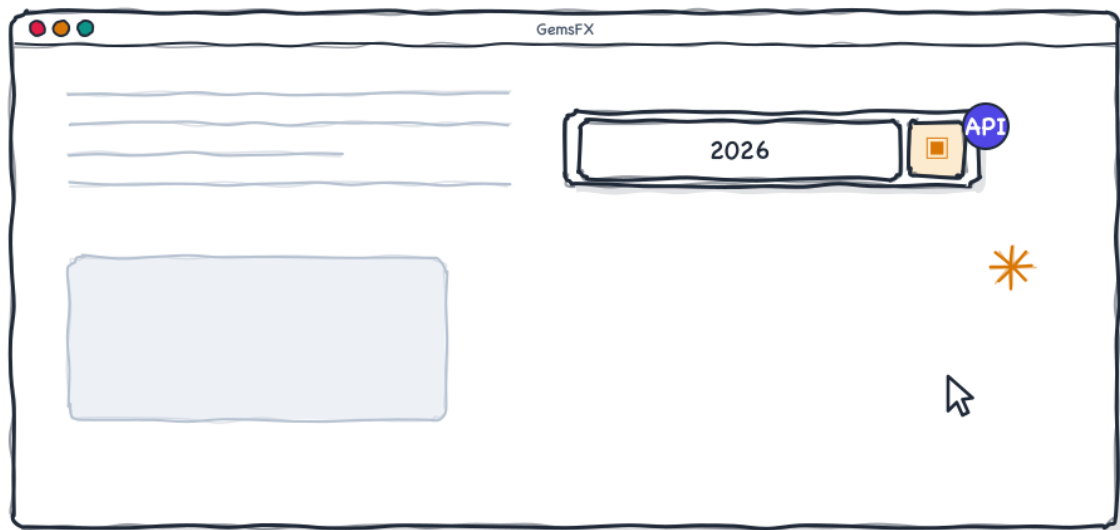


YearPicker

Developer Manual

GemsFX • com.dlsc.gemsfx • JavaFX Custom Controls



Generated cartoon overview of YearPicker.

YearPicker combines a numeric TextField editor with a popup YearView. It is compact, keyboard-friendly and suitable for forms that need a single year value.

Table of Contents

1. Introduction	2
1.1 Key features	2
1.2 Maven dependency	2
2. Getting started	2
3. Anatomy	3
4. Control API	4
4.1 Selection and editor	4
4.2 Popup and button	4
5. Behaviour	4
5.1 Committing text	4
5.2 Keyboard adjustment	5
5.3 Popup selection	5
6. Styling	5
6.1 Style classes	5
6.2 Pseudo classes	6
6.3 Styleable CSS properties	6
7. Accessibility	6
8. Recipes	7
8.1 Open the popup from another button	7
8.2 Hide the trigger button	7
8.3 Use popup bounds	7
8.4 Read the integer year	7
8.5 Checklist	7
9. See also	8

1. Introduction

YearPicker is part of the GemsFX module `com.dlsc.gemsfx`. This manual documents only behavior verified in the control, skin, CSS, resource bundles and demo app.

1.1 Key features

- Extends `CustomComboBox` and is editable by default.
- Editor accepts numeric input and truncates to four digits.
- Popup content is a `YearView` bound bidirectionally to value.
- Arrow keys adjust the selected year while editing.
- Read-only year property exposes the selected year as `Integer`.

1.2 Maven dependency

```
<dependency>
  <groupId>com.dlsc.gemsfx</groupId>
  <artifactId>gemsfx</artifactId>
  <version>4.4.1</version>
</dependency>
```

Use package `com.dlsc.gemsfx`.

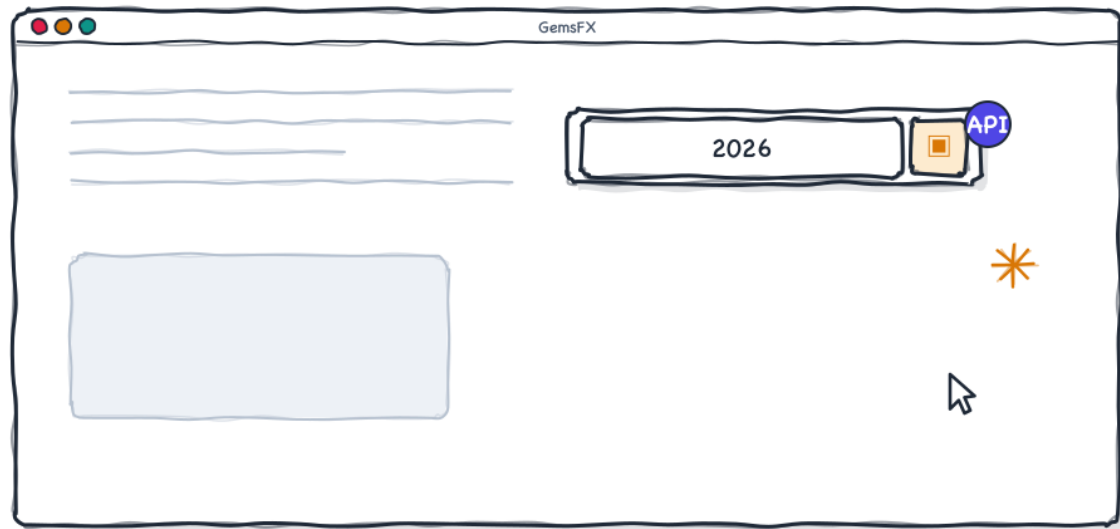
2. Getting started

Create the control, set the properties that define its valid values, and listen to the value or selection property that the control owns.

```
YearPicker picker = new YearPicker();
picker.setValue(Year.of(2026));
picker.getYearView().setEarliestYear(Year.of(2000));
picker.getYearView().setLatestYear(Year.of(2030));

picker.valueProperty().addListener((obs, oldYear, newYear) -> {
    System.out.println("year = " + newYear);
});
```

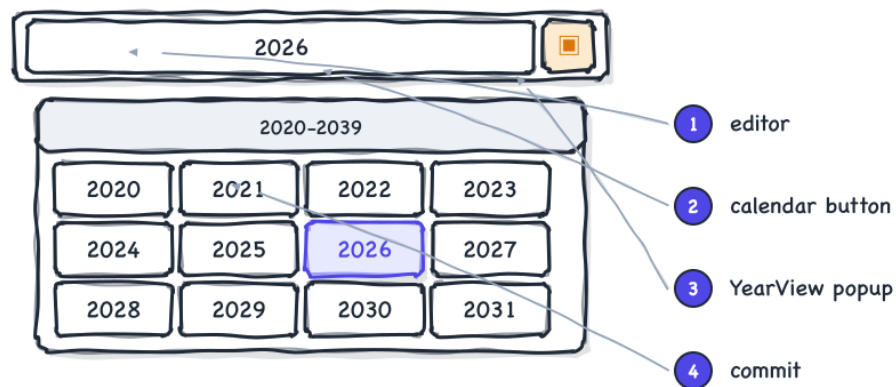
A compact setup for `YearPicker`.



A first look at the control in a simple application window.

3. Anatomy

The skin builds the visible nodes below the public control. The table lists the style classes and nodes that are useful when reading the source or writing CSS.



The main parts of the control.

Part	Style / node	Description
Root	year-picker text-input	CustomComboBox root style classes.
Box	box	HBox containing editor and trigger button.
Editor	TextField	Numeric editor returned by <code>getEditor()</code> .
Edit button	edit-button	Calendar icon button that shows or hides the popup.

Part	Style / node	Description
Popup	YearView	Created lazily by <code>getYearView()</code> and bound to value.
Year property	year	Read-only Integer mirror of the selected value.

4. Control API

4.1 Selection and editor

Property	Type	Default	Description
value	ObjectProperty<Year>	Year.now()	Inherited ComboBoxBase value; updated by editor commits and YearView selection.
year	ReadOnlyObjectProperty<Integer>	current year	Integer mirror of value, or null when value is null.
editor	TextField	created in constructor	Text field used for manual input; available through <code>getEditor()</code> .
editable	BooleanProperty	true	Inherited from ComboBoxBase; bound to <code>editor.editableProperty()</code> .

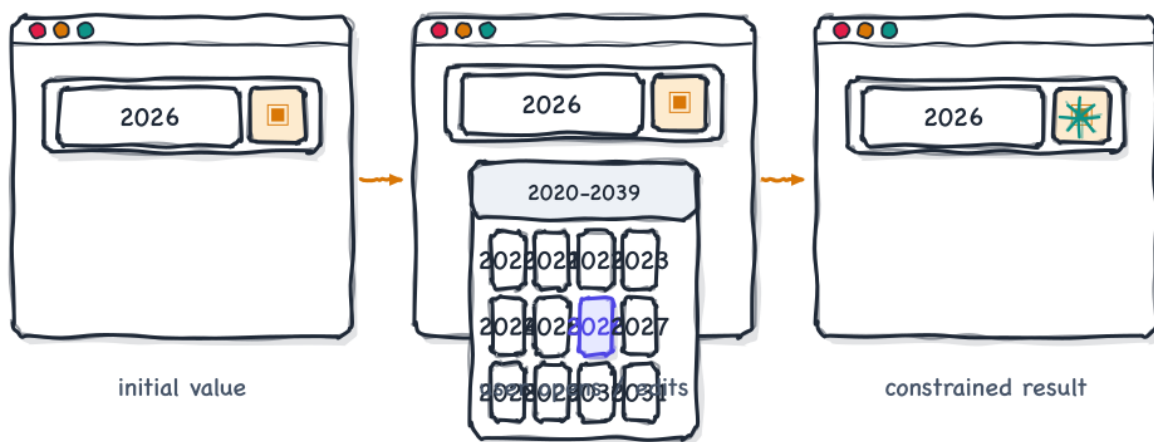
4.2 Popup and button

Property	Type	Default	Description
buttonDisplay	ObjectProperty<CustomComboBox.ButtonDisplay>	RIGHT	Inherited styleable property controlling LEFT, RIGHT, BUTTON_ONLY or FIELD_ONLY button placement.
yearView	YearView	lazy	Popup view returned by <code>getYearView()</code> ; configure its rows, columns and bounds before showing if needed.

5. Behaviour

5.1 Committing text

The editor commits on action, focus loss and touch-press-before-show. Non-blank parseable text becomes `Year.of(value)`; blank text leaves the current value unchanged.



Interaction and value-flow behaviour.

5.2 Keyboard adjustment

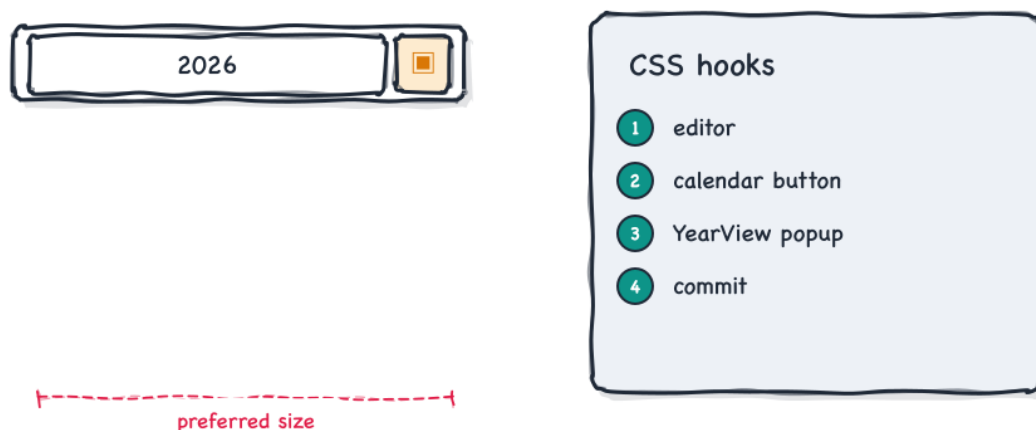
UP subtracts one year and DOWN adds one year. When the picker is not editable, LEFT also subtracts and RIGHT adds.

5.3 Popup selection

Selecting a different year in the popup updates value and hides the popup through YearPickerSkin.

6. Styling

The stylesheet is loaded by the control or its base class. The rows below list style hooks verified in the CSS and skin source.



Style classes and pseudo-class states.

6.1 Style classes

Style class	Where used
year-picker	Root style class.
text-input	Additional root style class set by the constructor.
box	HBox containing editor and button.
edit-button	Calendar trigger button.
edit-icon / ikonli-font-icon	Calendar icon inside the button.
year-view	Popup YearView, styled by year-view.css and shadowed when inside the picker.

6.2 Pseudo classes

Pseudo class / marker	Meaning
left	buttonDisplay = LEFT.
right	buttonDisplay = RIGHT; active by default.
button-only	buttonDisplay = BUTTON_ONLY.
field-only	buttonDisplay = FIELD_ONLY.
focused	Mirrors editor focus for picker styling.

6.3 Styleable CSS properties

Property	Type	Default	Description
-fx-button-display	ButtonDisplay	RIGHT	Inherited from CustomComboBox. Valid enum values: LEFT, RIGHT, BUTTON_ONLY, FIELD_ONLY.

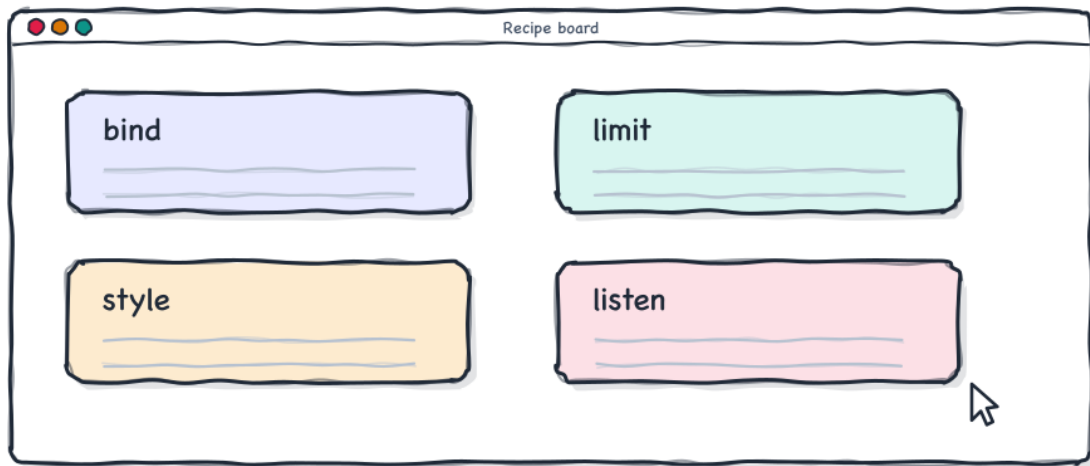
```
.year-picker {
    -fx-button-display: left;
}
.year-picker > .box > .edit-button > .ikonli-font-icon {
    -fx-icon-color: -fx-accent;
}
```

Example CSS.

7. Accessibility

The constructor sets `AccessibleRole.COMBO_BOX` and binds accessible text to `value.toString()`, or null when no year is selected.

8. Recipes



Common configuration recipes.

8.1 Open the popup from another button

```
Button button = new Button("Choose year");  
button.setOnAction(evt -> picker.show());
```

8.2 Hide the trigger button

```
picker.setButtonDisplay(CustomComboBox.ButtonDisplay.FIELD_ONLY);
```

8.3 Use popup bounds

```
picker.getYearView().setEarliestYear(Year.of(1990));  
picker.getYearView().setLatestYear(Year.of(2050));
```

8.4 Read the integer year

```
Integer year = picker.getYear();
```

8.5 Checklist

- 1 Configure `getYearView()` before first show when you need bounds.
- 2 Do not expect more than four digits in the editor.
- 3 Use `valueProperty` for `Year` and `yearProperty` for `Integer`.
- 4 Remember popup selection hides the popup automatically.

9. See also

Demo app: YearPickerApp. Run it with:

```
mvn javafx:run -f gemsfx-demo/pom.xml -Dmain.class=com.dlsc.gemsfx.demo.YearPickerApp
```

- Related GemsFX controls: YearView, YearMonthView, YearMonthPicker.
- API documentation: <https://dlsc-software-consulting-gmbh.github.io/GemsFX/api/>