



Thai Music

THAI CULTURE, NEW SERIES No.15



THAI MUSIC

BY
PHRA CHEN DURIYANGA



The Ranard Ek



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THE FINE ARTS DEPARTMENT
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Preface

Thailand is very rich in precious arts and cultural heritage which represents a long-lasting independence, prosperity and stability of the country. These various fields of heritage have been preserved, accumulated and inherited throughout generations until the present. This legacy brings pride, dignity and prestige to Thai people. Therefore, it should be shared with the world so that Thai wisdom can be appreciated.

The Fine Arts Department is responsible for the preservation, promotion, transmission and dissemination of arts and culture of the Thai nation. As such it has compiled and published a book series of 25 volumes written by experts in their respective fields. Their areas of knowledge include artistic works, architecture, music and dramatic arts as well as language and literature. Each series has been reprinted from time to time. In this publication, there are no alterations to the contents* although some illustrations have been added for the benefit of the readers.

The Department hopes that this series of books will be a resource among the international community to help them understand Thailand better through its unique arts and culture.



(Mr. Borvornvate Rungrujee)
Director General
The Fine Arts Department

*It is important to note that certain names and terms in this edition follow the contemporary spellings as adopted by the respective authors; thus we have generally preserved the older spelling of Thai words, and words derived from the Pali and Sanskrit languages concerning names of places, and terms relating to Buddhist and religious matters.

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The Gong Wong Yai

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PREFACE TO THE FIRST EDITION

The aim in compiling this little book* is to give the general public interested in arts, and especially foreign music-lovers who have come to our shores, a general idea of the Thai musical art, as understanding is necessary before there can be appreciation.

Phra Chen Duriyanga, who has played a leading role in the musical life of modern Thailand has endeavoured in this publication to limit the use of technical terms as much as possible, so that this book may be read and understood by laymen and musicians alike, but naturally it has not been possible to exclude or avoid them entirely.

Readers will soon observe that the Thai musical art is not as primitive as some of them might have thought at first. Tracing its history back at the Ayudhya period, one can gather from “L’ Histoire du Royaume de Siam” by La Loubère that there has been real development in this branch of the art. Unfortunately, however, it came to a standstill after the reign of King Rama VI, and now it is in a decadent state and actually in danger of extinction.

During the early part of the reign of H.M. King Chulalongkorn (Rama V) a fusion of Thai and Western music was effected by military bands equipped with Western instruments playing transcriptions from the music of the Piphat Band. Later, Thai melodies with Western harmonization were introduced and were for a time much in vogue. An arrangement of them in the form of a quadrille which was danced to the strains of a military band during the reception of the Russian and German princes who visited Thailand in the year B.E. 2433 and 2442 (A.D. 1890 and 1899) is still in existence. But now after the introduction of jazz, we try to imitate the West by singing and dancing to our own melodies in this new hybrid but popular rhythm.

We Thai generally are fond of novelties, but this sometimes proves detrimental to our own art, as can be observed in the trend of the musical taste of the general public at the present time. However much we may like novelties, we should not be deterred from the love of our own art, which is the same as that of other nations with the only difference that we speak another language and have other ways of expressing our thoughts. It was because of this regrettable trend in the taste of the Thai people that H.R.H. Prince Damrong Rajanubhab who foresaw the consequences caused traditional Thai music to be taken down in Western notation.

Thai music has its own style of expression and thus can in no way be compared with Western music or the music of other races. It is the same with all other branches of art. To appreciate, understand and enjoy Thai music during a performance, one must forget for the time being the cast and the expressions of other music.

It is to be hoped that traditional Thai music will be preserved, and properly edited when funds are available. It is also to be hoped that we will still be able to further the development of this national art in spite of the influence of Western music.

The Department of Fine Arts is very grateful to the author for preserving for posterity the main characteristics of Thai classical music by writing this pamphlet and also to Brahmin P.S. Shastri and Achan J.A. Degen who kindly assisted in putting it in proper form.

Phya Anuman Rajadhon

THE DEPARTMENT OF FINE ARTS, BANGKOK,

October, B.E. 2491

PHRA CHEN DURIYANGA

Phra Chen Duriyanga, former Professor of Music, The Fine Arts Department, Bangkok, was one of the most prominent figures in the Thai musical circles. He received his musical education from his father. He was eminently responsible for the tremendous strides made in Western music in this country in his capacity as instructor and conductor. Phra Chen Duriyanga’s great contributions to the cause of Western music dated as

far back as King Vajiravudh’s Reign when he was in charge of the Royal Orchestra, the first of its kind in Thailand and at that time the best in the Far East. A great music teacher, at whose feet sat most of the Thai exponents of Western music. He also made great contributions to both Thai and Western music including the notation of Thai music, for which this achievement alone would perpetuate his name in the history of Thai music.

* This book was first published in booklet size.



THAI MUSIC

Part I

The Technique of Thai Music in relation to Western Music*

It is my intention, to give a personal talk on the technique of Thai music tonight; but before I begin, I must ask for your indulgence. Please do not expect from me a very comprehensive knowledge in this matter. I am not an expert on Thai music, as I have had no teacher to give me the necessary instruction, and the little I know of it, has been gained only through the work of preserving in Western notation traditional Thai music, as performed by a Piphat Band.

It is well-known to most people that His Royal Highness Prince Damrong Rajanubhab, apart from his official duties, devoted much of his time to the furtherance of education and arts in this country. The notation of our traditional music, for instance, was all due to his encouragement and keen foresight. It is still vivid in my memory, that one day in 1929, he requested me to call on him at his palace, Wang Woradis. He was then, if I remember well, the President of the Royal Institute, the Rachabandit Sapha, as it was then called in Thai. His Royal Highness expressed to me his great

anxiety over the gradual disappearance of the traditional Thai music, through the death of Thai music masters, and asked me, if I could do something to prevent further loss and to preserve the national music from extinction. I replied to him that it was a great honour for me to be useful in this line of work, and for the sake of the nation and art, I would try my best to devise a system, in which this traditional music could be rendered into Western notation and later edited. Soon after that His Royal Highness convened a special conference of all the principal Thai music masters available at that time. During this conference His Royal Highness brought forward a complete list of the traditional Thai musical pieces the names of which had been preserved in the National Library from ancient times. On going through this list minutely, it was found that more than half of the melodies had already been lost for ever, many pieces in the list were quite unknown and many others were known only by their names. This is where we stood about eighteen years ago.

* A talk given before the Siam Society on August 22, 1947.

I must admit, that before I took this important work in hand, I scarcely knew anything about the technique of Thai music, but I had always thought that it was possible to register it in Western notation whenever this was desirable. Owing to the fact that there was no text-book on the theory of Thai music, no written instructions for playing on our instruments and singing our songs and no other way of learning this music except by ear, the performances of Thai music, which I heard occasionally, did not interest me very much; for there was no possibility of making any serious study of the subject. All Thai musicians received their training in playing and singing orally from their teachers, through constant playing and singing in their presence. They had nothing else to rely upon except their own memory which they perhaps possessed in a very remarkable degree, and if they happened to forget any passage, they could fall back on their teachers. It was only through much laborious grinding that they gained their technical experience and practical knowledge in the arts of playing and singing. In taking up the work of notation, I was obliged therefore to make a thorough study of the technique of the different instruments of the Piphat Band myself, not with a view to actually playing them, but only to know how they were played. In the first stage, I examined the construction of each instrument, then the composition of the different instruments used by this band, and lastly, the arrangement of their scale-steps singly and conjointly with all the other instruments in the same group.

Regarding the pitches of the different Thai melodic instruments, I soon found out that the scale in use consisted of seven different full tone-steps, arranged equidistantly, quite unlike the Western diatonic major scale which consists of full tones between the 1st and 2nd degree, the 2nd and 3rd degree, the 4th and 5th degree, the 5th and 6th degree, the 6th and 7th degree and semitones between the 3rd and 4th degree, and between the 7th and 8th degree, its upper octave. But within its octave, the Thai scale has exactly the same number of tones; therefore it is also a diatonic scale, of course neither major nor minor in the sense of Western music, but a special diatonic scale, characteristic of Thai music and all Thai musical instruments. When adopting the Western system of notation I further realized that the difference between the two scales was quite immaterial for the work of notation which, in fact, is nothing more

than the use of conventional symbols to signify the height, the depth and the duration of tones in the performance of music. One has to note that it was never my plan to have Thai and Western musical instruments playing Thai music conjointly or in combination, as that is impossible on account of the difference in their tone-steps. They can play it only separately from the same notation, with special signs written above or below the notes should Western instruments be used instead of the Thai ones.

I have come to this conclusion, because I realized that sounds emitted from executed notes are meant for the auricular sense, whereas the notations written out on paper, are meant for the visual sense to follow in reading and in playing. Taking a musical symbol denoting the note F, for instance, I make this note F to represent the sound of F on both Thai and Western scales, but not its relative pitch. The Thai F will sound F in the Thai diatonic scale which is always fixed, but the Western F will sound F in the Western diatonic scale and this note may be varied to F sharp, by way of a compromise to smooth a certain passage when it is rendered on Western musical instruments and the passage happens to move away from its natural scale and lean towards another key of the Western musical system. This is not quite in harmony with the Thai tone conception, but it is nevertheless quite tolerable to Thai ears and understanding.

As already stated, the Thai diatonic scale, is composed of seven full tones within its octave. These are evenly distributed in equidistant steps and there are no semitones between any of these full tone-steps. Therefore if you play a Thai diatonic scale on any Thai musical instrument from a certain note, taken as a point of departure or key-note, and proceed step by step to its upper octave, and then play another scale, taking the 2nd note as key-note and again proceed step by step to its upper octave, and so on, from the 3rd note, the 4th note, the 5th note, the 6th note and the 7th note, it will be found that the changes of these keynotes never affect the arrangement of their scale steps at all, and that the regular full tone steps prevail throughout. This, as you know, is not the case with the Western diatonic scales. If you change the keynote of the natural scale and take any other note as keynote, sharps and flats will have to come into play, in order that the arrangement of scale steps may fit into the order of the Western diatonic natural scale. For this very

reason, a Thai musical passage, when played on a Western musical instrument is sometimes apt to affect the scale steps of some particular key, and such passage must therefore be so adjusted by the use of sharps and flats. Unless this is done, that passage will not sound Thai. As an example, a fragment of a Thai musical passage taken at random will now be given below :-

(To be played slowly, clearly and evenly)



I just now said that when the Thai diatonic scales change their keynotes, these changes do not affect the arrangement of their scale steps, as the regular full tone steps will still prevail, and supposing that the Western scales had never been tempered and we were still compelled to use the medieval scales, the so-called ecclesiastical or church modes which consisted only of natural notes, the melody played just now would sound quite unnatural, or may I say non-Thai. Only one strange tone makes all the difference, thus :-



You might say “Why do we not transpose the melody a tone lower and use the IONIAN MODE which is a replica of the modern C major scale thus ?”



We may certainly do so to a certain extent, when a musical passage is unconnected with what has already preceded and what is about to follow, but we must not forget that Thai music, although favouring the pentatonic scale, is not always strictly pentatonic, especially in instrumental music. It can move about within its 7-tone scale, and as the position of the notes on the musical staff of the transcribed music is fixed and is meant for performance by Thai musical instruments, it goes without saying that we cannot transpose and change the keys at our pleasure, as this would only result in the music being disconnected and disfigured. Therefore when we propose to use Western musical instruments to play Thai music correctly, we must adhere to the movement of the written part, as closely as possible, and this can be done only by having recourse to sharps and flats of other keys for smoothing out the unnaturalness of certain passage. Such recourse in Western musical technique is called transition or temporary modulation.

In all the Thai music already in Western notation, I have adopted the natural scale only, that is “the Thai diatonic scale”, and it is only when the music is to be played on Western musical instruments; that the accidentals, placed above or below the notes, will have to be taken into account.

After having solved the problem of the notation to be adopted for the different melodic instruments of the Piphat Band, I was confronted with the task of fixing the notation for the rhythmic instruments. Of these the TAPONE gave me a great deal of trouble at the beginning. This instrument is a drum with two drum-heads, and although quite indefinite in pitch, is capable of producing eleven different sound effects. Its rhythm is also most complicated. For this particular instrument, I was obliged to invent special signs to cover all these various sound effects. At last these difficulties were overcome, and I am glad to say that later several of my musicians in the orchestra who took part in taking notations of the Thai traditional music, were able to do this work by themselves.

Thai musical compositions are all in the simple duple time. Compound time is never met in them.



Part II

The Piphat Band

The Piphat Band is divided into two sections, instruments of the Wood-Wind section and instruments of the Percussion section.

The Wood-Wind section is represented by a single instrument of the oboe class called Pi Nai (ปีโน).

The Percussion section is sub-divided into two classes:-

(A) Melodic Instruments with an actual compass of tones of different pitches :-

1. The Ranard Ek (ระนาดเอก).
2. The Ranard Thong Ek (ระนาดทองเอก).
3. The Gong Wong Yai (ฆ้องวงใหญ่).
4. The Gong Wong Lek (ฆ้องวงเล็ก).
5. The Ranard Thum (ระนาดทุ้ม).
6. The Ranard Thong Thum (ระนาดทองทุ้ม).

(B) Rhythmic Instruments :-

(a) The Drum-Class, capable of producing a variety of sound-effects, but having no definite pitch, is represented by the following instruments :-

1. The Tapone (ตะโพน), a kind of hand timpano with drum-heads covering both ends.

2. The Song Na (สองหน้า), a small long drum used in conjunction with other instruments, and also called Poeng Mang (เป็งมาง) when it is differently used for accompanying songs.

3. The Klong-Thad (กลองทัด), a thick large drum.

(b) The Gong-Class, capable of producing certain sounds of a definite pitch, but generally not tuned in such, is represented by the Gong Hooi (ฆ้องหุ่ย) consisting of a set of 3, 5 or 7 gongs of different sizes, and therefore of different pitches. It is, however, not regarded an essential instrument in a Piphat Band, as it is used only while staging certain episodes of the Ramayana.

(c) Metal instruments of indefinite pitch, represented by the following :-

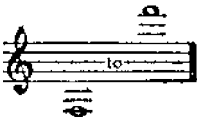
1. The Charb Lek (ฉาบเล็ก).
2. The Charb Yai (ฉาบใหญ่).
3. The Ching (ฉิ่ง).
4. The Mông (โหม่ง), a single medium-sized gong

THE WOOD-WIND SECTION

As already stated, the sole instrument representing this section is the Pi Nai (ปี่ใน). This is cylindrical in form, and made from seasoned rosewood of fine smooth grain. It is about 41.5 cm. in length, and about 4 cm. in diameter, at both ends. The slight bulge in the middle of the instrument is about 13.5 cm. in circumference. The tube or bore is tapered about 8 mm. in diameter at the top-end to about 20 mm. at the bottom-end. The tones are differentiated by means of a series of holes (6 in all) pierced in the body of the instrument and controlled by the performer's fingers. But the embouchure is a very important agency in tone differentiation too.

This is an illustration of the Pi Nai :-



Its compass is from  in the Thai diatonic scale

The tone of the Pi Nai is piercing, not unlike that of a bag-pipe; the low notes sound grunting and rough and the high ones shrill, but in the hands of an expert player it is enchanting.

In a Piphat Band, the Pi Nai is allotted the musical part of not only doubling the principal melody, which is usually assigned to the Gong Wong Yai, but also to embellish it with turns and variations in strict *legatissimo* style.

The reed consists of a small brass, copper or silver tube or staple about 5 to 6 cm. in length. The staple is provided with four small round vibrators made from a selected and dried palm-leaf and fastened by means of silk to one end of the staple. This reed is inserted in the upper part of the instrument. To produce a tone, the performer has to take the whole reed, including even a part of the staple into his mouth, bulge his cheeks to the utmost, force his breath through the vibrators, and thus set up vibrations in the column of air in the tube or bore of the instrument like the wind-bag acting on the reed of a bag-pipe. A great amount of practice is needed to produce good tone in proper pitch, as the force of the breath also regulates the higher and the lower register of the scale, apart from the use of the finger holes.

The fingering is made in the following manner :-

The right hand is kept above the left, with its first, second and third fingers controlling, respectively the first, second and third holes from the top, while the left hand, below the right, controls, with its first, second and third fingers the fourth, fifth and sixth holes, quite contrary to the Western way of handling a wood-wind instrument. The thumbs and the fourth fingers keep the instrument steady while playing.

A Pi Nai player is required to control his breath so that there shall be no break in the wind stream from the start to the finish of a tune like in the playing of a bag-pipe. But a Pi nai player has to inhale and exhale automatically and this is regarded as a special technique to be acquired on this instrument.


THE PERCUSSION SECTION

(A) The Melodic Instruments

1. The Ranard Ek (ระนาดเอก)

This illustration represents the Ranard Ek :-



Its compass is from  in the Thai diatonic scale, with the skip of a fourth between the first and the second resonance bars.

The Ranard Ek is made from various kinds of seasoned hardwood such as Mai Khanoon (ไม้ขนุน) Mai Pradoolai (ไม้ประดู่ลาย) Mai Marit (ไม้มะริด) and sometimes also teakwood (ไม้สัก), some models are artistically and richly carved and inlaid with mother-of-pearl or ivory. It is about 121 cm. in length. The opening on the top of the instrument under the resonance bars is about 20 cm. in width and about 12 cm. in depth. The body of the instrument itself acts as a resonance box.

The resonance bars are made from well-seasoned hardwood with very fine smooth grain, specially selected for this purpose. The kinds of wood so used are Mai Mahad (ไม้มหาด) Mai Ching Chan (ไม้ชิงชัน) and Mai Phayoong (ไม้พะยุง), and sometimes, varieties of the bamboo called Phai Bong (ไผ่บง) and Phai Tong (ไผ่ตง). These bars are about 5 cm. in width and about 1.5 cm. in thickness, but their lengths vary, being graduated from about 39 cm. for the lowest note to about 29 cm. for the highest. The exact tuning to the required pitch is done by sticking under the fore-end of each bar, the end nearer to the player, a composition of scraped lead and bee-wax, softened by heat, so that in a warm state it adheres fast to the bars.

The normal Ranard Ek has twenty-one resonance bars of different pitches, but some instruments have an additional bar for the highest note which is placed at the right hand end. These graduated resonance bars are held together scale-stepwise with very strong twine, running through holes which are bored through both ends of each bar. The set of bars thus strung together, is then suspended on hooks near the top right and left ends of the instrument. It should be remarked that between the first and the second bars there is a skip of an interval of a fourth and two tones within this interval are omitted in this particular instrument. Care must further be taken that each resonance bar be so spaced that its vibration is unhindered by that of the neighbouring ones. The top edges of the instrument under the resonance bars are also padded.

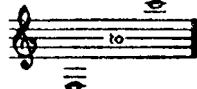
The performer is provided with two beaters with round flat end-knobs, about 4 cm. in diameter, which he firmly holds, one in each hand, and with these, the bars are struck briskly. The length of the beaters is about 42 cm. Two kinds of end-knobs, the hard and the soft, are used for hard or soft tones respectively.

The musical part allotted to the Ranard Ek in a Piphat Band is usually producing variations on the principal melody (which, as a rule, is assigned to the Gong Wong Yai) in octaves, splitting each beat or pulse into semi-quaver figurations.

2. The Ranard Thong Ek or Ranard Lek (ระนาดทองเอก หรือ ระนาดเหล็ก)

This illustration represents the Ranard Thong Ek or Ranard Lek.



Its compass is from  in the Thai diatonic scale.

The same kinds of wood are used in the construction of the Ranard Thong Ek and The Ranard Ek. But their forms are different, the Ranard Ek being boat-shaped while the Ranard Thong Ek is shaped like a slightly tapered box. The length of the instrument is about 98.5 cm., and the opening on the top, under the resonance bars, is about 17 cm. in width and about 14 cm. in depth. The body of the instrument itself acts as a resonance box.

There are twenty-one graded resonance bars made of steel. They are about 27 cm. in length for the lowest note, and about 23 cm. for the highest, while all of them are about 1 cm. in thickness and about 4.5 cm. in width. They are all detachable and are simply laid in scale order across the two lengthwise edges of the open top of the resonance box. These edges are covered with thick soft pads of felt or velvet, and the weight of the metal keeps the bars steady when struck.


The two beaters used are similar to those of the Ranard Ek, but the knobs are somewhat larger, being about 5 to 6 cm. in diameter, and are made of thick buffalo hide. Two kinds of knobs, the hard and the soft are used for producing hard and soft tones respectively.

The musical part allotted to the Ranard Thong Ek in a Piphat Band is the same as that of the Ranard Ek, namely making variations on the principal melody in octaves, splitting each beat or pulse into semi-quaver figurations.

3. The Gong Wong Yai (ฆ้องวงใหญ่)

The following is an illustration of the Gong Wong Yai.



Its compass is from  in the Thai diatonic scale, but its actual pitch is one octave higher.

The frame of the Gong Wong Yai is made from several pieces of thick rattan or cane called Wai Pong (หวายโป่ง) bent into a small oval nearly circular in form. The performer has his seat within the circle. It is about 125 cm. across, from left to right, about 105 cm. across from front to back, and about 24 cm. in height.

The resonance pieces are made from a special metal alloy, in which brass predominates, and in the shape of discs concavely embossed in the middle, similar to the knob of a cymbal but with drooping rims around the discs.

The diameters of these discs are graded, being about 16 cm. in the case of the disc with the lowest tone, and about 12 cm. in the case of the one with the highest. Tuning is done by sticking a composition of scraped lead and bee-wax on the inner surface of the concave embossment. This composition must first be softened by heating. This application of bee-wax also improves their tone.

The instrument employs sixteen discs of different pitches arranged in scale order, the disc with the lowest note on the left and that with the highest note on the right. These discs are fixed to the frame, piece by piece, with cord made from cowhide cut into thin strips and twisted. This cord passes through double holes bored opposite each other drooping rims of the discs.

The performer employs two short beaters, about 22 cm. long, of which he holds one in each hand. These beaters are mounted at the extremity with flat round pieces of thick buffalo hide, 7 to 9 cm. in diameter.

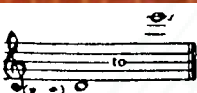
To produce a tone, the blow from the beaters must be directed on the summit of the embossment. There are two kinds of beaters, with hard and soft ends, for hard and soft tones.

The musical part allotted to the Gong Wong Yai is the principal melody. It is therefore an indispensable instrument of the Piphat Band. By bringing both hands into play, the performer has to play his melody, sometimes with the alternate hand in broken octave, and sometimes with both hands together in full octave, in 6th, 5th, 4th, 3rd and 2nd as may be required.

4. The Gong Wong Lek (ฆ้องวงเล็ก)

The Gong Wong Lek is built exactly on the same principle as the Gong Wong Yai but it is somewhat smaller. Therefore it is not necessary to illustrate it here.



Its compass is from  in the Thai diatonic scale, but the actual pitch is one octave higher.

The instrument measures about 102 cm. across, from left to right, about 88 cm. across, from front to back, and about 21.5 cm. in height.

The diameter of the resonance discs is graded, the lowest being about 13 cm. in the case of the disc with the lowest tone and about 9 cm. in the case of the one with the highest. In fact the third disc is but a duplicate of the eighth disc of the Gong Wong Yai, and thus these two discs are in unison.

This instrument employs eighteen discs of different pitches arranged in scale order, but the two lowest discs are never used.* The striking ends of the two beaters are somewhat smaller than those of the beaters used with the Gong Wong Yai.

The method of playing is exactly the same, but the musical part allotted to it is entirely different, in that it may, at times, duplicate the principal melody by progressing melodically in single strain, but normally it has to make its own variations on the melody by inserting gracenotes, such as slides, into the semi quaver figurations with both assisting one another in the design.

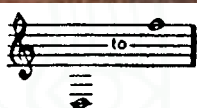
* No reason is given for adding these two dummies, but the writer is of the opinion that they are placed there only for the reason that if these two discs were removed the oval will have to be so reduced that it will make the performer squatting within it quite uncomfortable. Leaving these two dummies out of consideration, the relation between the two instruments, is the same as that between the Western flute and the Piccolo, as both differ in pitch by one octave.

5. The Ranard Thum or Thum Mai (ระนาดทุ้ม หรือ ทุ้มไม้)

The Ranard Thum is the deep-toned Ranard Ek, and is built on the same principle, but somewhat broader and slightly different in shape. The seventeen resonance bars are also larger and longer on account of their being deeper in pitch, about 42 cm. in length for the lowest note and about 34 cm. in length for the highest. The beaters are also slightly larger, but only the soft end-knobs are used.

This is an illustration of the Ranard Thum.



Its compass is from  in the Thai diatonic scale.


The method of playing is exactly the same as that of the Ranard Ek, but the musical part allotted to Ranard Thum is entirely different. This part is very intricate but not complicated, because it plays broadly and leisurely by duplicating, anticipating, retarding, hesitating, or syncopating the principal melody in a hide-and-seek fashion, using sometimes broad skips of large intervals and sometimes moving in conjunct degrees.

6. The Ranard Thong Thum or Thum Lek (ระนาดทองทุ้ม หรือ ทุ้มเหล็ก)

The Ranard Thong Thum is the deep-toned Ranard Thong Ek and is built on the same principle as the latter though it is somewhat larger in size, being about 104 cm. in length. Its body is slightly tapered from about 25 cm. on the left to about 21 cm. on the right. The seventeen steel resonance bars have a length of about 35 cm. for the lowest note and about 30.5 cm. for the highest. The two beaters are somewhat thick and their round flat end-knobs are made from thick buffalo hide. Two kinds of knobs are used, hard for hard tones and soft for soft tones

Here is an illustration of the Ranard Thong Thum.



Its compass is from  in the Thai diatonic scale.

The method of playing this instrument is exactly the same as that of playing the Ranard Thong Ek, but the musical part allotted to it is entirely different. In fact it leans to the style of the Ranard Thum but in a much broader manner.

Appended is a chart showing the pitch and compass of the different melodic instruments in use in a Piphat Band as already defined.

The accidental signs above the notes in the last staff, indicate the possible inflection of tones affected by the different manner of treating certain melodic passages when Western instruments are used instead of the Thai ones. It will be seen that when these inflected tones are arranged in scale order, the Pentatonic scale appears. These tones are shown by the black keys of the Piano, thus:-



It is needless to say that when the true Thai instruments are used, these accidental signs are unnecessary.

(B) The Rhythmic Instruments.

(a) The Drum-class.

1. The Tapone (ตะโพน)

This is the illustration of the Tapone.

The shell of the Tapone is made from a single block of teakwood (ไม้สัก) or Mai Khanon (ไม้ขนุน), which is hollowed out and shaped into a bulging drum. It measures about 48 cm. in length, the bulge being about 106 cm. in circumference. The two ends are unequal, the larger right hand end measuring about 24 cm. in diameter and the smaller left hand one about 22 cm. The right end is covered with parchment made from prepared ox or wild goat skin, and the left end, from prepared calf skin. Both pieces of parchment are made taut by several strips of thin leather drawn lengthwise along the outer side of the drum through the slings sewn around the rim of the parchments with very fine leather strings. On each of the drum-heads, there is a black round mark, painted with lacquer, about 9 cm. in diameter, on which the player is expected to apply a composition of cooked-rice mashed into a thick paste with ashes from the burnt branches of the palm-tree, this is done in order to give the drum its required sound-effects. (The white part of new bread will serve the same purpose as cooked-rice.) It goes without saying that the thicker and weightier the paste, the slower will be the vibrations of the parchment and likewise the deeper the tone. Both sides of the drum can thus be regulated for the desired sound-effects.

The Tapone is always placed on a special stand which keeps it steady during performance. Both hands and fingers are used in the tapping. The Tapone gives eleven varieties of sound-effects in the following manner.



Played with the right hand:-

(1) A brisk light blow on the rim with outstretched fingers, held straight and closely together and withdrawn immediately allowing the drum-head to vibrate freely, gives the long sound called Theng (เทิ่ง).

(2) The same as 1, when the fingers are kept on the drum-head to damp the sound, gives the short sound of Thoet (เท็ด).

(3) The same as 1, when the fingers are withdrawn and immediately after applied again to dampen the sound, gives the short sound called of Tha (ทะ).

(4) A smart blow given with open fingers and full palm of the hand and damped, gives the short sound of Pa (ปะ).

Played with the left hand:-

(5) The same as 1, gives the long sound called Ting (ติง).

(6) The same as 2, gives the short sound called Tuet (ตีด).

(7) The same as 3, gives the short sound called Tub (ตูป).

Played with both hands:-

(8) Light blows on the rims, where those on the left are stronger than those on the right, give the long sound called Phring (พริง).

(9) Smart blows on the rims, where the hands are immediately withdrawn, give the long sound called Phroeng (พร็อง).

(10) The same as 8, where the sound is damped immediately, gives the short sound called Phrued (พริ๊ด).

(11) The same as 9, where the sound is damped immediately after, gives the short sound called Phroet (พร็๊ด).

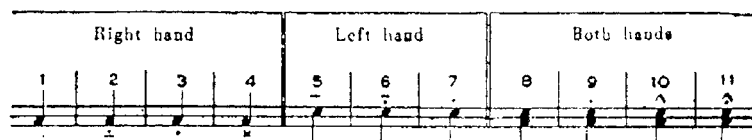
The symbols which represent these various sound-effects are as follows:-

The lower notes represent right-hand play.

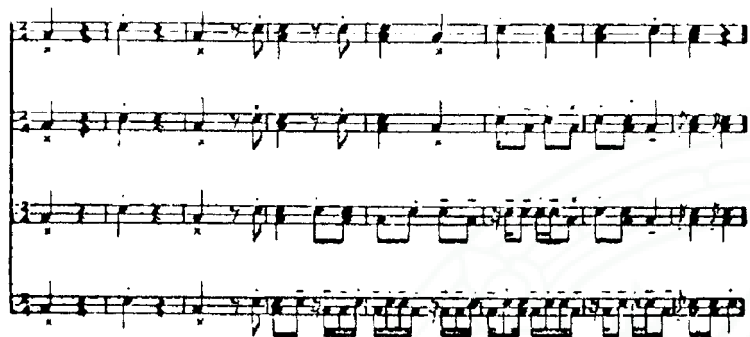
The upper notes represent left-hand play.

The double-notes represent play of both hands.

Above and below these notes are different signs representing different sound-effects as defined, thus:-



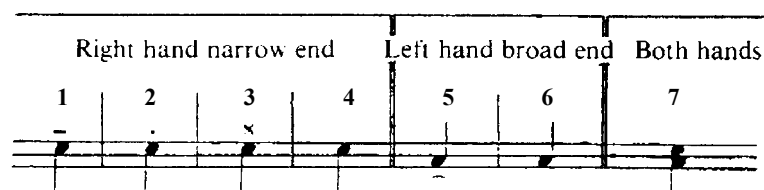
A specimen showing the use of these sound-effects in actual composition, taken from the Tapone part of the Suite Solennelle (เรื่องทำขวัญ) is herewith appended. The 8-bar phrase accompanying the music is made to vary in sound-effects and rhythms thus:-



2. The Song Na (สองหน้า)

Here is an illustration of the Song Na.

The Song Na is built on the same principle as the Tapone but thinner in form. It measures about 55 to 58 cm. in length, the bulge being about 71 to 73 cm. in circumference. The broader end measures about 21 to 24 cm. in diameter and is played with the left hands while the narrower end measures about 20 to 22 cm. in diameter and is played with the right hand, contrary to the playing of the Tapone. The instrument is kept on the lap of the player during the performance. Its sound-effects are also varied and are given below with their respective symbols.



Right-hand beats:-

- (1) sounding Ting (ติง), long.
- (2) sounding Tub (ตูป), short.
- (3) sounding Tja (จ๊ะ), short.
- (4) sounding Nang (หนั่ง), long

Left-hand beats:-

- (5) sounding Thoeng (เทิ่ง), long.
- (6) sounding Thoe (เถอะ), short.

Beats with both hands:-

- (7) sounding Phring (พริง), long

This same drum is also used, but differently, for accompanying songs. It is then called Poeng Mang (เป็งมาง), and it produces the most complicated rhythms with only the broader end which is beaten with the right hand.

3. The Klong Thad (กลองทัด)

Here we have an illustration of the Klong Thad. It is the largest species of drums in use, since it measures about 57 to 60 cm. in length, about 45 cm. across the drum head and about 182 cm. around the bulge. Both ends are of the same size and are covered with thick parchment made from the prepared hide of the gaur. Only one side of the drum is used in playing. Still it has to be propped up in a standing position so as to allow the bottom parchment to vibrate freely when the one at the top is beaten. A thick paste is also applied at the centre of the parchment on the top side, in order to obtain the required sound-effects. This species of drum, is never used singly, but always in two or three of which each has a different, but no definite, exactly tuned pitch. A set to two emits only low and high notes, but a set of three emits medium notes also.



In beating these large drums, thick bamboo sticks 50 to 54 cm. in length, are used for loud notes, but for soft notes, sticks with padded ends like those for the Ranard Thum, but of a heavier type, are used instead. A pair of such sticks are used with each drum and they are held tightly, one in each hand.

The following are the notes emitted by the Klong Thad drum:-

Toom (high)	Toom (medium)	Tom (low)
สูง	สูง	ต่ำ

(b) The Gong-class.

The Gong Hooi (ฆ้องหุ่ย)



This is an illustration of the Gong Hooi; a set of three gongs are made from the same alloy and exactly in the same shape as the discs used in the Gong Wong which have already been described, but they are larger and some are most beautifully decorated. Suffice to say that the smallest one measures about 28 cm. in diameter and the largest about 52 cm. They are very sonorous and have to be played with padded sticks whilst they are kept suspended from a special stand. They are usually used in sets of three, five or seven pieces. As they are used only for certain sound effects, they are not tuned to any definite pitch, although the differences in tone among individual gongs within the set are somewhat graduated. The Gong Hooi is considered merely an accessory in the Piphat Band and is used only when staging certain episodes from the Ramayana

(c) The Metal Instruments of indefinite pitch.

1. The Charb Lek (ฉาบเล็ก)



The accompanying illustration represents the Charb Lek. These are well-known cymbals and need no description. (Charb means cymbals and lek means small, therefore Charb Lek literally means small cymbals). They have a diameter of about 13 to 15 cm. and are used in pairs.

2. The Charb Yai (ฉาบใหญ่)



Neither illustration nor definition is needed for the Charb Yai; suffice it to say that these are the larger cymbals. They have a diameter of 24 to 26 cm. and are also used in pairs.

3. The Ching (ฉิ่ง)



The illustration represents the Ching. They are small, thick and heavy cup-shaped cymbals and have a fine ringing tone, much more resonant than the Western triangle. They are 5.5 to 6 cm. in diameter and used in pairs. They are the time-beater and the time-keeper of the Piphat Band. With their short and crisp sounds, alternating with long ringing sounds denoting the down and up beat of the music, they set the pace for the whole band throughout the performance. In the same manner, they make singers sing in proper tempo. A conductor has no place in the Piphat or in any other Thai band.

The accompanying illustration represents the Mông on its tripod stand.

4. The Mong (โหม่ง)



The Mông is definitely the gong, and it is called so when it is used singly. It is played, whilst hung from the stand, by striking its protuberance with a padded stick. It has a diameter of about 35 cm. It is not tuned to any defined pitch and is used only for sound-effects

Instruments of the Piphat Band and their equivalents among the Western instruments

Thai Instruments	Full	Medium	Small	Approximate equivalents among the Western instruments.
1. Pi Nai	1	1	1	Oboe or Piano accordion or C Clarinet.
2. Ranard Ek	1	1	1	Treble Xylophone with wooden resonance bars.
3. Ranard Thong Ek or Ranard Lek	1	—	—	Treble Xylophone with steel-resonance bars.
4. Gong Wong Yai	1	1	1	Resonophone or Tuba-phone or Glockenspiel.
5. Gong Wong Lek	1	1	—	Celesta.
6. Ranard Thum or Thum Mai	1	1	—	Alto Xylophone with wooden resonance bars or Marimba.
7. Ranard Thong Thum or Thum Lek	1	—	—	Alto Xylophone with steel resonance bars.
8. Tapone	1	1	1	No equivalent.
9. Song Na	1	1	—	No equivalent.
10. Klong Thad	1	1	1	Timpani.
11. Charb Lek	1	1	1	Small cymbals.
12. Charb Yai	1	1	—	Large cymbals.
13. Ching	1	1	1	Triangle.
14. Mong	1	1	—	No equivalent except perhaps tom-tom or gong.

Remarks.

(1) According to prevailing custom there is no doubling of any instrument in any part, but when written music is available, or when Western musical instruments are used perhaps in future such doublings may be made in order to secure balance of tone in the band.

(2) Rhythmic percussion instruments are changeable, mostly according to the arrangements of the music and the purpose of the performance. Thus should the band be required to accompany singing, another variety of drum (the Malayan drum—กลองแขก—)

may be substituted for other instruments of the same timbre. It is however advisable to use the real Thai rhythmic instruments; the triangle, for instance, is too weak to cope with the full band at work.

(3) Thai music is generally played without dynamics and in simple duple time only.

(4) For further particulars, the writer earnestly advises interested persons to refer to the book, “Siamese Musical Instruments” (with English text) written by H.R.H. Prince Damrong Rajanubhab, copies of which are available from the Department of Fine Arts.*

Part III

Thai Music

Thai music is based on a system which is peculiarly its own. It is neither pentatonic nor derived from the Chinese or the Javanese systems as is usually supposed, but it is diatonic with seven different tone-steps to its scale, though the distribution of these tone-steps is not the same as in the Western diatonic scale. During the course of a musical passage, it usually avoids the use of the fourth degree of the scale, and because of the occasional use of the seventh degree, this music appears to be in the pentatonic scale, as in the following popular song, which, according to Western musical technique, stands in the Key of F.

Andante

The musical score consists of ten staves of music. The first nine staves are written in treble clef with a key signature of one flat (F major/D minor) and a 2/4 time signature. The tempo is marked 'Andante'. The music is a single melodic line. The tenth staff is marked 'Xylo.' and contains a xylophone accompaniment. The score is a transcription of a Cambodian air.

SAI-YOK, A Cambodian air

*Also the new on “Thai Musical Instruments” by Dhanit Yupho both Thai and English translated by David Morton, copies of the Fine Arts Department B.E. 2502 and 2503.

Below is another popular song, also in the same key. This song is really pentatonic like the equally popular Scottish song “Auld Lang Syne”, but strange to say, its form is perfect according to the Western technique of musical composition, because it has well balanced phrases with proper antecedent and consequent, and is therefore quite suitable for Western harmonization.

PHAMA PLAENG Adapted Burmese melody

Adagio



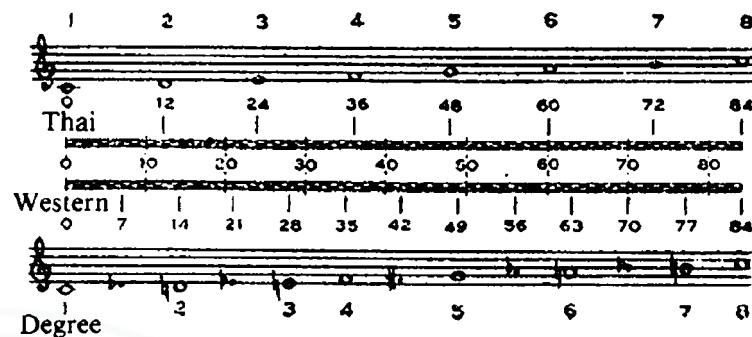
THE THAI MUSICAL SCALE

The Thai musical scale is equally divided within its octave into seven degrees of seven full tones equidistant as regards the different pitches. Had it any semitones, it would have fourteen, but such is not the case. This is merely mentioned here for the purpose of comparison with the Western chromatic scale of twelve semitones to the octave.

The Western chromatic scale is, by equal temperament, divided within its octave into twelve degrees or semitones, each consisting of an interval of a semitone. A comparison between the two scales may be made as follows:-

Supposing we divide the scale, from any fixed note to its upper octave, in to 84 subdegrees, we obtain the following result:-

With the Thai scale consisting of seven tones equidistant at an interval to twelve subdegrees between each, we arrive at the common denominator of eighty-four subdegrees, and with the Western chromatic scale consisting of twelve semitones at seven subdegrees' interval, we come also to the same common denominator of eighty-four subdegrees, as the following diagram will show.



By comparison, it will be seen that when the pitches between tones of the two scales are measured, the results are:-

(1) The fourths and the fifths are near to the mark on both, although not perfectly in harmony with the Western musical system. (It should be borne in mind that the two strings of Thai fiddles are also tuned in a fifth).

(2) The seconds are slightly out of pitch with each other.

(3) The thirds and the sixths are still more so, and in fact they lie halfway between the major and minor third and sixths respectively of the Western musical steps.

(4) The sevenths are most out of pitch with each other, and practically much flatter than the Western leading note.

The peculiar manner in which Thai music is composed is that, as already stated, it avoids the use of the fourth degree of the scale in any passage and uses the seventh degree only occasionally. The effect of such music is then similar to that composed on the basis of a pentatonic scale. But as a rule, in the course of Thai musical compositions, especially those set for instrumental performances a transient modulation (in the sense of the Western musical technique) is effected, calling forth a new tonic centre followed by an appropriate set of tones, also in the pentatonic scale. As a matter of fact such passages do not naturally affect the Thai order of tones when played on Thai musical instruments, but they do affect the pitch to a great extent when played on Western musical instruments. These differences can however be smoothed by making them meet halfway by the use of sharps and flats available on Western musical instruments, as the annexed table will show.

The tonal system of the Thai musical scale

THE ADJUSTMENT

(1) By omitting the fourth and the seventh degrees in the course of a musical passage, the pentatonic scale prevails, and that is the essential feature of a Thai musical composition.

(2) Thai musical composition, in the sense of Western musical technique, is modulative, although as stated above, the change of the tonic centre does not affect the tones of the Thai musical instruments. But this change has such an effect when such music is played on Western musical instruments though all the differences can be smoothed out by the use of sharps and flats available in the Western musical system. The accidentals denote the smoothed tones.

(3) As the Thai musical system is diatonic, as far as the number of tones within its scale is concerned, it goes without saying that the notation of Thai musical compositions can be effected by adopting the Western symbols. Such music, again, can be played on

Thai musical instruments by ignoring the accidentals, sounding, of course, in the characteristic Thai style and it can be played equally well on Western musical instruments by observing the accidentals placed above or below the notes.

(4) Thai music has often been played from scores in Western musical notation, by the military and naval band, to the delight of the Thai public. These bands are equipped only with Western musical instruments. Still the Thai audiences appreciated the music as if it were played on their own musical instruments. It is therefore obvious that Thai music can be rendered on Western musical instruments without misgiving. A Western Xylophone Band with Oboe and the real Thai rhythmic percussion set, can, for instance, be substituted for the Thai Piphat Band, as both bands will then consist of instruments of the same timbre. After editing the necessary Thai classical music such a Xylophone Band may perhaps one day, in the future, be able to perform here as well as in Europe and America.

(5) Thai music is polyphonic as there is no system of harmony in it, and therefore it is contrapuntal. The Gong Wong Yai (ฆ้องวงใหญ่), which may be substituted by the Resonophone or the Glockenspiel, carries the main melody (actually sounding an octave higher than it is written). All the other instruments are merely accessories embellishing the main melody, making variations, doubling, syncopating, etc. In fact each of them accommodates itself as it were, by spinning, weaving or clinging around the main melody, each in its own fashion. These embellishments can be made in various ways and no two musicians can render them alike nor can the same musician play them again in exactly the same way as he did previously. (His play is a sort of improvisation). For this very reason a Thai Piphat Band can never be able to double any instrument again in any part. It is nevertheless necessary for all musicians taking part in the Piphat Band to be able to memorize the main melody in order to be able to do the embellishments properly.

(6) Western musical instruments can be made to play Thai music satisfactorily as has already been stated, but the Thai musical instruments can never hope to render Western musical composition, not even the most simple tune, in an equally satisfactory manner. This is, of course, due to the peculiarity of the Thai scale.

A Piphat Band rendering “God Save The Queen” will not only kill its effect, but reduce it to a grotesque tune, and the “Marseillaise” would fare still worse with its modulation into the minor key in the middle of the tune.

(7) Under no circumstances can Western instruments be mixed up with the Thai since the scale-steps of the two systems of music are different.

Adjustment of the Thai Melodic Passages into the Western Scales

The purpose of modulation in that a melodic passage should fit into a pentatonic scale as much as possible, therefore:-

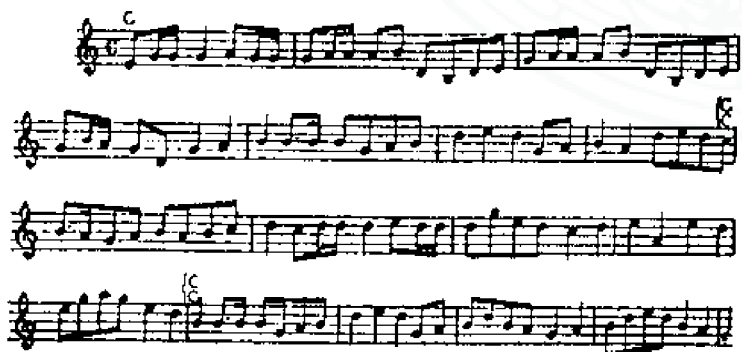
1. The appearance of a fourth in a prevailing key generally suggests a modulation to a sub-dominant key and the fourth, as a pivot note, becomes the first (tonic) of a new key.

2. The appearance of a seventh in a prevailing key generally suggests a modulation to the dominant key, and the seventh, as a pivot note, becomes the third of a new key.

3. It is also possible to take any other note of a prevailing key as the pivot note of a new key, but this is exceptional.

4. It should be observed that though the pentatonic scale has no semitone interval, sometimes such interval cannot be avoided when the music is rendered on Western instruments. It is undoubtedly not quite in tune as far as the Thai conception of tone is concerned, but it is tolerable.

First example, from the melody of the Maha Chai:-



*cf. Musical Suite to be performed during a Ceremony for invoking Spiritual Bliss.

Second example, a fragment from the melody of the Lao Phaen:-



Third example, a melody taken from the last number of the Suite Solennelle (เรื่องทำขวัญ) entitled “Dab kwan thien” (ดับควันเทียน):-



It must be understood that all these inflections of tones do not affect the Thai diatonic scale of seven tones in the least. The Thai musical instruments will play the plain notes, without paying any regard to the accidentals.

THAI MUSICAL SCORE

Here is a score fragment of a Thai classical suite entitled “เรื่องทำขวัญ”. It is a sort of a “Suite Solennelle”, *and is performed during religious ceremonies.

This suite consists of fifteen pieces strung together. It takes approximately one hour to perform, but the suite can be shortened to suit the occasion.

Here is another fragment of a suite used in a ballet performance.

เรื่องทำขวัญ SUITE SOLENNELLE

ปี่ใน
Oboe
ระนาดเอก
Xylophone treble
ฆ้องใหญ่
Xylophone of Glockenspiel
ฆ้องเล็ก
Celesta
ระนาดทุ้ม
Xylophone alto or Marimba
ทุ้มเหล็ก
Resonophone alto
ตะโพน
Small hand tympano
ฉิ่ง
Small cymbals
ฉาบเล็ก ฉาบใหญ่
Medium and large cymbals
โหม่ง
Large Gong

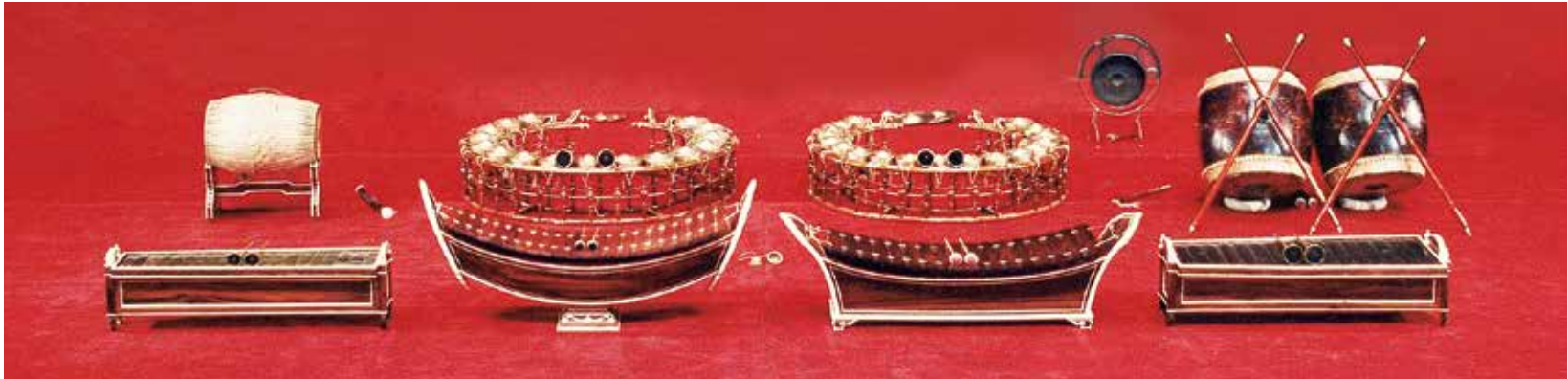
Moderato. $\frac{3}{4}$
Legatissimo sempre

เรื่องสีนวล SRI NUAN-BALLET (REUANG SI-NUAN)*

ปี่ใน
Oboe
ระนาดเอก
Xylophone treble
ฆ้องใหญ่
Xylophone of Glockenspiel
ฆ้องเล็ก
Celesta
ระนาดทุ้ม
Xylophone alto or Marimba
ทุ้มเหล็ก
Resonophone alto
ตะโพน
Small hand tympano
ฉิ่ง
Small cymbals
ฉาบเล็ก ฉาบใหญ่
Medium and large cymbals
โหม่ง
Large Gong

Slow dance rhythm

*The actual sound of the Resonophone or Glockenspiel and the Celesta is one octave higher than written.



Pi Phat Khrueng Yai Ensemble (Grand Pi Phat ensemble of traditional musical instruments.)

THE PITCH

Western musical instruments are tuned to the low pitch or diapason normal. This pitch to the note A, has 439 vibrations per second at 68° Fahrenheit. It does not agree with any tone of the Thai scale, but the note A flat with 415 vibrations to the second, comes rather near to one which is now used in notation to represent the note A. One may say that Thai music in general is pitched between B and Bb of the Western musical scale.

The practice of fixing the pitch by taking a certain number of vibrations to represent a certain note, is not followed by the manufacturers of Thai musical instruments. So each Piphat Band has its own pitch : one band may be a little higher or a little flatter than the other. Its pitch is usually fixed according to the notes of the Pi Nai (ปี่ใน Oboe) since all the other instruments of the band are tuned with the Pi Nai and minutely adjusted by sticking a composition of bee-wax and scraped lead under the wooden resonance bars in the case of Ranard Ek (ระนาดเอก Xylophone) or inside the protuberances of the metal gongs in the case of Gong Wong Yai (ฆ้องวงใหญ่ Glockenspiel) in order to lower their pitch should they be found to be too sharp.

THE TRAINING OF THAI MUSICIANS AND THE PURPOSE OF THE NOTATION

Thai musicians are trained to memorize the main melody of a tune by ears, as there is no system of registering their music in notation. The melodies had been handed down orally from generation to generation until H.R.H. Prince Damrong Rajanubhab took the lead in having traditional Thai music written with symbols. This was done some years ago (about 1930-1931) by a commission, consisting of learned professors of Thai music, setup for that purpose and another appointed for taking notation, with the present writer as the president of both. These commissions did their work with utmost care and have already taken down in notation a great amount of music in scores and parts. The notation comprised not only the main melody but also the intricate embellishments of the different parts, as actually played by the Piphat Band complete with rhythmic percussion parts. Unfortunately these commissions were ordered to stop their work for some unknown reason, and since then the work has been at a standstill. Many of the learned experts of Thai music have died in the meantime and with them went forever the greater part of the music of former times, and no one knows whether the work will ever be resumed and completed, as all the parts are still in manuscript stage, written with pencil on thin paper. Thus it may only be only a matter of time when these manuscripts will naturally decay, because the editing of this music has not yet been contemplated, and a day may come when the nation will regret having abandoned this important work of preserving for posterity the musical inspiration of our ancestors.

EXCERPT FROM AN OVERTURE SHOWING THE MELODIC PARTS OF "PATHOM"

M.M. ♩ = 72

Pi Nai
(Oboe)

Ranard Ek
(Xylophone)

Gong wong-yai
(Glockenspiel)
Sounding one 8va. higher

Gong Wong-lek
(Celesta)
Sounding one 8va. higher

Ranard Thum
(Alto Xylophone)

* To play with both hands in octave throughout.

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