Custom Keys App

for

Kaiser Permanente Radiologists

KPCK v1.3

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Contents

Overview

KPCK is a small low-profile software application with two purposes:

1. **Provide radiologists with the option to customize PowerMic buttons**. Many KP radiologists use a PowerMic as their only additional peripheral device beyond a standard keyboard and mouse. The "out-of-box" PowerMic button configuration is limited when used with PowerScribe 360 (PS360). KP users requested the ability to apply Radiator 20 hot keys and custom key settings to PowerMics.

2. **Allow customized PS360 short-cut key suppression.** There are a couple of overlapping shortcut keys between IntelliSpace PACS and PS360. Within IntelliSpace, the "F7" key is by default assigned to shift diagnostic windows, but it also launches the PS360 spell checker when PS360 is the active window. It is common for users who spend more time editing reports within the active PS360 window to inadvertently trigger the spell checker by striking "F7" when attempting to shift IntelliSpace windows. In addition, the fixed IntelliSpace localization key is "F12", which also triggers the report sign function in PS360.

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Installation

The application consists of a single executable (.exe format) file that can be launched by double-clicking the thunderbolt icon. A windows protection popup will need to be bypassed by selecting "More Info" followed by "Run Anyways". To ensure that the application is automatically running after initial workstation startup or after reboot, right-click on the icon, create a shortcut, and move the shortcut to the user "startup" directory in bold below the picture.
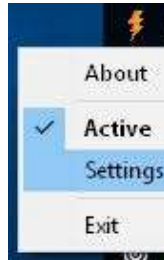

Replace the second level folder name "<NUID>" with your user id.

C:\Users\<NUID>\AppData\Roaming\Microsoft\Windows\Start Menu\Programs\Startup

KPCK is installed locally and there is no network service to receive updates or maintain consistency across workstations. It must be manually downloaded to each individual workstation.

Settings

After starting the app, find the settings window by right-clicking on the thunderbolt icon within the task bar to reveal menu options. From there, choose "Settings" to open the settings window.

There are four sections within the settings window: a labelled diagram of the PowerMic (top left), customized PowerMic settings (top right), PS360 disabled keys (bottom left), and save/cancel buttons (bottom right).
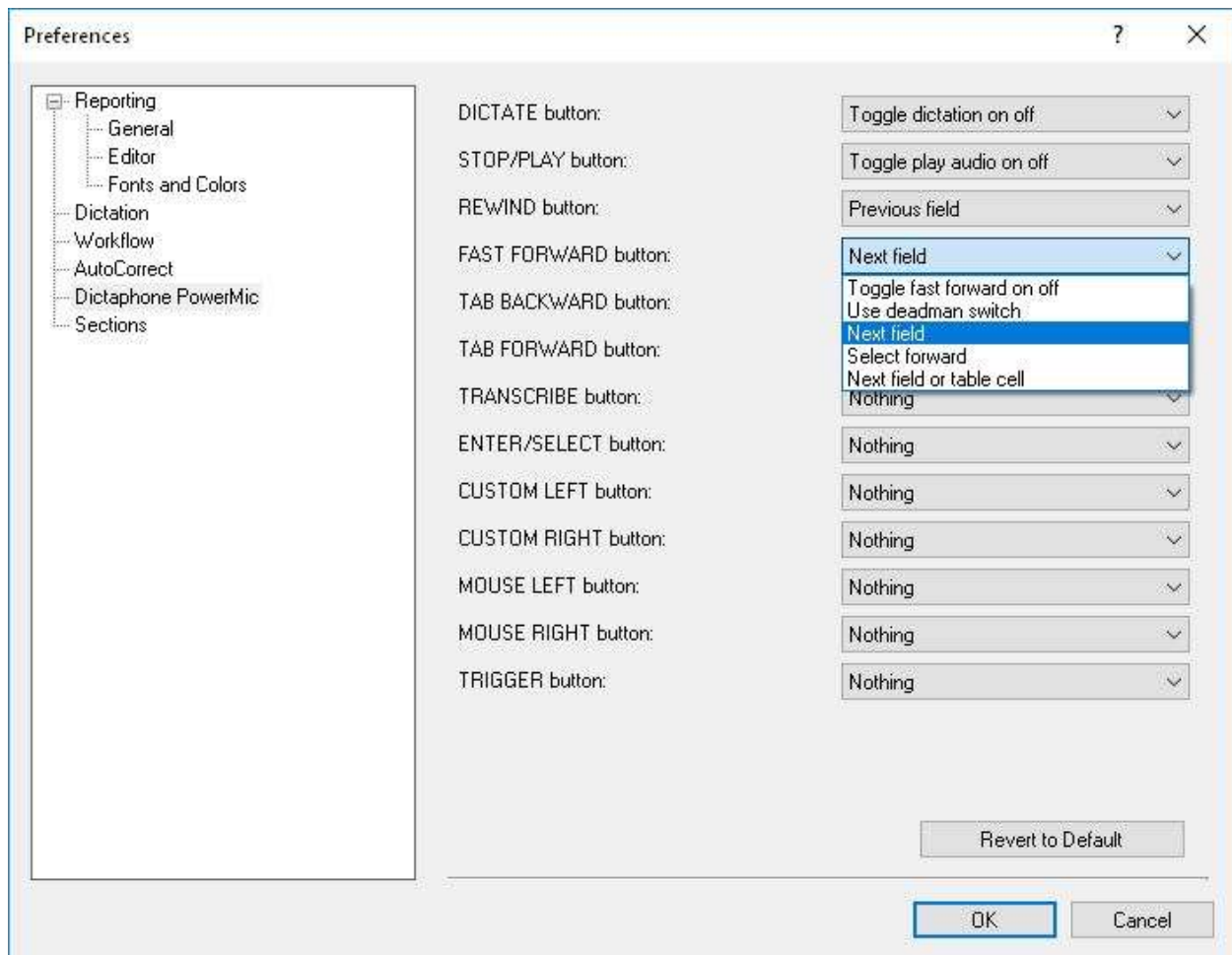
Referencing the PowerMic diagram, assign fixed Radiator 20 functions to each button using the "FIXED KEY" drop downs. Each function is listed by name as opposed to the hot key combination.

Use the "CUSTOM KEY" fields to assign a customized key combination to a PowerMic button. To access this field, choose the last option within the "FIXED KEY" drop down ("None/Custom"). Set the cursor position to the "CUSTOM KEY" field, and hit the desired keystroke.

There are four functionally obligate buttons on the PowerMic in the PS360 *Tools* → *Preferences* → *Dictaphone PowerMic* menu shown below: DICTATE, STOP/PLAY, REWIND, and FAST FORWARD. If these buttons are assigned secondary functions within the KPCK app, there may be conflicting or adverse duplication of functionality. The user may experiment with different assignments in PS360 preferences to avoid conflicts, or either ignore programming these buttons altogether within the KPCK app. It is recommended to keep the PS360 "DICTATE" button setting to toggle the microphone. There is no single best practice for the other three buttons.

The remaining buttons should be assigned to "Nothing" within the PS360 *Preferences* menu as above, because their functionality will be overridden by the KPCK application.

The settings window dedicates a small section at the bottom left to assign up to three different PS360 shortcut keys for suppression, or disabling. The most frequently used are the "F7" key because of the conflict between the PS360 spell checker and the default IntelliSpace window shift keystroke, and the "F12" key because of the conflict between the PS360 sign report shortcut and the fixed IntelliSpace localizer key.

To assign keys for disabling, set the cursor within one of the three fields and strike the desired key(s). No more than three PS360 shortcut key combinations may be assigned (one per field), and all three fields may be left blank if this disabling functionality is not desired. Use the backspace key within the field to delete an already assigned key combination.

Finally, use the "Save and Close" button at the bottom right of the settings window to save the assignments to a local configuration file. The "Cancel" button will close the settings window and ignore any changes made.
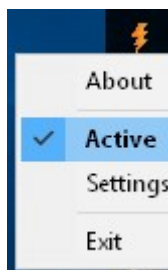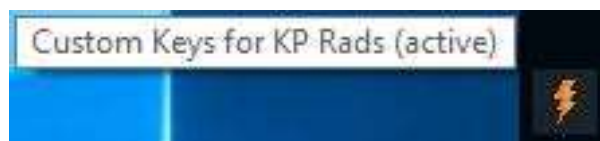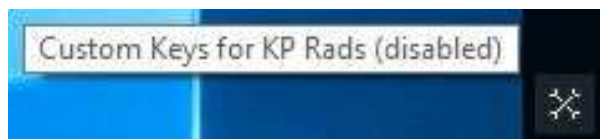
Usage

To run the app in *active*, or "keystroke listening" mode, right click the thunderbolt icon and select the "Active" menu item if it is not already checked.

The thunderbolt icon in the task bar confirms, along with a mouse hover message, confirms that the application is running in *active* mode.

The app may also continue to run in an *inactive*, or "non-listening" mode, whereby keystrokes or button presses are ignored are not rerouted to the assigned functions. Right-click the menu as above and select the "Active" menu item to toggle. *Inactive* mode is confirmed with a cross bones icon within the tool bar, along with a mouse hover message shown below.
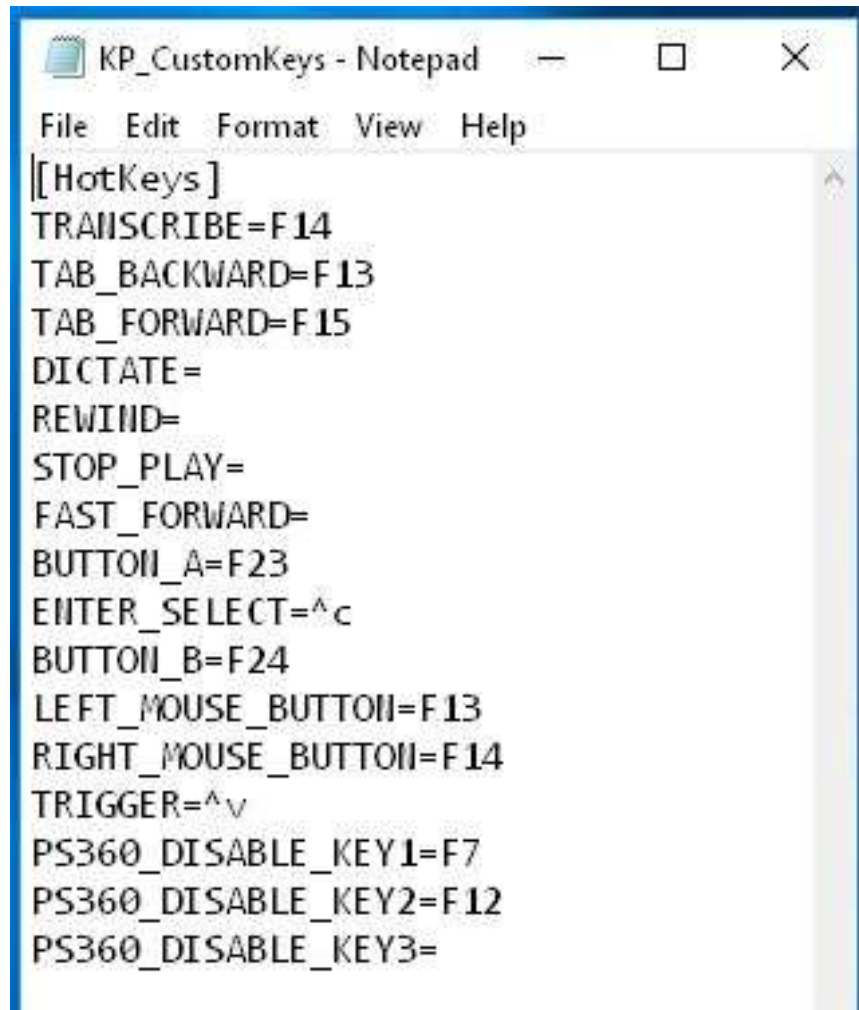
Configuration File

The settings described in the previous section are "remembered" by the app on the local workstation using a small initialization file called "KP_CustomKeys.ini". The file location is listed in bold below, with the user's identification number replacing the second level folder called "<NUID>".

Name	Date modified	Type	Size
RAD20	9/24/2020 7:27 AM	File folder	
Snagit	2/6/2020 2:50 PM	File folder	
KP_CustomKeys	10/4/2020 10:59 PM	Configuration settings	1 KB

C:\Users\<NUID>\Documents\KP_CustomKeys.ini

The file is human readable and may be opened and edited in Notepad, though some syntax rules apply. For example, the user may notice that the modifier keys "CTRL", "SHIFT", and "ALT" are represented by "^", "+", and "!". It is worth noting that although the "CUSTOM KEY" fields do not accept extended key combinations (such as the upper register function keys F13-F24), they may be manually written to the configuration file with preceding modifier keys (e.g. "=^F20" represents "CTRL-F20").

```
KP_CustomKeys - Notepad        —    □    X

File   Edit   Format   View   Help

[HotKeys]
TRANSCRIBE=F14
TAB_BACKWARD=F13
TAB_FORWARD=F15
DICTATE=
REWIND=
STOP_PLAY=
FAST_FORWARD=
BUTTON_A=F23
ENTER_SELECT=^c
BUTTON_B=F24
LEFT_MOUSE_BUTTON=F13
RIGHT_MOUSE_BUTTON=F14
TRIGGER=^v
PS360_DISABLE_KEY1=F7
PS360_DISABLE_KEY2=F12
PS360_DISABLE_KEY3=
```

The configuration file may also be copied to different workstations to efficiently initialize settings without having to use the application settings window. During the first use of the app on a workstation, the configuration file will be newly created with all blank assignments (nothing to the right of the "=" for every line).

Credits and References

1. **Tom T. Nguyen, MD for github code leads, testing, and recommendations.**

2. **Code repository: https://github.com/jbalkman/custom-powermic**

3. **Icons made by Freepik from Flaticon.**