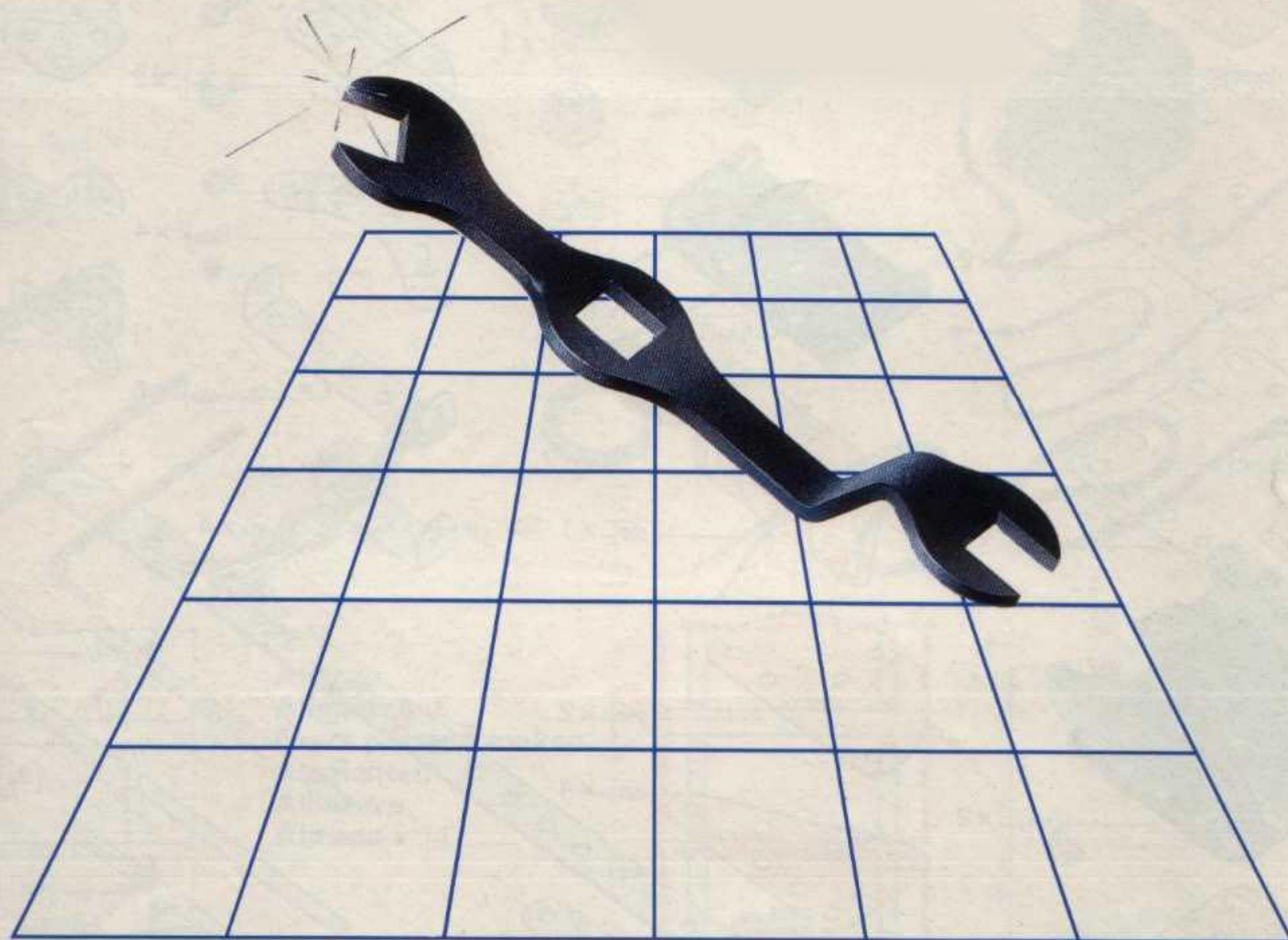



# MECCANO®



NOTICE  
BOOKLET  
INSTRUCCIONES  
ANLEITUNG  
BESCHRIJVINGEN  
ISTRUZIONI

1


# YOUR MECCANO MOTORISED SET

 Your Meccano Motorised Set will give you many hours of fun, interest and fascination. The models shown in this book are just the beginning; to convert your own ideas into working models marks real achievement in Meccano construction. But before you start building, read the following pages carefully.

This manual contains easy to follow instructions for building five dynamic models. Each section begins with an illustration of all the parts required. Select all these before starting your model. The section 'Using the Electric Motor' on pages 3 and 4 shows how the motor is prepared for use.

Certain standard arrangements for parts are used repeatedly in Meccano model-building e.g. locknuts to secure a free-running wheel or pulley. The most common of these basic constructions are described on page 21. Each has been given a letter (A, B, C and so on). When one of these appears on the building instructions it indicates the basic construction to use.

When you have completed all the models in this book start designing your own vehicles, machines and mechanisms. With Meccano you can build on and on.

 **VOTRE COFFRET MOTORISE MECCANO**  
Votre Coffret Motorisé Meccano vous distraira, vous passionnera, vous fascinera, pendant des heures... Les modèles montrés dans ce livret ne représentent qu'un début; en effet, la vraie réalisation de la construction Meccano, c'est la réalisation de vos propres idées sous forme de modèles qui fonctionnent. Mais avant de vous lancer dans la construction, lisez attentivement ces pages.

Ce manuel comporte des procédures très claires pour monter des modèles dynamiques. Chacune des sections commence par une présentation de toutes les pièces nécessaires. Réunissez ces pièces avant de commencer votre modèle. La section "Se servir du moteur électrique", pages 3-4, explique la préparation de cet élément.

Dans la construction des modèles Meccano, certains assemblages reviennent souvent. Exemple: pour retenir une roue ou une poulie rotative, on utilise un contre-écrou. De ces assemblages de base, les plus courants sont présentés page 21. Chacun porte une lettre de référence (A, B, C...). Dans les procédures de montage, ces lettres indiquent l'assemblage à retenir.

Lorsque vous aurez réalisé tous les modèles de ce livret, à vous de concevoir vos propres véhicules, machines et mécanismes: grâce à Meccano, vous construisez, et vous reconstruisez...

 **MECCANO BAUKASTEN MIT MOTOR**  
An Deinem Meccano Baukasten mit Motor hast Du stundenlang Freude beim Bau von Modellen aller Art. Mit den Modellen in diesem Heft kannst Du anfangen; mit Phantasie und Begeisterung kannst Du eigene Ideen im Modellbau verwirklichen und etwas bauen, auf das Du richtig stolz sein kannst. Aber lies bitte die folgenden Seiten gut durch, bevor Du anfängst.

Dieses Buch enthält Bauanleitungen für fünf Dynamik-Modelle. Am Anfang jeder Anleitung findest Du jedesmal eine Abbildung sämtlicher Teile, die Du brauchst. Stelle diese Teile zuerst zusammen, bevor Du mit dem Bauen anfängst. Die Gebrauchsanweisung für den Elektromotor auf Seite 3 und 4 gibt an, wie der Motor vorzubereiten ist.

Gewisse Grundanordnungen von Teilen kommen immer wieder beim Meccano-Modellbau vor wie z.B. Gegenmuttern, die ein freilaufendes Rad oder eine Riemenscheibe sichern. Die häufigsten Grundanordnungen sind auf Seite 21 beschrieben und jeweils mit einem Buchstaben bezeichnet (A, B, C usw.). Wenn einer dieser Buchstaben in der Bauanleitung erscheint, gibt er die entsprechende Grundanordnung an.


Wenn Du alle Modelle in diesem Buch nachgebaut hast, kannst Du auch eigene Fahrzeuge, Maschinen und Mechanismen konstruieren. Mit Meccano kannst Du immer bauen weiter.

 **LA VOSTRA SCATOLA MECCANO MOTORIZZATA**  
La vostra scatola Meccano motorizzata vi darà molte ore di divertimento e di interesse appassionante. I modelli illustrati nel presente manuale non sono che l'inizio; il vero fascino e la massima soddisfazione delle costruzioni Meccano si ha quando realizzerete dei modelli funzionanti di vostra propria ideazione. Ma prima di iniziare a costruire, leggete attentamente le pagine seguenti.

Il manuale contiene delle facili istruzioni per costruire cinque modelli dinamici. Ogni sezione inizia con un'illustrazione di tutti i pezzi occorrenti. Scegliete tutti i pezzi prima di iniziare il modello. Nella sezione 'Istruzioni per l'uso del motore elettrico', alle pagine 3 e 4, è indicato come si prepara il motore.

Per la costruzione dei modelli Meccano vengono utilizzate delle combinazioni ricorrenti di determinati pezzi, ad esempio i controdadi per fissare ruote libere o pulegge. Le più comuni di queste costruzioni base sono descritte a pagina 21. A ciascuna di esse è stata assegnata una lettera (A, B, C e così via). Quando nelle istruzioni di montaggio figura una di queste lettere, ciò indica la costruzione base da usare.

Dopo aver completato tutti i modelli descritti in questo manuale, cominciate a progettare dei veicoli, macchine e meccanismi di vostra ideazione. Con Meccano potete costruire sempre qualcosa di nuovo.

 **MECCANO-BYGGSSATS MED ELMOTOR**  
Meccano-byggsatsen med elmotor kommer att skänka timtals nöje, intresse och fascination. Modellerna i denna bok är bara början; att omvandla egna idéer till fungerande modeller är något av en prestation ifråga om Meccano-bygge. Men innan konstruktionsverksamheten påbörjas, bör följande sidor läsas igenom noga.

Denna handbok innehåller lättförståeliga anvisningar för att bygga fem dynamiska modeller. Varje avsnitt inleds med en bild av alla erforderliga delar. Välj ut alla dessa, innan arbetet påbörjas. Avsnittet "Elmotor" på sidorna 3 och 4 talar om, hur motorn görs iordning för drift.

Vissa standardarrangemang för delar används gång på gång vid Meccano-bygge, t.ex. låsmuttrar för att göra fast ett fritt löpande hjul eller en remskiva. De vanligaste bland dessa grundkonstruktioner beskrivs på sidan 21. De har var och en betecknats med en bokstav (A, B, C o.s.v.). När någon av dessa bokstäver förekommer i anvisningarna, anger den vilken konstruktion som bör användas.

När alla modellerna i denna bok har byggts, är det tid att börja konstruera egna fordon, maskiner och mekanismer. Med Meccano är det bara att bygga vidare.

 **UW MECCANO MOTORSET**  
Met je eigen Meccano Motorset kun je uren lang bezig zijn en plezier hebben. De modellen in dit boekje zijn maar een begin en al gauw zul je zelf Meccano constructies willen ontwerpen en bouwen. Maar voordat je aan de slag gaat wel even dit gedeelte goed lezen.


In dit boekje vind je duidelijke aanwijzingen voor het bouwen van vijf interessante modellen. Ze beginnen allemaal met een afbeelding van alle benodigde onderdelen. De beste manier is, voordat je met het model begint, alle onderdelen bij elkaar te zoeken. In het deel 'Het gebruik van de elektrische motor' op pagina's 3 en 4, zie je hoe de motor klaar voor gebruik gemaakt wordt.

Bij het bouwen van Meccano-modellen zijn er bepaalde vaste manieren om onderdelen aan te brengen, die regelmatig gebruikt worden, bij voorbeeld borgmoeren om een vrijlopend wiel of katrol te bevestigen. De meest voorkomende van deze vaste manieren worden op pagina 21 beschreven. Deze zijn elk van een letter voorzien (A, B, C, enz.). Wanneer je één van deze letters op de bouwhandleiding ziet, betekent dat welke vaste constructie gebruikt moet worden.

Als je alle modellen in dit boekje gemaakt hebt, begin dan met het ontwerpen van je eigen voertuigen, machines en mechanismen. Met Meccano kun je steeds verder bouwen, de mogelijkheden zijn onbeperkt.

 **مجموعتكم المجهزة بمحرك من صنع ميكانو**  
إن مجموعتكم المجهزة بمحرك من صنع ميكانو تعطىكم الكثير من ساعات اللذة والمتعة والسحر. فالنماذج التي تشاهدونها في هذا الكتاب هي إلا البداية. فتحولت تصوراتكم الخيالية إلى نماذج عمل يتسم بمنجز حقيقي عظيم. وقد أنشروا في التركيب قوماً بمطالعة الصفحات التالية مطالعة دقيقة.  
يحتوي هذا الكتاب على تعليمات سهلة التنفيذ لترتيب خمسة نماذج ديناميكية يبدأ كل قسم منها بصورة إيضاحية لكافة القطع اللازمة. انتقوا جميع هذه القطع قبل البدء بتركيب نموذجكم. فالقسم الخاص بطريقة استعمال المحرك الكهربائي في الصفحتين 3 و 4 يبين كيفية أعداد المحرك للاستعمال.  
إن بعض الترتيبات القياسية للقطع تستعمل تكراراً في تركيب نماذج ميكانو مثل صواميل التثبيت لتثبيت العجلة أو البكرة الطليقة الحركة. إن معظم هذه التعليمات الأساسية الأكثر شيوعاً مشروحة شرحاً وافياً في الصفحة 21. وقد أفرد لكل منها حرف ابجدي (A, B, C, etc.) وهلم جرا. وعندما يظهر أحد هذه الأحرف على تعليمات التركيب فإن ذلك يدل على استعماله الأساسي الواجب استعماله.

وعندما تنجزون تركيب جميع النماذج في هذا الكتاب بالشراب بنصه. ريانة وماك والياتكم الخاصة. هذا وبواسطة ميكانو يمكنكم السير قدماً في تركيب نماذجكم.

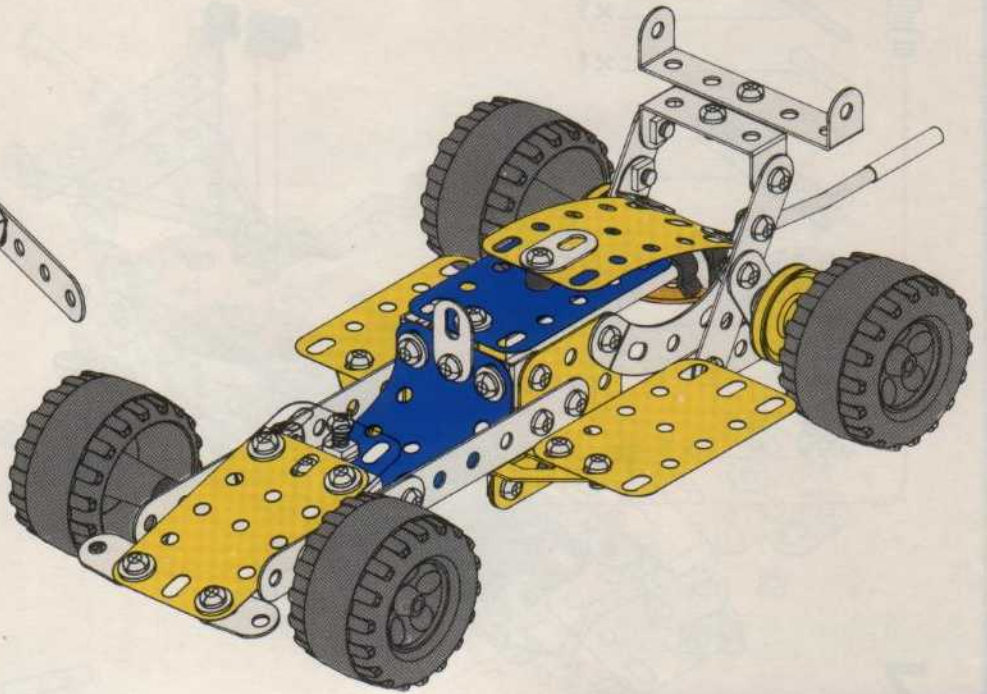
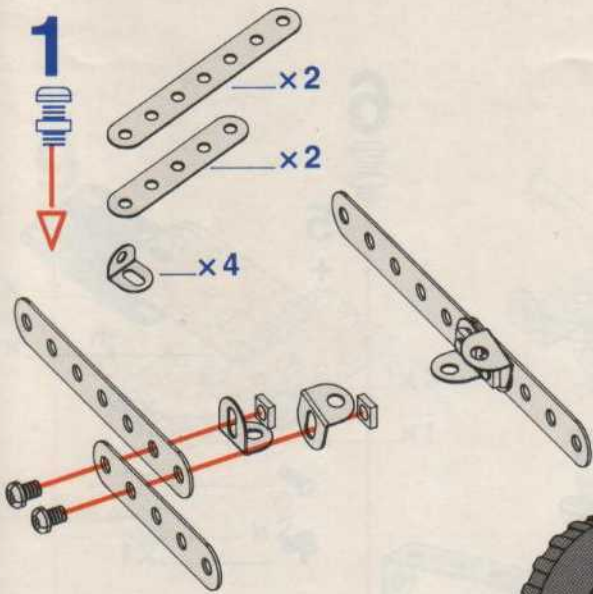
 **MECCANO MOTORIZADO**  
Este Meccano Motorizado proporcionará muchas horas de gran entretenimiento y diversión. Los modelos que aparecen en este manual son sólo el comienzo. La conversión de sus propias ideas en modelos que funcionan es un gran logro y el verdadero disfrute del Meccano. Pero antes de comenzar con el primer modelo lea atentamente las páginas que siguen.

Este manual contiene instrucciones fáciles de seguir para construir cinco modelos dinámicos. Cada sección comienza con una ilustración de todas las piezas requeridas. Seleccione las piezas antes de comenzar el modelo. La sección titulada "Empleo del motor eléctrico" en las páginas 3 y 4 indica la forma de preparar el motor para utilizarlo.

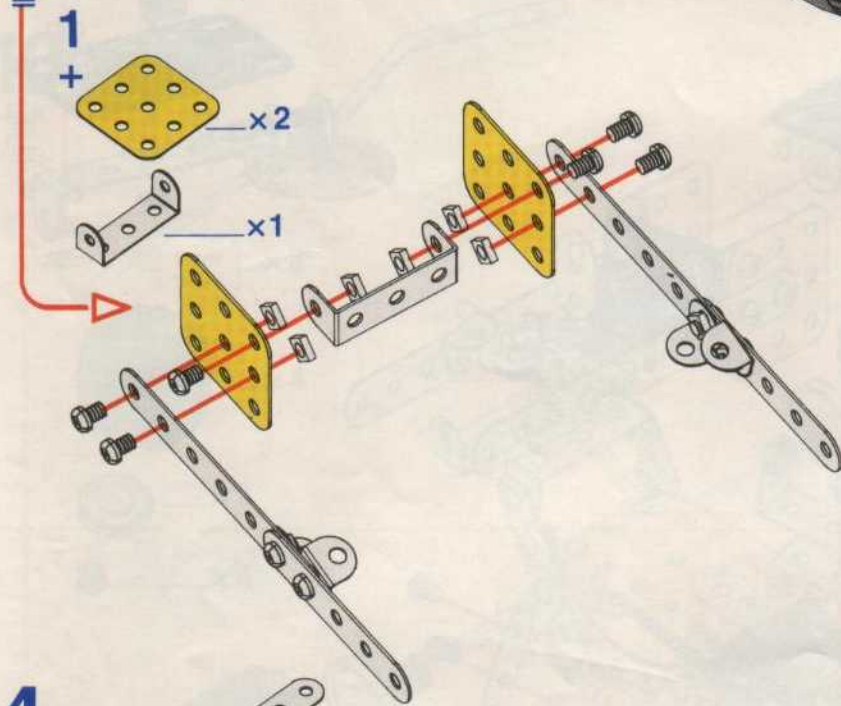
En la construcción de los modelos Meccano se usan repetidamente ciertas construcciones normales, tales como contratuercas para sujetar una polea de marcha libre. Las más comunes de estas construcciones básicas se describen en la página 21. Se indica cada una de ellas con una letra (A, B, C, etc.). Cuando aparezca una de estas letras en las instrucciones, indica la construcción básica que debe emplearse.

Cuando haya completado todos los modelos en este manual, comience a diseñar sus propios vehículos, máquinas y mecanismos. Con Meccano se puede construir más y más...

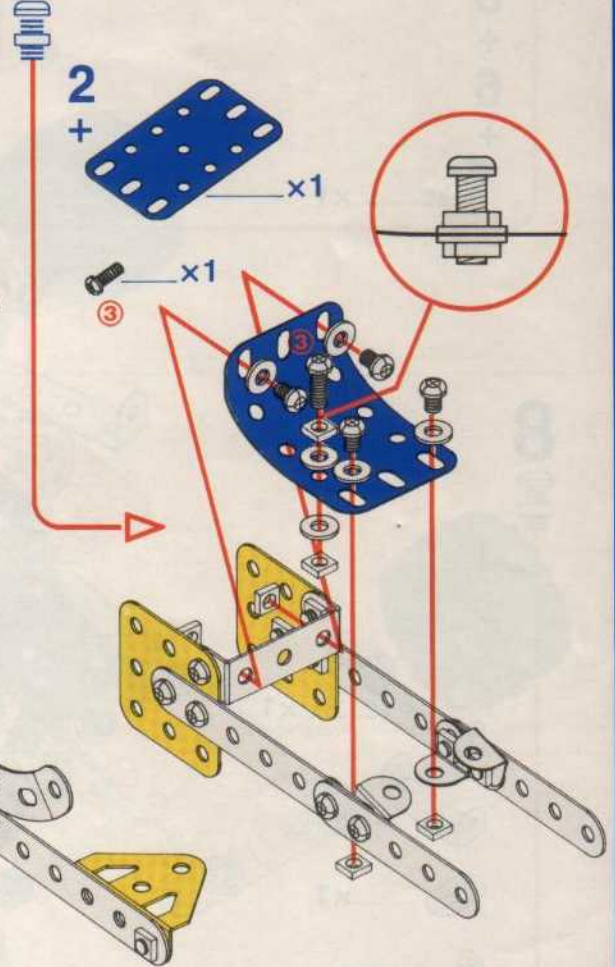
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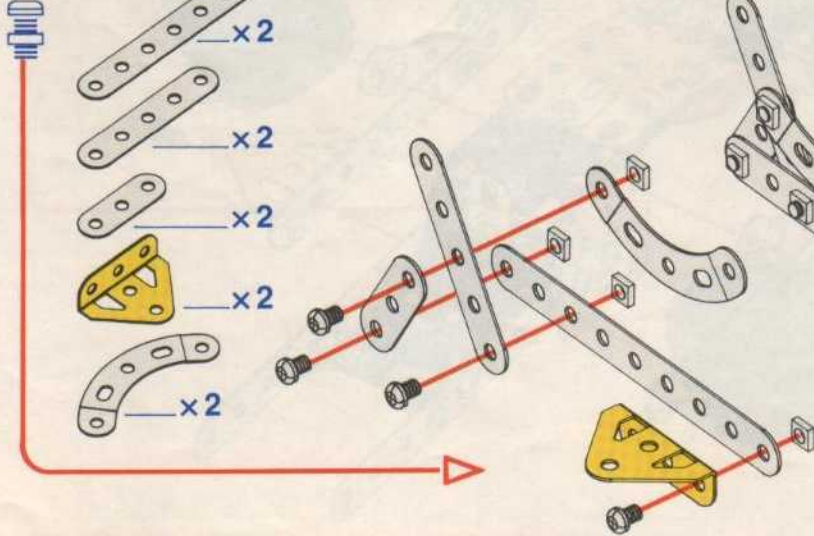
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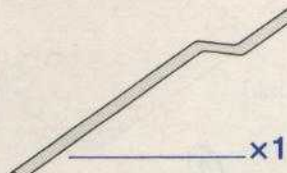

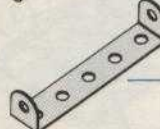


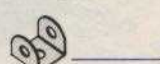

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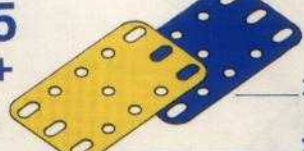
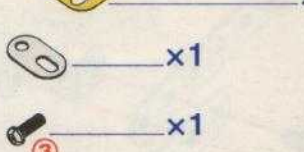
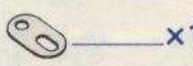


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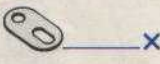
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-  x1
-  x1
-  x1
-  x3

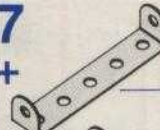



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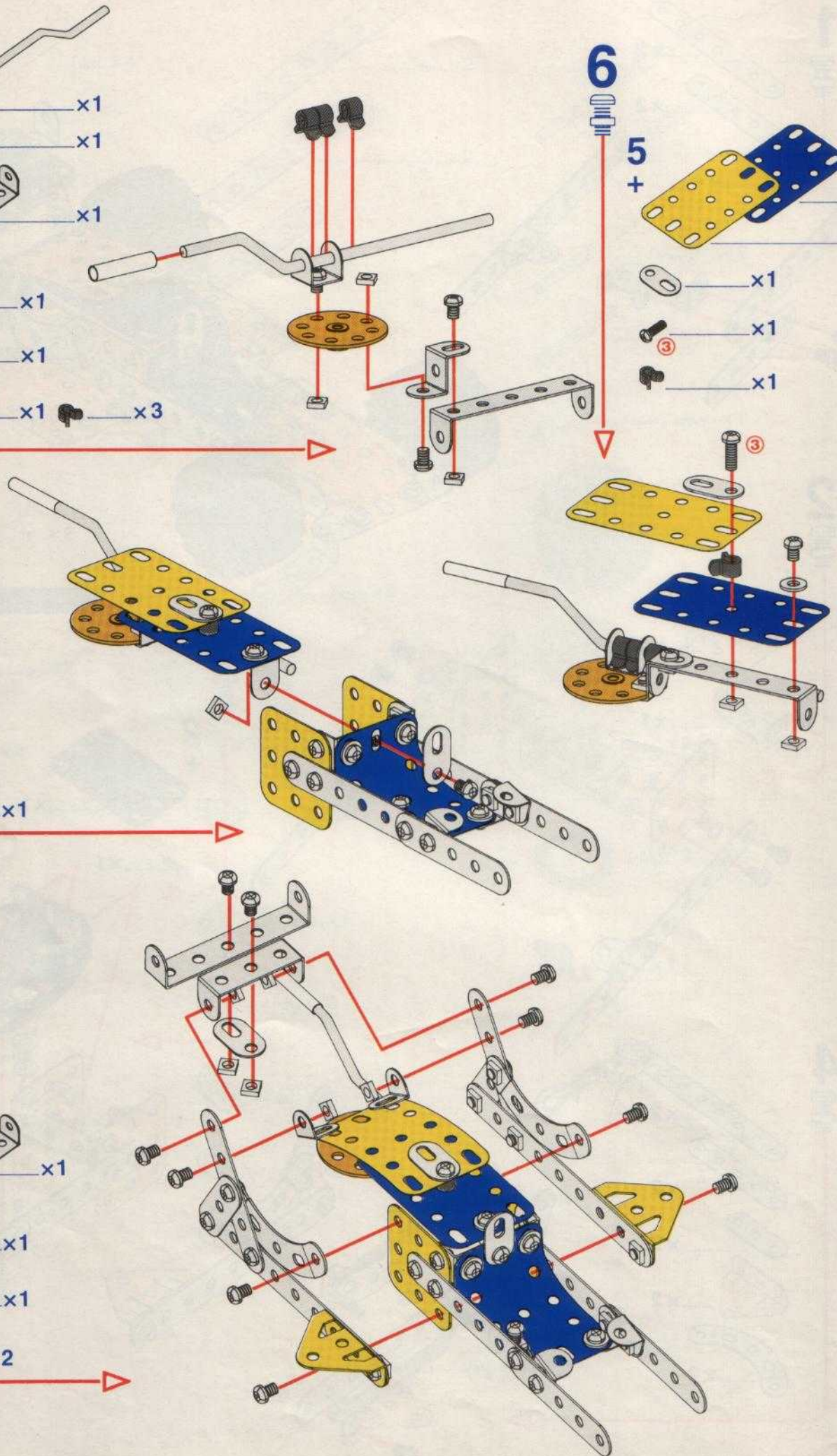
- 5 +  x1
-  x1
-  x1
-  x1
-  x1

7

- 3 + 6 +  x1

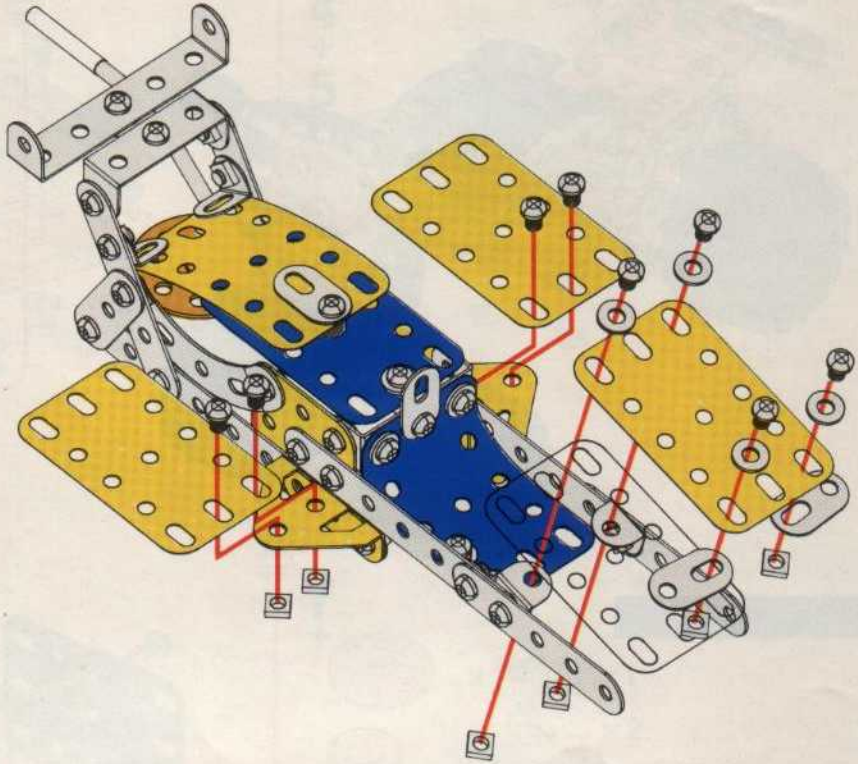
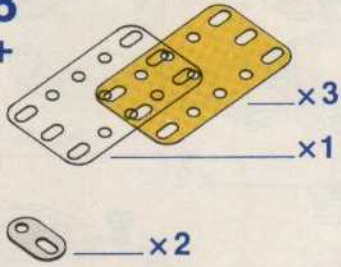
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- 4 + 7 +  x1
-  x1
-  x1
-  x2



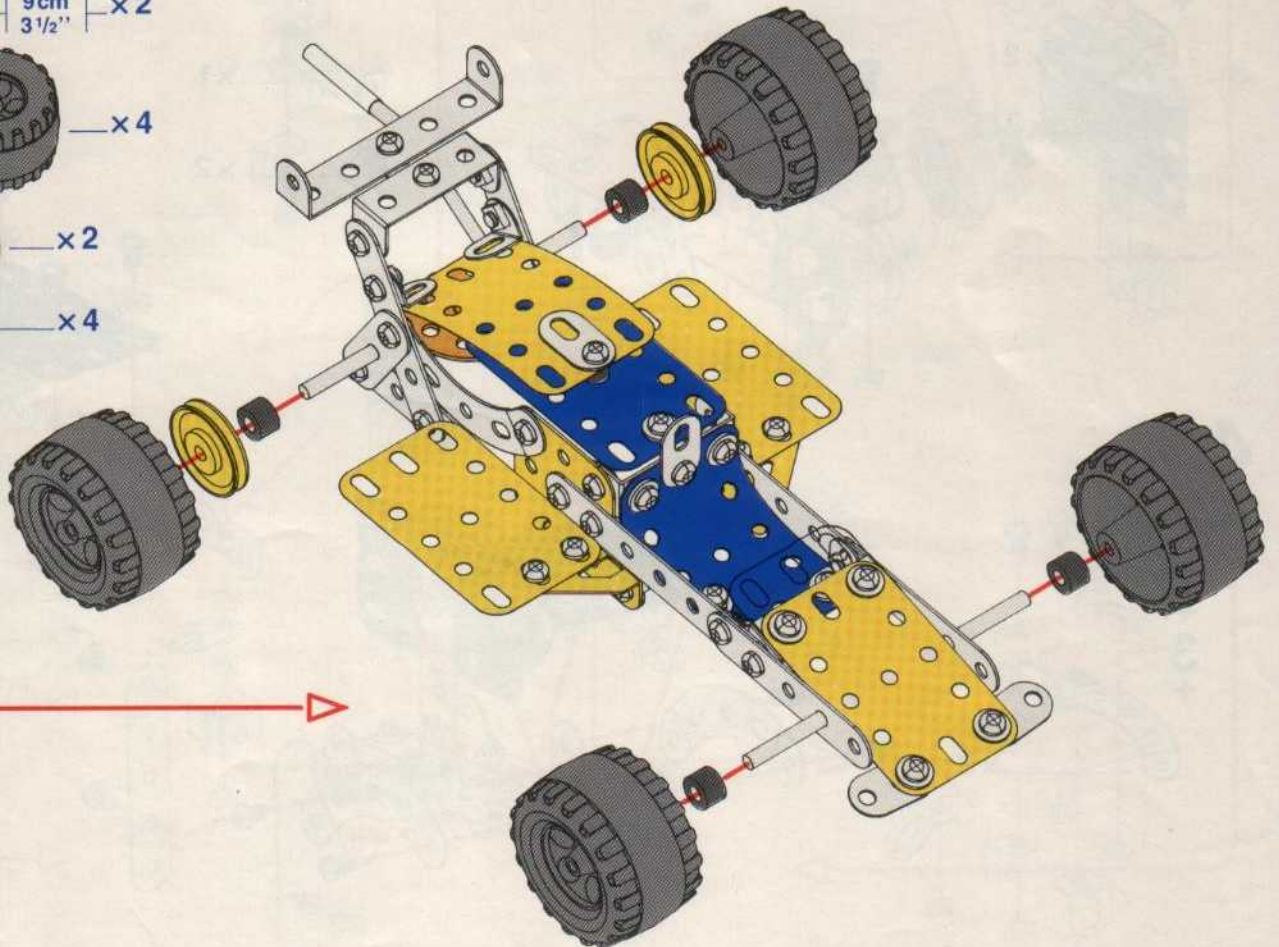
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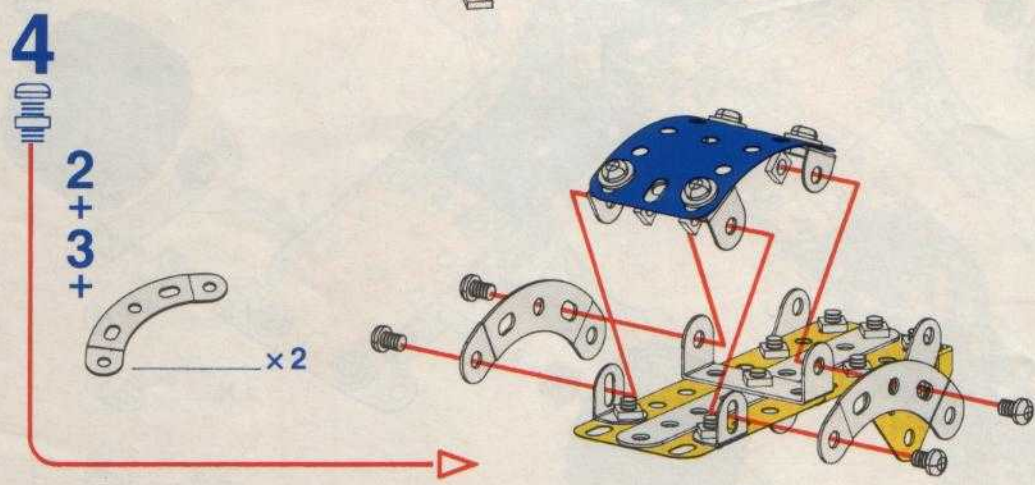
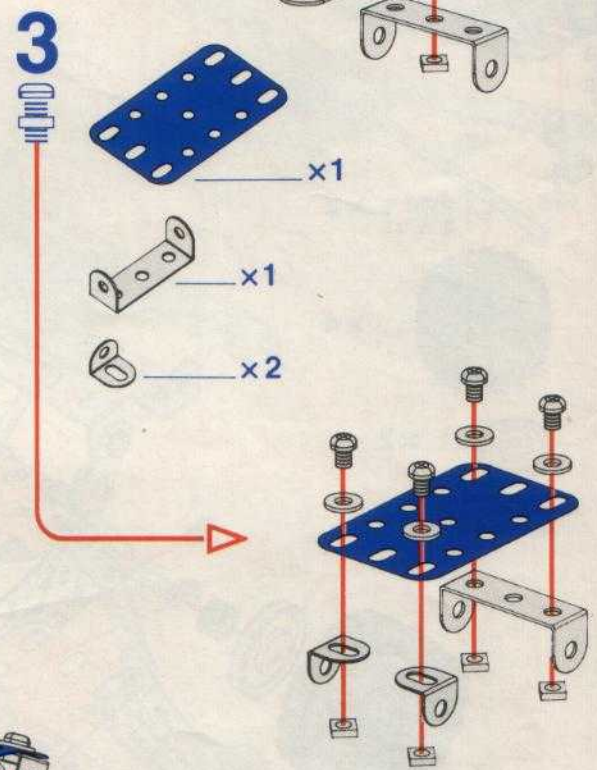
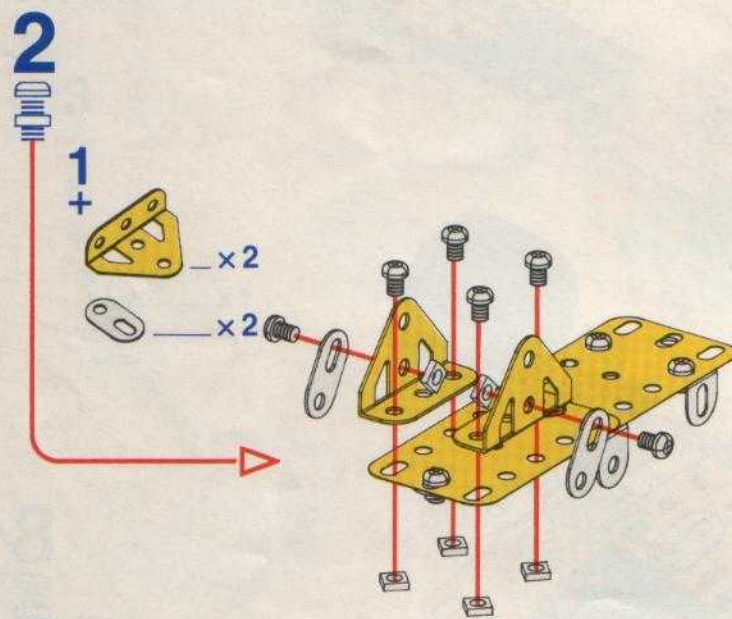
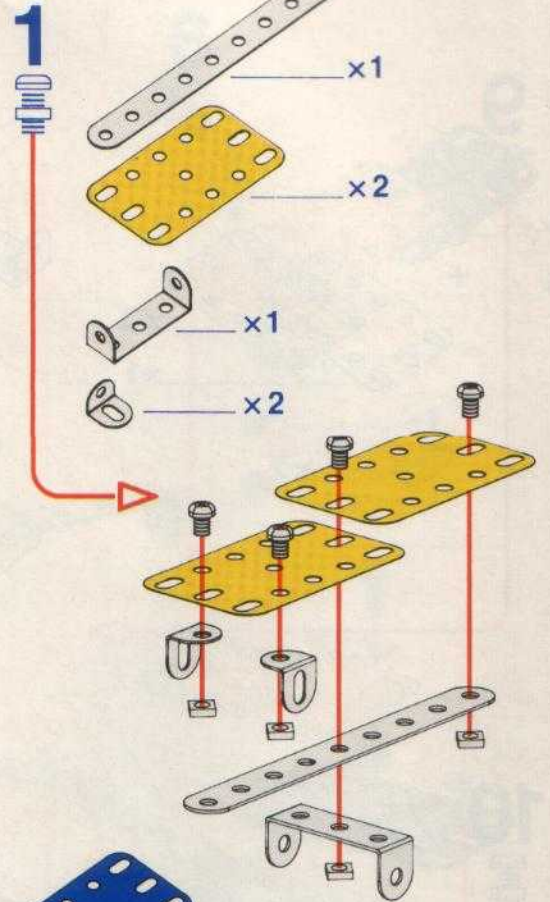
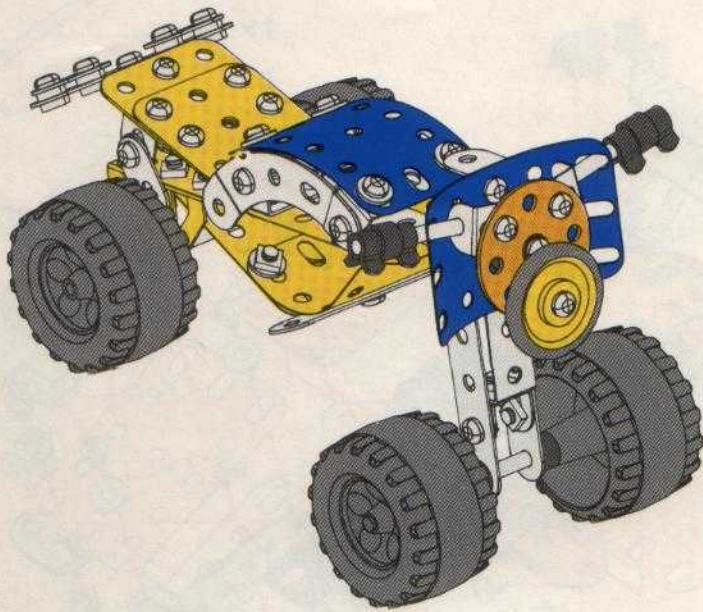
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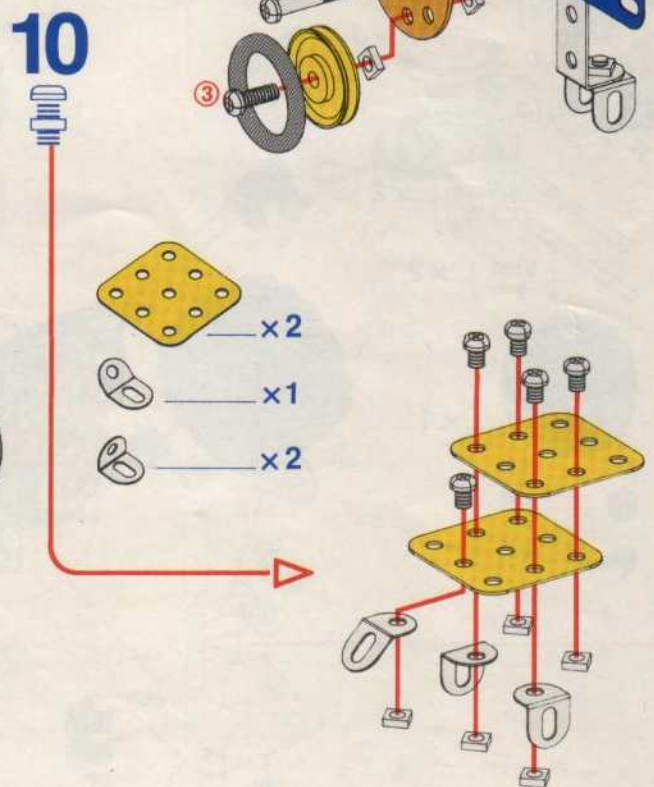
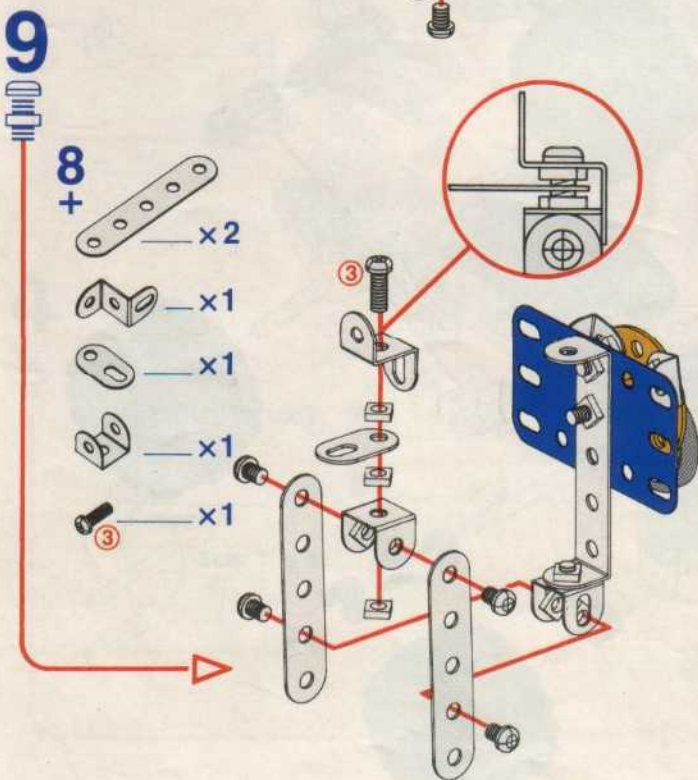
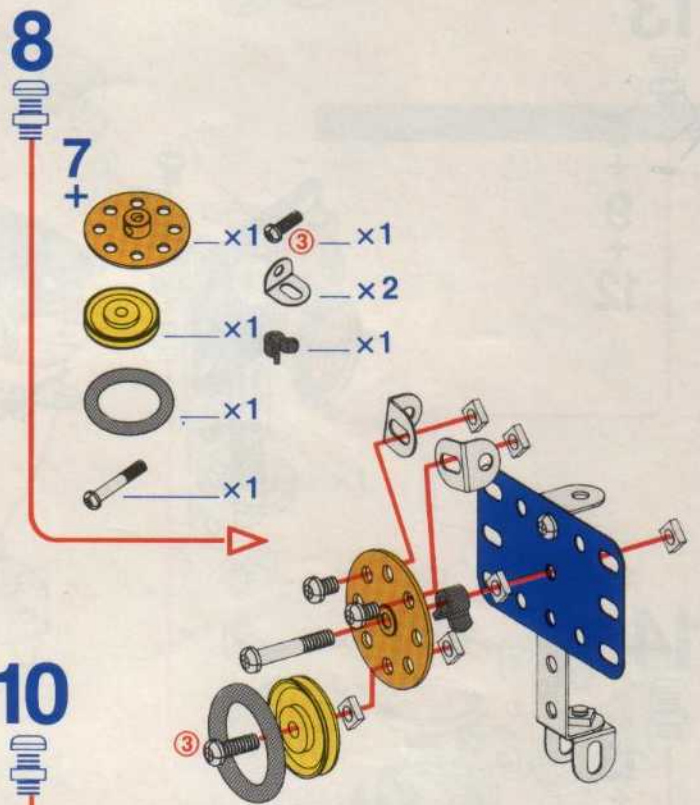
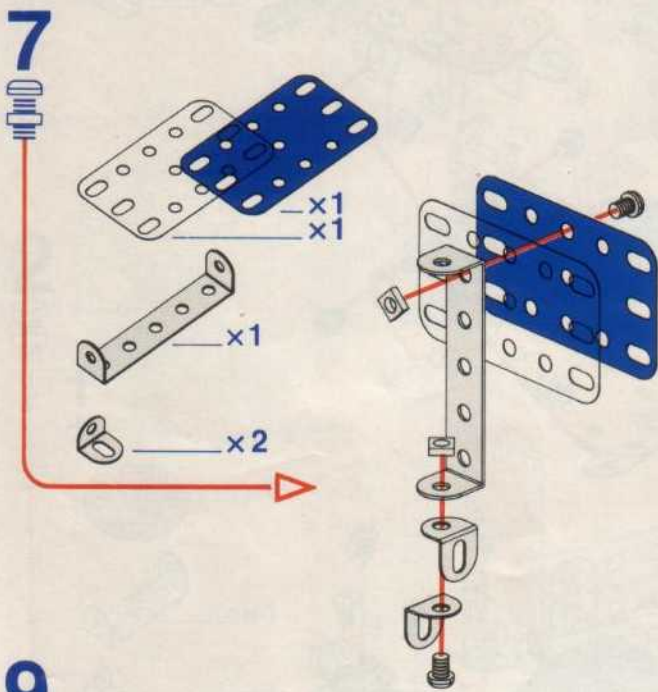
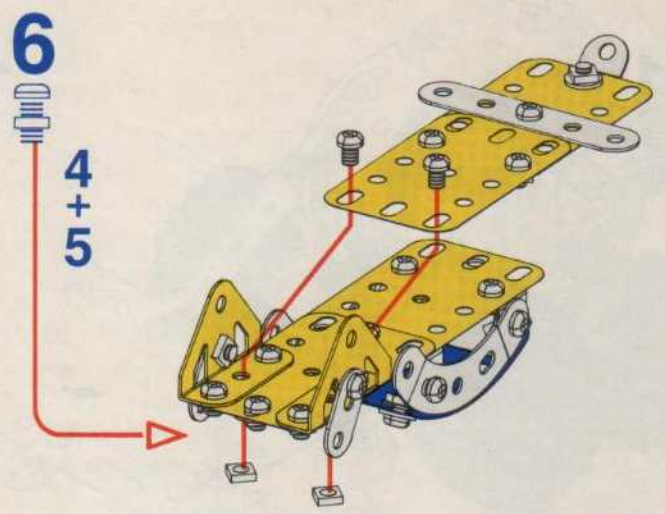
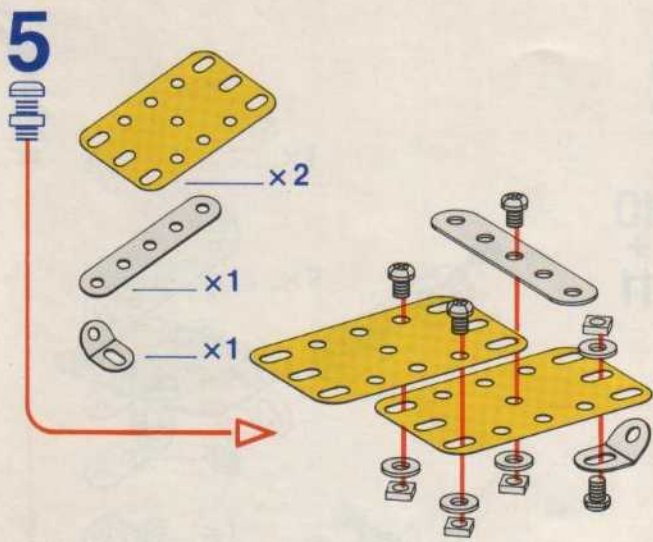


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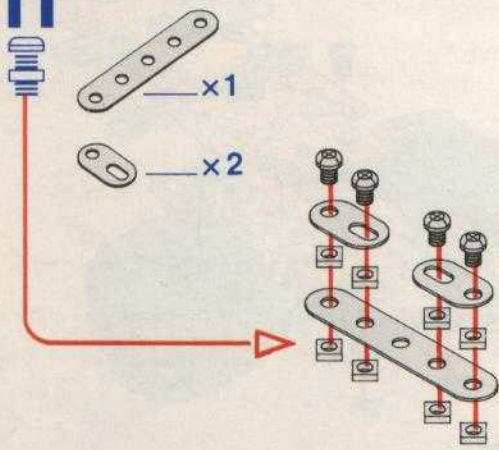
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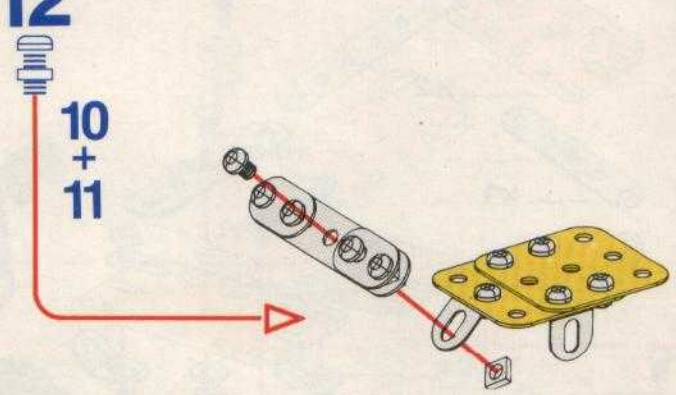




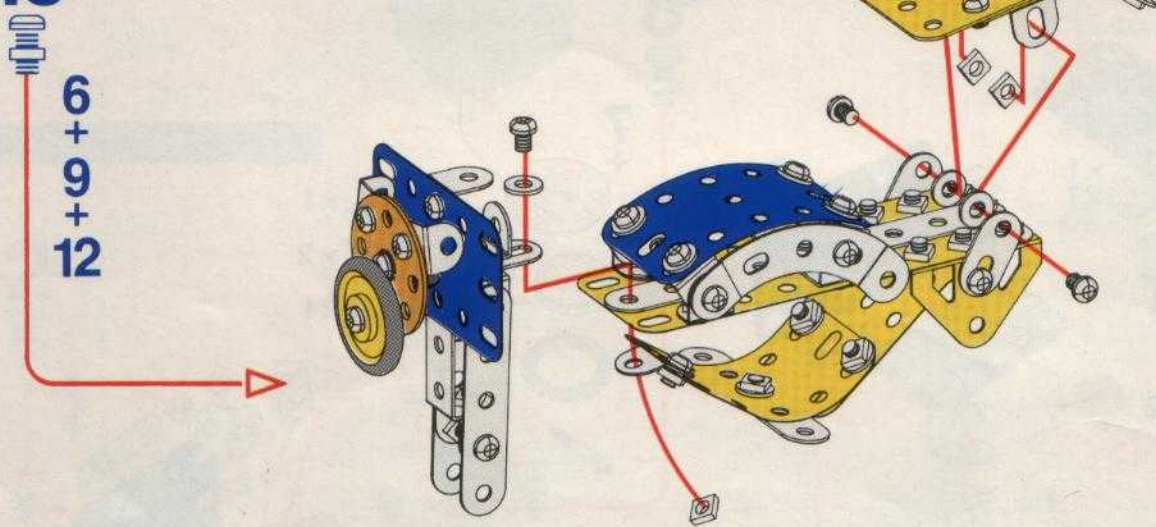
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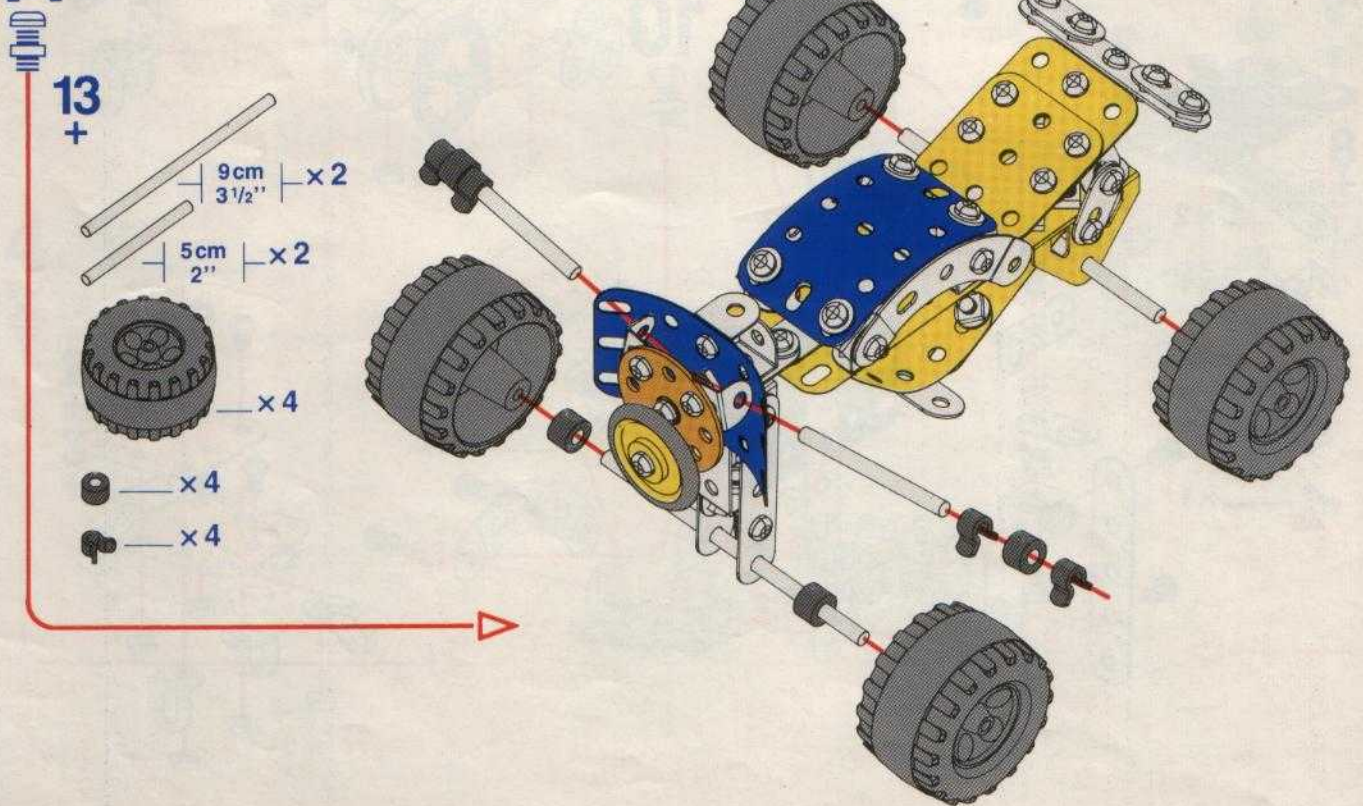
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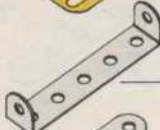
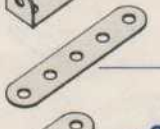
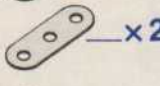
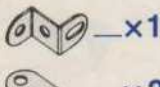
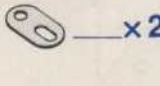


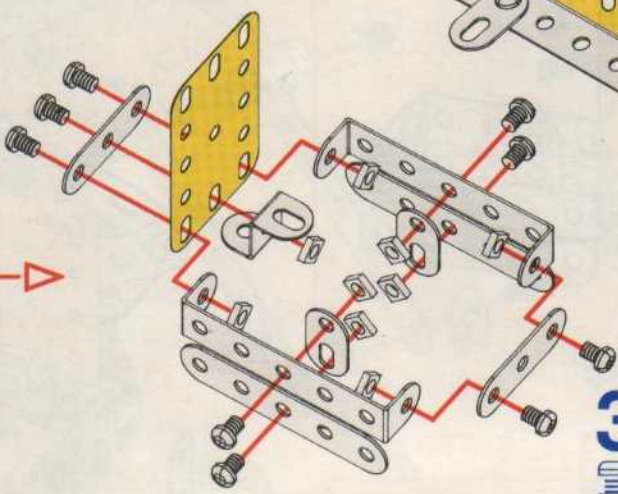
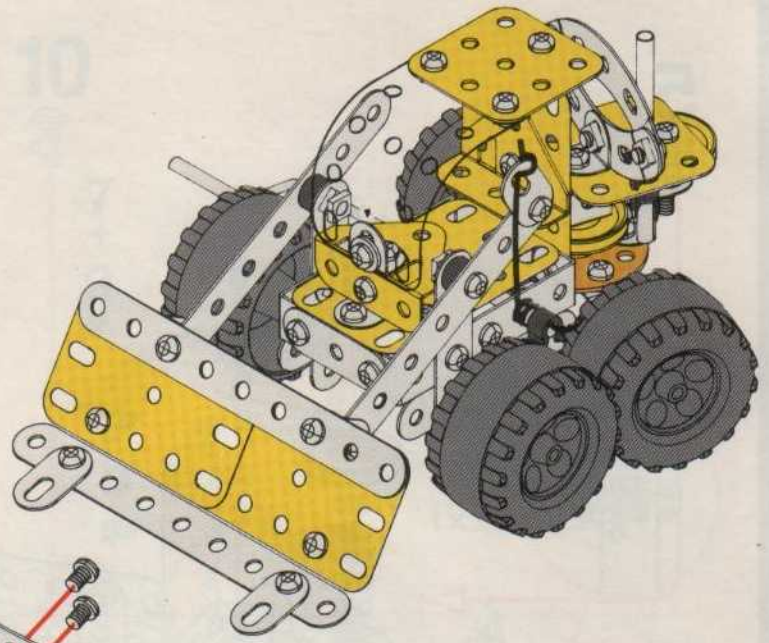
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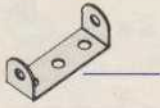
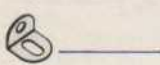
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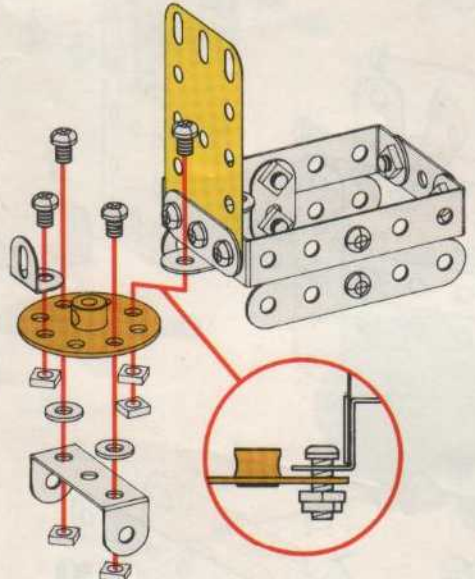
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2


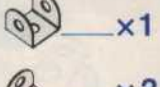

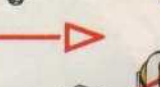
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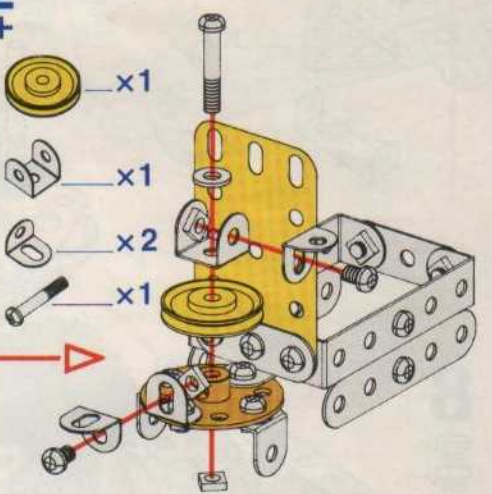
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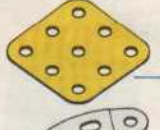

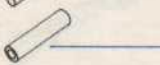



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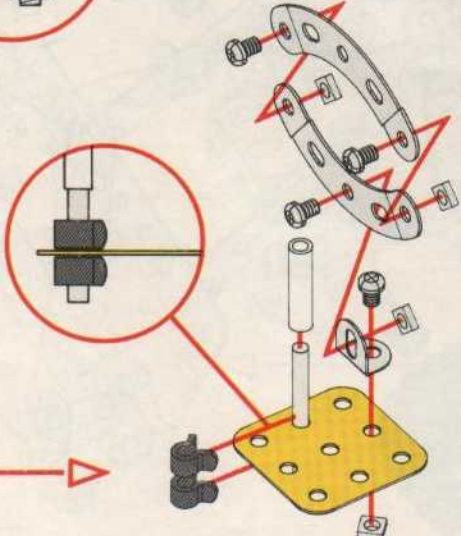
2 +

-  x1
-  x1
-  x2
-  x1





4

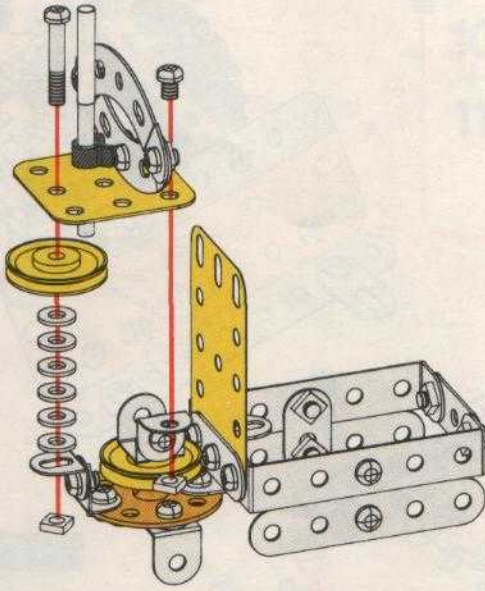
-  x1
-  x2
-  x1
-  x1
-  x1
-  x2



5

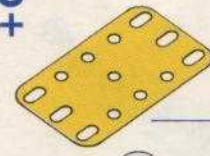
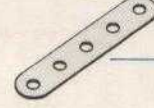

3  
+  
4  
+

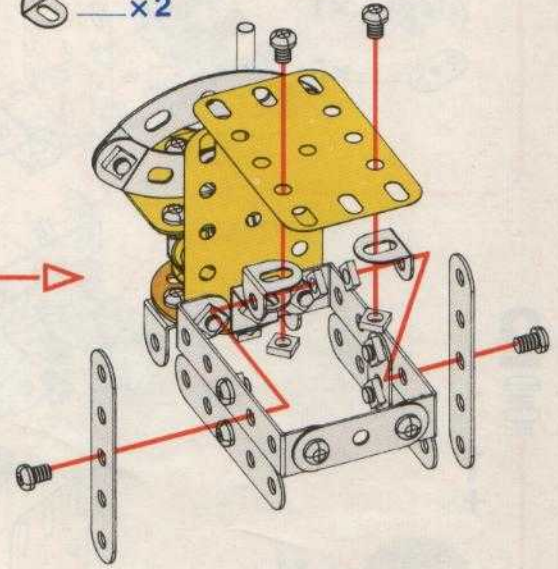
-  x1
-  x1



6

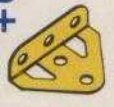
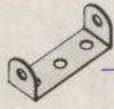
5  
+

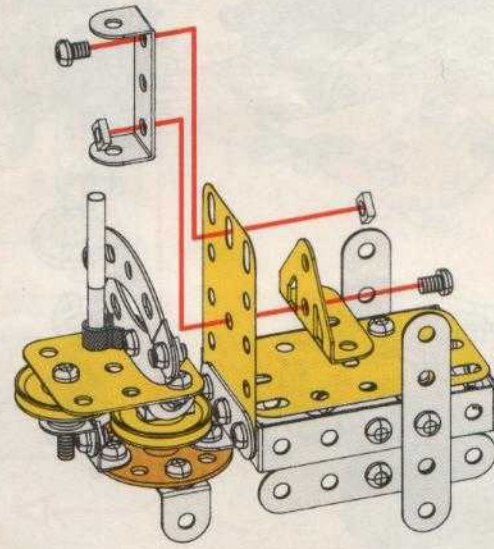
-  x1
-  x2
-  x2



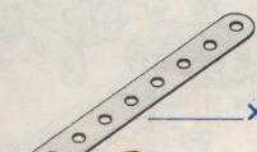
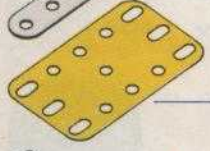



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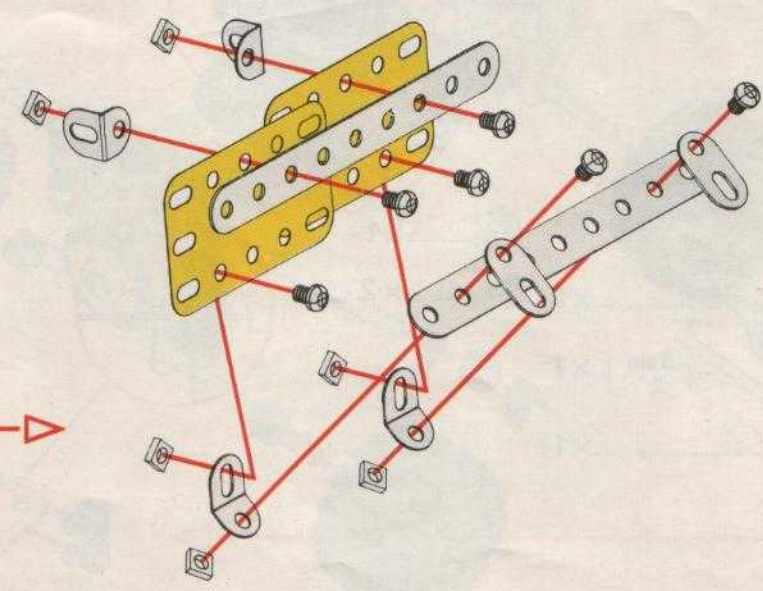
6  
+

-  x1
-  x1


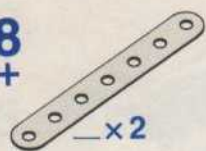



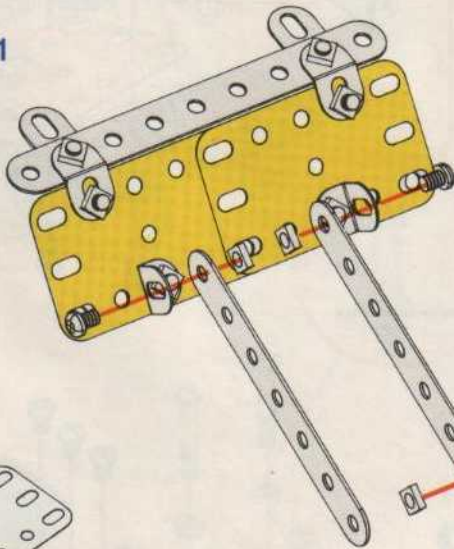
8







-  x2
-  x2
-  x2
-  x2
-  x2

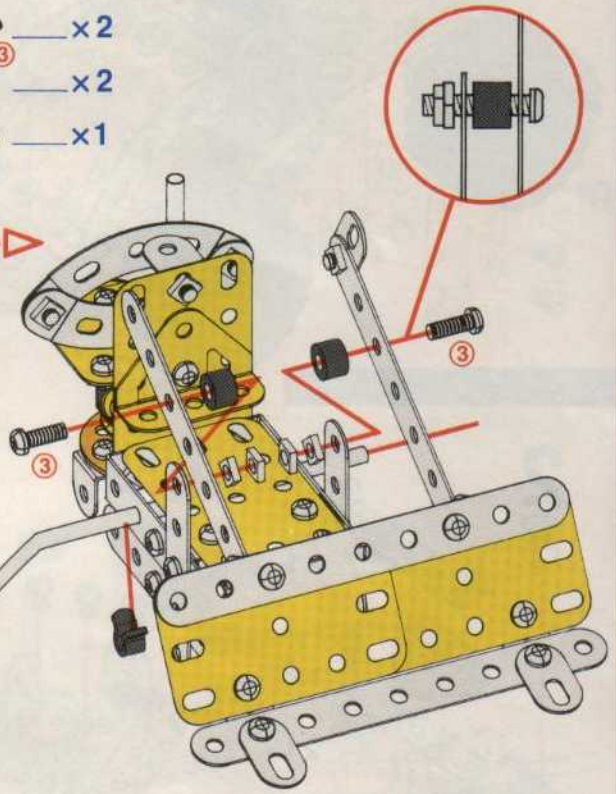






**9**

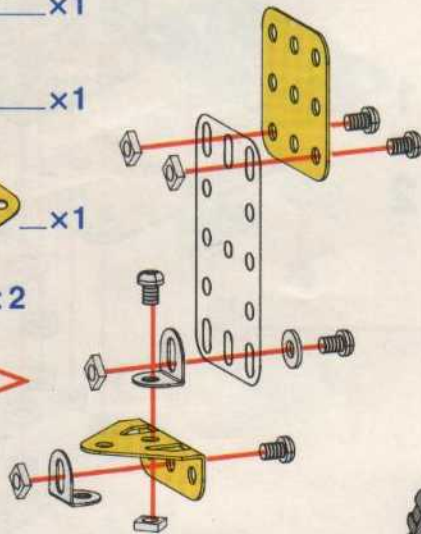
-  +
-  -x2
-  -x1







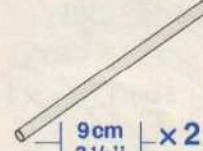

**10**

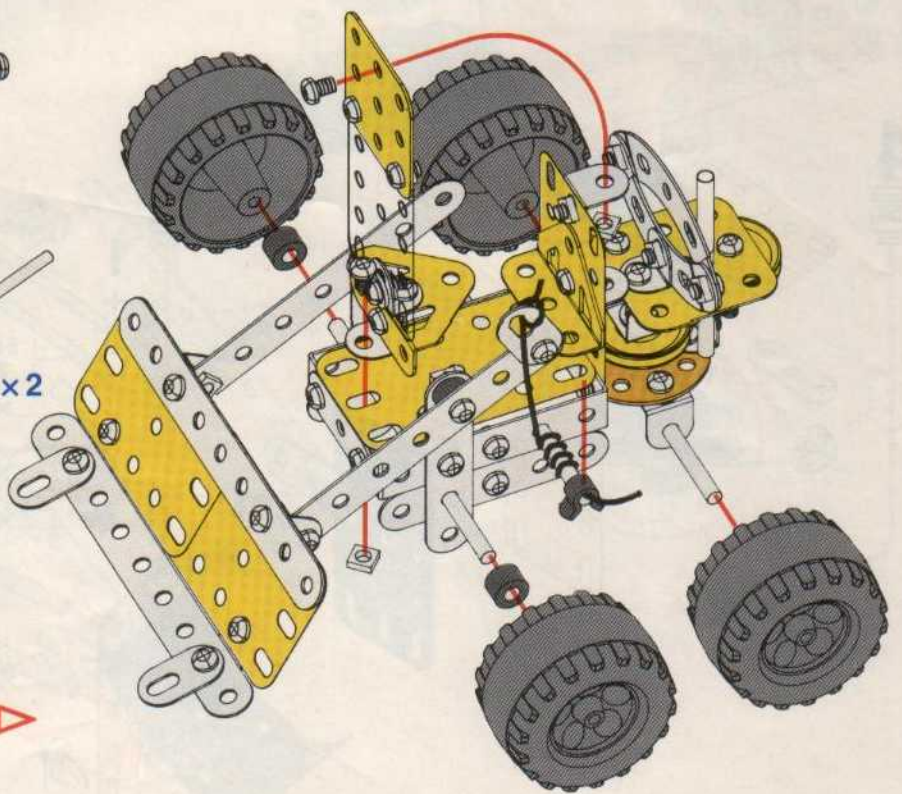
-  +
-  +
-  -x1
-  -x2
-  -x2
-  -x1

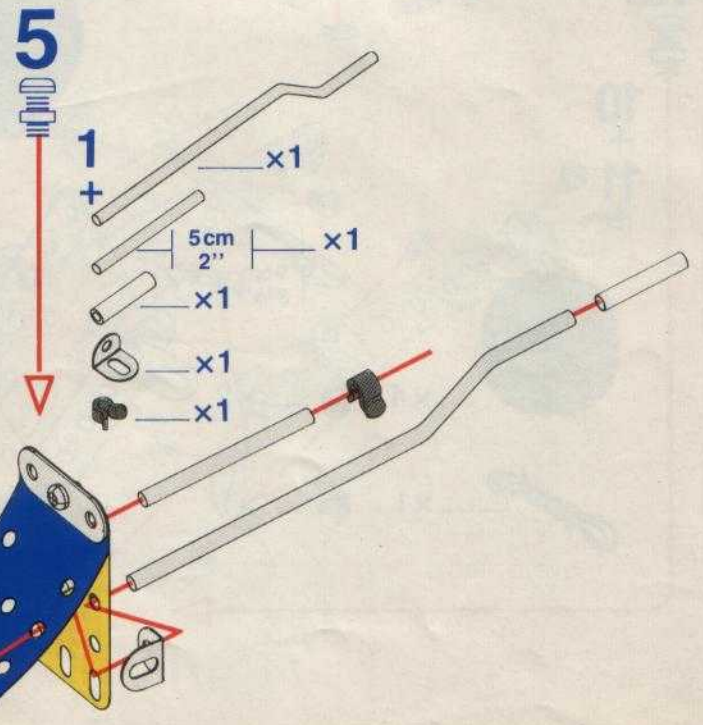
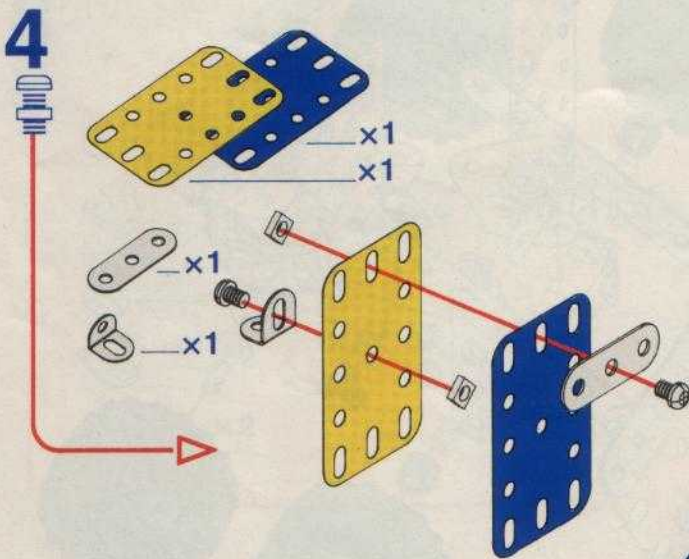
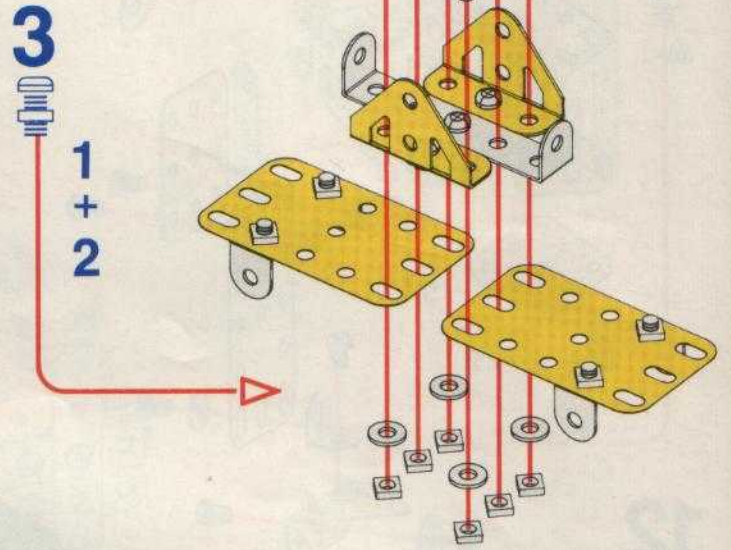
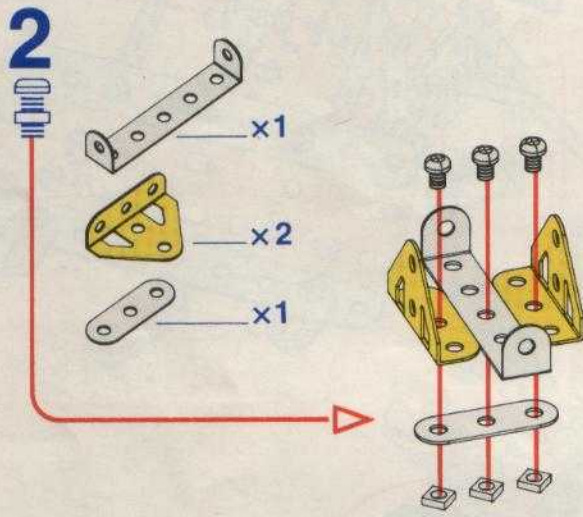
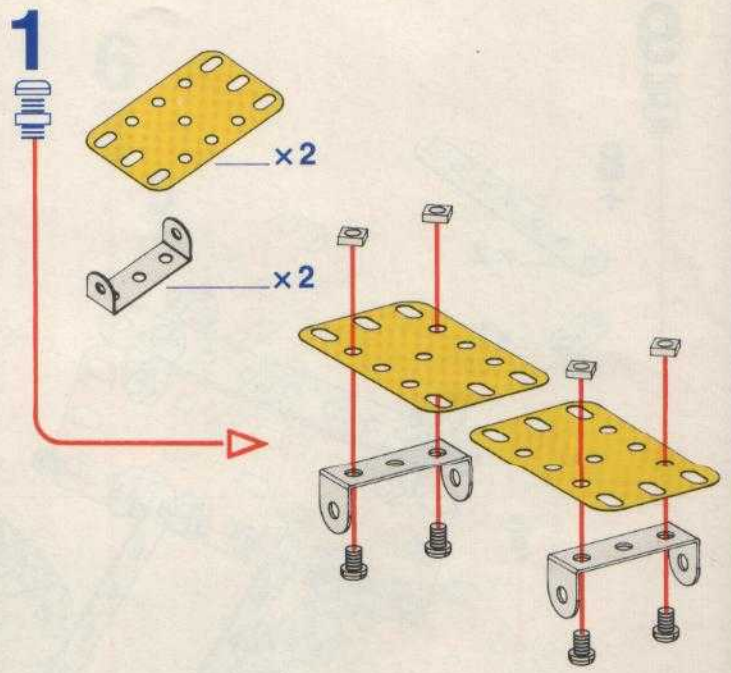
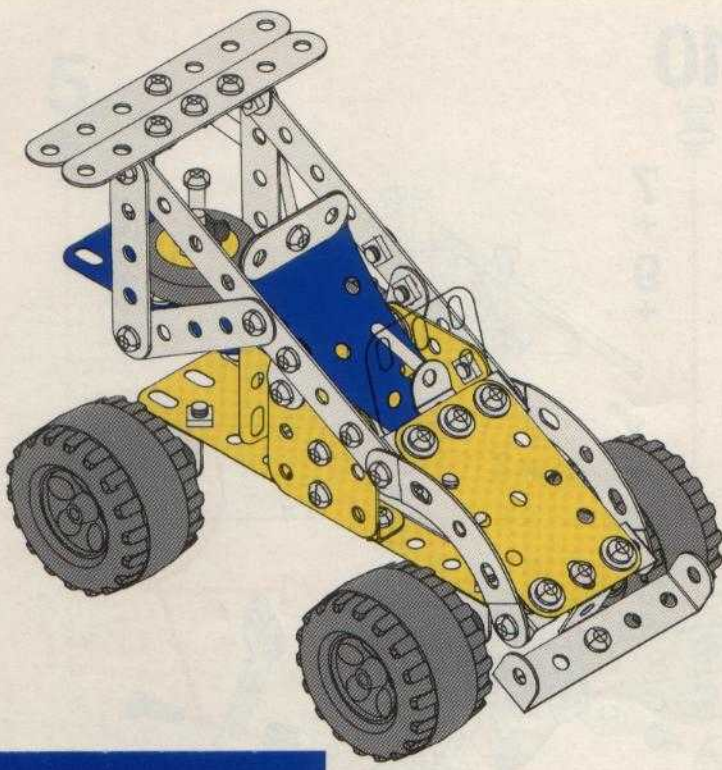
**11**

-  -x1
-  -x1
-  -x1
-  -x2

**12**

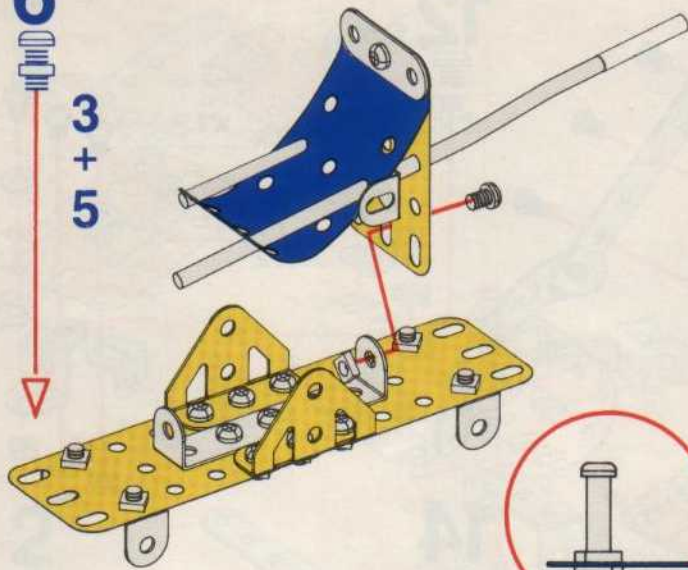
-  +
-  +
-  +
-  -x4
-  -x2
-  -x1
-  -x2
-  -x1





6

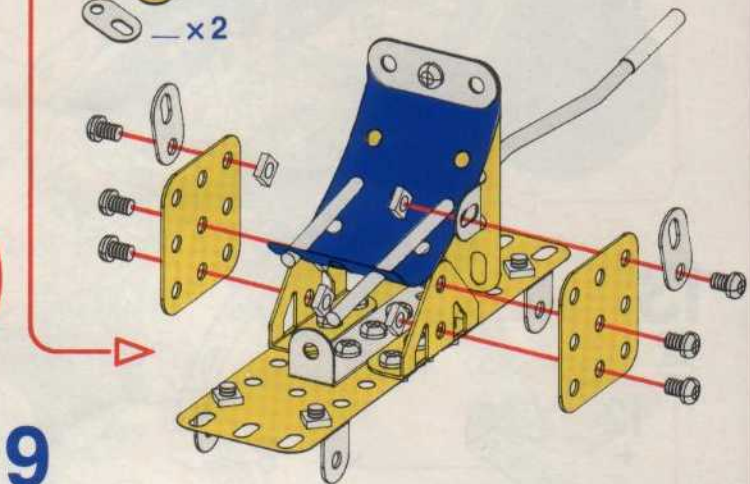
3 + 5



7

6 +

- x2
- x2

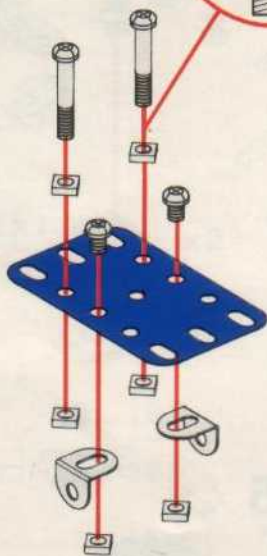


8

- x1

x2

x2



9

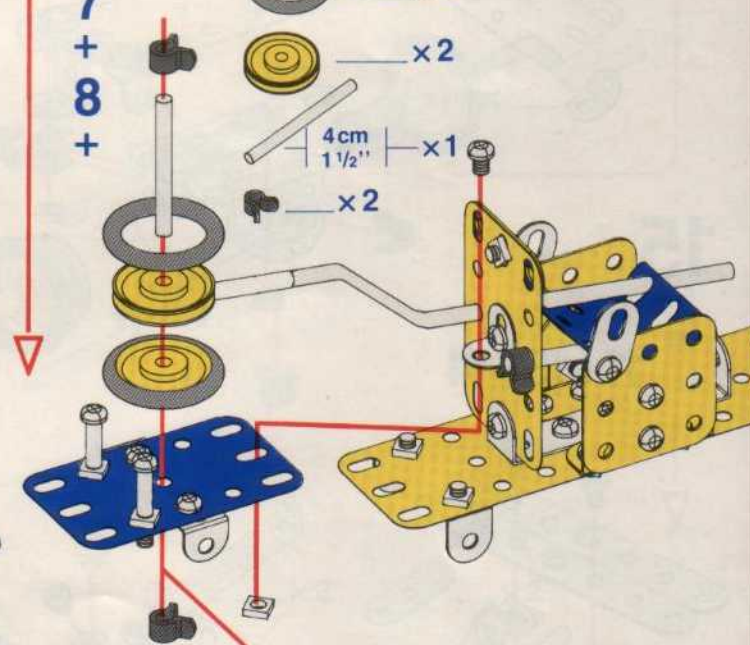
7 + 8 +

- x2

- x2

- x1

- x2



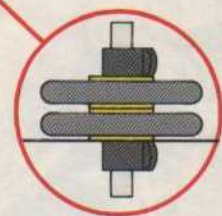
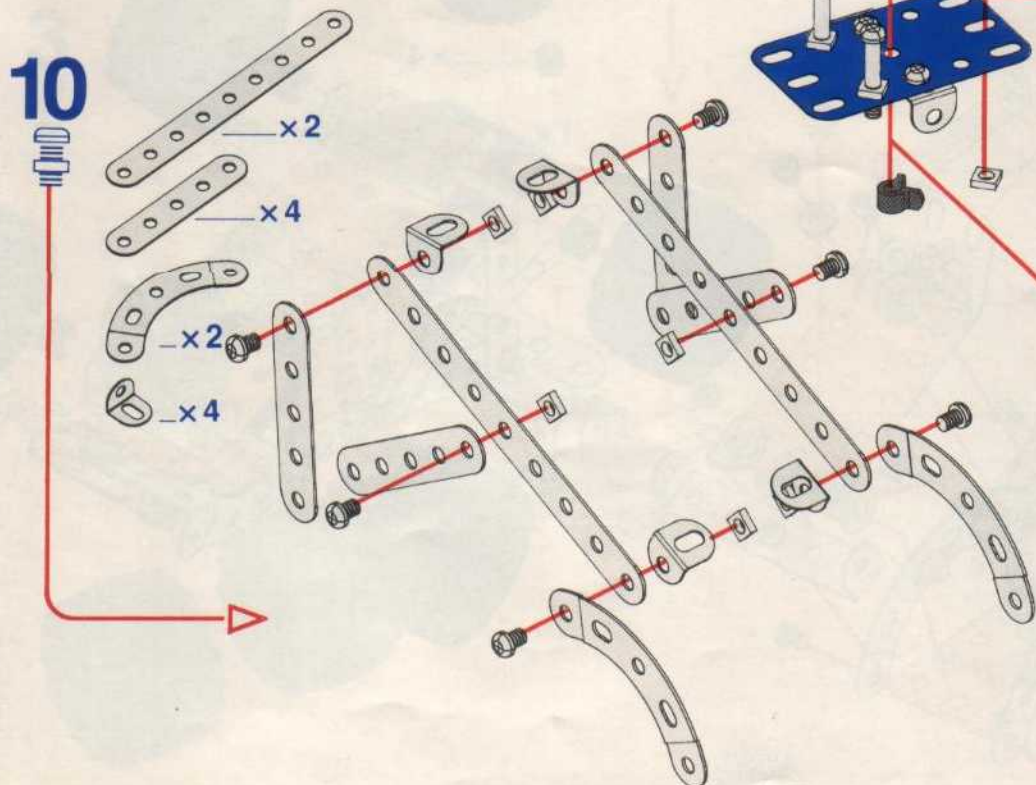
10

- x2

- x4

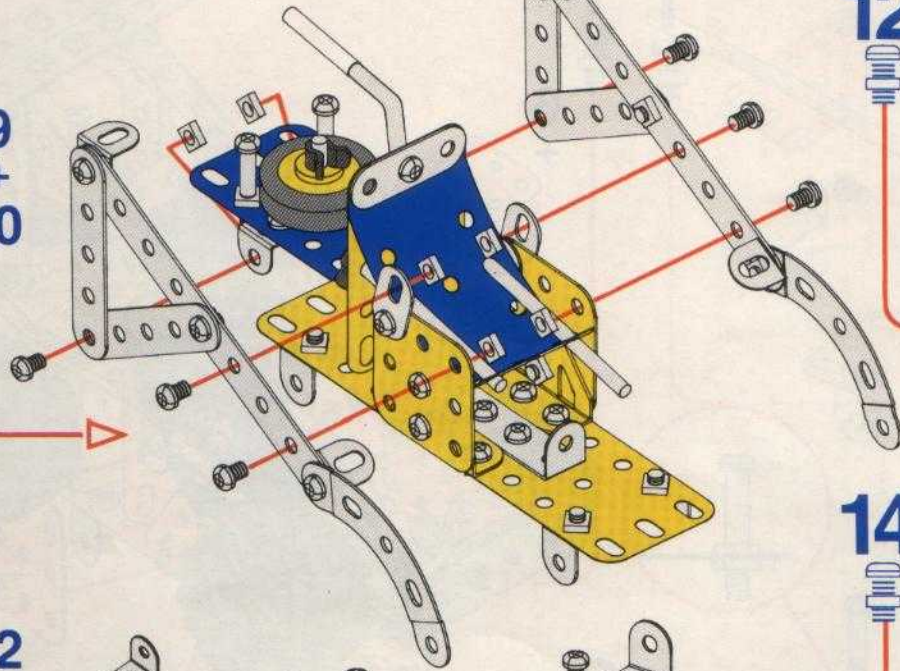
- x2

- x4

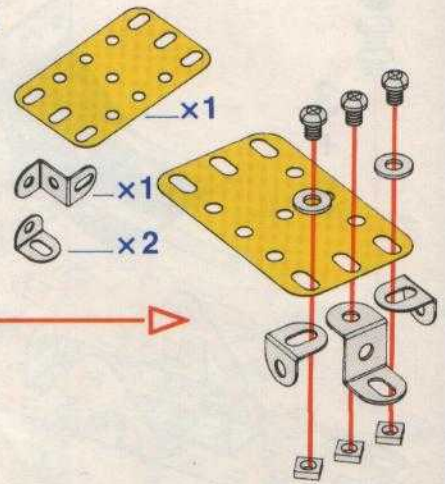


11

9 + 10

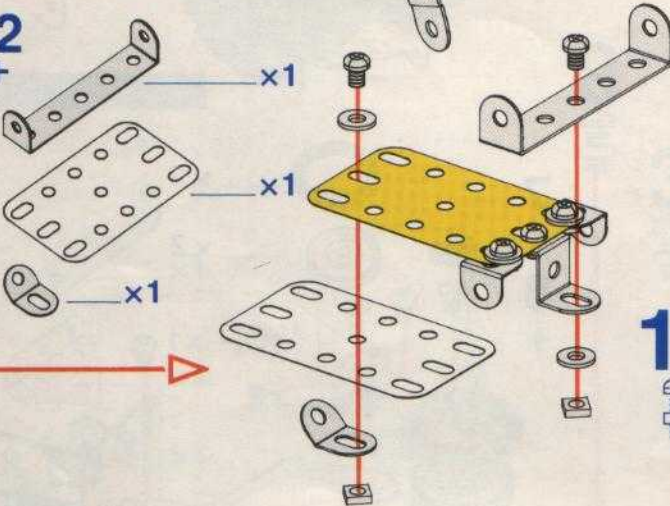


12

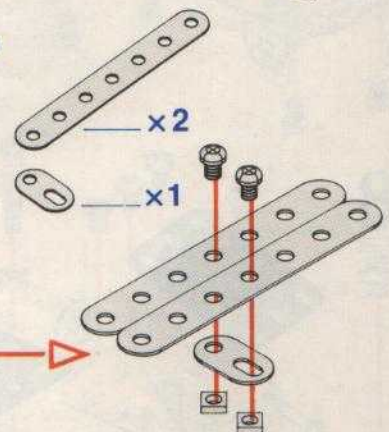


13

12 +

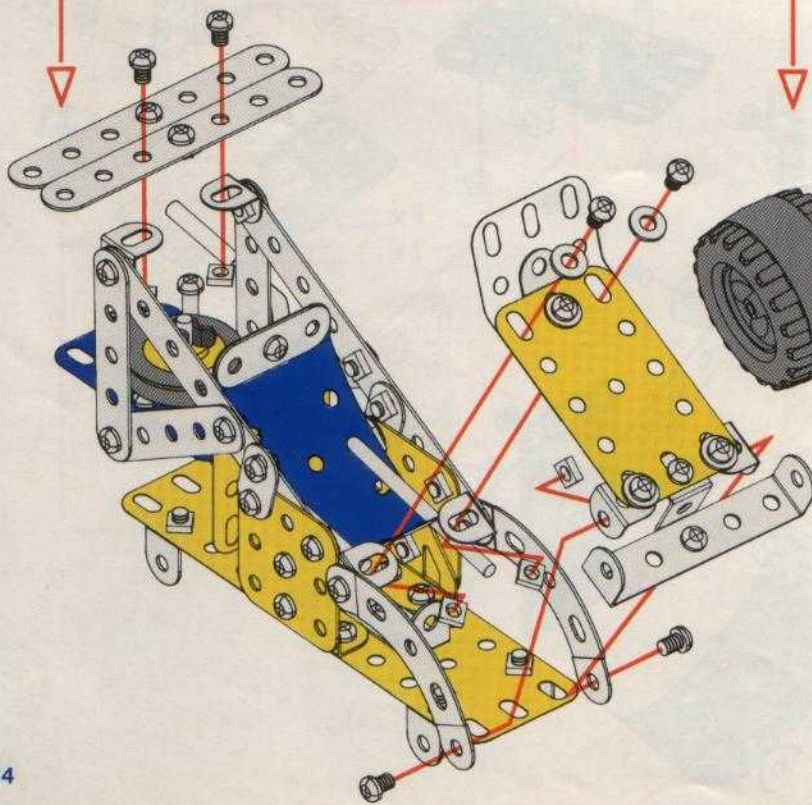


14



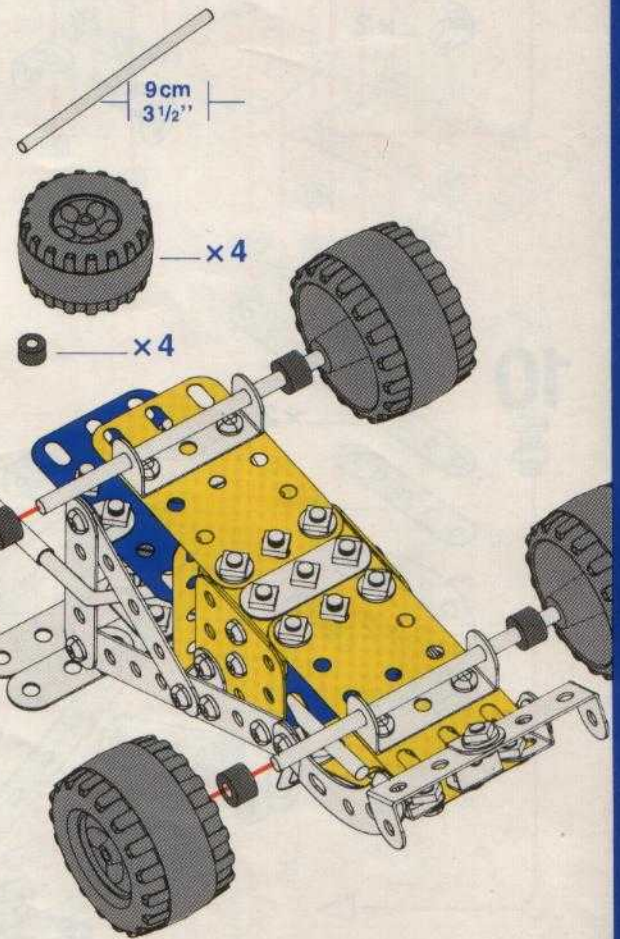
15

11+13+14




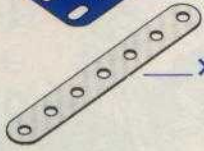
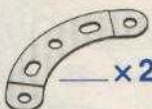




16

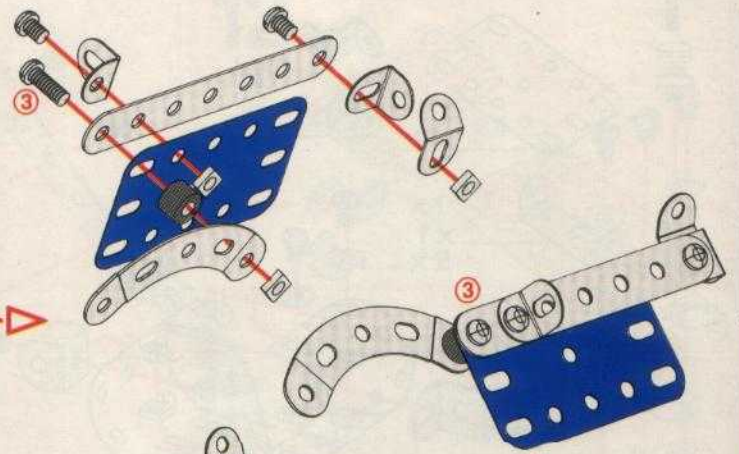
15 +







5

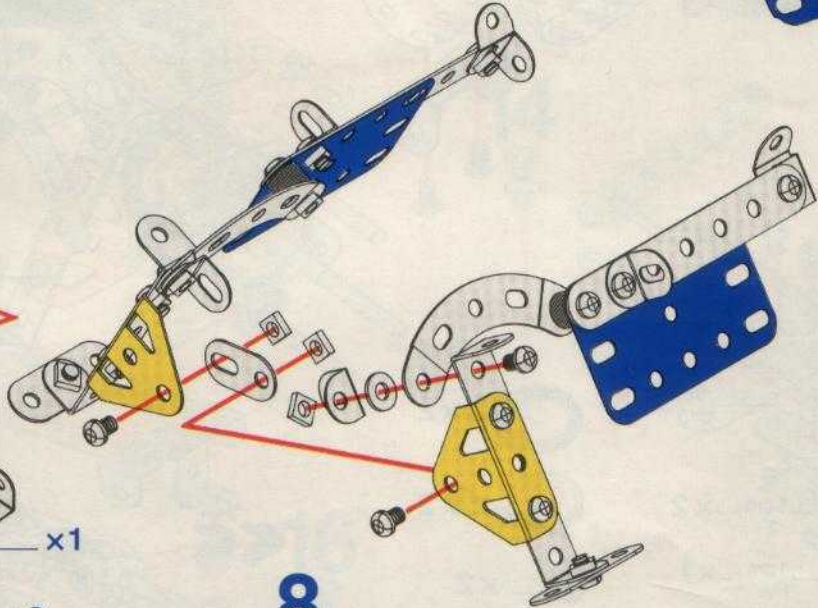
-  x2
-  x2
-  x2
-  x4
-  x2
-  x2
-  x2



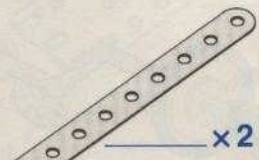
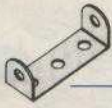
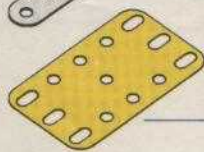
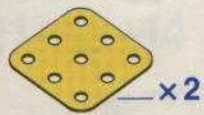


6

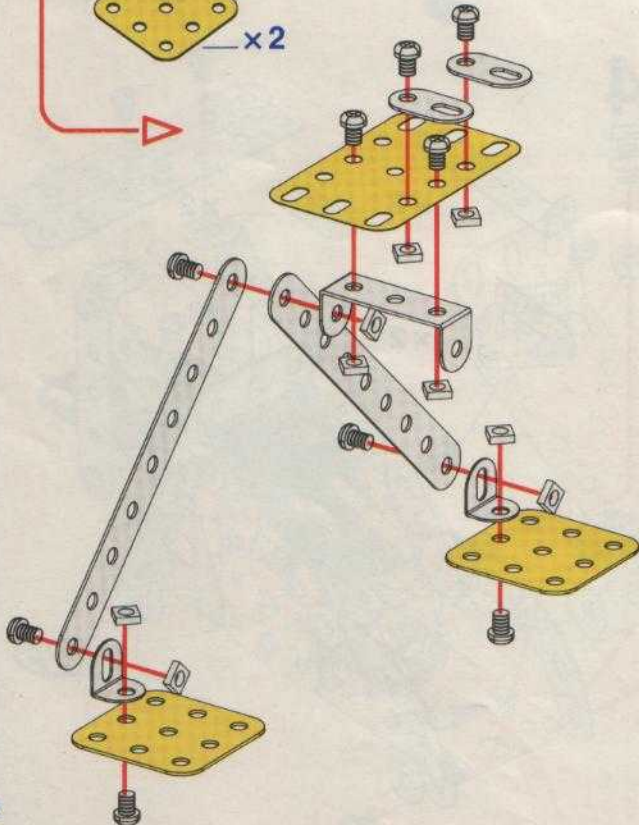
4 + 5 +

-  x2
-  x1



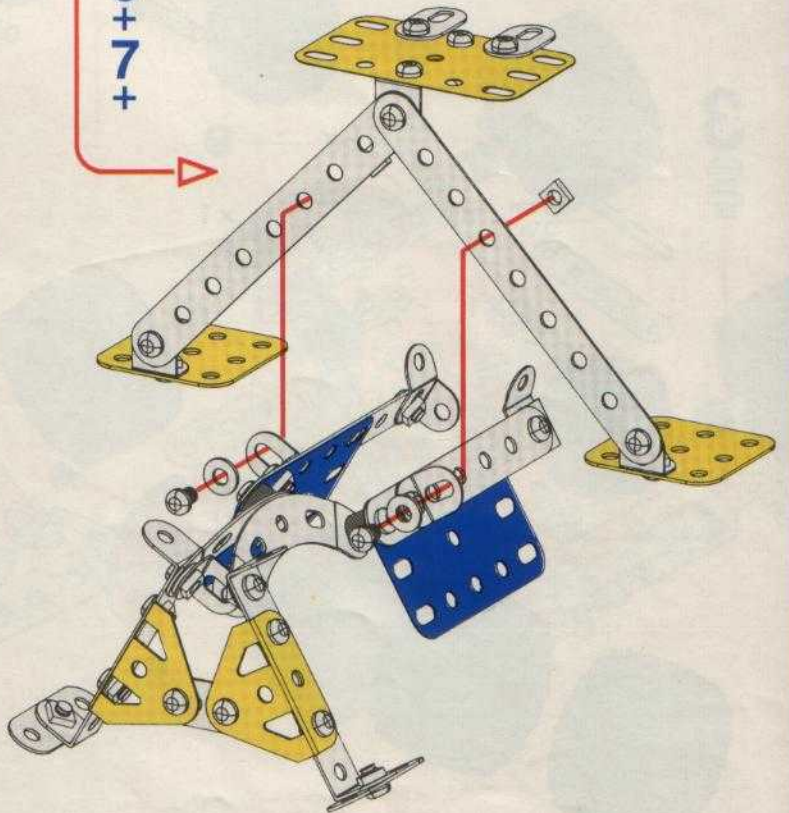
7

-  x2
-  x1
-  x1
-  x2
-  x2
-  x2



8

6 + 7 +

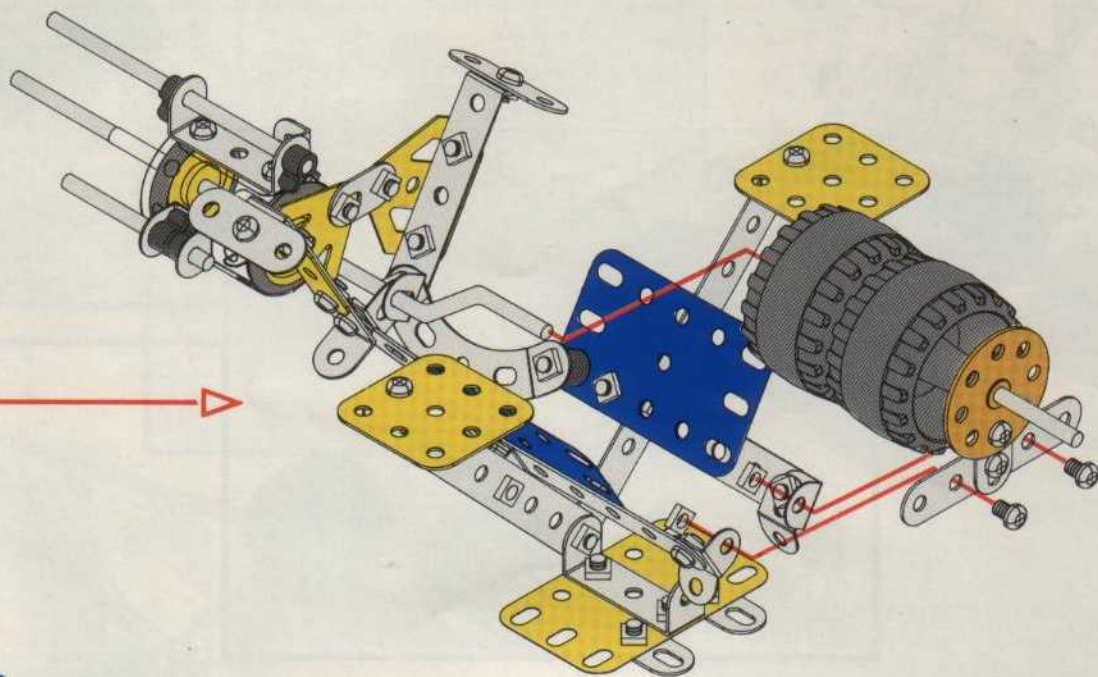




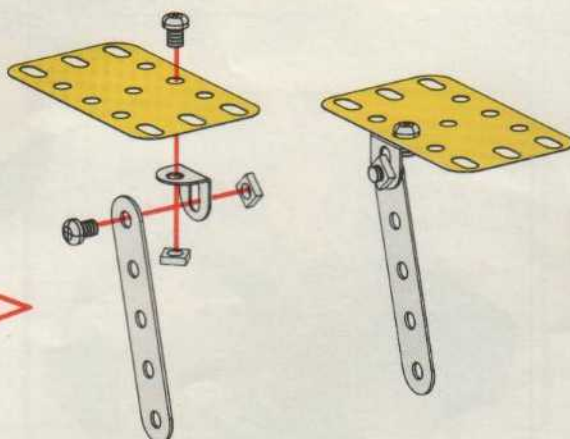
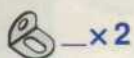
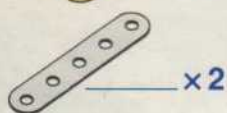
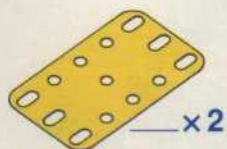
9



2  
+  
3  
+  
8



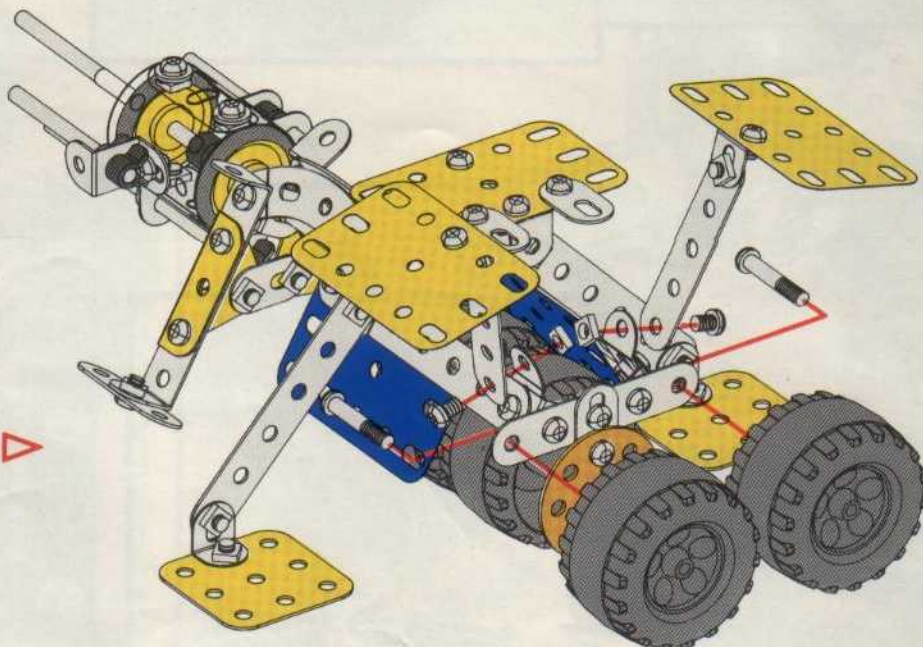
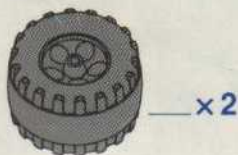
10

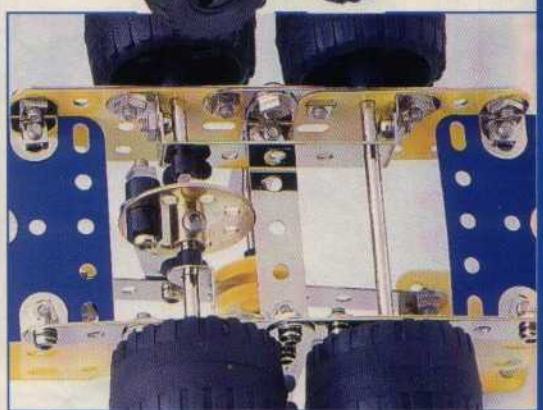
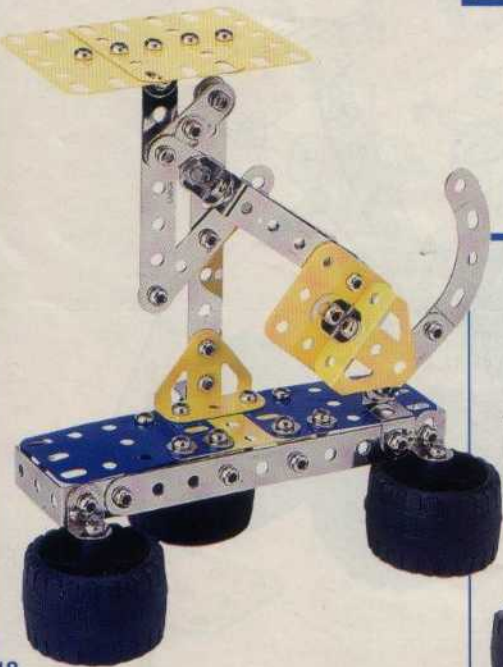
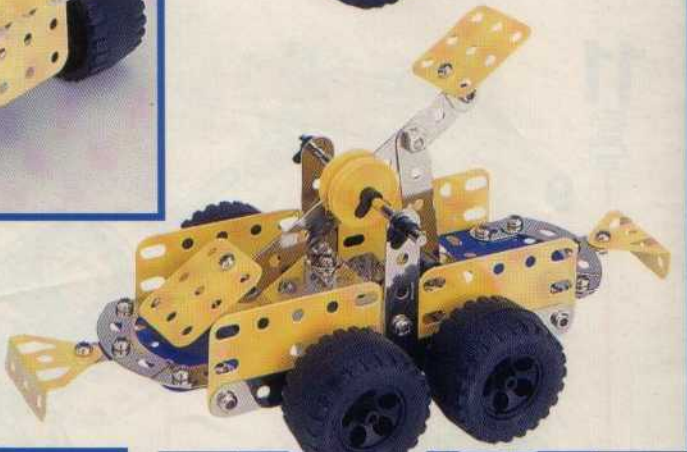
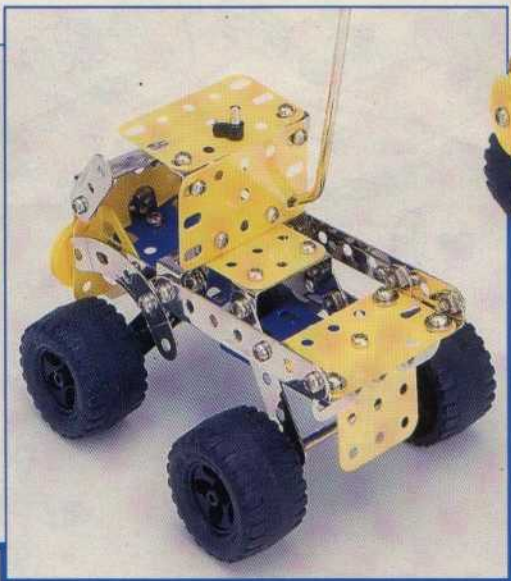
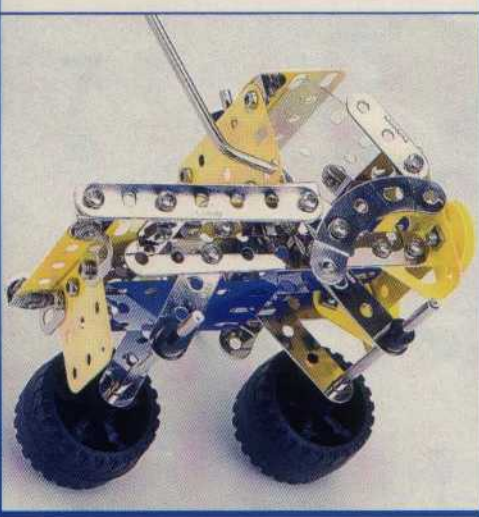
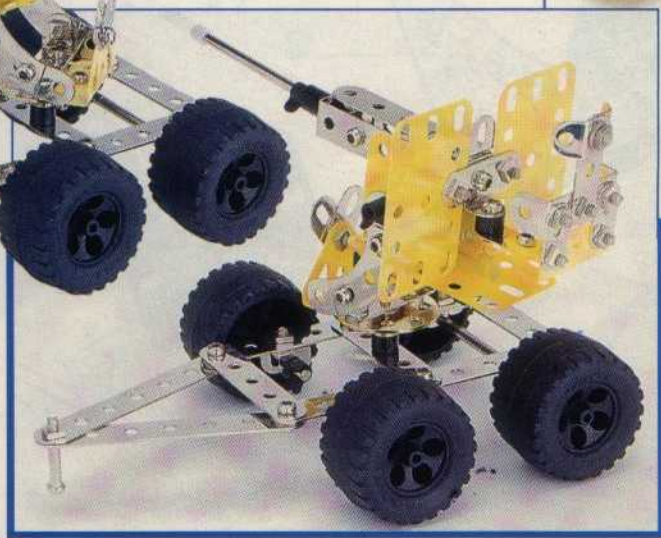
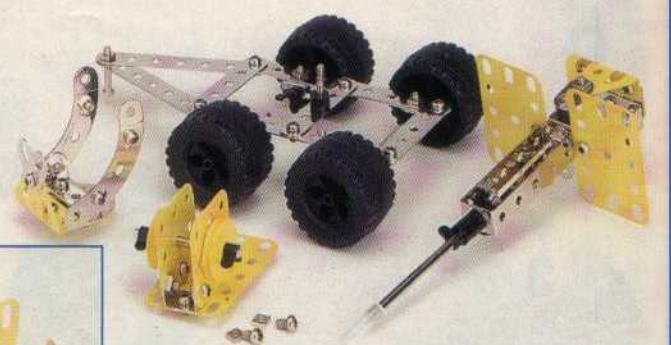
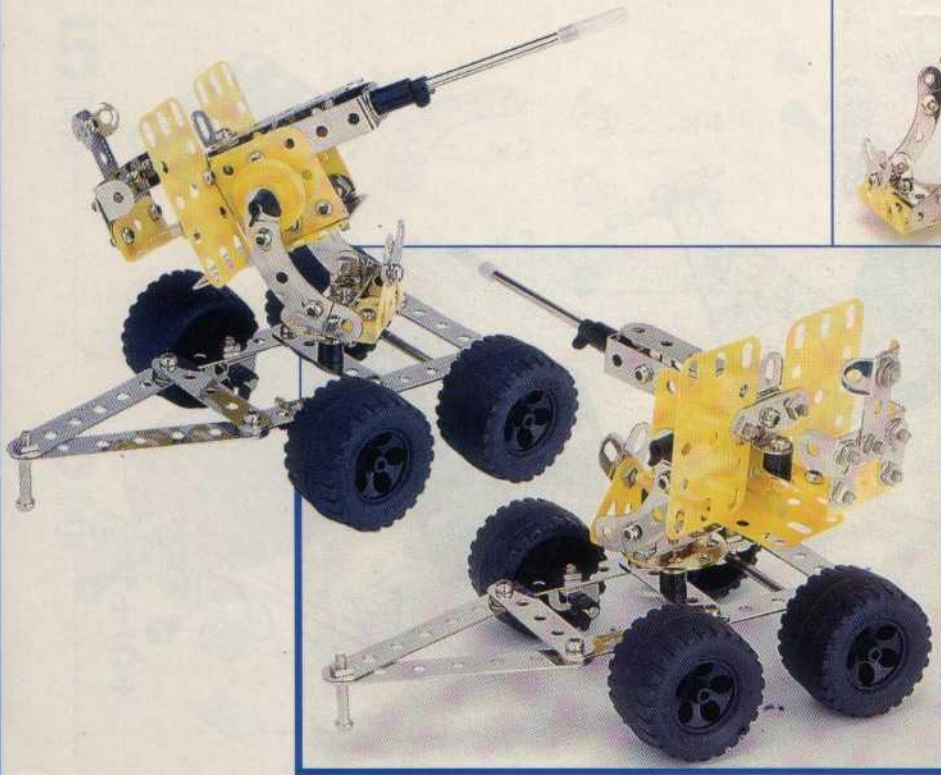


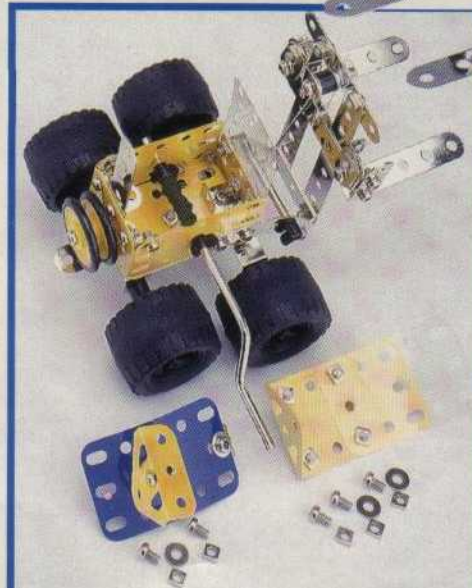
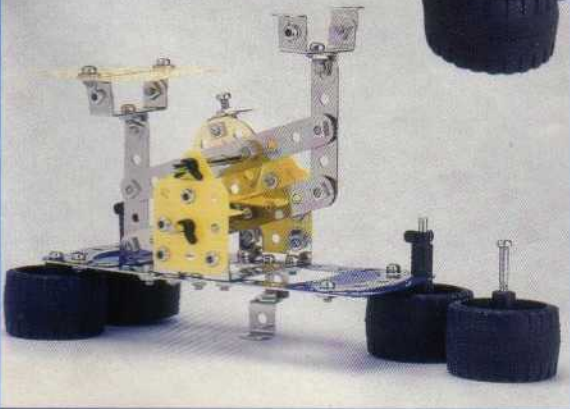
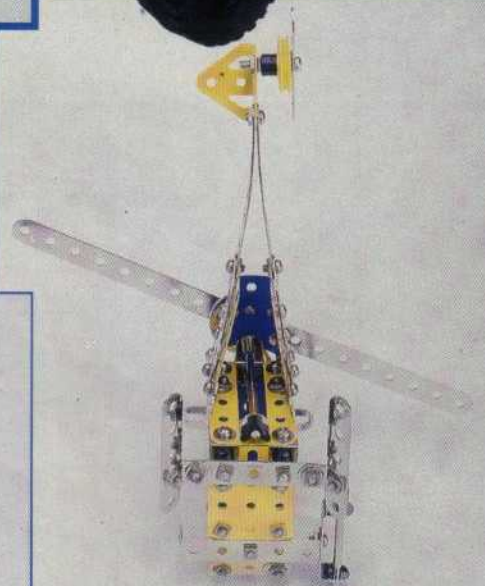
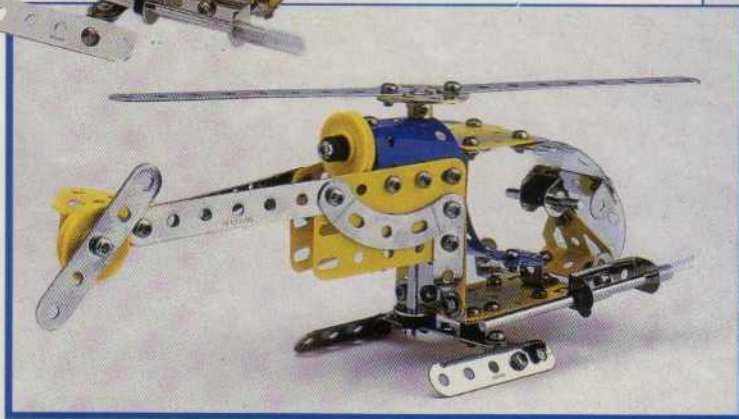
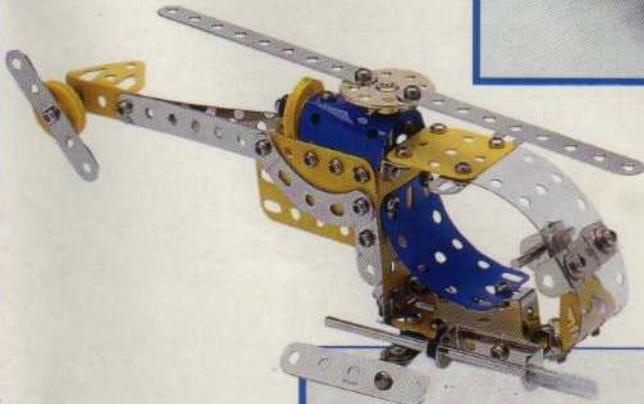
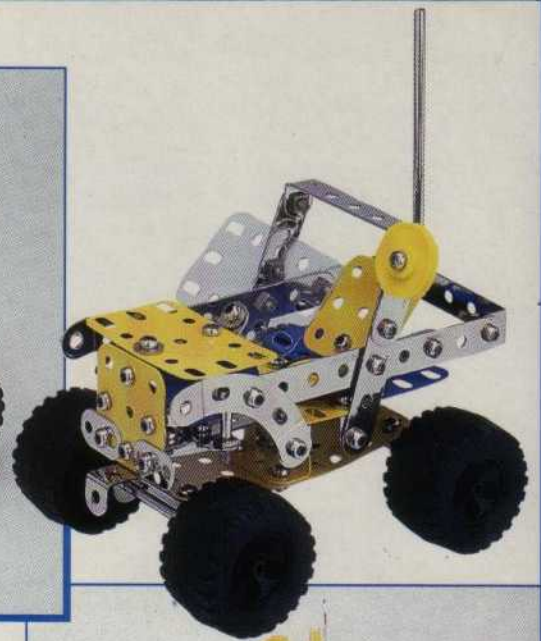
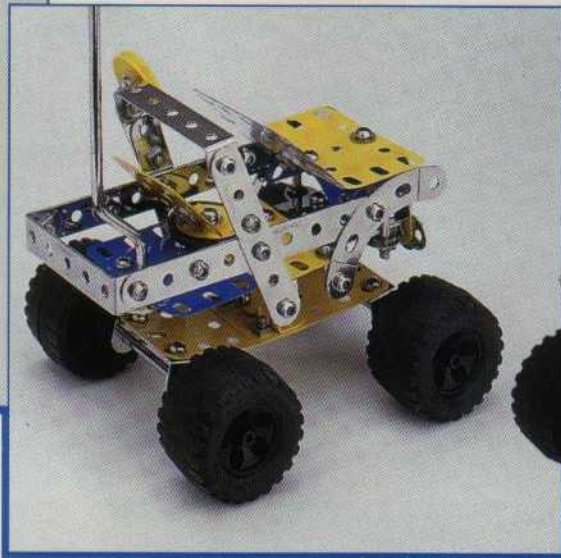
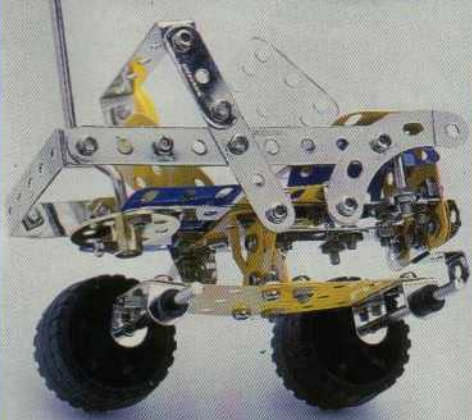
11

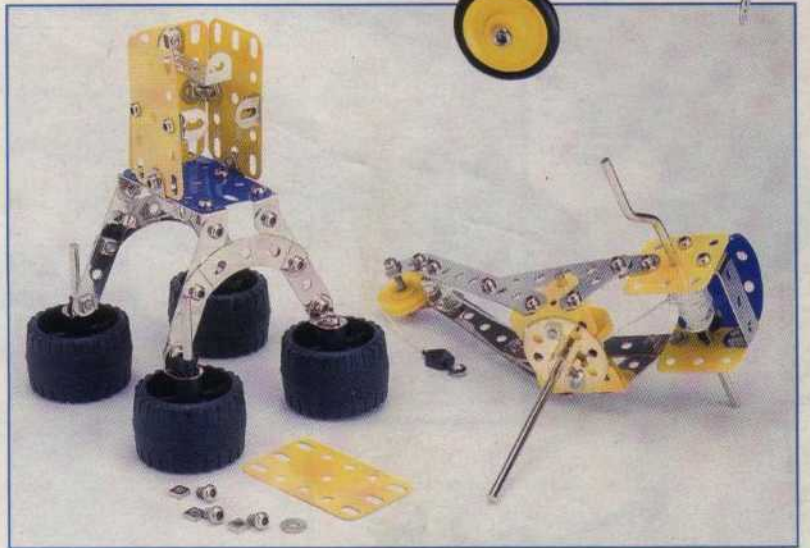
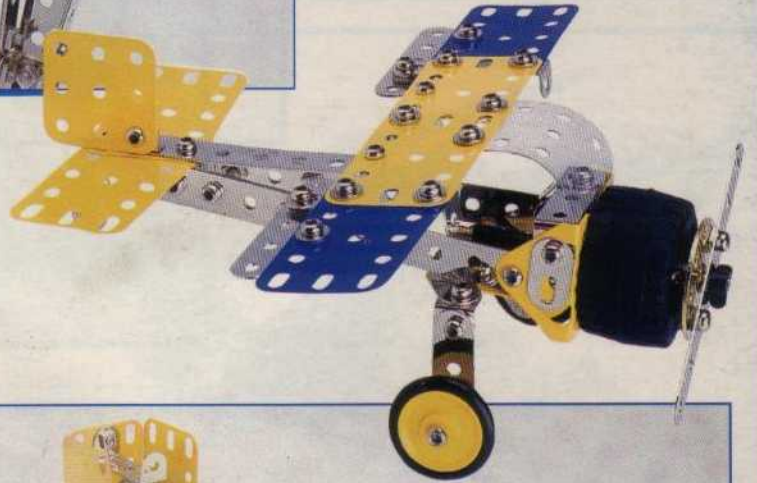
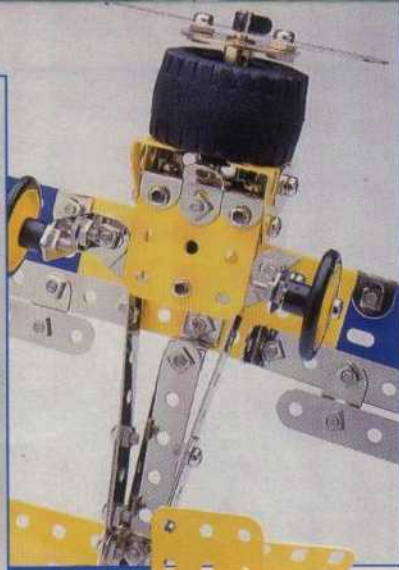
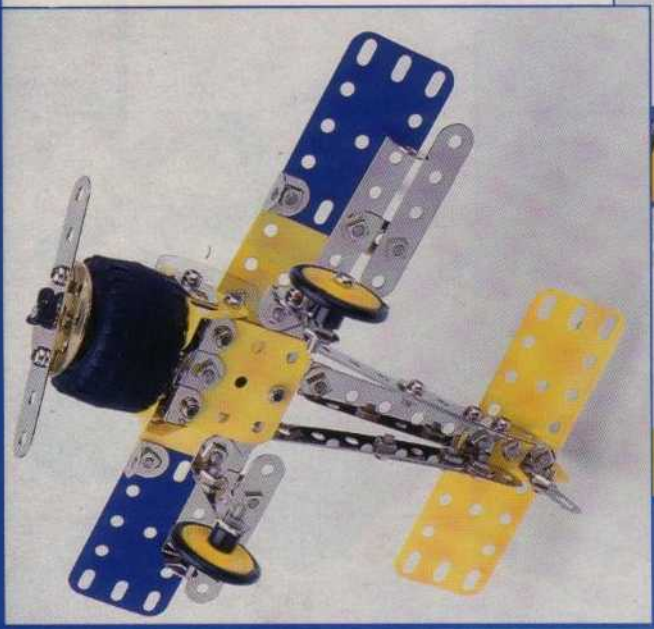


9  
+  
10  
+

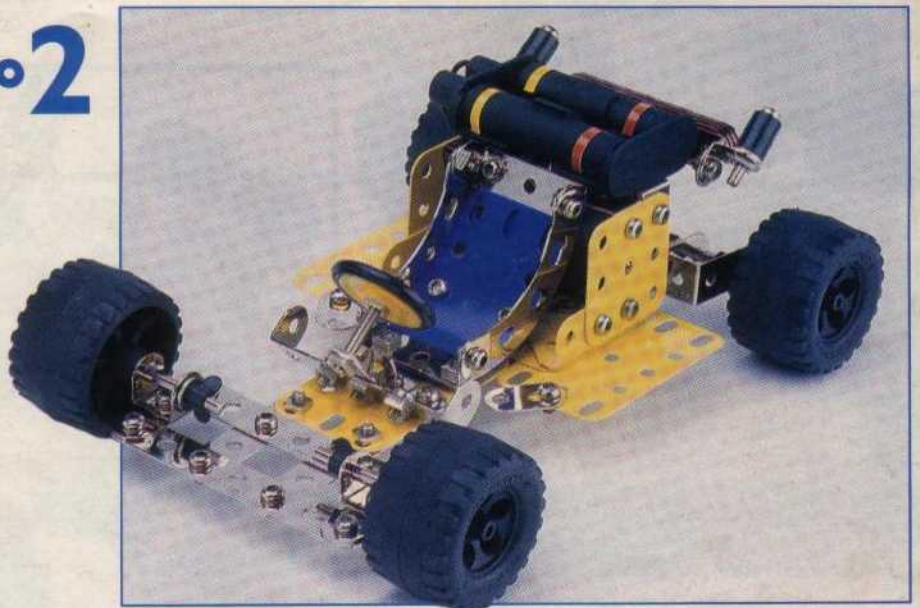








n°1 + C1 = n°2



**MECCANO**

Avenue de Saint-Exupéry  
62104 CALAIS - FRANCE