 6 (pages 6-1 to 6-6)	Lists error messages along with possible causes and remedies.
Appendix A (pages A-1 to A-4)	Explains how to use PGM800Win v1.0 on a PC without a mouse attached, using keyboard commands.
Licence (pages i to vi)	Tait Software Licence Agreement and Tait company addresses.

Typographic Conventions

This manual uses the following conventions:

Symbol	Definition
< >	Angle brackets in text show the key to push. Text of this sort should not be typed verbatim.
__	Underline represents text you must type (such as command-line).
" "	Double quotes represent text as it appears on screen.

Mouse Conventions

This manual uses the following conventions:

Mouse	Definition
Point	Move the mouse until it points at the desired selection.
Drag	Hold down the mouse button while you move the mouse.
Click	Quickly press and release the mouse button.
Double click	Click the mouse button twice in rapid succession.

Note: The default setting is the left mouse button. You may for your own convenience customise your mouse (see your Windows User's Manual).

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Introduction

Chapter 1

PGM800Win Package

PGM800Win v1.0 is a comprehensive software package designed to allow easy programming of TAIT T800 series base stations. The base stations supported by PGM800Win are:

Base Station	Normal Freq.	Freq. Steps
T825	66-88MHz	6.25kHz/5.00kHz
T826	66-88MHz	6.25kHz/5.00kHz
T827	66-88MHz	6.25kHz/5.00kHz
T835	136-156MHz	6.25kHz/5.00kHz
	148-174MHz	6.25kHz/5.00kHz
T836	136-156MHz	6.25kHz/5.00kHz
	148-174MHz	6.25kHz/5.00kHz
T837	136-156MHz	6.25kHz/5.00kHz
	148-174MHz	6.25kHz/5.00kHz
T851	400-440MHz	12.5kHz/6.25kHz
	440-480MHz	12.5kHz/6.25kHz
	480-520MHz	12.5kHz/6.25kHz

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Base Station	Normal Freq.	Freq. Steps
T855	340-380MHz	12.5kHz/6.25kHz
	380-400MHz	12.5kHz/6.25kHz
	400-440MHz	12.5kHz/6.25kHz
	440-480MHz	12.5kHz/6.25kHz
	480-530MHz	12.5kHz/6.25kHz
T856	400-440MHz	12.5kHz/6.25kHz
	440-480MHz	12.5kHz/6.25kHz
	480-512.29375MHz	6.25kHz only
	480-520MHz	12.5kHz/6.25kHz
T857	340-380MHz	12.5kHz/6.25kHz
	400-440MHz	12.5kHz/6.25kHz
	440-480MHz	12.5kHz/6.25kHz
	480-512.29375MHz	6.25kHz only
	480-520MHz	12.5kHz/6.25kHz
T865	220-245MHz	6.25kHz/5.00kHz
	240-270MHz	6.25kHz/5.00kHz
T867	220-245MHz	6.25kHz/5.00kHz
	240-270MHz	6.25kHz/5.00kHz
	265-285MHz	6.25kHz/5.00kHz
T875	330-380MHz	12.5kHz/6.25kHz
T877	330-380MHz	12.5kHz/6.25kHz
T881	800-880MHz	12.5kHz only
	850-960MHz	12.5kHz only
T885	800-880MHz	12.5kHz only
	850-960MHz	12.5kHz only

The Windows driven environment is easy to use and offers ex-
cellent flexibility to the user. Moving between Windows and
within Windows using a mouse or the cursor keys is simple.
Help information is available at every step if required.

PGM800Win v1.0 allows user specified channel information to
be saved onto disk and retrieved at any time. This is then used
in conjunction with a separate EPROM programmer to trans-
fer the information to an EPROM for installation in the base
station itself.

Data from the saved files or from a base station may be print-
ed, providing you with a permanent copy for your own records.

*Note: A separate user supplied EPROM programmer must be
used. It should be capable of programming from Binary
or Intel Hexadecimal files. Refer to the "Initial Tuning
& Adjustment" section of your Service Manual for more
detailed information on channel programming.*

New Features In PGM800Win v1.0

PGM800Win v1.0 is different in concept from DOS versions of
PGM800 in that it is Windows driven. It includes many new
and improved features over DOS versions of PGM800.

Major changes are outlined below:

■ The Windows environment makes data entry and editing
significantly easier.

■ Includes several new radio models which are not program-
mable with DOS versions of PGM800.

■ Out of range frequencies will result in warning messages
and will not be accepted for entry into the standard library

module. User defined modules can be created allowing variation from the standard library module.

■ Channel numbers default to 0-127 to match the EPROM memory locations, however the user can change this setting so that the channel numbers run from 1-128 to suit his/her particular needs.

Note: The datafiles produced by BASEPROG v1.0 and all DOS versions of PGM800 are still compatible with PGM800Win v1.0.

Requirements

The basic requirements for running PGM800Win v1.0 are:

■ IBM PC or true IBM compatible computer.

■ Windows version 3.1 or higher, or Windows 95.

■ 4 Mbytes of RAM (8 Mbytes recommended with Windows 95).

■ Any 80-column monitor (monochrome, colour, LCD or Plasma).

■ One floppy disk drive and one hard disk drive with 3 Mbytes free space.

■ An EPROM programming device and appropriate software capable of programming an EPROM from an Intel Hex format or Binary file.

To take full advantage of PGM800Win's features, a printer is also recommended.

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Before You Start

Chapter 2

Checking Your PGM800Win Package

Your PGM800Win package should contain the following:

■ A set of three 3½ inch high density disks.

■ T800 Programming Software User's Manual.

If any of these items are missing or damaged, please contact your nearest approved Tait Dealer or service centre.

Making A Back-up

Before you install PGM800Win, you should make a complete working copy of the original PGM800Win program disks. Your computer's DOS manual will explain how to use the disk copy command supplied with your computer.

Once you have copied them, store the original disks in a safe place and use the copies to install the program.

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Installing PGM800Win

To install PGM800Win onto your hard disk proceed as follows:

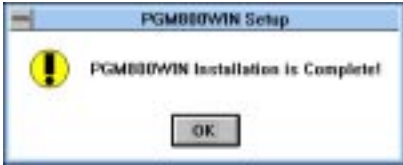| Step	Description
Step 1:	If Windows is not already running, at the DOS prompt, type <u>WIN</u> and press <ENTER>
Step 2:	Insert Disk 1 into drive A (or drive B).
Step 3:	Choose RUN from the File menu in Program Manager. The following dialog box appears.
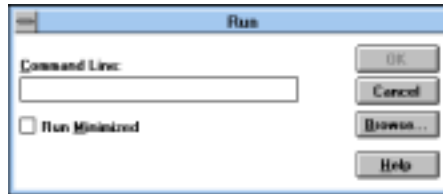
Step 4:	In the Command Line, type <u>a:\setup</u> (or <u>b:\setup</u>) and click "OK".
Step 5:	An "Initialising Setup" message will appear. This may be followed by.

Step 6:	Ignore this message. Click "OK". The following box will appear.

Step	Description
Step 7:	Once you have selected your preferred directory, click "Continue". PGM800Win will start loading and a message on the screen tells you what percentage is loaded at any particular time. At the following prompt, insert Disk 2 and click "OK".

Step	Description
Step 8:	The setup continues. At the following prompt, insert the database disk and click "OK".

Step	Description
Step 9:	The setup continues to completion and the following box is displayed.

Step	Description
Step 10:	Click "OK" and you will be returned to the Program Manager, which will now include a Program Group window for PGM800Win. You can resize this window and place it in a convenient place in your Program Manager window.

2-4   Before You Start

About Windows

Before we describe the various Windows menus available to you, we suggest that you take a few minutes to familiarise yourself with how to move around the Windows environment, particularly if you do not have the use of a mouse.

Note: Keyboard commands are described in Appendix A.

While you are in PGM800Win, on-line help is available to you at all times. Simply click "Help" on the menu bar.

Click "File" on the menu bar and a drop down menu gives you the following choices.

Menu	Function
New	Opens the "New File" dialogue box. Creates a new EPROM file.
Open	Opens the "Open File" dialogue box. Opens an existing EPROM file.
Save	Saves an opened EPROM file using the same filename.
Save As	Saves an opened EPROM file using the filename specified.
Close	Closes the active file. If any changes have been made, a dialogue box will give you the option to save those changes.
Print	Prints the channel information and dip switch settings of the active file.
Print Setup	Takes you into the setup procedure which allows you to determine the style and the printer to which you output your file.
Preferences	Allows you to choose the default directory.
Exit	Takes you out of PGM800Win back to Program Manager.

Click "Edit" on the menu bar and a drop down menu gives you the following choices.

Menu	Function
Undo	Cancels the previous editing operation.
Cut	Deletes the selected text and places it on the Clipboard.
Copy	Makes a copy of the selected text and places it on the Clipboard.
Paste	Pastes text from the Clipboard into the active window.
Clear	Clears selected text or frequencies.
Select All	Selects all the frequencies in your file (you can then Copy and Paste them into another file).
Database	This selection is further divided into "Add Module" and "Edit Module". These will be discussed in more depth in Chapter 5.

Click "View" on the menu bar and a drop down menu gives you the following choice.

Menu	Function
Tool Bar	Allows you to select whether you want the tool bar visible or not. If you are operating from a PC with a smaller screen, you may want to switch the tool bar off to give you more space.

Click "Window" on the menu bar and a drop down menu gives you the following choices.

Menu	Function
Tile	Allows you to arrange open files so that all can be seen.
Cascade	Allows you to arrange open files so that only the title bar can be seen.

Note: The Window menu also shows all the files currently open, with a "tick" against the file which is active.

Click "Help" on the menu bar and a drop down menu gives you
the following choices.

Menu	Function
<u>C</u>ontents	Gives an index of the help available on topics on the menu bar.
<u>S</u>earch	Opens a dialogue box which allows you to search for help on a partic-ular subject.
<u>A</u>bout	Tells you about PGM800Win software.

Running PGM800Win

Chapter 4

A Short Example

Now you have installed PGM800Win on your system and are ready to start programming. At this point, it is appropriate to find out a few basics. For instance, how to start PGM800Win, how to enter data, how to save the data to an Intel Hexadecimal or Binary formatted file and so forth.

Brief explanations on how to use PGM800Win to perform a simple example will be given. For a comprehensive explanation of the whole PGM800Win programming system, please refer to *Chapter 5, Detailed Description.*

Note: Throughout this Manual, instructions on how to move about the program assume that a mouse is connected to the system. If you do not have a mouse fitted, movement around the program can be achieved using the keyboard. A brief description of the more common keyboard commands are detailed in Appendix A. For more detailed information, please refer to your Windows User's Guide.

To Start PGM800Win
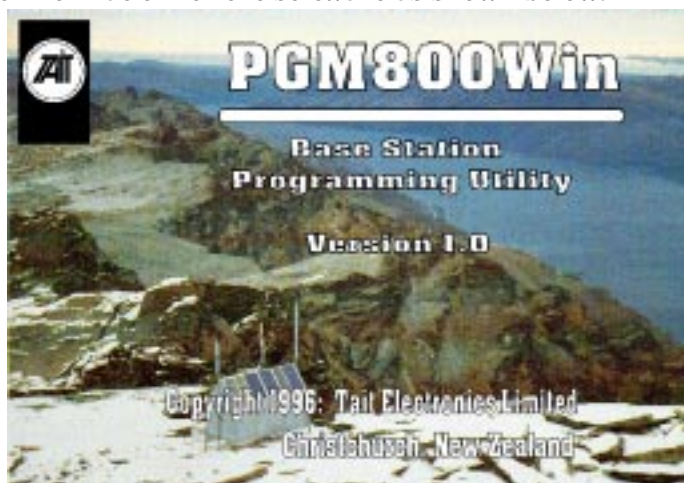
■ In Program Manager, double click on the PGM800Win icon.

4-2   Running PGM800Win

After starting the program, the title screen will be displayed for three seconds. This time delay can be by-passed by clicking on the screen. It shows the version number, date and copyright information for the software as shown below.

The title screen is followed by the main menu as shown below.

Information Required

The remaining sections of this chapter provide a step by step demonstration of how to use PGM800Win. This encompasses:

■ How to start a new file.

■ How to enter data.

■ How to save data in an Intel HEX or BIN formatted file.

■ How to load an existing data file.

The following information shows how to program a T825-15 base station fitted with T800-02 CTCSS module.

Base station module: T825-15 (receiver)

Serial No. of base station: 1234567

User's remark: Just testing

Starting frequency: 66.0000 MHz

Channel spacing: 12.5 kHz

The following frequencies are to be programmed into the corresponding channels:

Channel	Rx (MHz)	CTCSS (Hz)
0	66.0000	67.0
1	66.0125	
2	66.0250	114.8
3	66.0375	
4	66.0500	
.		
.		
49	66.6125	

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*Note: CTCSS information can be ignored if the T800 base sta-
tion does not have a T800-02 CTCSS module fitted, or a
particular channel does not require it.*

In this example, a hard copy of the channel information will
be taken and the data will be stored on disk under the name
T825-15.BIN.

*Note: If you do not have a printer, or do not require a hard
copy, ignore the paragraph entitled "To Print Data"*

To Enter Data

■ Click "File" in the menu bar. A drop down menu appears.

■ Click "New". The following dialogue box appears.

■ Click on the arrow in the square box at the right of the cur-
rent T800 module. A drop down list box appears with a list
of T800 modules which can be programmed.
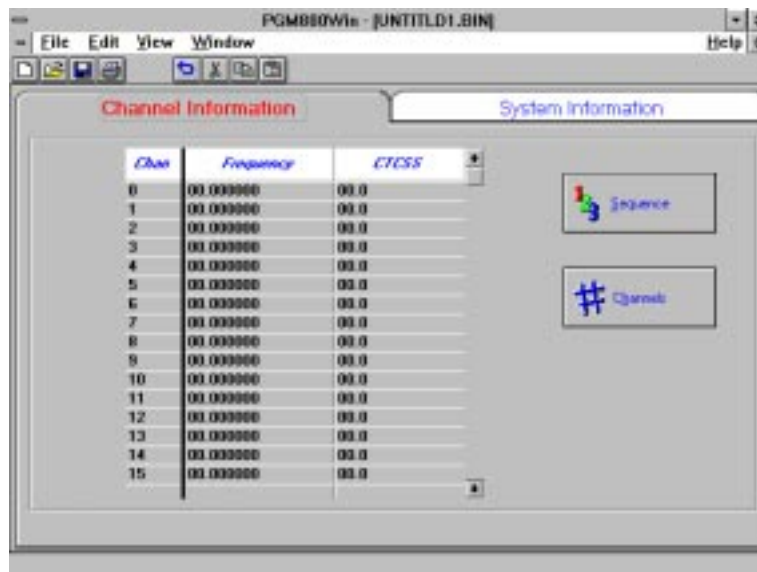
■ Select T825-15 from this list and click "OK". The following tabbed window appears.

■ Place the cursor in the "User Remark" box and type <u>Just testing</u>.

■ Place the cursor in the "Module ID" box and type <u>1234567</u>.

■ Point at the "Channel Information" tab and click on it. The following window appears.

■ Click on "Channels". The following dialogue box appears.

■ Place the cursor in the "New" box, delete the current number and type 50. Click "OK". The dialogue box closes.

■ Click on "Sequence". The following dialogue box appears.

■ Click on the arrow to the right of "Channel Spacing". Click
on "12.5kHz".

■ Click "OK". The dialogue box disappears. The channel in-
formation has been automatically inserted into 50 chan-
nels, starting from 66MHz and incrementing in 12.5kHz
steps.

■ Click in the CTCSS column for the frequency of 66MHz.
An arrow appears on the right hand side of this box. Click
on the arrow and a drop down box appears. Use the arrows
to scroll up or down this box. Click on "67.0Hz". This fre-
quency is automatically inserted into the CTCSS line cor-
responding to 66MHz.

■ Repeat the above procedure to insert a CTCSS frequency of
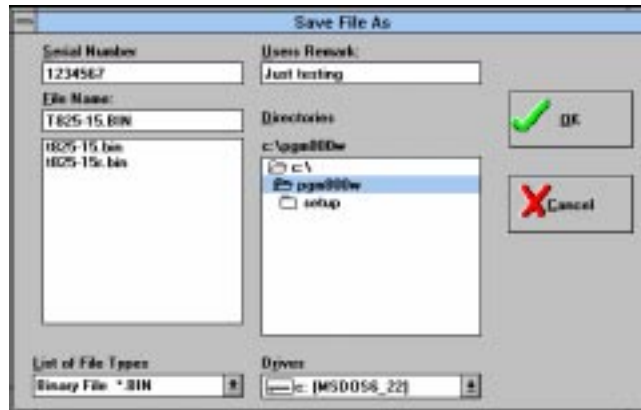114.8Hz against the channel frequency of 66.025MHz.

To Save Data

To save the data you have just entered, proceed as follows:

■ Click "File" in the top left hand corner of your screen, and

click "Save". The following dialogue box appears.

■ Place the cursor in the "File Name" box and type <u>T825-15.BIN</u>.

■ Click "OK". The channel data which you entered for the T825-15 module is now saved as "T825-15.BIN". Click "File" and "Close".

Note: The .BIN extension is used if your EPROM programmer accepts Binary format files. Alternatively, the .HEX extension can be used if your EPROM programmer accepts Intel Hexadecimal formatted files. The default is to .BIN extension, however you can select .HEX by clicking on the arrow under "List of File Types" and choosing that option.

To Open A Data File

In order to open a previously saved data file, proceed as follows:

■ Click "File" in the top left hand corner of your screen, and

click "Open". The following dialogue box appears.
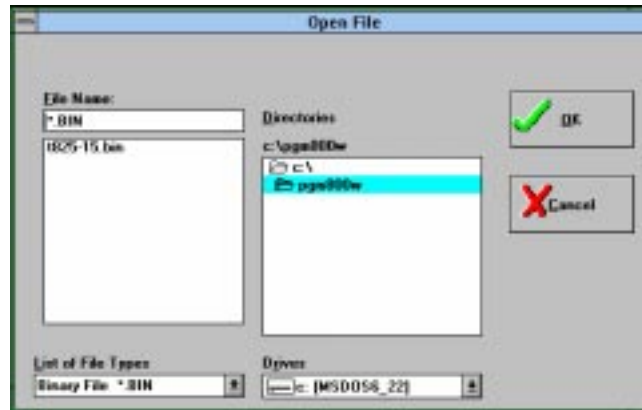
■ Select the directory in which you have saved your file.

■ Select "T825-15.BIN" under "File Name" and click "OK".

The "System Information" window will be displayed, showing the Module Serial Number as "1234567" and the User Remark as "Just testing".

■ Click on the "Channel Information" tab. The data displayed should be what you have entered before.

Note: Since entries in Starting Channel, No. of Channels, Starting Frequency and Channel Spacing are used to assist in frequency entry only, they are not saved in the file and hence they will return to their default settings once the memory is cleared.

To Print Data

To produce a printed copy of the channel information:

■ Power up your printer, making sure that it is on-line.

■ Click "File" in the top left hand corner of the screen, and

click "Print". The following dialogue box appears.

■ Click "Setup" and ensure your printer is selected. Set the
   paper size to portrait A4 or US Letter for best results.

■ Click "OK". The printer will then print a hard copy of the
   data entered.

■ Should you need to change any of your printer's parame-
   ters, there is a setup option on the above dialogue box.

*Note: The default is set to output information to your printer.
       You can, however, save the information in ASCII text
       format to disk for future use. To do this, select "Prefer-
       ences" from the "File" menu.*

What You Have Achieved

To see what you have achieved proceed as follows:

■ Click "File" in the top left hand corner of your screen and
   click "Exit".

■ Go to Program Manager and select File Manager.

■ Go to the directory and sub-directory where you have in-
   stalled PGM800Win and you will see a file called "T825-
   15.BIN". This file contains the channel information which
   you entered and can be transferred to an EPROM with a
   suitable EPROM programmer.

Detailed Description

Chapter 5

This chapter provides more detailed information on PGM800Win. It explains PGM800Win and Windows terminology and describes how manual and automatic insertion works

On opening a data file (whether new or previously generated) in PGM800Win, you are presented with a screen which looks like this:
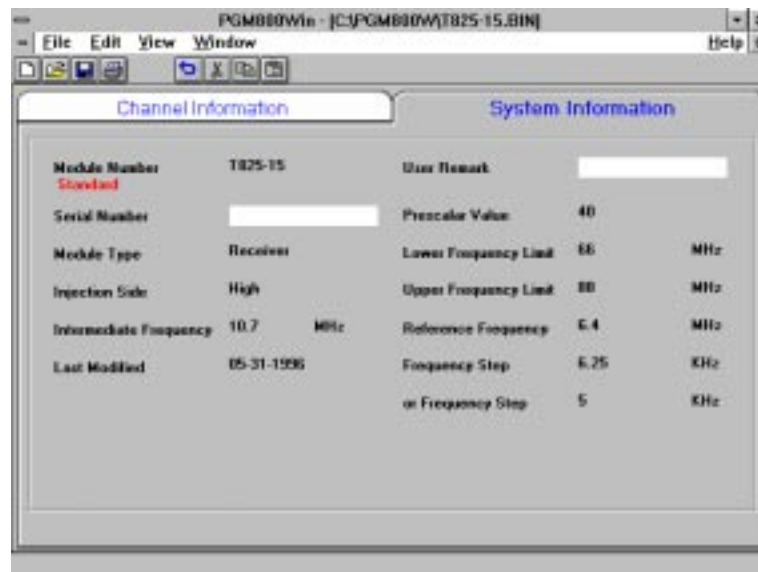
There are in effect two pages on this screen, "System Information" and "Channel Information". You can switch between these pages by clicking on the relevant tab.

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System Information

This tabbed page lists the parameters of the module you have selected. These are described below.

Field	Description
Module Number	This field lists the chosen module by "T" number and whether it is a "Standard" or "User Defined" module.
Serial Number	This field allows the user to uniquely label any module. A maximum of 7 characters may be used.
Module Type	This states whether the module is a Receiver, Transmitter or Exciter.
Injection Side	This field shows whether the oscillator frequency injection is above or below with respect to the RF input frequency.
Intermediate Frequency	This is the difference between the RF input frequency and the local oscillator frequency.
Last Modified	This shows the date the EPROM file was last modified.
User Remark	This field allows the user to enter a unique message. A maximum of 16 characters may be used (e.g. customer name).
Prescaler Value	This is a programmable divider used to divide the local oscillator frequency down to a frequency acceptable to the synthesiser. Examples of prescaler values used are 40/41, 64/65 and 80/81.
Lower Frequency Limit	This is the minimum RF frequency with which the radio may be programmed.
Upper Frequency Limit	This is the maximum RF frequency with which the radio may be programmed.
Reference Frequency	This frequency is used by the synthesiser as a high stability reference (6.4MHz in the Receiver, 200kHz in the Transmitter and Exciter).
Freq Steps	These fields show the minimum channel spacing for the module.

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Channel Information

This tabbed page allows you to enter data for up to 128 different channels. There are two parameters for each channel, and both parameters are optional:

■ The Receiver (Rx), Transmitter (Tx) or Exciter (Ex) frequency in MHz.

■ The CTCSS frequency in Hz.

You may choose automatic or manual insertion to enter either parameter in the channels of your choice. Automatic insertion is described later in this chapter in the paragraph entitled "Sequence". To manually insert parameters proceed as outlined below:

Receive Or Transmit Frequency

This field specifies the frequency which the base station receives or transmits on the corresponding channel. The normal frequency band for each base station model selected is given in *Chapter 1, Introduction*. You may enter any frequency in the channel of your choice by clicking in the appropriate field and typing in the frequency.

The entered frequency must be divisible by the frequency step (channel spacing) of the base station. Some base stations can be programmed with one of two possible frequency steps, such as 6.25kHz and 5kHz. In this case, the entered frequencies must be divisible by either one of the frequency steps, otherwise an error message is generated and you will not be allowed to continue until an appropriate frequency is selected.

If the entered frequency is divisible by both frequency steps, then the higher of the two will be automatically selected.

Any entered frequency which is divisible by the frequency step but outside the normal band will generate an error message and you will not be allowed to continue until an appropriate frequency is selected.

CTCSS Frequency

This field specifies the CTCSS frequency to be used for the corresponding channel if a T800-02 CTCSS module has been installed in the base station. You may enter any frequency in the CTCSS field of your choice by clicking in the appropriate field until it is highlighted, deleting its contents and typing in the new frequency.

The entered CTCSS frequency is checked against a look-up table, and an error message is generated if an invalid CTCSS frequency has been entered.

A list of valid CTCSS frequencies is available for you to choose from. To access this, place the cursor in the relevant "CTCSS frequency" field and click on the arrow to reveal a drop down menu containing all the valid CTCSS frequencies.

Channels may be programmed without a corresponding CTCSS frequency if desired. In this case, the EPROM will be automatically programmed to provide MSB 0000000010 LSB output from the T800-07 Multichannel Memory PCB. This is detected within the T800-02 CTCSS unit and used to defeat the CTCSS (later model CTCSS units only: PCB issue 225-01202-02 onwards).

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Sequence

You may automatically insert groups of frequencies by clicking "Sequence". Selection of this button allows the user to define the following:

■ Starting Channel field defines the channel number of the first automatically inserted frequency.

■ No. of Channels field defines the amount of channels in this particular sequence which will have a frequency inserted automatically.

■ Starting Frequency states the first frequency for the block of automatically inserted frequencies with constant increments. A warning message will be displayed if the entry exceeds the frequency range for that radio module and you will not be allowed to proceed until an appropriate frequency is selected.

■ Channel Spacing field specifies the constant increment between two channels in the block. The entry here has to be divisible by the frequency steps of the radio module selected or an error message will be displayed.

These fields together make the automatic insertion feature work. If the entries are not complete, automatic insertion will not function.

Unless cleared, all the frequencies will remain in memory. This allows for repeated use of the automatic insertion feature to input constant incrementing frequencies in blocks with irregular frequencies in between.

Channels

Selection of this button allows the user to define the total number of channels s/he wishes to program.

Windows Information

The various Windows menu options are described in Chapter 3. It is, however, appropriate to explain the more important ones in more detail in this chapter.

New

This option allows you to create a new file, with all the default settings of the particular module selected. You may then edit the module to enter relevant frequency and CTCSS information into the channels of your choice.

Click "File" and "New". The following dialogue box will be displayed:

Scroll through the modules available in the database to find the one you require. Click on your selection and click "OK". The module you chose is opened and the "System Information" page is displayed.

You may now edit the module, inserting frequency and CTCSS information.

Open

This option allows you to open any file with extension .BIN or .HEX that has been produced by PGM800Win v1.0. Additionally, files produced by the earlier versions of the program, BASEPROG, PGM800 v2.01 and PGM800 v2.21, can also be opened. It is not possible to open more than four files at any one time.

Click "File" and "Open". The following dialogue box will be displayed:
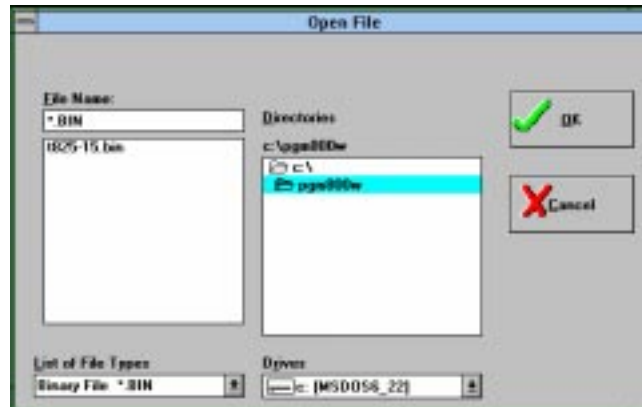
Select the directory from which you wish to open your file. All the files on that directory which have file name extension .BIN will be displayed. If you want a listing of .HEX files, you can select that option in the bottom left corner of the dialogue box.

To open a specific file, double click on its filename. PGM800Win will open the file and display the "System Information" page. You may now enter a "User Remark" and a unique "Serial Number", each up to 16 characters long. Click on the "Channel Information" tab. You may now edit the frequency and CTCSS information as described earlier in this chapter.

Note: The file name extension is very important here. OPEN will accept file names only with the .BIN (signifying Binary format file) or .HEX (signifying Intel Hexadecimal format file) extensions. Any other extension will generate an error.

Save

This option allows you to save all the entered data in a file. Click "File" and "Save". If the file already exists, it will be automatically saved without any warning messages being generated. It will overwrite any information previously saved in that file.

If the file does *not* already exist, then you will be given the option to "Save As".

Save As

Click "File" and "Save As". The following dialogue box will be displayed:

You may select the drive, directory and filename under which you want to save your file. If the entered file specification matches an existing file, the following dialogue box will appear:
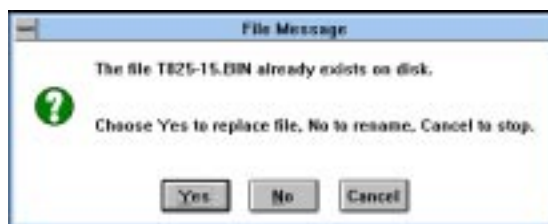
You may then choose to overwrite the file, rename it, or cancel the operation completely.

5-10   Detailed Description

Note: The filename extension is very important here. Save and Save As will accept file names only with the .BIN (signifying Binary format file) or .HEX (signifying Intel Hexadecimal format file) extensions. Any other extension will generate the following error.
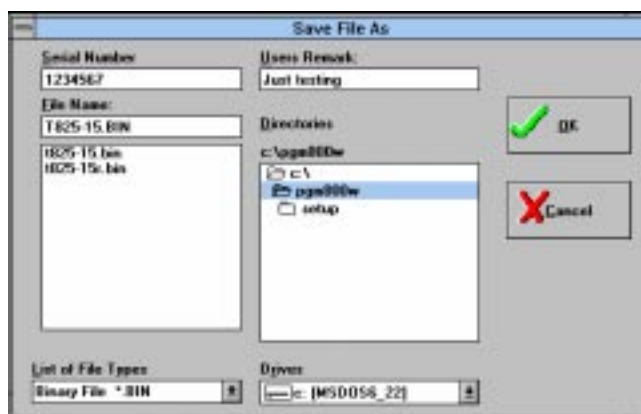

Preferences

Click "File" and "Preferences". The following dialogue box will be displayed:

You may now specify the following options:

■ The default directory in which you want to save your files.

■ To print your files to your printer, or to an ASCII text file, in which case the output will be saved to the stdout.txt file.

■ To number your channels either from 0 to 127, or 1 to 128.

Database Information

This option is selectable from the "Edit" menu and gives you a choice to "Add Module", which allows you to add a module with specific parameters, or to "Edit Module", which allows you to edit parameters stored in a user defined module.

Warning: Altering the database should not be undertaken lightly. The option is provided to allow users to overcome particular problems. Before choosing to alter a standard module, you may wish to discuss your specific requirements with your local Tait Dealer or Service Centre. All modules are presented to the user as if they are in a single database. However, in order to protect the integrity of the "Standard" modules, these are held in a separate database to any "User Defined" modules.

Add Module

This selection allows you to create a *User Defined* module based on a standard module into which you can enter data outside the parameters of the standard module.

5-12   Detailed Description

Click "Edit", "Database" and "Add Module". The following window will be displayed:

You may change any of the parameters in the white boxes and then click "Add". If the module number already exists in the database, the following error message will be given:

This is designed to prevent corruption of the standard database.

Once created, this module is saved to a separate user defined database, to prevent corruption of the standard database.

Note: These databases are combined into a single list for presentation to the user.

Edit Module

This selection is only available for a user defined module. Once again this is designed to prevent corruption of the standard database.

Click "Edit", "Database" and "Edit Module". The following window will be displayed:

You have three choices available to you:

■ You can alter the information in a previously saved module by editing the white user defined fields and then clicking "Update".

■ You can remove a user defined module by clicking "Delete".

■ You can include a new user defined module by editing the white fields and clicking "Add". You must, however, change the module number.

EPROM Programming

By following the procedures laid out in this manual, you will build up a library of files for all your Rx, Tx and Ex modules. These files will contain the channels, frequencies and CTCSS information which you require from your modules.

This information can be transferred to an EPROM with a suitable EPROM programmer. Following the EPROM programmer supplier's instructions will result in a correctly programmed EPROM for each of your modules.

Error And Warning Messages

Chapter 6

PGM800Win diagnostic messages fall into two classes: Errors and Warnings. These messages are displayed in the centre of the screen as they occur.

Errors indicate invalid data entered, illegal conditions, or an incorrect order of data entry attempted and are accompanied by an exclamation mark or an information symbol. They may be displayed in "Standard" or "User Defined" modules.

Warnings are only displayed in a "User Defined" module and are accompanied by a question mark. They do not prevent you from proceeding. They indicate data entry that is outside the normal limits. Data entered with a warning message will be accepted and processed accordingly.

In the following lists, error messages are presented first, followed by warning messages. A probable cause and remedy are provided for each message. All messages are listed alphabetically.

6-2   Error And Warning Messages

Error Messages	Possible Causes	Possible Remedies
Cannot find record	The module you want to delete is not in the database	Check the database for the correct name of the module you wish to delete
Cannot find the file <PATH:Defdir.txt>. Ensure this file exists	The file does not exist on the path specified	Put the file in the path. If the file does not exist, create it and, using a text editor, enter: 0 on line 1 1 on line 2 and 0 on line 3
Cannot find the file <PATH:Txxx-xx.ext>	The file does not exist on the path specified	Ensure the directory and filename are correct
Cannot find the file <PATH:xxxx.mdb>	The database files are not in the directory in which the application is installed	Locate the specified files and copy into the application's directory
Cannot have a duplicate module	You have tried to add a module which already exists	Select "Add Module", rename it and click on "Add"
Cannot have more than 4 windows open	You have tried to open more than 4 modules	Save and close a previously opened module and then open the module of your choice
Cannot open your file for that type of access	The file is incompatible with PGM800Win	Select a compatible file
Channel spacing must be a multiple of <Freq. step(s)>	The frequency entered is not divisible by the Frequency step(s)	Select a channel spacing from the drop down menu or manually enter an acceptable frequency
Checksum error	The data in the file is not in the correct format	Select a compatible file
Device appears to be unavailable	You are trying to access a device which is not available to your computer	Select a valid device
Disk is full	There is no room left on the chosen drive	Make space on your drive or choose another drive

Error Messages	Possible Causes	Possible Remedies
End of file	An attempt was made to read past the end of the file.	The file is likely to be corrupt. Select a valid file
Error opening window	There is an application error	Exit the program and start again
Error printing the file. Make sure your printer is connected	Printer is not selected, not on line, jammed or out of paper	Select the printer and ensure it is on line and serviceable
Error reading from file	The file is not compatible with PGM800Win	Select a compatible file
Error reading into window	There is an application error	Exit the program and start again
Error writing to stdout.txt	Stdout.txt is probably corrupt	Delete stdout.txt from File Manager and try again
File extension must be .BIN or .HEX	You have entered the wrong file extension	Enter the correct extension
File has a non-standard end-of-file marker, or an attempt has been made to read beyond the end of the file marker	The file is not compatible with PGM800Win	Select a compatible file
File is already open	You have attempted to open a file which is already open	Select the correct file
Filename is illegal	The file is corrupted	Select a valid file
Frequency goes beyond bandwidth	The entered frequency is greater than the upper frequency limit	Enter a frequency which is inside the range of the module selected
Frequency is less than bandwidth	The entered frequency is less than the lower frequency limit	As above
Frequency must be a multiple of <Freq. step(s)>	The frequency entered is not divisible by the Frequency step(s)	Enter a frequency which is divisible by the Frequency step(s)

6-4   Error And Warning Messages

Error Messages	Possible Causes	Possible Remedies
Frequency Step must be a number	You have entered a character	Check for a typographical error
Frequency Step must be between 0 and 99.9kHz	The Frequency Step entered is outside the range	Select a Frequency Step inside the range
Insert a disk in the drive and close the door	There is no disk in the floppy drive or it has been inserted incorrectly	Insert a disk into the floppy drive correctly
Intermediate frequency must be a number	You have entered a character	Check for a typographical error
Intermediate frequency must be between 0 and 255MHz	The intermediate frequency entered is outside the range	Select an intermediate frequency inside the range
Internal disk error	The hard disk has been corrupted	Consult your system manager
Invalid frequency	The frequency entered is either excessively large or has a character in it	Select a frequency inside the range
Lower frequency must be a number	You have entered a character	Check for a typographical error
Lower frequency must be between 0 and 9999MHz	The lower frequency entered is outside the range	Select an intermediate frequency inside the range
Module Txxx-xx is not in the database	You have tried to select an incorrect module	Check the module number and try again
No current record	Access to the database has failed	Select a valid module
Not enough channels in your table	The number of channels in the sequence goes beyond the last channel in the table	Reduce the number of channels in the sequence or Increase the number of channels available using the "Channels" button
Nothing to copy	This error could occur when you try to copy information from a new file	There is no information in the file to copy

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Error Messages	Possible Causes	Possible Remedies
Nothing to cut	As above	As above
Nothing to paste	As above	As above
Nothing to undo	As above	As above
Path does not exist	The directory specified does not exist	Create the directory in File Manager
Prescalar must be an integer value	You have entered a decimal value	Make prescalar an integer
Prescalar must be between 0 and 255	You have entered an out of range value	Enter a value between 0 and 255
Prescalar value must be a number	You have entered a character	Check for a typographical error
Reference Frequency must be a number	You have entered a character	Check for a typographical error
Reference Frequency must be between 0 and 25.5MHz	You have entered an out of range value	Enter a value between 0 and 25.5MHz
Upper frequency limit must be a number	You have entered a character	Check for a typographical error
Upper frequency limit must be between 0 and 9999MHz	You have entered an out of range value	Enter a value between 0 and 9999MHz
Upper frequency limit must be greater than lower frequency limit	You have entered an upper frequency limit which is less than the lower frequency limit	Check both frequency limits and amend
Value must be an integer	You have entered a decimal	Make value an integer
Value must be a number	You have entered a character	Check for a typographical error
Value must be a positive number	You have entered a negative value	Enter a positive value
Wrong file format	The HEX file read was of the wrong format	Select a valid file

6-6   Error And Warning Messages

Warning Messages	Possible Causes	Check
Channel spacing should be a multiple of <Freq. step(s)>	The frequency entered is not divisible by the Frequency step(s)	Ensure the channel spacing you have chosen is the one you want. If not, click "No" and enter the correct channel spacing
File Txxx-xx.ext already exists on disk	You have chosen a filename which already exists	Check the filename. If you choose "Yes", you will over-write the file!
Frequency should be a multiple of <Freq. step(s)>	The frequency entered is not divisible by the Frequency step(s)	Ensure the frequency you have chosen is the one you want. If not, click "No" and enter the correct frequency
USER.MDB/USER.LDB already exists on file. Do you want to overwrite this file	You are installing PGM800Win to a directory on which it was previously installed	If you want to keep any previously saved "User Defined" files, you must choose "No"

A-1

Keyboard Commands

Appendix A

This appendix lists the key combinations you can use in windows if you do not have access to a mouse. The lists are not exhaustive, and cover only those keystrokes essential for the operation of PGM800Win. Should you require more detailed information on keyboard commands, please refer to your Windows User's Manual.

System Keys

The following keys can be used in windows, regardless of the application you are using.

Keystroke	Command
F1	Start Help.
CTRL+ESC	Switch to task list.
ALT+ESC	Switch to the next application.
ALT+TAB	Switch to the application last used.
ALT+SPACEBAR	Open the Control menu for an application window.
ALT+HYPHEN	Open the Control menu for a document window.
ALT+F4	Quit an application or close a window

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Program Manager Keys

When working with group windows in Program Manager, use the following keys.

Keystroke	Function
Arrow keys	Move between items in a group window.
CTRL+TAB	Move between group windows and icons.
ENTER	Start the selected application / Open a group window icon.
CTRL+F4	Close an active group window.

Menu Keys

Use the following keys to select menus and choose commands in PGM800Win.

Keystroke	Command
ALT	Select or cancel selection of the first menu on the menu bar.
Character key	Choose the menu or command whose underlined letter matches the one you type.
LEFT/RIGHT ARROW	Move between menus. Move between pages in a document once the page title is highlighted.
UP/DOWN ARROW	Move between commands.
ENTER	Choose the selected menu or command.
ESC	Cancel the selected menu name / close the open menu.

Channel Information Keys

Use the following keys when entering Channel Information in PGM800Win.

Keystroke	Command
ESC	Cancels edit mode of current cell.
Left/Right arrow	Edit Mode - permits left and right movement within a cell.
	Non Edit Mode - permits left and right movement across fields.
Up/Down arrow	Move to the previous or next line respectively.
Page Up/Down	Move up or down by as many lines as are on the screen less one.
Shift+Right and Shift+Down arrow	Selects (highlights) cells for editing.
Shift+Left and Shift+Up arrow	Deselects cells for editing.
Shift+Delete	Deletes the contents of the current cells.
Delete	Deletes the current character within a cell, when in Edit Mode.
Enter	Ends Edit Mode of selected cell and allows left to right movement across fields when not in Edit Mode.
TAB	Movement from left to right across fields.
SHIFT+TAB	Movement from right to left across fields.
Home	Move to the leftmost field of the current line.
End	Move to the rightmost field of the current line.
CTRL+Home	Move to the leftmost field of the first line.
CTRL+End	Move to the rightmost field of the last line.
CTRL+Z	Undo last cut, copy or paste operation.
CTRL+X	Cut the contents of current cell(s) to the clipboard.
CTRL+C	Copy the contents of current cell(s) to the clipboard.
CTRL+V	Paste the contents of the clipboard at the current cursor position.
ALT+Down arrow	Opens any "drop down" box.

A-4   Keyboard Commands

Dialogue Box Keys

Use the following keys when working in a dialogue box in PGM800Win.

Keystroke	Command
TAB	Move from option to option (left to right / top to bottom).
SHIFT+TAB	Move from option to option in reverse order.
ALT+ character key	Move to the option or group whose underlined letter matches the one you type.

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