```
Estimate distance
travelled using v_next
```

$r1 \leftarrow s + s\_decel + v\_next$

```
ld   r0 s
add r0 s_decel
add r0 v_next
cmpgt r0 dist
```

pc
$\bigwedge$ s + s_decel + v_next $\leq$ dist

pc
$\bigwedge$ s + s_decel + v_next > dist

```
Accelerate
```
```
ld r0 v_next
```

```
Either keep speed
or decelerate
```

$r1 \leftarrow s + s\_decel + v$

```
ld   r0 s
add r0 s_decel
add r0 v
cmpgt r0 dist
```

pc
$\bigwedge$ s + s_decel + v_next > dist
$\bigwedge$ s + s_decel + v $\quad \leq$ dist

pc
$\bigwedge$ s + s_decel + v_next > dist
$\bigwedge$ s + s_decel + v $\quad$ > dist

```
Keep speed
```
```
ld r0 v
```

```
Decelerate
```
```
...
```