

**NAME**

XkbActionCtrls – Returns the ctrls fields of act converted to an unsigned int

**SYNOPSIS**

```
unsigned int XkbActionCtrls (XkbCtrlsAction act);
```

**ARGUMENTS**

*act* action from which to extract controls

**DESCRIPTION**

Actions associated with the XkbCtrlsAction structure change the state of the boolean controls.

The *type* field can have any one of the values shown in Table 1.

Table 1 Controls Action Types

Type	Effect
XkbSA_SetControls	A key press enables any boolean controls specified in the ctrls fields that were not already enabled at the time of the key press. A key release disables any controls enabled by the key press. This action can cause XkbControlsNotify events.
XkbSA_LockControls	If the XkbSA_LockNoLock bit is not set in the flags field, a key press enables any controls specified in the ctrls fields that were not already enabled at the time of the key press. If the XkbSA_LockNoUnlock bit is not set in the flags field, a key release disables any controls specified in the ctrls fields that were not already disabled at the time of the key press. This action can cause XkbControlsNotify events.

The *flags* field is composed of the bitwise inclusive OR of the masks shown in Table 2.

Table 2 Control Action Flags

Flag	Meaning
XkbSA_LockNoLock	If set, and the action type is XkbSA_LockControls, the server only disables controls.
XkbSA_LockNoUnlock	If set, and the action type is XkbSA_LockControls, the server only enables controls.

The XkbSA\_SetControls action implements a key that enables a boolean control when pressed and disables it when released. The XkbSA\_LockControls action is used to implement a key that toggles the state of a boolean control each time it is pressed and released. The XkbSA\_LockNoLock and XkbSA\_LockNoUnlock flags allow modifying the toggling behavior to only unlock or only lock the boolean control.

The *ctrls0*, *ctrls1*, *ctrls2*, and *ctrls3* fields represent the boolean controls in the *enabled\_ctrls* field of the controls structure. Xkb macros, to convert between the two formats.

*XkbActionCtrls* returns the *ctrls* fields of *act* converted to an unsigned int.

**STRUCTURES**

```
typedef struct _XkbCtrlsAction {
    unsigned char type; /* XkbSA_SetControls, XkbSA_LockControls */
    unsigned char flags; /* with type, controls enabling and disabling of controls */
    unsigned char ctrls3; /* ctrls0 through ctrls3 represent the boolean controls */
    unsigned char ctrls2; /* ctrls0 through ctrls3 represent the boolean controls */
    unsigned char ctrls1; /* ctrls0 through ctrls3 represent the boolean controls */
    unsigned char ctrls0; /* ctrls0 through ctrls3 represent the boolean controls */
}
```

```
} XkbCtrlsAction;
```