

INV: How should DateTimeSelect support time increments?

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Customer Problem

As an admin of a company with over 50 workers **I need to** create or edit timesheets for my workers **but** the fields to enter time make me select from a long dropdown list **which makes me feel** overwhelmed and frustrated when I have to search a long list of time increments for many timesheets.

Questions to answer

1. How do competitors handle entering and selecting time?
2. How can we better support mouse, keyboard, and screen reader users?
3. Can we simplify input by formatting automatically vs field validation?

Square

- <https://squareup.com/us/en/staff/shifts>

New shift

0.00
TOTAL HOURS

0.00
PAID HOURS

0.00
UNPAID HOURS

\$0.00
LABOR COST

Team member details

Name	Josh Harrison		
Job	Owner	Hourly rate	\$0.00

Changes to hourly rate will only be applied to this shift.

Tips earned

The job Owner was eligible to earn tips during this shift. [Edit](#)

Recorded hours [Add break](#)

Clock in	00:00 AM	Fri, Jan 26, 2024
Clock out	00:00 PM	Fri, Jan 26, 2024

-
- Input field, no popup or list
 - Editable inline
 - Force format as HH:MM (you must type ##:##, it will not auto-format in any way)
 - 15 -> 1:50
- Select dropdown for AM/PM choice
- Date field is a clickable div that brings up a popup date picker

Recorded hours [Add break](#)

Clock in	9:15 AM	Fri, Jan 26, 2024
Clock out	00:00 PM	

< January 2024

S	M	T	W	T	F	S
24	25	26	27	28	29	30
31	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	1	2	3

Create Appointment

×

Create Appointment

Save

Event type

Appointment

Client Information

Name

Select or create client

Email

Email

Phone

Primary Phone Number

Appointment Details

☐ All Day☐ Repeat

Date & Time

1/26/24 at 10:00 am

Appointment Notes

Add notes viewable by staff only (optional)

Services	Duration	Amount
Add a Service		
Add Discount		
Total		\$0.00

ⓘ **New! Send forms after booking**

Set up forms to automatically send after an appointment is booked.

[Go to Forms](#) | [Learn more](#)

×

- Date Picker uses different control than Shift

Appointment Details

☐ All Day☐ Repeat

Date & Time

1/26/24 at 10:00 am

Appointment Notes

Services

[Add a Service](#)

Services	Duration	Amount
		\$0.00

ⓘ **New! Send forms af**

Set up forms to auto

[Go to Forms](#) | [Lea](#)

×

Jan 2024←→

Su	Mo	Tu	We	Th	Fr	Sa
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

Appointment Details

Date & Time

1/26/24 at 10:00 am

Appointment Notes

Add notes view 10:00 am y (opti

Services

Add a Service

i
New! Send forms after booking
Set up forms to automatically send a

Go to Forms
Learn more

10:15 am
10:30 am
10:45 am
11:00 am
11:15 am
11:30 am
11:45 am

○

- Input field with popup listbox
 - Select a time from the scrollable list
 - Manually enter a time, format HH:MM
 - Auto-formats to HH:MM
 - 5.15 -> 5:15 AM
 - 13.13 -> 1:13 PM

Add to waitlist

Add to waitlist

Client

+ Add client

Availability preference

Date

Time

Between

Start time

12:00 pm

End time

3:00 pm

Add new preference

-
- Input field with popup listbox and auto-complete

12:00 pm

12:15 pm

12:30 pm

12:45 pm

Start time
12:00 pm

End time
3:00 pm

- Select predetermined time from popup list
- Manually type and auto-complete formats the list to match

1:24 am

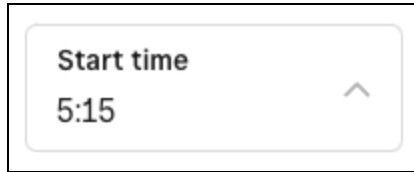
11:24 am

1:24 pm

11:24 pm

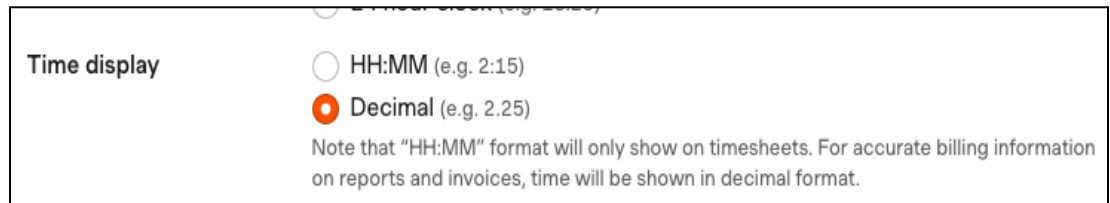
Start time
1:24

- Doesn't auto-correct if you don't select a result

- 

Harvest.io

- <https://www.getharvest.com/>
 - Settings available to switch between time formats

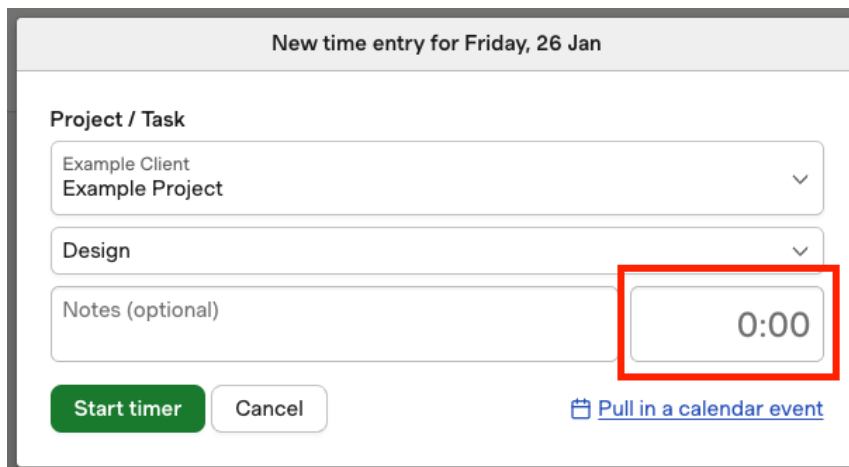
- 

Time display

☐ HH:MM (e.g. 2:15)
☒ Decimal (e.g. 2.25)

Note that "HH:MM" format will only show on timesheets. For accurate billing information on reports and invoices, time will be shown in decimal format.

New Time Entry (format HH:MM)



New time entry for Friday, 26 Jan

Project / Task

Example Client
Example Project

Design

Notes (optional)

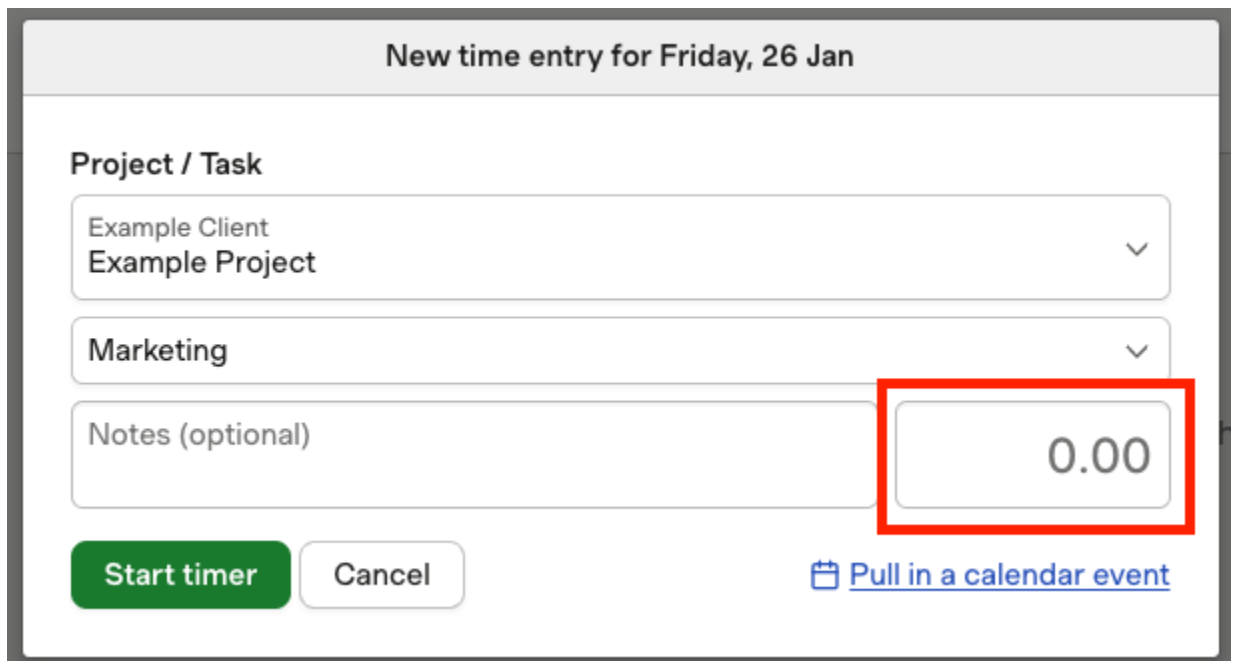
0:00

Start timer Cancel

[Pull in a calendar event](#)

- Input field, no popup or list
 - Editable inline
 - Auto-formats as duration HH:MM
 - 100 -> 100:00
 - 6.15 -> 6:09
 - 6:15 -> 6:15

New time entry (format Decimal HH.MM)



New time entry for Friday, 26 Jan

Project / Task


Example Client
Example Project

Marketing

Notes (optional)

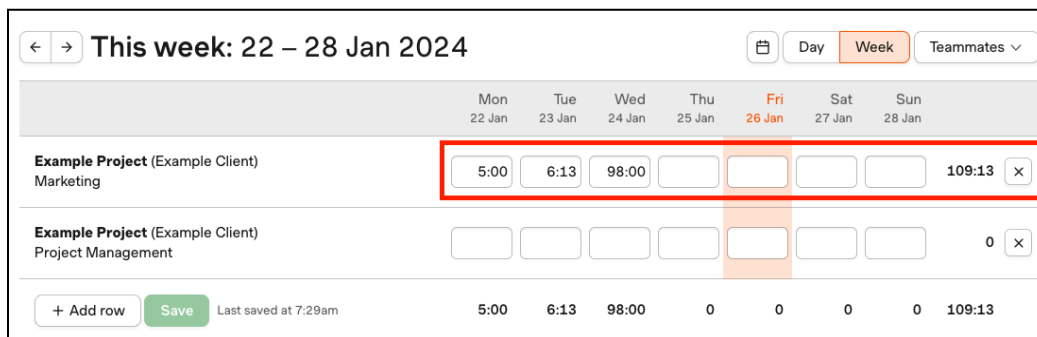
0.00

Start timer Cancel


 [Pull in a calendar event](#)

-
- Input field, no popup or list
 - Editable inline
 - Auto-formats as duration H.MM
 - 100 -> 100.00
 - 6.15 -> 6.15
 - 6:15 -> 6.25

Weekly time entry (format HH:MM)



← → This week: 22 – 28 Jan 2024

 Day Week Teammates ▾

	Mon 22 Jan	Tue 23 Jan	Wed 24 Jan	Thu 25 Jan	Fri 26 Jan	Sat 27 Jan	Sun 28 Jan	
Example Project (Example Client) Marketing	5:00	6:13	98:00					109:13 x
Example Project (Example Client) Project Management								0 x

+ Add row Save Last saved at 7:29am

5:00 6:13 98:00 0 0 0 0 109:13

-
- Input fields, no popup or list
 - Editable inline
 - Auto-formats as duration HH:MM
 - 100 -> 100:00
 - 6.15 -> 6:09
 - 6:15 -> 6:15

Weekly time entry (format Decimal HH.MM)

	Mon 22 Jan	Tue 23 Jan	Wed 24 Jan	Thu 25 Jan	Fri 26 Jan	Sat 27 Jan	Sun 28 Jan	
Example Project (Example Client) Design	32.22							32.22 x
Example Project (Example Client) Marketing	5.00	6.22	98.00					109.22 x
Example Project (Example Client) Project Management								0 x
<div>+ Add row Save Last saved at 8:59am</div>								
	37.22	6.22	98.00	0	0	0	0	141.44

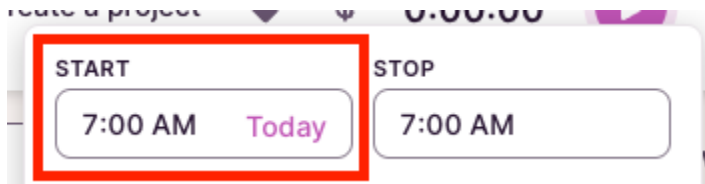
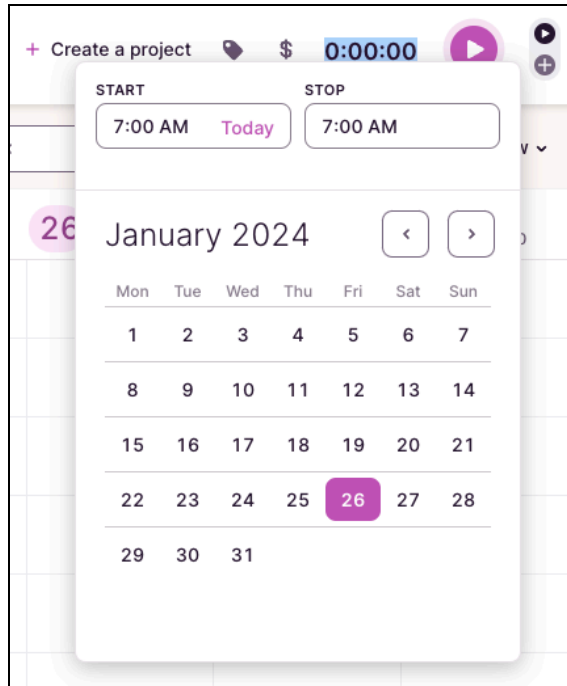
-
- Input fields, no popup or list
 - Editable inline
 - Auto-formats as duration HH:MM
 - 100 -> 100.00
 - 6.15 -> 6.15
 - 6:15 -> 6.25

Toggl

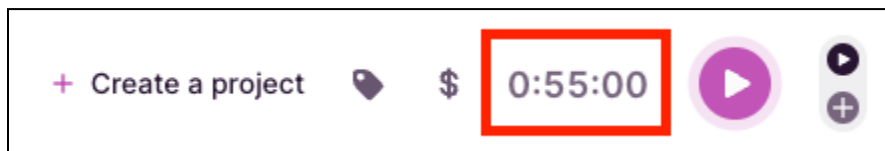
- <https://toggl.com/>

Manual Mode

-
- Clickable input field ("Adjust duration" tooltip)
 - Editable inline
 - Auto-formats as a duration HH:MM:SS
 - 6:15 -> 6 hrs 15 minutes
 - 6.15 -> 6 minutes 09 seconds
 - 70.15 -> 1 hr 10 minutes 09 seconds
- Exposes date/time picker

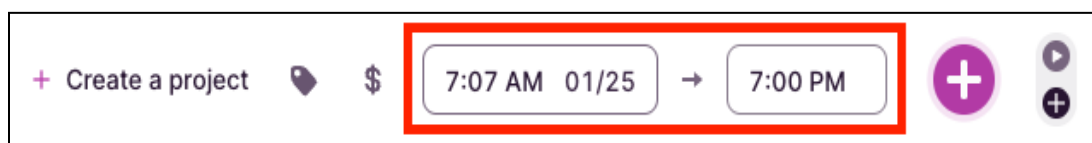


- Clickable input field
 - Auto-formats to HH:MM A
 - 6 -> 6:00 AM
 - 6.5 -> 6:05 AM
 - 6:98 -> error
 - 6:00 a -> 6:00 AM
 - 6a -> 6:00 AM



- Time shown as a duration HH:MM:SS

Timer Mode



- Clickable input field
 - Auto-formats to HH:MM A

- 6 -> 6:00 AM
- 6.5 -> 6:05 AM
- 6:98 -> error
- 6:00 a -> 6:00 AM
- 6a -> 6:00 AM

Calendly

- <https://calendly.com/>

This is a preview. To book an event, share the link with your invitees. [View live page](#)

Josh Harrison

Tester

🕒 30 min

📍 Home

Select a Date & Time

< February 2024 >

Tuesday, February 6

SUN	MON	TUE	WED	THU	FRI	SAT
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29		

Time zone

🌐 Mountain Time - US & Canada (8:52am) ▼

🔧 Troubleshoot

9:00am

9:30am

10:00am

10:30am

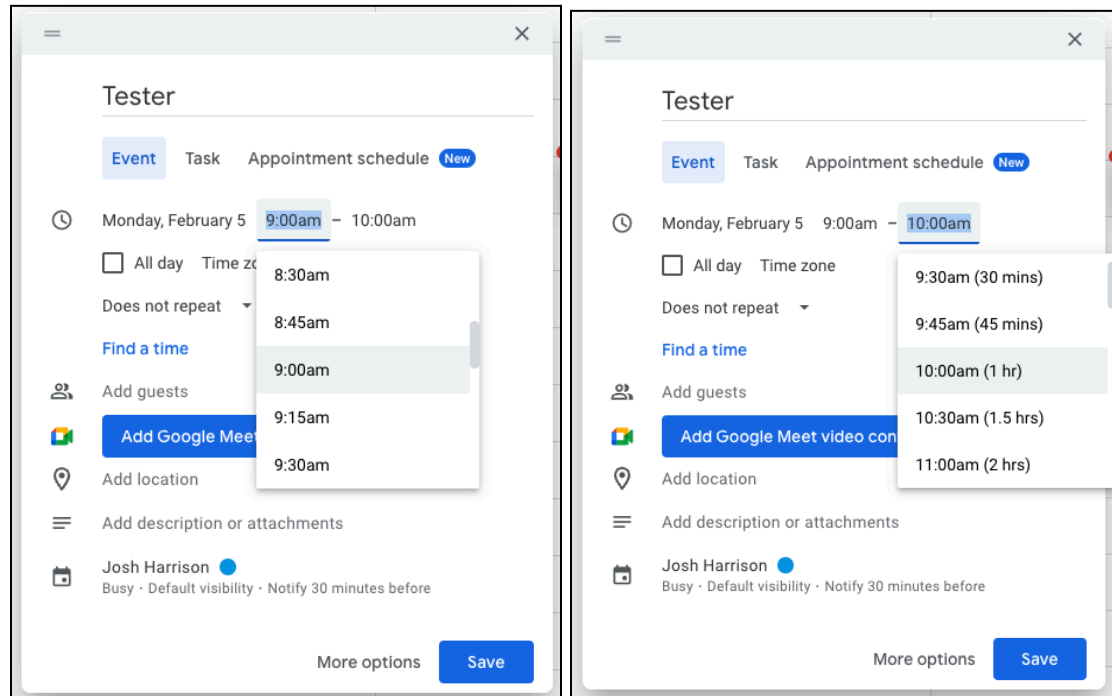
11:00am

11:30am

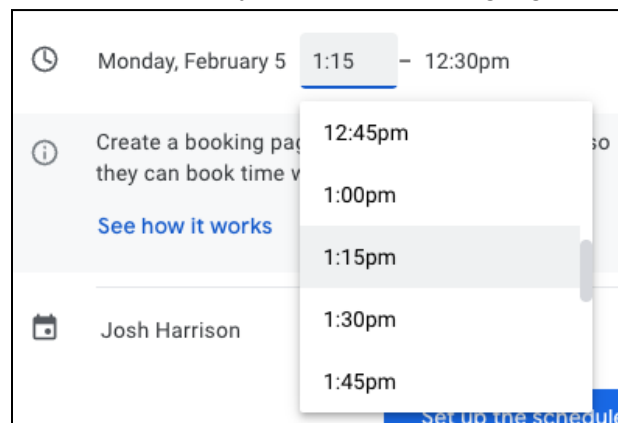
12:00pm

- Renders as a list of selectable buttons

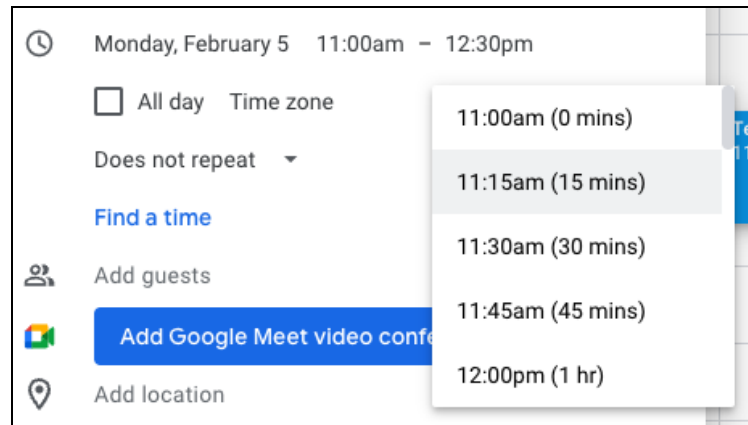
Google Calendar



- Input fields and dropdown select lists
 - List items are 15 minute increments
 - Entering a time opens the list and highlights the nearest time increment
 - AM or PM is dependent on the current system time
 - It's 9:02am and I type 1:15, the list highlights 1:15pm



- End time dropdown list starts where the start time is set

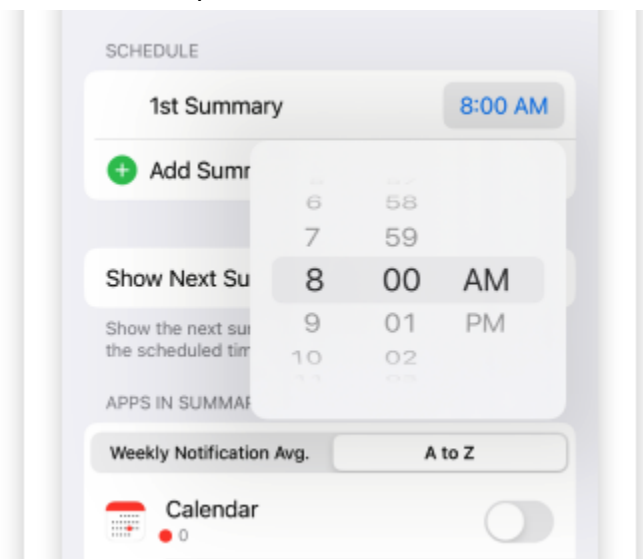


Apple Design

- <https://developer.apple.com/design/human-interface-guidelines/pickers>

Notes

1. No Web- specific time-related components
2. All examples reflected this scrollable selector style

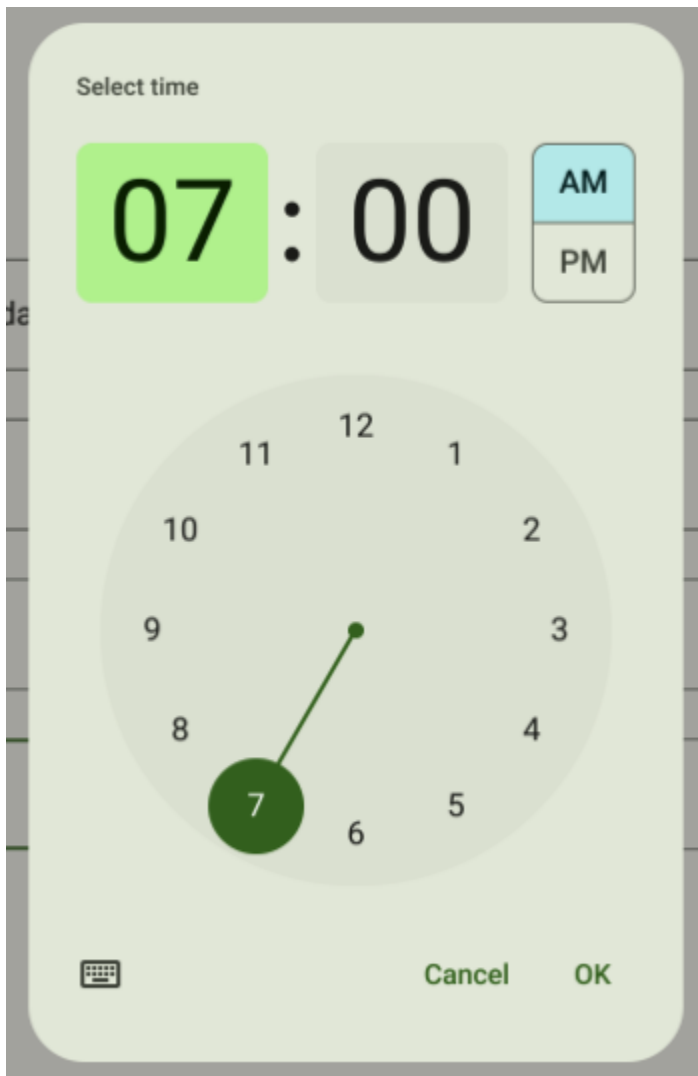


Google Material Design

- Web: <https://material-web.dev/>
- Mobile: <https://m3.material.io/components/time-pickers/specs>

Notes

1. For Web, there isn't a design for a time-related component
2. Time Input and Time Selector (Mobile)



Timecapture-DS

- <https://uxfabric.intuitcdn.net/internal/design-systems/timecapture-ds/master/latest/index.html?path=/story/components-time-select--basic-usage-with-knobs>

Time Select

06:31 pm ▼

- 06:30 pm
- 07:00 pm
- 07:30 pm
- 08:00 pm
- 08:30 pm
- 09:00 pm
- 09:30 pm
- 10:00 pm
- 10:30 pm

Notes

- Uses @ids-ts/text-field for text input, time can be edited
- Creates a custom-built listbox dropdown for selecting predetermined times
- 1st click shows the dropdown, 2nd click hides the dropdown and lets you manually enter
 - Initial dropdown shows 12:00am and full list
 - List does not stay visible while typing, does not highlight the nearest time (list is hidden)
- Auto-formats manually entered time
 - Current system time is not considered
 - 5:30 -> 05:30 am
 - 15:30 -> 03:30 pm

Prototypes

Time Select (Google Material Example)

Start time End time

<input type="text"/>	:	<input type="text"/>	<div>AM</div> <div>PM</div>	<input type="text"/>	:	<input type="text"/>	<div>AM</div> <div>PM</div>
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Time Select (QBDS Dropdown-Typeahead Example)

Start time (Time)

▼

Duration Select (QBDS Dropdown-Typeahead Example)

Start time (Duration)

▼

Time Input (IDS Text Field w/ Formatter)

Start time (Time)

Duration Input (IDS Text Field w/ Formatter)

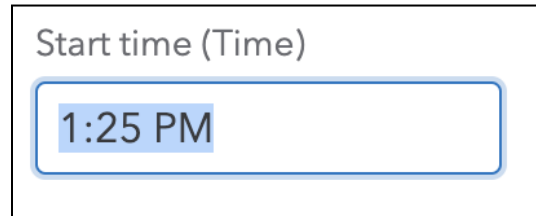
Start time (Duration)

Summary & Recommendation

Personally I found anything more than a simple text field with an auto-formatter on blur to be cumbersome and take too long to fill out. Providing a dropdown that also allows input is a flexible compromise, but once you have type in your time there's no point in selecting anything. Also, using a simple text field can be reused across Time widgets as a durable, recognizable input component for time or duration.

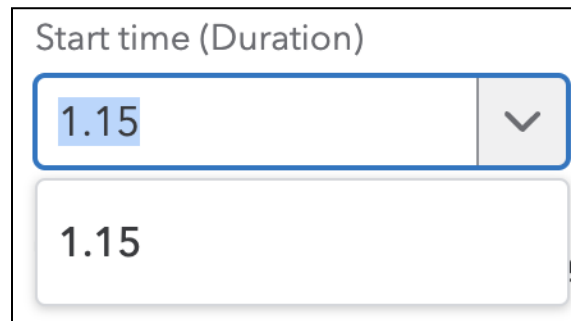
Both options should be heavily influenced by the [Google Calendar](#) experience.

1. Use the internal design system TextField input
 - a. Benefits
 - i. Flexible for Time or Duration
 - ii. Fast input for MM vs selecting from dropdown
 - iii. Can be re-used across widgets (Time Edit, Weekly Timesheet, etc.)
 - b. Use customer setting to distinguish between 12 hr or 24 hr formats
 - c. Use onFocus to auto-select the text



A screenshot of a text input field titled "Start time (Time)". The field contains the text "1:25 PM" which is highlighted with a blue selection background. The field has a light blue border and a rounded rectangle shape.

- i.
 - d. Use onBlur custom formatter (not built-in formatter) for
 - i. Adding AM or PM
 - ii. Forcing ":" or ".", depending on type of field
 - iii. Align on HH:MM or H:MM format
2. Use the internal design system DropdownTypeahead
 - a. Benefits
 - i. Flexible for Time or Duration
 - ii. Can allow for input or selecting from dropdown
 - b. Use customer setting to distinguish between 12 hr or 24 hr formats
 - c. Use selectTextOnFocus prop to auto-select the text in the input field



A screenshot of a dropdown menu titled "Start time (Duration)". The input field shows "1.15" and has a dropdown arrow on the right. The dropdown menu is open, showing a list with the option "1.15" selected. The input field has a light blue border and a rounded rectangle shape.

- i.
 - d. Use onBlur custom formatter (not built-in formatter) for
 - i. Adding AM or PM
 - ii. Forcing ":" or ".", depending on type of field
 - iii. Align on HH:MM or H:MM format