

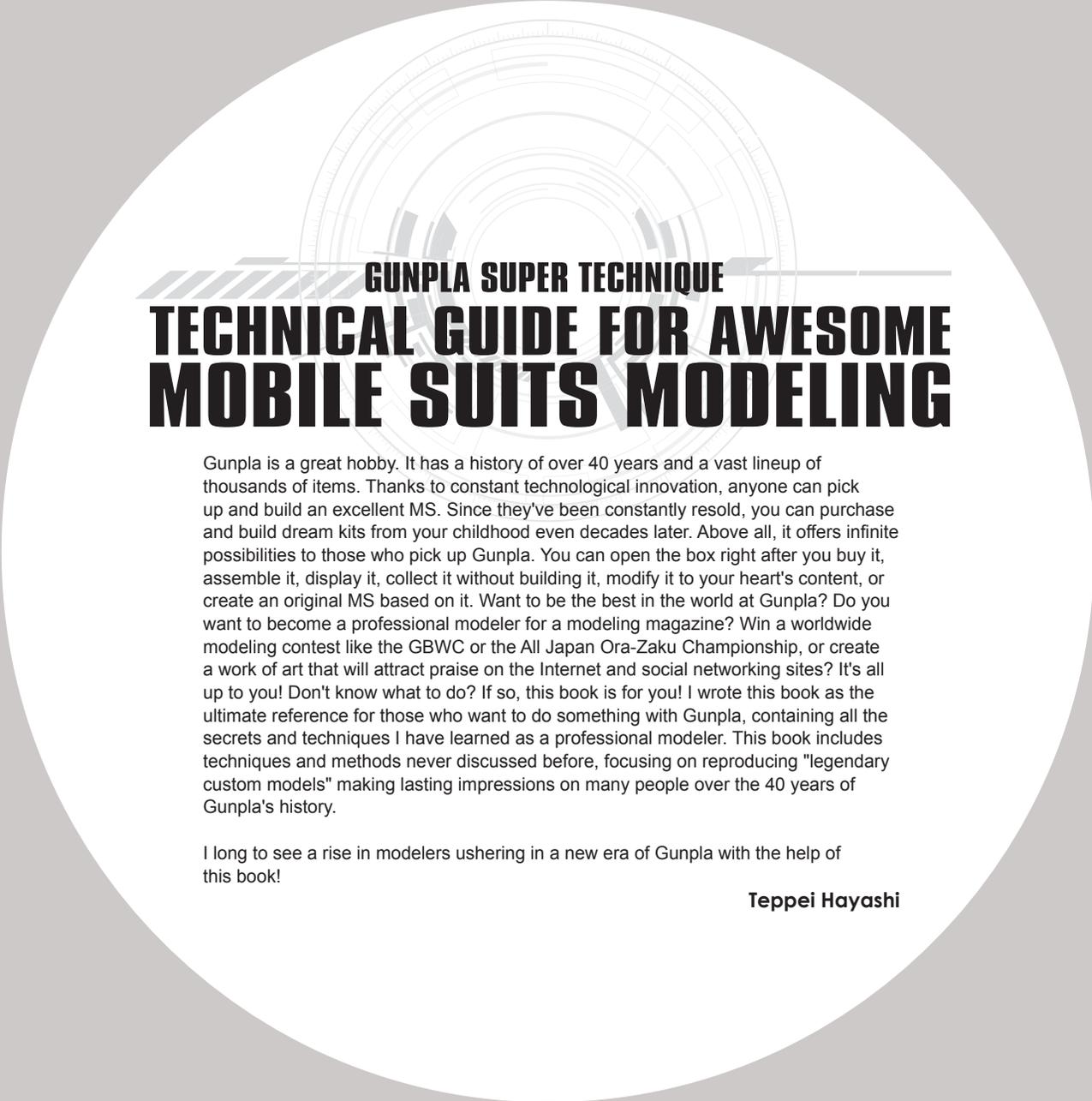
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MOOK GUNPLA SUPER TECHNIQUE

TECHNICAL GUIDE FOR AWESOME MOBILE SUITS MODELING

Author / Teppei Hayashi





GUNPLA SUPER TECHNIQUE

TECHNICAL GUIDE FOR AWESOME MOBILE SUITS MODELING

Gunpla is a great hobby. It has a history of over 40 years and a vast lineup of thousands of items. Thanks to constant technological innovation, anyone can pick up and build an excellent MS. Since they've been constantly resold, you can purchase and build dream kits from your childhood even decades later. Above all, it offers infinite possibilities to those who pick up Gunpla. You can open the box right after you buy it, assemble it, display it, collect it without building it, modify it to your heart's content, or create an original MS based on it. Want to be the best in the world at Gunpla? Do you want to become a professional modeler for a modeling magazine? Win a worldwide modeling contest like the GBWC or the All Japan Ora-Zaku Championship, or create a work of art that will attract praise on the Internet and social networking sites? It's all up to you! Don't know what to do? If so, this book is for you! I wrote this book as the ultimate reference for those who want to do something with Gunpla, containing all the secrets and techniques I have learned as a professional modeler. This book includes techniques and methods never discussed before, focusing on reproducing "legendary custom models" making lasting impressions on many people over the 40 years of Gunpla's history.

I long to see a rise in modelers ushering in a new era of Gunpla with the help of this book!

Tepei Hayashi

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* Please note the custom kits in this book are original models and differ from the official Sunrise settings.

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EXTRA

TOOLS

You can create incredible Gunpla without special tools. However, tools that reduce time and excellent reference materials can help immensely. Here, I will introduce tools and materials I always use when making Gunpla.

Tools and materials for advanced Gunpla production

Plamo-Kyoshiro (manga published by Kodansha)



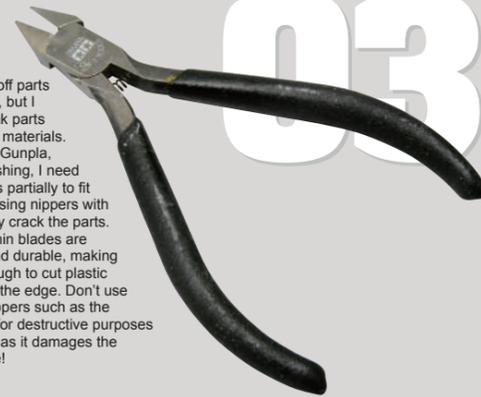
Plamo-Kyoshiro is a legendary plastic model manga by Koichi Yamato. As the protagonist, Kyoshiro grows as a modeler, he competes with many rivals. His passion for plastic models inspired me when I was young, and it became a bible for me. It's a masterpiece that contains all the essentials for advanced Gunpla modeling, like creating original models or incorporating elements from other genres. Above all, it teaches the importance of "Modeler's passion." Many of the best modelers I've met are fans of this manga. I often quote from this manga on the premise that modelers and especially Gunpla fans are familiar with it. In this book, you will find many references to Plamo-Kyoshiro. If you haven't read it, please check it out. (* Unfortunately, it is out of print, and no e-book is available.)

Gunpla books from the 1985-90s



The Gunpla books published from the late '80s to the '90s were full of enthusiasm. They featured excellent custom models and many valuable illustrations by the mechanical designers that appeared only in these books. I always go back to these books when searching for new ideas for my custom kits. Many of the "Legendary Custom Models," which is the theme for this book, were also created during this period. My specialty, kit-bashing using various scale model parts, is a modern take on custom models from these periods. Many of these books are still available as e-books, so please check them out if you haven't read them!

Tamiya Thin Blade Nippers (for cutting gates)



Designed to cut off parts from the runners, but I use them to break parts and other plastic materials. When modifying Gunpla, especially kit-bashing, I need to cut many parts partially to fit them together. Using nippers with a thick blade may crack the parts. These nippers' thin blades are double-edged and durable, making them strong enough to cut plastic without chipping the edge. Don't use single-bladed nippers such as the Ultimate Nipper for destructive purposes like gate cutting, as it damages the blades in no time!

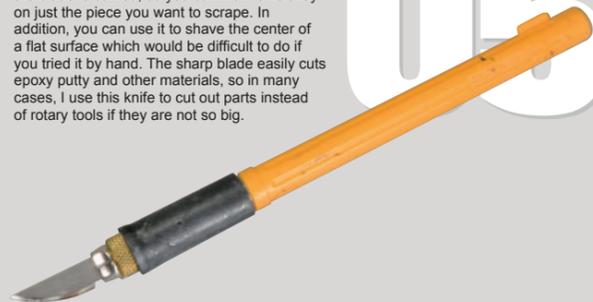
Wave HG Scraper Knife (curved, single-edged)



Its curved tip allows you to place it accurately on the part you want to cut without damaging the surrounding areas. Don't use a design knife to scrape details; the blade deteriorates in no time, causing damage to the parts. This scraper knife's edge is durable; it won't easily get chipped, keeping it serviceable for a long time, almost semi-permanently. It is a must-have tool as it is also a great time-saver.

OLFA Art Knife Pro Curved-Blade

I use this tool for shaving putty and modifying parts. Like the Scraper Knife mentioned above, the blade is curved, so you can work efficiently on just the piece you want to scrape. In addition, you can use it to shave the center of a flat surface which would be difficult to do if you tried it by hand. The sharp blade easily cuts epoxy putty and other materials, so in many cases, I use this knife to cut out parts instead of rotary tools if they are not so big.



Echo Tech Ultrasonic Cutter ZO-41II

An ultrasonic cutter can be a big help in large-scale modifications. The blade vibrates finely and cuts plastic like butter in the blink of an eye, which would have taken forever by hand. Since you don't have to apply any force, your hands never get tired. The best part is that you can almost avoid the common mistakes of manual work, such as damaging the parts or getting injured when using too much force. Although the blade is very sharp, it becomes dull if you use it just like a regular craft knife, so be sure to replace it frequently. I started using it for the Ex-S Gundam in this book, and I feel it's the best power tool I've ever had!



GSI Creos Mr. Super Speedy Putty (instant adhesive putty)



Putty hardens by mixing solvent and powder with the instant adhesive ingredients. It cures in about 10 minutes and adheres well to any materials, and is indispensable for bonding and seam removal when gluing different materials, such as plastic and putty or metal. Although it is not for mass use, it comes more in handy than other putties for smaller areas since it does not peel off during work. Sometimes, fine bubbles form on the putty, but removing them is pretty easy; apply low-viscosity type instant adhesive to the surface and then file it to make it smooth.

Wave Instant Adhesive X3G (high strength) & X3S (low viscosity & fast curing)



Instant adhesives are indispensable for Gunpla building which requires quick gluing. I use two different types of glue for various purposes. For normal gluing, I use the high strength type for its strong adhesion. It also allows you to fine-tune the position since it takes some time to harden. You can also use the high strength type to make the movable axis of Gunpla thicker to adjust the stiffness of joints. The fast drying type is for surface treatment such as removing scratches, sink marks, and hard to remove seams because it penetrates well and is soft, which is convenient when you shave it off later. I don't use it for regular gluing. However, the low viscosity of the fast drying type can cause capillary action and can accidentally flow into the details of panel lines. I don't apply it to parts taking loads like joint parts as it can break them because the adhesive flows into the invisible cracks. So be careful when you use it.

Various Handpieces



Handpieces are indispensable for airbrush painting, and it's handy to have several types depending on use. Metallic colors, in particular, can stick in the paint cup, which may become contaminated with glittery particles if you continue to use the same handpiece, which is a problem. Therefore, I use one for solid colors, one for metallics, one for clear, and one for camouflage. The main product I use is the Airtex Beauty Four, which is inexpensive at around 10,000 yen, and it is highly customizable, so you can change the caliber by using optional parts. Today's Gundam models require many parts to be painted evenly, so I use a needle with a large diameter of 0.5 mm and a large cup to paint large areas efficiently. For camouflage, the diameter of the needle should be 0.2 mm, since I need to spray finely. For clear coat painting, the larger the diameter, the easier it is to work with, so I use a custom-made Italian handpiece, the Corani, with a large diameter needle of 0.6 mm.

Mitsubishi Electric MJ-PV250SX-W Compressor Type Clothes Dehumidifier SARARI



It gets very humid during the rainy season and other times of continuous rain. When the humidity exceeds 65%, we start to see "blooming," where some lacquer-based paints turn white, and the whitening of topcoat-based paints with flat bases. Try to paint on a sunny, dry day. Sometimes, you have no choice but to paint in high humidity to meet a deadline. A dehumidifier for clothes is handy in such cases. The model I use is expensive at 78,000 yen, but it has a super strong dehumidifying capacity that can reduce humidity from over 70% to about 45%. Blooming or whitening will never occur with moisture less than 50%. The water tank will be full in about 8 hours in high humidity, so dispose of the water frequently. Since using a dryer raises the room's temperature, use it together with the dehumidifying function of your air conditioner to prevent heatstroke in summer. A dehumidifier also comes with a humidity indicator. It takes a little time before the humidity becomes consistent in the whole room, so I recommend you place the indicator near the airbrush when checking it. However, this machine is not essential for the average modeler, so there is no need to force yourself to buy one!

GATTOWORKS Nero Booth



A new generation of paint booths from Gattoworks. It features a "Sirocco fan," a heavy-duty ventilation fan for industrial use, for restaurants and factories, boasting excellent vacuum power. When crafting with power tools or spraying with an airbrush, it absorbs floating powder dust or paint particles. In addition, as it ventilates the air in the room, it filters dust, significantly reducing the risk of accidents like dust sticking to parts while painting. It's pricey, but its performance is far better than its predecessors. It is like the F91 compared to the Jegan in terms of its performance. It is a recommended buy! The only con is its size. It is about 115 cm tall (including the Sirocco fan) and massive! Measure your room first to see if you can accommodate this booth there. A cheaper priced version called the "Compatible Booth" is also available, which is another good option.

Guard Corset



Modelers spend much time sitting during work, and back pain can be a common problem. A corset is a great relief when you have severe back pain. It supports the torso and the upper body, relieving back pain. It also helps to set the spine correctly, so you can prevent back pain by wearing it. I use the "Hakuji FAMILY CARE waist guard corset." It comes with an outer belt that tightens the corset, which you can secure tightly. However, your core muscles become weaker if you rely on the corset too much and that causes more severe back pain. Make it a routine to stretch your body once an hour when you work, and never forget to do light muscle training or walk daily for exercise.

COLUMN 01

The History of Gunpla Techniques

The year 2020 saw the 40th anniversary of Gunpla. Gunpla has evolved tremendously in its play value, introducing many innovative features like multi-color mold, built-in poly caps, snap-fit, built-in ABS frame, high-precision details, and a wide range of articulation. It all started from a cheap 300 yen RX-78 Gundam kit using a single color mold. So how have the techniques of Gunpla modelers evolved? What techniques have they developed over the years? Which ones fall out of favor or get revived? Let's look back at the complex "history of Gunpla techniques" from the eve of its inception to the present.

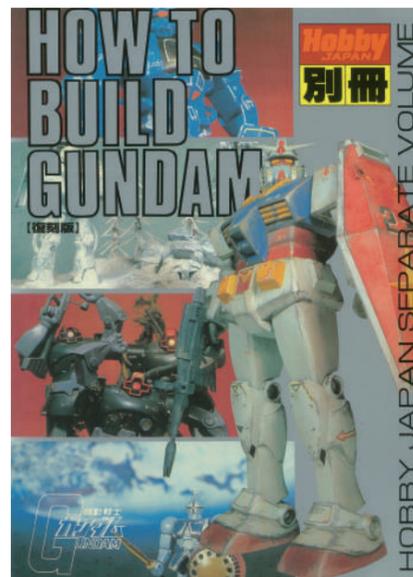
The Eve of the Dawn of Gunpla: Discovery of Polyester Putty

The anime *Mobile Suit Gundam* first started airing on April 7 1979, in Japan (different in some areas), and the first Gunpla, a 1/144 Gundam sold at the price of 300 yen, was released on July 19 1980. Gunpla didn't exist when the show was being aired, but after it became a hit, they started to produce Gunpla. At first, modelers had to make everything from scratch because Gunpla didn't even exist when they watched the show. The first 3D Gundam model published in *Monthly Hobby Japan* was Zaku, made by Akito Iwase in March 1980. He made it from scratch using polyester putty. Putty is a material originally used for construction and was not widely known among modelers then. Later, Iwase created a 1/100 Gundam for the August 1980 issue of *Monthly Hobby Japan*, and he introduced polyester putty as a material for building models completely from scratch. People found it an excellent material for building Gundam and it began to spread among modelers. After that, polyester putty became widely recognized as a material for full-scratch modeling and major modifications. Models covered with yellow putty became familiar sights in modeling magazines. Even after the advent of Gunpla, some MS had never received kit adaptations, and even existing Gunpla were not always perfect



reproductions of their ideal MS. The discovery of polyester putty, an inexpensive material that works great for modeling mecha, on the eve of the birth of Gunpla immensely expanded the modeler's freedom of production.

Dawn of Gunpla: Inheritance of plastic model culture with the influx of younger generations



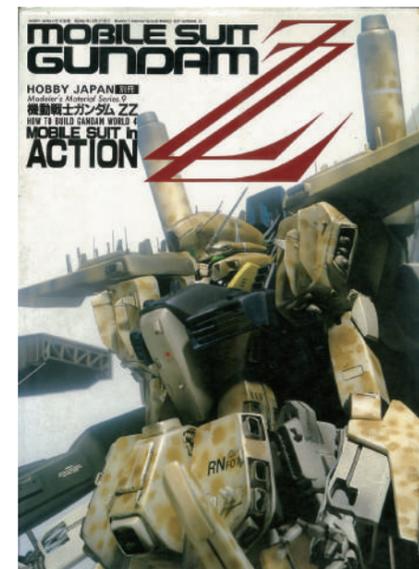
In 1980, Bandai Model, which had gained the merchandising rights for *Mobile Suit Gundam*, finally released the first Gundam plastic model, "Gunpla." In this era, the most significant event was the massive influx of elementary and junior high school students and other younger age groups into the hobby of making Gunpla. It brought about a major change in the plastic model industry in Japan. In the United States and Europe, plastic models saw a decline in the 1980s because of the oil crisis and changing preferences of people. However, in Japan the number of young plastic model enthusiasts increased

because of the Gunpla boom. This demographic built a major foundation for the plastic model culture that followed. Without Gunpla, the modeling culture in Japan would've died out, and the plastic model industry would've declined as it had overseas. Japan has become one of the world's largest plastic model markets because of Gunpla! It was a novelty when Gunpla began to show in *Monthly Hobby Japan*. The modelers had some experience with scale models like airplanes or tanks, the mainstream of the model industry at that time. They brought many techniques from these genres to Gunpla, including dry brushing, hand drawn markings, peeled paint effects, washing to tone down the overall appearance, and dioramas. They honed all these techniques in scale modeling and passed them on to the new generation through Gunpla. They used them for Gunpla, creating distinctive models; proportional modifications (such as making the shoulders of the Zaku into an inverted "V" shape) bringing it closer to the anime image, a cutaway model that reproduced the internal mechanisms taking advantage of the kit's hollow torso, a model with the hatch fully open developed from these cutaway models. They already used the term "kit-bashing," which means combining parts from various plastic models to make an original model.

The completion of MS design and the Golden Age of modelers

In 1983 Kunio Okawara created the concept of front armor and side armor for the Scopedog in *Armored Trooper Votoms*, and in 1984 Mamoru Nagano invented the internal frame in *Heavy Metal L-Gaim*. Together, these concepts became the foundation of the design of the MS, or rather robots in anime as we know them today. In 1985 *Mobile Suit Z Gundam* introduced an MS with a moving internal frame and exterior armor that didn't interfere with movement. The evolution from a monocoque structure to a frame structure allowed for far greater freedom in design. The Z and ZZ Gundam eras saw the birth of MS in a wide variety of forms. Still, it was not easy to reflect the rapidly developing complex structures of MS on Gunpla simultaneously. For this reason, some Gunpla, such as Gabthley and

Hamma Hamma, had different designs from the show due to technological limitations. For the same reason, large MS such as The-O and Queen Mansa that appeared in the show's latter half didn't receive kit adaptations, even though they were popular. The generation that came in with *Mobile Suit Gundam* had seen elementary school students enter junior high, and junior high school students become high school and college students. Many of them quit making Gunpla after the initial boom died out, but those who remained honed their skills since they could spend more time and money on it. Above all else, they were full of passion! Even if it wasn't available on the market, they created what they wanted. They made MS models not available as Gunpla from scratch or through major modifications of the existing kits to make them closer to the anime designs. They could easily make a Gunpla better than the original by modifying them since it was still the early days of Gunpla. Therefore, modelers didn't hesitate to try crafting and full-scratching, and even beginners could easily take on the challenge of making them. Between 1985 and 1990, from *Z Gundam* to *Char's Counterattack*, was a golden age for modelers and when many legendary custom models were produced. These have been passed down from generation to generation. This book includes many custom kits from this era.



SD Gundam boosted the Gunpla market during a slump

Popularity of Gunpla with realistic proportions had suffered during the period from *Mobile Suit Gundam F91* in 1991 to *Mobile Suit Victory Gundam* in 1994. There were several reasons: *Char's Counter Attack* concluded the storyline, which had started with *Mobile Suit Gundam*. There were drastic changes in mobile suit design, such as miniaturization or loss of the mono-eye from enemy suits. Moreover, the generation that came into the hobby during the first Gundam boom



became working adults en masse, and drifted away from Gunpla. During this period, *BB Senshi* (warriors) plastic models of SD (Super Deformed) Gundam supported the Gunpla market. They were cheap, and the main products cost between 300 to 500 yen, a low price that even elementary schoolers could afford. They were easy to assemble with fewer parts. Moreover, these Gunpla came with face stickers. It meant a lot, especially for younger modelers, because they found it hard to paint the small faces of Gunpla! *BB Senshi* became so popular that *Comic BomBom* (a monthly comic magazine for youngsters) featuring these kits exceeded even *CoroCoro Comic* (another comic magazine immensely popular in the market). Many people started Gunpla with *SD Gundam*, and I was one of them. *BB Senshi* are easy to assemble out of the box and are often considered just for kids, but they are some of the most tricky kits among Gunpla if you want to finish them with full painting. It is also a series that symbolizes the freedom of Gunpla as it can offer various ways to enjoy them depending on how you finish them.

The turning point: The birth of MG started an era in which modelers couldn't compete with Gunpla

In 1995, Bandai launched the MG (Master Grade) brand with the concept of "creating the ultimate Gunpla," to commemorate its 15th anniversary. As a result, the MG brand became the central part of Gunpla, which continues today. They incorporated the sense of actual weapons as well as the anime settings. They even draw new illustrations for that purpose. These unique designs were well thought out and a far cry from previous Gundam models. The first model was the Gundam and the second was the Zaku. This lineup represented their intention to go back to the origin of Gunpla and this successfully brought back many old fans who had been away from the hobby. The birth of the MG had a tremendous impact on modelers. The MG became the standard for 3D models, and the skills required for enhancing them through proportional modification and full-scratch remodeling escalated exponentially. As Gunpla developed, so did the skills of modelers. However, the technical superiority of the modelers over Gunpla faded, and they could no longer improve them just by adding a few changes to it. Sometimes, a modified kit could be worse than the original if their



skills were lacking. The advent of MG also marked the beginning of an era in which modelers would no longer compete with Gunpla, as the technology of individual modelers could no longer keep up with the rapid evolution of Gunpla.

Priority shift from crafting to painting: The era of the MAX painting method



A specific painting method thrived in the world of Gunpla from 1995 to the early 2000s, when the MG models first appeared. It was called the "MAX painting method" created by MAX Watanabe. With this technique, you create a gradient by adding several layers of lighter color over the dark gray base, which looks almost black. It's assumed that this technique came from "Ochi-Nuri," a painting technique developed by an AFV modeler, Nobuyoshi Ochi. With Ochi-Nuri, you use dark yellow mahogany as a base color to create 3D gradation on tank models. Among the many advantages of this technique, the biggest one is its clarity. It may sound unbelievable to practiced modelers, but a layperson can't tell if it's fully painted or just finished with the mold colors when they see a completed Gunpla. However, they can immediately see the effect if it is finished with this painting method and find it cool, thinking it is fully painted. The MAX painting method did not require precise control of the handpieces compared to the gradient method of airbrushing shades on the edges, which was common in Gunpla up to that time. With this method, you don't have to aim at the edges but spray the center of the parts. Although it was time consuming, it was not complicated, and anyone could copy it with an airbrush. At the time, whenever a new MG was released, MAX Watanabe's custom kits were published in *Monthly Hobby Japan* and the book *Gundam Weapons*, causing quite a stir. Generally, crafting techniques are hard to copy, but this method was straightforward enough that anyone could make their model like a MAX Watanabe custom by applying the MAX painting method to an MG model. With MG models, the era of painting dominance began, and it became not just the age of exploration but the age of MAX painting. It had such an impact that at its peak, more than half of the works at model exhibitions and contests were finished with this method.

The Birth of the PG (Perfect Grade) and the Mold Color Finish

When building a Gunpla, it was commonplace to treat the entire body before painting all the parts. However, with the evolution of Gunpla, you can now create a model as good as a fully painted model without painting. The PG Gundam released in 1999 was just such a kit, boasting intricate mechanical details and high-quality mold colors. In the April 1999 issue of *Monthly Hobby Japan*, they introduced the mold color finish for Gunpla in an article called "The Complete Guide to Easy Gunpla Finishing," in great detail. In the following issue (June 1999), MAX Watanabe introduced a more detailed method using the PG Zaku. His custom kit was so outstanding that you couldn't believe it was finished with the original mold colors. The PG is a high-quality kit worthy of being considered a top brand of Gunpla and yet, you would need to treat and paint many parts if you tried to finish it with the traditional method on the entire body. Creating a fully painted PG model is difficult, even for professional modelers. Gunpla has never ceased to develop, even after the PG. The number of parts and products is increasing. Applying surface treatment to all of them is almost impossible regardless of how much time you can spend. Mold color finish is still the most in-demand method of making Gunpla, as it is quick, takes advantage of the good qualities of the kit, and allows for an easy and cool finish.



The birth of the Internet: an era in which every modeler has their own model magazine

In the 2000s, the Internet became widespread, and as with the changes in society, it brought about significant changes for modelers. Now modelers can post their work on websites, blogs, and social media. In the old days, you could only see finished Gunpla in magazines unless you lived in a city where model stores displayed Gunpla, or if you had friends who shared the same hobby. In this modern era, however, you can see as many custom models as commercial custom kits in modeling magazines. Anyone can show off their Gunpla on the Internet. It is like everyone can publish their modeling magazine. As Gunpla fans interact, accumulating knowledge on the Internet, they create unique works never seen before

since the modification methods they invent spread very quickly. On the other hand, everyone has become sensitive to trends and evaluations from others. Unlike the old days, they now express their feelings using numbers (such as likes on Twitter), transforming how we approach Gunpla. Plastic modeling used to be more or less a solitary hobby, and seeking one's ideal was the most significant part of it. However, with the advent of social media, it has become impossible for anyone to escape the "communicational aspects" of the hobby like "how many likes will I get if I make this?" The Internet is no longer a mere virtual space but a part of reality. Therefore, using the Internet and knowing how to use it have become as crucial as nippers for today's Gunpla modelers.

Reevaluation of Old Kits

As Gunpla evolved, Gunpla from the first to MSV era gradually came to be called the "old kits." They have no color divisions, require glue, and much work to be completed. After the HG and MG, they were thought to be outdated, and many modelers used them just as sources for parts for other kits unless there were updated versions. However, in the Internet age, we found that many people still enjoy building these old kits alongside the latest ones. Modelers seem to have started reevaluating these kits. *Model Graphix* (a modeling magazine) featured them in their articles, calling them "Monaca Kits*." Instead of merely being "old-fashioned," they reevaluated the old kits as "nostalgic" and "having a warm, handmade charm" that the latest kits lack. They also re-assessed the



older kits from other series, such as early HGUC and MG kits. Gunpla has a long history of 40 years, and kits and techniques have evolved, and modelers have matured during it, breaking free from the myth of "the newer, the better."

* Monaca is a Japanese wafer cake filled with red bean paste. It means a kit with a large hollow area sandwiched by external parts or exoskeleton kits.

The birth of the RG (Real Grade) and the age when modelers can no longer surpass Gunpla



In 2010, on the 30th anniversary of Gunpla, the RG Gundam was released. It is a kit of the full-scale Gundam statue in Odaiba that was big news at the time. Although it is 1/144 scale, it has the same precision and outstanding detail as the MG as well as the latest technologies of the PG models. It has the completed internal frame created with inserted molding, the "Advanced MS Joints," and marking stickers made of metal foil seen on many works on the Internet then. It has become the ultimate form of Gunpla, where anyone can finish Gundam just as well as a professional just by simply assembling it. It is not so hard to straight build this kit, but if you are to apply surface treatment and full paint, the precision and the tightness of the kits make it challenging for fine adjustments of the details. Honestly, I do not see any need to paint the entire kit. Gunpla's design policy is that anyone can assemble it quickly, and it should look just like in the anime. Only a few people take pains to fully paint or modify the RG models. These models have become too complicated; even the avid modelers find it hard to modify them and go just for a straight-build and play!

From Scratch Build to Kit-Bashing: The era when we can casually enjoy original Gunpla

As Gunpla evolved, it became harder to apply modifications matching its level of production precision. This precision meant that most skilled modelers found it hard to create original parts that would blend well and look natural when incorporated into the original parts. Moreover, Gunpla boasts many lineups, from a gigantic mobile armor like Dendrobium to something obscure like Discus, which



appeared only in the manga. It becomes challenging for modelers aiming to create something unique to find a mech outside of the Gunpla lineup, making it hard for them to stay motivated. In such a situation, how can we create unique works? If it is hard to find something new, you can create something by mixing multiple kits into one! It is a technique called kit-bashing. Using this method, more and more people assemble unique art pieces which express their individuality with their models. This method has been known for some time, but it has become more popular on the Internet since it can help you express yourself using the models you make. Moreover, with the increasing range of Gunpla each year, you have more parts to work with. Above all, you do not have to worry about parts looking unnatural because they are all from Gunpla! With kit-bashing, there is no need to use materials like plastic plates or polyester putty, which require some experience before you can utilize them. Instead, you can use the mold colors of the kits, which is easy enough. Even if you are not confident in crafting, you can use this technique. In 2013, *Gundam Build Fighters* was aired, and they introduced Gunpla designs like customized kits. Eventually, they became actual Gunpla kits. The *Build* series has had many sequels and has become immensely popular. Creating an original MS by kit-bashing has become one of the most common ways to enjoy Gunpla.

Reintroducing Weathering: Materials and techniques instigated by the evolution of Gunpla

Weathering on Gunpla declined after the first Gunpla boom when dry brushing and paint peeling effects were prevalent, after which clean finishes without stains took their place. In the world of AFV models, the home of weathering, Makoto Takaishi invented the current style of weathering around 2000. Based on this, many modelers have developed new techniques and introduced materials over the past 20 years. Weathering painting has become simpler, allowing anyone who knows the method to create realistic weathering in a short time, and this was a perfect match for modern Gunpla. Weathering is a technique of applying multiple filters, so to speak, called smearing, to the surface to create changes. With weathering paint, you don't have to wipe off the excess smudging from the precise details of Gunpla, and it is easy to retouch mistakes by adding damage

or smudging as an effect. It is okay to be a bit rough with weathering paint, and it won't require advanced techniques that have to match the highly precise Gunpla that are evolving. The newer Gunpla kits come with excellent mold colors, and they are opaque. Using the mold color finish, you can complete work like a fully painted one in no time. In 2020, Rider Joe introduced his techniques based on weathering in his book *Gunpla Easy Custom Guide for Beginners to Intermediate*. These methods work well with Gunpla, which have many moving parts, using water-based paints to reduce the risk of damaging plastic parts. These techniques were well-received. In this way, weathering has made a comeback as an indispensable technique for modern Gunpla.



The Rise of 3D Modeling: Is it a game changer for modelers to keep up with Gunpla?

3D modeling has become available to ordinary modelers as 3D printers evolved and became cheaper, and output services are now offered in many



1/100 Xeku Zwei (by Keita YAGYU)
(Published in HJ Mechanics 04)

places. Many modelers use 3D modeling for Gunpla, and Keita Yagyu, a pioneer in this field, has created many commercial prototypes and excellent model examples using 3D modeling. 3D modeling allows us to quickly produce parts that would otherwise require superb skills, experience, and techniques if we tried to create them by hand. For example, the Gundam face is just such a part that involves pinpoint accuracy while keeping perfect symmetry. With 3D modeling, you can save a lot of time compared to full-scratch modeling, where you need to scrape putty repeatedly. You can make as many drafts as you want without using materials as you work on the screen. Also, 3D modeling allows you to build a huge Mobile Suit with many blocks of parts like Zek Zwei, which would have taken years to make by hand. With this time-saving method, you can create a high-precision model that looks like a regular Gunpla. It's still a costly method to use casually, but 3D modeling has become a potent weapon for today's modelers. It dramatically increases freedom in modeling and allows anyone to create high-precision works.

How should modelers confront the future of Gunpla?

Looking back at the history of Gunpla techniques, we can see modelers have developed various strategies to keep up with the evolving products. Gunpla will keep developing, and we will see it in the form of many outstanding kits. So how should we modelers cope with it? Planning on how to build the kit in front of you may be the best time for Gunpla modelers. But if you find yourself succeeding in creating some cool Gunpla techniques, please share them with others. Your discovery might add a new page to the "History of Gunpla Techniques," which will help many others. The "History of Gunpla Techniques" is the history of Gunpla users who have purchased and enjoyed building them.

01

**ZZ GUNDAM
GROUND TYPE**

No.
01

Creating the ZZ Gundam Ground Type using junk parts from scale models for decoration

In the past, professional modeler Masahiko Harada created the original model that graced the cover of the book *Mobile Suit Gundam ZZ Mobile Suit in Action* from Hobby Japan, based on an illustration drawn by mechanical designer Makoto Kobayashi. The custom kit by Harada had a tremendous impact because he created a Gundam with a strong military aesthetic that looked entirely different from the ZZ Gundam in the anime.

Now, we'll revive this ZZ Gundam Ground Type. Using many precise parts from scale models, I have refined this old model to 2021 specifications with even more information while retaining the atmosphere of the 1980s. This time, I'll make it into a vignette with a fixed pose, in keeping with the original custom kit.



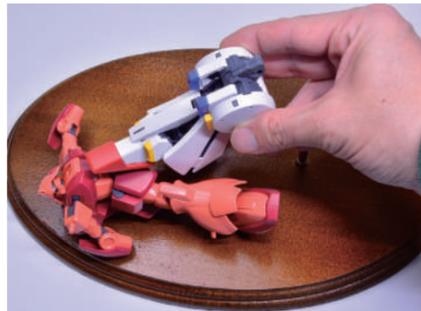
MOBILE SUIT GUNDAM ZZ MOBILE SUIT IN ACTION

Published by Hobby Japan in December 1986. It also includes custom kits from the TV anime, but you must check out the article entitled "SPECIAL STAGE," where they show unique custom kits different from the TV series.

BOOKS

01. Crafting

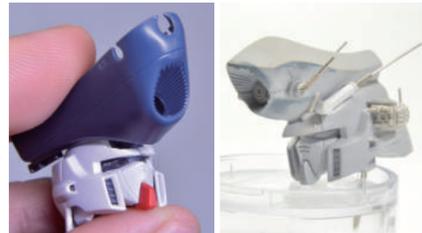
I will use an MG ZZ Gundam Ver.Ka as a base and add various junk parts, including scale models, to create the ZZ Gundam Ground Type to my preference.



▲ I'll use a round base. The size should be just right, allowing the model to stick out a little. Using a base that is too large reduces the work's intensity, while one that is too small prevents figures from striking bold postures for fear of it falling over. Place a Marasai on the base and check the position where the Gundam will step on it.



▲ I recommend Hearty Clay for creating the ground. It is inexpensive, lightweight paper clay, robust after drying, and easy to use. Before the clay dries, take apart a corkboard and embed torn pieces to look like rocks, and spread Citadel Sand all over it to reproduce the ground. Glue it all together with wood glue.



▲ The ZZ Gundam Ground Type has a distinctive Mega Particle Cannon at its head. I used the Wave Motion Cannon from Bandai 1/1000 Space Battleship Yamato, which shares the same designer, and glued it to the head. I filled it with putty and shaved it to make an edgy and crisp shape. For the overall silhouette of the head, I used the long front-to-back style that was popular in mecha design from the mid to late 80s to create a sense of the time. I also extended the supraorbital ridge with epoxy putty to hide more of the eyes, emphasizing the line of sight. For the sensor on the side of the head, I combined parts from the Maritime Self-Defense Force Ship Equipment Set. I used a 1 mm H-Eyes 3 lens in clear green and painted it. For the antenna, I combined a spring pipe and Nickel silver wire on the leg of the X-wing.



▲ For the torso, I tried to create visual impact by sliding the chest out as far as it could using the transformation feature of the kit. I decorated and filled the gaps with a T55 toolbox, an F14 ejection seat, and a spring pipe.



▲ I used the underside parts of the F-14 fuselage for the shoulder covers. I added detail around the inside of the neck using the Maritime Self-Defense Force equipment set. Then, I inserted a spring pipe at the base of the beam gun of 1/144 X-wing to create a wide cylinder.



▲ I reinforced the crotch by threading in 6 mm brass wire, and transplanted the base of the T-55's orbital wheel to emphasize realism. Since there was a noticeable gap, I cut the engine nacelle of the 1/72 X-wing into a circle to cover the shaft.



▲ I made the backpack larger to match the body, and I glued the internal frame of the RE/100 Guncannon Detector to the backpack. I also used parts from the T-55, X-wing, and F-14 and added them in a way that looked cohesive. I used the backpack arm of MG Full Armor Gundam Ver.Ka (Gundam Thunderbolt version) for the propellant tank connection part. I added a bulge on the backpack with the F-14 parts to emphasize the big engine inside.



▲ For the main wings, I used the 1/48 F-14 wing. However, it was a bit too large and looked dull so I partially cut its root area to make it look tighter.



▲ The propulsion unit with verniers looks like the anime and thus lacks realism. Changing them to actual aircraft nozzles makes it look more realistic. I used the 1/48 F-14 parts for the primary thrusters and the X-wing for the sub thrusters.



▲ For the missile pods, I enlarged them by sandwiching them with two wing parts from the X-wing, filling the gap with T-55 hatch plate parts. I left one side open as an accent.



▲ As for the propellant tank, I used a part from the MG Full Armor Gundam Ver.Ka (Gundam Thunderbolt version) as the core, attaching the fuel tank and fuselage side parts of the 1/48 F-14 around it.





▼ The diorama measures approximately 28 cm in width, 18 cm in depth, and 30 cm in height; the base model is a 1/100 scale with a compact composition.



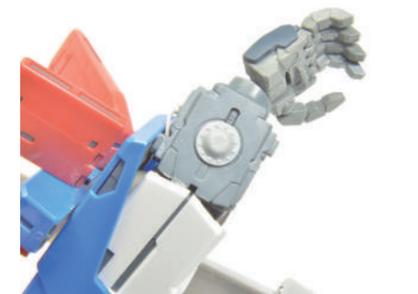
▲ I cut out around the base of the main wings of the 1/72 F-14 fuselage and used it as front armor. Ducts are the square nozzles from Kotobukiya. I placed the spring pipes from the X-wing to fill the emptiness. I lengthened the upper arms by 5 mm using epoxy putty to match the proportions of the enlarged body.



▲ There was a gap due to its transformation gimmick when it raised its arms. I filled it with engine nacelles and spring pipes from the X-wing to fill the emptiness. I lengthened the upper arms by 5 mm using epoxy putty to match the proportions of the enlarged body.



▲ I replaced the shoulder wings with the larger 1/72 F-14 main wings. The moving parts of the variable wing are hidden by the T-55 front fender, and the F-14 rectifier plate was added to improve the silhouette. If you want to enlarge long, thin parts like binders, replace them with a part that looks similar instead of modifying the original. In this way, you can reduce time while adding more detail.



▲ The right arms. I wanted the model to hold the Double Beam Rifle like a scene in Makoto Kobayashi's manga. I pulled out the joint and fixed it where the hand was attached to the weapon. Next, I threaded brass wire through the joint and used putty to connect it to the body. Then, I cut off the fingers before reattaching them at different angles.



▲ I extended the knee armor by 4 cm following the illustrations of Makoto Kobayashi and the custom kit by Harada, making the model look more powerful. For that purpose, I glued on the knee armor of the HG ZZ Gundam without modifying it. I filled the gaps on the backs with hinges from the Maritime Self-Defense Force Ship Equipment Set and F-14 to increase the density of detail.



▲ I used the 1/72 F-104 Starfighter from Hasegawa to create the barrel of the Double Beam Rifle. Cut off the nose cone and the nose of the rifle, and you have an 80s style cannon barrel. Using scale model parts allows you to turn an anime beam rifle into a realistic science fiction weapon.



▲ Overall view of the Double Beam Rifle. In line with Makoto Kobayashi's manga "0079 DECEMBER 1st.", the size of the rifle is huge, exceeding the length of the Ground Type ZZ. I made it bigger than Full Armor ZZ and FAZZ's Hyper Mega Cannons to make it look more powerful. I attached it to the main body at two points using 3 mm brass wire.



▲ The original nose looked too much like the anime/manga, so I added parts from the 1/144 F-4 Phantom from F Toys, connecting them with epoxy putty. The cockpit looks odd with a pilot inside, so I used the parts of the Maritime Self-Defense Force ship equipment set instead and made it crewless.



▲ The sacrificial Marasai. I used a smaller HGUC instead of an MG Marasai to emphasize the huge size of the ZZ Gundam Ground Type. I decorated the entire body with wheel caps and a Maritime Self-Defense Force ship equipment set. The power pipes were replaced with spring pipes used in many custom kits in the late 1980s.



▲ The torn-off head. I got the inspiration from a Warhammer miniature holding up a decapitated head. Next, I cut off the fingers of the MG Banshee's open hand and glued them to the helmet creating a firm grip. Finally, I tore off the power pipe on one side in homage to the Zaku from Gundam episode 1.