

## 1027 - Victorian Railways CE guards van.

Thank you for purchasing this kit and I hope you get many hours of enjoyment from it. Chris Pearce (Spirit Design)



5CE at Spencer St, 1978. (CE 5 is now preserved at Bright). Photo courtesy of Rob O'Regan

### Basic history notes:

Newport constructed the DVEs in 1906, which were later recoded CE's in 1910. The first batch 1-32 was built matching the then newly created 'E' stock beautifully with their clerestory roofs and were to become a favourite amongst railway followers for many years. Within the first batch, there were three subtypes where the guard's van area varied in size.

Their wooden bodies sat on steel underframes that were strengthened with truss rods. A guard's lookout was provided similar to the CW's then in service with one at each end of the van. Screw handbrakes, emergency brake valves and pressure gauges were provided in the lookouts for operation by the guard if needed. Internally 5 sections were provided for storing goods and hinged shelves with desks and chairs provided extra comfort when attending to paperwork. All doors in the vans were of the sliding type with the twin main doors providing ample room to manoeuvre trolleys in and out at stations. Four dog kennels were located under the raised seat of the guard and entry was via the outside of the van only. Dead fish were carried if required as the central door area had special hardwood floor runners, lead sheeting and a 2" pipe to drain away any foul water. Later on, in their lives steel panelling was added to the lower portions of CEs as the constant wear and tear with baggage handling trolleys had splinted the matchstick sides.

CE's 33-37 were built in 1924 with the newer semi-elliptical roof style that was becoming in vogue at the time for ease of construction. They rode on the newer 4-wheel bogies and a different arrangement for the truss rods strengthening their underframes. A terrible smash on 1/1/1930 saw CE15 written off and a new van built to the old number but in the semi-elliptical style.

In 1926-28 vans 11-14 were fitted with two Coffin chambers at one end. They were fitted with extra louvres and special tail discs were displayed when a chamber was occupied. By 1957 the vans were again altered to match the rest of the class.

As the 1980s arrived their importance had waned and with guards vans being removed from trains gradually most were scrapped. A few have survived into preservation and can be seen occasionally. One unit CE 33 was painted in the short-lived orange/silver scheme that the railways had in August 1982.

### The Kit:

The kit can be put together in a few hours spread over a few days. If you have already built one of my 'E' or 'W' cars then you are already ½ way there. Only minimal tools, basic skills and patience are all that is required to build a very accurate model of this VR guards van. It is suggested that you **read through** the instructions first to become familiar with the components and the essence of construction. There are a few steps that require close attention and they are highlighted in **bold and italics!** Parts referred to in the text are marked **(P1)**, **(P2)** etc. Please use prototype photos to aid construction. Generally, the kit will fit together without any problems, however as wood is a natural product sometimes cut lines burn more rapidly than others and as a result, a part might be fractionally shorter. **Please trial fit**

**parts before gluing and make minor adjustments if necessary.** Where Super Glue is mentioned for the roof side parts it should be used in preference to other types of glue. The kit is based on a typical unit running around from the mid-1970s.

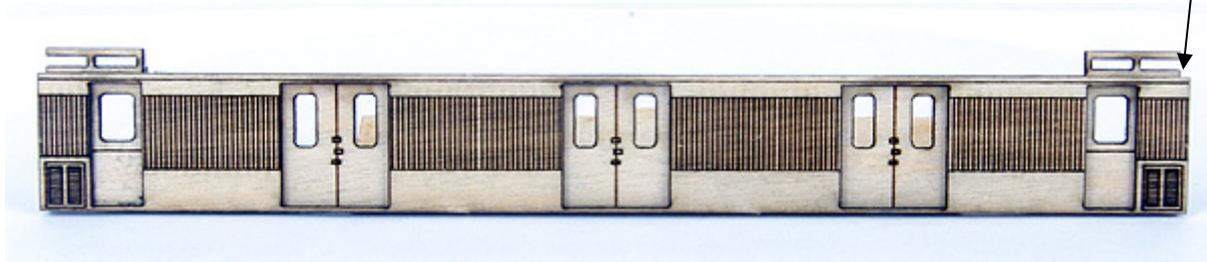
### Equipment & Materials:

Exacto knife (blade No. 16 or similar), 800-grit aluminium oxide sandpaper, small flat needle file, emery board, toothpicks for spreading the glue and a small screwdriver with a 3mm shaft. Fast-drying wood glue like Selleys Exterior PVA or Selley's water-based 'Kwik Grip', Super Glue for assembly (all recommended: usual disclaimers). The best application for gluing all my kits is the Ultra-Fine Glue applicator also available from Spirit Design separately.

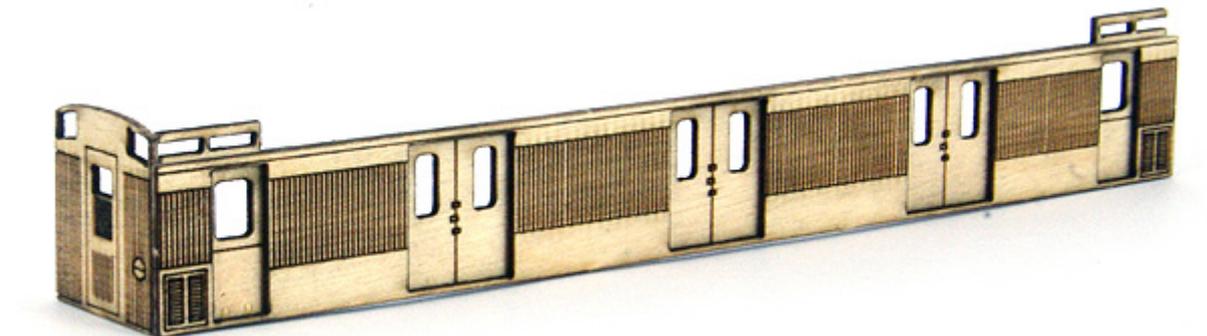
**General Assembly notes:** The kit can be painted before assembly but also can be painted after it is built as well. I will leave it up to the modeller to decide. The underframe and other components can be painted at any time. Any piece cut from the sheet should have the holding tag sanded slightly as there is always a slight bump when a knife cuts it free from the surrounding area. Also, become familiar with the prototype by studying the photos with the instructions before commencing the kit. Construction photos show painted and unpainted kits in assembly mode.

### Assembly Instructions

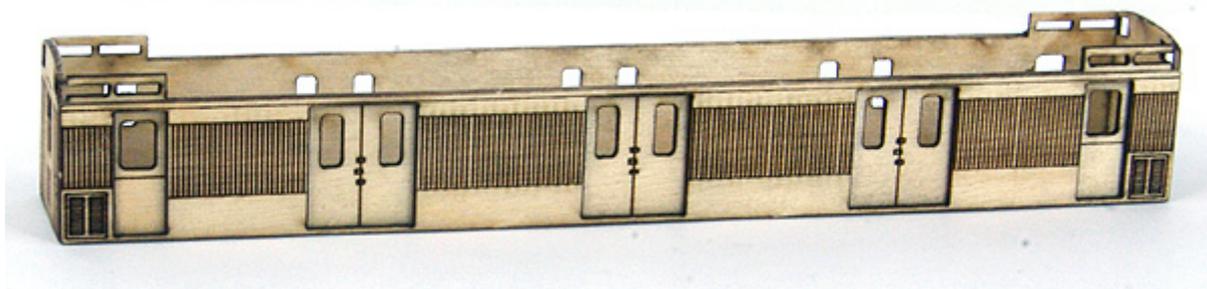
1. Glue **(P2)** to the back of **(P3)** making sure no glue escapes onto the door faces. There should be a 0.8mm gap between the end edges of **(P2)** and **(P3)** at both ends when viewed from the back. This will allow the end walls to slip into this spot. Also, make sure that the bottom edges of the two parts are in alignment. Note the orientation of the sides. See the photo below.



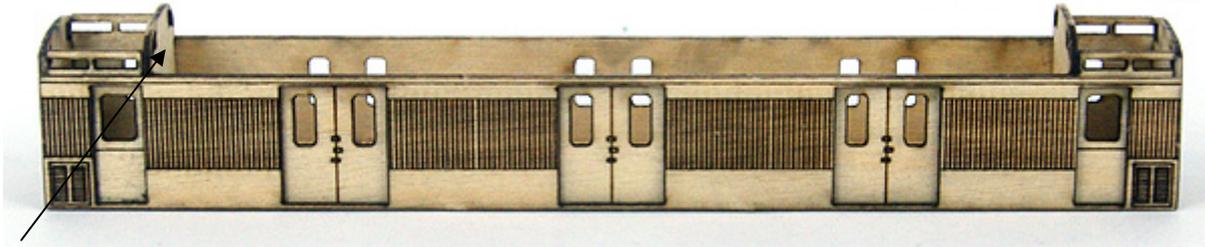
2. Repeat the same procedure for parts **(P4 & P5)**.
3. Glue **(P6)** to the unit assembled in step 1. It should fit neatly into the 0.8mm gap provided earlier, forming an 'L' shape with the sidepiece.



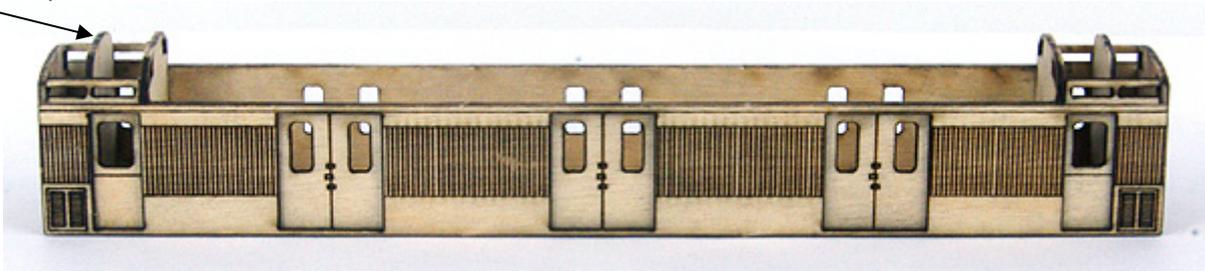
4. Repeat the same procedure for **(P7)** with the other side.
5. Glue both 'L' shaped halves together making sure that they all lineup and are square to each other. Use squares or aids to accomplish this. Place a small dab of glue where cupola/guards windows meet the end walls for added strength. In addition, pay attention to the bottom edges of the newly formed box so that **All** edges are sitting flat on the workbench. Use weights if necessary.



- Sand the MDF floor (**P1**) edges ever so slightly to remove the minor laser staining and to make the side edges a little more vertical. Tests fit the floor into the assembled sides and ends and when happy with the fit glue it in place. Once dry do very light sand on the base so that it sits flat with the sides and end walls of the completed unit.



- Glue the cupola front pieces (**P8**) into the guard's cupola areas making sure that the face of (**P8**) is vertical and in line with the edge of the cupola forming a neat box. See the photo above.
- Glue pieces (**P9**) into each of the guard's compartments halfway between the end walls (**P6 & P7**) and the cupola front pieces (**P8**) making sure the partitions are not seen in the window openings of the guard's compartments.



- Glue 10-15grams of weight inside onto the van floor using Selleys Kwik Grip Water-based glue.
- Tests fit the main roof piece (P10) and adjust if necessary for a neat snug fit. You may have to slice a very thin section away from the rebate underneath to allow the roof and sides to come together. Looking at the prototype photos, shave off part of the overhang where it meets the side if need be.
- Glue parts (**P11**) clerestory edging to the outside edges of (**P12**) as per the parts guide.
- Glue the assembled clerestory section (2 x **P11** & **P12**) to the roof centrally between the two cupola end faces (**P8**), parts (**P11**) being glued to the roof such that the top of (**P12**) is in line with the top of parts (**P8**).
- The styrene roof is the hardest part of the kit, which is why you have been given two units to help you achieve the finished form. Note that the shiny surface is glued down onto the wooden body.**



What the roof looks like after bending the components before the gluing process, in this case a CW end but the process is the same for the CE.

**Trial fit procedure:** Place the roof over the clerestory section and become familiar with where you have to bend the relevant parts to get them to follow the roofline shape. Using a small screwdriver with a 3mm shaft roll in the direction of the arrows all the edges marked 'A' in the diagram over the shaft to achieve a curved profile. Test fit the roof again and adjust items marked 'A' until they approximate the shape of the guard's cupola curve and only require glue to secure them, **but do not glue yet!**

**Repeat for items marked 'B' in the direction of its arrows and trial fit again. You may have to manoeuvre item 'A' out of the way to achieve this.**

**When you are happy with the shape, you may secure it with glue. There are several ways to do this.**

Experienced modellers will use Super Glue for the entire process, securing all sides down using pressure and a toothpick to apply any extra glue.

All other modellers should glue the main section to the roof and secure only up to section 'B' where they start at the intersection of **P9** using either Selleys Water-based Quick-Grip or Super Glue. Once dry, the part 'B' faces can be glued down using Super Glue onto the edge where they meet **P6 and P7**.

Each section marked 'A' should now be glued down using Super Glue, the folds made around the screwdriver earlier will help you achieve this angle. Take your time and do not rush this step.

**If disaster strikes on attempt one:** If you have an accident on attempt one with your roof, cut along the dotted lines shown in the diagram above to separate the second supplied roof (**P13**) Spare into 3 parts to allow easier application. However, you will need to patch the cut lines with suitable body filler afterwards.

14. Use body filler to patch the cut lines in the cupola. Once dry sand gently with very fine sandpaper to produce a smooth surface. Recoat with filler until the desired surface finish has been reached and no cut lines are visible.
15. Tidy up any edges around the guard's cupola roofline so that the overhang is even. This may require some very fine filing to make the roof edge parallel with the cupola as the roof has a slight flare in the shape to allow for the curving process over the cupola ends.
16. Glue (**P14**) the styrene (15thou x 30thou) strip along the scribed/marked line of the newly completed roof. Your model should now be painted following the procedures below.

### **Painting guide:**

The body should be **lightly coated** (2 passing light coats not 1 heavy one) with a pale grey primer; Tamiya Surface Primer is ideal for this step.

**Sides, end walls and doors, Cupola window frames, Roof:** Steam Era Diesel Blue. Other similar 'Blues' by other makers can also be used.

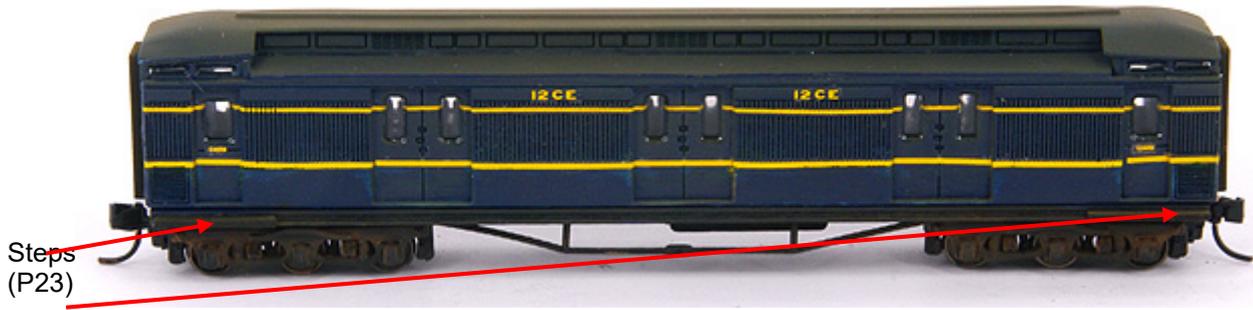
**Side stripes:** Steam Era Diesel Yellow paint or use the decals stripes provided. If using the decals it may be easier to cut them into smaller lengths for ease of handling. Another method is once they are laid and dry, cut through the centre of each window opening so that the decal is free to form back around to the inside of the carriage once more decal settling solution is applied.

**Tail disc:** Flat White

**(P16-P24) Underframe, vestibule ends, generator, steps, air reservoir and battery box:** Matt black, Floquil weathered black or grimy black.

17. Glue parts (**P15**) (Vestibules) to the end walls (**P6 & P7**) match the door lines engraved into the ends.
18. Glue (**P16**) the underframe to the floor (**P1**) centrally using toothpicks as an aid in lining up the bogie holes. The side facing you should have the scribed line for the battery box showing.
19. Glue the 'U' channel parts (**P17**) to the outside of the underframe and along the van floor edge. The routed-out area faces the builder and the flat back is glued to the underframe sides.
20. Glue (**P18**) the battery box straight edge across the scribed line on the underframe with the detail facing out to the modeller. The rounded edges of the unit should be hanging down from the underframe.
21. Glue (**P19**) the air reservoir to the floor of the van using the parts guide picture below. An arrow indicates its position.
22. Glue the generator (**P20**) underframe using the parts guide below.
23. Using the holes provided in the MDF floor sides; glue the truss rods (**P21**) in place.
24. Glue the switch panel (**P22**) as marked on the underframe parts guide.
25. Glue parts (**P23**) the steps into the 'U' channel below each of the guard's end side doors. See the photo below.

26. Parts **(P24)** (spacers) are provided for Microtrains 1015 couplers if needed.



Steps  
(P23)

Completed model of 12CE in a mildly weathered and battered condition.



6CE. Photo courtesy of Mel Skinner.



Typical battered wear and tear on 8CE, Note the roof colour and dirty windows. Photo courtesy of Mel Skinner



A fairly clean 18CE October 1985. Photo courtesy of Rob O'Regan.

**Decals:** Using the prototype photos above and the photo of the finished model, position the decals accordingly. The larger stripe decal is for the lower stripe on the CE. The guard's decals go on the doors.

**Weathering:** Use pastels or paint to weather the van as per photos or to your liking. Don't forget the roof as smoke and diesel fumes stained it.

**Bogies and couplers:** Microtrains 1018 6-wheel passenger bogies are screwed or attached into the bogie bolster holes provided in the underframe (P16) and floor (P1).

**Windows:** Use Microscale Kristal Klear for the windows to achieve a flush finish after painting.

**For more information and photos see** [www.spiritdesign.com.au](http://www.spiritdesign.com.au), Rob O'Regan's website <http://www.robx1.net/> or Mark Bau's <http://www.victorianrailways.net/> or Peter Vincent's <http://www.pjv101.net/index.htm>.

Any alterations, suggestions or queries please contact me. **Email** [chrispearce@spiritdesign.com.au](mailto:chrispearce@spiritdesign.com.au)

Spirit Design ABN 92 510 718 068

[www.spiritdesign.com.au](http://www.spiritdesign.com.au)

