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### **Overview**

MultiView/X provides an easy-to-use graphical keymap editor to allow you to customize any keyboard for use with the MultiView/X X Server.

Using this tool, you can define (or map) the X key code sent to X programs whenever you press any key. The file that stores the mappings of keys to these X key codes (or keysyms) is called a keymap.

MultiView/X includes several predefined keymaps. Using the keymap editor, you can open an existing keymap and modify any or all of the key mappings it contains. When this keymap is selected through the MultiView/X Control Panels Keyboard Preferences dialog box, your keyboard will be mapped as you have specified.

Complete information concerning keymaps, keysyms, and keycodes can be found in *Volume Two of the Xlib Reference Manual* by OReilly & Associates.

# **Accessing the Keymap Editor**

The keymap editor may be started by clicking on either the keyboard icon from the MultiView/X program group, by selecting the same icon from the MultiView/X Control Panels tool bar, or by selecting the Keyboard... entry from the MultiView/X Control Panels Options menu. The default keymap is based on the key layout of a IBM PC 101 keyboard.

The keymap editor automatically detects and loads the correct keyboard style file from the MS-Windows setup information. The symbols displayed on the keycaps will be appropriate for your localization. This means if Microsoft Windows is configured for French, French keycaps are displayed.

# **Key Color Conventions**

The keymap editor color-codes certain keys depending on their status:

**Blue** - Indicates that the key is selected for redefinition **Yellow** - Indicates that a Shift, Alt, or Num\_lock key is depressed

**White** - Indicates that the right-click pull down menu is active for this key.

If the text on a keycap is colored black, that key is not mapped to any symbol. If the text is blue, that key is mapped.

# **Modifying a Keymap**

To modify the mapping of any key in the current keymap, simply select the key symbol from the keysym list in the right pane, then drag and drop it on the target key. Alternatively, you can highlight the key then double click on the key symbol to map the key.

The View menu contains the tools for modifying a keymap. You can toggle on and off both the Keysyms List and the Status Bar selections. Initially, both are on.

### **Keysyms List**

This option controls the presentation of the keysym groups and their associated symbols. When toggled on, these items are displayed in the far right pane of the keymap editor. The following keysym groups are available.

APL	IBM3270	Latin-4
Arabic	ISO9995	Publishing
Custom	Katakana	Special
Cyrillic	Keyboard	Sun
DEC	Korean	Technical
Greek	Latin-1	Thai
Hebrew	Latin-2	US
HP	Latin-3	

Double click on the group name to display the available keysyms within that group. The most commonly used keysyms can be found in the Keyboard group.

#### **Status Bar**

This option controls whether or not the status bar at the bottom of the keymap editor is displayed. For keys under the cursor, the status bar will display the PC key name, currently mapped keysym and the corresponding hexadecimal value, if any. Appropriate action prompts will also be displayed here.

# **Saving and Using Keymaps**

Once you have modified an existing standard keymap, use the Save As selection under the file menu to preserve your changes. You may save multiple keymap files with the .XKB extension i.e. KEYMAP1.XKB, KEYMAP2.XKB. The last saved keymap file mapping is written to a file named XOFTWARE.KMP and is used by the X server as the current keymap.

### **Defining Modifiers**

Modifiers are keys that change the effect (or state) of other keys. For example the SHIFT keys are normally defined as shift modifiers. When one of these keys is depressed, a letter key will change from lower case to upper case.

The standard categories for modifiers are SHIFT, LOCK, CONTROL, and ALT (Mod1 is equivalent to ALT). Typically, the left and right SHIFT keys, the CAPS LOCK key, the left and right CTRL keys, and the left and right ALT keys are used as standard modifiers. You can, however, define any non-modifier key as one or more of these modifiers.

Select the key you wish to define as a modifier. Pull down the Mode menu and highlight then release the desired modifier. This will toggle the selected modifier on, and will place a checkmark in front of it.

**Note:** Mod2, Mod3, Mod4, and Mod5 are not implemented in this release.

# **Additional Keymapping**

A right mouse click on an ordinary key (e.g., non modifier key) of the graphical keyboard interface presents the following menu items. A different menu, described later, is presented for the modifier keys.

Macro... User Defined Keysym... Reserve for MS-Windows Map To Compose Revert to Default Unmap

**Macro** can be used to assign multiple keystrokes to a single key. This is useful for certain applications and terminal emulation functions. For example, you can assign the following sequence to a specific key to exit the vi editor in UNIX: Esc, :, q, !, Enter. To use this feature, simply:

Begin by right clicking on the key which should receive the macro definition. A menu of special keys will be presented. To define the symbols the target key will now send, simply type them in the Macro: box, or, alternately scroll down and double-click on a special key, such as backspace, delete, or enter, to add it to the macro definition. Any number of special keys may be selected. Select OK when done, or cancel to discard the changes.

For convenience, once again your macros changes are displayed in the status line.

**User Defined Keysym** is used to map any key to any hexadecimal value. To do this, first select a key you wish to assign a hexadecimal value. Right-click and select User Defined Keysym. Enter a hexadecimal value (e.g., 0x3535) and then select OK (or CANCEL if you wish to exit without changing). Up to 4 bytes may be entered. The new value will be reflected in the status line.

**Reserve for MS-Windows** is used to reserve a key press for exclusive use by Microsoft Windows. When this is done, the key press will be invisible to X11 clients. Right click on the desired key, then left click on the menu item. The status bar will reflect the change. This is most commonly done for the F10 and ALT keys, as these keys are often used by both MS-Windows and X11 programs.

**Map to Compose** allows you to define a sequence of up to three keys to define a special key. The first key you select is the key that will invoke the composed key. The modifier key applies a modification to the first selected key. If you wanted ALT on the right side of the keyboard modified with a shift, the first key would be ALT, the modifier key would be SHIFT, and the last key would be unique to finalize the sequence for the special keys.

**Revert to Default** discards any changes made to the highlighted keysym and resets the keysym to system defaults.

**Unmap** discards the current key mapping. Unmapped keys will send nothing and the status line will display No Symbol as their value.

### **Map to Compose**

A right-mouse click on Alt or Ctrl activates the Map to Compose feature of the Keymap Editor. This feature is slightly different than the Map to Compose associated with regular keys. This software allows you to specify a sequence composed of one or more modifiers and a regular key that when entered through an X client will insert a character not found on the keyboard. For example, using an English keyboard you can define a sequence that will insert a foreign diacritical mark. Whether the shift key is ON or OFF is optional.

Right click on the Shift key to highlight it if you want that to be part of the compose sequence. This key functions slightly differently than the other modifier keys, so it must be selected first; also it can not be the only key selected. Now right click on one or more modifier keys, Ctrl and/or Alt, to add to the sequence. Left click on the Map to Compose menu bar. The status line will verify the key selection and will indicate that the compose sequence is currently mapped to none. Highlight a regular key with a left mouse click. Drag and drop the desired keysym from an open keymap to the highlighted regular key. This completes the mapping.