The following help topics are available:

Keymap - Overview

Keymap is a utility which allows an advanced Air Warrior player to remap how keyboard (and joystick) input is handled during flight.   Like most simulations, Air Warrior has certain functionality associated with particular keys in flight (for instance, the ";" key raises or lowers your landing gear).   But unlike many simulations, Air Warrior allows you to change which keys perform which commands.   If you were accidentally hitting the ";" key too often and lowering your landing gear at awkward times, you could use the Keymap utility to move the raise/lower gear function to the "Q" key, or really anywhere on the keyboard.

Keymap is not a utility to be used by a novice user.   If you configure the keymap files incorrrectly, you may cause the game to not respond properly to the keys you press.   If you ever get into this situation, see the trouble shooting section in this help file.

Keymap Elements

Things You Should Know

To understand how to use this tool properly, you must first understand some key elements of the program:

Keymap File

A "keymap file" (*.key) is an ASCII file which contains commands for remapping keys in Air Warrior.   It gets processed by the program to create a "binding file", described below.   The content of a keymap file looks similar to this:

```
Version c   ; WARNING: DO NOT DELETE THIS LINE!
ESC           COMMAND_MODE
1                PIC_RANGE_1
2                PIC_RANGE_2
3                PIC_RANGE_3
4                PIC_RANGE_4
5                PIC_RANGE_5
6                PIC_RANGE_6
7                WAR_POWER
8                START_ENGINES
9                CAMERA_TOGGLE
```
etc.

Binding File

A "binding file" (*.bnd) is a binary file which Air Warrior loads from disk to determine which key settings to use in the game.   This is created by processing the keymap file with the Keymap program to create a binding file. This file must always exist in the "Support" directory for Air Warrior to execute properly.

How to Determine Which Key File You Are Using

It is not an easy process to determine which keymap file you are using.   The keymap file is determined by the joystick and throttle types you have selected.   The next paragraph provides some general guidelines for determining what keymap file is being used by Air Warrior.

Go into Air Warrior, press the right mouse button, and choose "Setup..." followed by "Controls".   This displays a dialog box showing the current control types that you have selected.

First, what throttle have you selected?

If your throttle selection is:	You use the mapping for:
ThrustMaster WCS Mark I	ThrustMaster WCS Mark I
ThrustMaster WCS Mark II CH Pro Throttle	ThrustMaster WCS Mark II
Any other throttle	Mapping depends on the joystick

If the throttle selection has not determined the mapping, which joystick have you selected?

If your joystick selection is:	You use the mapping for:
ThrustMaster FCS ThrustMaster XL Logitech Wingman Extreme	ThrustMaster FCS
CH Pro FlightStick CH CombatStick CH Force FX CH FighterStick	CH
Any other joystick	Joystick
Keyboard/Mouse	Default

What is the Difference Between the Different Keymap Files?

Not much, in most cases.   The various mappings are primarily for the convenience of people who use more than one joystick.   However, each is tailored somewhat for the type of controller:

Default   (DEFAULT.KEY) - Does not handle any joystick inputs.

Joystick (JOYSTICK.KEY) - This is a catch-all.   It supports joysticks without view switches, and the 8-way view switch of the Microsoft SideWinder.

CH (CHPRO.KEY) - This is for joysticks with view switches which do not allow combinations of buttons (ie. chording).   The primary distinction here is that VIEW_TOGGLE is press-and-release.

ThrustMaster FCS (THRUSTFCS.KEY) - This is for joysticks with view switches which do all combiniations of buttons.   The primary distinction here is that VIEW_TOGGLE is press-and-hold.

ThrustMaster WCS Mark II (WCSMKII.KEY) - This is for joysticks used in combination with certain programmable controls.   It assumes that most joystick buttons are being programmed to the keyboard, and has an alternate mapping for the VIEW_TOGGLE control.

ThrustMaster WCS Mark I (WCSMKI.KEY)   - This is a very different mapping exclusively for user's of this no-longer-in-production throttle.   It is set up for the DIP switch 1 programming option.

Using Keymap

KEYMAP.EXE resides in the Air Warrior "Support" directory.   Either execute the program from there, or move it to another directory so that you do not immediately write over the original files installed by Air Warrior.   In the latter case you will either need to generate the default key and binding files, or copy the existing ones to your new directory so that you can modify them.

When you run Keymap, the following dialog is displayed:

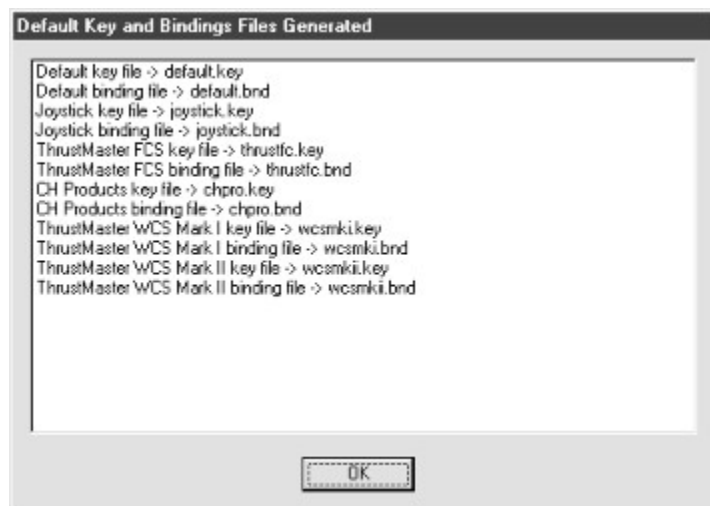Keymap has three major functions for editing and creating a new key binding file:

- "Generate All Default Key and Binding Files"   -   This will create all of the key files (*.key) and binding files (*.bnd) for Air Warrior.   There are six different sets of files generated by this tool   - default, joystick, CH Pro, ThrustMaster (FCS), Thrustmaster (WCS Mark I), and Thrustmaster (WCS Mark II).   These are described   in detail below (note that Air Warrior supports many more controls than this - these are only default bindings provided by the Keymap utility).   The files are created in the same directory as where Keymap is executing.   There is no ability to save them in a different directory.

- "Edit a Key File"   - This invokes a small window for editing a specific key file (you get to select the file to edit).   It will also allow you to create a key binding file from the "Edit" window.   The key file will be saved to the same directory where Keymap is executing.

- "Convert a Key file to a Binding File" - This converts a key file that you select into a binding file.   The binding file will be saved to the same directory where Keymap is executing.

The basic process is to open an existing key file and edit it to the key mappings you prefer.   Then convert that file into a binding file (.bnd), save it in the Air Warrior "Support" directory, and then execute Air Warrior.   The new key mappings will take effect immediately.

However, before starting this process we recommend that you backup your original .key and .bnd files.   Create a subdirectory under the Air Warrior directory and stash them away.   If you purchased the Air Warrior II Box version from Interactive Magic, you always have a backup on the CD-ROM (in the Support directory).

Generating Key and Binding Files

Clicking on this button generates all the keymap and binding files for all control types. The files are written to the directory where Keymap was executed from, and will overwrite any keymap and binding files that previously existed. When complete, the following dialog will be displayed:

```
Default Key and Bindings Files Generated

Default key file -> default.key
Default binding file -> default.bnd
Joystick key file -> joystick.key
Joystick binding file -> joystick.bnd
ThrustMaster FCS key file -> thrustfc.key
ThrustMaster FCS binding file -> thrustfc.bnd
CH Products key file -> chpro.key
CH Products binding file -> chpro.bnd
ThrustMaster WCS Mark I key file -> wcsmki.key
ThrustMaster WCS Mark I binding file -> wcsmki.bnd
ThrustMaster WCS Mark II key file -> wcsmkii.key
ThrustMaster WCS Mark II binding file -> wcsmkii.bnd

                    [    OK    ]
```

Editing a Key File

Clicking on this button allows you to edit a particular keymap file.   This is the most complicated part of the entire process.   You need to understand clearly how the mapping works before editing the file.

First you must choose the appropriate keymap file to edit (see the section above on how to determine the keymap file you currently use).   This is done via the following dialog box:
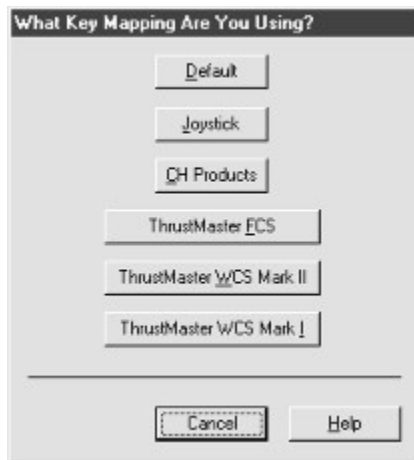
After you select the appropriate keymap file, the "Edit keymap file" dialog appears:
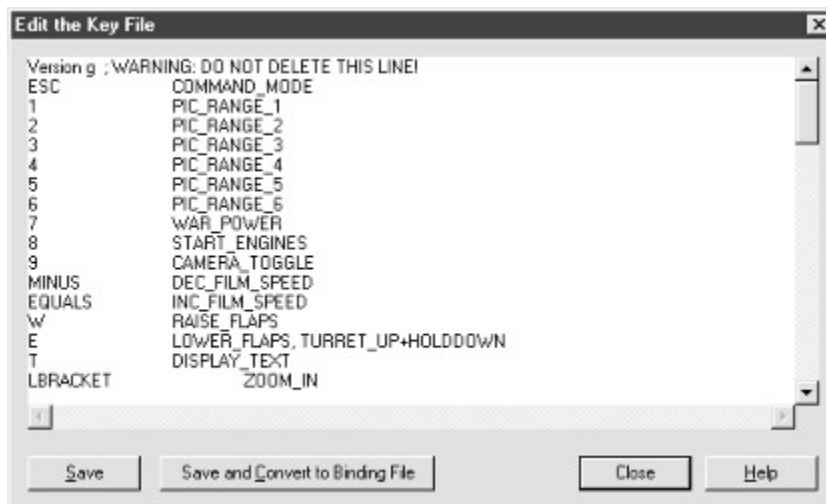
The two buttons "Save" and "Save and Convert to Binding File" are not enabled until you make changes to the file within the editor.   Once you have made the desired changes you must save the file and also convert that file into a key binding file (the latter step can also be done from the main Keymap dialog).

Special Instructions

1.   Do not modify or delete the first line in the file (the Version string).   Doing so will cause KEYMAP to become confused and it will not allow you to recompile your .KEY file after editing.

2.   A list of the key and command names are provided at the end of this help file.

3. The COMMAND_MODE command must not be changed.   It is currently assigned to 4 keys, and these cannot be changed.

4. The key files will include a line something like this: #87   #56
    Do not delete or alter this line.

5. Function keys cannot be reprogrammed using KeyMap.   They appear in the key files for reference only.

6. The toggle function in the F6 view (Tab key) cannot be reprogrammed.

7. Modifiers must always be entered in UPPER CASE.   In fact, we recommend that you type in the commands exactly as the commands are shown at the end of the help file.

8. VIEWSHIFT may only be combined with a joystick key.

How to Make Changes to the File

The file displayed has data in two columns:
KEY   COMMAND (effect that the key has)

The format here is simple;   the left column is the key that is pressed in the Air Warrior program and the right column is the effect it produces.   The spacing does not have to be precise but there needs to be at least one space between the left column and the right.

To change which key causes a command to be executed, simply find the command you are interested in and change the left hand column to the key you want to execute that command. For instance, if you want to change the raise/lower gear key to "Q" so you don't accidentally lower your gear when hitting Enter, you would change the following part of the CHPRO.KEY file:

SEMI   GEAR_UP_DN

to read like this:

Q   GEAR_UP_DN

Then SAVE and CONVERT the file to a key binding and you are all set to use "Q" for raising and lowering your gear.

Strange Keys and Stranger Commands
As you look through the file you will find some entries in the left and right columns that don't look exactly as they should. There are certain keys that can't be shown directly in the left hand column, so abbreviations are used instead. Equally there are certain commands that are actually combinations of commands, so they are listed as multi-part words in the right hand column.   Here's some keywords you'll see in the left hand column and what they mean:

  LBRACKET, RBRACKET   The [and] keys (to the upper left of Enter)
  QUOTE   The ' key

SEMI	The ; key
SLASH	The / key
UP,DOWN,LEFT,RIGHT	The arrow keys, usually on the numeric keypad for most keyboards and sometimes also in a separate location
PAD5,PADMINUS,PADPLUS	Other keys on the numeric keypad (the + key on the keypad is NOT the same thing as the general keyboard + key, at least not to Air Warrior)
SHIFT+,CTRL+,ALT+	Combination keys - SHIFT+A means to execute that command you would have to hold down the shift key and then hit A.
JOYSTICKA1	These are "keys" on the joystick - really the joystick buttons
HATCENTER	If your joystick has a "hat" key, Air Warrior will use HATXXXXX to describe the various positions it can be in.
VIEWSHIFT+	Special indicator to indicate the key after VIEWSHIFT has two commands; one for normal operation and one which is activated when the "alternate view" command key has been pressed. The VIEWSHIFT+ modifier shows which command should be executed when the alternate view key has already been pressed.
#46	When you see a # followed directly by a set of digits, it's a special signal for Air Warrior to look for the "scancode" for that key. You shouldn't change these values.

The rest of the keys in the left hand column are fairly self explanatory.

For the right hand column; if you are unsure of what a particular command does, BEFORE you change it's key value in the left hand column look it up in the Air Warrior manual by matching the key in the left hand side with the keys described in the manual. This should help you determine what that command really means.   Keep in mind that many commands only take effect when you are in film mode.

The +HOLDDOWN modifier to a command deserves some explanation. Basically this means that when the key in the left hand column is pressed AND HELD DOWN, Air Warrior will execute the command that precedes the +HOLDDOWN modifier continuously. In the line:

LEFT   LOOK_LEFT+HOLDDOWN

Air Warrior interprets this to say "when the user presses the left arrow, show the left view from the aircraft, and keep that command as long as the key is held down".

Some confusion results when the +HOLDDOWN modifier is removed, because the program doesn't behave as you might expect. If in the above example +HOLDDOWN was removed and the user then pressed the left arrow, you might expect the left view to be flashed briefly on the screen. In fact, nothing happens - until you hit enter, at which point the left view is displayed and stays there.   WITHOUT A HOLDDOWN COMMAND THE ENTER KEY IS REQUIRED TO CAUSE A VIEW TO BE DISPLAYED. This can actually be used to your advantage by creating views in a "building block" fashion and then activating them with enter.

Caveats

Keep in mind that KEYMAP is a fairly simple utility that doesn't do much automatic checking to see if you have made mistakes. If you create a command list that is missing a vital command like engine start, KEYMAP won't really notice. It WILL tell you if you have used an incorrect keyword in the columns, but it won't give you much help on what was wrong about it.

With this in mind, keep backup copies of your modified .KEY files if you intend to make subsequent changes to them. And if your .KEY file becomes hopelessly mangled, use the feature to extract all key files and bindings to start from scratch.

Also, KEYMAP cannot be used to create keyboard macros - sequences of multiple commands associated with a single keystroke. KEYMAP can only process one command (and possibly a modifier) for each key. If you want to have one key perform multiple command, use the macro function built into the Air Warrior program itself, triggered with the CTRL-ALT-F9 or CTRL-ALT-F10 keys.

Converting Key Files to Binding Files

Once a file has been <u>edited</u> you need to convert it to a <u>binding</u> file.   Just as in the edit key file section, you will be prompted to select the file you want to convert.   After selecting the appropriate file, you will get the dialog indicating that the file has been converted.
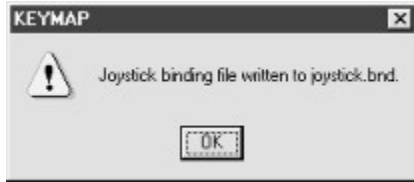
Once this is done you need to make sure that it exists in the Air Warrior "Support" directory.   Then you can run Air Warrior to test your change.   That's it!

Key and Command Names

This lists the valid keywords used within the keymap file.   Eventually this will be updated to describe what each keyword actually means.

Keys and Modifiers (these go on the LEFT column)

ESC
1
2
3
4
5
6
7
8
9
0
MINUS
EQUALS
BACKSPACE
TAB
Q
W
E
R
T
Y
U
I
O
P
LBRACKET
RBRACKET
ENTER
A
S
D
F
G
H
J
K
L
SEMI
QUOTE

BACKQUOTE
BACKSLASH
Z
X
C
V
B
N
M
COMMA
PERIOD
SLASH
PADSTAR
SPACE
F1
F2
F3
F4
F5
F6
F7
F8
F9
F10
HOME
UP
PGUP
PADMINUS
LEFT
PAD5
RIGHT
PADPLUS
END
DOWN
PGDN
INS
DEL
PADSLASH
JOYSTICKA1
JOYSTICKA2
JOYSTICKB1
JOYSTICKB2
JOYSTICKC1
JOYSTICKC2
JOYSTICKD1
JOYSTICKD2
HATCENTER

HATRIGHT
HATLEFT
HATBACK
HATFORWARD
HATFORWARDLEFT
HATFORWARDRIGHT
HATBACKWARDLEFT
HATBACKWARDRIGHT
HAT2CENTER
HAT2RIGHT
HAT2LEFT
HAT2BACK
HAT2FORWARD

Input Modifiers

+ SHIFT
+ CTRL
+ ALT
+ VIEWSHIFT

Command Names (these go in the right column)

LOOK_FRONT
LOOK_UP
LOOK_DOWN
LOOK_LEFT
LOOK_RIGHT
LOOK_BACK
TURRET_LEFT
TURRET_RIGHT
TURRET_UP
TURRET_DOWN
DISPLAY_TEXT
BRAKE
DISPLAY_RADAR
TURRET_STOP
BOMB_RELEASE
FIRE_GUNS
RAISE_FLAPS
LOWER_FLAPS
PIC_RANGE_1
PIC_RANGE_2
PIC_RANGE_3
PIC_RANGE_4
EXPERT_MODE

DISPLAY_PIC
BOMBSIGHT
GUNSIGHT
GEAR_UP_DN
START_ENGINES
LEFT_RUDDER
CENTER_RUDDER
RIGHT_RUDDER
TURRET_LOCK
COMMAND_MODE
ZOOM_IN
ZOOM_OUT
WAR_POWER
PIC_RANGE_5
TEST_MODE
MOUSE_SHIFT
THROTTLE_UP
THROTTLE_DN
THROTTLE_FULL
THROTTLE_STOP
PIC_RANGE_6
FIRE_CANNON
RECPLAY
RECPLAY_STOP
CAMERA_TOGGLE
VIEW_INOUT
SCROLL_UP
SCROLL_DN
FREEZE_FILM
NEW_FILM
MAP
HELP
RW_TO_BREAK
FF_TO_BREAK
DEC_FILM_SPEED
INC_FILM_SPEED
SEL_NEXT_TARGET
FILM_FLY
VIS_CAM_PLANE
RESTORE_VIEW
LATCH_WEP
BOMB_RIDE
NEXT_BOMB
PREV_BOMB
OVERHEAD_VIEW
OHV_FOLLOW
LOOK

LOOK_LFFR
LOOK_LFBK
LOOK_RTFR
LOOK_RTBK
LOOK_UPFR
LOOK_UPLF
LOOK_UPBK
LOOK_UPRT
LOOK_DNFR
LOOK_DNLF
LOOK_DNBK
LOOK_DNRT
LOOK_UPLFFR
LOOK_UPLFBK
LOOK_UPRTFR
LOOK_UPRTBK
LOOK_DNLFFR
LOOK_DNLFBK
LOOK_DNRTFR
LOOK_DNRTBK
VIEW_TOGGLE
NEXT_WAYPOINT
WP_TOGGLE

Command Modifiers

 +   HOLDDOWN

Trouble Shooting

If you go into flight and your keys are completely screwed up, most likely you have a problem with your keymap file.   First make sure that your controls are configured to what you are actually using.   If this is set correctly, exit Air Warrior and go to your Air Warrior "Support" directory.   Save the current .key and .bnd files to another directory.   Run   Keymap.exe   and generate the default .key and .binding files.   Go back into Air Warrior and into flight.   Your keys should work properly at this point since you are using the default files generated by the game.   To debug your 'bad" keymap file, copy Keymap.exe to the same directory where your old keymap files exist.   Run the program, edit your key file, and save it to a binding file.   Backup your "good" files in the Support directory, then copy the new "test" binding file to the Support directory and run Air Warrior.   If your keys are still not working properly, then you know that the binding file is still bad.   Keep repeating the process until you get it right, or go back to using the default key and binding files.

How to Contact Us

If you have <u>trouble</u> with Keymap, first check the Air Warrior newsgroups (primarily alt.games.air-warrior) to see if anyone has posted any useful information there.   If that is not available, go to   http://www.kesmai.com   or http://www.ariesgames.com   and look for an Air Warrior web page.   You can also visit http://www.imagicgames.com   to see if information exists there since Interactive Magic distributed the box version of Air Warrior II.

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Language Selection

Here you choose your language, although currently Keymap is only in English.   Future versions, however, may include more languages, hence this button.