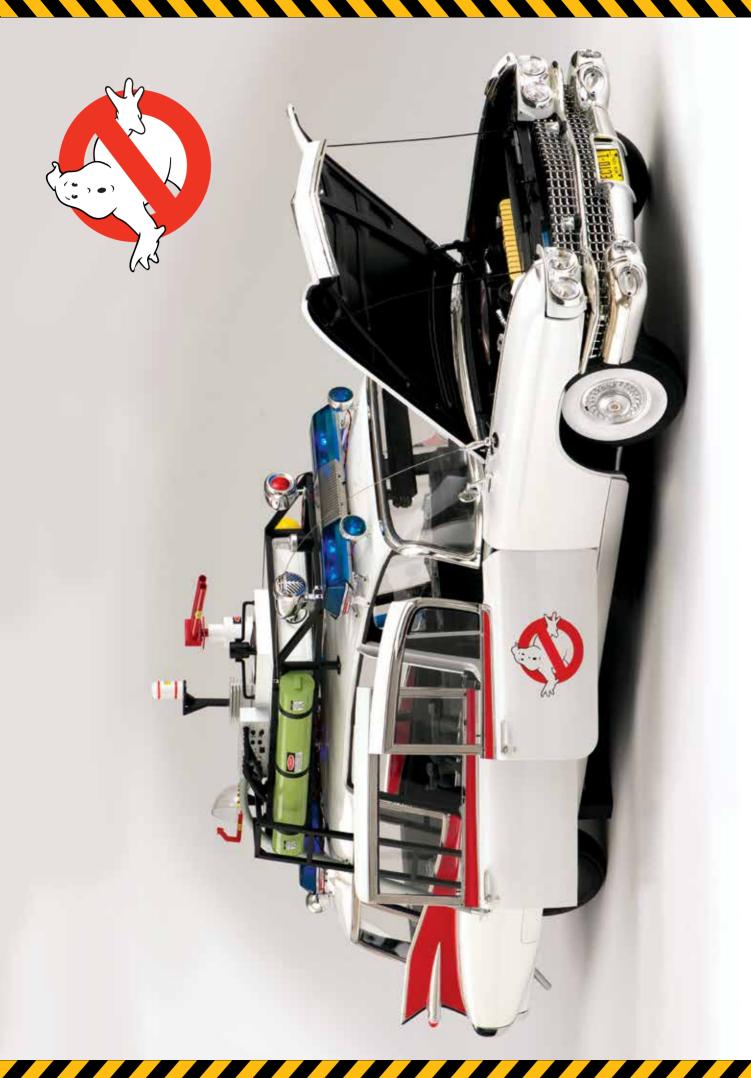
BUILD THE GHOSTBUSTERS...

ECTO-I





BUILD THE **GHOSTBUSTERS ECTO-I**

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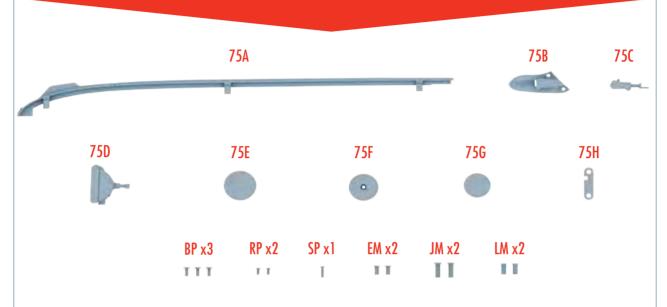
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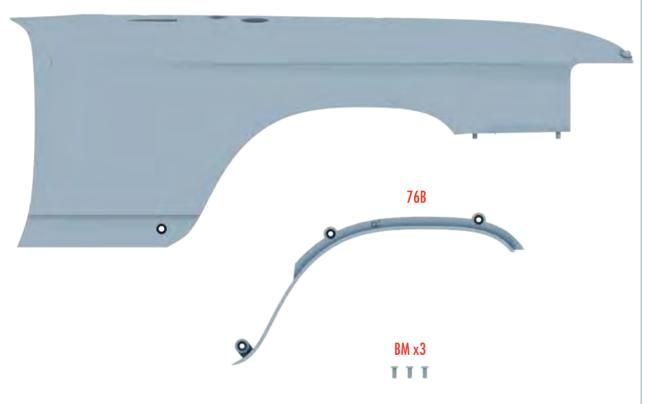
In this stage, you receive the Unity S6 spotlight and plating for the top of the front left fender.



PART NUMBER	DESCRIPTION	QUANTITY
75A	front left fender plating	1
75B	UNITY S6 SPOTLIGHT BASE	1
75C	UNITY S6 SPOTLIGHT BRACKET	1
75D	UNITY S6 SPOTLIGHT CUP	1
<i>75</i> E	UNITY S6 SPOTLIGHT LENS	1
75F	UNITY S6 SPOTLIGHT REAR CUP	1
75G	unity s6 spotlight rear lens	1
<i>75</i> H	SWITCH COVER	1
ВР	1.5x4MM	3 (+1 SPARE)
RP	1.2×3MM	2 (+1 SPARE)
SP	1.2×5MM	1 (+1 SPARE)
EM	2x4MM	2 (+1 SPARE)
JM	2.3×7MM	2 (+1 SPARE)
LM	2.3×5MM	2 (+1 SPARE)

In this stage, you receive the front right fender and its inner plating.

76A



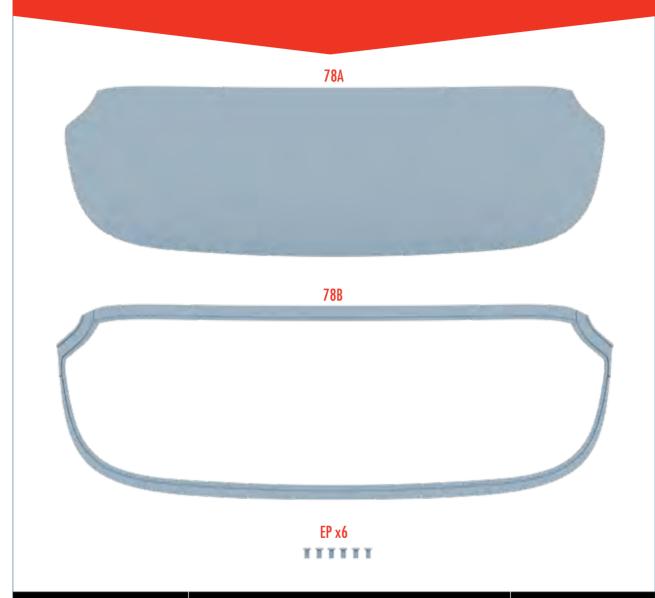
PART NUMBER	DESCRIPTION	QUANTITY
76A	front right fender	1
76B	FRONT RIGHT FENDER INNER PLATING	1
ВМ	1.7×4MM	3 (+1 SPARE)

In this stage, you receive more parts for the front section of your model, including antenna and base for the right rear view mirror.



PART NUMBER	DESCRIPTION	QUANTITY
77A	front right fender plating	1
<i>77</i> B	RIGHT REAR VIEW MIRROR BASE	1
77C	antenna base	1
<i>77</i> D	antenna	1
<i>77</i> E	front upper intake	1
<i>77</i> F	SWITCH COVER	1
ВР	1.5x4MM	5 (+2 SPARES)
EP	1. <i>7</i> ×4/WM	3 (+1 SPARE)
EM	2×4MM	3 (+1 SPARE)
GM	1. <i>7</i> x3/WM	5 (+2 SPARES)
JM	2.3×7/WM	2 (+1 SPARE)
LM	2.3×5/WM	4 (+1 SPARE)

In this stage, you receive the front window and front window frame.

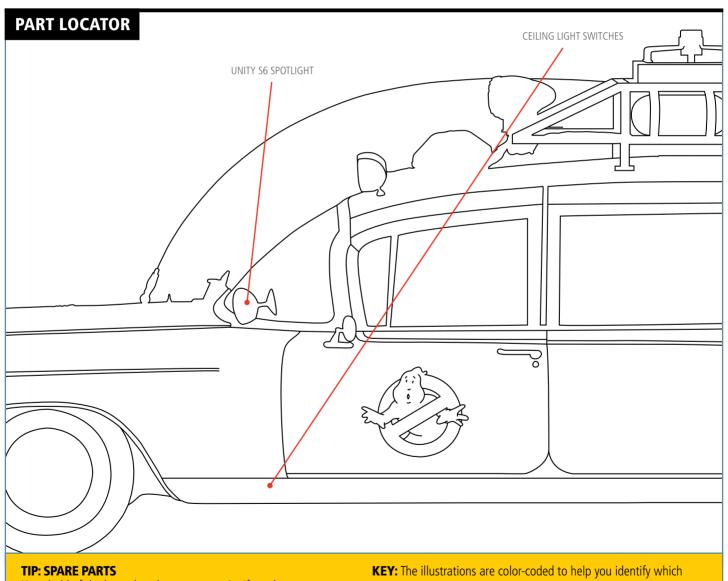


PART NUMBER	DESCRIPTION	QUANTITY
<i>7</i> 8A	front window	1
78B	front window frame	1
EP	1.7×4MM	6 (+2 SPARES)



STAGE 75 UNITY S6 SPOTLIGHT, PLATING & CEILING LIGHT SWITCHES

In this stage, you build the Unity S6 spotlight and install the ceiling light switches.

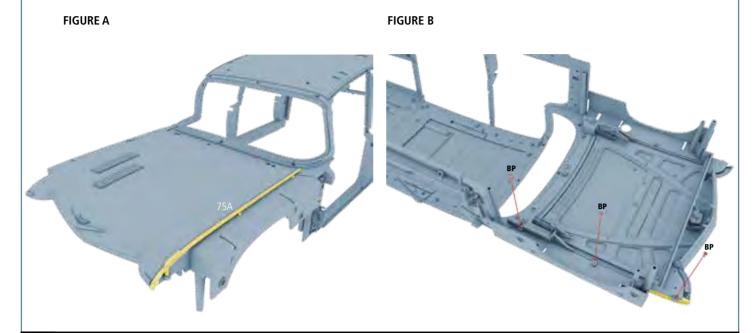


Keep hold of the bags that the parts come in. If you have any spare parts that need to be kept safe for use in a later part of the build sequence, you can keep these parts in the bag.

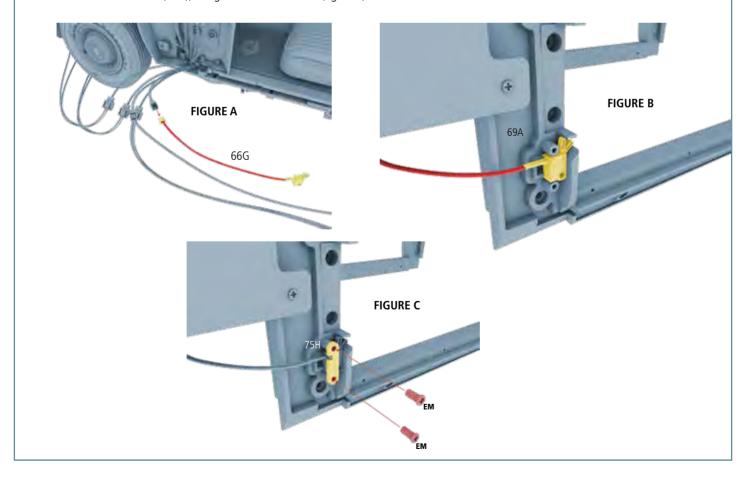
KEY: The illustrations are color-coded to help you identify which parts are being assembled. **RED** Highlights where the new part/s fit and screw in YELLOW Identifies the new part/s **GRAY-BLUE** Indicates the previous assembly on to which the new part is fitted.



FITTING THE PLATING: Begin by placing the front left fender plating (75A) next to the hood on the body front frame (68A) (figure A). Secure from underneath with three BP screws (figure B).

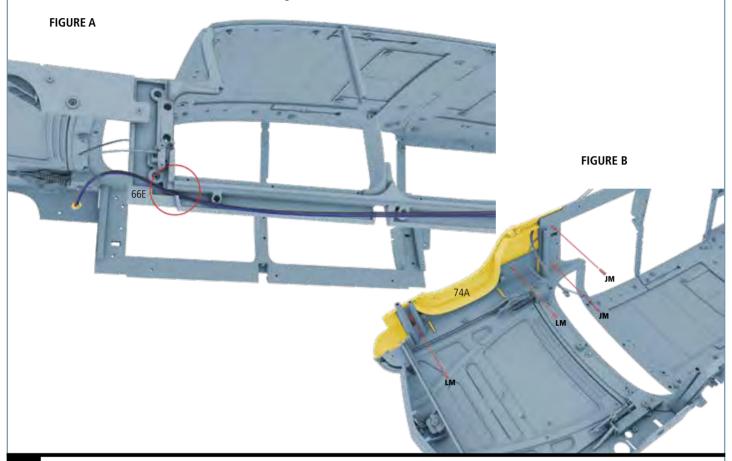


INSTALLING THE CEILING LIGHT SWITCH: Recover the chassis section of your model. Unplug the front left door switch (66G, marked with a "U") (figure A). Take the switch and place it in the recess by the left door frame in the body middle frame (69A) (figure B). Cover this with the switch cover (75H), fixing with two EM screws (figure C).





FITTING THE FRONT LEFT FENDER: Firstly, unplug the ceiling light LED (66E, marked with an "S") and feed the wire through the body frame as shown in figure A. Taking care not to damage the wires behind, push the front left fender (74A) in place and secure from behind with two JM screws and two LM screws (figure B).

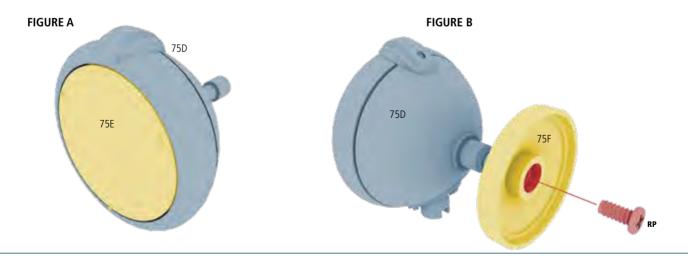


04 ASSEMBLING THE UNITY S6 SPOTLIGHT:

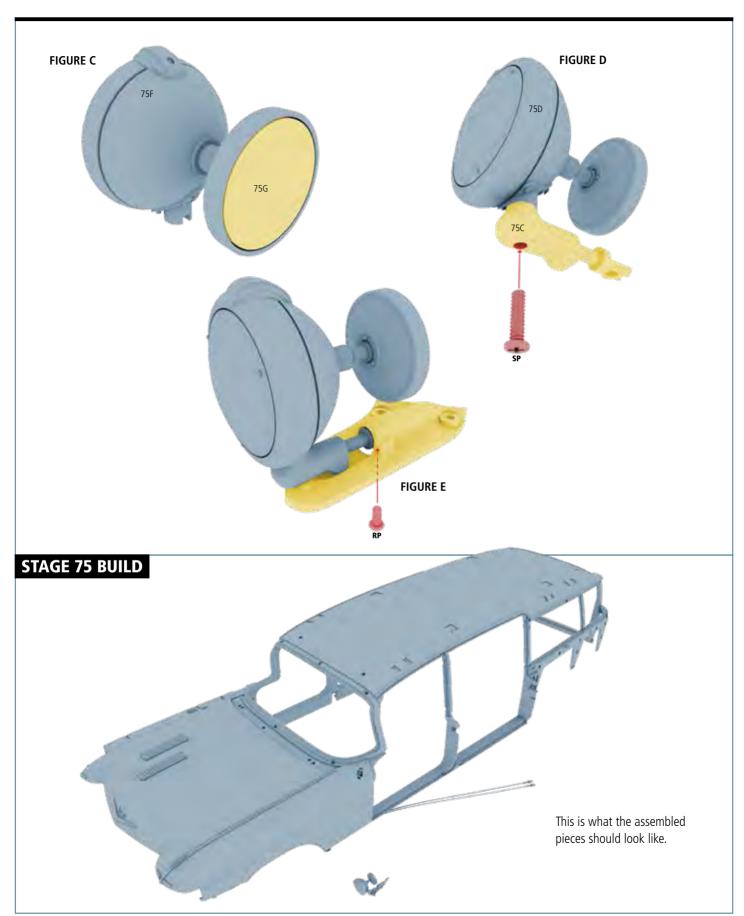
Push the spotlight lens (75E) into the spotlight cup (75D) (figure A). There is a notch in the lens so it only fits in one way. Then, fix the rear cup (75F) to the back of these parts with one RP screw (figure B). Finally, the rear lens (75G) into the rear cup (75F) (figure C).

Next, fit the bracket (75C) to the side of the spotlight cup (75D) using one SP screw (figure D). Push the end of the bracket into the spotlight base (75B) ensuring that the screw holes in both parts are aligned. Fix the two parts together with one RP screw (figure E).

Keep the spotlight safe, so it can be assembled at a later point.



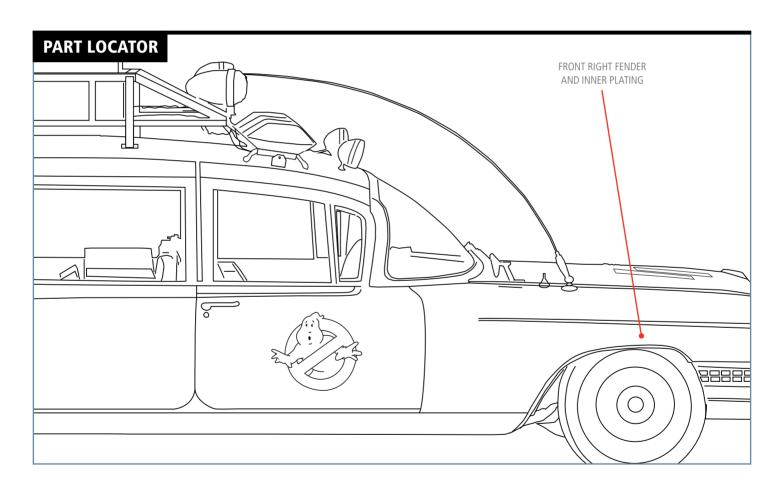






FRONT RIGHT FENDER AND INNER PLATING

In this stage, you fit the inner plating to the front right fender of your Ecto-1.



TIP: PROTECT THE PAINTWORK

To ensure you do not scratch any of the pre-finished surfaces of the car, always work on a soft cloth. Keep small parts and screws in a saucer or small tray to ensure you do not lose any of them during the assembly.

KEY: The illustrations are color-coded to help you identify which parts are being assembled.

RED Highlights where the new part/s fit and screw in

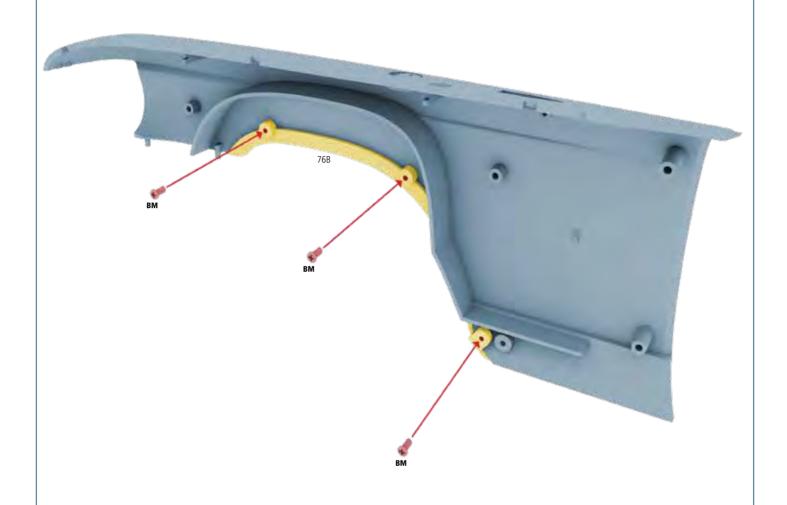
YELLOW Identifies the new part/s

GRAY—**BLUE** Indicates the previous assembly on to which the new part is fitted.



FITTING THE PLATING: Place the front right fender (76A) so the inside of the part is facing you. Set the front right fender inner plating (76B) along the edge of the front left fender (76A) and fix the two parts together with three BM screws (figure A).

FIGURE A



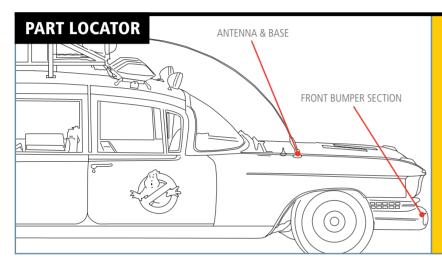
STAGE 76 BUILD





STAGE 77 ANTENNA & BASE

In this stage, you fit the antenna and front bumper section to your model.



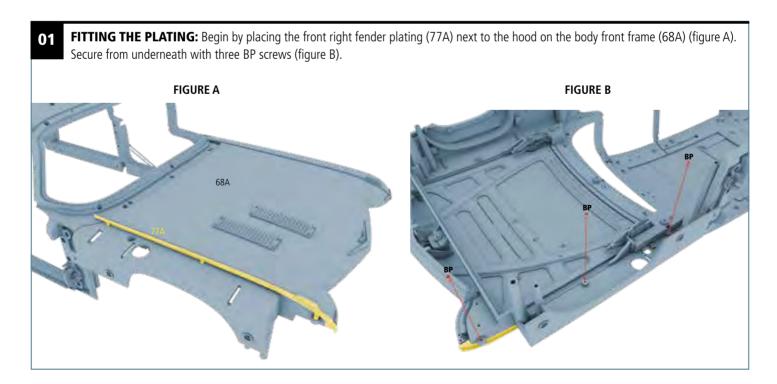
TIP: TIGHTENING THE SCREWS

Screws with codes ending in the letter M (such as BM and CM) drive into metal. Those ending in the letter P (such as BP and CP) drive into plastic.

Self-tapping screws for metal cut their own thread in the pre-drilled socket. To prevent the screw from jamming before it is fully tightened, drive the screw only halfway in at first. Then unscrew it to release the shavings (swarf) created as the screw cuts its thread. Finally, drive the screw fully into the socket.

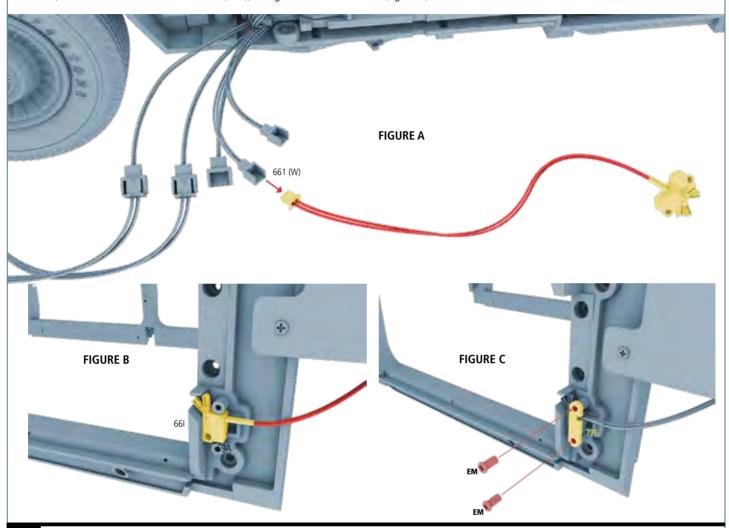
KEY: The illustrations are color-coded to help you identify which parts are being assembled. **RED** Highlights where the new part/s

fit and screw in **YELLOW** Identifies the new part/s **GRAY–BLUE** Indicates the previous assembly on to which the new part is fitted.

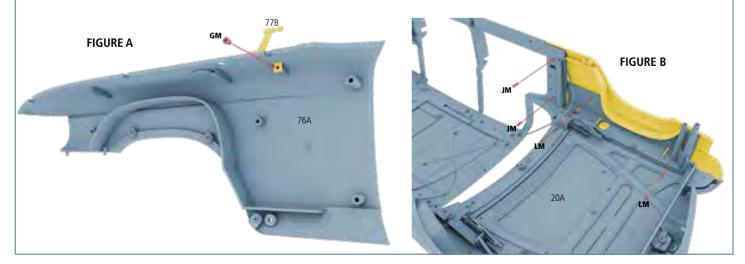




INSTALLING THE CEILING LIGHT SWITCH: Recover the chassis section of your model. Unplug the front right door switch (66I, marked with a "W") (figure A). Take the switch and place it in the recess by the right door frame in the body middle frame (69A) (figure B). Cover this with the switch cover (77F), fixing with two EM screws (figure B).



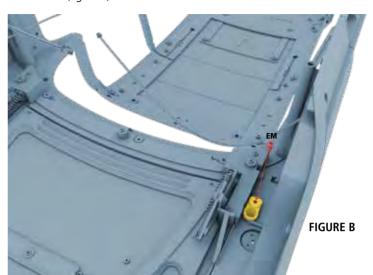
FITTING THE FRONT RIGHT FENDER: Firstly, take the right rear view mirror base (77B) and insert the post at the bottom of this part into the screw hole in the front right fender (76A). Secure the parts together with one GM screw (figure A). Taking care not to damage the wires behind, push the front right fender (76A) in place and secure from behind with two JM screws and two LM screws (figure B).



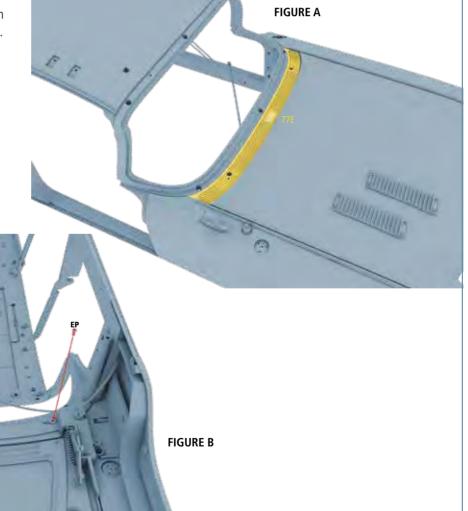


ASSEMBLING THE ANTENNA: Push the antenna (77D) into the antenna base (77C) (figure A). Take this assembled part and push it up through the underside of the right fender, fixing in place with one EM screw (figure B).





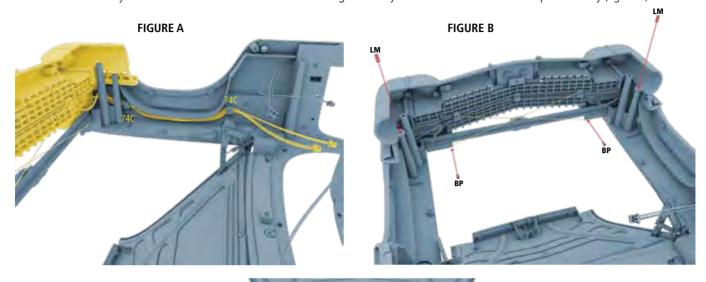
Place the front upper intake (77E) between the hood and main body frame, securing from the underside with three EP screws (figure A).

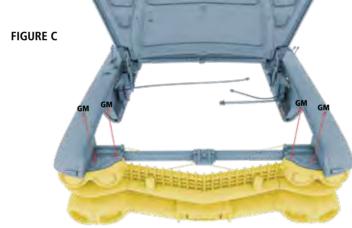




INSTALLING THE FRONT BUMPER SECTION: Fit the front bumper assembly to the front of the body shell, carefully slotting the wires into the two wire covers (74C) fitted to the inside of the front left fender (figure A). Secure the front bumper to the body front frame using two LM screws and fix the two steel wires (69B) to the body frame assembly using two BP screws (figure B).

Turn this assembly over and drive in four more GM screws through the body front frame into the front bumper assembly (figure C).



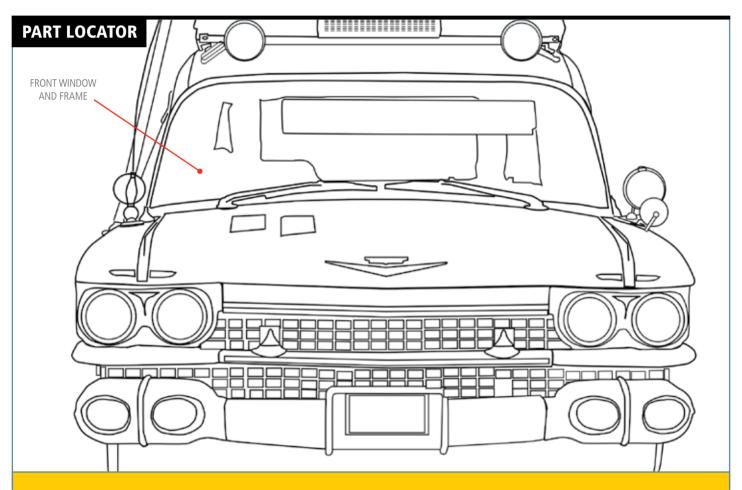






STAGE 78 FRONT WINDOW AND FRAME

In this stage, you fit the front window and frame to your model.



TIP: PROTECT THE PAINTWORK

To ensure you do not scratch any of the pre-finished surfaces of the car, always work on a soft cloth.

Keep small parts and screws in a saucer or small tray to ensure you do not lose any of them during the assembly.

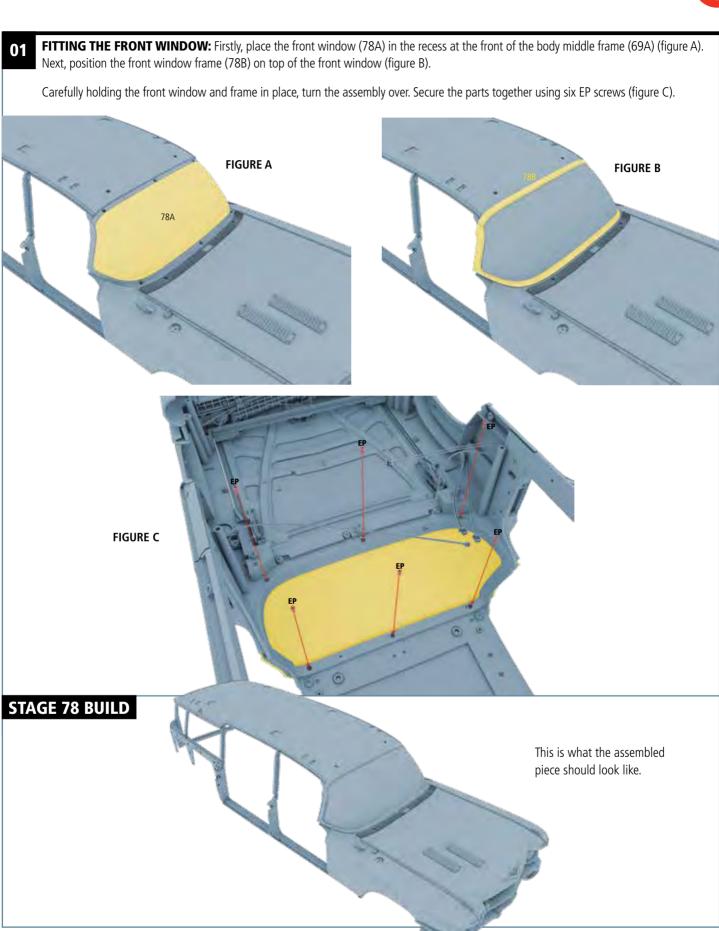
KEY: The illustrations are color-coded to help you identify which parts are being assembled.

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YELLOW Identifies the new part/s

GRAY—BLUE Indicates the previous assembly on to which the new part is fitted.







MODEL BEHAVIOR

Ghostbusters II's model shop supervisor Bill George remembers how his team created detailed miniatures, from the rusting *Titanic* ghost-ship to a smashed-up police car.

REATING THE MEMORABLE MODELS IN

Ghostbusters II, which included everything from the Museum of Slime to the Titanic, involved a large degree of trial and error – and for model shop supervisor Bill George that was the joy of special effects at the time.

"We were trying to figure it out as we went," he remembers. "You would go in and pull stuff off the shelf, pour it in [to a mix] and see what happened. That was a big part of the fun back then. You never knew where the solution was going to come from!"

George headed up ILM's team of mold-makers, sculptors, and other model-builders on the film, often working in conjunction with the creature shop. "There wasn't a huge model shop on the show – there were probably around 25 people at our peak – and we were supporting players," he says. "There was a meshing between my role and the creature shop supervisor [Tim Lawrence], because certain things – like parts of the Statue of Liberty's costume – were done in the model shop and handed over to the creature shop."

George was following in the footsteps of the mighty Mark Stetson, who had overseen the distinctive, highly detailed models of Central Park West and the Temple of Gozer in the original movie. He says he didn't want to radically break with the style that Stetson had established. "First of all, I'm a huge a fan of the first film, it's absolutely brilliant. It has a look and a style, and that's something that we wanted to emulate because that's what people would expect. But at the same time, it was a different project with a different supervisor. Also, it [the look of the sequel] was really a team effort. You were given tasks to figure out how to do something, and sometimes it was the model shop that came up with the solution, sometimes it was the stage department, sometimes it was the camera guys."



MODEL BEHAVIOR



ABOVE Bill George and ILM's talented model shop crew create intricate sculpts and miniatures for parts of the Statue of Liberty's costume, a swathe of Battery Park, and the Museum of Slime.

A HANDFUL OF DUST

One key ingredient in coming up with solutions to model-work challenges was a fine glitter known as Diamond Dust. It was a substance that George had previously used in his role as model shop supervisor on 1987's *InnerSpace*. "When we first created the slime, it really was kind of dead," he says. "But when we put in this Diamond Dust, all of a sudden, we got a sheen and movement and depth to it that we didn't have before."

As well as the psychomagnotheric slime flowing through New York's sewer system, Diamond Dust was one of the ingredients in the Museum of Slime model. "We built a miniature of the official building in New York [US Custom House] that they had dressed as the Manhattan Museum of Art. Then we had to build a plastic covering as though it was covered in slime,

which was all vacuum formed. We filled the covering with water, and in the water was the Diamond Dust. We'd get it roiled up and then shoot it at high speed so you'd just see a little bit of movement in it."

Other key miniatures included the subway that surrounds the river of slime, the Scoleri brothers' electric chairs and, as in the first film, an array of model cars. "We did a scene with [model maker] John Goodson wearing the Statue of Liberty foot smashing a police car. We had rock salt inside the car – you'd blow through a tube so that when you smashed it, the rock salt would shoot out to look like broken glass."

While the Statue of Liberty stomping through the streets of New York was played by Jim Fye, the model shop was responsible for constructing certain key parts of Lady Liberty. "We built a huge Statue of



Liberty sculpture for some of those close-up shots," George says. "We also created certain things in her costume that were solid, like her crown and the book that she carries."

One of the largest and best remembered models in the film – despite the fact that it only appears on screen for a matter of seconds – is the ghost *Titanic*. As with the Statue of Liberty, the fact it was based on a real construction meant that the model shop needed to work from real-life reference to make it look convincing. "Luckily one of our producers [Ned Gorman] was very much into the *Titanic* and had tons of reference material, which was very helpful. By this time, they had found the *Titanic* and there was film of what it looked like on the bottom of the ocean. That informed how we dressed the outside of our model. Of course, we did make some changes – the four very

distinctive stacks were no longer attached [on the shipwreck], but we wanted to have those on, because otherwise it's not the *Titanic*! So we faked it and put those back on. The model itself was huge. John Goodson built it, then we sprayed it with this really nasty spray-mount, which made it look like it was covered in cobwebs. Then we sprinkled iron powder on it and sprayed on a very light acid so that it rusted."

Since Ghostbusters II, George has worked as the ILM visual effects supervisor on numerous big-budget spectaculars including Harry Potter and the Prisoner of Azkaban, Twilight, and G.I. Joe: Retaliation, but he looks back on the pre-digital era of special effects with fondness. "We're never going back, there's no two ways about it, but it was a really wonderful time. I think Ghostbusters II has a very distinctive look and feel to it, which I find very charming."



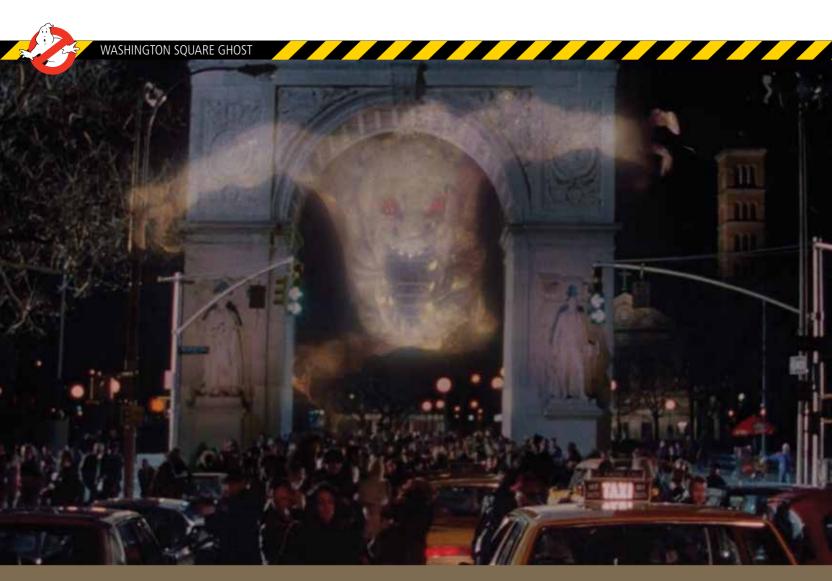
COSTUME DRAMA

The screen-worn Ghostbusters jumpsuits can fetch thousands of dollars at auction, while many fans choose to make their own bespoke suits.

HE COTTON JUMPSUITS WORN BY THE
Ghostbusters in the original two movies have become
highly sought-after props. Peter Venkman's khaki suit,
worn by Bill Murray in the first film, fetched a staggering £35,000
(\$47,062) at Prop Store's Entertainment Memorabilia Live Auction in
2017. Meanwhile, one of the lighter hued versions worn by Murray
in Ghostbusters II, which was made by military/aviation outfitters
Flight Suits Ltd (now Gibson & Barnes), sold for an only slightly more
affordable £25,000 (\$32,183). One of Ray's original jumpsuits, worn
by Dan Aykroyd, also fetched £25,000 in 2019. Not included were
the various attached gadgets, such as the leg hoses and radios.

Of course, many cheaper replicas exist for fans who want to dress up as their heroes, and many Ghostheads choose to make bespoke suits, complete with their own name patches.





WASHINGTON SQUARE GHOST

Animators Randal Dutra and Harry Walton recall how they helped Phil Tippett bring the hulking monstrosity to life. but revered stop-motion animator Phil Tippett was instrumental in bringing to life the Washington Square ghost, the hulking monstrosity that terrifies New Year's Eve revellers in the Greenwich Village park in *Ghostbusters II.* Before founding his own studio, Tippett had created groundbreaking work for ILM (including animating the chess sequence in *Star Wars* and the AT-ATs and Tauntauns in *The Empire Strikes Back*), and he maintained an excellent relationship with the studio. So when a stretched ILM wanted to ensure they hit their deadline by outsourcing certain effects work late in the day, it made sense to approach Tippett.





Tippett tasked fellow animator Randal Dutra (who would later be nominated for Academy Awards® for his work on *The Lost World: Jurassic Park* and *War of the Worlds*) with creating the initial sculpt in clay. "It was a two to three-day project," remembers Dutra. "My recollection is that it was a bit of a Production afterthought/insertion. The design then went through some additional permutations that I believe were requested by Ivan Reitman and addressed accordingly by Phil."

MOOD SLIME MONTAGE

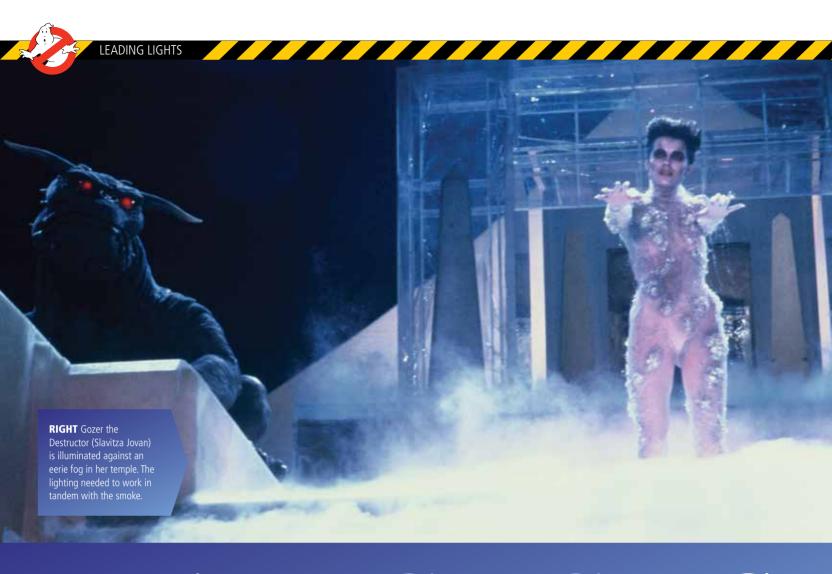
With time tight, Tippett incorporated existing stopmotion armatures into the puppet as he finalized the design. It was then handed to another experienced animator, Harry Walton. "Phil built it up with foam and painted it, and then I animated it," says Walton, who in that period was dividing his time between creating optical effects for ILM and shooting stopmotion for Tippett Studios. "It was a really quick stop-motion shot." Walton says he spent one day setting up and shooting exposure tests at Tippett Studio and then animated it on the second day. "First of all I had a plate of the [location] shot from Production, which I put in the animation camera. I then rotoscoped it out and built a little mock-up model of the arch so the puppet could react to it when it was shot in stop-motion. As it was double-exposed into the shot, everything behind the creature was black."

Walton took on multiple tasks during the quick shoot. "I set up the camera, rotoscoped it, lit the creature and animated it. I think I may have composited it too as I was doing a lot of optical work for ILM!"

The stop-motion shot was composited into the location footage, which had been shot in the early hours at Washington Square by another effects company, John Dykstra's Apogee. The sequence was then incorporated into the movie's mood-slime montage. "The screen time was fleeting but it served its purpose!" says Dutra.

ABOVE Photographs of the Washington Square ghost puppet, courtesy of Prop Store.

OPPOSITE PAGE The monster as seen in the mood slime montage in *Ghostbusters II*.



LEADING LIGHTS

Ghostbusters' lighting technician Michael J. Schwartz on God's rays, the challenges of shooting in an old firehouse, and lighting Sigourney Weaver.

HE SEAMLESS BUT EVER-SHIFTING MOOD OF Ghostbusters – which can change from funny to romantic to scary within the space of a single scene – would not have been possible without the film's formidable lighting department. A small army of technicians, best boys, gaffers, and grips were responsible for setting up extensive rigs and ensuring that the lighting reflected the atmosphere Ivan Reitman and cinematographer László Kovács were trying to create. Bearing in mind the film not only danced through different genres but took in day and night shoots, interiors and exteriors, and location and studio footage, the lighting arrangements required extensive advance planning.

"I'd say 80% of lighting on movies like *Ghostbusters* is pre-planned," says Michael J. Schwartz, one of the movie's lighting technicians. "László

would sit down with the director – sometimes with the gaffer and head lighting technician, perhaps the producers too – and break down the script to get a good lighting plan. But 20% of lighting would be off-the-cuff, because things can change on the day." Lighting crews would prep four to five weeks before filming and then spend at least two hours on testing on the day, he adds.

It is on-location exteriors like the sequences shot on the streets of New York that were the most unpredictable, Schwartz says, because of factors like the weather and the sun shifting in the sky. "Then at night you need to add the effects of the moon, and it takes a line of equipment to get lights up high. You use cranes and elevated platforms, so it becomes a little trickier. The size of the lights gets bigger too, and we didn't have the technology on *Ghostbusters*, like HMI lights, that we do now."

SMOKE AND MIRRORS

One of the main sequences that Schwartz worked on was lighting the interior firehouse sequences, which were shot inside the former Fire Station No. 23 in LA. Unlike studio stages, which are designed to hang lights onto, location interiors can pose their own challenges - in the case of the firehouse, says Schwartz, this included dozens of reflective windows and the fact they could not make alterations to the building. "That was the toughest part - working around the restrictions of the fire station being a historical building," he recalls. "You couldn't add anything mechanical, so you would either have to black out the window completely or take precautions to omit reflections. And it was a live location – there were a lot of civilians working in the area, so you had to be mindful when you were getting equipment in. The crew would probably spend an entire day rigging some of these sets. Logistically, it was a tough set."

Other issues that the crew needed to incorporate into their lighting plans were in-car lighting and smoke effects. While the former may have been limited, there was plenty of smoke drifting through the film. "A lot of times you'll see light coming through the smoke," Schwartz says. "We call it 'God's rays.' It has both an

LEADING LIGHTS

emotional and creative effect. We did a lot of tests with different smokes and different thickness of smoke to see how the lighting would come through best."

The amount of lighting and the type of lights used changed depending on the mood of the scene. The sequences shot in the containment unit area were infused with a sense of tension thanks to flashing red-light indicators, while more romantic moments between Venkman and Dana were shot in a softer light. Lighting Sigourney Weaver required careful preparation, Schwartz remembers – much more than the Ghostbusters themselves. "It's tougher to light the features of a woman's face than it is to light a man's," he says. "You want to expose the beauty in Sigourney Weaver. Whereas you don't mind so much what Dan Aykroyd looks like as long as you can see him!"

ABOVE Ecto-1's lights cut through the fog; Ray is bathed in bright light; mood lighting helps make the possessed Dana appear sinister but sexy; illuminated mist was key to creating an otherwordly atmosphere on the Temple of Gozer set.

ECTO-IOI

A MONTHLY LIST OF ALL THE THINGS THAT MAKE GHOSTBUSTERS GREAT.

#21 EUGENE LEVY

omedy legend Eugene Levy had a couple of small scenes in *Ghostbusters II* – unfortunately they were cut from the final movie.

He played Louis's cousin Sherman Tully, a dermatologist who works at the Parkview Psychiatric Hospital where the heroes are locked up. The first scene sees Louis plead with his similarly-voiced brother to free the heroes. At first Sherman is hesitant, worried he could lose his license. "Sherman, I've done you lots of favors... I got you out of those bad tax shelters," Louis pleads. "You were the one that got me in!" Sherman reminds him. But when Sherman sees the sky darkening, he decides to help.

One of Sherman's conditions is a ride in the Ectomobile, but the Ghostbusters drive off without fulfilling the deal. "I thought you were like the fifth Ghostbuster," Sherman says to Louis. "I let them handle all the little stuff. I just come in on the big ones," Louis replies.

Like Murray, Aykroyd, Ramis and Moranis, Levy honed his comic talents at the Second City troupe and its television spin-off *SCTV*. He starred in Ivan Reitman's first two movies, *Foxy Lady* and *Cannibal Girls*, and has appeared in dozens of comedy classics over the last 50 years including *Splash*, *American Pie* and the Emmy award-winning sitcom *Schitt's Creek*.



If you want to be good at anything, do it every day.

Your birthday, holidays, Christmas, doesn't matter...

whatever it is you want to be good at, do it every day for a
year. And at the end of a year you're going to know one of
two things. If you're pretty good at it, you'll probably get
hired doing it. Or maybe you might never be and it's
time to think about something else.

▲ Ghostbusters sculptor Rob Burman gives his advice to anyone wanting to get started in the industry (Creature Geek, 2017).

The baby boomers, all my age, wanted to see these movies. Grew up and wanted to see them. Before that, not many people wanted to see these effects films.

▲ Dennis Muren on how a new generation embraced visual effects-driven movies (CG Society, 2015).

When I first look at a film, the first question I ask of the film and myself is, 'Why has there got to be music at all? What's the music supposed to be doing?' I have to be able to answer that question.

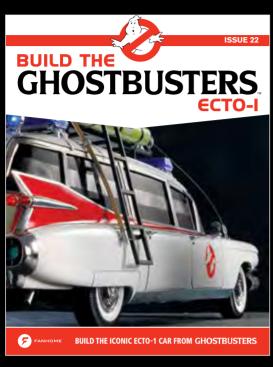
And it's different things for different films.



▲ Ghostbusters' composer Elmer Bernstein on how he first approaches scoring a movie (CNN, 2001).



YOUR PARTS



THE MAGIC FACTORY
ILM's Ned Gorman on Ghostbusters II.



ELDO RAY ESTES *Ghostbusters'* excitable red-headed businessman.



