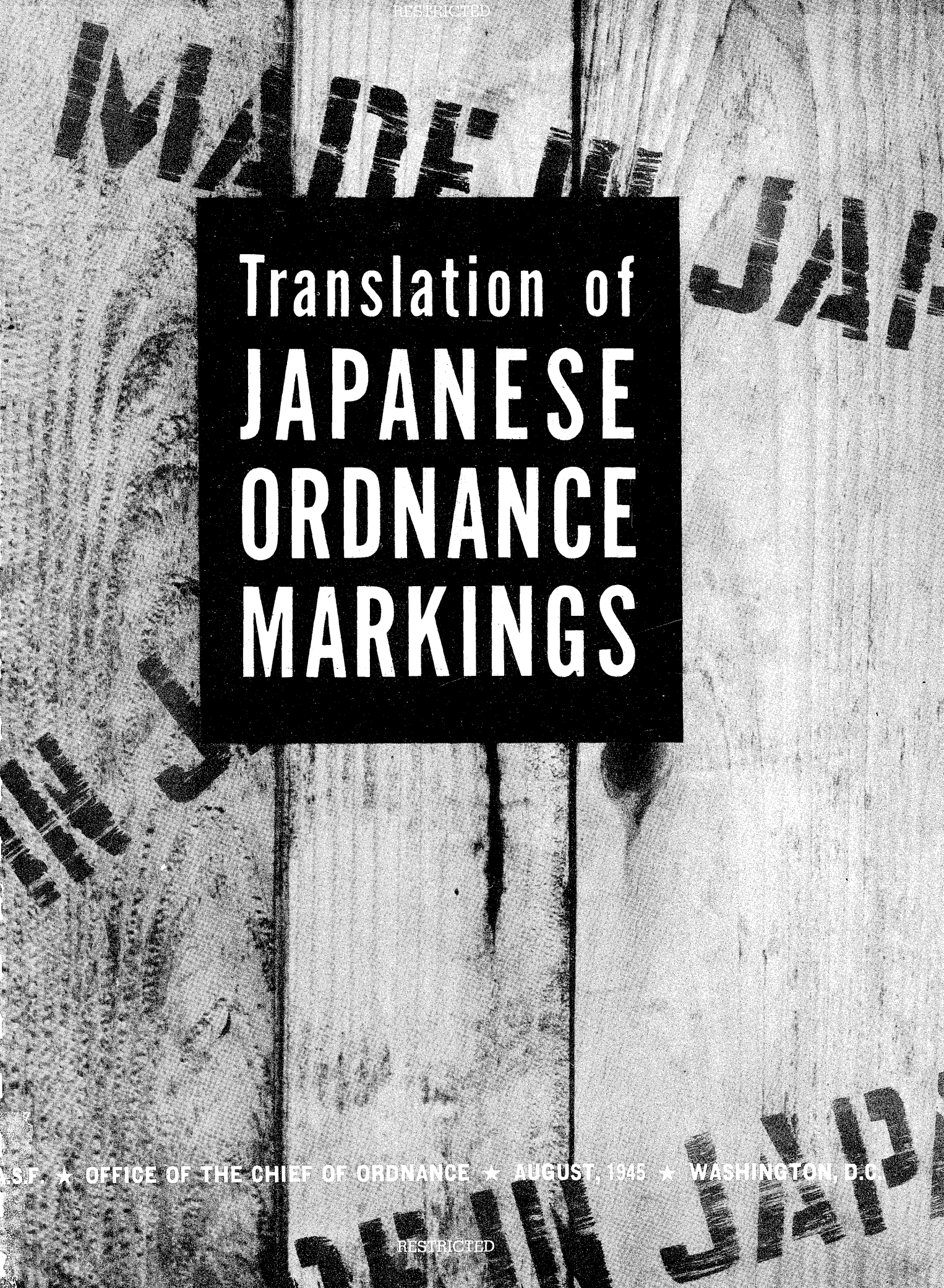

Translation of JAPANESE ORDNANCE MARKINGS

A.S.F. ★ OFFICE OF THE CHIEF OF ORDNANCE ★ AUGUST, 1945 ★ WASHINGTON, D.C.

KEY CHARACTERS
for Essential Japanese Ordnance Materiel

TABLE	CHARACTER		ORDNANCE
1	車 *Sha*		Tanks Trucks Cars Vehicles
2	彈 *Dan*		Bullet Grenade Shell (w. #12) Bomb (w. #18) Rocket
3	砲 *Hō*		Gun Cannon Howitzer Mortar
4	藥 *Yaku*		Explosives Ammunition
5	式 *Shiki*		Type
6	年 *Nen*	月 *Getsu*	Year Month
7	油 *Yu*		Gasoline Fuel Oils Lubricating Oils
8	筒 *Tō*		Primer Shell Case Bangalore Torpedo Grenade Launcher Complete Round
9	兵 *Hei* (or)	軍 *Gun*	Unit or Organization
10	雷 *Rai*		Mines Torpedo (Aerial)

TABLE	CHARACTER		ORDNANCE
11	銃 *Jū*		MG Rifle Pistol Carbine
12	榴 *Ryū*		Artillery Shell (W. #2)
13	號 *Gō*		Mark Number and Data on Bombs
14	糎 *Sanchi*	粍 *Miri*	Metric Terms (Weight & Dimension)
15	機 *Ki*		Aircraft
16	鐵 *Tetsu*		Metals
17	管 *Kan*		Fuze Cap Train
18	爆 *Baku*		Airplane Bomb (w. #2)
19	所 *Sho*		Factory
20	廠 *Shō*		Arsenal

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AUGUST, 1945

A. S. F.
OFFICE OF THE CHIEF OF ORDNANCE
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Table of Contents

Complete identification of Japanese materiel often necessitates translation into English of the ideographs and phonetic alphabet characters stamped on equipment or printed on accompanying tags, boxes or pamphlets. Because of their inability to read Japanese, many persons responsible for inspection of captured ordnance items are unable quickly and accurately to identify unfamiliar materiel.

This book has been prepared as a practical guide to the translation of Japanese ordnance nomenclature. Its successful use does not require a prior knowledge of Japanese but depends only upon the application of simple principles that can be learned within a few hours. It explains how the recognition of twenty key ideographs, in conjunction with tables in the text, will enable the reader to translate markings that describe Japanese ordnance.

SECTION ONE

INTRODUCTION

General Discussion of Japanese Characters

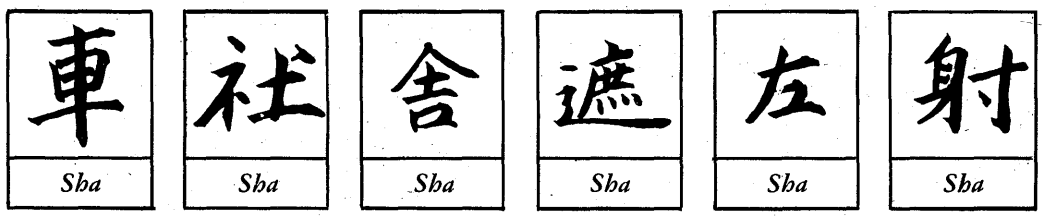
KANJI

Until a phonetic alphabet was invented between 774 and 835 A.D. the Japanese depended entirely upon ideographs or picture-characters for written expression of their thoughts. Even today ideographs remain the principal medium for written Japanese, although the phonetic characters have considerable subsidiary use. Since most of the words in the language are represented by an individual character, several thousand ideographs have to be memorized for facility in reading or writing. Most of these characters were adopted from the Chinese in the third century A.D., this Chinese origin being indicated by their name, "Kanji," which means "Chinese characters." During the long period that has elapsed since their adoption, the Chinese sounds for the ideographs have been modified until the present Japanese equivalents are quite different from the original Chinese.

Japanese sentences do not follow normal English structure. While each noun and its descriptive adjectives are represented by a separate ideograph, the position of the noun does not correspond to that in English. Japanese ordnance inscriptions usually have an easily recognized noun character at or near the first part of the sentence. In translating, this permits identification of the noun ideograph to serve as a key to the meaning of the combined characters, as is shown in the section of this book entitled "Explanation of the Key Characters and Their Use." The way in which ideographs are combined to designate a term or item is apparent from the combination of the three characters for picric acid in which the ideographs for yellow, color, and powder are employed.

黄	*ō*	Yellow	PICRIC ACID
色	*Shoku*	Color	
薬	*Yaku*	Powder	

Because the number of word sounds in Japanese are limited, a single sound may have various meanings according to the context of the sentence in which it is used. In written Japanese each of these meanings is clearly denoted by a distinctive ideograph. For instance, there are numerous meanings of the word "Sha," each represented by a different ideograph, some of which are illustrated below.



Sha	*Sha*	*Sha*	*Sha*	*Sha*	*Sha*

In Japanese ordnance terms, only the "Sha" character on the extreme left of this group of six selected pictures of the sound "Sha" is of value. This particular representation of "Sha" indicates a vehicle and, when so used, is always at the end of the group of characters; for example, "jinrikisha" (a two-wheeled cart), and "sensha" (a battle tank).

CART		
人	*Jin*	(Man)
力	*Riki*	(Moves)
車	*Sha*	(Wagon)

TANK		
戦	*Sen*	(Battle)
車	*Sha*	(Wagon)

This form of "Sha" appears in the nomenclature of all Japanese vehicular ordnance items, where it is the terminal sound or ideograph. This "Sha" is the root word for all Japanese vehicles, and is one of 20 key characters in the table of key ordnance characters which will be explained in detail later in this outline.

KANA

The Japanese realized the disadvantages and limitations of their ideograph system in its inability to represent the constantly increasing number of foreign words being absorbed into the language. This problem was solved by use of the phonetic alphabet called "Kana." Unlike Kanji, which cannot express the correct sound or proper construction of words, the

JAPANESE KANA ALPHABET

ア *a*	イ *i*	ウ *u*	エ *e*	オ *o*
カ *ka*	キ *ki*	ク *ku*	ケ *ke*	コ *ko*
ガ *ga*	ギ *gi*	グ *gu*	ゲ *ge*	ゴ *go*
マ *ma*	ミ *mi*	ム *mu*	メ *me*	モ *mo*
ナ *na*	ニ *ni*	ヌ *nu*	ネ *ne*	ノ *no*
ハ *ha*	ヒ *hi*	フ *fu*	ヘ *he*	ホ *ho*
パ *pa*	ピ *pi*	プ *pu*	ペ *pe*	ポ *po*
バ *ba*	ビ *bi*	ブ *bu*	ベ *be*	ボ *bo*
タ *ta*	チ *chi*	ツ *tsu*	テ *te*	ト *to*
ダ *da*	ヂ *ji*	ヅ *zu*	デ *de*	ド *do*
ファ *fa*	フィ *fi*	フ *fu*	フェ *fe*	フォ *fo*
ラ *ra*	リ *ri*	ル *ru*	レ *re*	ロ *ro*
サ *sa*	シ *shi*	ス *su*	セ *se*	ソ *so*
ワ *wa*	ヰ *i*	ウ *u*	ヱ *e*	ヲ *o*
ヤ *ya*	イ *i*	ユ *yu*	エ *e*	ヨ *yo*
ザ *za*	ジ *ji*	ズ *zu*	ゼ *ze*	ゾ *zo*

eighty Kana characters represent the basic syllables of the language. Since its characters represent sounds and not letters, Kana may be more accurately considered a syllabary than an alphabet. Because of its phonetic nature Kana can be used for foreign words after they have been reduced to Japanese syllables as closely as possible imitative of the sounds in the original words.

Kana is designed around the five vowels, A, I, U, E, O, and the fifteen consonants, K, G, M, N, H, P, B, T, D, F, R, S, W, Y, Z. The working plan of this table is simple. For example, the consonant K produces five separate syllable sounds when added singly to each one of the five vowels. These are KA, KI, KU, KE, and KO. There is a separate alphabet mark, or Kana character, for not only each of the five vowels, but also for each of the seventy-five two-letter sounds, making a total of eighty individual Japanese Kana characters in the basic table.

The pronunciation of the vowel sounds is slightly different from the English pronunciation: thus A, I, U, E, O, are pronounced ah, ee, oo, ay, oh, in Japanese. These pronunciation sounds remain the same when they are converted into the two-letter syllables of the Kana Table.

The table of Kana characters appears on Page 3. These Kana characters are used not only for Japanese ordnance items but also for Japanese medical and chemical warfare terms. Examples of the use of Kana are set forth below. Note again that the Kana characters represent syllables.

When the Japanese want to convert a new English word such as "aneroid" into their printed language they use the Kana system of basic sounds. This can only be done after the English word is separated into a grouping of sounds closest to those in the Kana alphabet. To the Japanese, "aneroid" sounds like the following: ah/nay/ro/ee/do. All these sounds appear in the Kana Table, and can be written by using the Kana characters. The following are examples of the method of changing three words, Aneroid, Magnesium, and Browning, into the written Kana language:

ア	ネ	ロ	イ	ド	ANEROID
A	*Ne*	*Ro*	*I*	*Do*	
ah	*nāy*	*rō*	*ēē*	*dō*	

マ	グ	ネ	シュ	ーム	MAGNESIUM
Ma	*Gu*	*Ne*	*Shiyu*	*Mu*	

ブ	ラ	ウ	ニ	ン	グ	BROWNING
Bu	*Ra*	*U*	*Ni*	*En**	*Gu*	

*A special character, *en* or *an,* generally ending a word.

Since the Kana characters are easier to write than Kanji numerals, Japanese often use Kana to list ordnance items; hence it is common to find a vertical list of items headed by a Kana symbol instead of a number (when used as first, second, third, etc.). On artillery ammunition items, as boosters and fuzes, Kana characters such as "To" are stamped into the metal, or painted thereon. These are important identification marks, discussed later in this publication.

Unusual Methods of Japanese Marking

There are four main types of material on which Japanese character markings describing ordnance items are placed. These are: (1) wooden shipping-cases, (2) metal parts of ordnance items, (3) cardboard tags, tied to the item by string or pasted on metal inner-cases, (4) descriptive booklets, which either accompany the item within the wooden shipping case or are obtained among captured records found with the equipment.

(1) On wooden shipping cases, the Japanese generally describe the item by characters painted across one or more sides of the wooden box, as illustrated:

The first step in translating such an inscription is to determine the order in which the Japanese characters are written. They may start either from left to right or from right to left. The direction in which they are to be read can be found by noting the location of the character for Type ("Shiki") which invariably appears in inscriptions for all ordnance items. In the illustration, it is the third ideograph from the right. By memorizing the Japanese numerals from one to ten, shown in Table No. 5 of Section Two, it is easy to recognize their ideographs, which in Japanese always precede the character for "Type." In the illustration Japanese numerals for "88" are the first two on the extreme right followed by the ideograph for "Shiki" (Type). Thus the direction of placing the characters on this shipping box is from right to left.

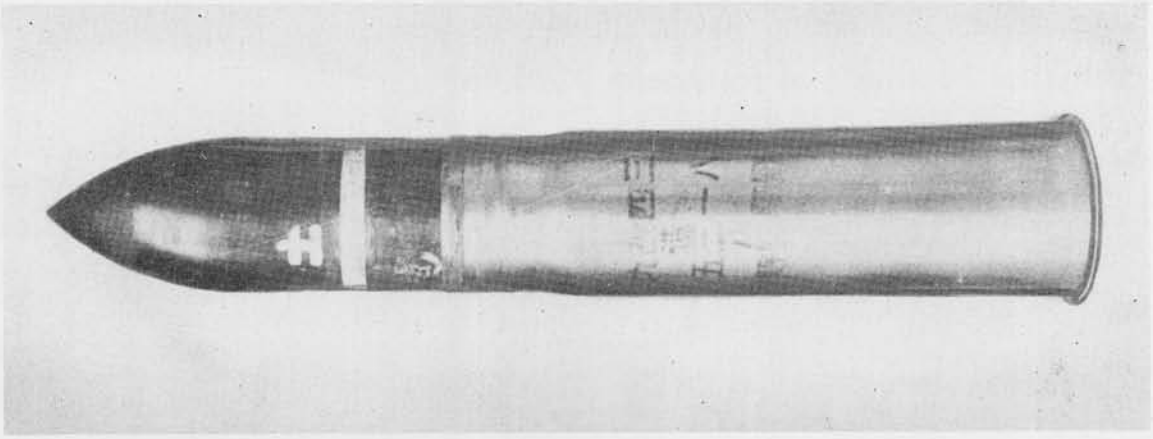
When right to left order has been followed in marking, it is suggested (for simplicity in translation) that the characters be copied on paper as usual, but placed in the opposite direction from that found, as follows:

(2) Japanese mark metal parts of ordnance items with both Kanji and Kana characters. The polished brass surface of an artillery shell cartridge-case lends itself readily to the paint-

八	八	式*	短	延	期	信	管*
Hachi	*Hachi*	*Shiki*	*Tan*	*En*	*Ki*	*Shin*	*Kan*
88 Type			Short-Delay			Fuze	

*Key Characters

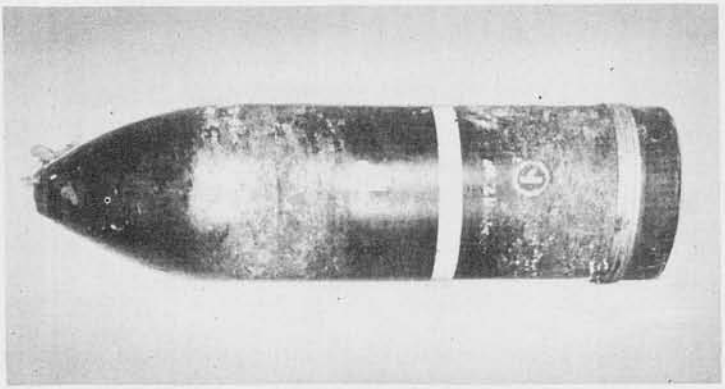
ing of the more intricate Kanji characters for marking purposes. These are to prevent mistakes when several types of shells resemble each other, although intended for different weapons. The markings here generally indicate the type of gun that is to fire this ammunition. The following illustration is arranged, not for the purpose of translation of the markings, but to show their position.



Kana characters are simple in design and make good dies for stamping Japanese metal parts, or for quickly painting an abbreviated arsenal mark. The flexibility of Kana characters in describing various ordnance items is evident in the use of one of the plainest and most widely employed Kana characters, "To."

To

When "To" is painted on the body of an artillery shell, just above the rotating band, it indicates that the shell was manufactured at the "Tokyo Army Branch Ordnance Depot." This is illustrated by the view of a Japanese 150 mm howitzer shell.



However, when the Japanese mark their machine gun ammunition for airplanes, although they use the same character, "To," to mark the bottom of the cartridge case, it indicates an entirely different place of manufacture. In this case "To" refers to the Toyokawa Navy Yard. As an interesting sidelight on this abbreviated system of marking, the sound of the character "To" is the sound of the first part of the word Toyokawa. Likewise the "A" of the Kana alphabet is used to indicate the Asahi Plant, while "Yo" is used to mark the products of the Yokosuka Navy Yard in airplane machine gun ammunition.

(3) When the Japanese place characters on pasteboard tags or on paper labels attached to ordnance items, they use Kanji.

A sample of such a marking copied from a label glued to the cardboard shipping container for a shell is shown in Section Three of this text. This inscription demonstrates that when the Japanese print ordnance terms on paper they arrange the characters in a long, vertical line reading from top to bottom. The reproduction of characters on this label is accompanied by their actual translation, using the system of selecting the key characters and subsequently referring to the tables in which they are located, as explained in Section Two.

砲兵彈藥

昭和十三年五月

(4) After study of this booklet it will be possible to translate the general descriptive matter in pamphlets accompanying Japanese ordnance items. It is cautioned here that the Japanese put such general descriptions on what we would call the back page of our books. Holding the Japanese book in a normal position it is necessary to turn to the final page and look for key characters.

For example, illustrated here are two sections from the descriptive page of a captured Japanese booklet on Japanese artillery shells. These are shown not for the purpose of translation, but merely to illustrate where to look for them in the book, and to repeat the caution that the characters are to be read along a vertical line from top to bottom.

The heavy-type column to the left is the name: "Artillery Ammunition," while that to the right is the date, "May 1938."

SECTION TWO

INSTRUCTIONS FOR TRANSLATING JAPANESE MARKINGS

Different Japanese Calendar Systems

The Japanese designate types of ordnance materiel, such as mortars, howitzers, rifles, guns, etc., with a descriptive term indicating the year the item was officially adopted. For marking high explosives, a date on the label of the package or outside of the shipping box indicates the date of manufacture. It is common for the Japanese to make liberal use of calendar dates, but it must be remembered that four different systems are employed.

BASIC JAPANESE CALENDAR

One system employs the basic Japanese calendar years, represented either by four digits, as in the year 2598, or by its reduced form 98 derived by dropping the first two digits as is done when our year 1945 is abbreviated to '45. The Japanese Kanji ideograph "Shiki," always employed with the abbreviated date numerals, is shown with the numeral characters for nine and eight.

九	八	式
Ku	*Hachi*	*Shiki*
9	8	Type

As an example of a date in a decade preceding that shown, the year 1921 is the equivalent of the Japanese calendar year 2581, and any Japanese models produced in that year would be called their "Type 81."

REIGN OF EMPEROR OR ERA

The Japanese also indicate the date in terms of the year of the reign of a Japanese emperor, each reign being known as an era. Any ordnance materiel produced within one of these periods might be marked as "Showa Era, 18 Year" (our year 1943), as explained later.

昭	和
Sho	*Wa*
Bright	Era

There have been three different eras representing the reigns of individual Japanese emperors within the past seventy-seven years. The reign of the present emperor, begun in 1926, is referred to as the "Showa Era," meaning the bright period, or the golden era. It is designated by the characters shown at right.

Development of modern Japanese ordnance has occurred only in the three most recent eras.

Era 2 covers the Meiji Era from 1868 to 1912.

Era 3 covers the Taisho Era from 1912 to 1926.

Era 4 covers the Showa Era from 1926 to the present time.

Although Eras 2, 3 and 4 are designated by different ideographs, they employ the same general principle in relation to indicating a date marking. The basis for each is to (a) name the era during which the item was designed or manufactured, and (b) give the particular year of this era to which the date applies.

Conversion of a date within any Japanese era to one in our calendar can be accomplished by adding the given Japanese year to the English date for the year preceding the beginning of the era. For example, the English equivalent of the 20th year of the Showa Era can be found by adding 20 to 1925, which gives our year 1945.

Table No. 6 describes the Kanji characters used by the Japanese to indicate the Meiji Taisho, and Showa Eras.

Japanese Characters for Type and Modification

TYPE

The Japanese always use dates or numerals with a character which refers to dates in classifying their ordnance items. Only one character is used to indicate the type classification. This character is "Shiki." It appears on artillery shells, bombs, small arms, guns, howitzers, fuzes, etc., but always in association with numerals of one or two digits. These numerals are abbreviations for dates in the Japanese calendar.

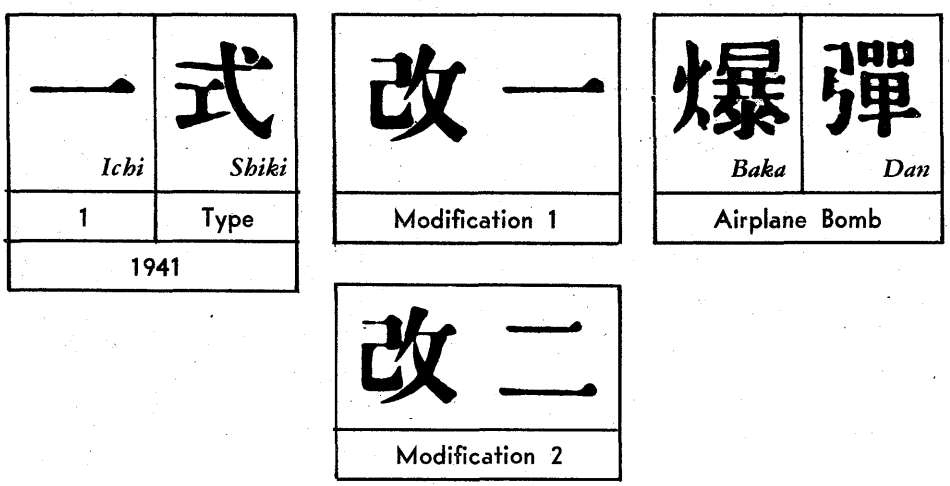
The following are some common markings used by the Japanese on their ordnance items to express Type and Type Numbers:

二 *Ni*	式 *Shiki*	茶褐 *Cha* *Katsu*	炸 *Saku*	藥 *Yaku*
2	Type	Brown	Bursting	Powder
(Year) 1942		TNT	Bursting Charge	

十一 *Ju* *Ichi*	年 *Nen*	式 *Shiki*	海 *Kai*	岸 *Gan*	砲 *Hō*
11th	Year	Type	Sea	Coast	Gun

MODIFICATIONS

The Japanese describe modifications of ordnance items in the following manner:



In marking bombs, the Japanese use, in addition to these characters, three extra characters to indicate "mark," "weight," and "design number." These are discussed in Table No. 13.

Note: It is common to find the ideograph for modification with a numeral placed together near the base of the shell. The meaning is "The new improved type No. 2."

Explanation of the Key Characters and Their Use

On page 11 and on the inside of the cover appears a table of key ordnance characters. Each key character is a base or root word which the Japanese use in designating ordnance materiel. Next to each key character, the Japanese write additional characters which modify the root word to indicate the full description of the particular item, as "Sen Sha" (tank) or "Chu Sen Sha" (medium tank). Also in this section are tables of key characters that list those characters which normally accompany the key ideograph, modify it, and in combination with it give the name of a specific Japanese ordnance item. Except in rare instances, the key character is always the last character in a related group of sounds or written characters, but note that in following this rule the direction of writing must first be ascertained.

One key character, such as "Sha" (a vehicle) is the terminal root word for four classes of ordnance items in the vehicular family, namely: Tanks, Trucks, Cars and Tractors.

The particular type of vehicle referred to by "Sha" can be ascertained by using the table to identify the characters that precede the key ideograph.

Table No. 2 has a key character of "Dan," and includes such items as Bullets and Grenades. Note that this key character, "Dan," is added to another key character, "Ryu," to form a double key character group. From this combination is derived a new table (Table No. 12) to indicate Artillery Shells and Rockets.

Likewise the key character "Dan" just described is joined with a second key character "Baku," to form another double-character group, giving us Table No. 18 on Airplane Bombs.

KEY CHARACTERS
for Essential Japanese Ordnance Materiel

TABLE	CHARACTER		ORDNANCE
1	車 *Sha*		Tanks Trucks Cars Vehicles
2	彈 *Dan*		Bullet Grenade Shell (w. #12) Bomb (w. #18) Rocket
3	砲 *Hō*		Gun Cannon Howitzer Mortar
4	藥 *Yaku*		Explosives Ammunition
5	式 *Shiki*		Type
6	年 *Nen*	月 *Getsu*	Year Month
7	油 *Yu*		Gasoline Fuel Oils Lubricating Oils
8	筒 *Tō*		Primer Shell Case Bangalore Torpedo Grenade Launcher Complete Round
9	兵 *Hei* (or)	軍 *Gun*	Unit or Organization
10	雷 *Rai*		Mines Torpedo (Aerial)

TABLE	CHARACTER		ORDNANCE
11	銃 *Jū*		MG Rifle Pistol Carbine
12	榴 *Ryū*		Artillery Shell (W. #2)
13	號 *Gō*		Mark Number and Data on Bombs
14	糎 *Sanchi*	粍 *Miri*	Metric Terms (Weight & Dimension)
15	機 *Ki*		Aircraft
16	鐵 *Tetsu*		Metals
17	管 *Kan*		Fuze Cap Train
18	爆 *Baku*		Airplane Bomb (w. #2)
19	所 *Sho*		Factory
20	廠 *Shō*		Arsenal

These are the only tables which are made up from double key characters. The materiel to which the other tables relate appears on top of each table.

Method of Using the Key Character Tables in Translation

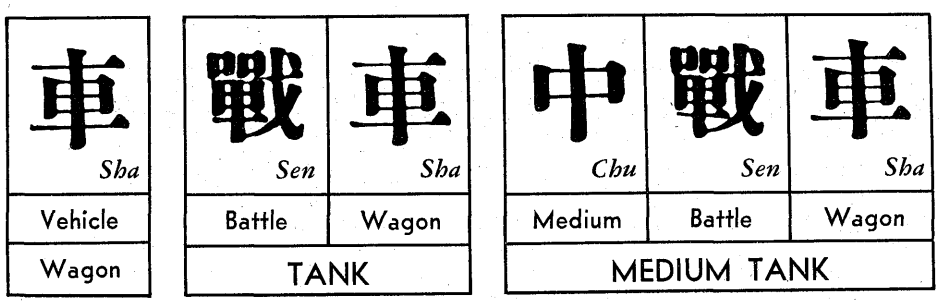
1. Become thoroughly familiar with each key character, and with the characters for numerals from 1 to 10.

2. Ascertain the direction in which the particular writing to be translated has been written; i. e., from left to right, right to left, or top to bottom. Page 13 of this outline explains the method.

3. Select all the key characters in the writing.

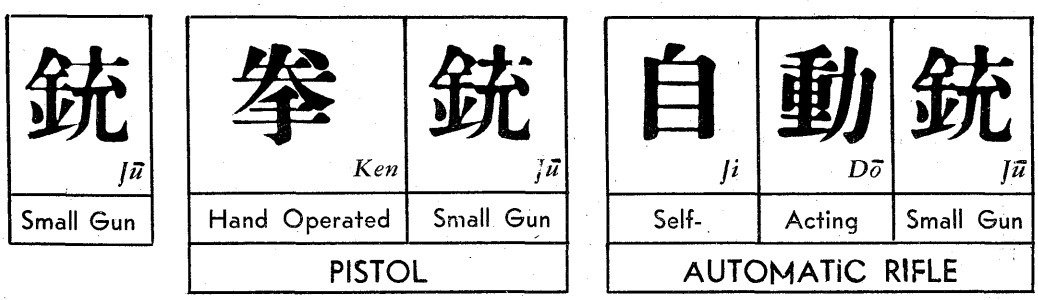
4. Mark off the characters accompanying each key character. This may be done by drawing rectangles around each related group of characters (key characters plus accompanying modifying characters).

Note: Where the writing to be translated involves a considerable number of characters (i. e., more than 50), it is recommended that the writing be treated piecemeal in groups of three or four characters, selecting a key character from a group and translating that group before proceeding to the next group.



The three characters "Chu," "Sen," and "Sha" that compose the word for medium tank, are shown above as the Japanese would write them from left to right on a wooden crating for the vehicle. The key character "Sha" is placed last, to the right of the modifying characters "Chu" and "Sen." When the Japanese mark ordnance items they do so without punctuation. That is one reason why it is necessary to memorize the twenty key characters used in ordnance.

The following example is employed to show the method used in building up "Ju" (meaning a small gun), into the compound group of characters, "Ken Ju" (meaning a pistol) and then "Ji Do Ju" (meaning an automatic rifle).



Up to now only one key character with its adjective ideographs has been described. The illustration below shows the ideographs for "automatic rifle" by a new key character, "Shiki," plus its descriptive adjective ideographs. Note that there are no periods, commas, or open spaces.

九	八	式	自	動	銃
Ku	*Hachi*	*Shiki*	*Ji*	*Dō*	*Jū*
9	8	Type	Self-	Acting	Small Gun
TYPE 98			AUTOMATIC		RIFLE

The direction in which the Japanese wrote these characters must be determined. The finding of "Shiki" (Type), the character third from the left, is the first step. It is always preceded by numerals. Since the numerals for 9 and 8 are to the left of "Shiki" the writing plan is from left to right.

Since it is a key character, the last character of the line (bearing in mind the direction of the writing of the group) is selected. It is "Ju," a key character for small arms, as is shown in Table No. 11.

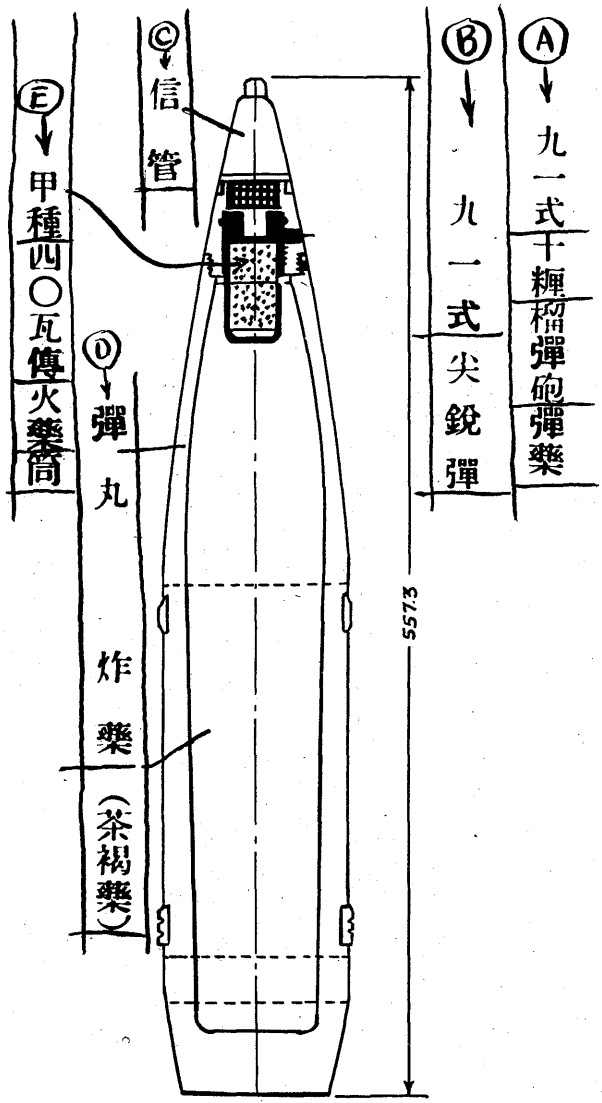
Taking "Ju" and its two preceding characters (the Japanese usually write in groups of two, three, or four characters when describing ordnance), turn to Table No. 11. There the meanings of the three picture characters are found to be automatic rifle. Similarly, it is found that "Ku Hachi Shiki" means Type 98.

Elsewhere in this publication are illustrated actual markings found on a captured Japanese ammunition box, an airplane bomb, and a heavy gun. The names of the Japanese characters are given in each case, the key characters being set off from the long string of modifying characters by placing a cross-line just below the key character. The partial translation and the full translation are given with each example.

Note that if the Japanese write from left to right, the cross-line follows the key character and is to the right of it. If the Japanese write from right to left, then the cross-line follows the key character but is to the left of it.

When the Japanese string of characters proceeds from top to bottom, as illustrated in Section Three (page 72), the cross-line is beneath the key character. In the case mentioned there were 43 Japanese characters appearing in one consecutive vertical line which has been divided into four columns for convenience in printing.

The following illustration is employed to show how several vertical columns of Japanese characters may be broken down into the key characters for translation purposes. It has been taken from a Japanese book on Japanese artillery shells. The only additions to it have been the placing of the letters A, B, C, D, and E for reference purposes and the drawing of a line



beneath each key character to illustrate the method followed in determining key characters and the preceding characters which are used to describe them.

Roughly, the method is to go to the foot of each vertical line for the first key character and strike a line under it.

The best plan, to avoid confusion in locating the next key character, is to work in groups of but two or three characters at a time. When the Japanese write in vertical columns, the reading starts at the top right hand corner. Here the column marked A is the first to be read. Start at the foot of the column for the first key character. It is "Yaku," found in Table No. 4.

The next question is, how many characters relate to "Yaku"? Table No. 4 shows that in this particular case only "Yaku" and its adjoining character "Dan" are in the table and mean Ammunition (General). The third character from the bottom is next found to be a key character "Ho."

In questioning how many characters are to be included with "Ho," look through Table No. 3. Here it is to be noted that "Ho" and "Po," denoted by the same ideograph, are inter-

changeable when referring to artillery pieces and mortars, depending upon the type of weapon. In this particular case the key character is "Po" and the two characters next to "Po" in the Japanese text are included with the key character in line 5 of the table to form the Japanese word "Ryu Dam Po," meaning Howitzer.

The next key character "Sanchi," meaning centimeter, makes translation easy. With it is the numeral "Ju" (ten) to complete the term 10 CM. It is quite evident that the next character "Shiki" is a key character and it is preceded by the numeral characters "Ku" (nine) and "Ichi" (one), given in Table No. 5. The translation of this phrase is thus "Type 91."

By this same method the ideographs in Column B are identified and translated into "Model 91 Streamlined Shell." Column C is translated as "Fuze." Column D has two sections, an upper and a lower section, the first of which is translated as "Projectile," or "Shell Body," while the lower section means "Explosive Charge, TNT."

TABLES OF BASIC KEY CHARACTERS FOR JAPANESE ORDNANCE

TABLE No. 1

車	TANKS TRUCKS VEHICLES
Sha	
Vehicle	

戰 *Sen*	車 *Sha*	TANK
Battle	Wagon	
輕 *Kei*	戰 *Sen*	車 *Sha*	LIGHT TANK
Light	Battle	Wagon	
中 *Chū*	戰 *Sen*	車 *Sha*	MEDIUM TANK
Medium	Battle	Wagon	
重 *Jū*	戰 *Sen*	車 *Sha*	HEAVY TANK
Heavy	Battle	Wagon	
自 *Ji*	動 *Dō*	車 *Sha*	MOTOR CAR
Self	Moving	Wagon	
自 *Ji*	動 *Dō*	貨 *Ka*	車 *Sha*	MOTOR TRUCK
Self	Moving	Freight	Wagon	

(Continued on next page)

TABLE No. 1
Continued

車	TANKS TRUCKS VEHICLES
Sha	
Vehicle	

軌	道	貨	車	CATERPILLAR TRUCK
Ki	*Dō*	*Ka*	*Sha*	
Cycled	Track	Freight	Wagon	

自動	自轉	車	MOTOR CYCLE
Ji *Dō*	*Ji* *Ten*	*Sha*	
Self-Moving	Self-Cycling	Vehicle	

側	車	SIDE CAR
Soku	*Sha*	
Side	Vehicle	

指揮	車	COMMAND CAR
Shi *Ki*	*Sha*	
Command	Vehicle	

自動	偵	車	RECONNAISSANCE CAR
Ji *Dō*	*Tei*	*Sha*	
Self-Moving	Scout	Vehicle	

裝甲	車	ARMORED CAR
Sō *Kō*	*Sha*	
Armor-Plated	Vehicle	

(Continued on next page)

TABLE No. 1
Continued

車	TANKS TRUCKS VEHICLES
Sha	
Vehicle	

裝甲	兵	車	ARMORED TROOP CAR
Sō *Kō*	*Hei*	*Sha*	
Armor-Plated	Troop	Vehicle	

彈藥	車	AMMUNITION WAGON
Dan *Yaku*	*Sha*	
Ammunition	Wagon	

牽引	車	TRACTOR
Ken *In*	*Sha*	
Traction	Vehicle	

火砲	牽引	車	ARTILLERY TRACTOR
Ka *Hō*	*Ken* *In*	*Sha*	
(An) Artillery Gun	Tractioned	Conveyance	

無限	軌道	牽引	車	CATERPILLAR TRACTOR
Mu *Gen*	*Ki* *Dō*	*Ken* *In*	*Sha*	
Endless	Cycle	Tractioned	Vehicle	

破	戰	車	TANK DESTROYER
Hakai	*Sen*	*Sha*	
To Destroy	Battle	Wagon	

水	陸	兩用	戰	車	AMPHIBIAN TANK
Sui	*Riku*	*Ryō* *Yō*	*Sen*	*Sha*	
Sea and Land		Double-Use	Battle	Wagon	

TABLE No. 2

彈 *Dan*	BULLETS GRENADES BOMBS (TABLE 18) SHELLS (TABLE 12) ROCKETS
Bullet	

尖 *Sen*	彈 *Dan*	POINTED BULLET
Cone-shaped	Bullet	
小 *Shō*	銃 *Jū*	彈 *Dan*	RIFLE BULLET
Small	Gun	Bullet	
曳 *Ei*	痕 *Kon*	彈 *Dan*	TRACER BULLET
Tracer		Bullet	
曳 *Ei*	光 *Kō*	彈 *Dan*	LIGHT TRACER BULLET
Trace	Light	Bullet	
曳 *Ei*	煙 *En*	彈 *Dan*	SMOKE TRACER BULLET
Trace	Smoke	Bullet	
爆 *Baku*	裂 *Retsu*	銃 *Ju*	彈 *Dan*	EXPLOSIVE BULLET
Explosive-Burst		Rifle-Bullet	

(Continued on next page)

TABLE No. 2
Continued

彈	BULLETS GRENADES BOMBS (TABLE 18) SHELLS (TABLE 12) ROCKETS
Dan	
Bullet	

燒夷	用	小銃	彈	INCENDIARY BULLET
Shō *I*	*Yō*	*Shō* *Jū*	*Dan*	
Incendiary	(Used by)	Small Arms	(Bullet)	
		硬材	彈	HARD WOOD BULLET
		Kō *Zai*	*Dan*	
		Hard Timber (Wood)	Bullet	
ダム		ダム	彈	DUM-DUM BULLET
Da *Mu*		*Da* *Mu*	*Dan*	
Dum		Dum	Bullet	
破甲銃			彈	ARMOR PIERCING BULLET
Ha *Kō* *Ju*			*Dan*	
Pierce Armor Rifle			Bullet	
彈子				SHRAPNEL BULLET
Dan *Shi*				
Shrapnel				
擲			彈	GRENADE
Teki			*Dan*	
Grenade				

(Continued on next page)

TABLE No. 2
Continued

彈 *Dan*	BULLETS GRENADES BOMBS (TABLE 18) SHELLS (TABLE 12) ROCKETS
Bullet	

手 *Shu*			榴 *Ryū*	彈 *Dan*	HAND GRENADE
Hand (Thrown)			Shell		
銃 *Jū*	用 *Yō*		擲 *Teki*	彈 *Dan*	RIFLE GRENADE
Rifle-	(Use)		Grenade		
燐 *Rin*		劑 *Zai*	擲 *Teki*	彈 *Dan*	PHOSPHORUS GRENADE
Phosphorus		Filled (Dose)	Grenade		
灼 *Shaku*		熱 *Nestu*	擲 *Teki*	彈 *Dan*	THERMITE GRENADE
Intense		Heat (Red Hot)	Grenade		
噴 *Fun*	進 *Shin*	通 常 *Tsū* *Jō*		彈 *Dan*	STANDARD ROCKET (PROJECTILE) (of the 20 cm type)
Spitting Out	(as it Advances)	Known (as)	Regular	Shell	
A ROCKET		STANDARD		PROJECTILE	

TABLE No. 3

砲	GUN CANNON HOWITZER MORTAR
Ho	
Gun (larger calibre than *Ju*)	

Note: *Ho* and *Po* interchangeable

山	砲	MOUNTAIN GUN
Sam	*Pō*	
Mountain	Gun	

Note: Field is *"Yagai"*

野	砲	FIELD GUN
Ya	*Hō*	
Field (Abbrev.)	Gun	

平	射	砲	CANNON
Hei	*Sha*	*Hō*	
Low	Trajectory	Gun	

十五	糎	加	農	砲	15 CM CANNON
Jū *Go*	*Sanchi*	*Ka*	*Non*	*Hō*	
15	Centimeter	Cannon		Gun	

榴	彈	砲	HOWITZER
Ryū	*Dam*	*Pō*	
(Common)	Shell	Gun	

Note: Calvary is *"Kiho"*

騎	砲	CAVALRY GUN
Ki	*Hō*	
Cavalry (Abbrev.)	Gun	

(Continued on next page)

TABLE No. 3
Continued

砲 *Ho* Gun (larger calibre than *Ju*)	GUN CANNON HOWITZER MORTAR

海 軍 砲 *Kai* *Gun* *Hō* Sea Branch Gun	NAVAL GUN
守 城 砲 *Shu* *Jō* *Hō* Defenders Man-the-Gun	SIEGE GUN
海 岸 砲 *Kai* *Gan* *Hō* Sea Coast Gun	COAST DEFENSE GUN
滑 腔 砲 *Kak* *Kō* *Hō* Smooth-Bore Gun	SMOOTH-BORE GUN
自 動 砲 *Ji* *Dō* *Hō* Self-Acting Gun	AUTOMATIC GUN
速 射 砲 *Soku* *Sha* *Hō* Rapid-Fire Gun	QUICK-FIRING GUN

(Continued on next page)

TABLE No. 3
Continued

砲 *Ho*	Gun (larger calibre than *Ju*)	GUN CANNON HOWITZER MORTAR

高角砲 *Kō Kaku Hō*	High-Angle Gun		DUAL-PURPOSE GUN (HIGH-ANGLE GUN)
大隊砲 *Dai Tai Hō*	Large-Size Unit Gun		BATTALION (INFANTRY) GUN
聯隊砲 *Ren Tai Hō*	A Multi-Sized Unit Gun		REGIMENTAL GUN
平射 *Hei Sha*	歩兵砲 *Ho Hei Hō*	Low-Trajectory Infantry Gun	INFANTRY CANNON
臼砲 *Kyū Hō*	Mortar		MORTAR
施線 *Shi Sen*	臼砲 *Kyū Hō*	Rifling Mortar	RIFLED MORTAR

(Continued on next page)

TABLE No. 3
Continued

砲	GUN CANNON HOWITZER MORTAR
Ho	
Gun (larger calibre than *Ju*)	

輕	迫 擊	砲	LIGHT TRENCH MORTAR
Kei	*Haku* *Geki*	*Hō*	
Light	Close-Quarters (Attack)	Gun	

重	迫 擊	砲	HEAVY TRENCH MORTAR
Jū	*Haku* *Geki*	*Hō*	
Heavy	Close-Quarters (Attack)	Gun	

曲 射	高 兵	砲	INFANTRY MORTAR (81 mm)
Kyoku *Sha*	*Ho* *Hei*	*Hō*	
High-Angle Fire	Infantry	Gun	

對 空	高 射	砲	ANTIAIRCRAFT GUN
Tai *Ku*	*Ko* *Sha*	*Hō*	
Anti Aircraft	High Angle (Elevation)	Gun	

對	戰 車	砲	ANTITANK GUN
Tai	*Sen* *Sha*	*Hō*	
Anti	Tank	Gun	

高 射	機 關	砲	ANTIAIRCRAFT MACHINE CANNON
Ko *Sha*	*Ki* *Kan*	*Hō*	
High Angle (Elevation)	Machine-Firing	Large-Size Gun (Cannon)	

TABLE No. 3
Continued

砲	GUN CANNON HOWITZER MORTAR
Ho	
Gun (larger calibre than *Ju*)	

移動	高射	砲	ANTIAIRCRAFT MOBILE GUN
I *Dō*	*Kō* *Sha*	*Hō*	
Mobile	High-Angle (Elevation)	Gun	

固定	高射	砲	ANTIAIRCRAFT FIXED GUN
Ko *Tei*	*Ko* *Sha*	*Hō*	
Fixed	High-Angle (Elevation)	Gun	

機關	砲	"POM-POM" GUN MACHINE CANNON
Ki *Kan*	*Ho*	
Machine-Firing	Large-Sized Gun (Cannon)	

長	射程	砲	LONG-RANGE FIELD GUN
Cho	*Sha* *Tei*	*Ho*	
Long	Range	Gun	

自動	車	牽引	砲	TRACTOR DRAWN ARTILLERY
Ji *Do*	*Sha*	*Ken* *In*	*Ho*	
Self-Powered	Vehicle	With Traction (Carrying a)	Gun	

要塞	重	砲	FORTRESS HEAVY ARTILLERY
Yo *Sai*	*Ju*	*Ho*	
Fortress	Heavy	Gun	

噴進	彈	砲	ROCKET GUN
Fun *Shin*	*Dan*	*Ho*	
Spitting Out-(as it)-Advances	Shell	Gun	
Rocket		Gun	

TABLE No. 4

藥 *Yaku*	EXPLOSIVES
Powder	

					裝 *Sō*	藥 *Yaku*	PROPELLANT CHARGE
				點 *Ten*	火 *Ka*	藥 *Yaku*	PRIMING POWDER (IGNITER)
				Ignition		Powder	
				傳 *Den*	火 *Ka*	藥 *Yaku*	BOOSTER CHARGE
				Booster		Powder	
甲 *Kō*	種 *Shu*	四 *Shi*	○ *Rei* 瓦 *Ga*	傳 *Den*	火 *Ka*	藥 *Yaku*	A-GRADE, 40 GRAM, BOOSTER CHARGE
A	Grade	4	0 Gram	Booster		Powder	
				炸 *Saku*		藥 *Yaku*	EXPLOSIVE BURSTING CHARGE
				(Abbrev.) Explosive Burst		Powder	
			茶 *Cha*	褐 *Katsu*	炸 *Saku*	藥 *Yaku*	TNT BURSTING CHARGE
			TNT		(Bursting)	Powder	
					彈 *Dan*	藥 *Yaku*	AMMUNITION (GENERAL)
					Ammunition		

Note: Explosion Burst is: *"Sakurotsu"* (Example, shrapnel)

(Continued on next page)

TABLE No. 4
Continued

薬	EXPLOSIVES
Yaku	
Powder	

穿甲	榴弾	炸薬	HOLLOW CHARGE AMMUNITION
Sen *Kō*	*Ryu* *Dan*	*Saku* *Yaku*	
Used to Perforate Armor Plate	Explosive Shell	Bursting Powder	
十五糎	加農	弾薬	AMMUNITION FOR 15 CM. CANNON
Jū *Go* *Sanchi*	*Ka* *Non*	*Dan* *Yaku*	
1 5 Centimeter	Cannon	Ammunition	
無煙	火 薬		SMOKELESS POWDER
Mu *En*	*Ka* *Yaku*		
Smokeless	Gun Powder		
大粒 薬			LARGE-GRAINED POWDER
Dai *Ryū* *Yaku*			
Large Grain Powder			
小粒 薬			FINE-GRAINED POWDER
Shō *Ryū* *Yaku*			
Small Grain Powder			
褐色 薬			BROWN (COLORED) POWDER GUN POWDER
Kas *Shoku* *Yaku*			
Brown Color Powder			
黒色 薬			BLACK (COLORED) POWDER GUN POWDER
Koku *Shoku* *Yaku*			
Black Color Powder			

(Continued on next page)

TABLE No. 4
Continued

藥	EXPLOSIVES
Yaku	
Powder	

硝 化		藥	NITRO-POWDER
Shō	*Ka*	*Yaku*	
Nitro		Powder	
中	方 形	粒	藥	MEDIUM SIZE SQUARE FLAKE POWDER
Chū	*Hō* *Kei*	*Ryū*	*Yaku*	
Medium (Size)	Square	Flake	Powder	
帶 狀		火	藥	STRIP POWDER
Tai	*Jo*	*Ka*	*Yaku*	
Band-Shaped		Gun	Powder	

NOTE: To indicate the more modern varieties of military high explosives, the Japanese have selected arbitrary symbols or characters which are used as a sort of code. There are no known English equivalents for these symbols, and therefore no English words were placed under the characters as has been done in other tables in this outline.

硝 宇	藥	$(CH_2)_3$ (N. $NO_2)_3$	CYCLONITE (EQUIVALENT TO RDX OR HEXYL)
Sho *U*	*Yaku*		
茶 褐	藥	$C_6H_2CH_3$ $(NO_2)_3$	TNT (TRINITROTOLUOL)
Cha *Katsu*	*Yaku*		
Brown	Powder		
安 瓦	藥	NITROGUANIDINE IS THE CHEMICAL ("GUNIGIN," TR) C. $NHNO_2$. $NH.NH_2$	CYCLONITE TNT NITROGUANIDINE AMMONIUM NITRATE
An *Ga*	*Yaku*		

(Continued on next page)

TABLE No. 4
Continued

藥 *Yaku*	EXPLOSIVES
Powder	

名 *Mei*	亞 *A*	藥 *Yaku*	C_6H_2 $(NO_2)4$ NCH_3	TETRYL
硝 *Sho*	英 *Ei*	藥 *Yaku*	$C(CH_2$ $ONO_2)4$	PETN (PENTAERYTHRITE TETRANITRATE)
灰 *Kai*	色 *Shoku*	藥 *Yaku*	NH_4 ClO_4 C_nH_{2n-2} SEE: CYCLONITE $H_2N.C$ (NH) NH_2HNO_3	AMMONIUM PERCHLORATE (MIXTURE) CYCLONITE
平 *Hei*	寧 *Nei*	藥 *Yaku*	C_6H_2 (OC_2H_5) $(NO_2)_3$	TRINITROPHENETOL
硝 *Sho*	斗 *To*	藥 *Yaku*	(TNT — NH_4NO_3) SEE: TNT	AMATOL
鹽 *En*	斗 *To*	藥 *Yaku*	C_7H_6 $(NO_2)_2$ — $KClO_3$	DINITROTOLUOL POTASSIUM CHLORATE
黃 *Ko*	色 *Shoku*	藥 *Yaku*	C_6H_2 $(NO_2)_3$ OH	PICRIC ACID (TRINITROPHENOL)
Yellow	Color	Powder		
茶 *Cha*	黃 *Ko*	藥 *Yaku*	SEE: PICRIC ACID AND TNT	PICRIC ACID TNT

(Continued on next page

TABLE No. 4
Continued

藥 *Yaku*	EXPLOSIVES
Powder	

黄 *Ko*	那 *Na*	藥 *Yaku*	SEE: BOTH COMPOUNDS	PICRIC ACID DINITRONAPHTALENE
黄 *Ko*	脂 *Shi*	藥 *Yaku*	SEE: PICRIC ACID	PICRIC ACID PARAFFIN
硝 *Sho*	那 *Na*	藥 *Yaku*	$C_{10}H_6\ (NO_2)_2$ — NH_4NO_3	DINITRONAPHTALENE NH_4NO_3
鹽 *En*	那 *Na*	藥 *Yaku*	$C_{10}H_7NO_2$ — $KClO_3$	CHEDDITE (NITRONAPHTALENE POTASSIUM CHLORIDE)
	雷 *Kai*	汞 *Ko*	$HgC_2N_2O_2$	FULMINATE OF MERCURY (DETONATOR)
	爆 *Baku*	粉 *Fun*	$HgC_2N_2O_2$ $KClO_3$ Sb_2S_3	FULMINATE OF MERCURY POTASSIUM CHLORATE ANTIMONY SULFIDE
窒 *Chik*	化 *Ka*	鉛 *En*	$Pb(N_3)_2$	LEAD AZIDE (DETONATOR)

TABLE No. 5

式	TYPE DESIGNATION
Shiki	
Type	

TYPE 99	
九九 式	
Kujuku	*Shiki*
99	MODEL

TYPE 1	
一	式
Ichi	*Shiki*
ONE	MODEL

11th Year TYPE		
十一 年 式		
Ju ichi	*Nen*	*Shiki*
11th	Year	MODEL

JAPANESE NUMERALS

0	○	*Rei*
1	一	*Ichi*
2	二	*Ni*
3	三	*San*
4	四	*Shi*
5	五	*Gō*
6	六	*Roku*
7	七	*Hichi*
8	八	*Hachi*
9	九	*Ku*
10	十	*Jū*
11	十 一	*Jū ichi*
12	十 二	*Jū ni*
13	十 三	*Jū san*
14	十 四	*Jū shi*
15	十 五	*Jū gō*
16	十 六	*Jū roku*
17	十 七	*Jū shicki*
18	十 八	*Jū hachi*
19	十 九	*Jū kū*
20	二 十	*Ni jū*
30	三 十	*San jū*
40	四 十	*Shi ju*
50	五 十	*Gō jū*
100	百	*Hyaku*
1000	千	*Sen*
10,000	万	*Man*
100,000	十 万	*Jū man*
1,000,000	万 百	*Haku man*

TABLE No. 6

年	月
Nen	*Getsu*
Year	Month

ERAS

TIME PERIODS DURING REIGN OF THREE RECENT EMPERORS	NAMES	CALENDAR DATES OF ERAS
明 *Mei* 治 *Ji*	MEIJI ERA	1868 TO 1912 INCLUSIVE
大 *Tai* 正 *Shō*	TAISHO ERA	1912 TO 1926 INCLUSIVE
昭 *Sho* 和 *Wa*	SHOWA ERA	1926 TO PRESENT TIME

There Are Three Different Dates for the Following:

十年	10th YEAR
Jū *Nen*	
10th Year	

明 *Mei* 治 *Ji*	十 *Jū*	年 *Nen*	10th Year MEIJI ERA 1867 10 1877
Meiji (Era)	10th	Year	
大 *Tai* 正 *Shō*	十 *Jū*	年 *Nen*	10th Year TAISHO ERA 1911 10 1921
Taisho (Era)	10th	Year	
昭 *Sho* 和 *Wa*	十 *Jū*	年 *Nen*	10th Year SHOWA ERA 1925 10 1935
Showa (Era)	10th	Year	

月	Month
Getsu	

The first month of the Japanese year is January and the twelfth month is December, the same as in our calendar system.

十月	OCTOBER
Jū *Getsu*	
10th Month	

TABLE No. 7

油	GASOLINE LUBRICATING OILS FUEL OILS
Yu	
Oil	

REFERENCE LINE NUMBER	THESE ARE USED IN PRINTED TEXT FOR ABBREVIATIONS ON CANS OR DRUMS. SEE PAGE 38.	ENGLISH TRANSLATION
1	揮 發 油 *Ki* *Hatsu* *Yu* Volatile Oil	GASOLINE (KANJI)
2	ガ ソ リ ン *Ga* *So* *Rin*	GASOLINE (KANA)
3	普 通 揮 發 油 *Fu* *Tsū* *Ki* *Hatsu* *Yu* Ordinary Volatile Oil	ORDINARY GASOLINE
4	特 種 揮 發 油 *Toku* *Shu* *Ki* *Hatsu* *Yu* Special Volatile Oil	SPECIAL GASOLINE
5	分 留 揮 發 油 *Bun* *Ryū* *Ki* *Hatsu* *Yu* Distilled Volatile Oil	GASOLINE FROM "CRACKING PROCESS" (FRACTIONAL DISTILLATION)
6	航 空 機 揮 發 油 *Kō* *Kū* *Ki* *Ki* *Hatsu* *Yu* Aviation Volatile Oil	AVIATION GASOLINE

(Continued on next page)

TABLE No. 7
Continued

油	GASOLINE LUBRICATING OILS FUEL OILS
Yu	
Oil	

REFERENCE LINE NUMBER	THESE ARE USED IN PRINTED TEXT FOR ABBREVIATIONS ON CANS OR DRUMS. SEE PAGE 38.	ENGLISH TRANSLATION
7	原料 (*Gen* *Ryō*) / 揮發油 (*Ku* *Hatsu* *Yu*) Raw Material / Volatile Oil	"BASE" GASOLINE (FOR ADDING TETRA-ETHYL-LEAD)
8	石油 (*Seki* *Yu*) Stone Oil	KEROSENE
9	滑 (*Katsu*) 油 (*Yu*) Lubricating Oil	LUBRICATING OIL
10	輕 (*Kei*) 滑 (*Katsu*) 油 (*Yu*) Light Lubricating Oil	LIGHT LUBRICATING OIL
11	重 (*Jū*) 滑 (*Katsu*) 油 (*Yu*) Heavy Lubricating Oil	HEAVY LUBRICATING OIL
12	パラヒン (*Pa* *Ra* *Pin*) 油 (*Yu*) Oil	PARAFFIN OIL

(Continued on next page)

TABLE No. 7
Continued

油	GASOLINE LUBRICATING OILS FUEL OILS
Yu	
Oil	

REFERENCE LINE NUMBER	THESE ARE USED IN PRINTED TEXT FOR ABBREVIATIONS ON CANS OR DRUMS. SEE PAGE 38.	ENGLISH TRANSLATION
13	内部 油 *Nai Bu* *Yu* Internal Oil	INTERNAL (ENGINE) OIL
14	外方 油 *Gai Hō* *Yu* External Oil	EXTERNAL (GEAR) OIL
15	燃料 油 *Nen Ryō* *Yu* Fuel Oil	FUEL OIL
16	篦 麻子 油 *Hi Ma Shi* *Yu* Castor-Bean Oil	CASTOR OIL
17	礦 油 *Kō* *Yu* Mineral Oil	MINERAL OIL

(Continued on next page)

TABLE No. 7
Continued

油

Yu

Oil

GASOLINE
LUBRICATING OILS
FUEL OILS

ABBREVIATED JAPANESE MARKINGS USED ON GAS AND OIL DRUMS	
* 1	2 KI or G 2 No. 2 Gasoline Note: Abbreviation "KI" is derived from KIHATSUYU (Gasoline)
3	FU KI or G Note: Abbreviation FUTSU (Ordinary)
4	特 91 G *Toku* Special 91-Octane Gasoline
5	BUN 80 or 80 CG Abbreviation: BUNRYU (Distilled) 90-Octane Cracked-Gasoline
6	KU 90 KI or A 90 G Abbreviation: KOKUKI (Aviation) 90-Octane Aviation Gasoline
7	KU 87 GEN KI or G 87 B Abbreviation: GENRYO and KOKUKI 87-Octane Aviation Base-Gasoline

ABBREVIATED JAPANESE MARKINGS USED ON GAS AND OIL DRUMS	
8	1 SE KI or P-1 Abbreviation: SEKI YU (Kerosene) No. 1 Kerosene
10	KEI YU or K Abbreviation: KEIKATSU YU Light Oil
11	1 JU Abbreviation: JUKATSU No. 1 Heavy Oil
13	一 内 *ichi* *Nai* Abbreviation: NAI BU No. 1 Internal Oil
14	一 外 *ichi* *Gai* Abbreviation: GAIBU No. 1 External Oil
	*Numbers correspond to those in preceding table. (Key Character "*Yu*")

TABLE No. 8

筒 *To*	PRIMER SHELL CASE BANGALORE TORPEDO GRENADE DISCHARGER COMPLETE ROUND
Tube (Shaped Container)	

爆 *Baku*	筒 *Tō*		PRIMER
Explosive	Tube		
藥 *Yaku*	筒 *Tō*		SHELL CASE
Powder	Tube Case		
藥 *Yaku*	爽 *Kyō*	爆 *Baku*	筒 *Tō*	CARTRIDGE CASE PRIMER
Cartridge	Case	Explosive	Tube	
破 *Ha*	壞 *Kai*	筒 *Tō*		BANGALORE TORPEDO
Demolition		Tube		
爆 *Baku*	藥 *Yaku*	筒 *Tō*		BANGALORE TORPEDO
Explosive-Powder		Tube		
擲 *Teki*	彈 *Dan*	筒 *Tō*		GRENADE DISCHARGER
Grenade		Tube		

(Continued on next page)

TABLE No. 8
Continued

筒 *To*	PRIMER SHELL CASE BANGALORE TORPEDO GRENADE DISCHARGER COMPLETE ROUND
Tube (Shaped Container)	

	弾薬 *Dan Yaku*	筒 *Tō*	COMPLETE ROUND
	Artillery Shell (Complete)	Tube	
榴弾 *Ryū Dan*	弾薬 *Dan Yaku*	筒 *Tō*	COMPLETE ROUND HE SHELL
High Explosive	Artillery Shell (Complete)	Tube	

TABLE No. 9

兵 *Hei*	SERVICE DIVISION
Troops	

步 *Ho* + 兵 *Hei*	INFANTRY
Walking Troops	
造 *Zo* + 兵 *Hei*	ORDANCE
Manufacture (Arms) for Troops	
工 *Ko* + 兵 *Hei*	ENGINEERS
Construction Troops	
騎 *Ki* + 兵 *Hei*	CAVALRY
Horse Troops	
砲 *Ho* + 兵 *Hei*	ARTILLERY
Gun Troops	
輕 *Kei* + 砲 *Ho* + 兵 *Hei*	LIGHT ARTILLERY
Light Gun Troops	

(Continued on next page)

TABLE No. 9
Continued

兵	SERVICE DIVISION
Hei	
Troops	

車	砲	兵		HEAVY ARTILLERY
Jū	*Hō*	*Hei*		
Heavy	Gun	Troops		
野	戰	砲	兵	FIELD ARTILLERY
Ya	*Sen*	*Hō*	*Hei*	
Field	Warfare	Gun	Troops	
海	岸	砲	兵	COAST ARTILLERY
Kai	*Gan*	*Hō*	*Hei*	
Sea	Coast	Gun	Troops	
自 動	重	牽 引	砲 兵	MECHANICALLY-DRAWN ARTILLERY
Ji *Dō*	*Sha*	*Ken* *In*	*Hō* *Hei*	
Self-Moving	Vehicle	Tractioned	Gun Troops	
自 動		砲	兵	SELF-PROPELLED ARTILLERY
Ju *Dō*		*Hō*	*Hei*	
Self-Moving		Gun	Troops	
騎		砲	兵	HORSE-DRAWN ARTILLERY
Ki		*Hō*	*Hei*	
Horse (drawn)		Gun	Troops	

(Continued on next page)

TABLE No. 9
Continued

兵	SERVICE DIVISION
Hei	
Troops	

高	射	砲	兵	ANTIAIRCRAFT ARTILLERY
Kō	*Sha*	*Hō*	*Hei*	
High	Angle	Gun	Troops	
師	團	砲	兵	DIVISIONAL ARTILLERY
Shi	*Dan*	*Hō*	*Hei*	
Division		Gun	Troops	
陸	軍	航 空	兵	ARMY AIR SERVICE
Riku	*Gun*	*Kō* *Kū*	*Hei*	
Land	Unit	Air	Troops	
化	學	戰	兵	CHEMICAL WARFARE SERVICE
Ka	*Gaku*	*Sen*	*Hei*	
Chemistry		Warfare	Troops	
小	火	兵		SMALL ARMS
Shō	*Ka*	*Hei*		
Small	Fire	Troop (Branch)		

(Continued on next page)

TABLE No. 9
Continued

兵 *Hei* Troops	SERVICE DIVISION

軍 *Gun* Unit	ARMY AND NAVY UNITS

陸軍 *Riku* *Gun* Land Unit	ARMY
海軍 *Kai* *Gun* Sea Unit	NAVY
空軍 *Kū* *Gun* Air Unit	AIR FORCES

TABLE No. 10

雷	MINES
Rai	
Mine (Detonating Explosion)	

		地 雷		LAND MINE
		Ji *Rai*		
		Land Mine		
		水 雷		WATER MINE
		Sui *Rai*		
		Water Mine		
	觸 發	地 雷		CONTACT LAND-MINE
	Shoku *Hatsu*	*Ji* *Rai*		
	Contact	Land Mine		
	戰 車	地 雷		ANTITANK MINE
	Sen *Sha*	*Ji* *Rai*		
	Tank	Land Mine		
鐵 線	係 蹄	雷		TRIP-WIRE MINE
Tes *Sen*	*Kei* *Tei*	*Rai*		
Iron Wire	Tripping Purpose	Mine		
	自 發	地 雷		CLOCK-WORK MINE
	Ji *Hatsu*	*Ji* *Rai*		
	Self-Acting	Land Mine		

(Continued on next page)

TABLE No. 10
Continued

雷	MINES
Rai	
Mine (Detonating Explosion)	

爆 雷			MINE DEMOLITION
Baku *Rai*			
Explosive	Mine		
浮 游	水	雷	FLOATING MINE
Fu *Yu*	*Sui*	*Rai*	
Floating	Water	Mine	
	空	雷	TORPEDO (Aerial)
	Ku	*Rai*	
	Air	Mine	

TABLE No. 11

銃	MACHINE GUN AUTOMATIC RIFLE PISTOL RIFLE
Ju	
Gun (Smaller Dimension than "*Ho*")	

		機關	銃	
		Ki *Kan*	*Jū*	MACHINE GUN
		Machine	Gun	
	輕	機關	銃	
	Kei	*Ki* *Kan*	*Jū*	LIGHT MACHINE GUN
	Light	Machine	Gun	
	重	機關	銃	
	Jū	*Ki* *Kan*	*Jū*	HEAVY MACHINE GUN
	Heavy	Machine	Gun	
固定		機關	銃	
Ko *Tei*		*Ki* *Kan*	*Jū*	FIXED MACHINE GUN
Fixed		Machine	Gun	
柔軟		機關	銃	
Jū *Nan*		*Ki* *Kan*	*Jū*	FLEXIBLE MACHINE GUN
Flexible		Machine	Gun	
高射		機關	銃	
Kō *Sha*		*Ki* *Kan*	*Jū*	ANTIAIRCRAFT MACHINE GUN
High-Angle		Machine	Gun	

(Continued on next page)

TABLE No. 11
Continued

銃 *Ju*	MACHINE GUN AUTOMATIC RIFLE PISTOL RIFLE
Gun (Smaller Dimension than "*Ho*")	

小 *Sho*	銃 *Jū*	RIFLE
Small	Gun	
自動 *Ji* *Do*	銃 *Jū*	AUTOMATIC RIFLE
Self-Acting	Gun	
拳 *Ken*	銃 *Jū*	PISTOL
Hand-Operated	Gun	
騎 *Ki*	銃 *Jū*	CARBINE
Horse (Cavalry)	Gun	

TABLE No. 12

榴	彈	ARTILLERY SHELL
Ryu	*Dan*	

榴 彈 *Ryu* *Dan* (Type used for Artillery) H.E. Shell		ARTILLERY SHELL
特 殊 *Toku* *Shu* Special	砲 彈 *Hō* *Dan* Gun-Shell	SPECIAL SHELL
尋 常 *Jin* *Jō* Common	榴 彈 *Ryu* *Dan* High Explosive Shell	COMMON SHELL
試 製 *Shi* *Sei* Experimental	彈 *Dan* Shell	EXPERIMENTAL SHELL
大 口 徑 *Dai* *Kō* *Kei* Large Caliber	砲 彈 *Ho* *Dan* Gun-Shell	LARGE CALIBER SHELL
高 級 *Kō* *Kyū* High	榴 彈 *Ryū* *Dan* Explosive Shell	HIGH-EXPLOSIVE SHELL

(Continued on next page)

TABLE No. 12
Continued

榴	彈	ARTILLERY SHELL
Ryu	*Dan*	

曳 光	榴 彈	HE SHELL WITH LIGHT-TRACER
Ei *Kō*	*Ryū* *Dan*	
Tracer (with) Light	HE Shell	

九 二 式	歩	榴 彈	TYPE 92 HE SHELL (for Infantry)
Ku *Ni* *Shiki*	*Ho*	*Ryū* *Dan*	
9 2 Type	Infantry	HE Shell	

尖	鋭	彈	LONG-POINTED (Streamlined) SHELL
Sen	*Ei*	*Dan*	
Come to a	Sharp Point	Shell	

瓦 斯	彈	GAS SHELL
Ga *Su*	*Dan*	
Gas	Shell	

穿	甲	榴 彈	HOLLOW CHARGE SHELL
Sen	*Kō*	*Ryu* *Dan*	
Pierce Through	Armor Plate	Shell	

焼 夷	彈	INCENDIARY SHELL
Shō *I*	*Dan*	
Incendiary	Shell	

(Continued on next page)

TABLE No. 12
Continued

榴	彈	ARTILLERY SHELL
Ryu	*Dan*	

照	明	彈	STAR SHELL (Illuminating)
Shō	*Mei*	*Dan*	
Brilliant	Glare	Shell	

發	煙	彈	SMOKE SHELL
Hatsu	*En*	*Dan*	
Emit	Smoke	Shell	

高 射	尖 鋭	彈	ANTIAIRCRAFT POINTED SHELL
Kō *Sha*	*Sen* *Ei*	*Dan*	
High-Angle (Fire)	Pointed	Shell	

破 甲	榴 彈	ARMOR-PIERCING HE SHELL
Ha *Kō*	*Ryū* *Dan*	
Pierce Armor-plate	HE Shell	

徹	甲	彈	AP STEEL SHELL (AP Shot)
Tek	*Kō*	*Dan*	
Remove, Destroy	Armor-plate	Shell	

Tek is an abbreviation of *Tekkyo (Remove)*

被	帽	彈	AP SHELL WITH HARDENED CAP
Hi	*Bō*	*Dan*	
Armor-piercing	Cap	Shell	

(Continued on next page)

TABLE No. 12
Continued

榴	彈	ARTILLERY SHELL
Ryu	*Dan*	

鋼	性	銑	榴	彈	SEMI-STEEL SHELL
Ko	*Sei*	*Sen*	*Ryū*	*Dan*	
Semi		Steel	Shell		

鍛	鋼	榴	彈	DRAWN-STEEL SHELL
Tan	*Kō*	*Ryū*	*Dan*	
Forge	Steel	Shell		

堅	鐵	彈	CHILLED STEEL (AP) SHELL
Ken	*Tetsu*	*Dan*	
Chilled	Steel	Shell	

砲	塔	用	加	農	彈	丸*	TURRET PROJECTILE FOR CANNON USE
Ho	*Tō*	*Yō*	*Ka*	*Non*	*Dan*	*Gan*	
Gun-Turret		Use	Cannon		Projectile		

榴	散	彈	SHRAPNEL
Ryū	*San*	*Dan*	
High-explosive	Case	Shell	

有	翼	彈	(Finned Shell) MORTAR SHELL
Yū	*Yoku*	*Dan*	
Possessing	Wings	Shell	

* This is an exception to the general rule that key characters are terminal characters.

(Continued on next page)

TABLE No. 12
Continued

榴	彈	ARTILLERY SHELL
Ryu	*Dan*	

	銃	榴彈	RIFLE GRENADE
	Jū	*Ryū* *Dan*	
	Rifle	Grenade	
灼	熱	擲彈	THERMITE GRENADE
Shaku	*Netsu*	*Teki* *Dan*	
Intense	Heat (Red hot)	Grenade	
柄付	手	榴彈	POTATO-MASHER TYPE HAND-GRENADE
E *Tsuki*	*Shu*	*Ryu* *Dan*	
Stick-Hand	Hand	Grenade	
	實彈		BALL AMMUNITION
	Jitsu *Dan*		
	Solid Ammunition		
彈	丸*		PROJECTILE
Dan	*Gan*		
Shell	Body (Form)		

* This is an exception to the general rule that key characters are terminal characters.

TABLE No. 13

PRELIMINARY DESCRIPTION

JAPANESE AIRPLANE BOMBS AND THEIR MARKINGS

1	陸上 *Riku Jō*	爆彈 *Baku Dan*	Land-Use	Bomb	LAND BOMB (Thin-cased HE-GP Bomb) Demolition Blast
2	通常 *Tsu Jō*	爆彈 *Baku Dan*	General Purpose	Bomb	ORDINARY BOMB (Heavy-cased HE-GP Bomb) Demolition SAP
3	特種 *Toku Shu*	爆彈 *Baku Dan*	Special Kind	Bomb	SPECIAL PURPOSE BOMB 14 Types (Mark No. Series)

Group 3, or Special Purpose Bombs, is by far the most important, being composed of a diversified list ranging from chemical bombs to rocket and incendiary bombs. Although there are 26 types of Special Purpose Bombs listed with mark numbers in Japanese ordnance catalogs, there are but 14 known types in actual use and some of these are advanced only to the experimental stage.

While the Japanese characters "Baku Dan" (airplane bomb) appear on all aerial bombs, or their shipping cases, the characters for "mark" number appear only on Special Purpose Bombs, and just preceding "Baku Dan." Look first for the character "mark" and its number. If "mark" is present, then the number following it describes the type (through reference to Table No. 13).

號 *Gō*	二 *Ni*	Mark	2	MARK-2

爆 *Baku*	彈 *Dan*	Airplane	Bomb	BOMB

When the ideograph for "mark" is absent, look for "Baku Dan." The characters preceding it will describe whether it is a Land Bomb or an Ordinary (General Purpose) Bomb. These are set forth in Table No. 18.

TABLE No. 13

號 Gō	MARK (Number) (Airplane Bombs)

號 Gō	Meaning is: MARK (Number)

On "Special Series" bombs a number follows this character to indicate the type as follows:

Mark No.	Type of Bomb
1	Gas, chemical
2	Antisubmarine
3	Incendiary
4	Rocket
5	Armor-Piercing
6	Magnesium Incendiary and Oil Incendiary
7	Unknown
8	Unclassified
9	"
10	"
11	"
12	"
13	"
14	Unclassified
15	"
16	"
17	"
18	"
19	"
20	"
21	Cluster, Airdrome
22	Stick Cluster
23	Long-delay
24	Parachute
25	Parachute Cluster
26	Above Ground

(Continued on next page)

TABLE No. 13
Continued

番 *Ban*	NUMBER

六番 *Roku* *Ban*	NUMBER 6

The Japanese have several common weights for airplane bombs. Examples: 30 Kg.; 60 Kg.; 250 Kg.; 700 Kg.; 800 Kg.

The preceding character indicates the weight of the bomb. In the example illustrated, Roku Ban means number 6. Multiply the 6 by 10, and the result is the weight of the bomb in kilograms. (60 kg.)

型 *Kata*	Meaning is: DESIGN NUMBER (so-and-so)

式 *Shiki*	Meaning is: MODEL (so-and-so)

改 *Kai*	Meaning is: MODIFICATION (so-and-so)

Note: The Japanese characters on this page are related to markings found only on JAPANESE AIRPLANE BOMBS.

TABLE No. 14
Continued

粁厘 *Sanchi*	METRIC TABLES

粁厘 *Sanchi*		CENTIMETER
粍 *Miri*	or 密位 *Mi Ri*	MILLIMETER
瓦 *Guramu*		GRAM (15.432 grains)
秒 *Byo*		1 SECOND
瓧 *Kilo*		KILOGRAM (2.2 lbs.)
1. K. 205 = 1.205 Kg.		
立 *Rittoru*		1 LITER (1.7607 pints)
立十 *Deka Rittoru*		1 DECALITER (10 liters) (2.2008 gallons)
封 *Pondo*		1 POUND (120.96 momme)

(Continued on next page)

TABLE No. 14
Continued

粁厘 *Sanchi*	METRIC TABLES

匁 *Momme*	1 MOMME (120.96 momme = 1 lb.)
瓦 *Ga Ron*	1 GALLON (2.5188 Sho)
升 *Sho*	2.5188 = 1 Gallon
長サ *Naga Sa*	LENGTH
重量	WEIGHT
吋 *Inchi*	INCH
呎 *Futo*	FOOT
碼 *Yado*	YARD

TABLE No. 15

機 *Ki*	"AIRCRAFT" WEAPONS AND AMMUNITION
Machine	

航 *Kō*	空 *Kū*	機 *Ki*	AIRCRAFT
Flying (in) Air		Machine 1	
陸 *Riku*	軍 *Gun*	機 *Ki*	ARMY PLANE
Land	Branch	(Flying) Machine	
海 *Kai*	軍 *Gun*	機 *Ki*	NAVY PLANE
Sea	Branch	(Flying) Machine	
陸 *Riki*	上 *Jō*	機 *Ki*	LAND PLANE
Land	Best (Use)	(Flying) Machine	
水 *Sui*	上 *Jō*	機 *Ki*	SEA PLANE
Sea	Best (Use)	(Flying) Machine	
雷 *Rai*	撃 *Geki*	機 *Ki*	TORPEDO AIRPLANE
Water Mine 2	Attack 3	(Flying) Machine	

(Continued on next page)

TABLE No. 15
Continued

機 *Ki*	"AIRCRAFT" WEAPONS AND AMMUNITION
Machine	

裝甲 *Sō* *Kō*	飛行 *Hi* *Kō*	機 *Ki*	ARMORED AIRCRAFT
Armor Plated	Flight	(Flying) Machine	
	爆撃 *Baku* *Geki*	機 *Ki*	BOMBING AIRPLANE
	Bomb 4 Attack	(Flying) Machine	
爆撃 *Baku* *Geki*	照準 *Shō* *Jun*	機 *Ki*	BOMB SIGHT
Bomb 4 Attack 3	Sighting Device (For a)	(Flying) Machine	

FOOTNOTES TO TABLE 15
Abbreviations reference

1

機械 *Ki* *Kai*		MACHINE
Machine		

2

空雷 *Kiō* *Rai*		TORPEDO Aerial
Air Mine		

3

攻撃 *Kō* *Geki*		ATTACK

4

爆弾 *Baku* *Dan*		AIRPLANE BOMB

TABLE No. 16

鐵 *Tetsu*	METALS TABLE
Iron	

鐵 *Tetsu* Iron	IRON
鋼 鐵 *Kō* *Tetsu* Steel	STEEL
黄 銅 *Ō* *Dō* Yellow Copper	BRASS
銅 *Dō* Copper	COPPER
青 銅 *Sei* *Dō* Bluish Copper	BRONZE
鉛 *Namari* Lead	LEAD

(Continued on next page)

TABLE No. 16
Continued

鐵	METALS TABLE
Tetsu	
Iron	

合 金		ALLOY
Gō *Kin*		
Compound Metal		
鑄 鐵		CAST IRON
Chu *Tetsu*		
Cast Iron		
クローム	鋼 鐵	CHROMIUM STEEL
Ku *Ro* *Ma*	*Kō* *Tetsu*	
Chromium Steel		
鋼* 性	銑	SEMI-STEEL
Kō *Sei*	*Sen*	
Steel with Steel-type pig-iron		
鋼 鍛*		DRAWN STEEL
Tan *Kō*		
Forged Steel		
堅	鐵*	CHILLED STEEL
Ken	*Tetsu*	
Chilled	Steel	

* *Ko* is an abbreviation of *KoTetsu* (steel)

(Continued on next page)

TABLE No. 16
Continued

鐵	METALS TABLE
Tetsu	
Iron	

	鑄 *Chū*	鋼* *Kō*	CAST STEEL
	Cast	Steel	
合 *Gō*	金 *Kin*	鋼* *Kō*	ALLOY STEEL
Compound Metal		Steel	
	鋼* *Kō*	板 *Bau*	STEEL PLATE
	Steel	Plate	
	亞 *A*	鉛 *En*	ZINC
		Lead	

* *Ko* is an abbreviation of *KoTetsu* (steel)

TABLE No. 17

管 *Kan*	FUZE POWDER TRAIN
A Pipe or Tube	

彈 *Dan*	頭 *Tō*	信 管 *Shin Kan*	NOSE FUZE
Projectile	Head	Communicating Tube (Fuze)	
彈 *Dan*	底 *Tei*	信 管 *Shin Kan*	BASE FUZE
Projectile	Base	Fuze	
曳 *Ei*	火 *Ka*	信 管 *Shin Kan*	TIME FUZE
Slow-moving	Fire	Fuze	
着 發 *Chaku Hatsu*		信 管 *Shin Kan*	PERCUSSION FUZE
Arrival - Departure		Fuze	
複 働 *Fuku Dō*		信 管 *Shin Kan*	COMBINATION FUZE (Time and Percussion)
Double-Motion		Fuze	
瞬 *Shu*	發 *Matsu*	信 管 *Shin Kan*	INSTANTANEOUS FUZE
Instant	Depart (Fire)	Instantaneous Fuze	
短 *Tan*	延 *Eh*	期 *Ki* 信 管 *Shin Kan*	SHORT-DELAY FUZE
Short-time	Late-Period	Fuze	

(Continued on next page).

TABLE No. 17
Continued

管	FUZE POWDER TRAIN
Kan	
A Pipe or Tube	

除	信管	UNFUZED
Jō	*Shin* *Kan*	
Without	Fuze	
爆彈	信管	BOMB FUZE
Baku *Dan*	*Shin* *Kan*	
Airplane Bomb	Fuze	
爆裂	信管	DETONATING FUZE
Baku *Retsu*	*Shin* *Kan*	
Explosive (Force)	Fuze	
火道	信管	POWDER TRAIN (of a Fuze)
Ka *Dō*	*Shin* *Kan*	
Fire-Road (Powder Train) Fuze		
藥盤	信管	TIME TRAIN (of a Fuze)
Yaku *Ban*	*Shin* *Kan*	
Powder-Block	Fuze	
雷	管	PERCUSSION CAP (of a Cartridge)
Rai	*Kan*	
Detonating	Tube (Cap)	
爆	管	PRIMER CAP
Bak	*Kan*	
Explosive	Tube (Cap)	

TABLE No. 18

爆 彈	AIRPLANE BOMBS
Baku *Dan*	
Explosive Shell (Bomb)	

陸 上		爆	彈	LAND BOMB
Riku	*Jo*	*Baku*	*Dan*	
For (Land) Use	(the) Best	Explosive	Shell	
通 常		爆	彈	GENERAL PURPOSE (HE) (Ordinary) BOMB
Tsu	*Jo*	*Baku*	*Dan*	
Known as	Regular (Standard)	Bomb		
特 種		爆	彈	SPECIAL PURPOSE BOMB
Toku	*Shu*	*Baku*	*Dan*	
Special	Kind (of)	Bomb		
焼 夷	用	爆	彈	INCENDIARY BOMB (Airplane)
Sho *I*	*Yo*	*Baku*	*Dan*	
Incendiary-	Use	Bomb		
燐		爆	彈	PHOSPHORUS BOMB
Rin		*Baku*	*Dan*	
Phosphorus		Bomb		
火 焔		爆	彈	LIQUID FLAME BOMB
Ka *En*		*Baku*	*Dan*	
Fire-Flame		Bomb		

(Continued on next page)

TABLE No. 18
Continued

爆	弾
Baku	*Dan*
Explosive Shell (Bomb)	

AIRPLANE BOMBS

細	裂	爆	弾	
Sai	*Retsu*	*Baku*	*Dan*	FRAGMENTATION BOMB
(Into) Smallest	Pieces	Bomb		

瓦	斯	爆	弾	
Ga	*Su*	*Baku*	*Dan*	GAS BOMB
Gas		Bomb		

爆	破 *	用	爆	弾	
Baku	*Ha*	*Yo*	*Baku*	*Dan*	DEMOLITION BOMB
Explosive	Demolition	Use	Bomb		

破	甲	爆	弾	
Ha	*Kō*	*Baku*	*Dan*	ARMOR-PIERCING BOMB
Pierce	Armor	Bomb		

擬 * *	爆	弾	
Gi	*Baku*	*Dan*	DUMMY BOMB
Abbrev. for Gi Sei (Dummy)	Bomb		

* 破壊 *Ha Kai* — Demolition

** 擬製 *Gi Sei* — Dummy

TABLE No. 19

所 *Sho*	FACTORY

		製 *Sei*	造 *Zō*	所 *Sho*	FACTORY
		Made in	Work	Plant	
小 *Shō*	銃 *Jō*	製 *Sei*	造 *Zō*	所 *Sho*	SMALL ARMS FACTORY
Small	Rifle	Made in	Work	Plant	
火 *Ka*	薬 *Yaku*	製 *Sei*	造 *Zō*	所 *Sho*	POWDER FACTORY
Fire (Gun)	Powder	(Made in) Manufacturing Plant			

TABLE No. 20

廠	ARSENAL
Sho	

		工 廠		ARSENAL WORKSHOP
		Kō	*Shō*	
		Work	Shop	
	陸 軍	工 廠		ARMY ARSENAL
	Riku *Gun*	*Kō*	*Shō*	
	Land Branch	Work	Shop	
	造 兵 廠			ARSENAL
	Zo *Hei*	*Shō*		
	Manufacture (Arms for)	Troops	Shop	
呉	海 軍	工 廠		THE NAVAL ARSENAL AT KURE
Kure	*Kai* *Gun*	*Kō*	*Shō*	
Kure	Naval	Arsenal		

SECTION THREE

PRACTICAL READING AND TRANSLATION OF JAPANESE CHARACTERS

JAPANESE MARKINGS COPIED FROM A TAG WITHIN AN AMMUNITION BOX

Start at left top corner and read down.

航 Kō 空 Ku 機 Ki	AIRCRAFT Table 15
用 Yō 二 Ni 十 Jū 粍	20 MM Metric Table 14
機 Ki 關 Kan 砲 Hō	POM-POM GUN Table 3

彈 Dan 藥 Yaku	AMMUNITION Table 4
昭 Shō 和 Wa 十 Jū 八 Hachi 年 Nen	SHOWA 18th YEAR 1943 Table 6
十 Jū 一 Ichi 月 Getsu	NOVEMBER Table 7

二 Ni 式 Shiki	TYPE 2 Table 5
曳 Ei 光 Kō	LIGHT TRACER ———
徹 Ha 甲 Kō 彈 Dan	AP SHELL Table 2
彈 Dan 藥 Yaku	AMMO. Table 4
筒 Tō	COMPLETE ROUND Table 8

東 To 京 Kyo	TOKYO
第	———
陸 Riku 軍 Gun	ARMY Table 10
造 Zō 兵 Hei 廠 Shō	ARSENAL Table 20
川	———
越	
製 Sei 造 Zō	FACTORY
所 Sho	Table 19

Note: The Japanese characters on this page were copied direct from tags within ammunition boxes that had been captured in the Philippines.

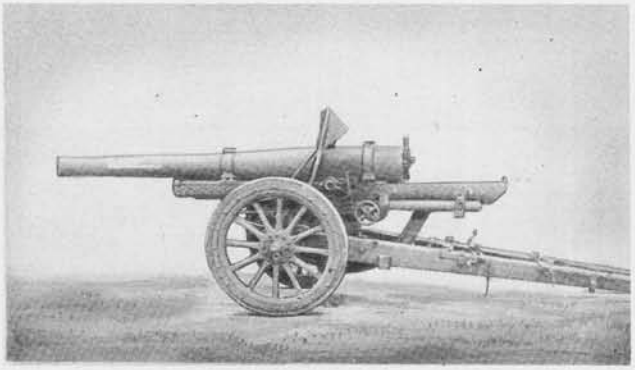
JAPANESE MARKINGS ON AN AIRPLANE BOMB

二	五	番**	號**	二	爆**	彈		NUMBER 25 (250 Kg.) Mark 2 . . . Anti-submarine Airplane Bomb
Ni	*Go*	*Ban*	*Go*	*Ni*	*Baku*	*Dan*		
Two	Five	Number	Mark	Two	Airplane-Bomb			

一	式**	一	型**	改**	一			TYPE 1 . . . (1941) MODEL 1 MODIFICATION 1
Ichi	*Shiki*	*Ichi*	*Kata*	*Kai*	*Ichi*			
(No.) One	Type	(No.) One	Model	Modification	(No.) One			

** Indicates KEY CHARACTERS that appear on bombs.
(Reference to Table 13)

JAPANESE MARKINGS ON A HEAVY GUN



Japanese 150 mm Howitzer

Inscriptions on Weapon

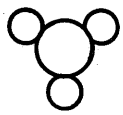
After transposing characters, left to right.

九 六 式	十 五 粁	榴 彈 砲
Ku Roku Shiki	*Ju Go Sanchi*	*Ryu Dan Po*
TYPE 96	15 CENTIMETER	HOWITZER

昭 和	十 五 年	大 阪 工 廠
Sho Wa	*Ju Go Nen*	*O Saka Ke Sho*
SHOWA	15th YEAR (1940)	OSAKA ARSENAL

JAPANESE MARKINGS USED TO INDICATE ARSENALS

The following are the markings found on ordnance items, such as Cannon and Artillery Shells, and represent Japanese Arsenals.

SYMBOL	JAPANESE ARSENAL OR MANUFACTURING PLANT
	Kokura Arsenal
	Tokyo Arsenal
	Gas and Electric Co.
	Nagoya Arsenal
	Heijo Arsenal
	Osaka Arsenal
	Chiyoda Arsenal
	South Arsenal
	Tokyo Explosives Factory

JAPANESE BALLISTICS TERMS

弾道 *Dan Do*	TRAJECTORY
弾道學 *Dan Dō Gaku*	BALLISTICS
最小射程 *Sai Shō Sha Tei*	MINIMUM RANGE
最大射程 *Sai Dai Sha Tei*	MAXIMUM RANGE
初速 *Sho Soku*	MUZZLE VELOCITY
射角 *Sha Kaku*	ANGLE OF ELEVATION
仰度 *Gyō Do*	DEGREES OF ELEVATION
米突毎秒 *Mei Toru Mai Byō*	METERS PER SECOND

JAPANESE BALLISTICS TERMS
(Continued)

經過時間 *Kei Ka Ji Kan*	TIME OF FLIGHT
高速度 *Kō Soku Do*	HIGH VELOCITY
低速度 *Tei Soku Do*	LOW VELOCITY
命中速度 *Mei Chū Soku Do*	STRIKING VELOCITY
方位角 *Hōi Ka Ku*	AZIMUTH
照準 *Shō Jun*	LAYING (of a gun)
口徑 *Kō Kei*	DIAMETER OF BORE
腔長 *Kō Chō*	LENGTH OF BORE

INDEX OF JAPANESE ORDNANCE ITEMS

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