



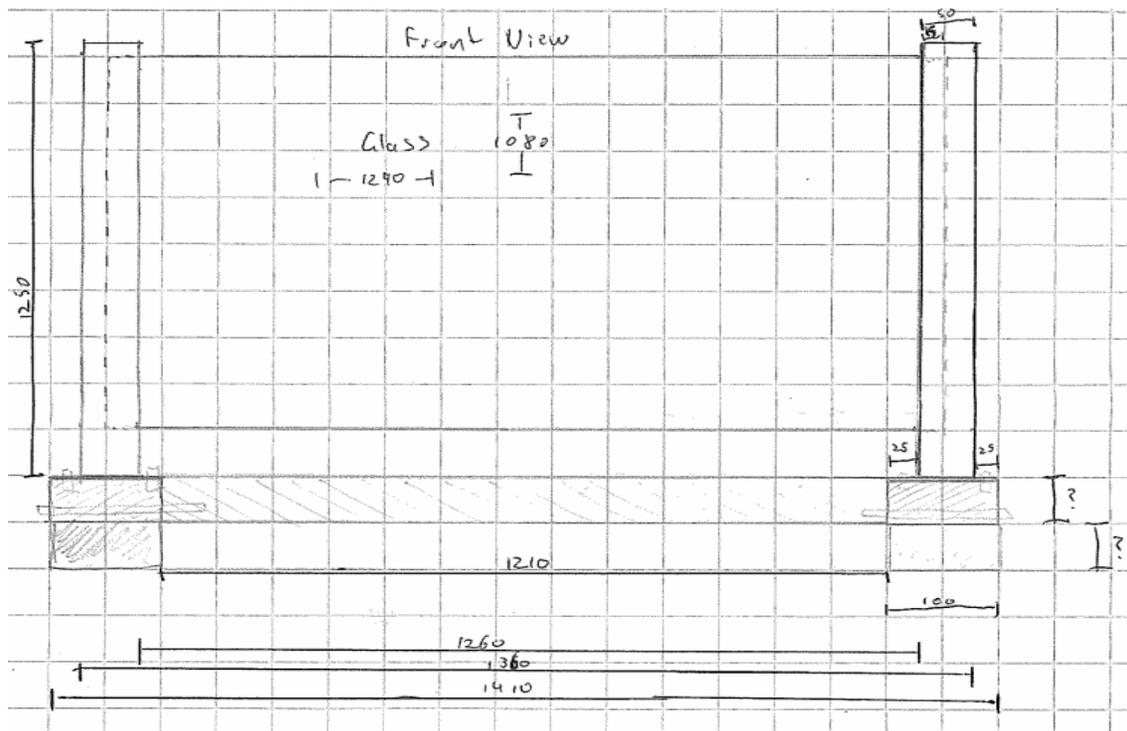
How to Build a Forward Board

Introduction

Credit for the base design has to go to [Joel Speranza](#), who kindly shared his original Forward Board design via twitter after FlipConAus 2015. I cannot recall where exactly he shared it from, however, you can find a copy of Joel's original plans [here](#). I have modified the design slightly and have plans to alter it further after I fine tune things a bit. The main difference between Joel's original plan and what I ended up building was in the base. Joel has a solid base, whereas I have two feet which can be attached and detached as needed for transport.

I filmed the entire construction process I went through (just under three and a half hours), and using Camtasia, edited it all together, and sped it up to show the entire process in a *much* shorter time. You can find that video [here](#). To see what some of the videos I have made using the Forward Board look like, check [my YouTube channel](#) or [Joel Speranza's channel](#). There are many others out there who are making Forward Board videos (you will also hear them referred to as *Lightboards*) as well as various plans for making them. These are my plans. Feel free to use and modify them. I would love to see what yours looks like.

Sketched plans before construction



Materials



Prod Code	Item	Vendor	Qty	Unit	Total
	Superglue	Coles	2	\$ 2.35	\$ 4.70
EXPO175226	Expo Neon Markers	Officeworks	1	\$ 12.16	\$ 12.16
930069712245 2	Superglue	Bunnings	1	\$ 2.14	\$ 2.14
4110485	Flyscreen Spline 6mm x 2mt	Bunnings	4	\$ 0.35	\$ 1.40
EV5051	Everton 1250mm Pool Fence Post	Bunnings	2	\$ 53.00	\$ 106.00
1079658	12x12x1.5mm 3m Aluminium Channel	Bunnings	1	\$ 13.86	\$ 13.86
	Timber Offcuts	Bunnings	2	\$ 1.00	\$ 2.00
7071769	LED Lights*	Bunnings	1	\$ 30.00	\$ 30.00
1232496	Glass Silicone	Bunnings	2	\$ 5.98	\$ 11.96
	Caulking Gun	Bunnings	1	\$ 3.95	\$ 3.95
3940067	Leg Furniture Stud 5/16" 4pk	Bunnings	2	\$ 3.10	\$ 6.20
	Wingnuts 5/16" 5 pk	Bunnings	2	\$ 3.90	\$ 7.80

	Washer 5/16" 40pk	Bunnings	1	\$ 3.90	\$ 3.90
466978	Flyscreen Spline 4.5mm x 2mt	Bunnings	2	\$ 0.58	\$ 1.16
	Starphire Glass 1290x1080x4mm**	Sydney Glass Wholesaler	1	\$ 109.67	\$ 109.67
TOTAL					\$ 316.90

*This LED strip set did not come with a dimmer switch and was significantly longer than was needed. However it is designed to be cut to length with specific spots marked as cuttable on the strip.

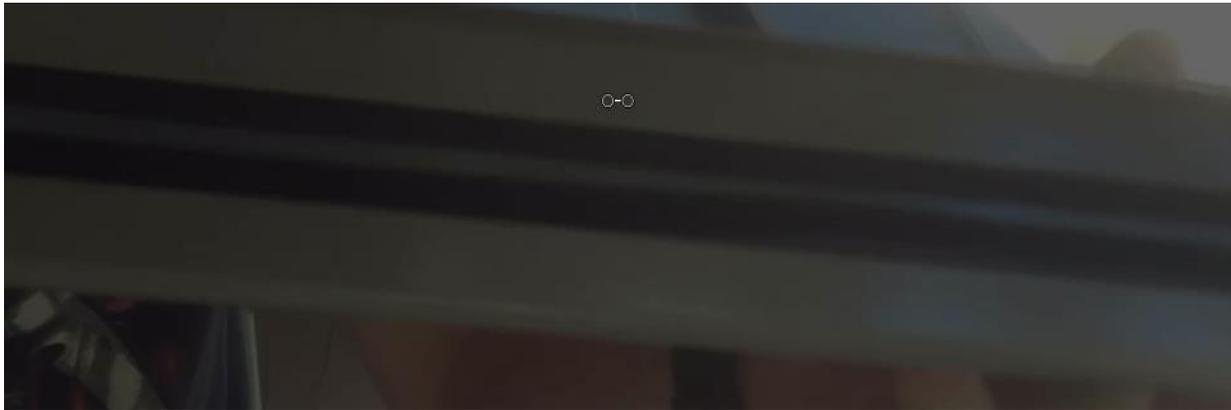
**It is important to take note of the [Glazing Code - AS1288-2006](#) as there are certain requirements for glass thickness and glazing depending on the size and location of the glass, especially when schools and children are involved. The Trend Glass website has a really helpful summary which can be found [here](#). The basics are at the top of the page and the details about exceptions and additional requirements where schools are involved are further down the page.

Tools Used

Eye and ear protection, angle grinder fitted with a cutting disc, electric drill. A router can be used to tidy up the feet to make them more aesthetically pleasing if required.

Method

1. Attach the 6mm spline to both sides of the pool fence channel (not the bottom of the channel) using the super glue. I put some superglue on the channel and then pressed the spline into the glue, holding it for about thirty seconds before doing the next small section. I used 1mtr lengths, which is not enough for the full length of the channel, but is enough to do the job. Leave a gap of ~40mm at the base-end of the channel and at the top-end of the channel. The spline acts as cushioning for the glass to take some of the pressure when transporting.



You can see in the photo above that the spline (black rubber strips) is glued against the side walls of the fence post to create a channel. The glass panel will sit in the channel with the spline helping to act shock absorption during transportation as well as to keep the glass in place when being used.

2. Measure and cut the aluminium channel to the length of the glass. You should end up with two aluminium channels the same length. These are for the top and base of the glass. The offcut is not needed
3. Taking **one** of the aluminium channels from Step Two, repeat step one using the 4mm spline. This will be used as a cross beam for the base of the glass panel. The second aluminium channel will house the LED strip and thus will not need the rubber spline. I used a large flathead screwdriver to help keep the spline straight instead of twisting around.
4. Marking out and drilling the holes in the feet requires careful measurement and marking (not to mention drilling). Find the centre of the foot and place the centre of the fence post on that. Use a rule to mark where the holes in the fence post base are. I would suggest getting one hold correct in regards as ensuring the furniture screw goes in, and then putting the fence post in place and checking that your other marks still line up, repeating after each pilot hole and screw.
5. Drill pilot holes into the timber to allow the furniture screws to be screwed in. The furniture screw (pictured below) has one end as a screw for timber (right hand end in the photo) and the other end as a bolt for metal (left hand end in the photo), perfect for this application.



6. The fence posts come with two black rubber spacers which go in the channel and allow the glass to be raised up. I used both spacers in each fence post as the measurements worked out that it meant I would not need to cut any fence post at the top. It is entirely up to you.
7. Lay the fence posts on a table or similar and insert the aluminium channel in the base with the channel facing up. You will need a second person to help you with the next steps. A third and fourth wouldn't go astray.
8. With one person holding each side of the glass, very carefully slide the glass panel into the fence posts from the top down towards the base. If you have additional people helping, you can have a person in each corner to assist with feeding the glass into the fence posts without dropping the glass as well as ensuring the fence posts do not pop off the glass.
 - a. The glass should be in the channel between the spline.
 - b. If you watch the video, you will notice that the glass has a bit of a bow in it. This is due to its weight. I would recommend having something underneath the middle of the glass to support it.



Mrs C21 and I sliding the glass panel into place.

9. When the glass is in place correctly, use your caulking gun and some clear glass-appropriate silicon to secure it in place by applying silicon to all three channels (two sides and the base). The silicon will be what holds the unit together as well as providing shock absorption. Go nice and slow with the silicon and ensure that you get as much silicon in as deeply into the channel as possible. I used the offcut aluminium channel to help push the silicon into the channel. I also recommend having a cloth handy and using it to clean the glass from silicon smears as you go. If, like me, you have never used a silicon before, I recommend these videos:
 - a. [Ultimate Handyman](#)
 - b. [UAT](#)
10. Allow at least 24 hours for it to set. If you are making this outside, as I was, allow longer if the air is wet/damp/cold. When it is set, there will still be some give in the silicon which I have been told is normal.
11. Once the silicon on the first side has set, have someone help you flip the forward board over and silicon the second side.

- 12.** When the silicon for the second side has set, attach the feet, using washers and wingnuts. The wingnuts will allow you to remove the feet for easier transportation if needed. If you are not going to be transporting, you can probably just bolt the feet in place.
- 13.** Stand the forward board up on the ground.
- 14.** Measure out the length of the strip LEDs that you need for your glass. Before cutting the strip, I would recommend laying it over the glass to double check.
- 15.** Cut the LED strip at the appropriate place.
- 16.** Carefully remove the backing tape from the LED strip and lay it into the final aluminium channel to keep the strip in place.
- 17.** When the super glue has set, place the top aluminium channel into the fence posts. The strip LEDs should now be facing down through the glass. The power cord should hide down the outside of the fence post in the outside channel.
- 18.** Place the fence post caps in place to finish the look.
- 19.** I use a 3M picture hook as an anchor for my RODE lapel mic to ensure that what I say is picked up.
- 20.** I set my iPad up on a tripod so that the field of view only contains the forward board and plug the RODE microphone (I have an extension for the microphone)