

Indications of the placement of the feet with pins

1. Background

1.1. A paper titled “Interpretations of the placement of the feet” (Misi 2011) pointed out certain differences in the understanding of Kinetography Laban/Labanotation dialects focusing on detailed footprint drawings. The examples presented in the paper were related to seven areas:

P1. Step in place & rotated feet

P2. Touching & place

P3. Step forward, normal distance & rotated feet

P4. Step forward & very small distance

P5. Spring forward & very small distance

P6. Step diagonal & very small distance

P7. Spring forward from a position

Although most of the P1-P7 ambiguities were not solved at the ICKL conference in 2011 (ICKL 2011), the reactions during and after the presentation helped to refine the definitions in the system.

1.2. Billie Mahoney stated that the precise indication of the placement of the feet is as important for step dance as for Hungarian traditional dance (ICKL 2011 p.22). After the presentation she mentioned that it would be good to have kinds of maps of footprints which allow an easy reading of various footprint drawings and the related indications. The main purpose of this paper is to create such maps.

1.3. Odette Blum noted that Kinetography Laban/Labanotation dialects can exist beside each other. In her opinion standardization is not needed, and it is enough to define which dialect is used in a particular work. Therefore the purpose of this paper cannot be more than to set up a self-consistent symbol system which can indicate the placement of the feet relatively precisely with direction signs, space measurement signs and pins on any leg rotation.

1.4. Pins can be the appropriate signs to indicate the placement of the feet precisely. The types of pins used in Kinetography Laban/Labanotation are the following.

a) Black pins. They indicate the relationship of the feet on the floor plane (Hutchinson Guest 2005 p.386, Knust 1997 p.22, Szentpál 1976 p.77), though this meaning has two interpretations (see 2.8 below).

b) Flat pins. They mean slight shifts on the floor plane (Hutchinson Guest 2005 p.393, Szentpál 1976 p.80).

c) White pins. They are rarely used on the floor plane, though their meaning is defined by an ICKL decision (ICKL 1979 p.58).

d) Polar pins (Hutchinson Guest–Kolff 2003b p.70). They are not used for the floor plane.

e) Track pins. They can be used to indicate locomotion on tracks of the floor plane (Hutchinson–Szentpál 1975, Hutchinson Guest–Kolff 2003a p.136).

1.5. The Direction from Body Part, DBP system (Szentpál 1976 p.148, Hutchinson Guest–Kolff 2003a p.42) is also capable of indicating the placement of the feet precisely. This paper does not deal with DBP, because the indications that it uses are complicated graphically.

2. Preparation

2.1. In order to solve the P1-P7 ambiguities the next conventions will be followed.

2.2. Problem P5 and P7 will not be solved, because this paper does not deal with springs. It is admitted that the distance of the steps and the springs has to be calculated differently, just as Mária Szentpál discussed them separately (Szentpál 1976 p.36b).

2.3. Problem P2 is solved in a way that K3 results in the F3a footprint drawing. (The Appendix repeats the related figures with the numbering of the previous paper.) The placement of a touching gesture is the same on the floor as if the movement was a step, regardless of the touching foot part.

2.4. Problem P3 has already been solved (ICKL 2011 p.21). The distance of the feet is calculated regardless of leg rotations.

2.5. Problem P4 is solved in a way that K5 results in the F5a footprint drawing. When the feet touch, that is their distance is zero, e.g. in the F5b footprint drawing, a place direction sign has to be used to indicate the step. The distance of the feet is the distance of the closest points of the feet.

2.6. In problem P7 the F9a and F9b interpretations can be distinguished with using pins, as Billie Mahoney pointed out in the conference (ICKL 2011 p.22). However, it remains a question, what K9 results in without any pin.

2.7. In problem P6 the F8a and F8b interpretations can also be specified by using pins. Mária Szentpál's theory, which applies the pins for open positions (see 5.2 below), will be revisited.

2.8. Problem P1 has to be rethought. The reactions after the presentation at the conference showed that the explanation of the meaning of black and white pins was not understood. (For the historical context, see also 6.2 and 6.3 below.) The problem will be redefined from the viewpoint of pins, how pins are used for closed positions. In kinetogram K2b a side black pin indicates the side relationship. In F2b this relationship is understood to apply to the centers of the feet (Marion 1979). In F2a understanding the relationship is a 1st position, in which two heels or two toe parts touch by definition (Szentpál 1976 p.91).

2.9. K10-K12 and F10-F12 figures show P10-P12 problems which are similar to P1. P10 is P1 rephrased for a sideward open position. P11 illustrates an ambiguity in the case of the 5th position. P12 is P11 rephrased for a forward open position. Obviously forward or side tracks should be interpreted and indicated. Therefore, the application of track pins has to be investigated next.

3. Tracks and track pins

3.1. Using tracks is a basic convention of Kinetography Laban/Labanotation in the case of forward steps. (Hutchinson Guest 2005 p.54, Knust 1997 p.22).

3.2. Mária Szentpál mentioned the application of tracks for side directions too (Szentpál 1965 p.6).

3.3. Ann Hutchinson and Mária Szentpál defined tracks for diagonal directions as well when they introduced track pins (Hutchinson–Szentpál 1975).

3.4. Track pins describe the deviation from the center track. The deviation can only be to the left or right, and it is always determined in relation to the left or right, as if the performer faced to the spatial direction of the movement. Therefore the track pins are abstract signs, that is the graphical form of the track pin can be rotated without changing its meaning (Hutchinson Guest–Kolff 2003a p.144).

3.5. When applying the track theory, it is not clear which of the S1a-S1k signs should be used. There are two plane distributions on legs for track pins in the literature: the first is shown in S2a (Hutchinson–Szentpál 1975 p.2), and the second is shown in S2b (Hutchinson Guest–Kolff 2003a p.140). What is more, the book containing the latter distribution uses different indications for forward and side directions: S1c and S1i are used for forward steps (cf. Hutchinson Guest–Kolff 2003a p.142, fig.19aq), while S1a and S1k are used for crossed side steps (cf. Hutchinson Guest–Kolff 2003a p.144, fig.19au, p.222, fig.Bo). This paper uses the S1c and S1i sign pair, so K13 results in F13a rather than F13b which would follow from F13b'.

3.6. The width of tracks or the distance of tracks is not defined exactly. It is known that “The width of these tracks in stepping depends on the degree of leg rotation. When the feet are parallel they occupy less width on the tracks; when markedly turned out the track appears to be wider” (Hutchinson Guest–Kolff 2003a p.142). Therefore the tracks are narrow due to the parallel feet in figure F13a, but wider due to the outward rotated feet in F14 belonging to kinetogram K14. If the left foot is rotated to a different degree than the right one, which foot determines the width of the track is not defined. Figures F15a-F15c and F16a-F16c show some possible distributions: a) narrow tracks, b) wide tracks, c) mixed track widths, where the new support footprint determines the track width but the floor plane is distributed from the tangent of the old support footprint.

3.7. Track pins cannot be used to solve problems P10 and P12 unless the track concept is defined in the case of leg rotations.

3.8. On the other hand, track pins cannot be used to solve problems P1 and P11, since the place direction cannot have any track line that would be necessary to construe a shift from the track (see 3.4 above). Unless the pin beside the place direction sign is able to represent a direction (see 7.6 below).

3.9. There is another possibility to indicate the F10a or F10b, and the F12a or F12b footprint drawings differently, namely without track pins. These footprint drawings can be inherited from the F2a-F2b and the F11a-F11b closed positions, and black or white pins can be used in their extended meaning (see 5.2 below).

4. Footprint maps

4.1. The sign combination in K17a results in F17 footprint drawing. The heel part of the right foot is indicated with dark color, whereas the heel part of the left foot is empty in the drawing. This footprint drawing shows the placement of the left foot after a step even if it is not with the whole foot, or after a touching gesture even if it is not with the whole foot (see 1.6 above). Thus all of K17a-K17f result in F17. F17 shows the vertical projection of the left foot, if only a part of it touches the floor.

4.2. In the M1 figure the sign combination of the step is drawn into the empty heel part of the left footprint. In this way more than one left footprint and the related sign combinations can be drawn in the same figure. Each footprint and the related movement indication are mutually identifiable. These kinds of figures containing footprints with sign combinations will be called *footprint maps* from now on. With the introduction of footprint maps fewer figures will be required to show the footprints. A figure can contain much more footprints if only the heel parts appear, because the whole foot can be visualized from them (cf. footprint maps M2, M3 and M4).

5. Black pins and positional positions

5.1. The system of closed positions and their indications with black pins are well known in Kinetography Laban/Labanotation (Hutchinson Guest 2005 p.53, Knust 1997 p.22, Szentpál 1976 p.77). Footprint map M2 shows two 1st and two 5th positions and M3 shows four 3rd positions when the direction of both feet is forward. Footprint map M4 contains all the eight previous closed positions.

5.2. Mária Szentpál applied black pins for open positions also (Szentpál 1976 p.79). Their indications were inherited from the indication of the opposite closed positions. These open positions inherited from the opposite closed positions are called *positional positions*. The principle of the inheritance can be explained in the following ways:

- a) the open position is modified so that the placement of the feet is *shifted* to the track determined by the closed position, or
- b) the legs were opened from the closed position to the direction determined by the open position, or
- c) if the legs are closing from a positional position to zero distance while holding the direction determined by the open position, the result is the closed position.

For example, in the case of the 5th positional 4th position

- a) the 4th position is modified so that the placement of the feet is *shifted* to the track determined by the 5th position, or
- b) the legs were opened from the 5th position to the direction determined by the 4th position, or
- c) if the legs are closing from the 5th positional 4th position to zero distance while holding the direction determined by the 4th position, the result is the 5th position.

5.3. In the case of the forward-backward directions footprint map M5 shows two 5th positional 4th positions, i.e. 4th positions opposite 5th positions (Szentpál 1976 p.79) beside two 4th positions of Szentpál. M6 presents the positions narrowed from them.

5.4. In the case of the side directions Mária Szentpál defined the shifts to create the positional 2nd positions, including 2nd positions opposite 3rd and 5th positions (Szentpál 1976 p.79) as shown in footprint map M7. M8 presents the positions narrowed from them.

5.5. In the case of the diagonal directions shifts are also defined (Hutchinson–Szentpál 1975, p.4). The related statement was not correct in the last paper (ICKL 2011 p.22 2.8.1, Misi 2011 p.40 8.6). Footprint map M9 presents nine positional 6th positions, i.e. 6th positions opposite 1st, 3rd and 5th positions.

5.6. Footprint map M10 summarizes the indication of positions that have been presented so far (in M4, M6, M8 and M9). The scale of this map is small enough, since most footprints are drawn in a footprint width distance from each other. Only 10 footprints are empty, and their indications will be examined later (see 7.1 below).

5.7. An even smaller scale map can be created, if further positional positions are inherited, especially from the *small and large 3rd positions*. Footprint map M11 shows the small and large 3rd positions, where the feet are shifted from the placement of the 3rd position towards the placement of the 1st or the 5th position (Szentpál 1976 p.78).

6. Black pins and white pins

6.1. The interpretation of the closed position is quite complex if the legs are rotated. In the following figures the right leg is parallel with the forward direction, and the left leg is rotated outward, exactly at an extreme 90 degrees. Figures M12a-M12c show the 1st and 5th positions, whereas figures M13a-M13c show the 3rd positions with the given leg rotation. M12a and M13a present the use of black pins by Szentpál (see 2.8 above). M12b and M13b indicate the same feet relationship with white pins in accordance with the ICKL decision (ICKL 1979 p.58). M12c and M13c show the black pins in a different meaning, representing the relationship of the centers of the feet (see 2.8 above).

6.2. Mária Szentpál did not want to use black pins to indicate the relationship of the center of the feet when track pins were introduced. “It is agreed that the black pins will retain their old usage and meaning for positions of the feet. Now that they are freed from meaning CL as well, it provides more possibilities in describing positions as people feel them physically.” (Hutchinson–Szentpál 1975 p.3)

6.3. Mária Szentpál prepared reading exercises so that she could prove that a dancer can easily reconstruct heel or toe part relationships (Szentpál 1981 p.3). However, she did not have the opportunity to present her theme in the next conference, since “the majority of the membership does not want to discuss the pin situation any further” (Lange 1981 p.1). Hungarian notation practice still uses black pins on the basis of Szentpál’s theory (Szentpál 1987 p.2).

6.4. This paper follows the ICKL decision (ICKL 1979 p.58) and white pins will be used in line with Szentpál’s approach from now on. Footprint map M14 contains the 1st, 3rd and 5th positions as already presented in M12b and M13b. Two types of pins are used beside the right side direction sign. The white pin indicates the relationship of the feet, while the black pin indicates the direction of the leg crossing as before (Hutchinson Guest 2005 p.40, Szentpál 1976 p.78).

6.5. The indication of the open positions was not defined either by Szentpál in the cases where the legs are rotated differently. These indications can be created now easily on the basis of her theory (see 5.2 above). This paper use white pins for this purpose.

6.6. If black pins mean just the relationship of the centers of the feet, only some open positions can be indicated with them, see footprint map M15.

6.7. In the case of forward-backward directions and the given extreme leg rotation, footprint map M16 presents the positional 4th positions. M17 presents the narrowed versions of these positions.

6.8. In the case of side directions and the given extreme leg rotation, footprint map M18 presents the positional 2nd positions, and M19 presents the narrowed versions.

6.9. In the case of diagonal directions and the given extreme leg rotation, M20 presents the positional 6th positions.

6.10. In the case of the given extreme leg rotation footprint map M21 shows all the positions presented so far (M14, M17, M19 and M20). It is clear that more positions can be indicated this way than in M15.

6.11. It is possible to indicate even more positions, than in M21, since the small and large 3rd positions can be defined in the case of the given leg rotation, see M22, and positional positions can be inherited from them.

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6.12. To cover all the possible leg rotations, nine cases have to be discussed.

R1. both feet are parallel with the forward direction

R2. the left leg is rotated outward, the right foot is parallel with the forward direction

R3. the left foot is parallel with the forward direction, the right leg is rotated outward

R4. the left leg is rotated inward, the right foot is parallel with the forward direction

R5. the left foot is parallel with the forward direction, the right leg is rotated inward

R6. both legs are rotated outward

R7. both legs are rotated inward

R8. the left leg is rotated inward, the right leg is rotated outward

R9. the left leg is rotated outward, the right leg is rotated inward

The first and the second cases have been discussed (see 5. and 6. above). M23 and M24 show their footprint maps using white pins and fewer auxiliary lines. The other cases can be created similarly to these two. M25-M31 present the created footprint maps, which was the main purpose of this paper.

7. Flat pins and track width

7.1. The indications of 16 footprints are not specified with pins in footprint maps M10 and M23. Each of footprint maps M28-M31 contains 16 empty footprint drawings as well. Hungarian notation practice indicates the relevant footprints in M10 by using flat pins, see footprint map M32a. M32b shows the same flat pins beside white pins.

7.2. A problem of using a flat pin in general is that it indicates an approximate rather than an exact distance. When this distance is defined, it is about 3-5 centimeters in the definition of Szentpál (Szentpál 1976 p.80), while in the definition of Hutchinson Guest, the distance is 1-1.5 inches or 3 centimeters (Hutchinson Guest 2005 p.393).

7.3. A further problem of using a flat pin is that it produces a graphically complicated image if placed beside another pin, and makes reading them more complicated than reading only a single pin.

7.4. Since the direction of both feet is forward in the case of R1, track pins can be used to notate a movement on the forward-backward track. This case does not come up against the problem of rotated legs (see 3.7 above). Footprint maps M32c and M32d show the notations of the footprints in M32a with track pins. M32d varies from M32c in the rotation of track pins (see 3.4 above). The indications of the closed positions are missing in these figures, because track pins cannot be used with the place direction (see 3.8 above).

7.5. The F18 footprint drawing is taken from the footprints in M32a-M32d in order to examine the step indication belonging to F18. K18a shows the indication with a black pin and a flat pin, K18b shows the indication with a white pin and a flat pin, and K18c shows the indication with a track pin. If the placement of the feet is interpreted as a positional 4th position (see 5.2 above), it is enough to write only a white pin beside the forward direction sign for the indication. Since F18 can be inherited from several positions, each of kinetograms K18d-K18j is understandable, though reading a certain direction sign and an opposite pin beside each other is unusual (K18h-K18j). To avoid having several indications with the same meaning, a position should be defined from which the positional position can be opened (see 5.2.b above).

7.6. The position in F18 can be inherited from F19, as K18a and K19a are similar in Hungarian notation (see 7.1 above). F19 is not a real closed position but an open 5th position, where the feet are opened to the track. There is no simpler solution to indicate F19 than K19a. The indication variant K19b (Hutchinson–Szentpál 1975 p.3) contains a track pin. The forward shift with a footlength distance is indicated with a black pin, while the side shift with a track distance is indicated with a track pin. K19c is the same kinetogram with the exception that it contains the currently used S1c track pin. Either K19b or K19c shows an equally complicated graphical image due to the two pins as K19a.

7.7. There is another approach. Since F19 is not a real closed position, its proper indication is K19d, or more precisely K19e. The forward shift with a minimal distance is indicated with a forward direction sign and the 6th degree of a narrow sign, while the side shift with a track distance is indicated with a track pin. K19e does not show a simpler graphical image than K19a.

7.8. K19f is a variant of K19a with a white pin. The next part of the paper makes an attempt to create an indication of F19 that is simpler than K19f, by treating F19 as a quasi closed position in-between the 1st and the 5th positions. The system of white pins applied to the placement of the feet could be extended. Figures S3a, S3b, S3c and S3d show four suggestions for a new sign. The form of S3a is composed from the pins used for the 1st and the 5th positions, so it has two strokes as the in-between pins have. S3b has two strokes with different lengths, where the vertical is longer because the indicated relationship is closer to the 5th position. S3c has only one stroke, and its broken end reflects the form of a flat pin or the form of the track pin that is used in figure F13b. S3d also has one stroke, and its broken end reflects the form of the track pin that is used in figure F13a and that has been used in this paper. S4, which depicts the relationship in-between the 1st and the 3rd positions, is already used for the large 3rd position (see 5.7 above).

7.9. Kinetograms K20a, K20b, K20c and K20d present the possible indications of the step belonging to the F19 footprint drawing. Similarly, K21a, K21b, K21c or K21d could simply indicate the movement that results in F18.

7.10. S5aa-S5ad, S5ba-S5bh, S5ca-S5ch and S5da-S5dh present the complete sets of signs of the suggested four sign groups. The first sign group contains four graphical forms, which is sufficient because any of these forms is invariable under diagonal mirroring. Each of the other sign groups contains eight graphical forms. The new elements of the extended pin set cannot be rotated while retaining their meaning similarly to all the white pins, and in contrast with track pins (see 3.4 above).

7.11. The next figures show the applications of the S5aa-S5ad, S5ba-S5bh, S5ca-S5ch and S5da-S5dh signs. In the case of R1 rotation M32b can be replaced with one of footprint maps M33a-M33d. In the case of R6 rotation, M34 contains the indications with flat pins, while footprint maps M35a-M35d present the replacement possibilities. In the case of R7 rotation, M36 contains the indications with flat pins, and M37a-M37d contain the possible variants. In the case of R8 rotation, M38 contains the indications with flat pins, and M39a-M39d contain the possible variants. In the end, the indications with flat pins in footprint map M40 belonging to R9 rotation can be replaced with one of footprint maps M41a-M41d. Since in the cases of R6 and R7 the directions of the feet are parallel and opposite, open 1st positions had to be indicated with the S3bc-S3bf, S3cc-S3cf and S3dc-S3df signs in footprint maps M35b-M35d and M37b-M37d.

7.12. Many positional positions can be defined and indicated on the basis of Mária Szentpál's theory. This paper elaborated these indications for rotated leg cases. The set of white pins were used, which contains 2 place-, 8 main- and 8 in-between-directional signs. It was established that extending the set of white pins with 4 or 8 additional signs, the track-open 1st and 5th positions might be indicated easily with only one pin. The extended white pin set could be a complete pin set to indicate the placement of the feet together with the direction and space measurement signs.

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Bibliography

Hutchinson Guest, Ann (2005): Labanotation. The System of Analyzing and Recording Movement. Fourth edition. Routledge, London, 2005.

Hutchinson Guest, Ann – Kolff, Joukje (2003a): Floorwork, Basic Acrobatics. Advanced Labanotation. Issue 6. Dance Books, London, 2003.

Hutchinson Guest, Ann – Kolff, Joukje (2003b): Spatial Variations. Advanced Labanotation. Issue 9. Dance Books, London, 2003.

Hutchinson, Ann – Szentpál, Mária (1975): The Track Pins. (Pins related to the Center Line of Directions). Paper for ICKL 1975. Manuscript.

ICKL (1979): Technical Report – ICKL 1979.
In: Proceedings of the Eleventh Biennial Conference of ICKL, Chantilly, 1979. pp. 58-61.

ICKL (2011): Technical Report – ICKL 2011
In: Proceedings of the Twenty-Seventh Biennial Conference of ICKL, Budapest, 2011. pp. 15-27.

Knust, Albrecht (1997): A Dictionary of Kinetography Laban. Volume 1-2. Second edition. Instytut Choreologii, Poznan, 1997.

Lange, Roderyk (1981): Answer to Maria Szentpál's Proposal for the Presentation of Pins for Foot Positions. Letter to ICKL Research Panel.

Marion, Sheila (1979): Closed Positions of the Feet. Pins. Paper 2. Paper for ICKL 1979. Manuscript.

Misi, Gábor (2011): Interpretations of the placement of the feet.
In: Proceedings of the Twenty-Seventh Biennial Conference of ICKL, Budapest, 2011. pp. 32-45.

Szentpál, Mária (1965): Position Pins Near Direction Symbols (The Centre Line Problem). The Labanotator No.23, pp. 1-9.

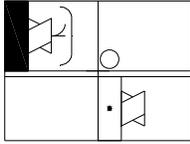
Szentpál, Mária (1976): Dance notation. Laban kinetography. Volume 1. [Táncjelírás. Laban-kinetográfia. I.] English translation. Manuscript.

Szentpál, Mária (1981): Proposal for the Presentation of Pins for Foot Positions. Manuscript.

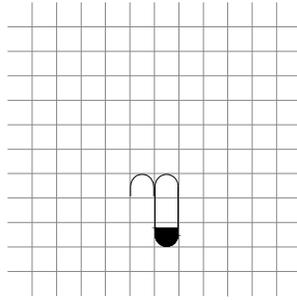
Szentpál, Mária (1987): Specific Conventions, Symbols, Abbreviations in Hungarian Kinetogramms. Manuscript. Distributed at the Fifteenth Biennial Conference of ICKL, Namur, 1987.

Figures

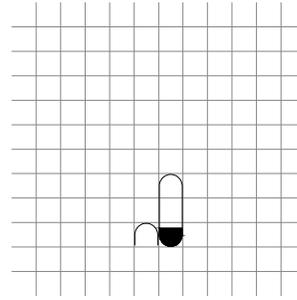
Problem P2:



K3

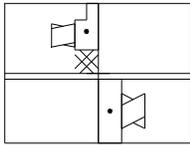


F3a

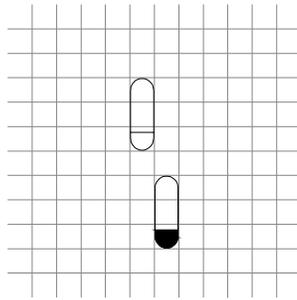


F3b

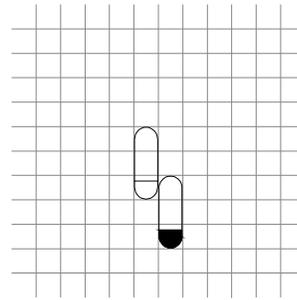
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K5

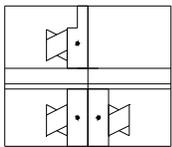


F5a

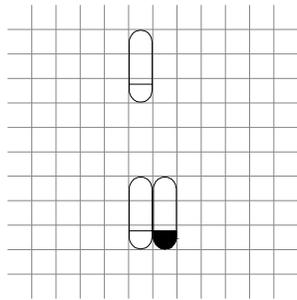


F5b

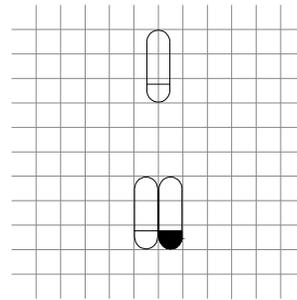
Problem P7:



K9

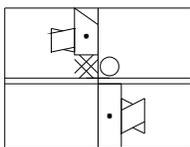


F9a

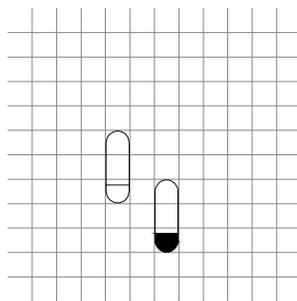


F9b

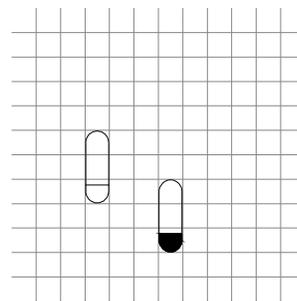
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K8



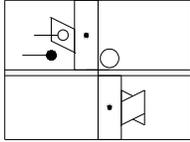
F8a



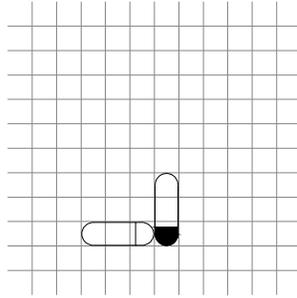
F8b

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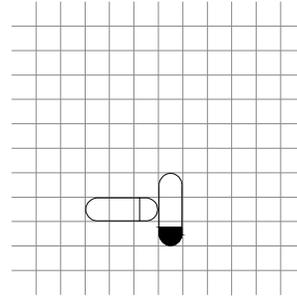
Problem P1:



K2b

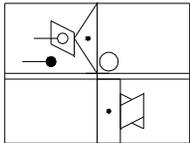


F2a

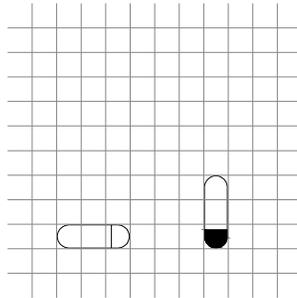


F2b

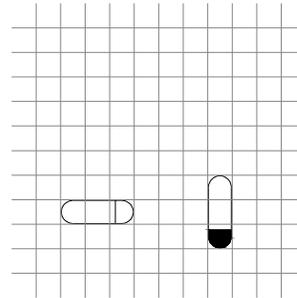
Problem P10:



K10

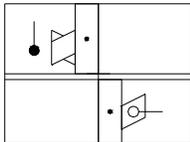


F10a

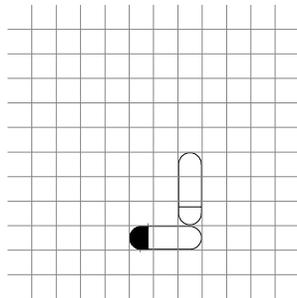


F10b

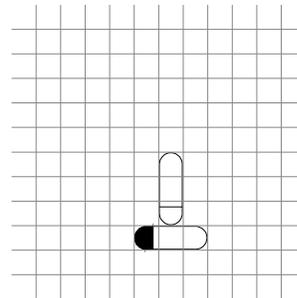
Problem P11:



K11

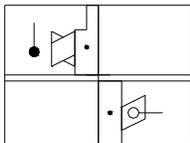


F11a

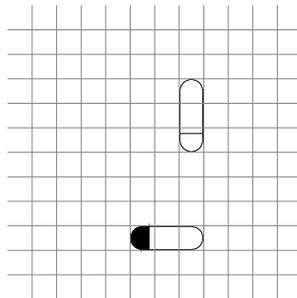


F11b

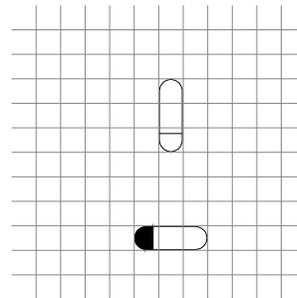
Problem P12:



K12

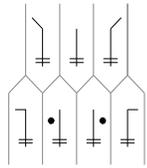
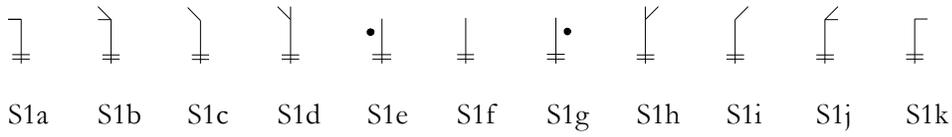


F12a

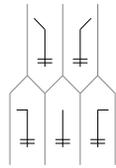


F12b

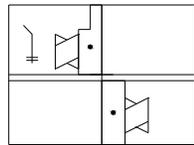
Misi: Indications of the placement of the feet with pins



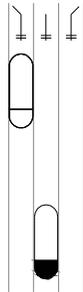
S2a



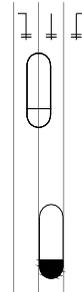
S2b



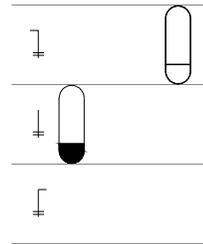
K13



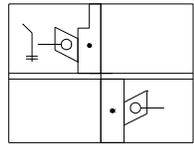
F13a
(cf. AHG–JK 19aq)



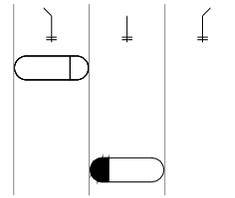
F13b



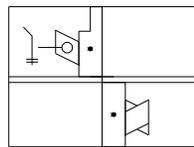
F13b'
(cf. AHG–JK 19au)



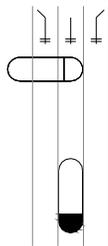
K14



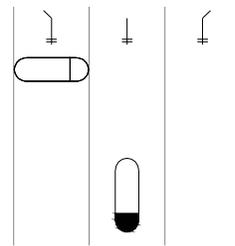
F14



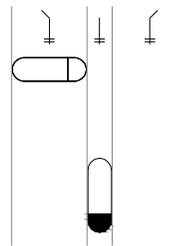
K15



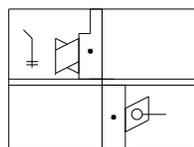
F15a



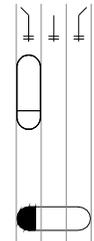
F15b



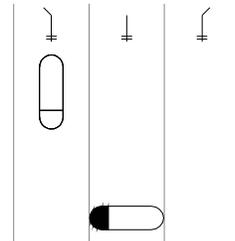
F15c



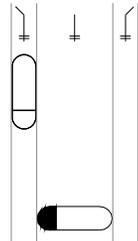
K16



F16a

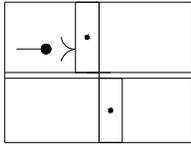


F16b

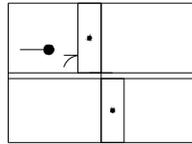


F16c

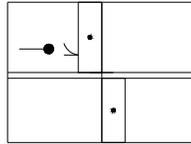
Misi: Indications of the placement of the feet with pins



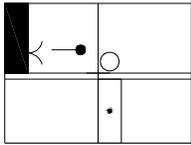
K17a



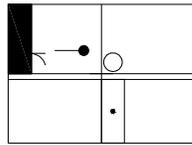
K17b



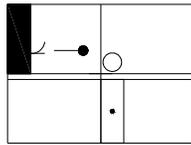
K17c



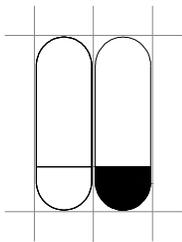
K17d



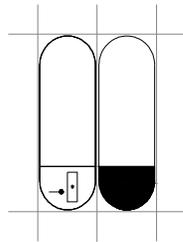
K17e



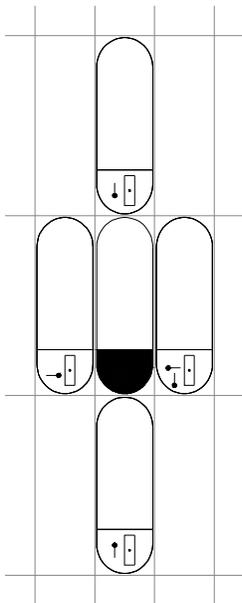
K17f



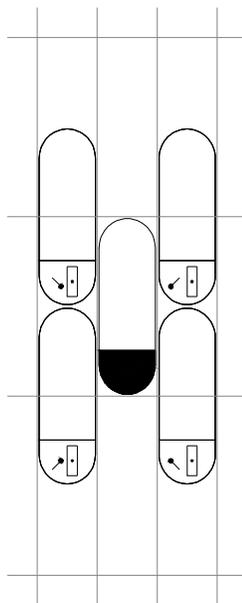
F17



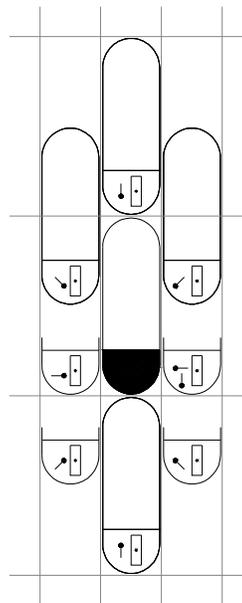
M1



M2

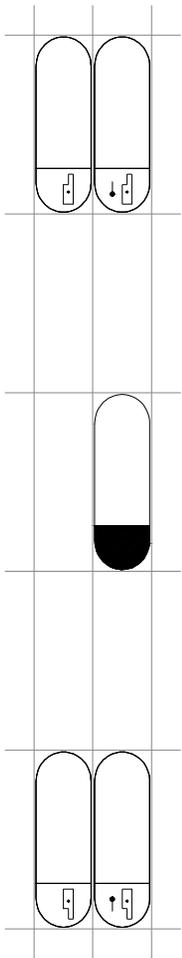


M3

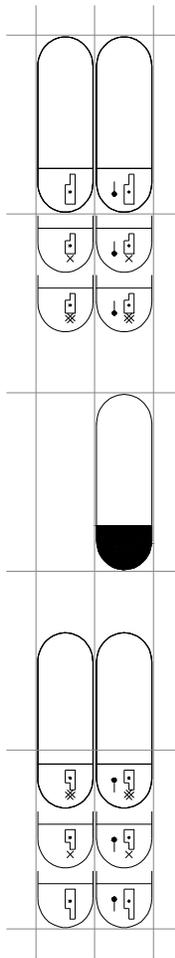


M4

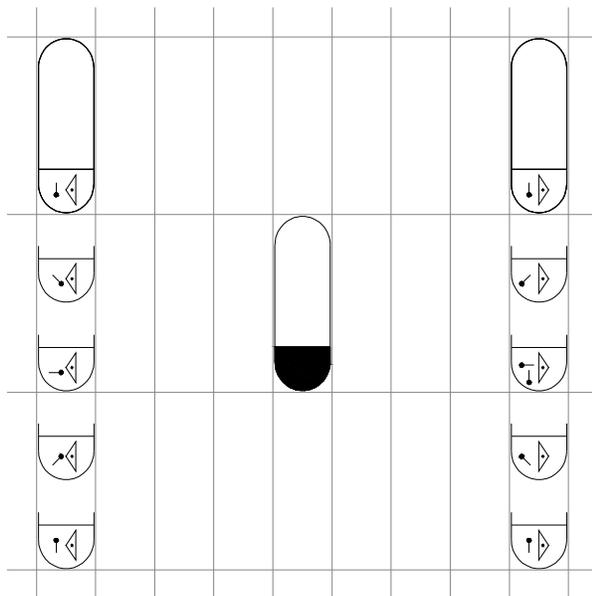
Misi: Indications of the placement of the feet with pins



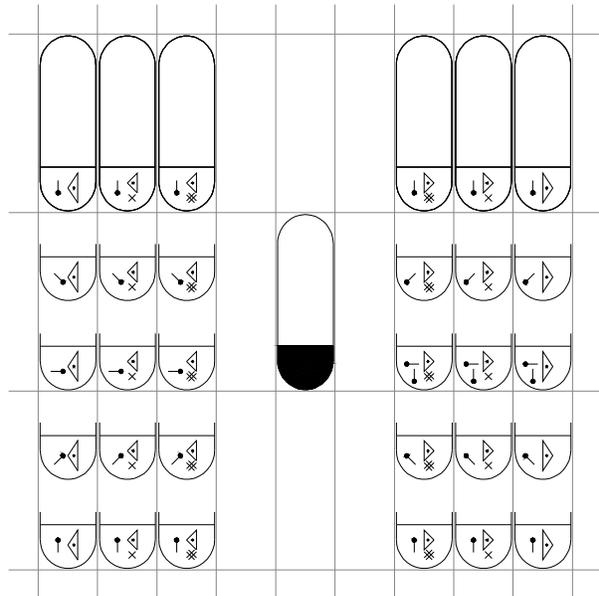
M5



M6

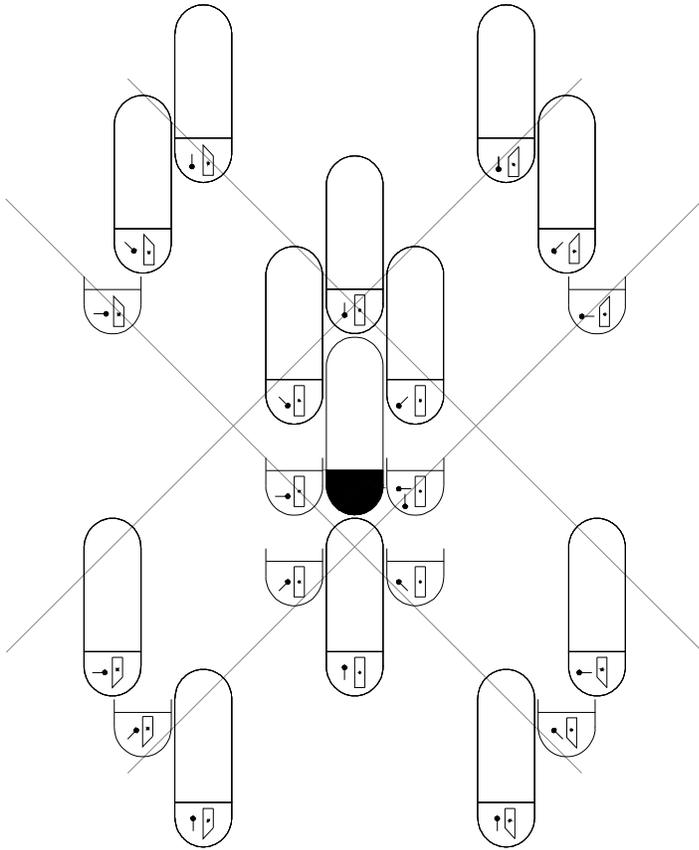


M7



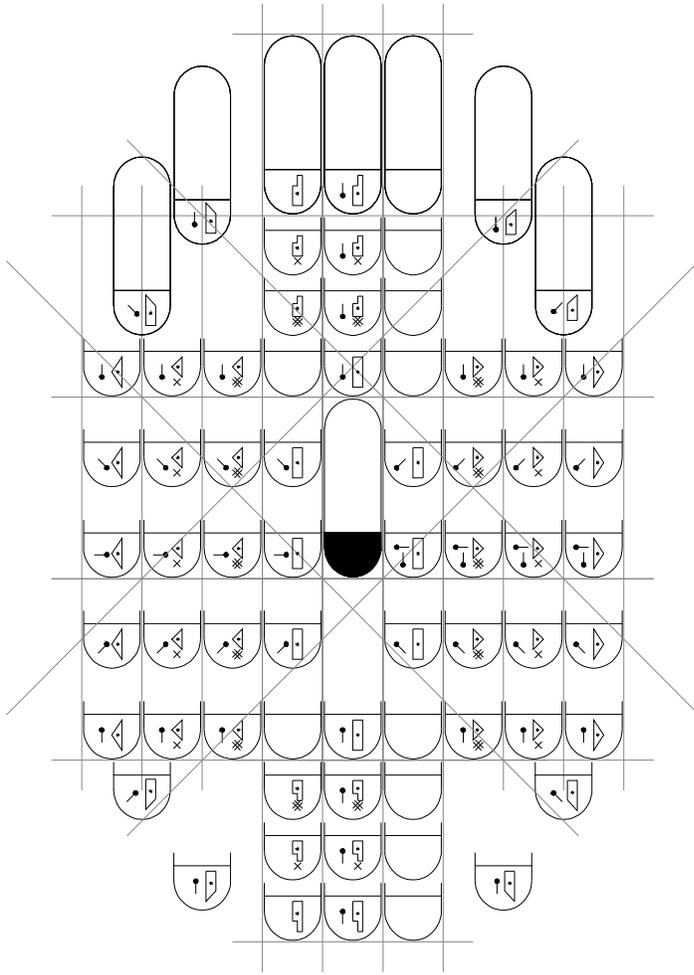
M8

Misi: Indications of the placement of the feet with pins

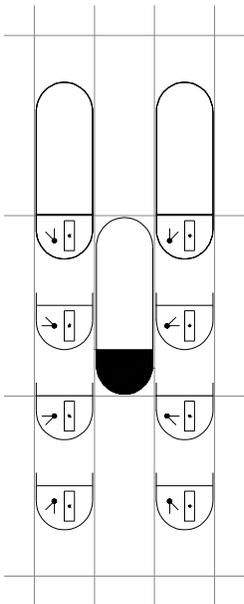


M9

Misi: Indications of the placement of the feet with pins

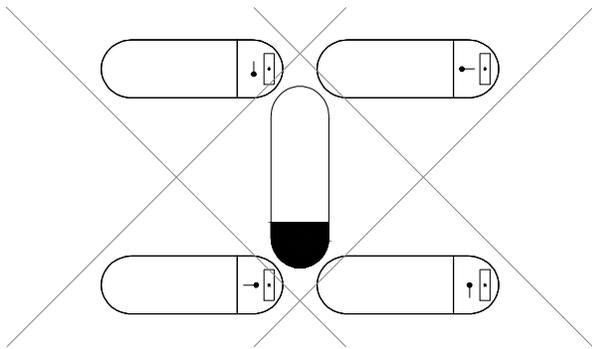


M10

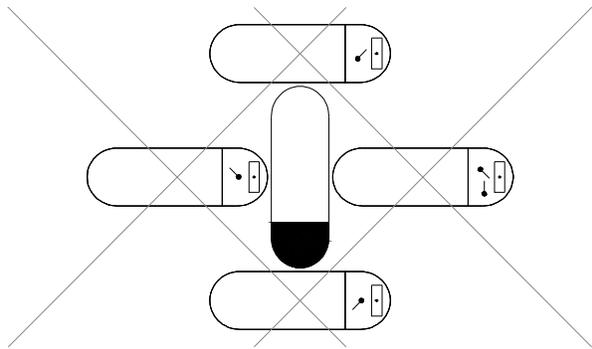


M11

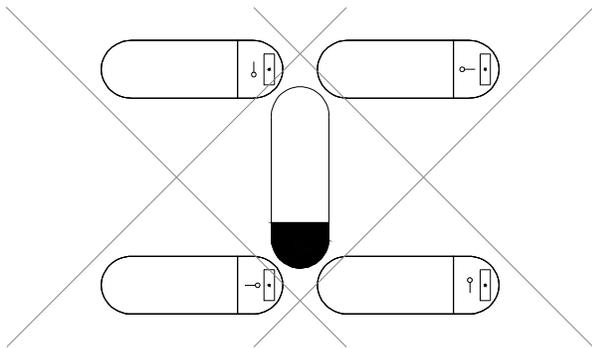
Misi: Indications of the placement of the feet with pins



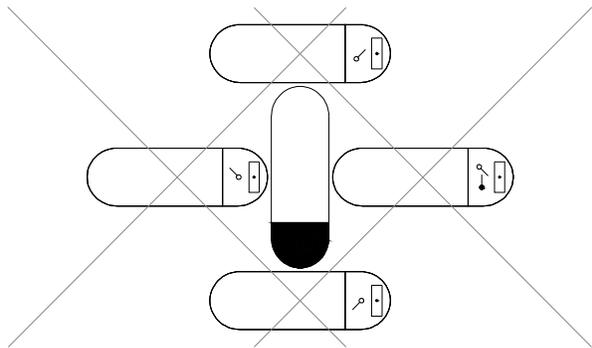
M12a



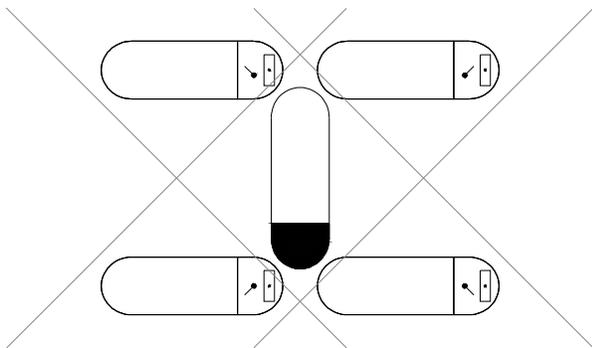
M13a



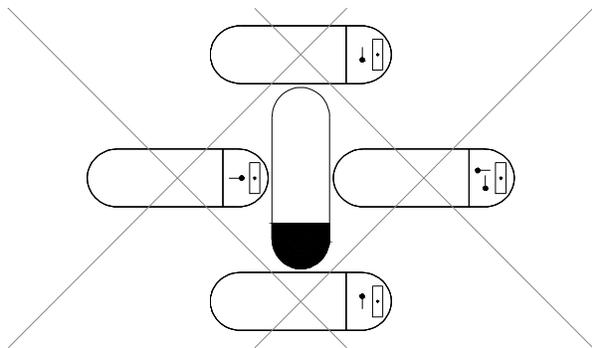
M12b



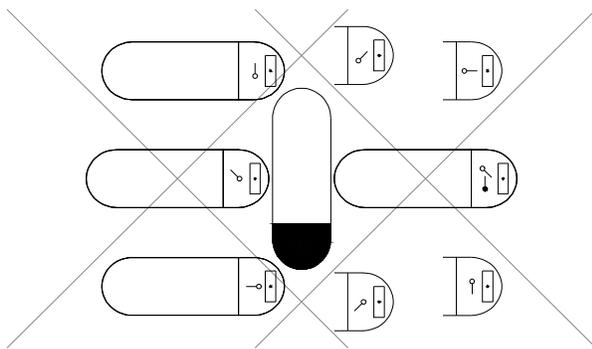
M13b



M12c

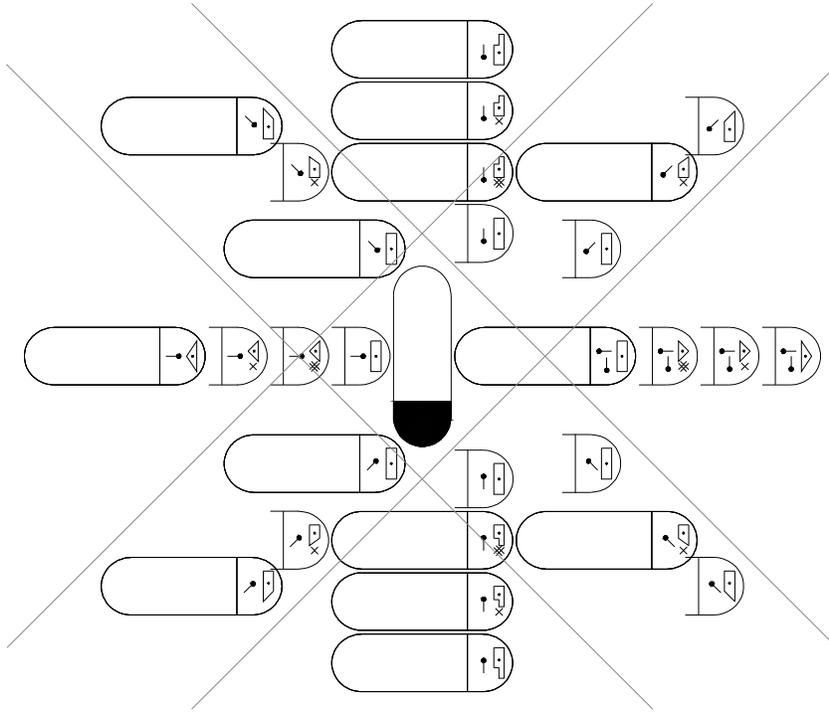


M13c

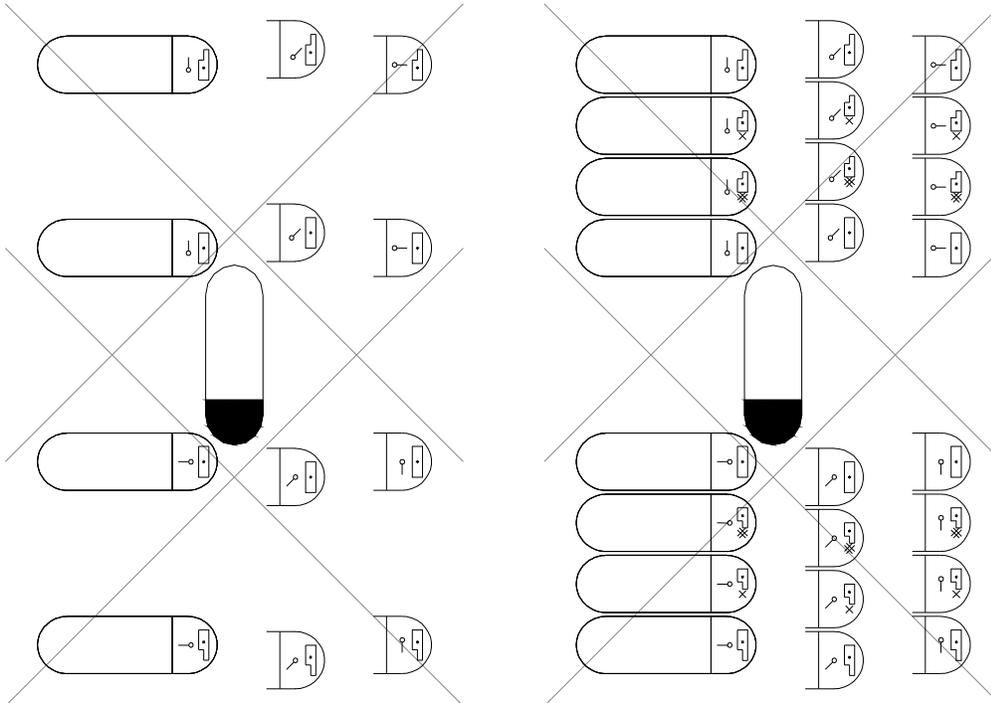


M14

Misi: Indications of the placement of the feet with pins



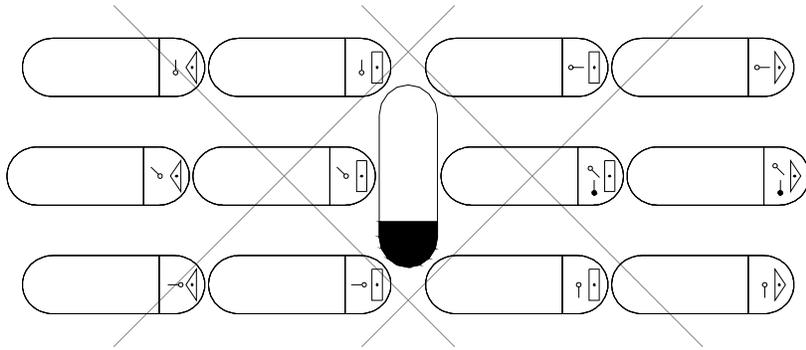
M15



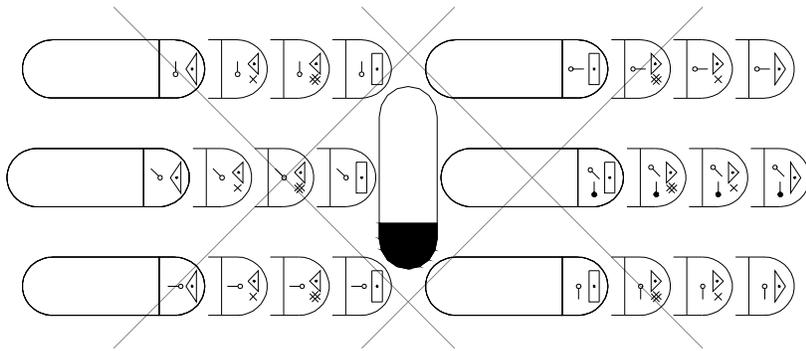
M16

M17

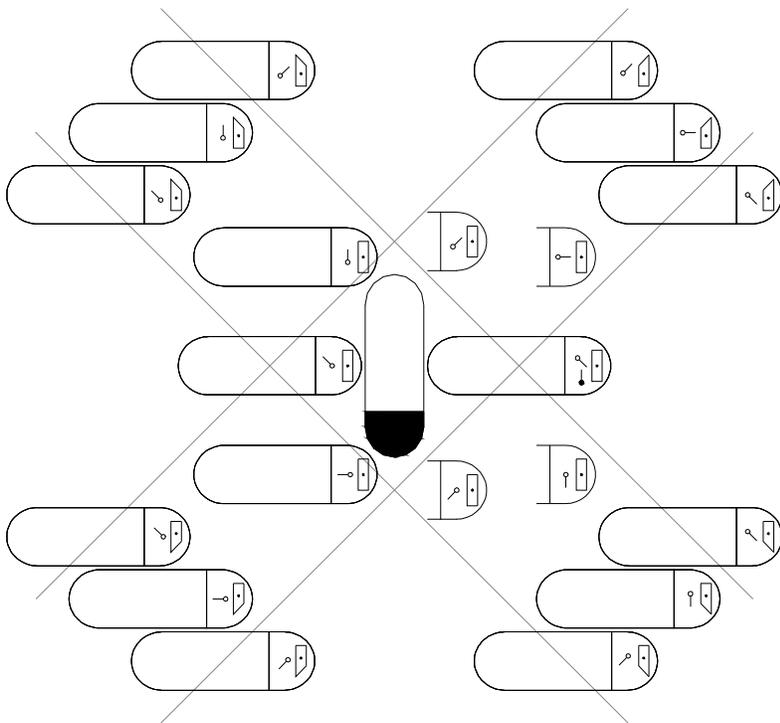
Misi: Indications of the placement of the feet with pins



M18

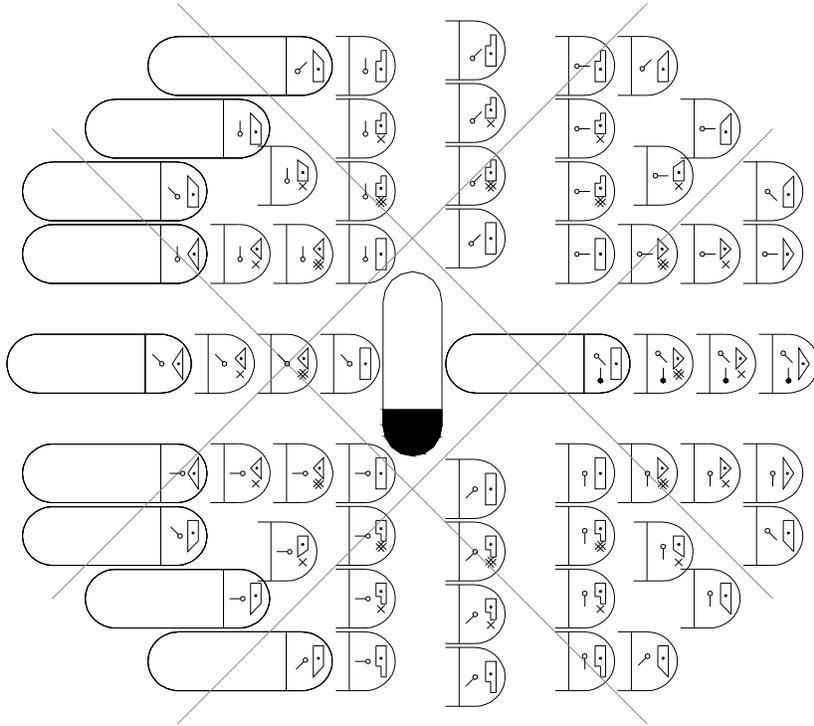


M19

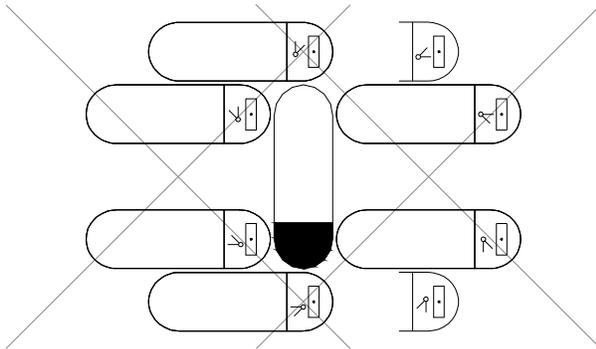


M20

Misi: Indications of the placement of the feet with pins

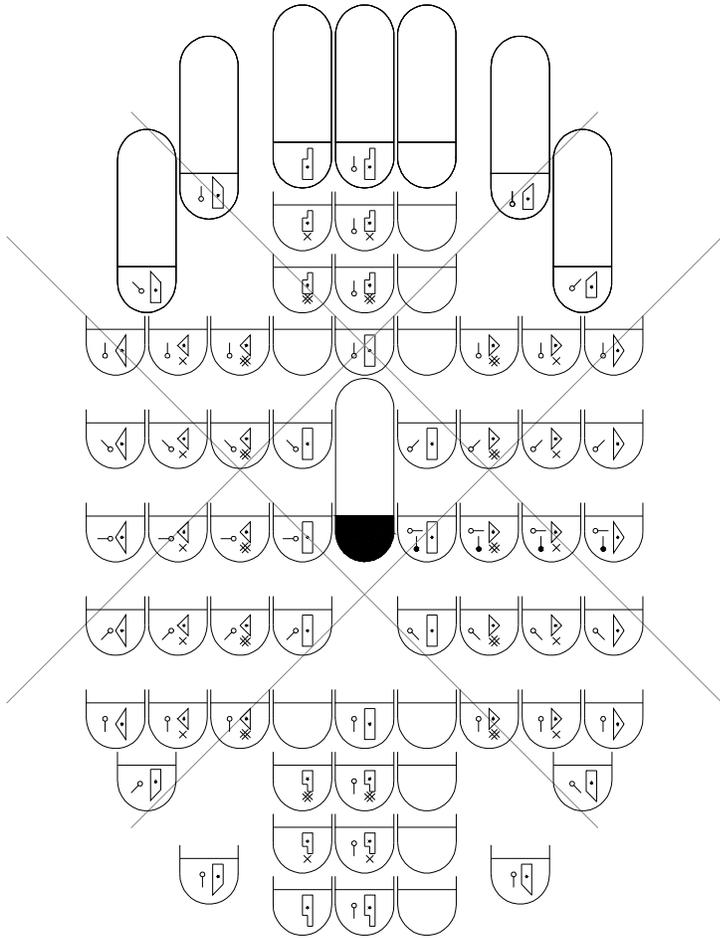


M21

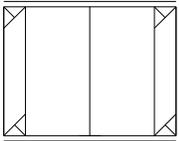


M22

Misi: Indications of the placement of the feet with pins

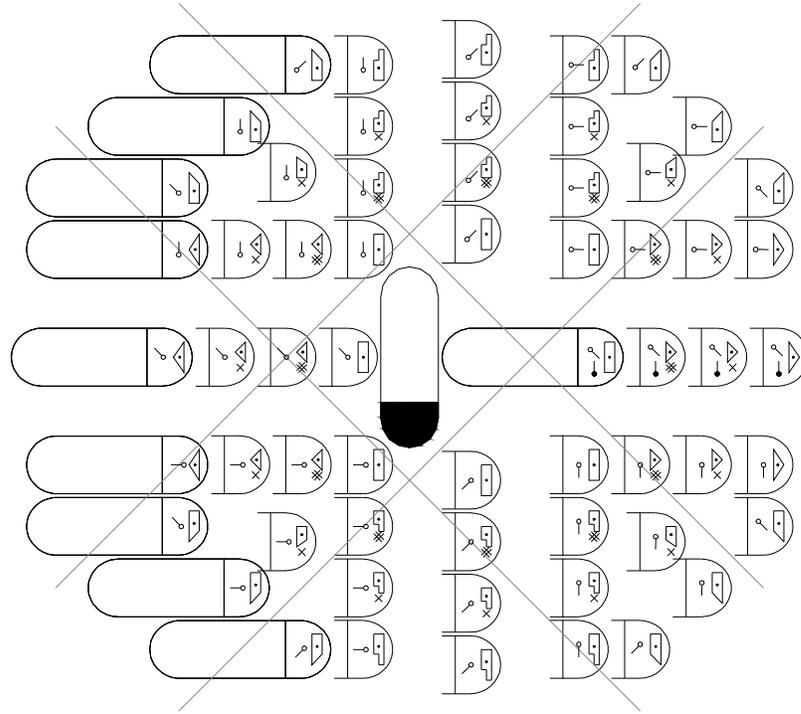


M23

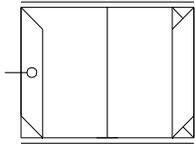


R1

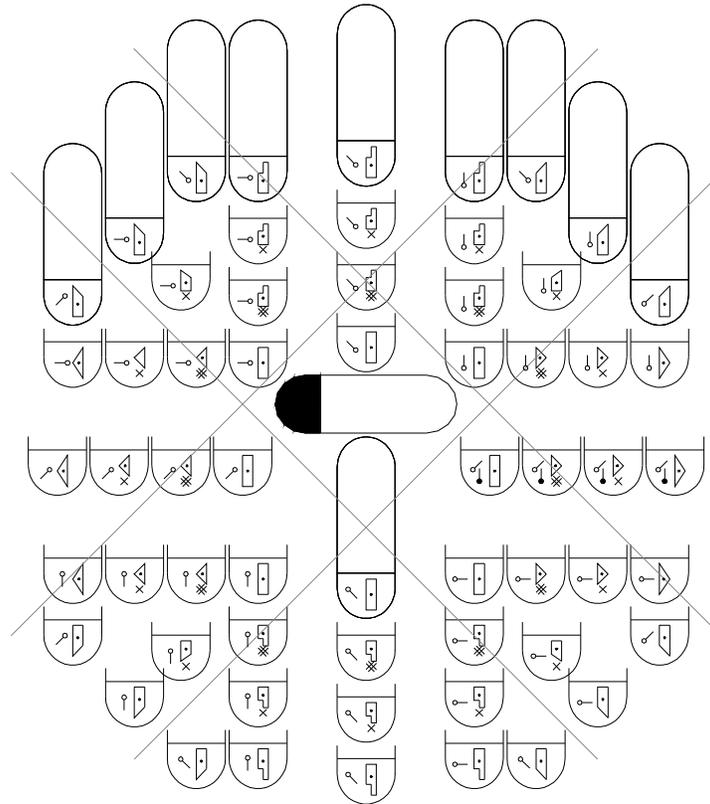
Misi: Indications of the placement of the feet with pins



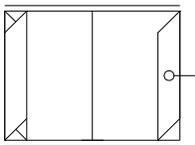
M24



R2

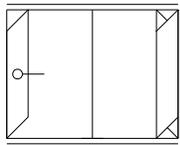


M25

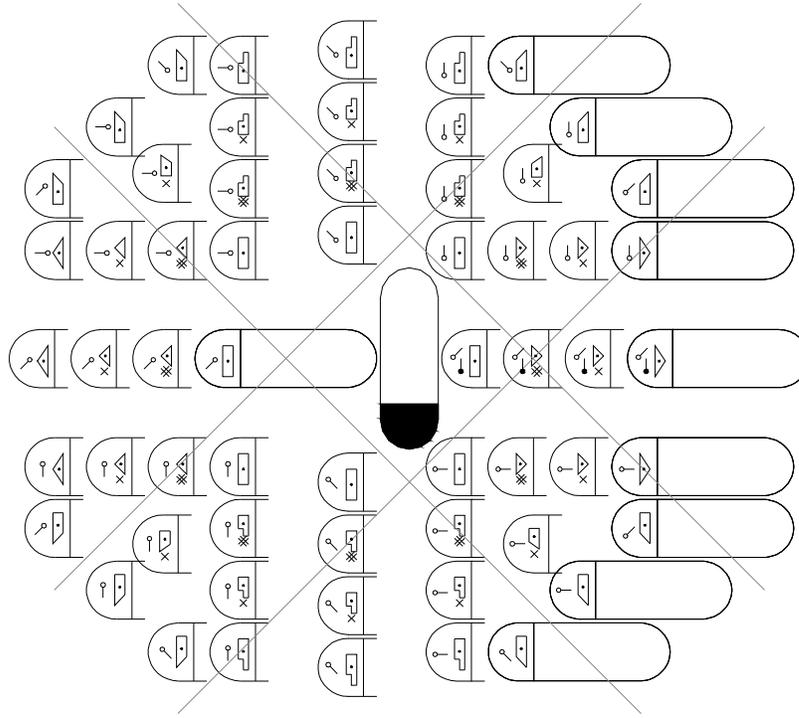


R3

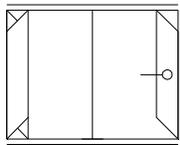
Misi: Indications of the placement of the feet with pins



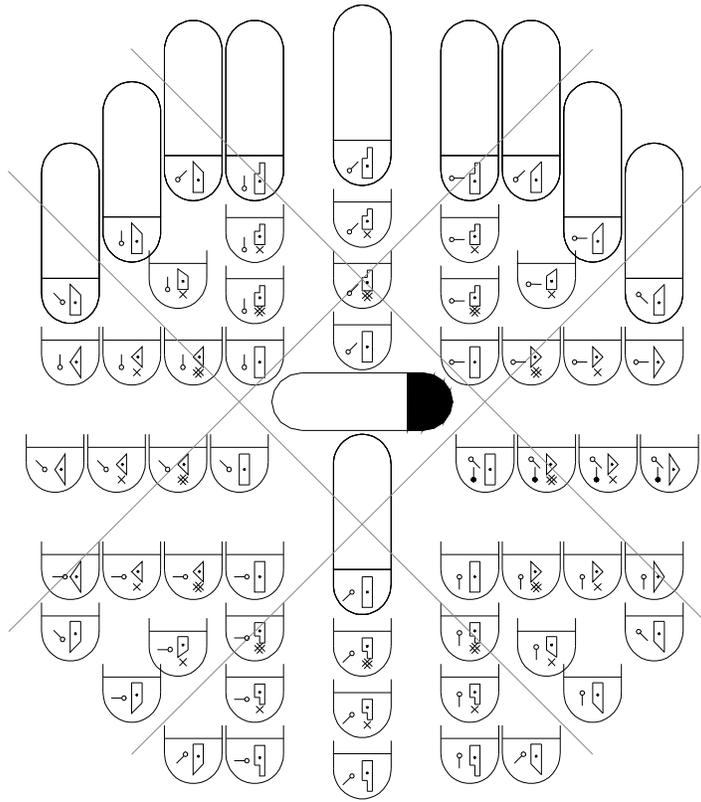
R4



M26

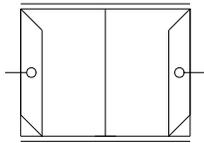


R5

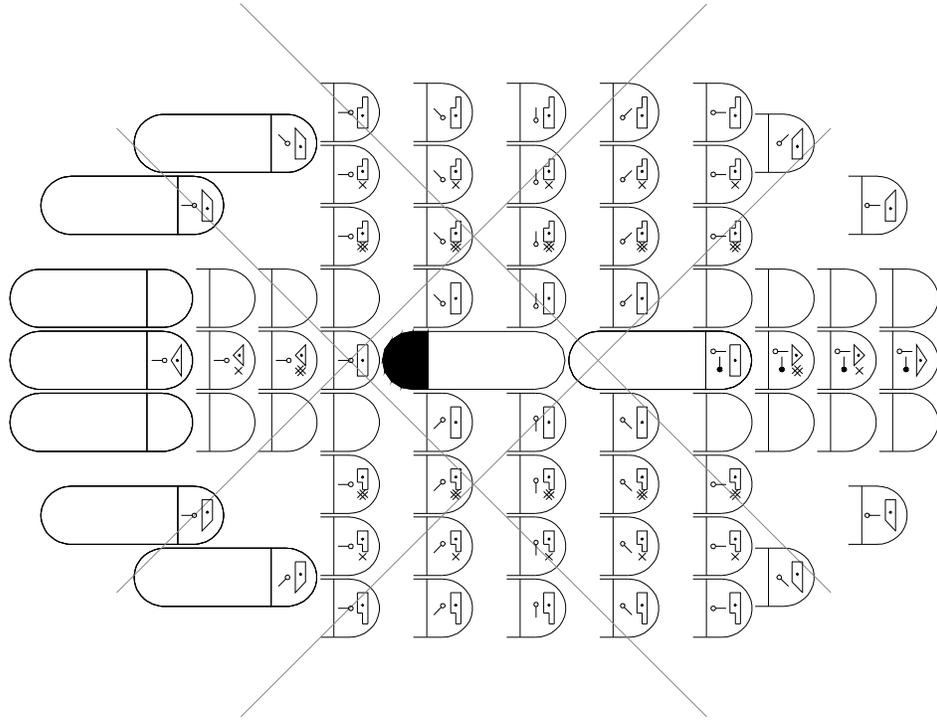


M27

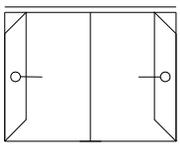
Misi: Indications of the placement of the feet with pins



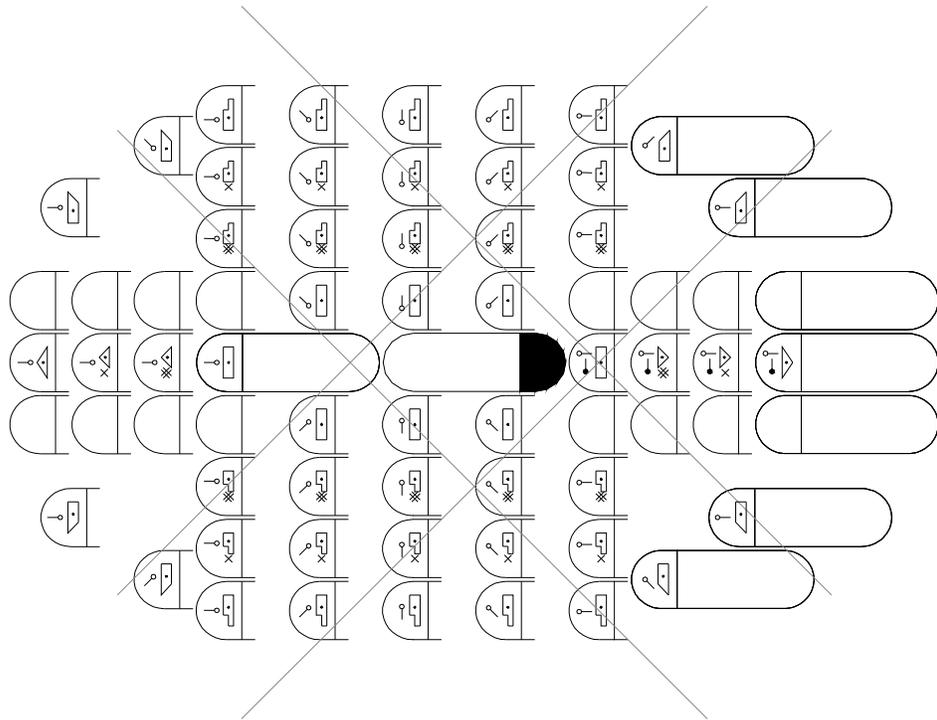
R6



M28

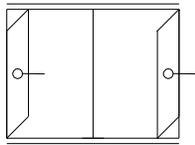


R7

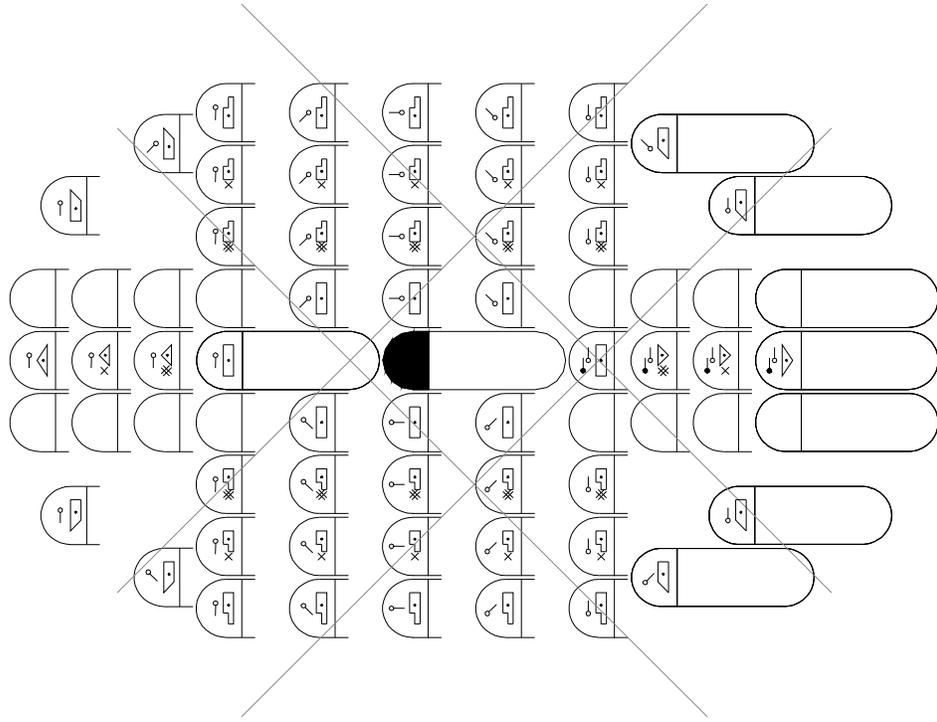


M29

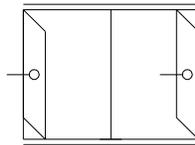
Misi: Indications of the placement of the feet with pins



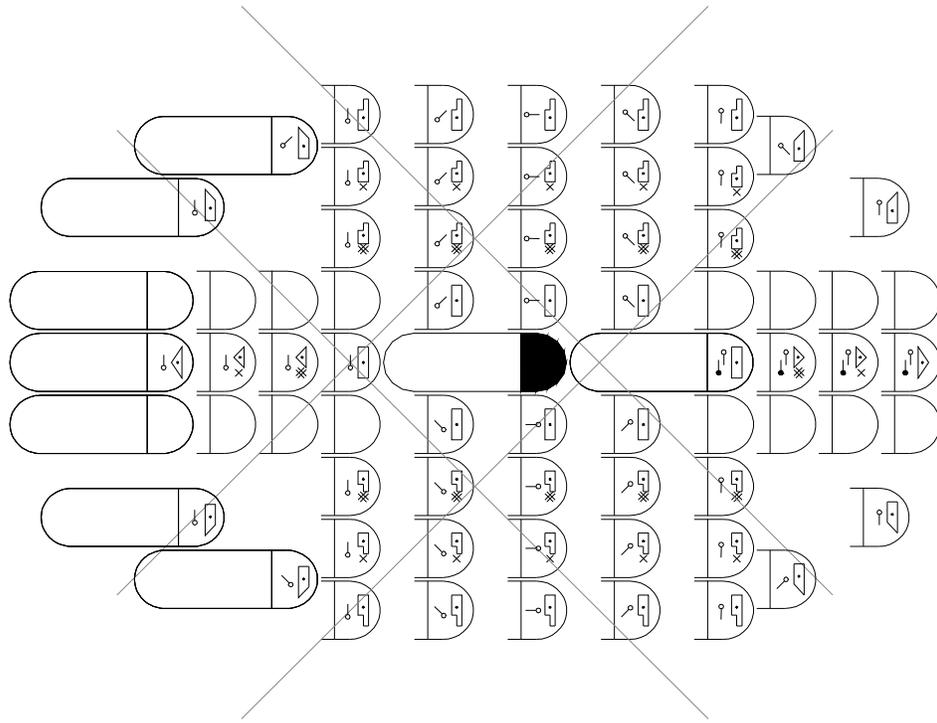
R8



M30

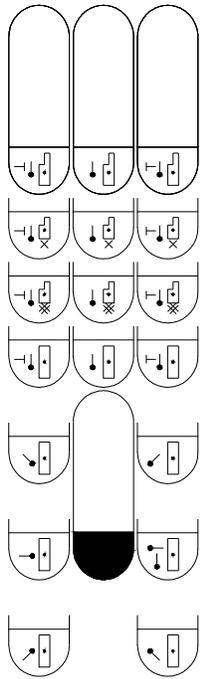


R9

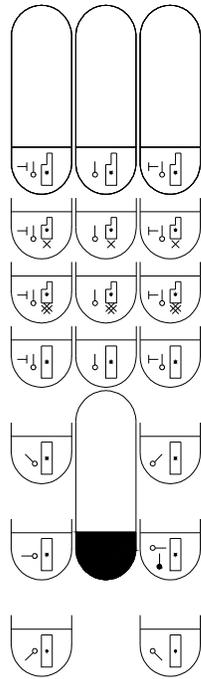


M31

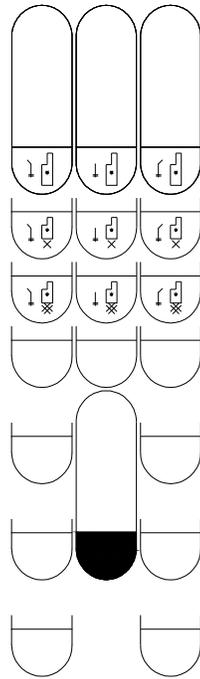
Misi: Indications of the placement of the feet with pins



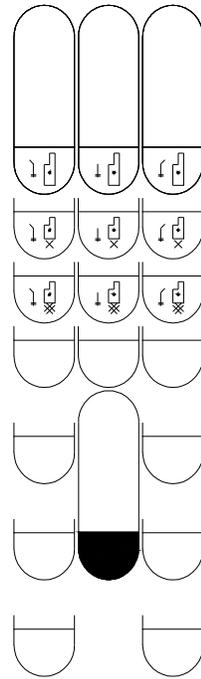
M32a



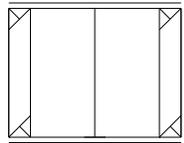
M32b



M32c

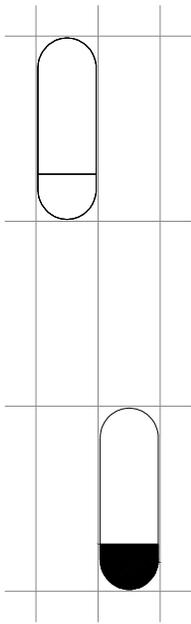


M32d

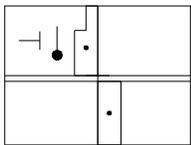


R1

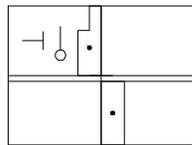
Misi: Indications of the placement of the feet with pins



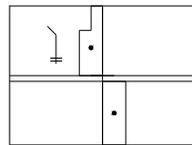
F18



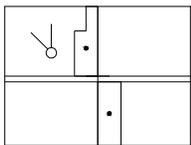
K18a



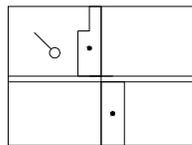
K18b



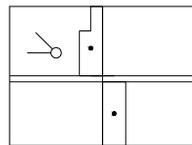
K18c



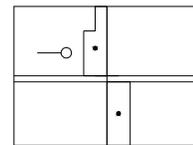
K18d



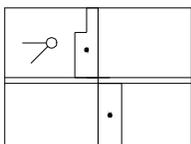
K18e



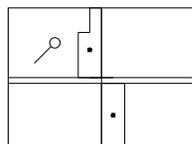
K18f



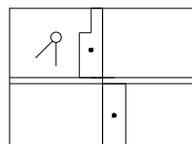
K18g



K18h

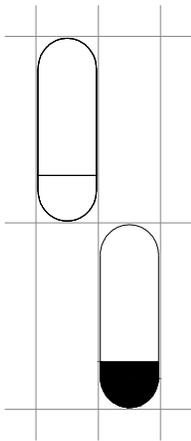


K18i

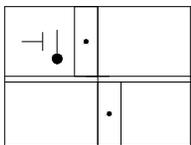


K18j

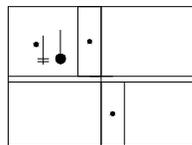
Misi: Indications of the placement of the feet with pins



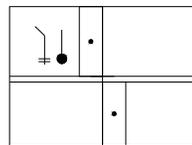
F19



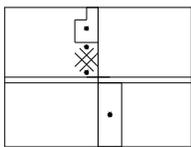
K19a



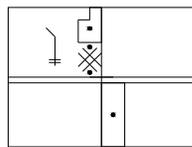
K19b



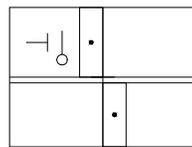
K19c



K19d



K19e



K19f



S3a



S3b



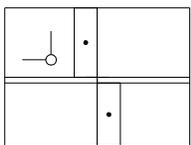
S3c



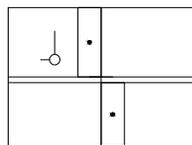
S3d



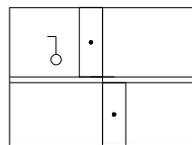
S4



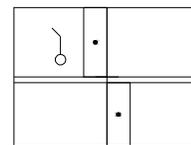
K20a



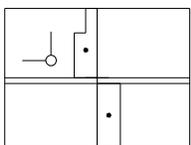
K20b



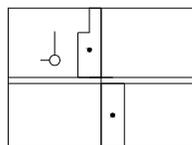
K20a



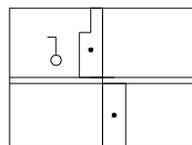
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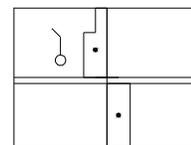
K21a



K21b

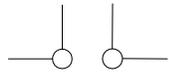


K21c

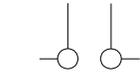


K21d

Misi: Indications of the placement of the feet with pins



S5aa



S5ab

S5ba



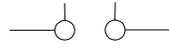
S5ca

S5cb



S5da

S5db



S5bc

S5bd



S5cc

S5cd



S5dc

S5dd



S5be

S5bf



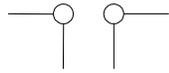
S5ce

S5cf



S5de

S5df



S5ac



S5ad

S5bg

S5bh



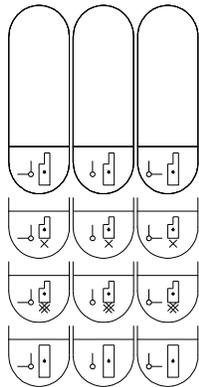
S5cg

S5ch

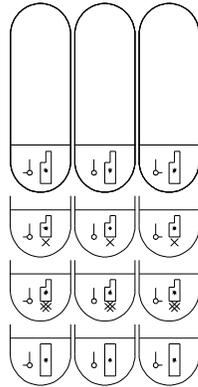


S5dg

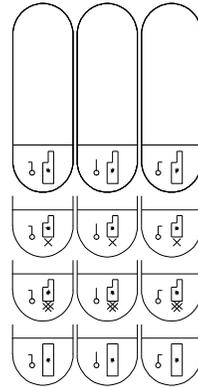
S5dh



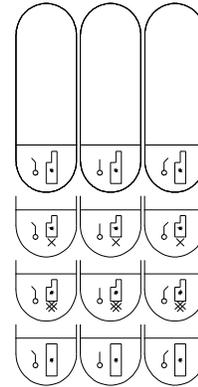
M33a



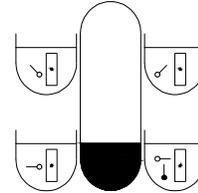
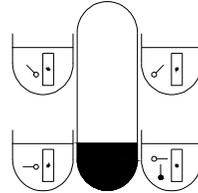
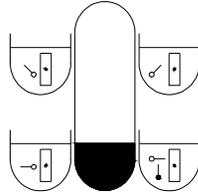
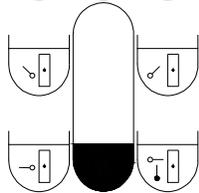
M33b



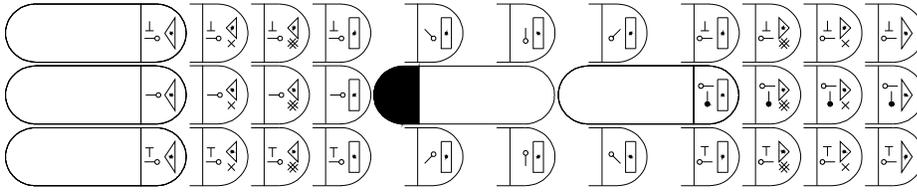
M33c



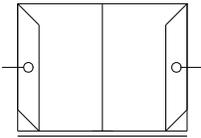
M33d



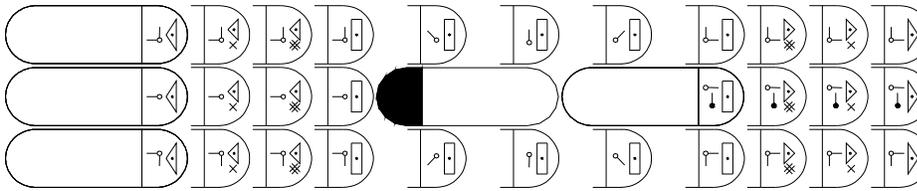
Misi: Indications of the placement of the feet with pins



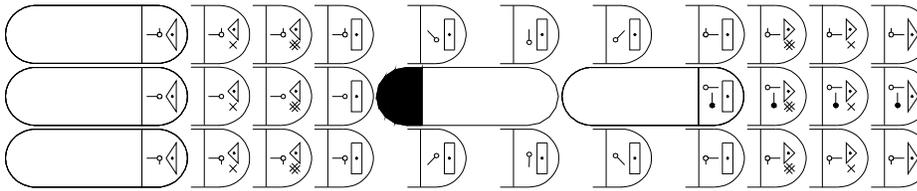
M34



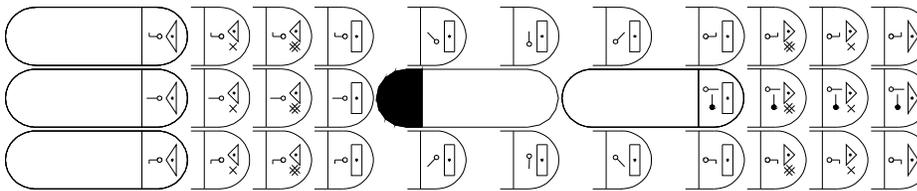
R6



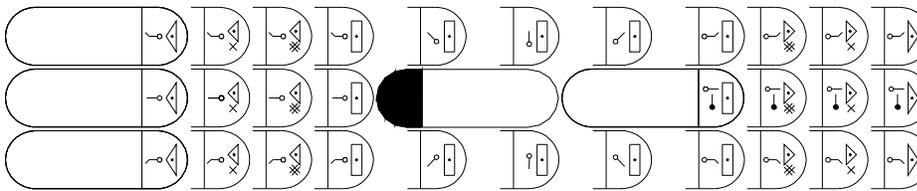
M35a



M35b

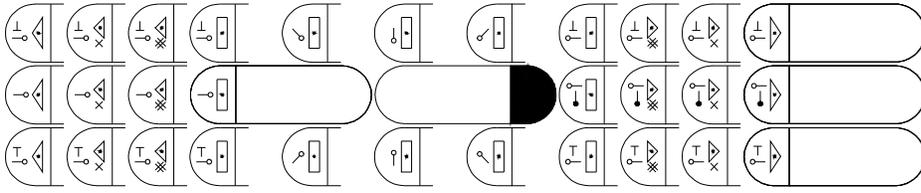


M35c

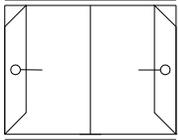


M35d

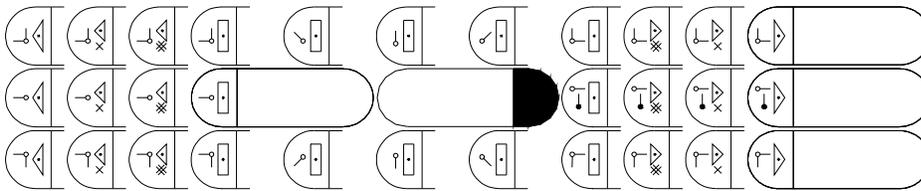
Misi: Indications of the placement of the feet with pins



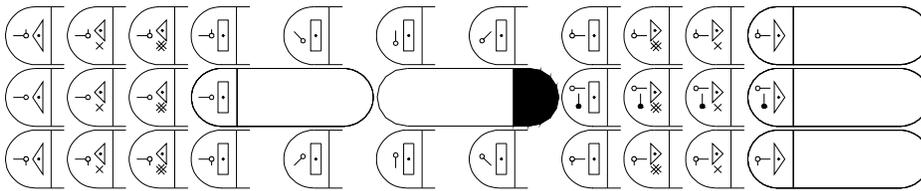
M36



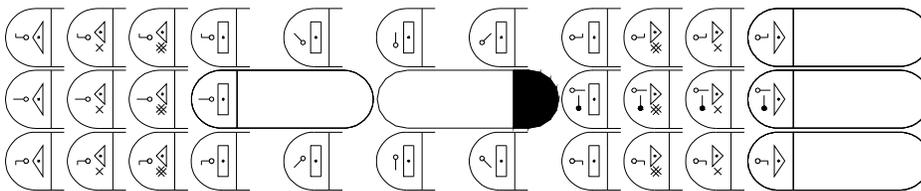
R7



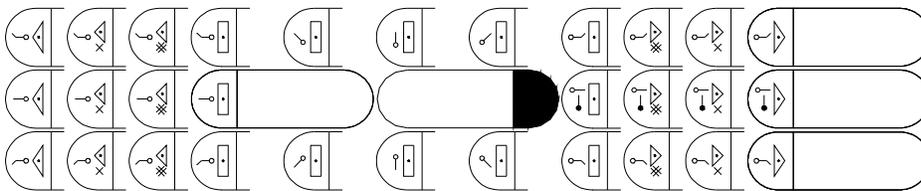
M37a



M37b

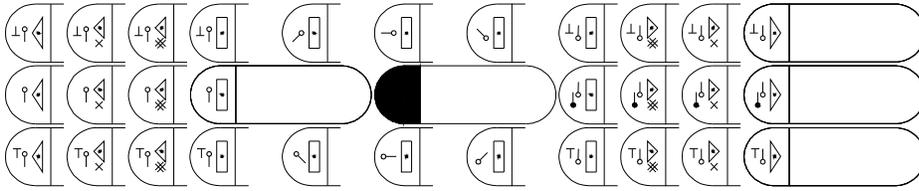


M37c

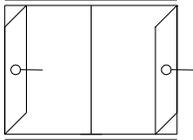


M37d

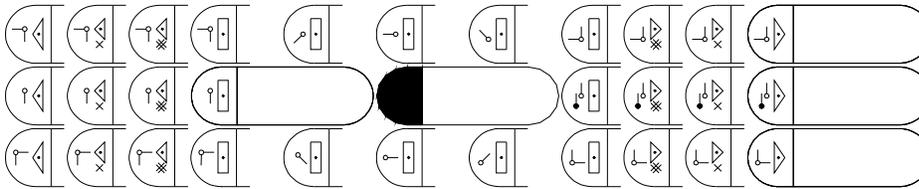
Misi: Indications of the placement of the feet with pins



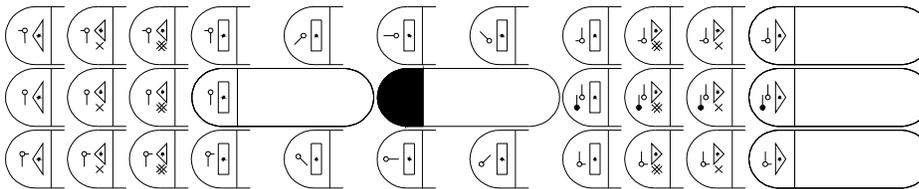
M38



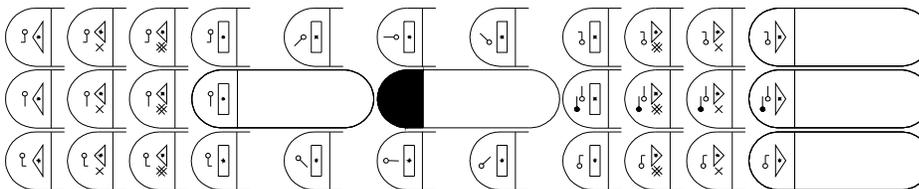
R8



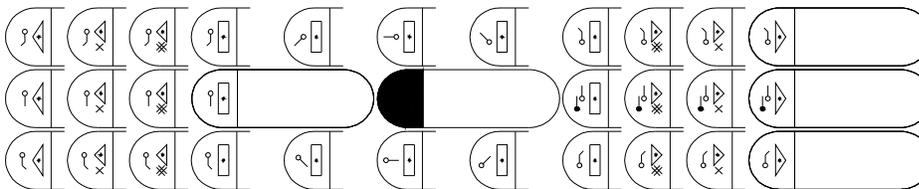
M39a



M39b

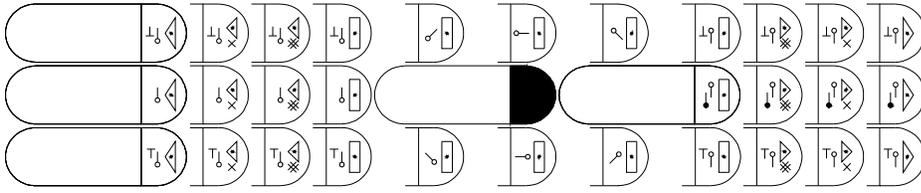


M39c

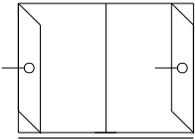


M39d

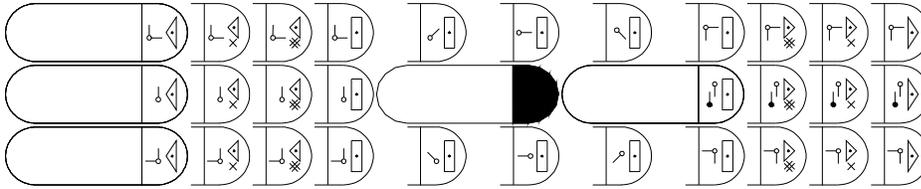
Misi: Indications of the placement of the feet with pins



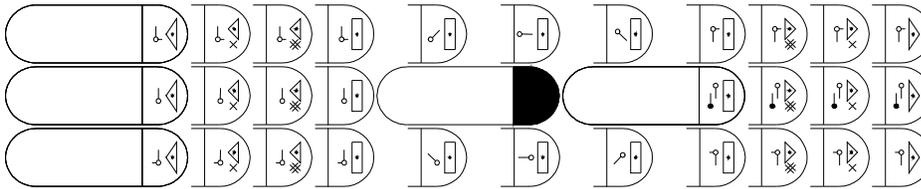
M40



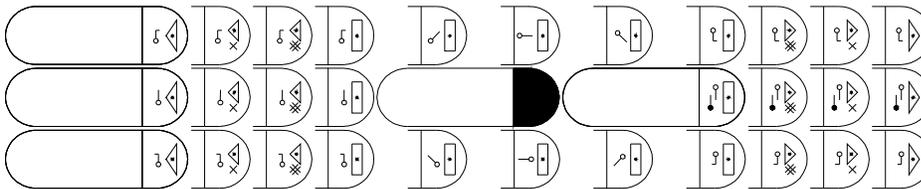
R9



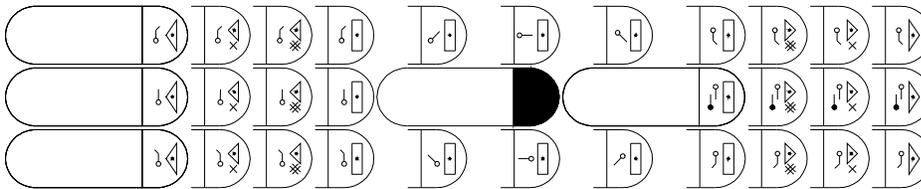
M41a



M41b



M41c



M41d