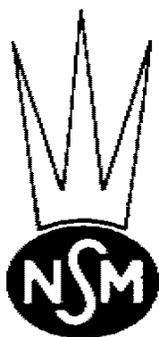

TECHNICAL

INSTRUCTIONS

for



PHONOGRAPH

240-I

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Information and illustrations contained in this technical instructions are correct at the time of going to press.

SUBJECT TO, BUT NO OBLIGATION OF, SUBSEQUENT TECHNOLOGICAL MODIFICATION



SERVICE-PROGRAMS

— ES III —

Display	Description	Serv. Progr. key required	programme by key identification	page
P 00	Pricing, lowest price and credit	x	x	4
01	pricing, step 2	x	x	
02	pricing, step 3	x	x	
03	pricing, step 4	x	x	
04	pricing, highest price and credit	x	x	5
05	coin channel 1)	x	x	
06	2) value of coins and number of pulses	x	x	6
07	3)	x	x	
08	4)	x	x	
09	Dollar bill acceptor	x	x	7
P 10	Number of free plays	x	x	
11	Time interval for random play	x	x	8
P 20	Number of records to be played		x	8
21	Synchron. position		x	
22	Volume, left		x	9
23	Volume, right		x	
24	Volume, left - for background only		x	
25	Volume, right - for background only		x	
26	Price per group	x	x	10
27	Size of group	x	x	
28	Box code number for recording device	x	x	
29	Service card - code for recording device	x	x	
P 30	Counter of plays, A-side	x		11
31	Counter of plays, B-side	x		
32	Cash impulses, total cash, change and read out with top ten button	x		
33	Wall box plays	x		
34	Free plays counter	x		
35	Selection counter	x		
36	Group selection counter	x		
37	Hit parade selection counter	x		
38	Counter for background records played	x		
39	Counter for random records played	x		
P 40	Pop. counter of groups			12
41	Pop. counter of sides of records			
42	Pop. counter reading of individual records (A+B), from least frequented record upwards			
43	Pop. counter of individual records(A+B), from best record downwards			
44	Transfer to service card			13
45	Transfer to printer	x	x	
46	Test programme			
47	Programming of key for remote control	x	x	14
48	Programming of service code	x	x	16
49	Identification to enter keyed programme (code)			
P 50	Credit clearing	x		17
51	Pop. counter clearing	x		
52	Clearing of credit, pop. counter, P 30-39	x		
P 60-69	Accumulative Counter (are not re-settable)	x		11

GENERAL ADVICE

The list of the "Service Programmes ES III" shows the possibilities to maintain and control the phonograph.

The service programme allows selecting of data for permanent storage.

For protection of not allowed access to any important data, input of a keyword is possible this allowing only authorized persons to accomplish secured changes in programme, or to fetch protected data from storage.

The Service Programmes list left offers a general idea of what is possible.

The column "Display" shows, by groups, the different programmes.

The column "Serv.-Progr. key required" shows the data protected by the programme code.

The following column informs about the programmability by key identification.

The last column "Page" shows the page where the matter involved is described.

EXAMPLE OF APPLICATION:

Open last cover page with the operating and display elements.

SELECTION OF PROGRAMME

Open lid, Let down keyboard.

The display 1 shows $\bar{P}_ _ _$. Key in service programm step.

Example: Programme 20 "maximum amount of records placed"

Display 1 $\bar{P}\bar{2}\bar{0}$

Display 3 shows the value previously programmed. Key in new number of record, e.g. 70 records in the magazine.

Display 2 shows $_ _ \bar{0} \bar{7}\bar{0}$. When pressing top ten button, display 3 shows $\bar{0}\bar{7}\bar{0}$ so confirming the programming to be correct, and accomplished.

Within a group of programmes (e.g. P 00 thru P 09), you can advance to the next programme step with the blue "Hit" key.

By red "Hit"-key you can return to the next lower programme step.

When pressing the "R" key, you leave the programme group, display 1 $\bar{P}_ _ _$

When keying in a two-digit number, another programme group will be obtained and displayed by display 1.

Return to the standard program with opened to phonograph "R" key must be pressed twice.

At this condition, credit is possible by coin insertion, but no cash pulse will be released. Pulses will be given to the counter only when lid is closed.

IMPORTANT



All phonographs with ES III-technique offer the chance to code the programme.

When programming a code number, any data (see SERVICE PROGRAMMES, column: Service programme key, showing an "x") can be fetched from the storage, when the authorized individual keys in, to P49, the correct code number and pressing the top ten button. When trying to fetch from storage any protected programme without input of the code, the display "error" will appear, and the service programme jump to display 1 P49. When now keying in, and entering, the correct code number, fetching from storage of the protected data is possible.

Upon closing of the phonograph and return by pressing the "R" key to the standard programme, the service programmes are again protected against unauthorized access. The code number (P 48) set, will not be displayed, therefore

DON'T FORGET THE CODE NUMBER

(in this respect, see Description "The Service programme key" P 49).

No code number is set by the manufacturer.

"0000", so all the data can be fetched from storage of the service programme.

SERVICE PROGRAMMES

With phonograph closed, always the programme as set (standard programm) is switched in. When opening the lid, the computer will be set to the service programmes by means of the cabinet switch. Credits or any plays will not be lossed. Information is given by display 1 P. No programme key is required for the performance of any service work -setting number of records, volume, permanent operation, reading of the pop.counter. With the input of the programme key, access to all the programmes is possible.

PROGRAMMING WITH CODED PHONOGRAPH

After keying-in of the code number in programme P 49, display 1 P49 and pressing the top ten button, and if so required, reprogramming of all the service programmes is possible.

With a wrong code number, PP PP remains on display 2, when pressing top ten button "pppp".

With correct code number, P PPP will appear on display 3, when pressing the top ten button, access to all the programmes is possible.

The service programme group P0 - display 1 P00 through P09 accomplishes and displays all the settings required for the coin insertion:

P 00 - P 04 conversion and price-scale

P 05 - P 09 value of coins to the coin channel involved, and the number of pulses for the cash counter.

PROGRAMMING OF PRICE-SCALE

5 price-classes can be set.

Each price-class is allocated to a service programme.

P00 should be programmed with the lowest price-class. The lowest price-class which can be set, is 0.05, the highest is 9.95.

The highest number of plays (credit) which can be set is 63.

With the keying-in, the three left digits of the display 2 show the setting of the price, the right two digits the number of plays offered for.

Credit and price settings are shown in intervalls when phonograph is in stand by positions.

CONVERSION OF THE LOWER STEP 1

Press 00 button. On display 1 appears P00.

On display 3 there appears the previously programmed price-class of this step, at the right side, the coin value, at the left, on two digits, the number of plays.

Key in lower price-class. E.g.: 0.50 = 1 play.

The display 2 will show 050 01.

ATTENTION! Even when changing just part of the setting, keying-in of all 5 numbers is indispensable.

Upon pressing the top ten button, the display 3 shows 1 050, and there with the programming of step 1 is terminated.

CONVERSION OF STEP 2

Advance with blue Hit button the programme to display P01.

Display 3 shows the previously programmed price-class of this step.

Key in medium price-class. Example: 1.00 = 3 plays. Display 2 shows 100 03.

When pressing the top ten button, display 3 shows 3 100, and the programming of step 2 is completed.

CONVERSION OF STEP 3

By blue Hit button can be advanced to next programmestep P02.

On display 3, appears the previously programmed price-class of this step.

Key in highest price-class. Example: 2.00 = 7 plays. The display 2 shows 200 07.

When pressing the top ten button, display 3 will show 7 200, and the programming of step 3 is completed.

CONVERSION OF THE STEPS 4 and 5

When setting 3 price-classes only (step 1 - 3), it is necessary to program also the free steps 4 and 5, either by 5 times "0", or with the highest price-class, i.e. with the present example, with 2.00 = 7 plays.

When preparing the box to accept just one coin value - e.g. insertion of _ _ _ - at least two steps - P 00 and P 01 should be programmed with the very same coin value, and into the other steps, P 02 - P 04, there can be keyed in five times "0" each.

COIN INSERTION

In the programmes P 05 to P 09, the coin values are allocated to the coin channels, and the pulses given to the cash counter when inserting the coin (s), are programmed.

Display 3 shows on the right the coin values, and on the left the number of cash counter pulses.

Coin values can be changed by reprogramming. In case no cash counter pulses shall be given, set the puls number to "00".

Allocation of the coin channels to the displays:

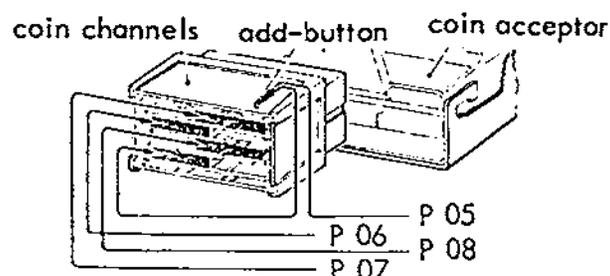
Display P05 for coin channel 1 plus add.key

P06 for coin channel 2

P07 for coin channel 3

P08 for coin channel 4

P09 for dollar bill (reserve)



Depending on country and currency, coins of different coin value will go into the coin channels, and so the following simple check of the allocation to channel (i.e. which coin will go through which channel) should be performed:

Key in the service programme P00

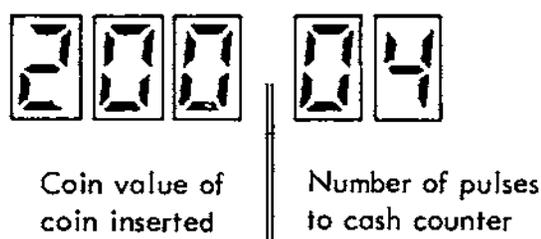
Insert coin.

Display 1 shows the coin channel involved.

Display 3 shows the values as previously set, i.e. at the right, the coin value, at the left the cash counter pulses.

If such setting is subject to change, the new values are to be programmed.

EXAMPLE:



Upon pushing the top ten button, display 3 shows . 4 200 . This way the coin channel is programmed for 2.00, and the cash counter receives 4 pulses.

Since the cash counter multiplies the pulses programmed, "true to value", by 5, 20 will be read in service programme P 32.

See the following schedule.

PROGRAMMING

of the service programmes P05 thru P09
"coin value" and "cash counter pulses"

Reading of the service programmes P32
true to value 1 x top ten button

coin value / pulses	Insertion coin	coin value		number of pulses		Reading of the service programmes P32		Number of pulses								
		0	5	0	0	0	0	0	0	0	0					
0.05	0,50	0	5	0	1	0	0	0	0	5	0	0	0	0	1	0
	1,00	1	0	0	2	0	0	0	1	0	0	0	0	0	2	0
	2,00	2	0	0	4	0	0	0	2	0	0	0	0	0	4	0
0.5	1,00	1	0	0	0	2	0	0	0	1	0	0	0	0	0	2
	2,00	2	0	0	0	4	0	0	0	2	0	0	0	0	0	4
	5,00	5	0	0	1	0	0	0	0	5	0	0	0	0	1	0
5	50	0	5	0	1	0	0	0	0	5	0	0	0	0	1	0
	100	1	0	0	2	0	0	0	1	0	0	0	0	0	2	0
	200	2	0	0	4	0	0	0	2	0	0	0	0	0	4	0
5	5,00	0	5	0	0	1	0	0	0	0	5	0	0	0	0	1
	10,00	1	0	0	0	2	0	0	0	1	0	0	0	0	0	2

In case the cash shall not be displayed, pulse number 00 should be set.

In case display 1 shows some P0-programme or other, the programming operation described in the foregoing, can be accomplished with a coin of the second, the third and - with phonograph having a 4-channel coin acceptor - also a fourth coin value.

PROGRAMMING OF THE COIN VALUE AND THE NUMBER OF PULSES

Key in service programme P05 (display 1).

Display 3 shows the previously programmed values, i.e. at the right, the coin value, at the left the cash counter pulses.

COIN CHANNEL 1 - value allocation and pulse number for cash counter

Key in the values, e.g. coin value 0.50, and no cash counter pulses (for add. key).

The display 2 shows 050 00

Upon pressing the top ten button the display 3 shows 10 050, and this programming completed.

COIN CHANNEL 2 - value allocation and pulse number for cash counter

Advance to P05 of the programme by blue hit button.

On display 3, the previously programmed values will appear. Key in the values desired.

Example: Coin value 0.50/10 cash counter pulses.

Display 2 shows 050 10

After pressing the top ten button there appears on display 3 10 050, and this way this programming is performed.

COIN CHANNEL 3 - value allocation and pulse number for cash counter

Switch the programme forward to display P03 by blue hit button.

Display 3 shows the previously programmed values. Key in the values desired; example, coin value 2.00/40 cash counter pulses.

It appears on display 2 200 40

Upon pressing the top ten button, there appears on display 3 40 200, and this programming is completed.

COIN CHANNEL 4 - value allocation and pulse number for cash counter

Advance to P08 by blue hit button

The display will show the previously programmed values. Key in desired values, example: monetary value 1.00/20 cash counter pulses.

The display 2 shows 100 20

Upon pushing the top ten button, display 3 will show 20 100, and this programming is completed.

DOLLAR BILL ACCEPTOR

Advance to display 1 P09 by using blue hit button. Key in five times "0" (if no bill acceptor is used). On display 2, there appears 000 00. Upon pressing the top ten button, the display 3 shows 00 000

So the programming of the P0.. service programme group is terminated.



In the service programme group P1..., displays 1 P10 and P11, the free plays and the time interval for random play are set.

FREE PLAYS

That number of free plays will be programmed which can be fetched in the standard programme through remote control. When programming free play up to the value of 254, each call will be subtracted by 1 until the storage number is equal to zero.

When programming the value of 255, an unlimited number of free plays can be fetched. No internal subtraction will take place.

Records selected under "free play credit" will be counted in the free plays counter, and displayed in service programme P34.

Key in display 1 P10 of service programme.

Display 3 shows the previously set number of free plays.

Key in the desired value, e.g. 100 free plays.

The figure display 2 shows 000 00

Upon pressing of the top ten button, the figure display 3 shows 00 100 and this programming operation is accomplished.

RANDOM RECORD

Setting of the time (number = minutes) for the random play of a side of record.

The time set runs from end of the last played record.

Maximum setting number is 127 = 127 minutes. If 000 is programmed, no random record will be played.

The random records played will be counted and displayed in service programme P39.

Display 3 shows the previously set time in minutes. Key in new number, e.g. 15 minutes (015).

The display 2 will show , and so this programming is completed.



The service programme group P2  thru , allows the following programming.

P20 - maximum number of records (number of records placed in the box).

P21 - position of synchronization

P22 - sound volume left (Standard)

P23 - sound volume right (Standard)

P24 - sound volume left (for background only)

P25 - sound volume right (for background only)

P26 - price of group

P27 - size of group

P28 - box code number (for recording device)

P29 - memory code (for recording device).

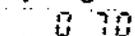
MAXIMUM AMOUNT OF RECORDS

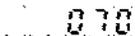
Key in display 1  of service programme.

The display will show the previously set number.

With record magazine not fully provided with records the empty spaces must be on the right side, and the correct number of records to be played must be programmed.

Key in desired number, e.g. 70 records in magazine (070).

The display 2 shows .

After pushing the top ten button, display 3 shows , thus the programming operation is confirmed.

IMPORTANT! The number programmed should never exceed the number of records in the magazine.

POSITIONING OF THE SYNCHRONIZATION

Upon start from parking position in the center of the record magazine, the reflection coupler of the travelling carriage perceives the transition from dark to light on the rearside profile of the carriage base.

From this position the incoming counting pulses will be counted.

The 240- and the 160-record phonographs require always the position 80 to be programmed, the 120-record phonograph require always position 60 to be programmed.

Programming of the synchro-position: **P21**

Enter into programme P21 by blue hit button.

Display 3 shows the previously programmed position.

Key in the new number, e.g., Position 80 (80)

Display 2 shows **0000 80**

Upon pressing the top ten button, the display 3 shows **0000 80**, and this programming is completed.

PROGRAMMING OF THE SOUND VOLUME

The volume of the two channels can be jointly set in 32 steps - zero thru 31 - either by the control unit in the phonograph, or by the remote control unit, during a record playing. The last-set volume will be kept even after power off. This applies to standard- and to background-music.

When setting the volume with the control unit to "0", display 1 shows **000**

A just playing record will be played, other selected records will not be fetched, unless volume key + was pushed.

For service purposes, the volume for the two channels can be programmed separately. A different setting of the volumes of the two channels will be kept in its asymmetry when operating the volume control unit.

In case a channel volume reaches the final position - upwards the step 31, downwards the step 00 -, a continuous actuation of the control unit allows matching the two channels. After this, symmetry of sound volume is maintained again.

PROGRAMMING OF THE SOUND VOLUME - LEFT CHANNEL

Advance with the blu hit key to display 1 **P22**

On display 3 there appears the previously set sound volume step (0 - 31) of the left channel.

Key in wanted value, e.g., step 15 (approximately like 1/2 sound volume).

display 2 shows **000 15**

After pushing the top ten button display 3 shows **00 015** and this programming is completed.

For the following programmes, see "service programmes". cover page.

Advance by the blu hit button to program display **P23** thru **P25** and programme or control on display 3 the previously set volume-step (0 - 31).

GROUP PRICE

On 2 digit display credits will be shown necessary for a "Group selection" or top ten selections. Price programming is possible between 01 and 10 credits.

Advance by the blue hit button on to display 1 **P26**, or key in directly the programme P26. Display 3 shows the previously set group price.

Key in price wanted, e.g. 8 credits (08). Display 2 shows **00 08**

Upon pushing the top ten button, display 3 shows **00 08**, the programming is completed, and the "Group selection" display shows the price as programmed.

SIZE OF GROUP

By programming a figure between 01 and 10, the number of records is determined which is offered for a group- or a Hit selection.

In case of programming a group size less than 10, the first records of the group involved will be selected.

Input of another figure:

Advance by blue hit button on to display 1 **P27**, or key in directly the programme P27.

Key in group size wanted, e.g., 10 record sides. Display 2 shows **00 10**

After pressing top ten button, display 3 shows **00 10**, and this programming is completed.

CODE NUMBER (for recording device)

To recognize accounting data each phonograph needs its code No. of its own, which is programmed by a two-figure number.

Change of the box code:

Advance with the blue hit button to display 1 **P28**, or key in directly the programme P28. Display 3 shows the previously set box code (even without programme key).

Key in code No. wanted, e.g., 03.

Display 2 shows **00 03**

Upon pressing the top ten button display 3 shows **00 03** and the programming is terminated.

MEMORY CODE NUMBER (for recording device)

To secure data - from unauthorized data transfer into the service memory with the possibility to read out the recording device - a two-figure memory code No. will be programmed.

Change of the memory code number:

Advance with the blue hit button to display 1 **P29**, or key in programme P29 directly.

Display 3 shows the previously set memory code number.

Key in code number wanted, e.g., 03.

The display 2 shows **00 03**

After pressing the top ten button display 3 shows **00 03**, and the programming is completed.

The service programme group P3..., display 1 P30 till P39 shows the counts of the counters.

READING THE COUNTS OF THE COUNTERS

Key in display 1 P30 of service programme.

On display 3, there appears the count of the "plays counter, A-sides", of the programme. Advance by blue hit button the following programmes (till P39) step by step. On the display 3, the count of the counter involved will appear.

Service programme, display P32, "Cash pulses, coin value", offers a peculiarity. When actuating the top ten button, the cash pulses and the coin value (cash receipts) are displayed in succession (first, the cash pulses, then the total-cash, etc.). At the display "cash pulses", example 150, it is possible to extend, by multiplication of the programmed coin value per pulse, the cash receipts (see programming P05 thru P09).

$$1 \text{ st example: } \frac{\text{coin value}}{\text{programmed pulse number}} = \frac{1.00}{20} = 0.05 \text{ coin value / pulse}$$

or

$$2 \text{ st example: } \frac{\text{coin value}}{\text{programmed pulse number}} = \frac{1.00}{20} = 0.5 \text{ coin value / pulse}$$

When multiplying the displayed 150 cash pulses by the coin value/pulse, it results the cash receipts as follows:

$$\text{for the 1st example, } 150 \times .05 = 7.50$$

$$\text{for the 2nd example, } 150 \times .5 = 75.00$$

The second display in the service programm P32 "coin value" (cash receipts) indicates the cash balance true to value - See service programmes P05 thru P09.

READ OUT OF THE COUNTERS

To read out the counters involved it is necessary to key in once more the number of the respective service programme (e.g., with display 1 P30, once more,30).

Display 3 shows the count of the counter; press the top ten button and the counter is put to zero.

Display 3 shows 0000

CUMULATING COUNTERS

The individual values of all the counters of P30 thru P39 are displayed in cumulation in the service programmes displays 1 P60 thru P69

The displays of the service programmes P60 thru P69 can not be reset.

POPULARITY COUNTER

In the service programmes, displays 1 P40 thru P43 , the reading of the popularity counters is prepared.

Key in service programme, display 1 P40 , popularity counter for group selection.

The first digit of the display 2 shows G for "group", the fourth and the fifth digit shows the amount cont. in the group. Example: display 2 G00 10

Display 3 shows the frequency of the group selection, i.e. in correct sequence up to 99. The top ten button allows to go through the groups till G33, and to display the specific frequency.

When reaching the group G33, the display starts again with G10.

By keying-in a group number for ex.: P40 - the group selection frequency will be displayed directly..

Key in service programme, display 1 P41 , popularity counter for the record sides.

The first digit of display 2 shows H for "Hit", the third, fourth and fifth place show the number of the record side.

Example: Display 2 H00 00

Display 3 shows the frequency of the record sides played in the correct sequence.

The top ten button allows to key in the record sides till H339 and to read out the individually playing frequency.

When H339 is obtained, it starts again with H100 (240 selections). By direct keying-in - P41 - the number of individual played record side, will be displayed.

Key in service programme, display 1 P42 , popularity counter for individual records - upwards (A + B-sides).

The first digit of the display 2 stands P for popularity; on the third, fourth and fifth digit the number of the record appears.

On display 3 there appears the frequency of played record upwards, starting with 00 for the least played record (till to maximum of 99) by pressing the top ten button.

The read out stops with reaching the most played record.

Key in service programme, display 1 P43 popularity counter for individual records, downward (A + B sides) .

The first digit of display 2 stands P for "Popularity"; on the third, fourth, and fifth digit the number of the record (the A-side number) is displayed.

On display 3 there appears the frequency in true sequence (maximum = 99), downwards when pressing the top ten button to the least played record. The read out stops when the least played record is reached. Resetting of the popularity counters:

see service-programm P51 - "Resetting".

Key in service programme, display 1 P44 - transferring data into service memory

The transfer into the service memory is prepared in this programme.

The following counts of counter are transferred:

1. Cash impulses and total cash (coin value) in P32
2. Total number of plays - plays paid -
consisting of P35 standard selections
+ P36 group selections x group size programmed (at P27)
+ P37 Hit parade selections x group size programmed (at P27).
3. Extra plays - unpaid plays -
consisting of P34 free plays
+ P38 background records played
+ P39 random records played.

In addition the code number (from P28) is taken over into the service memory.

Transfer is possible only with identical code numbers of phonograph (P29) and service memory

Data transfer:

1. Put service memory into socket of control- and credit unit.
2. Enter into programme. P44
3. Press top ten button to transfer data.

The display flickers during the transfer.

The correct data transfer is confirmed on display 3 by P P

The service memory can record the data of 16 different phonographs.

In case P P E appears on display 3 after pressing the top ten button, the service memory is full. No transfer is possible. At display 3 P P

the service memory just takes last transfer.

If there is no transfer possible, the code numbers of phonograph and service memory do not correspond.

Key in service programme, display 1 P45 - printer connection - (OPTION)

If so desired, the connection of a printer can be programmed into this programme.

The interface is designed for a 20 mA current loop with ASC II data format.

There are four Baudrates provided: 110, 300, 600, 1200.

Four outprints different as to contents, are possible (list outprints A, A+B, A+C, and A+B+C).

Please contact service department for further information.

Key in service programme, display 1 P46 - permanent operation

The control- and maintenance programme is prepared. Upon pressing the top ten button, display 3 shows P 46. With box going to the standard programme via the button "R" or "Closing of box" respectively, title "100" will be played permanently.

Display 2 shows P 46

If in addition to title 100 other records are desired, same must be selected - on the condition a credit was previously existing.

Resetting of the permanent operation is done by actuating key "R", insertion of a coin, or power off.

Service programme, display 1 P47 - programming of key for remote control
With phonograph in "Standard play" position, free credit can be released by the remote control with the identification code and the "Free Credit"-button.
In case free credit are transferred the display "free plays - please select" remains illuminated, and selections are possible.

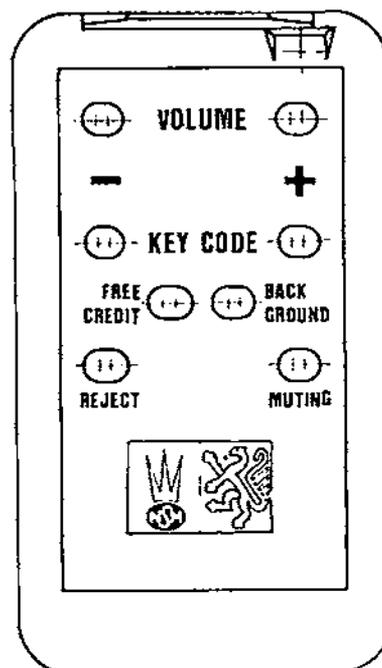
REMOTE CONTROL

All remote functions will be indicated at the right-hand side of the selector panel with

" thank you
enjoy the music "

Button " VOLUME - " decrease volume of both amplifiers

Button " VOLUME + " increase volume of both amplifiers



Holding (+) button permanently increases volume continuously.
Holding (-) button permanently decreases volume continuously.
Just tapping button changes volume level step by step. Volume in "0" position is indicated on selector panel at left-hand display 1 with 0FF. A record in the play position will be played without sound, the carriage will remain at that position until the (+) volume button is pressed.

Pressing the REJECT button for a minimum of one (1) second will reject a playing record.

Momentarily pressing the MUTING button mutes the sound of a playing record. This function will be indicated at the selector panel with 0FF at the left-hand display. The scanning function of the carriage will be stopped as long as the word 0FF is displayed at the left-hand display. Pressing the MUTING button again, return to normal operation.

With these buttons the receiver will release "FREE CREDIT" and "BACKGROUND" music and the remote key can be programmed.

PROGRAMMING REMOTE KEY CODE

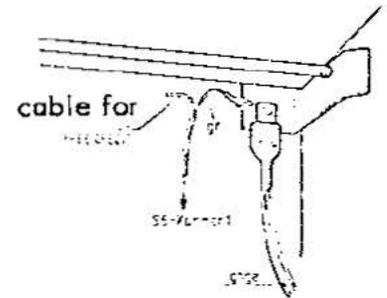
Opening the lid of the phonograph in service programm (indicated by "P")select "47". Display 1 $\overline{P}47$. Press key code buttons on the remote control for desired code (14 combinations are possible). Each time you press the key button the number in the credit display will increase by one (1). Whether you push (-) or (+) the number will increase by one, therefore, you must remember the sequence entered. The code number will be entered in the memory by pressing the " top ten " button on the selector panel. This entry will be confirmed with $\overline{0000}$ on the right-hand display 3. Whilst programming it is recommended to send control pulses not directly to receiver, use reflex via ceiling.

With the correct code one can call for free credit, if free credits are programmed in the service programm P10. Any free credits transferred from the memory will be indicated cated on the credit display and the make selections courtesy of the management lamp will light at the right-hand side of the selector panel.

BACKGROUND-MUSIC - FUNCTION!

To enter the function the line Nb.1 of plug Nb.6 must be connected with ground terminal. The line is connected when delivered from factory.

If the background function will not be used the line Nb.1 will be disconnected and insulated.



PROGRAMMING PROCEDURE

Put phonograph in stand-by position.

Press KEY CODE buttons or remote control in reverse sequence to enter key code followed by background button.

EXAMPLE: Remote key is programmed by pressing key button (-) twice to release free credits. The key button (+) must be pressed twice to enter into the background programming. Finally, the background button must be pressed. The programming will be confirmed with $\overline{0000}$ $\overline{P}P$ at the credit display.

With " G " button on the selector panel and the group number, the background groups can be programmed. By pressing the background button on the remote control, the phonograph will return to normal operation.

If full capacity of phonograph (120) is not programmed in P 20 cancelled groups must not be programmed.

BACKGROUND PLAY

To call for background from remote control the key button must be pressed in key code mode. In our example, key button (-) twice. With the background button, the background groups will be release and played. The phonograph remains in background playing function as long as the background button is not pressed again.

If during a background playing function, selections by coins will be made, the background music will be interrupted and the selected records will be played. After all coined selections have been played, the programm returns to background music.

PROGRAMMING OF THE SERVICE PROGRAMME CODE NUMBER

1. Key in service programme, display 1 P48
2. Input a four digit code number. Each of the four digits is confirmed by a "P" on display 2 PP PP
3. After pressing the top ten button, said code number is entered. Display 3 shows P PPP

For security reasons, this code number will not be displayed during keying-in, therefore

▶ DO NOT FORGET THE CODE NUMBER! ◀◀

Without knowledge of this number, access to the protected programmes is impossible.

With "0000" coded access to all programmes is possible.

SERVICE PROGRAMME CODE

Access to coded programmes is possible only by code number identification (4 digits).

1. Key in service programme, display 1 P48
2. Identify with correct 4 digit code number. Each of the four digits will be confirmed with a "P" on display 2 PP PP
3. Press top ten button to enter into memory

With the correct code number put in, display 3 shows P PPP

When entering with a wrong code number, display 3 shows after the pressing of the top ten button nothing :

When calling for protected programme data without knowing the code number, the display shows "error", and the programme returns to display 1 P48 , i.e. "prepared for input of the correct code".

When closing the phonograph or switching back to standard programme by means of the key "R", the programmes are again protected.

At delivery the phonograph is without any code number, display 3 0 000

that means access is given to all the programmes.

In case the programme code number got lost (code number forgotten, or, by error, input of an unknown number) there exists, in such case of emergency, the following possibility:

Remove the EAROM of the respective control and credit unit to place it into the service memory instead of the installed EAROM (this requires modification of the service memory, because EAROM is soldered in, without any socket).

To reset the EAROM inserted in service memory and cancelled. The service memory has to be connected with recording device. After inserting the cancelled EAROM in the control and credit unit, the code number 0000 must be entered, and after this, the complete service programme must be reprogrammed (see "Technical instructions - service memory and recording device").

The following programme groups, P50 thru P52, allow to reset the counters individually, by groups or altogether.

CANCEL OF CREDIT

1. Key in service programme, display P50
2. Key in number 50; display 2 shows 50
3. After pushing the top ten button, display 3 shows 50

So the credit is cancelled.

RESETTING OF THE POPULARITY COUNTER

1. Key in service programme, display P51
2. Key in number 51; display 2 shows 51
3. Push top ten button, and display 3 shows 51

The four popularity counters - service programme - are reset (P40, P41, P42 and P43).

RESETTING OF THE POPULARITY COUNTERS AND COUNTERS P 30 thru P 39

1. Key in service programme, display P52
2. Key in the number 52; display 2 shows 52
3. After pressing the top ten button, display 3 shows 52

ATTENTION. During resetting operations P51 and P52, all displays will flicker.

EXTENSION SPEAKER CONNECTIONS

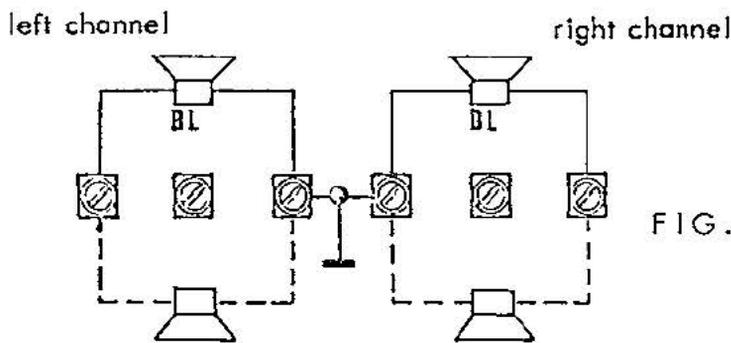
If remote speakers have to be connected, check for matching of the impedance.

Mismatching will result in distortion due to the safety circuit in this amplifier. The total impedance of connected speakers must not be less than 3 Ω per channel.

Output transformers can be supplied upon request.

When the speakers are connected through output transformer, please observe the instructions inside the transformer cover.

SPEAKER CONNETION WITHOUT OUTPUT TRANSFORMER



BL = Cabinet speaker comb.
ZL = Additional speaker comb.

FIG. 1) Phonograph with extension speaker $\approx 6.5 \Omega$

FIG. 1

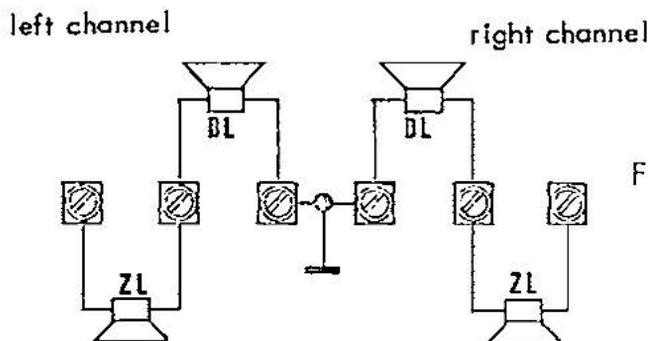


FIG. 2) Additional speaker combinations with a total impedance of 2 to 4 Ω, should be connected in series with the cabinet speakers.

FIG. 2

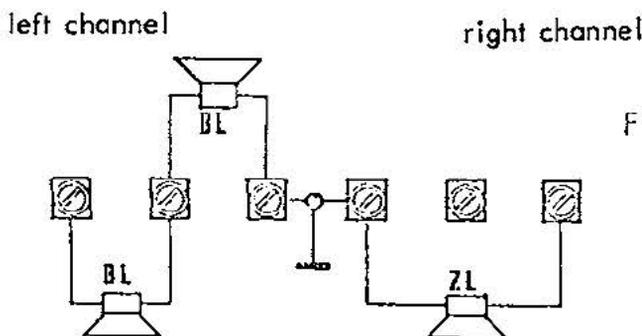
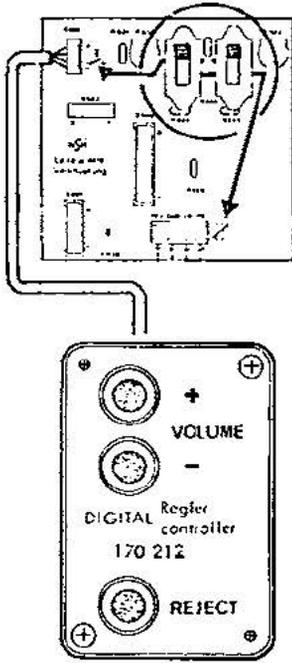
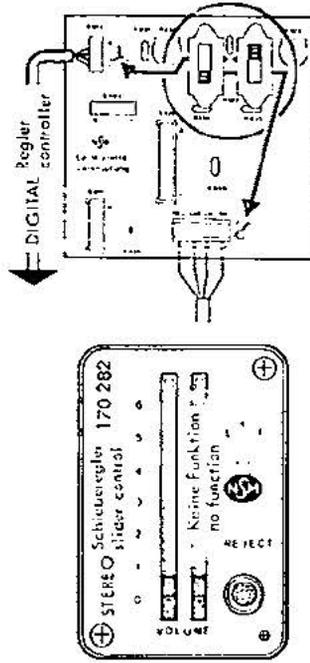


FIG. 3) With additional speakers in another room (mono), separate control of both rooms is possible by means of the dual volume control and mono stereo switch in "mono" position.

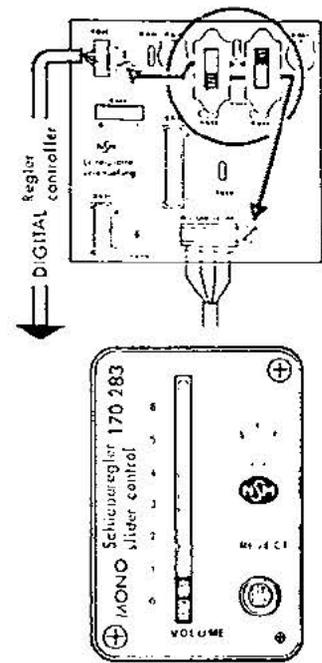
FIG. 3



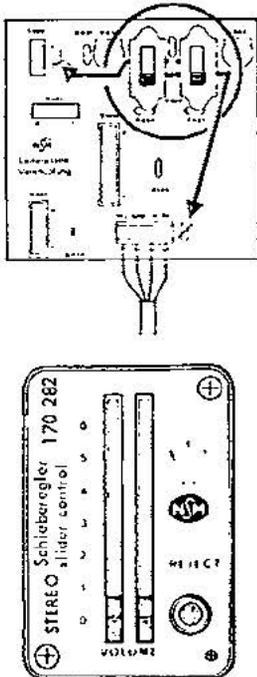
Digital volume control by keys or remote control
No individual control of the channels.



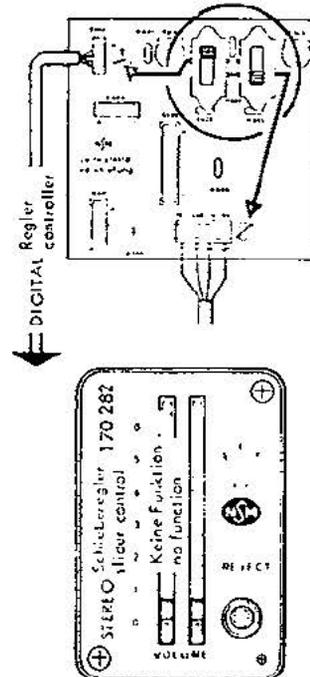
Volume control of the left channel: by hand
right channel: digital control



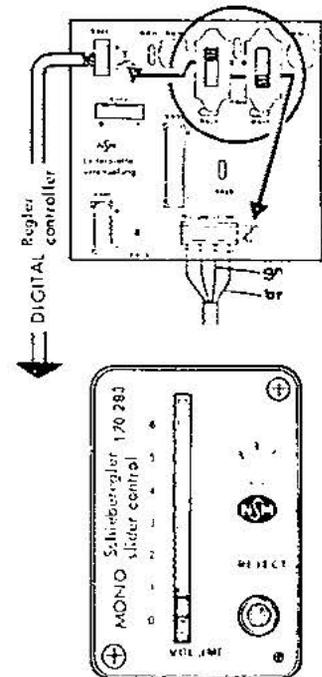
Volume control of the left channel: by hand
right channel: digital control



Manual volume control by slider controller.
Individual control of the channel
After turning-over of the control knobs (mechanic coupling, joint control)



Volume control for the right channel: by hand
left channel: digital control



Volume control for the right channel: by hand
left channel: digital control
Interchange the green and the brown cable.

BACKGROUND VOLUME CONTROL is possible but by means of the digital control.

TECHNICAL INSTRUCTION

SETTING OF THE MAX. VOLUME OF PHONOGRAPH ES III

The volume control by means of the digital controller is made by the digital-analogue converter in the control and credit unit.

At maximum volume (step 31) should be measured 2.6 ± 0.0 V at the IC 101, pin 5 of the amplifier.

With values not corresponding, setting for amplifier I (left channel) is done by R 600, for amplifier II (right channel) by R 603, the two of them being on the "printed circuit board - connection".

CHECKING AND SETTING

Recommended when replacing the control and credit unit phono-graph in service programme, display 1 : P--.

Key in programme 22; display 1 : P22. Display 3 shows the previously set volume step (0-31) of the left channel.

Key in the highest value, i.e. step 31. Display 2 shows ---31.

After pressing of the top ten button, display 3 shows -- -31, and the highest volume step is programmed. For the programming of the right channel, advance the service programme by blue button to display 1 : P23.

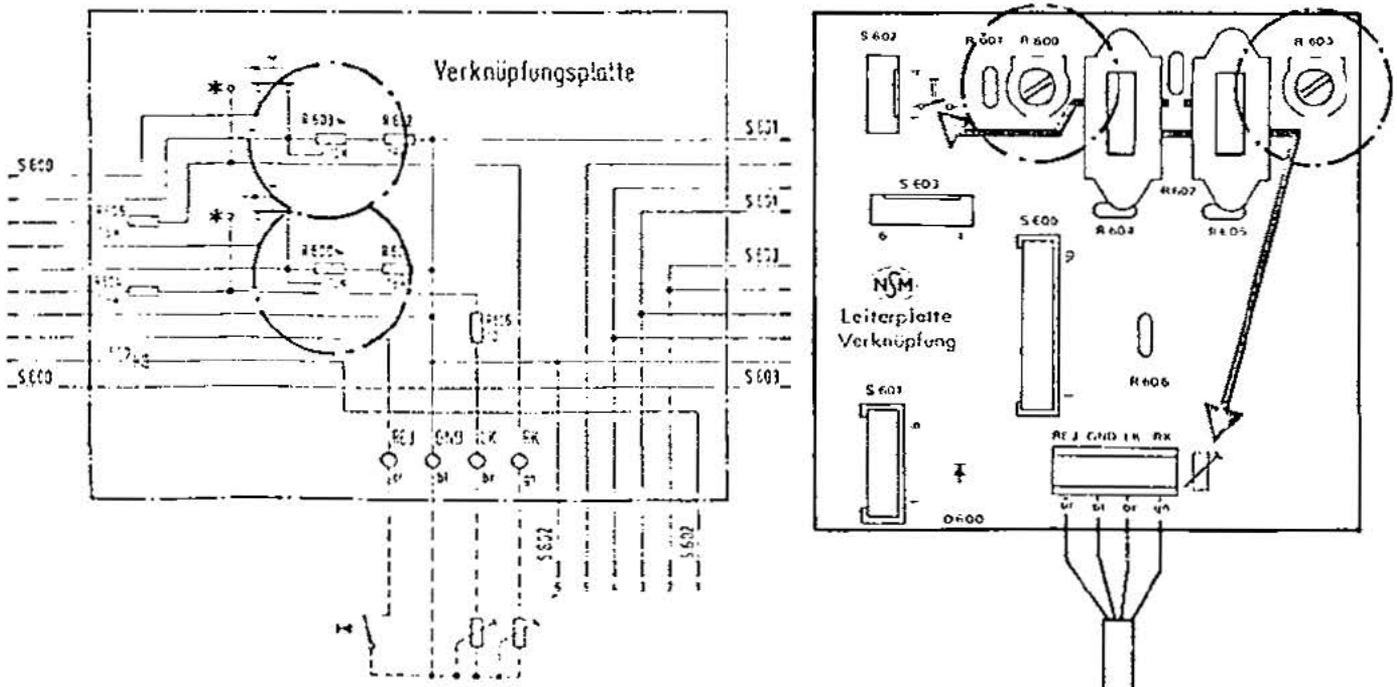
Program highest volume step (31) the very same way as for the left channel.

Put measuring device, R_i 1 M Ω to center pick off of potentiometer R603 (for the right channel in service programme P23) and to ground.

Correct Value = 2.6 ± 0.05 V

Like control and setting with potentiometer R600 for the left channel in service programme P22.

Return to programme P22 by red hit button.



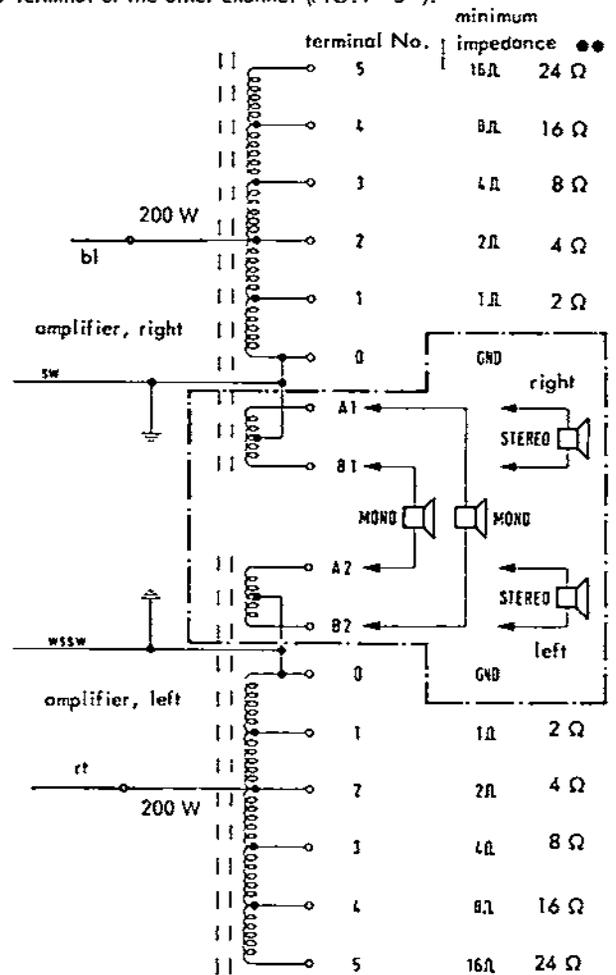
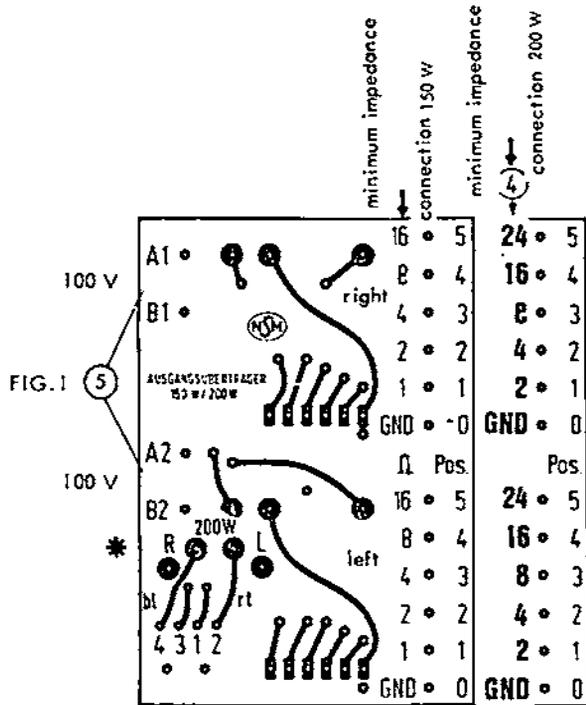
CONNECTING OF LOUDSPEAKER by means of output transformer 109 884

The four free wire ends at the output transformer will be connected according to the colour indications printed on.

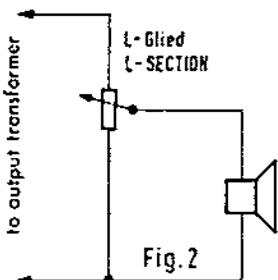
*** ATTENTION!** Check whether or not the connecting line is connected to the output transformer 200 W the right way for NSM juke box 240 - 1.

- Box loudspeaker normal
- The minimum impedance as indicated at the connecting terminals (FIG.1 4) should not fall below, and the power consumption of all the speaker connected, should not exceed the maximum of 100 W respectively.
- To connect a mono-loudspeaker to a stereo-amplifier requires the one line of the mono-speaker cable to be connected to the "A" terminal of the one channel and the other line, to the "B" terminal of the other channel (FIG.1 5).

In case volume lowering of the box loudspeakers or the external loudspeakers (independent of the other) is requested, an L-section (per channel) can be provided before the loudspeakers involved. In such case impedance and power of the L-section depend on the loudspeaker volume required, and the connection on the output transformer as well. E.g. for a small volume - up to 10 W - and connection to the terminals 0 - 1, an 8 Ω / 10 W L-section may be used. A bigger volume will need an 8 Ω / 30 W L-section (Order-No.221 789) which should be connected to the terminals 0 - 2.

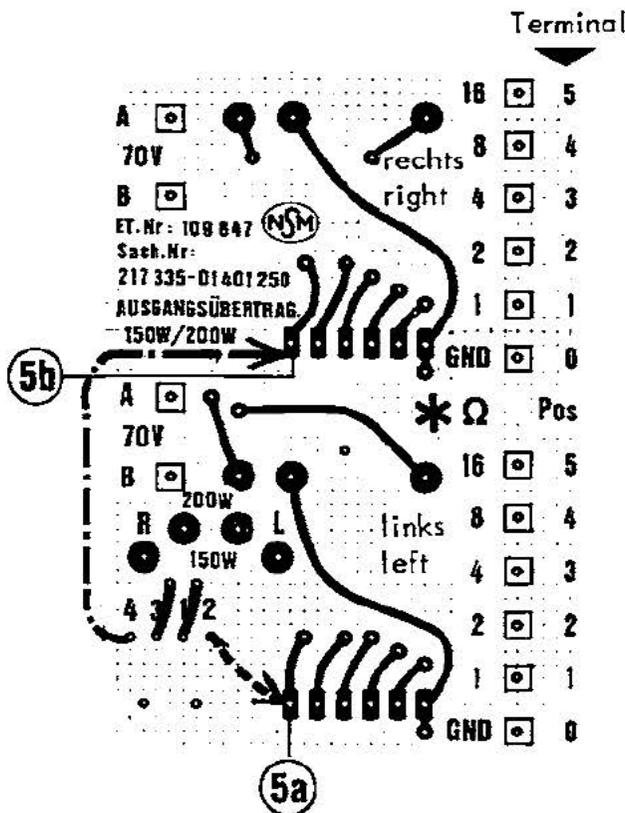


terminal No.	At a speaker impedance of ...					minimum impedance	
	2 Ω	4 Ω	8 Ω	16 Ω	24 Ω		150 Ω
0 - 5	not matching (low ohmig)					80 W	24 Ω
0 - 4	not matching (low ohmig)					90 W	16 Ω
0 - 3	not matching (low ohmig)					100 W	8 Ω
0 - 2	not matching (low ohmig)					100 W	4 Ω
0 - 1	95 W	45 W	30 W	16 W	9 W	2 Ω	
FIG.1 5	A 1 - B 1	STEREO right				60	150 Ω
	A 2 - B 2	STEREO left				60	150 Ω
	A 1 - B 2	MONO				90	150 Ω
	A 2 - B 1	MONO				90	150 Ω



Connection diagram for output transformer

for the adaptation to lower power or several speakers in parallel connection respectively



Remove red line ~~-----~~ from soldering points 150 W or 200 W respectively, and solder it on connection (5a).

The blue line ~~-----~~ will be removed from the 150 W, or 200 W soldering points respectively (redraw in the flexible hose) and re-solder it on connection (5b).

* Values are not valid.

Due to this modification it is not possible any longer to give the full power of the amplifier to a speaker having more than 4 Ω.

The maximum power furnished to a speaker with corresponding impedance is shown in the following list

Terminal Position	4 Ω speaker	8 Ω speaker	16 Ω speaker
0 - 5	100 watts	50 watts	25 watts
0 - 4	40 watts	26 watts	14 watts
0 - 3	20 watts	13 watts	7 watts
0 - 2	10 watts	6,5 watts	3,5 watts
0 - 1	5 watts	3,2 watts	1,7 watts

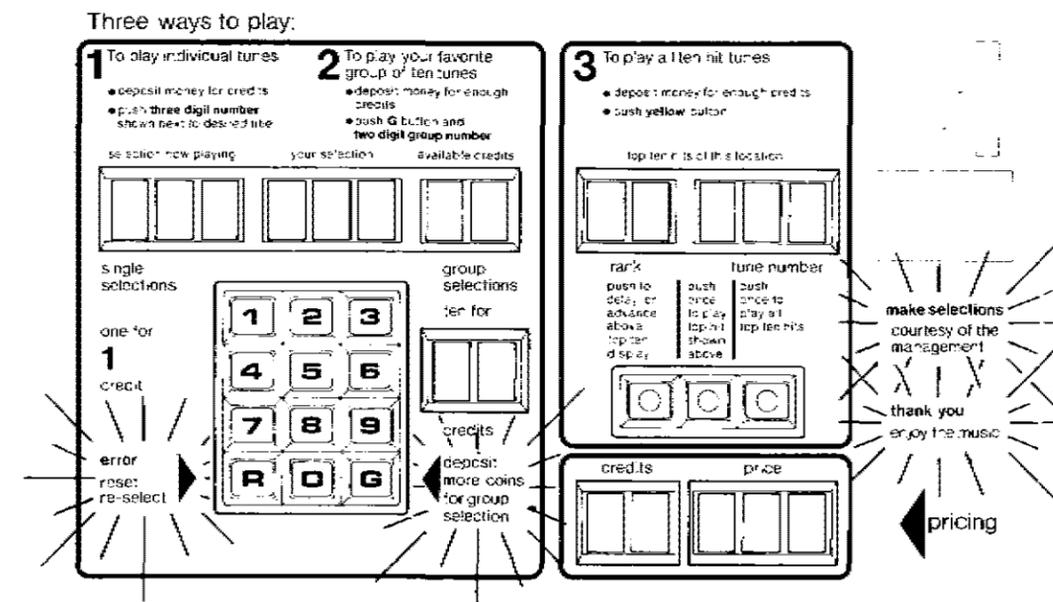
The total power furnished to all the speakers connected to one channel, is not allowed to exceed a maximum of 100 W.

Example : Just two 8 - Ω speakers = 100 W are allowed to be connected to terminal 0 - 5.

ACCESSORIES for PHONOGRAPH 240-1

106 740	<u>SERVICE MEMORY UNIT</u> A handy additional storage device allowing the storage of the total cash total plays and special plays together with the code number of the phonograph involved. This unit will accept information from up to phonographs.
107 054 107 359	<u>RECORDING DEVICE</u> The recording device will then display the data stored in the service memory unit for your accounts dept.
109 884	<u>OUTPUT TRANSFORMER</u> With output-power terminal for remote speakers and C.V. connectors.
042 139	<u>MICROPHONE, ASSY</u> Dynamic microphone with paging switch. Adapter with relays. Easy installation installation when following attached installation instructions. Possible use use of microphone in any operating position and stand by.
108 650 170 430	<u>ELECTRONIC WALLBOX " CONSULETTE ES "</u> <u>ELECTRONIC WALLBOX " CONSULETTE ES II "</u> To be connected to the NSM electronic phonograph. The phonograph must be equipped with a special unit (adapter) part nr. 170 308, 50 Hz (resp. 170 233, 60 Hz). Detailed technical instructions are supplied.
170 281	<u>PRINTER INTERFACE - BOARD</u> With the printer interface board any printer with serial input and 20 mA current loop can be connected. Printer with 110 to 1200 bauds (speed) can be used.
170 460	<u>WIRELESS REMOTE CONTROL (infrared)</u> The wireless remote control kit includes the receiver, the infrared control and the installation hardware. For connection see schematic.
170 258 170 332	<u>DOLLAR BILL ACCEPTOR NRI</u> <u>DOLLAR BILL ACCEPTOR ARDAC</u>

PROGRAM LID



OPERATING and DISPLAY ELEMENTS

please open

**SPEZIAL-SERVICE-UNTERLAGEN für
PARTICULAR SERVICE INSTRUCTIONS for**



**MUSIKAUTOMAT
PHONOGRAPH**

240-1

**AUFSTELLEN DER BOX
INSTALLATION OF PHONOGRAPH**



**BAUGRUPPEN-LAGEPLAN
LAYOUT OF ELEMENTS**



**TECHNISCHE DATEN
SPECIFICATIONS**

AUFSTELLEN DER BOX

Ein GEHÄUSESCHLÜSSEL und ein KASSENSCHLÜSSEL

sind mit Klebeband auf der Frontscheibe befestigt. Die übrigen Schlüssel befinden sich in der Kasse.

Nach Öffnen des Schlosses an der Frontseite, läßt sich die Haube ganz hochschwenken und mit den seitlichen Stützen sichern.

Zum Programmieren kann die Tastatur - nach Entriegeln - bei geöffneter Haube heruntergeklappt werden.

PROGRAMMTAFELN

der Kasse entnehmen, beschriften und in gewünschter Reihenfolge in die Programmtafel einschieben.

TITELSTREIFEN

nach leichtem Druck auf die seitlichen Rastfedern aufklappen, bzw. herausnehmen.

NETZSPANNUNG

Das Gerät ist für die auf der Anhängkarte am Netzkabel angekreuzte Netzspannung eingerichtet. Für andere Spannungen am Transformator die entsprechende Spannung einstellen.

Gemäß VDE-Vorschrift ist das Gerät mit Schutzleiteranschluß zu versehen.

TRANSPORTSICHERUNGEN

und Schutzvorrichtungen müssen vor Inbetriebnahme entfernt und vor jedem Weitertransport eingesetzt werden.

Einwandfreies Arbeiten der Münzanlage bedingt waage- und lotrechtes Aufstellen der Box.

Nachdruck, auch auszugsweise, ist ohne Genehmigung der NSM Apparatebau GmbH + Co. KG nicht gestattet.

ÄNDERUNGEN IM SINNE DES TECHNISCHEN FORTSCHRITTES VORBEHALTEN,
JEDOCH KEINE NACHRÜSTPFLICHT!

Sach-Nr : 208 920 a

Ausgabe : Juni 1982

INSTALLATION OF PHONOGRAPH

One CABINET KEY and one CASH BOX KEY

are taped to the front panel. The other keys are in the cash box.

Upon the opening of the lock on the front side, the lid can be turned fully upwards and secured - left side and right side - by the lid support.

With the lid open the keyboard can be unlatched and turned down for the programming.

TITLE STRIP HOLDERS

Take title strips out of cash box. After lettering of the title strips insert same into title strip holder in the desired sequence.

TITLE STRIPS

after slight pressure on to the latch levers at both sides turn up or remove title strip holders.

VOLTAGES

The tag at linecord shows the voltage - setting by the factory. For other voltages, set voltage required at transformer.

Green-yellow of the 3-wire main cord must be connected to earth according to international safety codes.

DEVICES FOR SAFETY

and protection during transport have to be removed before operating the phonograph. Prior to any further transit, the safety and protection devices have to be refitted.

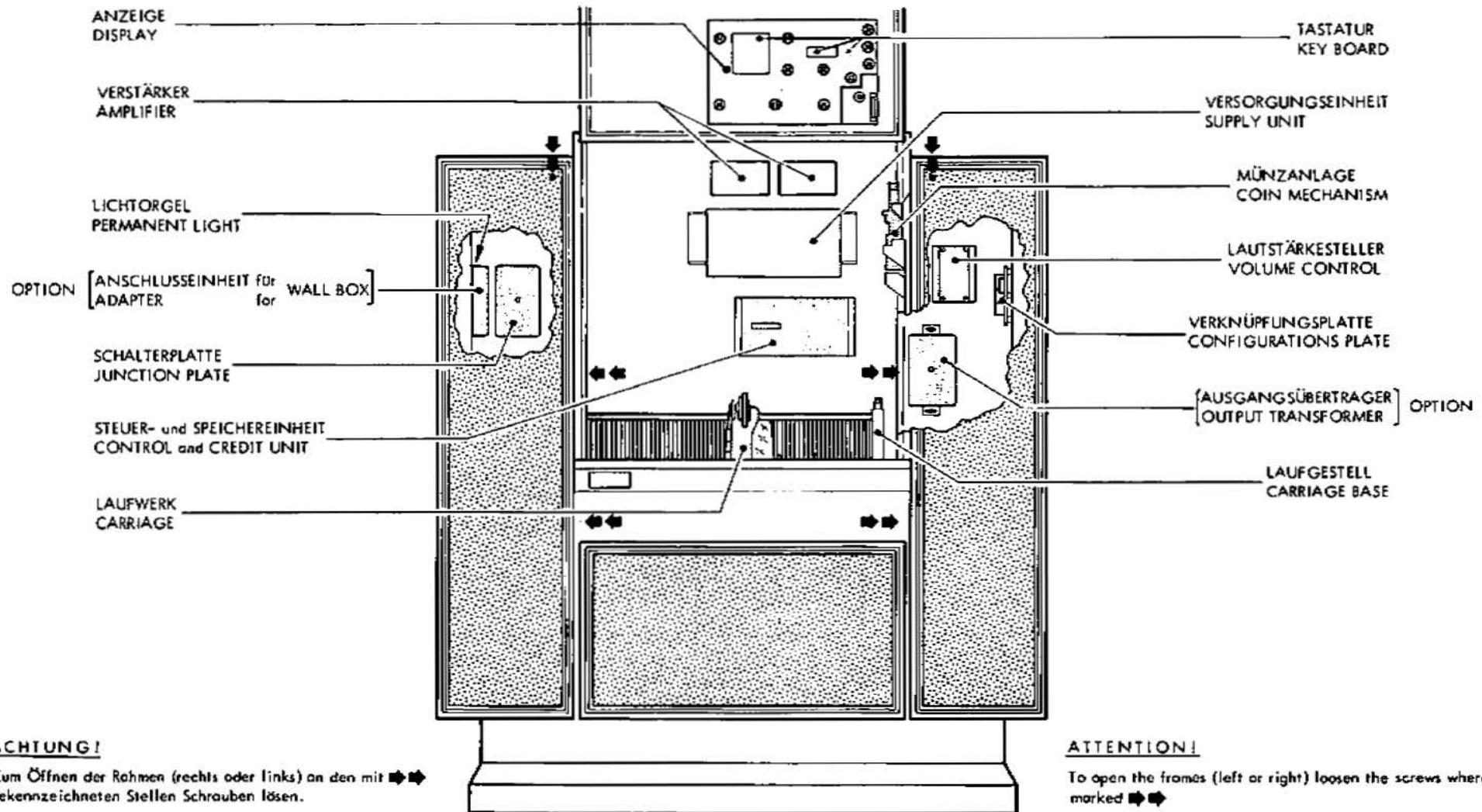
Trouble free working of the coin acceptor will only be achieved with the phonograph carefully levelled horizontally and vertically.

No reprint in full nor in part unless approved by NSM Apparatebau GmbH + Co. KG.

SUBJECT TO, BUT NO OBLIGATION OF, SUBSEQUENT TECHNOLOGICAL MODIFICATION.

BAUGRUPPEN - LAGEPLAN

LAYOUT OF ELEMENTS



ACHTUNG!

Zum Öffnen der Rahmen (rechts oder links) an den mit  gekennzeichneten Stellen Schrauben lösen.

ATTENTION!

To open the frames (left or right) loosen the screws where marked .

TECHNISCHE DATEN

SPECIFICATIONS

Elektrische Werte Electrical datas	<p>Netzspannung 100 - 240 V ~ 50/60 Hz</p> <p>Netztransformator 100 - 240 V ~ prim. sec I = 2 x 28 V sec II = 22 V sec III = 13 V sec IV = 43 V</p> <p>Leistungsaufnahme im Leerlauf 190 W bei Spielvorbereitung 200 W beim Spiel 250 W</p>	<p>Mains voltages 100 - 240 VAC 50/60 Hz</p> <p>Mains transformer 100 - 240 VAC prim. sec I = 2 x 28 VAC sec II = 22 VAC sec III = 13 VAC sec IV = 43 VAC</p> <p>Power consumption at stand by 190 W at transfer and scan 200 W play 250 W</p>
Sicherungen Fuses	<p>Hauptsicherung 2 x T 3,15 A träge (200-240 V) Si 201/202/205 = T 3,15 A 2 x T 4,0 A slo blo (100-127 V) Si 203/204 = T 1,25 A Si 206 = T 1,0 A Sekundär Si 701/702/703 = T 3,0 A Si 900 = T 8,0 A</p>	<p>Main fuse 2 x T 3,15 A slo blo (200-240 V) Si 201/202/205 = T 3,15 A 2 x T 4,0 A slo blo (100-127 V) Si 203/204 = T 1,25 A Si 206 = T 1,0 A secondary fuses Si 701/702/703 = T 3,0 A Si 900 = T 8,0 A</p>
Beleuchtung Lighting	<p>1 Leuchtstofflampe TL 20 W 1 Vorschaltgerät 220 V 20 W 50 Hz 1 Leuchtstofflampe TL 15 W 1 Vorschaltgerät 220 V 15 W 50 Hz 2 Starter S 10 20 Sieben-Segmentanzeigen 1/2" 44 Glühlampen 12 V 2 W</p>	<p>1 fluorescent lamp TL 20 W 1 ballast 220 V 20 W 50 Hz (117 V 20 W 60 Hz) 1 fluorescent lamp TL 15 W 1 ballast 220 V 15 W 50 Hz (117 V 15 W 60 Hz) 2 starters S 10 20 Seven-segments displays 1/2" 44 lamps 12 V 2 W</p>
Vorwahlrichtung Selection circuit	<p>Microcomputer</p> <p>10 Zifferntasten 1 Korrekturtaste "R" 1 Hit-Taste 2 Hit-Wahl-tasten 1 Gruppenwahl-Taste</p>	<p>Microcomputer</p> <p>10 number keys 1 correction key "R" 1 Hit-key 2 Hit-selection keys 1 group selection key</p>
Abspielmechanik Playing mechanism	<p>1 Laufgestell mit Schallplattenkassetten für 120 Platten, vertikal gelagert</p> <p>1 Laufwerk 45 UpM, Stereo</p> <p>1 Spielmotor 1500 UpM 42 V ~ 100 % ED</p> <p>1 Antriebsmotor 2500 UpM 42 V ~ 20 % ED ED = Einschaltdauer</p> <p>1 Auslösemagnet 56 V = 15 % ED</p> <p>1 Tonkopf SHURE - Magnet</p>	<p>1 carriage base with magazine for 120 records, vertically stored</p> <p>1 carriage 45 RPM, stereo</p> <p>1 play motor 1500 RPM 42 VAC 100 % ED ED = continuous duty</p> <p>1 drive motor 2500 RPM 42 VAC 20 % ED</p> <p>1 trip solenoid 56 VDC 15 % ED</p> <p>1 cartridge SHURE-magnetic-system</p>

TECHNISCHE DATEN

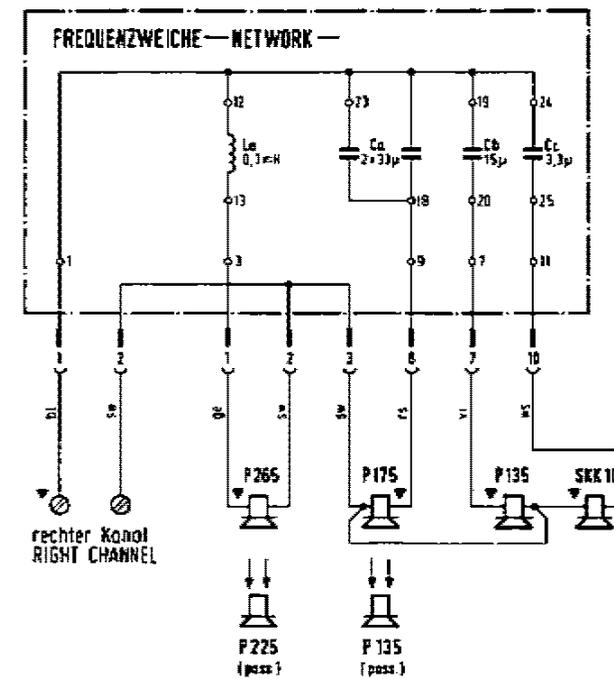
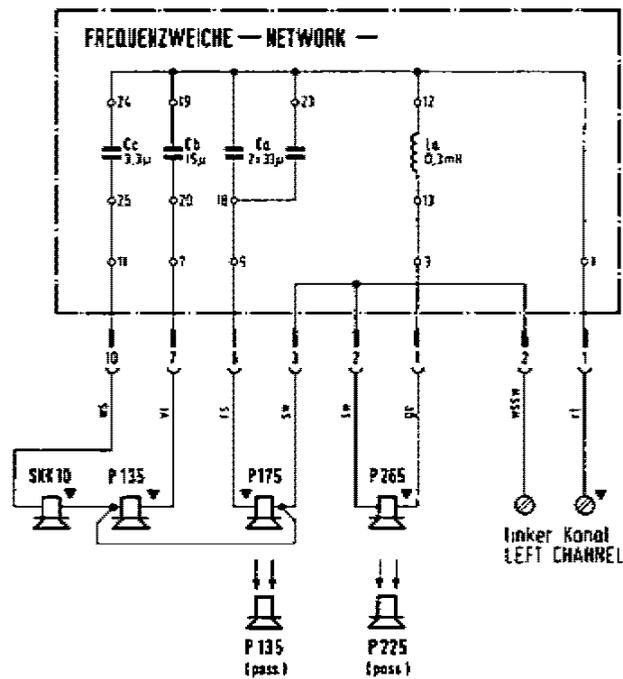
SPECIFICATIONS

Steuerung Control	ROM's, EA-ROM, Integrierte MOS-Schaltkreise, Integrierte TTL-Schaltkreise, Integrierte Transistor-Array 2 Integrierte Spannungsregler 3 Relais 5 Leuchtdioden für Spannungsanzeige 2 Foto-Transistoren) Laufwerkposition 1 Infrarot-Leuchtdiode) 3 Infrarot-Lichtschranken (Laufwerk) 4 Foto-Transistoren) Münzdurchlauf 2 Infrarot-Leuchtdioden)	ROM's, EA-ROM, MOS integrated circuits, TTL integrated circuits, integrated transistor array 2 integrated voltage regulators 3 relays 5 LED for Voltage indication 2 photo-transistors) placed at carriage 1 infrared LED) 3 infrared light barriers (carriage) 4 photo-transistors) placed at coin chutes 2 infrared LED)
Kreditspelcherung und -verrechnung Credit and conversion	Einstellung - Preistafel durch Service-Programm über Mikrocomputer Indirekte Umwertung (Bonus) Programmeinstellung Add.-Taste (Credit) Service-Auswertung: Anschluß für Service-Speicher (EA-ROM) Anschluß für Drucker	Setting of prices by SERVICE PROGRAM thru microcomputer Indirect conversion (Bonus) programming add. button (credit) Service evaluation: connection for service memory unit (EA-ROM) connection for printer
Verstärker Amplifier	Lautstärksteller: getrennte Lautstärkeeinstellung beider Kanäle möglich und 1 REJECT-Knopf Drahtlose Infrarot-Fernbedienung: Lautstärksteller, Stummschaltung, REJECT- Taste, Freispielkredit, Background-Einstellung, Fernsteuer- kontrolle mit "Thankyou"-Lampe.	Volume control: for each channel separately and one REJECT-button wireless radio infrared telecontrol apparatus: Volume control, Muting, Reject, Free credit, Background, Remote control with "Thankyou"- lamp
Lautsprecher Loudspeaker	2 Lautsprecher P 265 2 Lautsprecher P 175 2 Lautsprecher P 135 2 Lautsprecher SKK 10 2 Lautsprecher (passiv) P 225 2 Lautsprecher (passiv) P 135 2 Frequenzweichen	2 Loudspeakers P 265 2 Loudspeakers P 175 2 Loudspeakers P 135 2 Loudspeakers SKK 10 2 Loudspeakers (passiv) P 225 2 Loudspeakers (passiv) P 135 2 networks
Schlösser u. Schlüssel Locks and keys	1 Gehäuse-Schloß 2 Gehäuse-Schlüssel 1 Kassenschloß 2 Kassen-Schlüssel (verschiedene Nr.)	1 Cabinet lock 2 Cabinet keys 1 Cash box lock 2 Cash box keys (different from cabinet key)

Maße Measurements	Höhe height	Breite width	Tiefe depth	Gewicht weight
	1460 mm 57-1/2 inches	1160 mm 45-2/3 inches	760 mm 30 inches	171 kg 376 pounds (lbs)

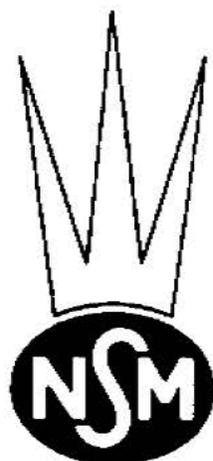
Lautsprecher-Kombination

Loudspeaker combination



ERSATZTEIL-LISTE

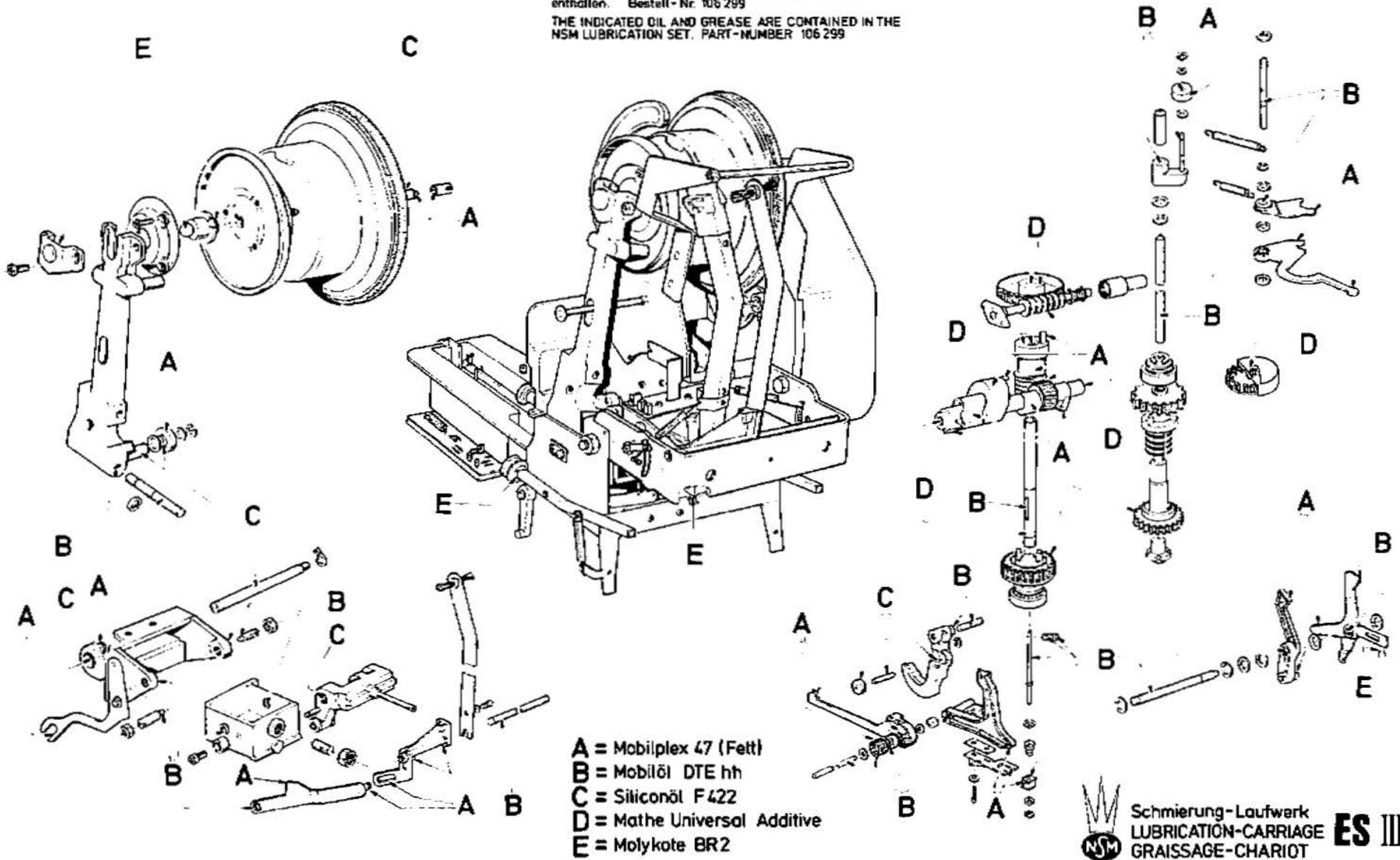
SPARE PARTS LIST



**MUSIKAUTOMAT
PHONOGRAPH**

240-I

Die angegebenen Schmiermittel sind im NSM-Schmiermittelsatz enthalten. Bestell-Nr. 106 299
 THE INDICATED OIL AND GREASE ARE CONTAINED IN THE NSM LUBRICATION SET. PART-NUMBER 106 299



Schmierung-Laufwerk
 LUBRICATION-CARRIAGE
 GRAISSAGE-CHARIOT

ES III

Bitte beachten Sie!

Diese Ersatzteil - Liste gilt nur für den NSM - Musikautomaten

240-1

Jede Ersatzteilbestellung muß folgende Angaben enthalten:

- 1) Gerätetyp
- 2) Gerätenummer
- 3) Bestellmenge
- 4) Bestellnummer
- 5) Benennung

Beispiel

Gerätetyp: ... **240-1**

Gerätenummer:

Stück	Bestell-Nr.	Benennung
3	205 304	Zugfeder
1	200 410	Tonarmrohr
5	221 099	Widerstand 470 Ω 0,34 W
10	221 115	Si-Diode 1 N 4004

Die Gerätenummer befindet sich auf dem Typenschild an der Gehäuse-Rückwand.

Klare Bestellangaben ersparen unnötige Rückfragen und führen zu rascher Erledigung Ihres Auftrages.

BITTE RICHTEN SIE ERSATZTEIL-BESTELLUNGEN NUR AN IHREN GROSSHÄNDLER ODER AN DIE LÖWEN-ORGANISATION!

ÄNDERUNGEN IM SINNE DES TECHNISCHEN FORTSCHRITTES VORBEHALTEN, JEDOCH KEINE NACHRÜSTPFLICHT!

Die in dieser Ersatzteil-Liste enthaltenen Angaben und Abbildungen entsprechen dem Stand zur Zeit der Drucklegung.

Nachdruck, auch auszugsweise, ist ohne Genehmigung der NSM Apparatebau GmbH + Co. KG nicht gestattet.

Please note

This spare parts list is applicable to NSM phonographs only

240-1

Every spare part order should contain the following:

- 1) Model
- 2) Serial number
- 3) Quantity
- 4) Part number
- 5) Description

Example

Model: ... **240-1**

Serial number:

QTY	PART-NUMBER	DESCRIPTION
3	205 304	TENSION SPRING
1	200 410	TONE ARM TUBE
5	221 099	RESISTOR 470 Ω 0,34 W
10	221 115	SI-DIODE 1 N 4004

The serial number is on the manufacturing plate on rearside of cabinet.

Precise orders save unnecessary questions and bring the best results.

ORDER SPARE PARTS THRU YOUR NSM-DISTRIBUTOR!

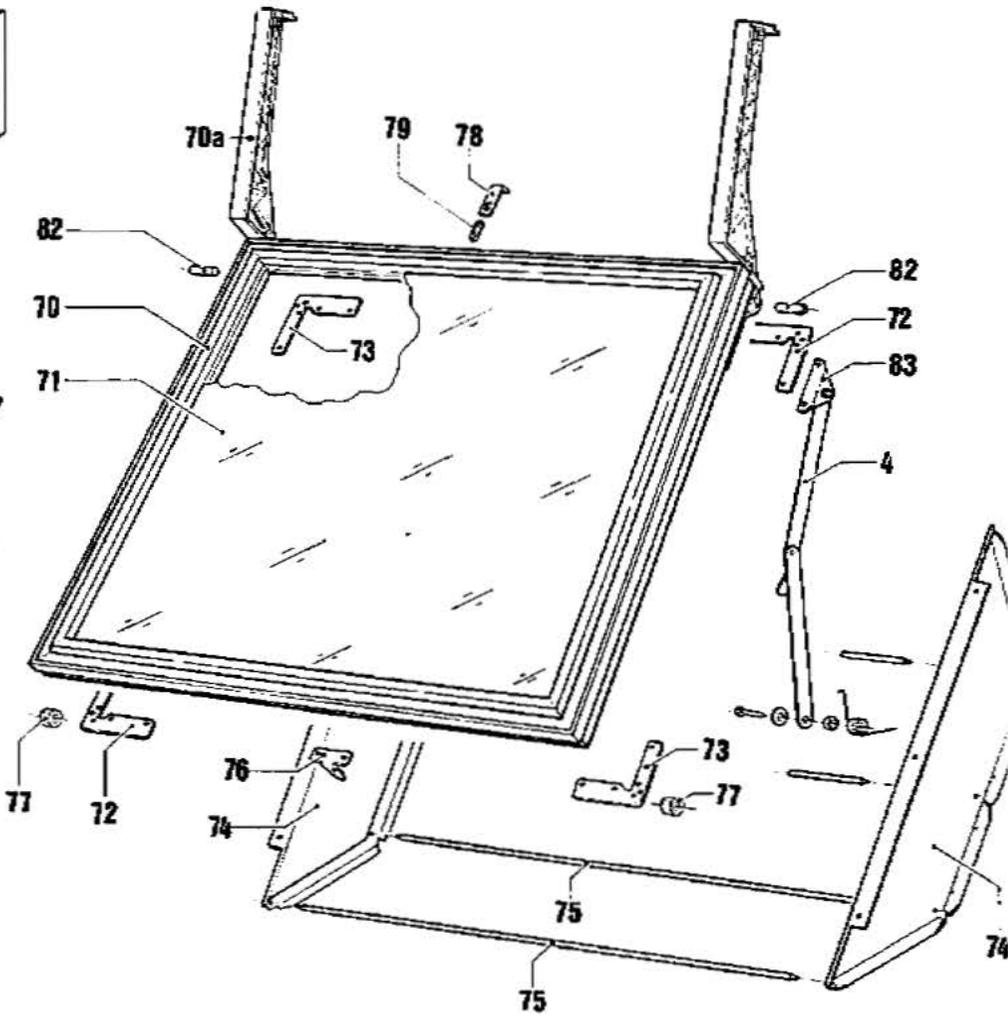
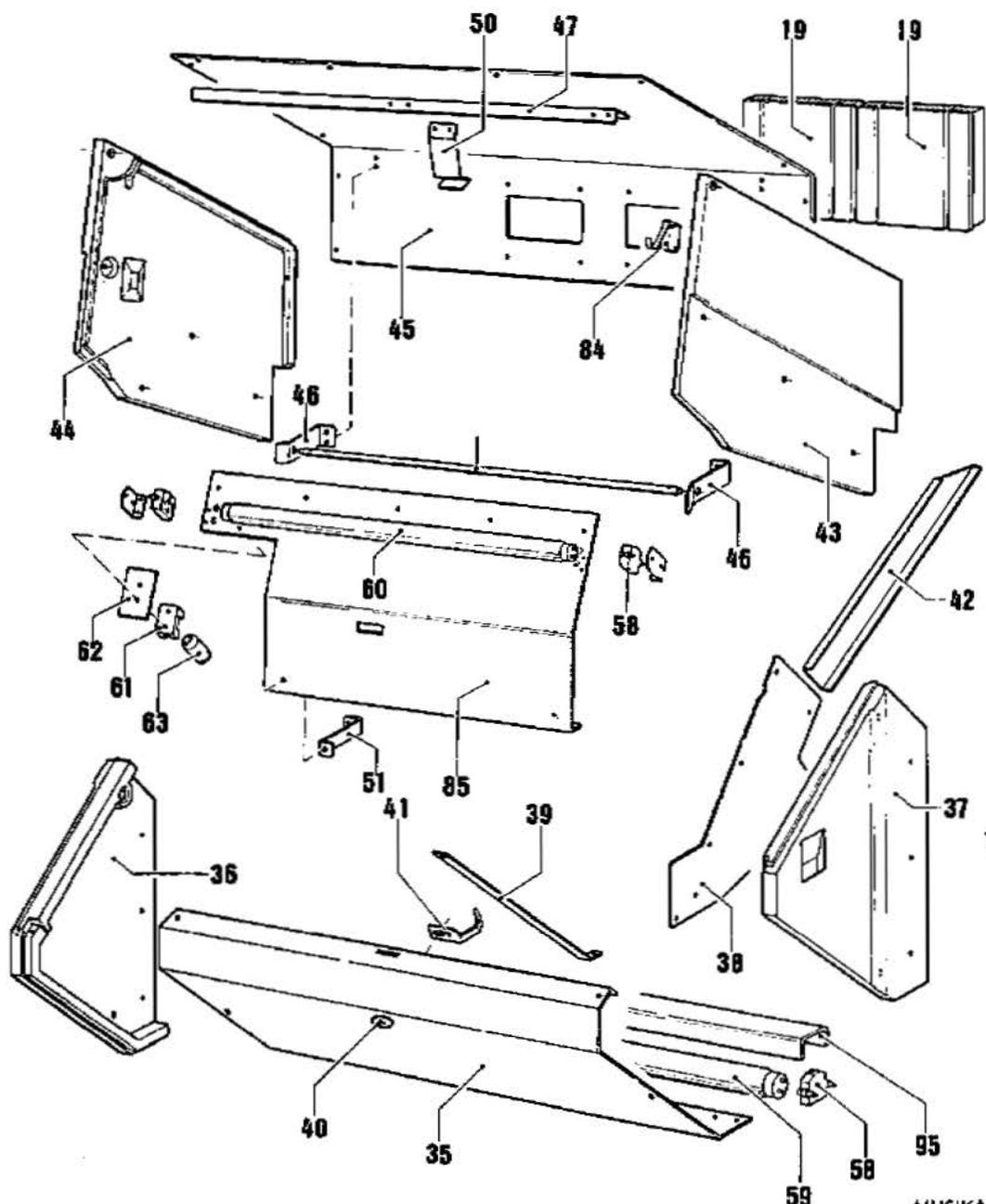
SUBJECT TO, BUT NO OBLIGATION OF, SUBSEQUENT TECHNOLOGICAL MODIFICATION!

Information and illustrations contained in this spare parts list, are correct at the time of going to press.

No reprint in full nor in part unless approved by NSM Apparatebau GmbH + Co. KG.

Nummer in der Abbildung ITEM	Bestell-Nr. PART NUMBER	Benennung	DESCRIPTION	Häufigkeit in dieser Baugruppe QTY	siehe Seite SEE PAGE
1	203 557	Gehäuse mit Beschlägen	CABINET with ARMATURES	1	
2	217 483	Scharnier	HINGE	1	
3	217 506	Doppellenkrolle	ROLLER	4	
4	170 404	Hochstellschere, kompl.	SUPPORT ROD	2	7
5	170 165	Rahmen, links - vormontiert -	FRAME, left - PRE-MOUNTED -	1	
6	170 166	Rahmen, rechts - vormontiert -	FRAME, right - PRE-MOUNTED -	1	
7	225 587	Lampensockel	LAMP SOCKET	28	
8	224 201	Lautsprecher SKK 10 4 Ω	LOUDSPEAKER SKK 10	2	
9	224 202	Lautsprecher P 135 (passiv)	LOUDSPEAKER P 135 (PASSIV)	2	
10	224 193	Lautsprecher P 135 / A 26 - 19 / 51 8 Ω	LOUDSPEAKER P 135/A 26-19/51	2	
11	224 203	Lautsprecher P 175 / AA 36 - 25 / 16 8 Ω	LOUDSPEAKER P 175/AA 36 - 25/16	2	
12	224 204	Lautsprecher P 203 (passiv)	LOUDSPEAKER P 203 (PASSIV)	2	
13	170 170	Rahmen, unten - vormontiert -	FRAME, lower - PRE-MOUNTED -	1	
7	225 587	Lampensockel	LAMP SOCKET	12	
15	224 199	Lautsprecher P 265 / AA 70 - 25 / 50 6,5 Ω	LOUDSPEAKER P 265/AA 70 - 25/50	2	
16	226 049	Glassockellampe 12 V 2 W	LAMP 12 V 2 W	40	
17	170 307	LP-Lichtorgel, vollst. - 50 Hz -	LP-PERMANENT LIGHT, ASSY - 50 Hz -	1	14
	170 232		LP-PERMANENT LIGHT, ASSY - 60 Hz -	1	18
18	170 213	Frequenzweiche	SEPARATING NETWORK	2	7
19	200 992	Kühlprofil	COOLING PROFILE	2	16
20	170 161	Verstärker	AMPLIFIER	2	
21	170 212	Lautstärksteller	VOLUME CONTROL	1	
	170 336	Fernbedienung, vollst.	REMOTE CONTROL, ASSY	1	8
22	220 320	Funk-Entstörkondensator		1	
23	170 157	Trafolech, genietet	TRAFO PLATE, STAMPED	1	
24	223 380	Transformator	TRANSFORMER	1	
25	170 072	Ansatzbuchse	SLEEVE	4	
26	223 379	Transformator	TRANSFORMER	1	
27	224 137	Vorschaltgerät 220 V 50 Hz 20 W	BALLAST 220 V 50 Hz 20 W	1	
28	224 200	Vorschaltgerät 220 V 50 Hz 15 W	BALLAST 220 V 50 Hz 15 W	1	
27	224 136		BALLAST 117 V 60 Hz 20 W	1	
28	224 191		BALLAST 117 V 60 Hz 15 W	1	
29	170 076	Kasse, geschweißt	CASH, WELDED	1	
30	170 060	Deckel	COVER	1	
31	207 008	Zylinderschloß	CASH LOCK	1	
32	170 079	Münztrichter	COIN FUNNEL	1	
33	170 262	Kassette	MAGAZINE	1	
34	211 300	Schieber	SLIDE	1	
35	170 158	Pult, genietet	DESK, STAMPED	1	7
36	170 037	Seitenteil, links	SIDE PART, left	1	7
37	170 036	Seitenteil, rechts	SIDE PART, right	1	7

Nummer in der Abbildung ITEM	Bestell - Nr. PART NUMBER	Benennung	DESCRIPTION	Häufigkeit in dieser Baugruppe QTY	siehe Seite SEE PAGE
38	211 307	Abdeckblech	COVER PLATE	1	
39	170 120	Versteifung	REINFORCEMENT	1	
40	207 007	Zylinderschloß	DESK LOCK	1	
41	170 052	Schließhebel	CLOSING LEVER	1	
42	211 299	Münzkanal	COIN CHANNEL	1	
43	170 046	Seitenteil, oben - rechts -	SIDE PART, UPPER, right	1	
44	170 047	Seitenteil, oben - links -	SIDE PART, UPPER, left	1	
45	170 356	Haube	CAP	1	
46	205 668	Rastfeder	STOP SPRING	2	
47	170 087	Abdeckwinkel	COVER BRACKET	1	
48	170 073	Münztrichter	COIN FUNNEL	1	5
49	170 063	Lagerblech	SUPPORT	1	5
50	205 663	Rastfeder	STOP SPRING	1	
51	170 173	Winkel, genietet	BRACKET, STAMPED	1	
52	170 291	Schalterplatte, vollst. - 50 Hz -	JUNCTION PLATE, ASSY - 50 Hz -	1	18
	170 098		JUNCTION PLATE, ASSY - 60 Hz -		
53	041 691		SERVICE CONNECTION - USA -	1	
54	023 641	Abdeckplatte	COVER PLATE	1	9
55	212 092	Münzrohr	COIN TUBE	1	5
56	170 114	Haltewinkel	HOLDING BRACKET	1	5
57	170 113	Verschlußplatte	CLOSING PLATE	2	9
58	225 367	Einbaufassung	SOCKET	4	
59	226 071	Leuchtstofflampe TL 20 W/25	FLUORESCENT LAMP	1	
60	226 076	Leuchtstofflampe TLD 15 W/25	FLUORESCENT LAMP	1	
61	225 364	Starterfassung - 50 Hz -	STARTER HOLDER - 50 Hz -	2	
	225 021		STARTER HOLDER - 60 Hz -		
62	104 622	Isolierplatte	INSULATING PLATE	2	
63	225 040	Starter S 10 - 50 Hz -	STARTER S 10 - 50 Hz -	2	
	225 343		STARTER S 5 - 60 Hz -		
64	170 062	Lagerbolzen	BEARING BOLT	2	5
65	103 025	Ansatzbolzen	BOLT	1	5
66	170 204	Rückzahlhebel, vollst.	REJECT LEVER, ASSY	1	5
67	170 069	Halter	HOLDER	1	5
68	170 070	Leitblech	VANE	1	5
69	170 031	Münzdurchlauf, vollst.	COIN CHUTE, ASSY	1	5
	170 172	Programmtafelrahmen, vormontiert	PROGRAM LID, PRE-MOUNTED	1	
70	170 365	Programmtafelrahmen ohne Scheibe	PROGRAM LID without GLASS	1	
70 o	170 038	Scharnierteil	HINGE PARTS	2	
71	204 524	Programmtafelscheibe	PROGRAM GLASS	1	
72	170 143	Knotenblech, links	GUSSET, left	2	
73	170 142	Knotenblech, rechts	GUSSET, right	2	
74	170 171	Seitenblech, genietet	SIDE PLATE, STAMPED	2	



ERSATZTEIL - LISTE

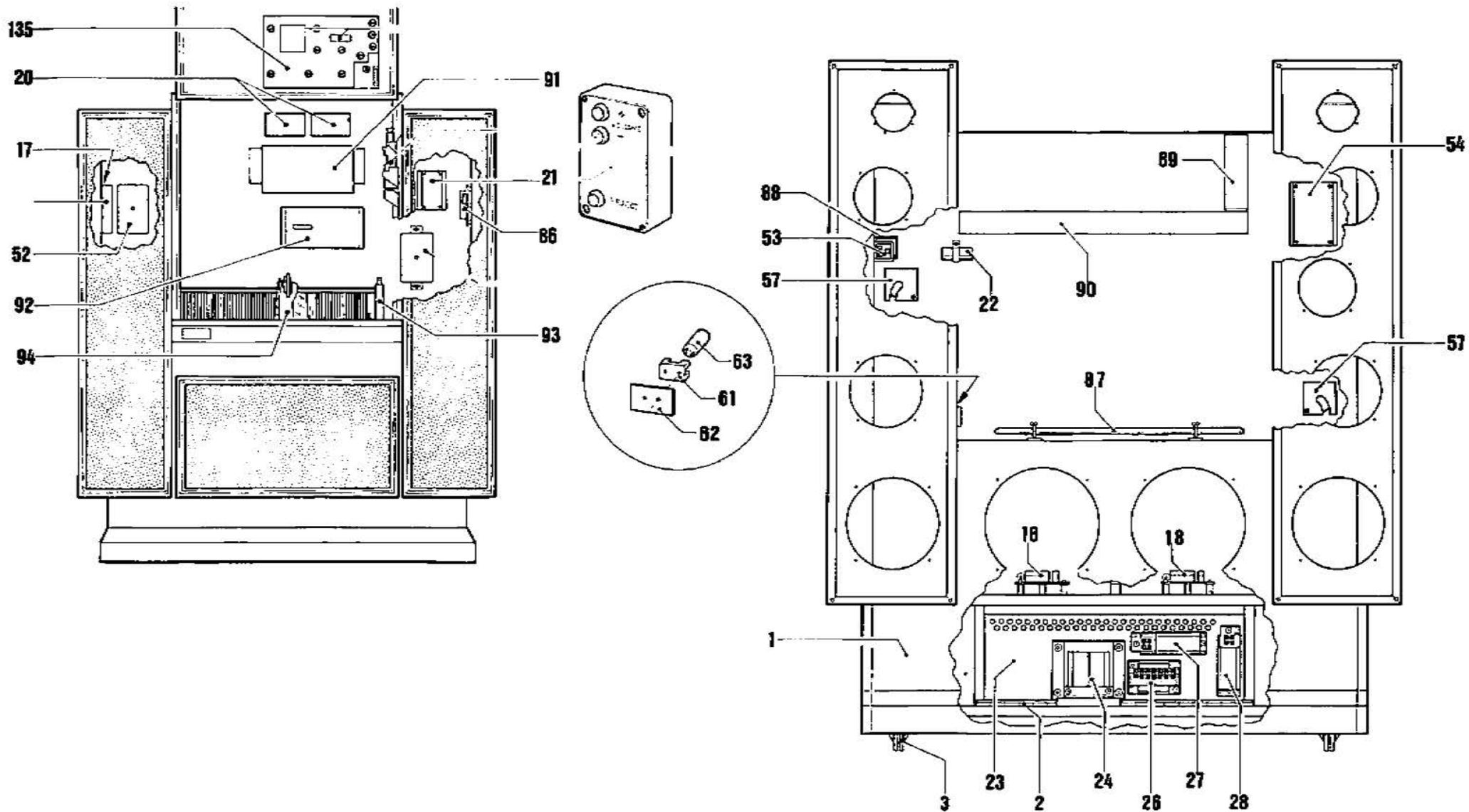
NSM MUSIKAUTOMAT
PHONOGRAPH

240 - I

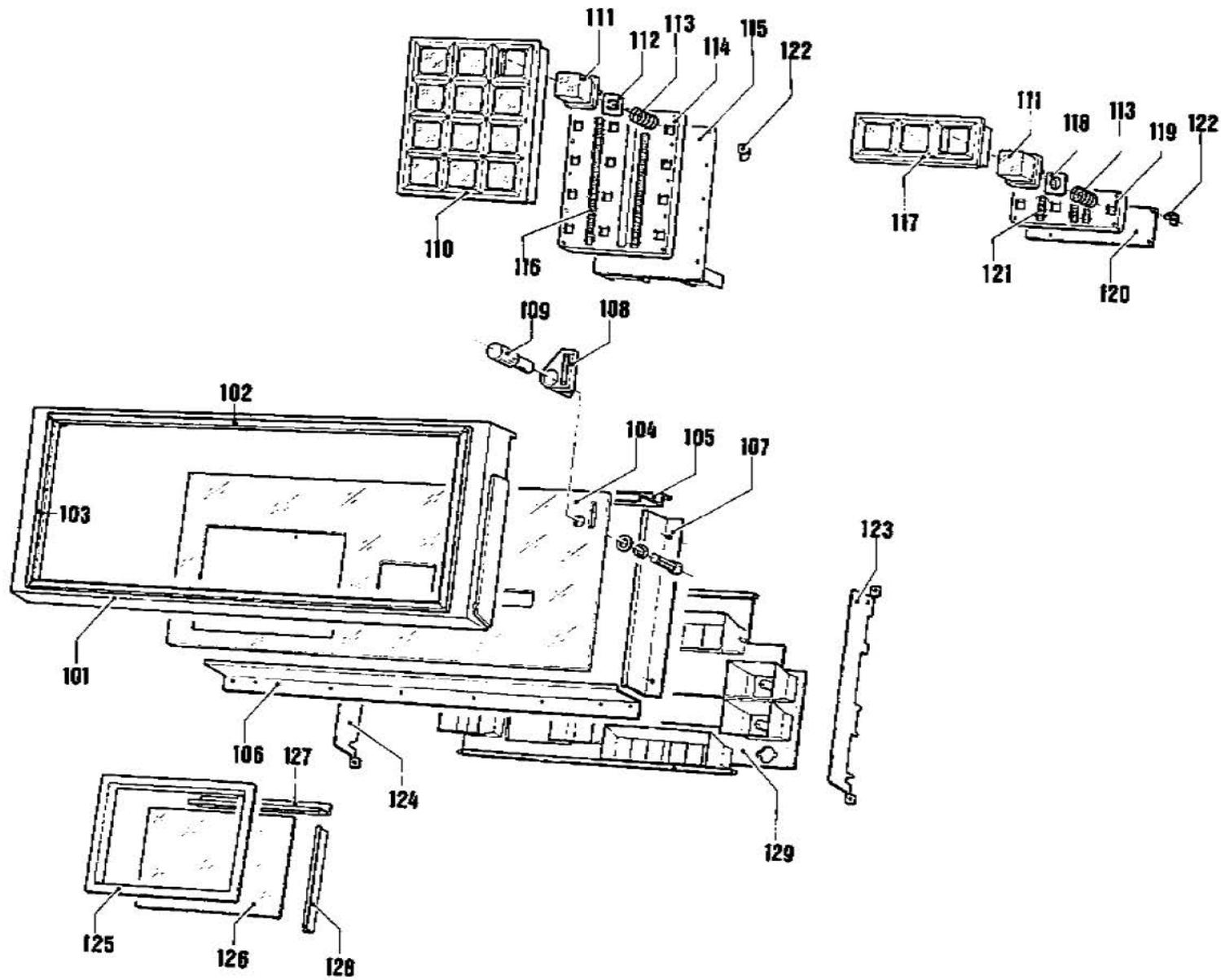
SPARE PARTS LIST

Nummer in der Abbildung ITEM	Bestell - Nr. PART NUMBER	Benennung	DESCRIPTION	Häufigkeit in dieser Baugruppe QTY	siehe Seite SEE PAGE
75	170 135	Achse	SHAFT	3	7
76	170 018	Klaue	CLAW	1	7
77	170 162	Dämpfung	DAMPING	2	7
78	170 068	Schließwinkel	CLOSING BRACKET	1	7
79	205 340	Druckfeder	PRESSURE SPRING	1	7
	170 200	Streifenträger, kompl. G 10 - G 15	TITLE STRIP HOLDER, ASSY	1	
80	170 201	Streifenträger, kompl. G 16 - G 21	TITLE STRIP HOLDER, ASSY	1	5
	170 202	Streifenträger, kompl. G 22 - G 27	TITLE STRIP HOLDER, ASSY	1	
	170 203	Streifenträger, kompl. G 28 - G 33	TITLE STRIP HOLDER, ASSY	1	
81		Anzeigenrahmen, vollst.	INDICATING FRAME, ASSY	1	10
82	170 053	Achse	SHAFT	2	7
83	170 383	Winkel	BRACKET	2	7
84	222 406	Mikroschalter	MICRO SWITCH	1	7
85	170 206	Abdeckblech, vormontiert	COVER PLATE, PRE MOUNTED	1	7
86	170 231	LP-Verknüpfung	CIRCUIT-PLATE - CONFIGURATION	1	
87	022 742	Montagerohr	MOUNTING TUBE	1	
88	212 095	Verdrahtungskanal (125 lg)	WIRING CHANNEL (125 lg)	1	
	212 097	Verdrahtungskanaldeckel	COVER for WIRING CHANNEL	1	
89	212 096	Verdrahtungskanal (150 lg)	WIRING CHANNEL (150 lg)	1	
	212 098	Verdrahtungskanaldeckel	COVER for WIRING CHANNEL	1	
90	212 109	Verdrahtungskanal (575 lg)	WIRING CHANNEL (575 lg)	1	
	212 110	Verdrahtungskanaldeckel	COVER for WIRING CHANNEL	1	
91	170 290	Versorgungseinheit - 50 Hz -	SUPPLY UNIT - 50 Hz -		21
	170 168		SUPPLY UNIT - 60 Hz -		
92	170 160	Steuer- und Speichereinheit ES III	CONTROL and CREDIT UNIT ES III	1	
93	170 000	Laufgestell, vollst. - 240 -	CARRIAGE BASE, ASSY - 240 -	1	24
94	170 300	Laufwerk, vollst. - 50 Hz -	CARRIAGE, ASSY - 50 Hz -	1	26
	170 333		CARRIAGE, ASSY - 60 Hz -		
95	204 531	Schutzblende	PROTECTION TRIMPLATE	1	7
		<u>ZUBEHÖR</u>	<u>ACCESSORIES</u>		
	170 260	Lautstärkereglern mit 12 m Kabel	VOLUME CONTROL with CABLE 12 m	1	
	170 282	Lautstärke-Doppelregler mit 12 m Kabel (Stereo)	VOLUME CONTROL - STEREO - with 12 m CABLE	1	
	170 283	Lautstärke-Einfachregler mit 12 m Kabel (Mono)	VOLUME CONTROL - MONO - with 12 m CABLE	1	
		<u>FERNBEDIENUNG</u>	<u>REMOTE CONTROL</u>		
	217 525	Sender	SENDER	1	
	217 526	Empfänger	RECEIVER	1	
	170 266	Anschlußkabel 2 m	CONNECTING CABLE 2 m	1	
	170 459	Anschlußkabel 5 m	CONNECTING CABLE 5 m	1	
	170 334	Halteblech	HOLDING PLATE	1	
	170 335	Sicherungsblech	SAFETY PLATE	1	

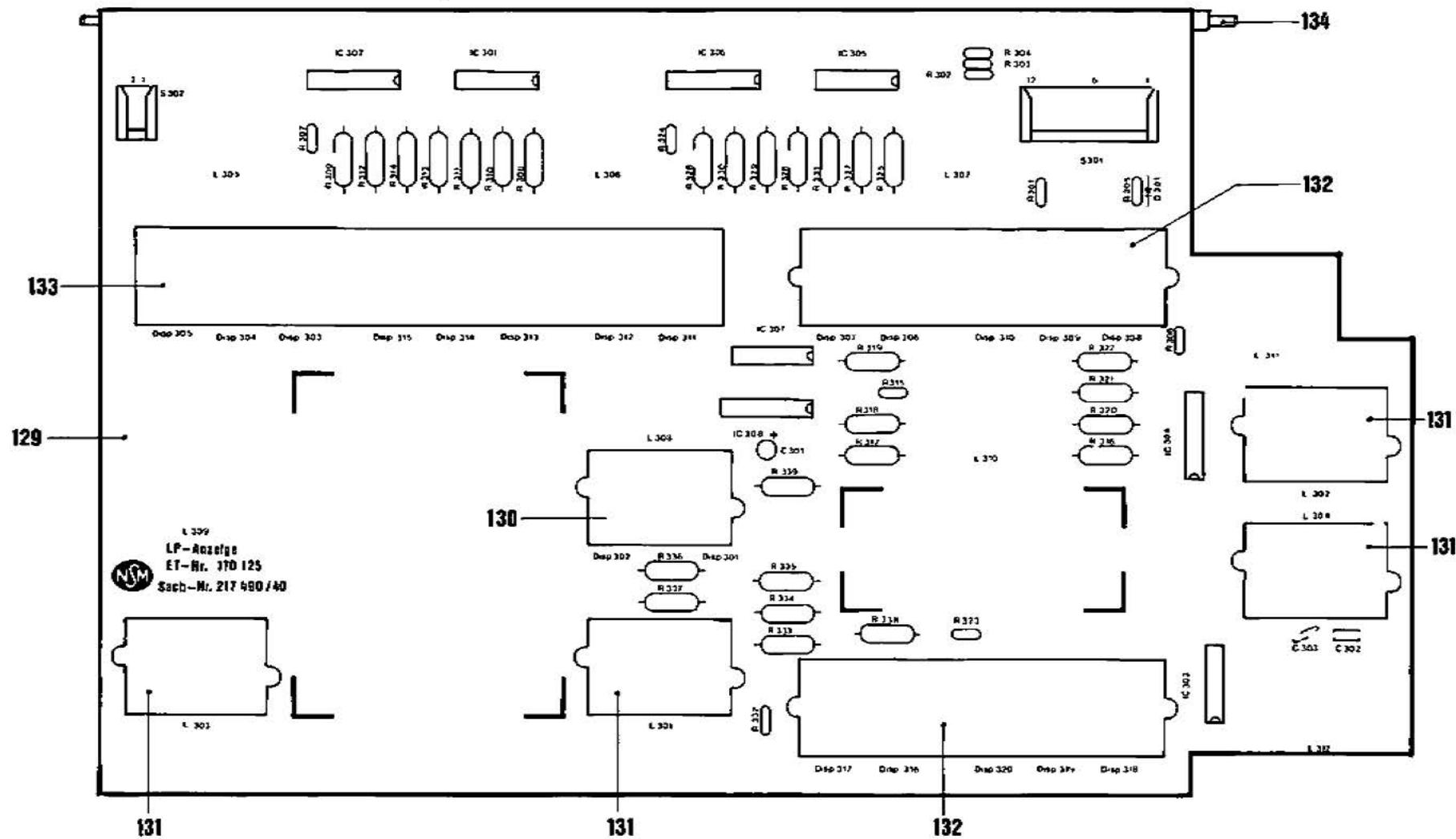
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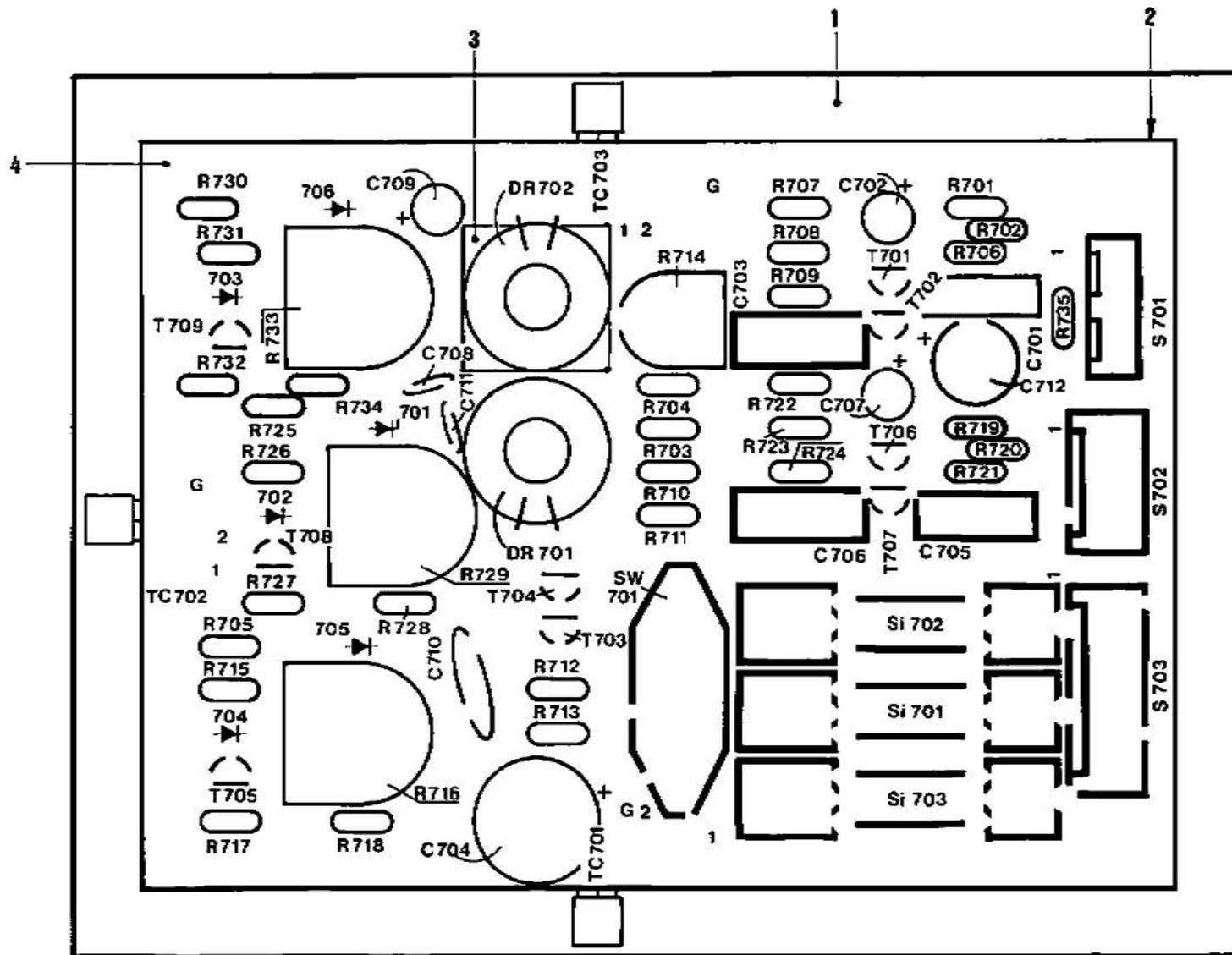
Nummer in der Abbildung ITEM	Bestell-Nr. PART NUMBER	Benennung	DESCRIPTION	Häufigkeit in dieser Baugruppe QTY	siehe Seite SEE PAGE
	170 437 170 150	ANZEIGERAHMEN, vollst. -deutsch-	INDICATING FRAME, ASSY -english-		
101	170 364	Rahmen mit Zierstreifen	FRAME with DECORATIVE STRIP	1	
102	211 292	Zierstreifen, lang	DECORATIVE STRIP, long	2	
103	211 291	Zierstreifen, kurz	DECORATIVE STRIP, short	2	
104	204 523	Programmscheibe (englisch)	PROGRAM GLASS	1	
	204 548	Programmscheibe (deutsch)		1	
105	170 049	Leiste, oben	LEDGE, UPPER	1	
106	170 050	Leiste, unten	LEDGE, LOWER	1	
107	170 051	Seitenleiste	SIDE LEDGE	2	
108	200 980	Münzeinwurf	COIN ENTRY	1	
109	170 042	Druckstift	COIN REJECT	1	
	170 147	Tastatur 12-fach, vollst.	KEY BOARD (12 KEYS), ASSY	1	
110	170 011	Tastenrahmen I	KEY FRAME I	1	
111	170 303	Taste, vormontiert	BUTTON, PRE-MOUNTED	12	
112	208 993	Schrifteinsätze 12er	WRITING INSERTION (12)	1	
113	205 659	Druckfeder	PRESSURE SPRING	12	
114	170 013	Kontaktfederplatte I	CONTACT SPRING PLATE I	1	
115	170 111	Leiterplatte, gelötet	CIRCUIT PLATE, SOLDERED	1	
116	205 666	Zugfeder	TENSION SPRING	3	
	170 148	Tastatur 3-fach, vollst.	KEY BOARD (3 KEYS), ASSY	1	
117	170 012	Tastenrahmen II	KEY FRAME II	1	
118	170 303	Taste, vormontiert	BUTTON, PRE-MOUNTED	3	
119	208 995	Tasteneinsätze 3er	WRITING INSERTION (3)	1	
113	205 659	Druckfeder	PRESSURE SPRING	3	
119	170 014	Kontaktfederplatte II	CONTACT SPRING PLATE II	1	
120	170 086	Leiterplatte, gelötet	CIRCUIT PLATE, SOLDERED	1	
121	205 665	Zugfeder	TENSION SPRING	3	
122	211 302	Klammer	CLIP	6	
123	170 151	Druckleiste, rechts - genietet -	PRESSURE LEDGE, right - RIVETED	1	
124	170 152	Druckleiste, links - genietet -	PRESSURE LEDGE, left - RIVETED	1	
125	170 218	Rahmen	FRAME	1	
126	204 534	Einlegescheibe	GLASS	1	
127	170 224	Druckleiste, lang	PRESSURE LEDGE, long	2	
128	170 223	Druckleiste, kurz	PRESSURE LEDGE, short	2	



Nummer in der Abbildung ITEM	Bestell-Nr. PART NUMBER	Benennung	DESCRIPTION	Häufigkeit in dieser Baugruppe QTY	siehe Seite SEE PAGE
				1	
129	170 125	LP-Anzeige, vollst.	CIRCUIT PLATE - DISPLAY, ASSY	1	
130	170 080	Tubus I	TUBE I	1	
131	170 081	Tubus II	TUBE II	4	
132	170 082	Tubus III	TUBE III	2	
133	170 083	Tubus IV	TUBE IV	1	
134	170 054	Lagerachse	BEARING	2	
	231 068	Anzeige DL 507	DISPLAY DL 507	20	
IC 301/303/305/307	221 771	IC-CMOS HEF 4094 B	IC-CMOS HEF 4094 B	4	
IC 302/304/306/308	232 078	IC-Linear SN 75 423	IC-LINEAR SN 75 423	4	
D 301	221 114	Si-Diode 1 N 4148	SI-DIODE 1 N 4148	1	
C 303	220 185	Keramik-Kondensator 270 pF	CAPACITOR CERAMIC 270 pF	1	
C 302	220 334	MKT-Kondensator 0,1 µF 63 V	CAPACITOR MKT 0,1 µF 63 V	1	
C 301	220 159	Elko 4,7 µF 63 V	CAPACITOR LYTIC 4,7 µF 63 V	1	
301/307/315/324/332	221 611	Widerstand 10 Ω 0,34 W (1/4 W)	RESISTOR 10 Ω 0,34 W (1/4 W)	5	
R 323	221 614	Widerstand 330 Ω 0,34 W (1/4 W)	RESISTOR 330 Ω 0,34 W (1/4 W)	1	
R 305	221 029	Widerstand 1 K 0,34 W (1/4 W)	RESISTOR 1 K 0,34 W (1/4 W)	1	
R 302/303/304	221 035	Widerstand 10 K 0,34 W (1/4 W)	RESISTOR 10 K 0,34 W (1/4 W)	3	
R 306	221 009	Widerstand 1 M 0,34 W (1/4 W)	RESISTOR 1 M 0,34 W (1/4 W)	1	
R 308-314/325-331	221 985	Widerstand 330 Ω 0,71 W (1 W)	RESISTOR 330 Ω 0,71 W (1 W)	28	
316-322/333-335/339	225 665	Stiftwanne 12polig 90°	PIN CONTACT 12 PRONGS 90°	1	

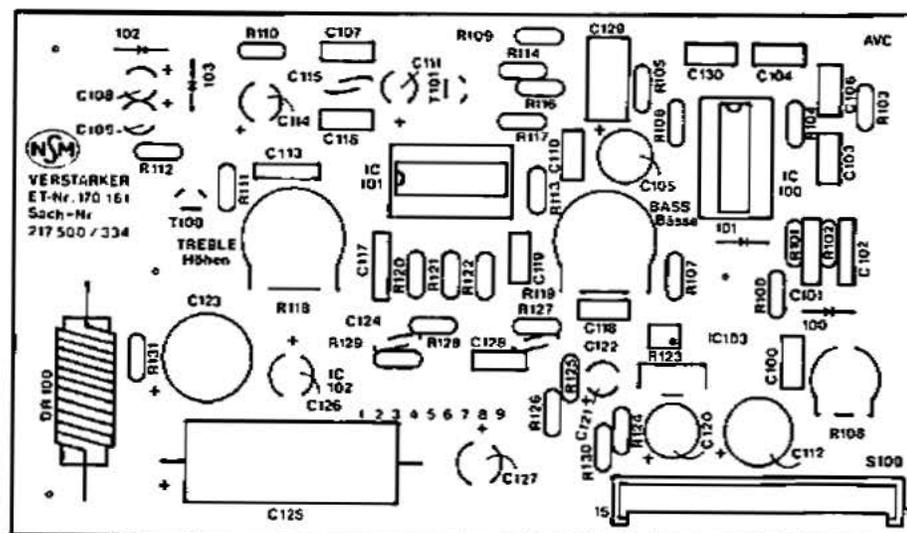


Nummer in der Abbildung ITEM	Bestell - Nr. PART NUMBER	Benennung	DESCRIPTION	Häufigkeit in dieser Baugruppe QTY
	170 307	LP-Lichtorgel, vollst. - 50 Hz -	LP - PERMANENT LIGHT, ASSY - 50 Hz -	1
	170 232		LP-PERMANENT LIGHT, ASSY - 60 Hz -	
1	170 205	Grundplatte	BASE PLATE	1
2	106 591	Distanzhülle	DISTANCE SPACER	3
TC 701 - 703	231 028	Si-Transistor Triac TIC 206 D	SI-TRANSISTOR Triac TIC 206 D	3
3	170 230	Bügel	RETAINER	1
	225 016	Sicherungshalter - 50 Hz -	FUSE HOLDER - 50 Hz -	
	225 405		FUSE HOLDER - 60 Hz -	6
Si 701 - 703	225 029	G-Schmelzeinsatz T 3, 15 A träge - 50 Hz -	FUSE T 3, 15 A SLO BLO - 50 Hz -	3
	225 225		FUSE 3-2/10 A SLO BLO - 60 Hz -	
SW 701	222 403	Schiebeschalter	SLIDE SWITCH	1
DR 701	170 268	Spulenkörper, vollst.	COIL FORMER, ASSY	1
	170 267	Bolzen	BOLT	1
DR 702	170 268	Spulenkörper, vollst.	COIL FORMER, ASSY	1
	170 227	Distanzbolzen	DISTANCE BOLT	1
S 702	225 326	Stiftleiste	PIN PLUG	4 PRONGS
S 703	225 328	Stiftleiste	PIN PLUG	6 PRONGS
S 701	225 443	Stiftleiste	PIN PLUG	6 PRONGS
T 705, 708, 709	221 459	Si-Transistor	SI-TRANSISTOR	BC 556 B
T 701-704, 706, 707	221 491	Si-Transistor	SI-TRANSISTOR	BC 550 B
C 701, 705	220 239	MKT-Kondensator	CAPACITOR MKT	0,047 µF 100 V
C 710	220 341	Keramik Kondensator	CAPACITOR CERAMIC	4700 pF
C 703, 706	220 176	MKT-Kondensator	CAPACITOR MKT	0,22 µF 100 V
C 708, 711	220 265	Keramik Kondensator	CAPACITOR CERAMIC	0,022 µF 32 V
C 702, 707, 709	220 159	Elko	CAPACITOR LYTIC	4,7 µF 63 V
C 704	220 248	Elko	CAPACITOR LYTIC	220 µF 63 V
C 712	220 250	Elko	CAPACITOR LYTIC	100 µF 25 V
D 701 - 706	221 114	Si-Diode	SI-DIODE	1 N 4148
R 713	221 614	Widerstand	RESISTOR	330 Ω 0,34 W
R 717, 727, 732	221 029	Widerstand	RESISTOR	1 K 0,34 W
R 704, 712	221 030	Widerstand	RESISTOR	1,5 K 0,34 W
R 710	221 032	Widerstand	RESISTOR	2,7 K 0,34 W
R 715, 726, 731	221 034	Widerstand	RESISTOR	4,7 K 0,34 W
705, 718, 725, 728, 730, 734	221 035	Widerstand	RESISTOR	10 K 0,34 W
R 711	221 036	Widerstand	RESISTOR	15 K 0,34 W
R 702, 708, 720, 723	221 604	Widerstand	RESISTOR	22 K 0,34 W
R 709, 724	221 601	Widerstand	RESISTOR	27 K 0,34 W
R 703	221 046	Widerstand	RESISTOR	120 K 0,34 W
R 706, 721	221 045	Widerstand	RESISTOR	150 K 0,34 W
R 707, 722	221 605	Widerstand	RESISTOR	180 K 0,34 W
R 701, 719	221 049	Widerstand	RESISTOR	470 K 0,34 W
R 735	221 600	Widerstand	RESISTOR	100 Ω 0,34 W
R 714	221 280	Trimmerwiderstand	TRIMMER RESISTOR	25 K lin. 0,1 W
R 716, 729, 733	221 395	Trimmerwiderstand	TRIMMER RESISTOR	10 K lin. 0,15 W



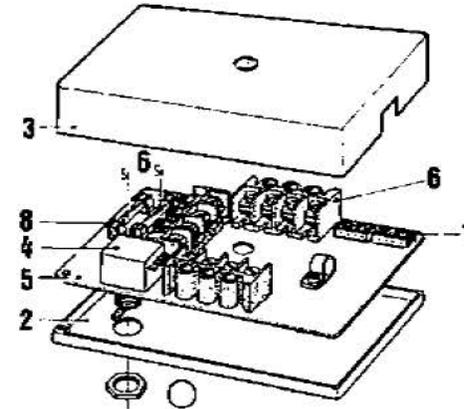
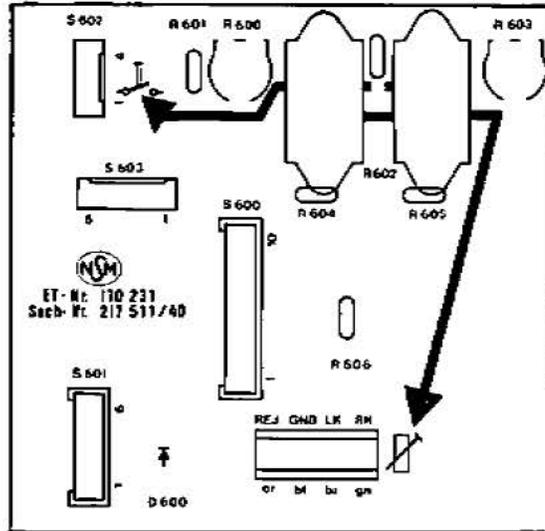
Nummer in der Abbildung ITEM	Bestell-Nr. PART NUMBER	Benennung	DESCRIPTION	Häufigkeit in dieser Baugruppe QTY
	170 161	Verstärker, vollst.	AMPLIFIER, ASSY	
IC 102	231 090	NF-Leistungsverstärker	NF-POWER AMPLIFIER	1
IC 101	231 089	IC-Linear Klangregler	IC-LINEAR TONE CONTROL	1
IC 100	221 417	IC-CMOS MC 14007	IC-CMOS MC 14007	1
IC 103	231 088	IC-CMOS U 351 M	IC-CMOS U 351 M	1
DR 100	220 387	Funk-Entstördrossel 3 µH 6 A	RADIO INTERFERENCE CHOKE 3 µH 6 A	1
S 100	225 656	Stiftwanne 15polig	PIN PANEL 15 PRONGS	1
D 100-103	221 114	Si-Diode 1 N 4148	SI-DIODE 1 N 4148	4
T 100	221 283	Si-Transistor PNP BC 212 B	SI-TRANSISTOR PNP BC 212 B	1
T 101	221 491	Si-Transistor NPN BC 550 B	SI-TRANSISTOR NPN BC 550 B	1
C 101	220 167	KT-Kondensator 1500 pF 100 V	CAPACITOR KT 1500 pF 100 V	1
C 102, 113	220 166	KT-Kondensator 6800 pF 100 V	CAPACITOR KT 6800 pF 100 V	2
100, 103, 104, 106, 110	220 333	MKT-Kondensator 0,22 µF 63 V	CAPACITOR MKT 0,22 µF 63 V	5
C 105, 112	220 250	Elko 100 µF 25 V	CAPACITOR LYTIC 100 µF 25 V	2
C 107, 116, 119, 128	220 334	MKT-Kondensator 0,1 µF 63 V	CAPACITOR MKT 0,1 µF 63 V	4
C 108, 109	220 243	Tantal-Kondensator 100 µF 3 V	CAPACITOR TANTAL 100 µF 3 V	2
C 111	220 159	Elko 4,7 µF 63 V	CAPACITOR LYTIC 4,7 µF 63 V	1
C 114, 126, 127	220 162	Elko 10 µF 63 V	CAPACITOR LYTIC 10 µF 63 V	3
C 115	220 274	Keramik-Kondensator 330 pF	CAPACITOR CERAMIC 330 pF	1
C 117	220 388	KT-Kondensator 3300 pF 100 V	CAPACITOR KT 3300 pF 100 V	1
C 118, 130	220 335	MKT-Kondensator 0,022 µF 63 V	CAPACITOR MKT 0,022 µF 63 V	2
C 120	220 389	Elko 47 µF 10 V	CAPACITOR LYTIC 47 µF 10 V	1
C 121	220 249	Elko 1 µF 63 V	CAPACITOR LYTIC 1 µF 63 V	1
C 122	220 185	Keramik Kondensator 270 pF	CAPACITOR CERAMIC 270 pF	1
C 123	220 390	Elko 100 µF 40 V	CAPACITOR LYTIC 100 µF 40 V	1
C 124	220 365	Keramik-Kondensator 120 pF	CAPACITOR CERAMIC 120 pF	1
C 125	220 165	Elko 470 µF 40 V	CAPACITOR LYTIC 470 µF 40 V	1
C 129	220 330	MKT-Kondensator 0,68 µF 63 V	CAPACITOR MKT 0,68 µF 63 V	1
R 100, 101	221 038	Widerstand 47 K 0,34 W	RESISTOR 47 K 0,34 W	2
R 102, 111	221 049	Widerstand 470 K 0,34 W	RESISTOR 470 K 0,34 W	2
R 103, 110, 113, 117, 128	221 035	Widerstand 10 K 0,34 W	RESISTOR 10 K 0,34 W	5
R 104, 105, 114, 116,	221 048	Widerstand 100 K 0,34 W	RESISTOR 100 K 0,34 W	4
R 106	221 041	Widerstand 820 K 0,34 W	RESISTOR 820 K 0,34 W	1
R 107	221 030	Widerstand 1,5 K 0,34 W	RESISTOR 1,5 K 0,34 W	1
R 108	221 414	Trimmerwiderstand 100 K lin. 0,1 W	TRIMMER RESISTOR 100 K lin. 0,1 W	1
R 109	221 097	Widerstand 82 Ω 0,34 W	RESISTOR 82 Ω 0,34 W	1
R 112	221 045	Widerstand 150 K 0,34 W	RESISTOR 150 K 0,34 W	1
R 118, 119	231 086	Trimmerwiderstand 10 K lin. 0,15 W	TRIMMER RESISTOR 10 K lin. 0,15 W	2
R 120, 124	221 604	Widerstand 22 K 0,34 W	RESISTOR 22 K 0,34 W	2
R 121	221 622	Widerstand 820 Ω 0,34 W	RESISTOR 820 Ω 0,34 W	1
R 122	221 029	Widerstand 1 K 0,34 W	RESISTOR 1 K 0,34 W	1

Nummer in der Abbildung ITEM	Bestell-Nr. PART NUMBER	Benennung	DESCRIPTION	Häufigkeit in dieser Baugruppe QTY
R 123	221 583	Trimmerwiderstand 2,2 K lin 0,1 W	TRIMMER RESISTOR 2,2 K lin. 0,1 W	1
R 125	221 034	Widerstand 4,7 K 0,34 W	RESISTOR 4,7 K 0,34 W	1
R 126	221 099	Widerstand 470 Ω 0,34 W	RESISTOR 470 Ω 0,34 W	1
R 127	221 614	Widerstand 330 Ω 0,34 W	RESISTOR 330 Ω 0,34 W	1
R 129	221 865	Widerstand 22 Ω 0,5 W	RESISTOR 22 Ω 0,5 W	1
R 130	221 611	Widerstand 10 Ω 0,34 W	RESISTOR 10 Ω 0,34 W	1
R 131	221 094	Widerstand 2,7 Ω 0,34 W	RESISTOR 2,7 Ω 0,34 W	1

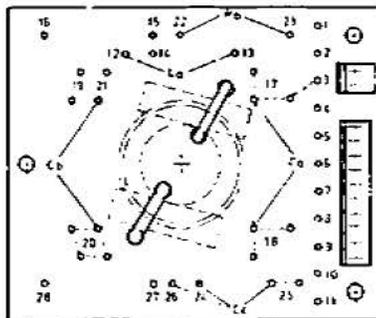


Nummer in der Abbildung ITEM	Bestell - Nr. PART NUMBER	Benennung	DESCRIPTION	Häufigkeit in dieser Baugruppe QTY
	170 231	LP-Verknüpfung, vollst.	CIRCUIT PLATE - CONFIGURATION	1
S 601	225 443	Stiftleiste 6polig	PIN PLUG 6 PRONGS	1
S 602	225 418	Stiftleiste 4polig	PIN PLUG 4 PRONGS	1
S 603	225 652	Stiftwanne 6polig	PIN PANEL 6 PRONGS	1
S 600	225 654	Stiftwanne 10polig	PIN PANEL 10 PRONGS	1
	222 403	Schiebeschalter	SLIDE SWITCH	2
D 600	221 676	Ge-Diode AA 143	Ge-DIODE AA 143	1
R 600/603	221 278	Trimmerwiderstand 10 K lin 0,1 W	TRIMMER RESISTOR 10 K lin 0,1 W	2
R 601/602	221 501	Widerstand 18 K 0,34 W	RESISTOR 18 K 0,34 W	2
R 604/605	221 616	Widerstand 7,5 K 0,34 W	RESISTOR 7,5 K 0,34 W	2
R 606	221 611	Widerstand 10 Ω 0,34 W	RESISTOR 10 Ω 0,34 W	1
	170 213	Frequenzweiche, vollst.	SEPARATING NETWORK, ASSY	
	107 748	Frequenzweiche, gelötet	SEPARATING NETWORK, SOLDERED	1
Cc	220 307	Tonfrequenz-Kondensator 3,3 μF 40 V	AUDIO FREQUENCY CAPACITOR 3,3 μF 40 V	1
Ca	220 210	Tonfrequenz-Kondensator 33 μF 15 V	AUDIO FREQUENCY CAPACITOR 33 μF 15 V	2
Cb	220 146	Tonfrequenz-Kondensator 15 μF 40 V	AUDIO FREQUENCY CAPACITOR 15 μF 40 V	1
	170 291	Schalterplatte, vollst. - 50 Hz -	JUNCTION PLATE, ASSY - 50 Hz -	1
	170 098		JUNCTION PLATE, ASSY - 60 Hz -	
2	103 663	Unterteil - 50 Hz -	BOTTOM PART - 50 Hz -	1
	104 977		BOTTOM PART - 60 Hz -	
3	103 668	Haube - 50 Hz -	COVER - 50 Hz -	1
	104 978		COVER - 60 Hz -	
4	222 328	Geräteschalter	PLUG SWITCH	
5	170 314	Leiterplatte, gelötet - 50 Hz -	CIRCUIT PLATE, SOLDERED - 50 Hz -	1
	170 091		CIRCUIT PLATE, SOLDERED - 60 Hz -	
6	225 423	Klemme 4polig	TERMINAL BOARD 4 PRONGS	3
7	225 417	Stiftleiste 4polig	PIN PLUG 4 PRONGS	2
8	225 016	Sicherungshalter - 50 Hz -	FUSE HOLDER - 50 Hz -	6
	225 405		FUSE HOLDER - 60 Hz -	8
Si 3/Si 4	225 029	G-Schmelzeinsatz T 3,15 A träge - 50 Hz -	FUSE T 3,15 A SLO BLO - 50 Hz -	2
Si 5	225 540	G-Schmelzeinsatz T 8,0 A träge	FUSE T 8,0 A SLO BLO	1
Si 3/Si 4	225 542		FUSE 4 A SLO BLO	2
Si 5	225 541		FUSE 8 A SLO BLO - 60 Hz -	1
Si 6	225 350		FUSE 5 A SLO BLO	1

Leiterplatte - Verknüpfung
CIRCUIT PLATE - CONFIGURATION

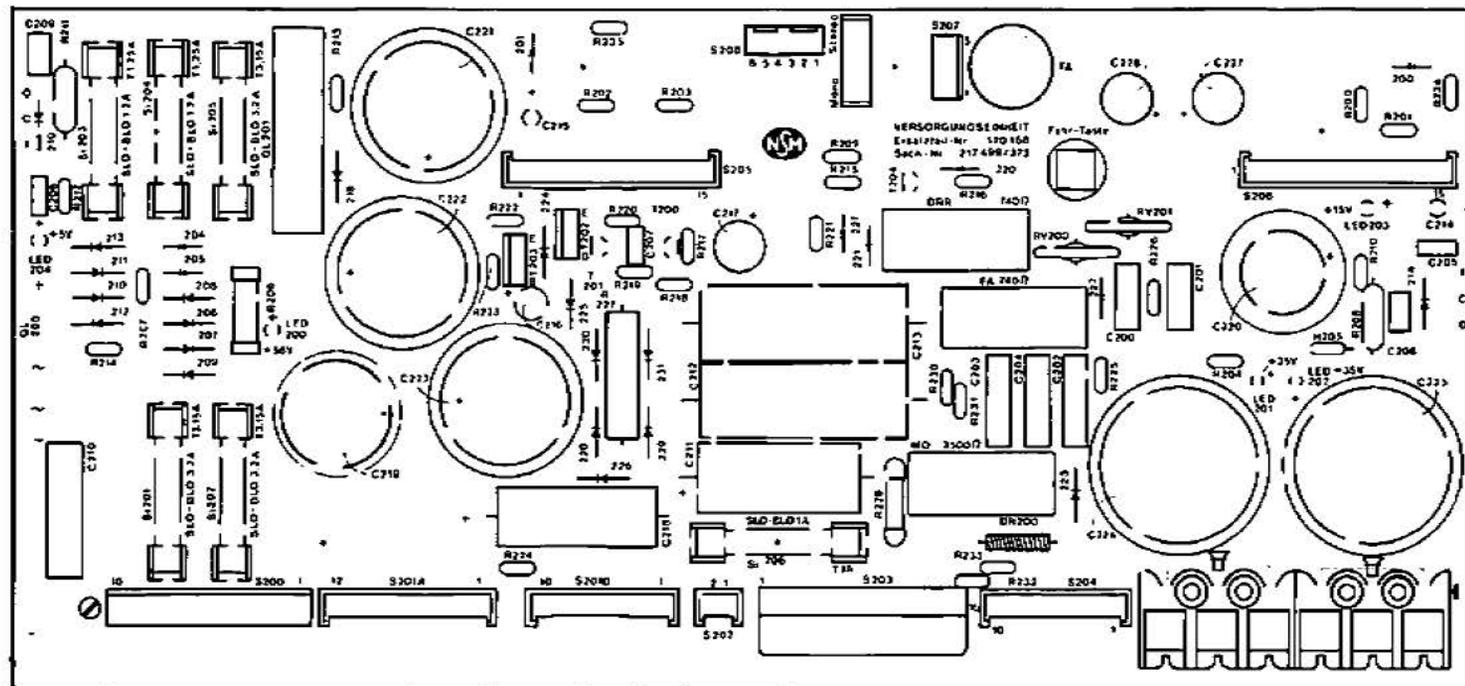


Schalterplatte
JUNCTION PLATE



Frequenzweiche
SEPARATING NETWORK

Nummer in der Abbildung ITEM	Bestell - Nr. PART NUMBER	Benennung	DESCRIPTION	Häufigkeit in dieser Baugruppe QTY
	170 290	Versorgungseinheit, vollst. - 50 Hz -	SUPPLY UNIT, ASSY - 50 Hz -	1
	170 168		SUPPLY UNIT, ASSY - 60 Hz -	1
	170 061	Grundplatte	BASE PLATE	1
VR 200	221 476	IC-Spannungsregler 15 V/1 A	IC-VOLTAGE 15 V/1 A	1
VR 201	221 572	IC-Spannungsregler 5 V/1 A	IC-VOLTAGE 5 V/1 A	1
GL 200	221 342	Gleichrichter B 80 C 5000/3300	RECTIFIER B80 C 5000/3300	1
	109 261	Bügel	RETAINER	1
S 200	225 268	Stiftleiste 10polig	PIN-PLUG 10 PRONGS	1
S 203	225 415	Stiftleiste 16polig	PIN-PLUG 16 PRONGS	1
S 202	225 650	Stiftwanne 2polig	PIN PANEL 2 PRONGS	1
S 201 B/ 204	225 654	Stiftwanne 10polig	PIN PANEL 10 PRONGS	2
S 201 A	225 685	Stiftwanne 12polig	PIN PANEL 12 PRONGS	1
S 205/ 206	225 656	Stiftwanne 15polig	PIN PANEL 15 PRONGS	2
S 207	225 442	Stiftleiste 5polig	PIN-PLUG 5 PRONGS	1
	225 422	Klemmleiste 3polig	TERMINAL BOARD	2
TA	225 532	Einbaubuchse	SOCKET	1
	222 472	Schiebeschalter	SLIDE SWITCH	1
FT	222 404	Kontaktaste rot	CONTACT BUTTON red	1
	225 016	Sicherungshalter - 50 Hz -	FUSE HOLDER - 50 Hz -	12
	225 405		FUSE HOLDER - 60 Hz -	12
Si 201, 202, 205	225 029	Sicherung T 3, 15 A träge)	FUSE T 3, 15 A)	3
Si 203, 204	225 032	Sicherung T 1, 25 A träge) 50 Hz	FUSE T 1, 25 A) 50 Hz	2
Si 206	225 034	Sicherung T 1, 0 A träge)	FUSE T 1, 0 A)	1
Si 201, 202, 205	225 225		FUSE 3, 2 A SLO BLO)	3
Si 203, 204	225 226		FUSE 1, 2 A SLO BLO) 60 Hz	2
Si 206	225 227		FUSE 1, 0 A SLO BLO)	1
FA, DRR	223 314	Relais 740 Ω 1 u	RELAY 740 Ω 1 u	2
MO	223 312	Relais 3500 Ω 2 u	RELAY 3500 Ω 2 u	1
D 200/201/204/205/	221 114	Si-Diode 1 N 4148	SI-DIODE 1 N 4148	8
	221 115	Si-Diode 1 N 4004	SI-DIODE 1 N 4004	19
LED 200-204	221 466	Lumineszenz Diode Ga As P CQY 65	LIGHT EMITTING DIODE	5
DR 200	220 318	Funk-Entstördrossel 30 µH 0,4 A	RADIO INTERFERENCE SUPPRESSOR	1
GL 201	221 342	Gleichrichter B 80 C 5000/3300	RECTIFIER B 80 C 5000/3300	1
T 200, 201	221 459	Si-Transistor PNP BC 256 B	SI-TRANSISTOR PNP BC 256 B	2
T 202, 203	221 292	Si-Transistor PNP BD 244 B/C	SI-TRANSISTOR PNP BD 244 B/C	2
T 204	221 492	Si-Transistor	SI-TRANSISTOR	1
C 200, 201	220 176	MKT-Kondensator 0,22 µF 100 V	CAPACITOR MKT 0,22 µF 100 V	2
C 202, 203, 204	220 077	MKT-Kondensator 0,22 µF 250 V	CAPACITOR MKT 0,22 µF 250 V	3
C 205-207	220 334	MKT-Kondensator 0,1 µF 63 V	CAPACITOR MKT 0,1 µF 63 V	3
C 208, 209	220 332	MKT-Kondensator 0,33 µF 63 V	CAPACITOR MKT 0,33 µF 63 V	2
C 210	220 257	MKT-Kondensator 1,5 µF 100 V	CAPACITOR MKT 1,5 µF 100 V	1



Nummer in der Abbildung ITEM	Bestell - Nr. PART NUMBER	Benennung	DESCRIPTION	Häufigkeit in dieser Baugruppe QTY
C 211	220 255	MKT-Kondensator 3,3 µF 160 V	CAPACITOR MKT 3,3 µF 160 V	1
C 212	220 256	MKT-Kondensator 6,8 µF 160 V	CAPACITOR MKT 6,8 µF 160 V	1
C 213	220 218	MKT-Kondensator 10 µF 160 V	CAPACITOR MKT 10 µF 160 V	1
C 214, 215	220 249	Elko 1 µF 63 V	CAPACITOR LYTIC 1 µF 63 V	2
C 216	220 162	Elko 10 µF 63 V	CAPACITOR LYTIC 10 µF 63 V	1
C 217	220 247	Elko 47 µF 63 V	CAPACITOR LYTIC 47 µF 63 V	1
C 218	220 065	Elko 220 µF 63 V	CAPACITOR LYTIC 220 µF 63 V	1
C 219, 220	220 392	Elko 1000 µF 63 V	CAPACITOR LYTIC 1000 µF 63 V	2
C 221, 222, 223	220 393	Alko 4700 µF 25 V	CAPACITOR LYTIC 4700 µF 25 V	3
C 224, 225	220 394	Elko 4700 µF 50 V	CAPACITOR LYTIC 4700 µF 50 V	2
C 226, 227	220 389	Elko 47 µF 10 V	CAPACITOR LYTIC 47 µF 10 V	2
R 200, 202, 209	221 048	Widerstand 100 K 0,34 W	RESISTOR 100 K 0,34 W	3
R 201, 203	221 009	Widerstand 1 M 0,34 W	RESISTOR 1 M 0,34 W	2
R 204, 205	221 628	Widerstand 3,9 K 0,34 W	RESISTOR 3,9 K 0,34 W	2
R 206	221 193	Widerstand 6,8 K 0,71 W	RESISTOR 6,8 K 0,71 W	1
R 207, 212, 215, 220, 223	221 029	Widerstand 1 K 0,34 W	RESISTOR 1 K 0,34 W	5
R 208, 211	221 682	Widerstand 1 Ω 0,5 W	RESISTOR 1 Ω 0,5 W	2
R 210	221 031	Widerstand 2,2 K 0,34 W	RESISTOR 2,2 K 0,34 W	1
R 213	221 620	Widerstand 22 Ω 0,34 W	RESISTOR 22 Ω 0,34 W	1
R 214	221 099	Widerstand 470 Ω 0,34 W	RESISTOR 470 Ω 0,34 W	1
R 226	221 611	Widerstand 10 Ω 0,34 W	RESISTOR 10 Ω 0,34 W	1
R 227	221 149	Drahtwiderstand 22 Ω 5 W	WIRE WOUND RESISTOR 22 Ω 5 W	1
R 228	221 169	Drahtwiderstand 10 Ω 1 W	WIRE WOUND RESISTOR 10 Ω 1 W	1
R 232, 233	221 038	Widerstand 47 K 0,34 W	RESISTOR 47 K 0,34 W	2
R 234, 235	221 604	Widerstand 22 K 0,34 W	RESISTOR 22 K 0,34 W	2
R 200, 201	221 104	VDR-Widerstand	RESISTOR-VDR	2

Nummer in der Abbildung ITEM	Bestell - Nr. PART NUMBER	Benennung	DESCRIPTION	Häufigkeit in dieser Baugruppe QTY
ohne Abbildung no picture	170 225	Kabelbaum: Schleppleitung	CABLE HARNESS: TRAILING CABLE	
	170 236	Netzverdrahtung 60 Hz	MAINS WIRING 60 Hz	
	170 352	Netzverdrahtung 50 Hz	MAINS WIRING 50 Hz	
	170 237	Trafo-Versorgungseinheit	TRANSFORMER - SUPPLY UNIT	
	170 238	Trafo-Lichtorgel-Schalterplatte	TRANSFO.-PERMAN.LIGHT-JUNCTION PLATE	
	170 351	Trafo-Lichtorgel-Schalterplatte	TRANSFO.-PERMAN.LIGHT-JUNCTION PLATE	
	170 239	Lichtorgel-Lampenrahmen	PERMANENT LIGHT - LAMP FRAME	
	170 241	Lichtorgel-Versorgungseinheit	PERMANENT LIGHT - SUPPLY UNIT	
	170 242	I Versorgungseinheit - Steuer- und	I SUPPLY UNIT - CONTROL and CREDIT UNIT	
	170 243	II Speichereinheit	II SUPPLY UNIT - CONTROL and CREDIT UNIT	
	170 244	LP/Anzeige-Steuer- und Speichereinheit	INDICATION - CONTROL and CREDIT UNIT	
	170 245	Tastatur - Tastatur	KEY BOARD - KEY BOARD	
	170 246	Tastatur - Steuer- und Speichereinheit	KEY BOARD - CONTROL and CREDIT UNIT	
	170 247	Versorgungseinheit - Verknüpfungsplatte	SUPPLY UNIT - CONFIGURATIONS PLATE	
	170 248	Steuer- und Speichereinheit - Verknüpfung	CONTROL and CREDIT UNIT - CONFIGURATIONS PLATE	
	170 249	Gehäuseschalter - Steuer- u. Speichereinheit	CABINET SWITCH - CONTROL and CREDIT UNIT	
170 220	Lautsprecher	LOUDSPEAKER		
170 264	Frequenzweiche	SEPARATING NETWORK		
170 265	Verstärker - Versorgungseinheit	AMPLIFIER - SUPPLY UNIT		

ERSATZTEIL - LISTE

NSM MUSIKAUTOMAT
PHONOGRAPH

240 - I

SPARE PARTS LIST

LAUFGESTELL und LAUFWERK

CARRIAGE BASE and CARRIAGE

ERSATZTEIL - LISTE

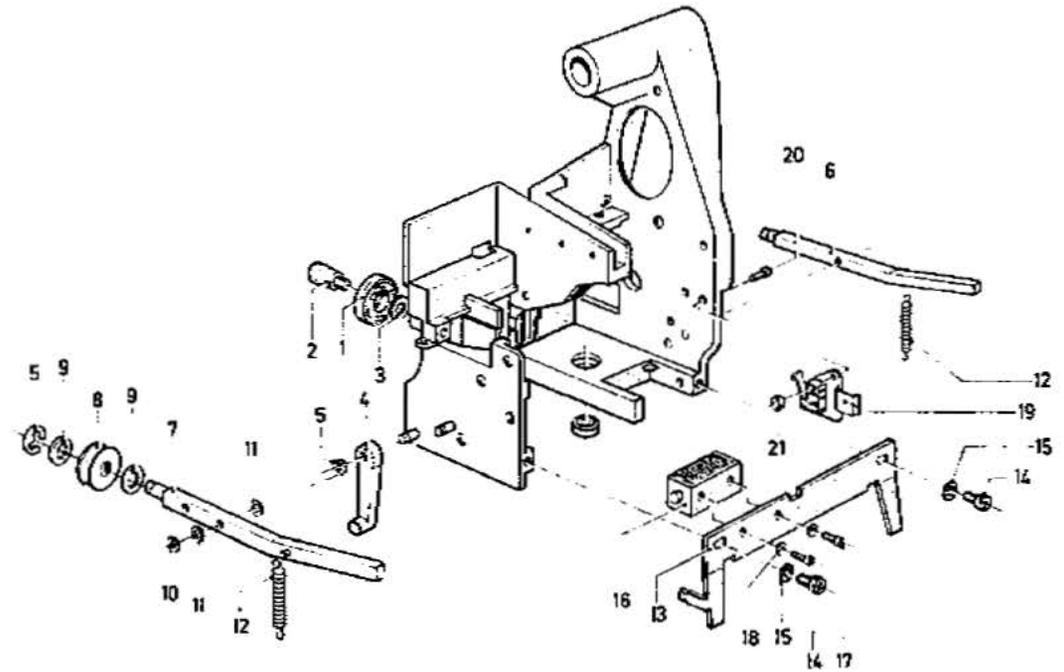
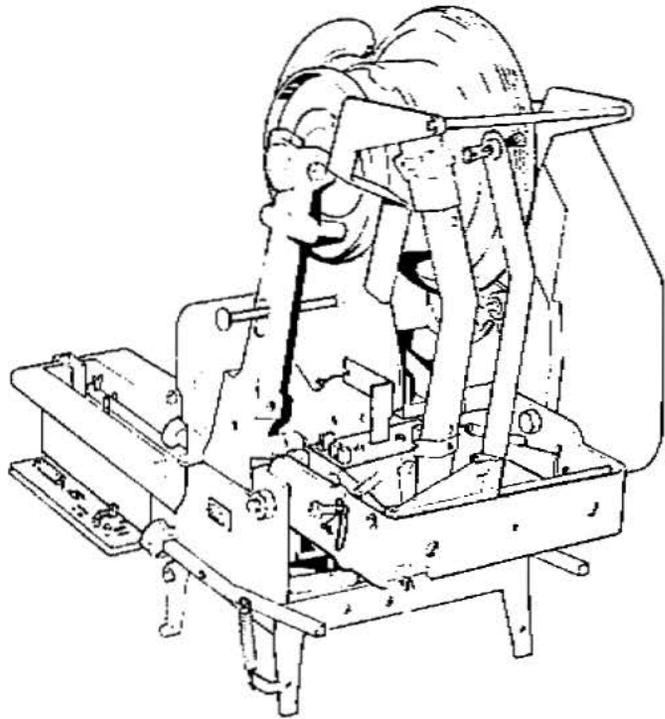
LAUFGESTELL und LAUFWERK
CARRIAGE BASE and CARRIAGE

SPARE PARTS LIST

23

Nummer in der Abbildung ITEM	Bestell - Nr. PART NUMBER	Benennung	DESCRIPTION	Häufigkeit in dieser Baugruppe QTY
	170 000	LAUFGESTELL, vollst. - 240 -	CARRIAGE BASE, ASSY - 240 -	
1	170 101	Zahnstange, vollst.	GEAR RACK, ASSY	1
2	102 722	Kopfstück, links	HEAD PIECE, LEFT	1
3	102 721	Kopfstück, rechts	HEAD PIECE, RIGHT	1
4	102 966	Zahnstangensegment	GEAR RACK SEGMENT	3
5	102 965	Zahnstangensegment	GEAR RACK SEGMENT	1
6	640 058	Linsenschraube M4 x 22	SCREW M4 x 22	2
7	710 010	Sicherungsscheibe 4 (Schnorr)	LOCKWASHER 4	2
8	733 006	Spannhülse 1,5 x 8	DRIVE PIN 1,5 x 8	2
9	170 104	Verbindungsprofil	CONNECTION PROFIL	1
10	170 138	Schaltblech	SWITCH PLATE	1
11	640 032	Linsenschraube M 4 x 8	SCREW M 4 x 8	1
12	692 011	Scheibe 4,3	WASHER 4,3	1
13	710 010	Sicherungsscheibe 4	LOCKWASHER 4	1
14	170 105	Halblech, links - gepunktet -	HOLDING PLATE, left - WELDED -	1
15	170 106	Halblech, rechts - gepunktet -	HOLDING PLATE, right - WELDED -	1
16	627 022	Sechskantschraube M 8 x 16	HEXAGON BOLT M 8 x 16	6
17	710 015	Sicherungsscheibe B (Schnorr)	LOCKWASHER	6
18	170 107	Kassette, vollst.	MAGAZINE, ASSY	1
19	170 137	Hülse	SLEEVE	4
20	170 110	Haltewinkel	HOLDING BRACKET	2
21	640 036	Linsenschraube M 4 x 18	SCREW M 4 x 18	4
22	697 006	Scheibe B 4,3	WASHER B 4,3	4
23	200 994	Profil 240er (für Zahlenstreifen)	NUMBER STRIP PROFILE	1
24	208 897	Zahlenstreifen	NUMBER STRIP	1
25	640 017	Linsenschraube M 3 x 16	SCREW M 3 x 16	2
26	692 009	Scheibe 3,2	WASHER 3,2	2
27	208 899	Zahlenstreifen	NUMBER STRIP	1
31	619 033	Flachrundschraube M 10 x 50 x 70	SCREW M 10 x 50 x 70	4
32	170 007	Sockel	SOCKET	4
33	692 016	Scheibe 10,5 DIN 433	WASHER 10,5 DIN 433	4
34	648 015	Sechskantmutter BM 10	HEXAGON NUT BM 10	4
35	205 560	Kegelfeder	CONE SPRING	4
36	170 006	Führungsscheibe	GUIDE WASHER	4
37	170 005	Scheibe	WASHER	4
38	657 004	Mutter N M 10	NUT N M 10	4
39	170 144	Dämpfung, vollst.	DAMPING, ASSY	2
40	645 041	Spanplatten-Schraube RK 4 x 15	SCREW RK 4 x 15	4
41	640 030	Linsenschraube M 4 x 6	SCREW M 4 x 6	4
42	710 010	Sicherungsscheibe 4	LOCKWASHER 4	4

Nummer in der Abbildung ITEM	Bestell - Nr. PART NUMBER	Benennung	DESCRIPTION	Häufigkeit in dieser Baugruppe QTY
	170 300	LAUFWERK, vollst. - 50 Hz -	CARRIAGE, ASSY - 50 Hz -	1
	170 333		CARRIAGE, ASSY - 60 Hz -	
1	170 276	Chassis, vollst.	CHASSIS, ASSY	1
2	206 084	Kugellager	BALL BEARING	2
	211 115	Ansatzschraube	SHOULDER SCREW	2
	690 214	Scheibe 5,3 x 10 x 0,1)	WASHER 5,3 x 10 x 0,1)	
3	690 081	Scheibe 5,3 x 10 x 0,2) noch Bedarf	WASHER 5,3 x 10 x 0,2) IF REQUIRED	
	690 082	Scheibe 5,3 x 10 x 0,3)	WASHER 5,3 x 10 x 0,3)	
4	029 036	Exzenterhebel	ECCENTRIC LEVER	1
5	703 011	Sicherungsscheibe 4	LOCKWASHER 4	3
6	106 631	Spannhebel, rechts, vollständig	LOCKING LEVER, RIGHT, ASSY	1
7	106 632	Spannhebel, links, vollst.	LOCKING LEVER, LEFT, ASSY	1
8	106 506	Rolle	ROLLER	2
9	690 081	Scheibe 5,3 x 10 x 0,2	WASHER 5,3 x 10 x 0,2	4
10	703 008	Sicherungsscheibe 3,2	LOCKWASHER 3,2	4
11	690 046	Scheibe 4,2 x 8 x 0,1	WASHER 4,2 x 8 x 0,1	4
12	205 554	Zugfeder	TENSION SPRING	2
13	107 699	Stützwinkel, genietet	SUPPORT, RIVETED	1
14	640 032	Linsenschraube M 4 x 8	SCREW M 4 x 8	2
15	710 010	Sicherungsscheibe 4	LOCKWASHER 4	2
16	223 332	Magnet	SOLENOID	1
17	640 007	Linsenschraube M 3 x 6	SCREW M 3 x 6	2
18	710 004	Sicherungsscheibe 3	LOCKWASHER 3	2
19	103 652	Zwischenplatine, genietet	MICRO SWITCH with BRACKET	1
20	640 078	Linsenschraube M 2,5 x 10	SCREW M 2,5 x 10	1
21	648 003	Sechskanmutter BM 2,6	HEXAGON NUT BM 2,6	1



ERSATZTEIL - LISTE

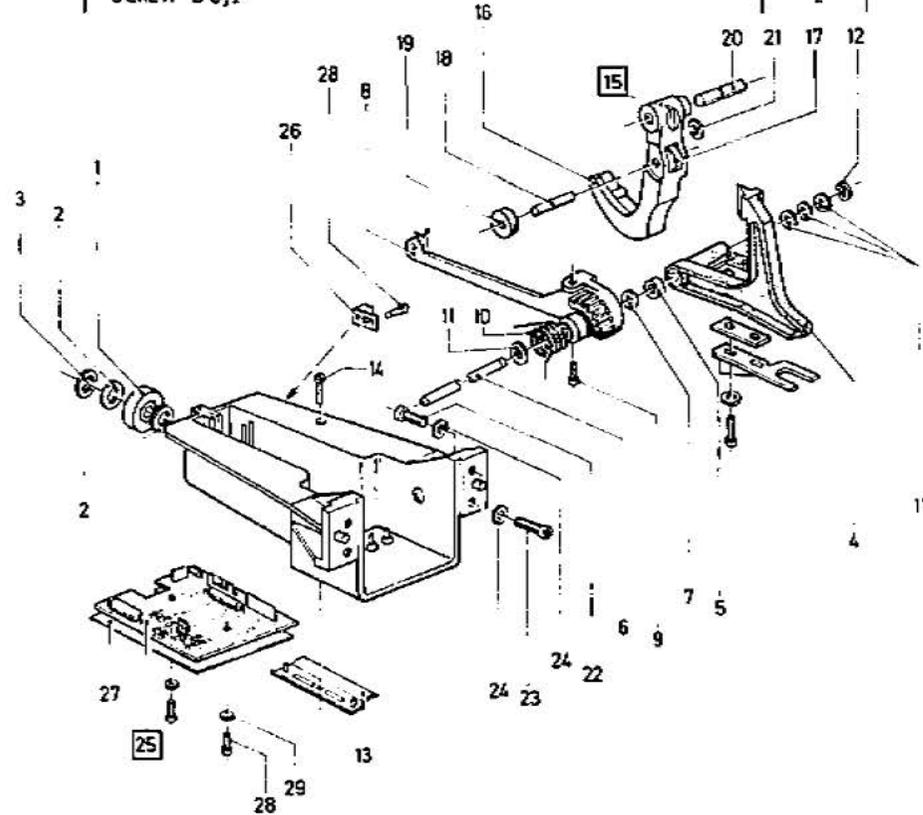
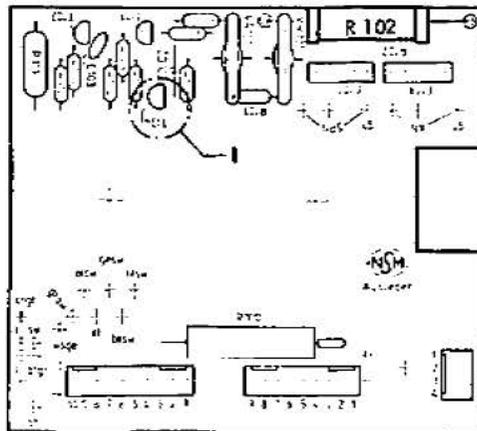
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LAUFWERK
CARRIAGE

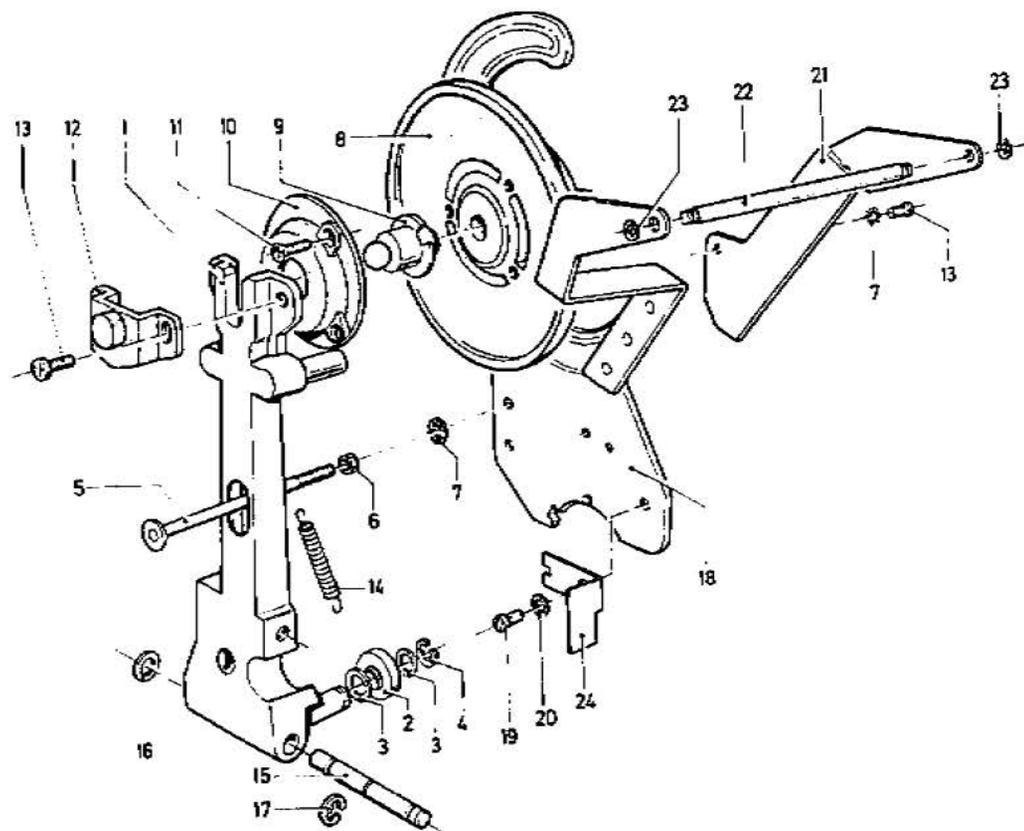
SPARE PARTS LIST

Nummer in der Abbildung ITEM	Bestell - Nr. PART NUMBER	Benennung	DESCRIPTION	Häufigkeit in dieser Baugruppe QTY
	106 606	AUSLEGER, vollst.	TRANSFER ARM, ASSY	
1	102 754	Rolle	ROLLER	1
2	690 111	Scheibe 6,2 x 10 x 0,1	WASHER 6,2 x 10 x 0,1	2
3	703 014	Sicherungsscheibe 5	LOCKWASHER 5	1
4	102 913	Riegel	LOCKING PAWL	1
5	102 955	Buchse	SPACER	1
6	201 955	Achse	SHAFT	1
7	690 214	Scheibe 5,3 x 10 x 0,1	WASHER 5,3 x 10 x 0,1	1
8	105 274	Plattenzubringer, vollst.	RECORD TRANSFER ARM, ASSY	1
9	640 033	Linsenschraube M 4 x 10	SCREW M 4 x 10	1
10	205 570	Drehfeder	TORSION SPRING	1
	690 214	Scheibe 5,3 x 10 x 0,1)	WASHER 5,3 x 10 x 0,1)	
11	690 081	Scheibe 5,3 x 10 x 0,2) nach Bedarf	WASHER 5,3 x 10 x 0,2) IF REQUIRED	
	690 082	Scheibe 5,3 x 10 x 0,3)	WASHER 5,3 x 10 x 0,3)	
	690 224	Scheibe 5,3 x 10 x 0,4)	WASHER 5,3 x 10 x 0,4)	
12	703 011	Sicherungsscheibe 4	LOCKWASHER 4	1
13	103 524	Klemmsstück	CLAMPING DEVICE	1
14	640 013	Linsenschraube M 3 x 12	SCREW M 3 x 12	1
15	042 113	Zahnsegment, vollst.	GEAR SEGMENT, ASSY	1
16	200 268	Zahnsegment	GEAR SEGMENT	1
17	042 112	Laufrolle, vollst.	ROLLER, ASSY	1
18	022 874	Achse	SHAFT	1
19	042 234	Laufrolle, vollst.	ROLLER, ASSY	1
20	103 997	Achse	SHAFT	1
21	703 011	Sicherungsscheibe 4	LOCKWASHER 4	1
22	640 046	Linsenschraube M 5 x 16	SCREW M 5 x 16	2
23	640 051	Linsenschraube M 5 x 12	SCREW M 5 x 12	2
24	710 013	Sicherungsscheibe 5	LOCKWASHER 5	4
23	170 226	LP-Ausleger, gelötet - 50 Hz -	CIRCUIT PLATE - TRANSFER ARM, SOLDERED - 50 Hz -	1
	170 149		CIRCUIT PLATE - TRANSFER ARM, SOLDERED - 60 Hz -	
26	231 083	Reflexkoppler	REFLEX COUPLING	1
	225 418	Stiflleiste 4polig	PIN PLUG 4 PRONGS	1
	225 419	Stiflleiste 9polig	PIN PLUG 9 PRONGS	1
	225 561	Stiflleiste 10polig	PIN PLUG 10 PRONGS	1
D 500	221 115	Si-Diode	SI-DIODE 1 N 4004	1
ZD 500	221 516	Si-Z-Diode	SI-Z-DIODE 8,2	1
T 502-504	221 458	Si-Transistor	SI-TRANSISTOR BC 237 B	3
T 505	221 488	Si-Transistor	SI-TRANSISTOR BD 139-10	1
C 503	220 265	Keramik-Kondensator	CAPACITOR CERAMIC 0,022 µF	1
R 503, 504	221 029	Widerstand	RESISTOR 1 K 0,34 W	2
R 505, 506	221 604	Widerstand	RESISTOR 22 K 0,34 W	2

Nummer in der Abbildung ITEM	Bestell-Nr. PART NUMBER	Benennung	DESCRIPTION	Häufigkeit in dieser Baugruppe QTY
R 507	221 638	Widerstand 270 Ω 0,34 W	RESISTOR 270 Ω 0,34 W	1
R 508	221 031	Widerstand 2,2 K 0,34 W	RESISTOR 2,2 K 0,34 W	1
R 509	221 099	Widerstand 470 Ω 0,34 W	RESISTOR 470 Ω 0,34 W	1
R 510	221 045	Widerstand 150 K 0,34 W	RESISTOR 150 K 0,34 W	1
R 511, 513	221 230	Widerstand 470 Ω 0,5 W	RESISTOR 470 Ω 0,5 W	2
R 515	221 035	Widerstand 10 K 0,34 W	RESISTOR 10 K 0,34 W	1
R 512, 514	221 039	Widerstand 47 K 0,34 W	RESISTOR 47 K 0,34 W	2
R 516	221 030	Widerstand 1,5 K 0,34 W	RESISTOR 1,5 K 0,34 W	1
R 518	221 053	Drahtwiderstand 270 Ω	WIRE WOUND RESISTOR 270 Ω	1
R 517	221 301	Widerstand 56 Ω 1,13 W (bei 50 Hz)	RESISTOR (for 50 Hz) 56 Ω 1,13 W	1
	503 509		CONNECTING WIRE ϕ 0,8x40 (for 60 Hz)	1
27	170 278	Abdeckung	COVER	1
28	640 012	Linse schraube M 3 x 10	SCREW M 3 x 10	2
29	697 003	Scheibe B 3,2	SCREW B 3,2	2



Nummer in der Abbildung ITEM	Bestell - Nr. PART NUMBER	Benennung	DESCRIPTION	Häufigkeit in dieser Baugruppe QTY
	103 654	PLATTENSANNTTEIL, vollst.	CLAMP ARM, ASSY	1
1	104 198	Plattenspannhebel, vormont.	CLAMP ARM, PRE-MOUNTED	1
2	042 177	Laufrolle, vollst.	ROLLER, ASSY	1
3	690 046	Scheibe 4,2 x 8 x 0,1	WASHER 4,2 x 8 x 0,1	2
4	703 008	Sicherungsscheibe 3,2	LOCKWASHER 3,2	1
5	103 864	Stahbolzen, genietet	BOLT, RIVETED	1
6	654 008	Sechskantmutter M 4	HEXAGON NUT M 4	1
7	710 010	Sicherungsscheibe 4	LOCKWASHER 4	3
	102 091	Spannkonus, vollst.	CLAMP DISK, ASSY	1
8	029 022	Spannkonus	CLAMP DISK	1
9	041 357	Gelenkstück	JOINT	1
10	029 023	Flansch	FLANGE	1
11	642 019	Senkschraube M 3 x 6	SCREW M 3 x 6	3
12	029 024	Gegenlager	PIVOT BLOCK	1
13	640 032	Linsenschraube M 4 x 8	SCREW M 4 x 8	4
14	205 304	Zugfeder	TENSION SPRING	1
15	022 890	Achse	SHAFT	1
	690 046	Scheibe 4,2 x 8 x 0,1)	WASHER 4,2 x 8 x 0,1)	
16	690 043	Scheibe 4,2 x 7,5 x 0,2) nach Bedarf	WASHER 4,2 x 7,5 x 0,2) IF REQUIRED	
	690 220	Scheibe 4,3 x 10 x 0,5)	WASHER 4,3 x 10 x 0,5)	
	690 050	Scheibe 4,2 x 11 x 0,2)	WASHER 4,2 x 11 x 0,2)	
17	703 008	Sicherungsscheibe 3,2	LOCKWASHER 3,2	2
18	105 410	Führungsblech, vollst.	GUIDE PLATE, ASSY	1
19	640 005	Linsenschraube M 3 x 5	SCREW M 3 x 5	2
20	710 004	Sicherungsscheibe 3	LOCKWASHER 3	2
21	105 414	Haltewinkel, vollst.	HOLDING BRACKET, ASSY	1
22	106 594	Achse	SHAFT	1
23	703 006	Sicherungsscheibe 2,3	LOCKWASHER 2,3	2
24	170 139	Trennwinkel	SEPARATING BRACKET	1



ERSATZTEIL - LISTE

NSM

LAUFWERK
CARRIAGE

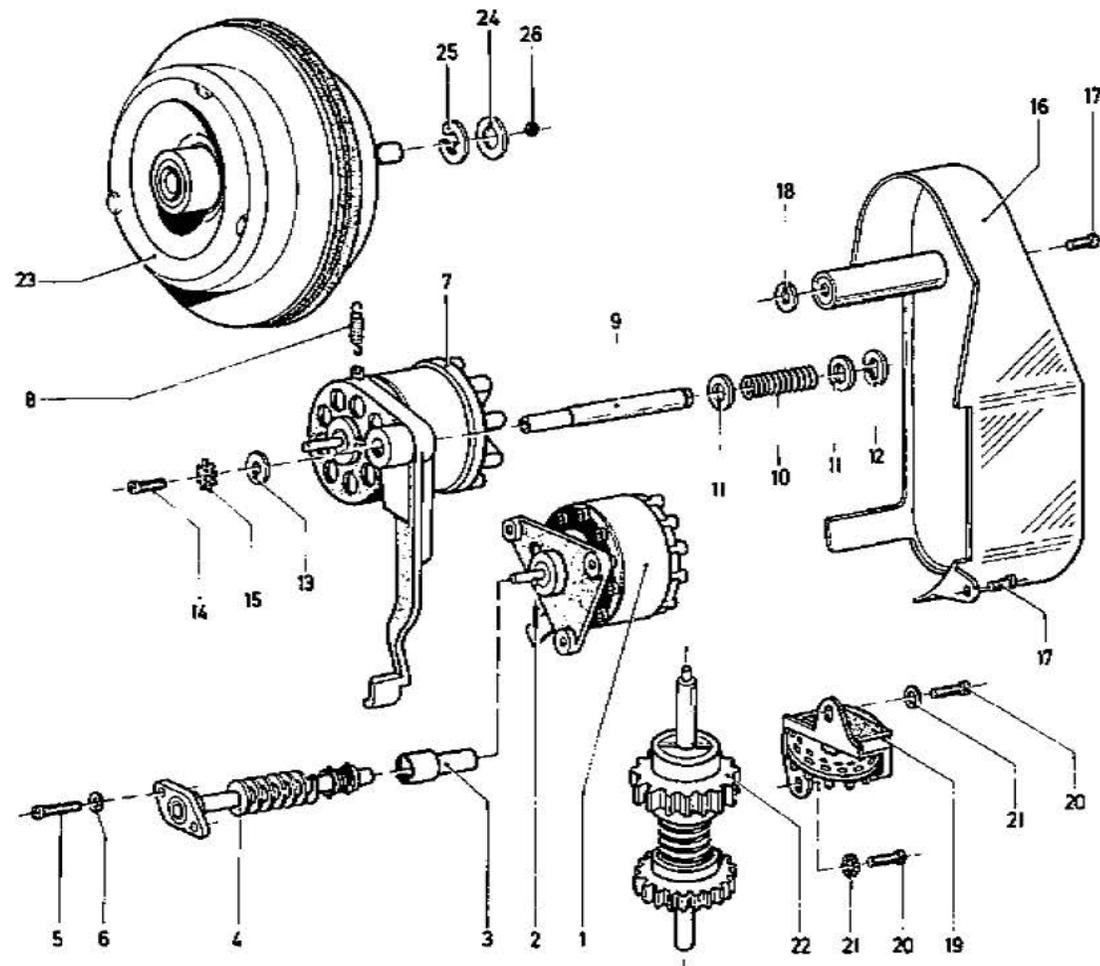
240 - 1

SPARE PARTS LIST

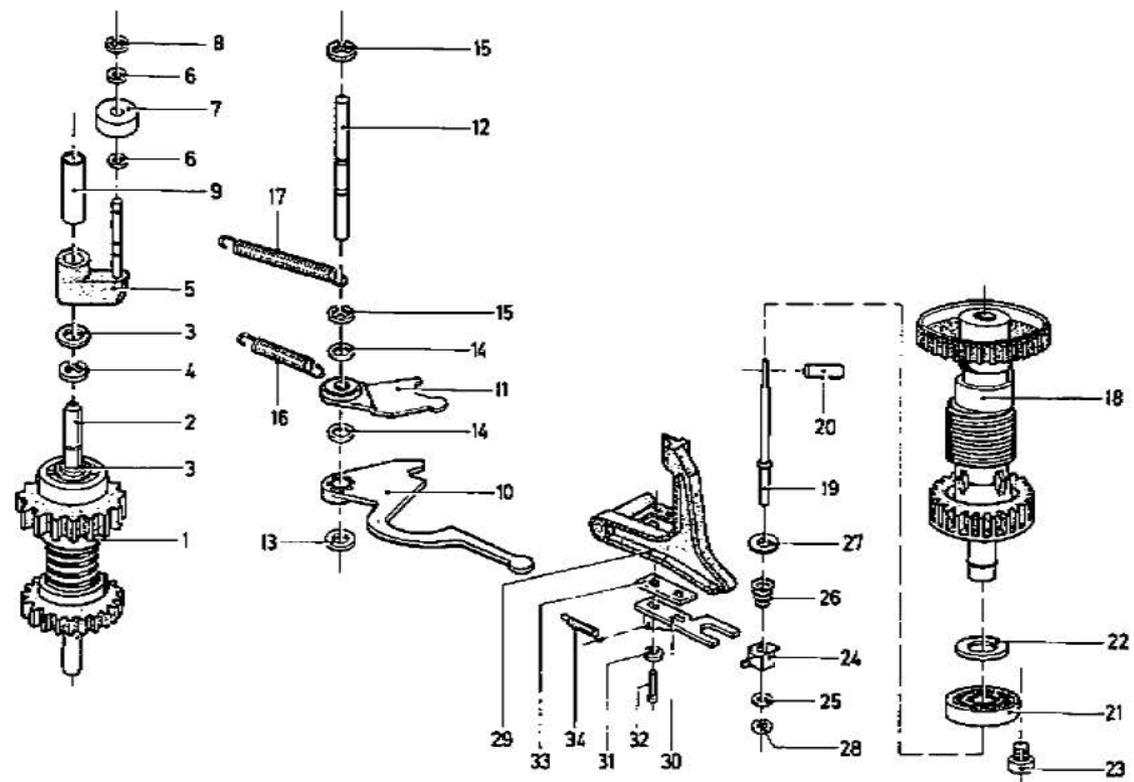
Nummer in der Abbildung ITEM	Bestell - Nr. PART NUMBER	Benennung	DESCRIPTION	Häufigkeit in dieser Baugruppe QTY
1	104 136	Antriebsmotor, montiert	DRIVE MOTOR, MOUNTED	1
2	733 006	Spannhülse 1,5 x 8	DRIVE PIN 1,5 x 8	1
3	104 118	Hülse	SLEEVE	1
4	103 425	Schnecke, vollst.	WORM DRIVE, ASSY	1
5	640 017	Linsenschraube M 3 x 16	SCREW M 3 x 16	2
6	710 004	Sicherungsscheibe 3	LOCKWASHER 3	2
7	106 394 106 746	Spielmotor, vollst. - 50 Hz -	PLAYING MOTOR, ASSY - 50 Hz - PLAYING MOTOR, ASSY - 60 Hz -	1
8	205 581	Zugfeder	TENSION SPRING	1
9	107 629	Achse	SHAFT	1
10	205 565	Druckfeder	PRESSURE SPRING	1
11	690 144	Scheibe 7,1 x 11,2 x 0,2	WASHER 7,1 x 11,2 x 0,2	2
12	703 014	Sicherungsscheibe 5	LOCKWASHER 5	1
13	697 003	Scheibe B 3,2	WASHER B 3,2	1
14	540 007	Linsenschraube M 3 x 6	SCREW M 3 x 6	1
15	710 004	Sicherungsscheibe 3	LOCKWASHER 3	1
16	103 782	Kappe	COVER	1
17	640 032	Linsenschraube M 4 x 8	SCREW M 4 x 8	2
18	690 210	Scheibe 3,7 x 8 x 0,8	WASHER 3,7 x 8 x 0,8	1
19	107 556	Optoabstufung, vollst.	OPTO SCANNING, ASSY	1
20	640 076	Linsenschraube M 2,5 x 6	SCREW M 2,5 x 6	2
21	710 005	Sicherungsscheibe 2,5	LOCKWASHER 2,5	2
22	104 853	Transportrad, vollst.	SLIP CLUTCH, ASSY	1
23	106 125	Plattenteller, vollst.	RECORD TURNTABLE, ASSY	1
	690 160	Scheibe 8,3 x 12 x 0,1)	WASHER 8,3 x 12 x 0,1)	
24	690 161	Scheibe 8,3 x 12 x 0,2)	WASHER 8,3 x 12 x 0,2)	
	690 162	Scheibe 8,3 x 12 x 0,3)	WASHER 8,3 x 12 x 0,3)	
	690 208	Scheibe 8,4 x 12 x 0,4)	WASHER 8,3 x 12 x 0,4)	
25	703 018	Sicherungsscheibe 7	LOCKWASHER 7	1
26	741 006	Kugel 4 ϕ III	STEEL BALL ϕ 4 III	1

nach Bedarf

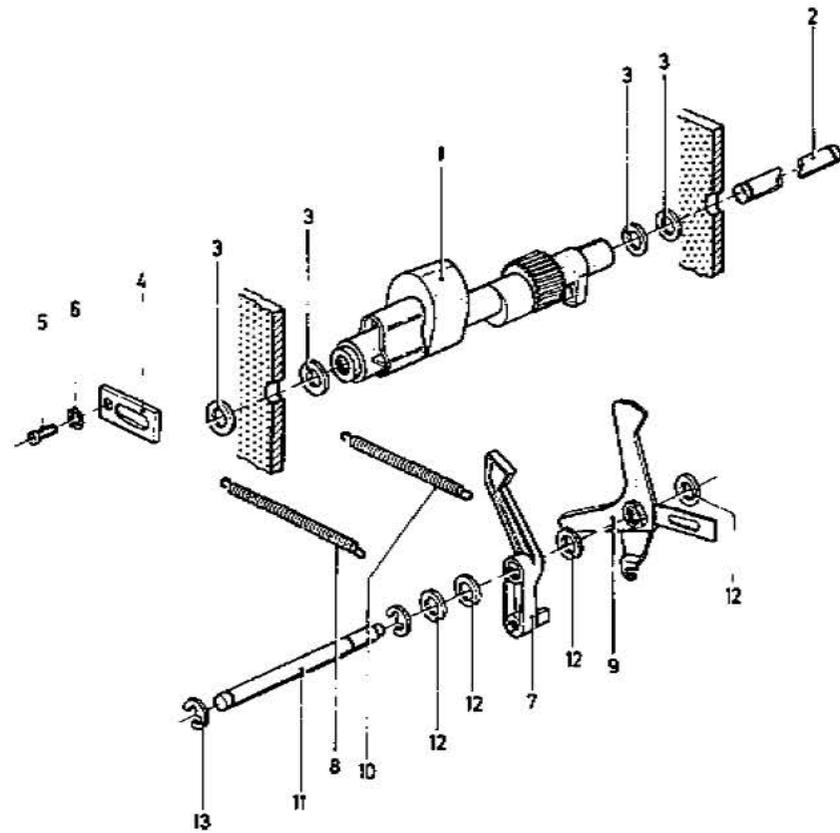
IF REQUIRED



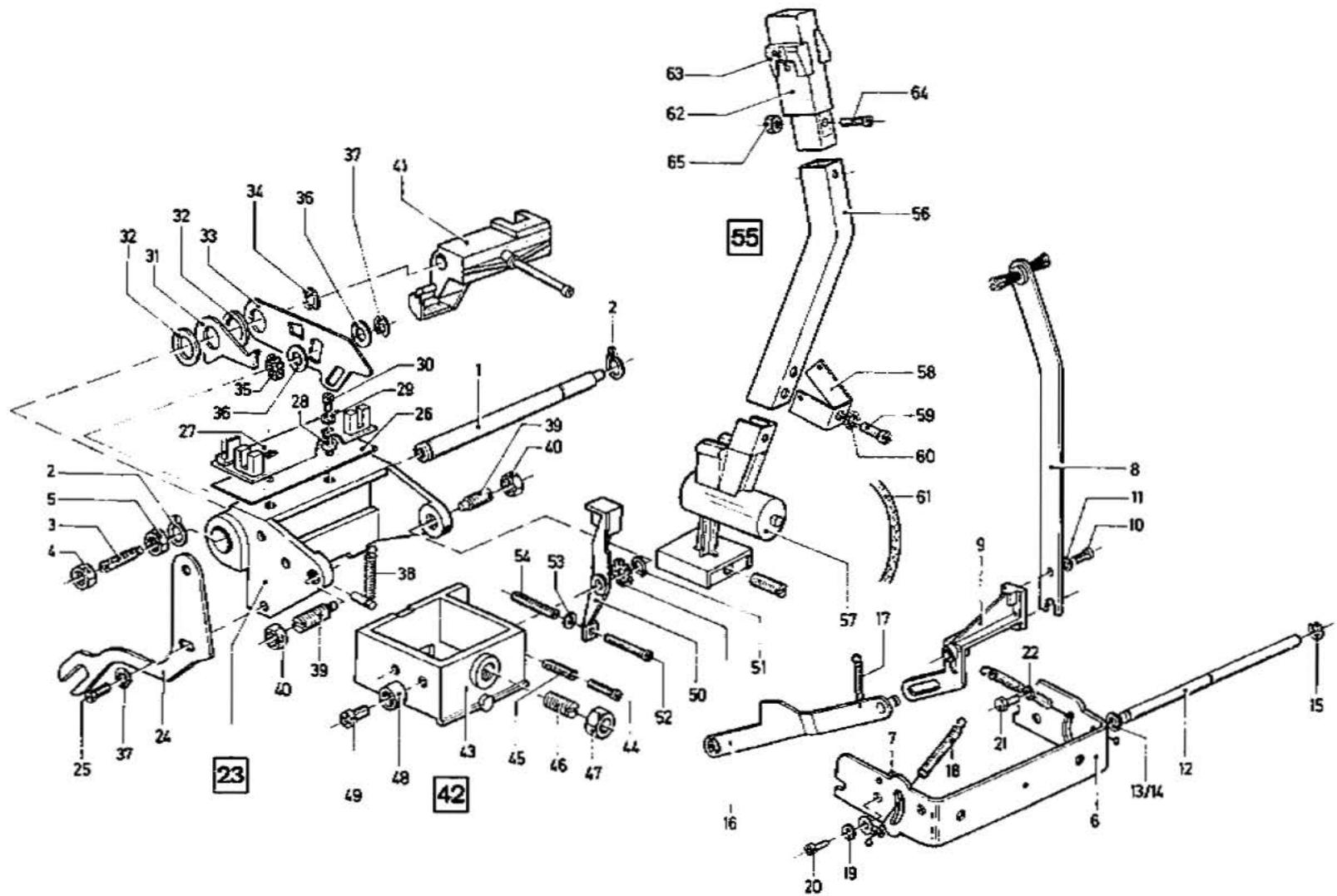
Nummer in der Abbildung ITEM	Bestell - Nr. PART NUMBER	Benennung	DESCRIPTION	Häufigkeit in dieser Baugruppe QTY
1	104 853	Transportrad, vollst.	SLIP CLUTCH, ASSY	1
2	201 951	Achse	SHAFT	1
3	690 184	Scheibe 5,1 x 11 x 0,3	WASHER 5,1 x 11 x 0,3	2
4	703 011	Sicherungsscheibe 4	LOCKWASHER 4	2
5	103 181	Spannklinke, vormontiert	LATCHING LEVER, PRE-MOUNTED	1
6	690 019	Scheibe 3,2 x 6 x 0,1	WASHER 3,2 x 6 x 0,1	2
7	106 648	Rolle	ROLLER	1
8	703 006	Sicherungsscheibe 2,3	LOCKWASHER 2,3	1
9	106 652	Hülse	SLEEVE	1
10	106 642	Umsteuerhebel, genietet	PICK UP SHIFTING LEVER, RIVETED	1
11	102 747	Schlepphebel, genietet	CRADLE ACTUATOR, RIVETED	1
12	103 419	Achse	SHAFT	1
13	690 025	Scheibe 3,2 x 8 x 0,8	WASHER 3,2 x 8 x 0,8	1
14	690 020	Scheibe 3,2 x 6 x 0,2	WASHER 3,2 x 6 x 0,2	2
15	703 006	Sicherungsscheibe 2,3	LOCKWASHER 2,3	2
16	205 534	Zugfeder	TENSION SPRING	1
17	205 535	Zugfeder	TENSION SPRING	1
18	104 723	Kupplungswelle, vollst.	ALTERNATING CLUTCH, ASSY	1
19	103 349	Kupplungsstößel	CLUTCH ROD	1
20	103 402	Mitnehmerstift	DRIVE PIN	1
21	206 058	Kugellager 626-2	BALL BEARING 626-2	1
	690 169	Scheibe 6,2 x 10 x 0,05)	WASHER 6,2 x 10 x 0,05)	
	690 111	Scheibe 6,2 x 10 x 0,1)	WASHER 6,2 x 10 x 0,1)	
22	690 112	Scheibe 6,2 x 10 x 0,2) nach Bedarf	WASHER 6,2 x 10 x 0,2) IF REQUIRED	
	690 113	Scheibe 6,2 x 10 x 0,3)	WASHER 6,2 x 10 x 0,3)	
	690 114	Scheibe 6,2 x 10 x 0,4)	WASHER 6,2 x 10 x 0,4)	
23	640 007	Linenschraube M 3 x 6	SCREW M 3 x 6	1
24	103 845	Kupplungsschieber	CLUTCH SLIDER	1
25	690 134	Scheibe 4,2 x 6,5 x 0,2	WASHER 4,2 x 6,5 x 0,2	1
26	205 548	Druckfeder	PRESSURE SPRING	1
27	690 055	Scheibe 4,3 x 11 x 0,5	WASHER 4,3 x 11 x 0,5	1
28	703 009	Sicherungsscheibe 2,95	LOCKWASHER 2,95	1
29	102 913	Riegel	LOCKING PAWEL	1
30	103 530	Kupplungshebel	CLUTCH LEVER	1
31	692 009	Scheibe 3,2	WASHER 3,2	2
32	637 003	Blechschaube BZ 2,9 x 9,5	SCREW BZ 2,9 x 9,5	2
	106 655	Beilage 0,5)	SPACER 0,5)	
33	106 656	Beilage 1,0) nach Bedarf	SPACER 1,0) IF REQUIRED	
	106 657	Beilage 2,0)	SPACER 2,0)	
34	205 551	Zugfeder	TENSION SPRING	1



Nummer in der Abbildung ITEM	Bestell - Nr. PART NUMBER	Benennung	DESCRIPTION	Häufigkeit in dieser Baugruppe QTY
1	103 035	Nockenwelle, vollst.	CHAMSHAFT, ASSY	1
2	211 093	Achse	SHAFT	1
	690 049	Scheibe 4,2 x 11 x 0,1)	WASHER 4,2 x 11 x 0,1)	
3	690 050	Scheibe 4,2 x 11 x 0,2) noch Bedarf	WASHER 4,2 x 11 x 0,2) IF REQUIRED	
	690 055	Scheibe 4,2 x 11 x 0,5)	WASHER 4,2 x 11 x 0,5)	
4	106 658	Wellensicherung	SHAFT E-WASHER	1
5	640 007	Linsenschraube M 3 x 6	SCREW M 3 x 6	1
6	710 004	Sicherungsscheibe 3	LOCKWASHER 3	1
7	103 621	Sperrhebel	LOCKING LEVER	1
8	205 538	Zugfeder	TENSION SPRING	1
9	103 657	Federhebel	TRIP LEVER	1
10	205 552	Zugfeder	TENSION SPRING	1
11	102 915	Achse	SHAFT	1
	690 214	Scheibe 5,3 x 10 x 0,1)	WASHER 5,3 x 10 x 0,1)	
12	690 216	Scheibe 5,3 x 8 x 0,2) nach Bedarf	WASHER 5,3 x 8 x 0,2) IF REQUIRED	
	690 072	Scheibe 5,3 x 8 x 0,4)	WASHER 5,3 x 8 x 0,4)	
13	703 011	Sicherungsscheibe 4	LOCKWASHER 4	2



Nummer in der Abbildung ITEM	Bestell - Nr. PART NUMBER	Benennung	DESCRIPTION	Häufigkeit in dieser Baugruppe QTY
	170 277	TONARMAUSLEGER, vollst.	CRADLE, ASSY	1
1	022 098	Achse	SHAFT	1
2	712 004	Spannring 4,8 Sp. 220	CLIP RING 4,8 Sp. 220	2
3	022 892	Gewindestift	LOCKING SCREW	1
4	654 011	Sechskantmutter M 6	HEXAGON NUT M 6	1
5	648 010	Sechskantmutter BM 6	HEXAGON NUT BM 6	1
6	106 662	Schutzbügel	PICK UP BRACKET	1
7	717 004	Paßkerbstift C 3 x 8	PIN C 3 x 8	1
8	105 409	Wischer, vollständig	WIPER, ASSY	1
9	105 415	Wischerlager	WIPER BEARING	1
10	640 011	Linsenschraube M 3 x 8	SCREW M 3 x 8	1
11	710 004	Sicherungsscheibe 3	LOCKWASHER 3	1
12	105 423	Achse	SHAFT	1
	690 034	Scheibe 4,1 x 8 x 0,1)	WASHER 4,1 x 8 x 0,1)	
13	690 035	Scheibe 4,1 x 8 x 0,2) nach Bedarf	WASHER 4,1 x 8 x 0,2) IF REQUIRED	
	690 036	Scheibe 4,1 x 8 x 0,3)	WASHER 4,1 x 8 x 0,3)	
14	692 011	Scheibe 4,3	WASHER 4,3	1
15	703 008	Sicherungsscheibe 3,2	LOCKWASHER 3,2	2
16	106 645	Hebel, genietet	LEVER, RIVETED	1
17	205 604	Zugfeder	TENSION SPRING	1
18	041 505	Tonarmfeder, vollst.	TOPE ARM SPRING, ASSY	2
19	692 009	Scheibe 3,2	WASHER 3,2	2
20	640 004	Linsenschraube M 3 x 4	SCREW M 3 x 4	2
21	627 013	Sechskantschraube M 3 x 8	HEXAGON SCREW M 3 x 8	1
22	692 011	Scheibe 4,3	WASHER 4,3	1
23	106 608	Tonarmschlitten, vollst.	CRADLE BLOCK, ASSY	1
24	106 609	Strebe	CRADLE GUIDE	1
25	627 012	Sechskantschraube M 4 x 6	HEXAGON SCREW M 4 x 6	1
26	170 279	Isolierbeilage	INSULATING PLATE	1
27	170 155	LP - Gabel-Lichtschranke	LP - LIGHT BARRIER	1
28	690 223	Scheibe 4,3 x 11 x 2,5	WASHER 4,3 x 11 x 2,5	2
29	692 009	Scheibe 3,2	WASHER 3,2	2
30	640 011	Linsenschraube M 3 x 8	SCREW M 3 x 8	2
31	106 627	Schaltzunge	RESET LEVER ACTUATOR	1
32	690 160	Scheibe 8,3 x 12 x 0,1	WASHER 8,3 x 12 x 0,1	2
33	106 614	Bremshebel	RESET LEVER	1
34	703 018	Sicherungsscheibe 7	LOCKWASHER 7	1
35	205 467	Sternfeder	SPRING WASHER	1
36	029 226	Scheibe (Kunststoff)	WASHER (PLASTIC)	2
37	703 011	Sicherungsscheibe 4	LOCKWASHER 4	2
38	205 313	Zugfeder	TENSION SPRING	1
39	022 099	Gewindestift	LOCKING SCREW	2



Nummer in der Abbildung ITEM	Bestell-Nr. PART NUMBER	Benennung	DESCRIPTION	Häufigkeit in dieser Baugruppe QTY
40	648 009	Sechskantmutter B M 5	HEXAGON NUT B M 5	2
41	102 089	Tonarmführung, vollst.	RELEASE FORK, ASSY	1
42	109 206	Tonarm-Lagerkorb, vollst.	PICK UP BLOCK, ASSY	1
43	103 609	Tonarm-Lagerkorb, vormontiert	PICK UP BLOCK, PRE-MOUNTED	1
44	640 017	Linsenschraube M 3 x 16	SCREW M 3 x 16	1
45	205 147	Druckfeder	PRESSURE SPRING	1
46	022 101	Gewindestift	LOCKING SCREW	1
47	648 009	Sechskantmutter B M 5	HEXAGON NUT B M 5	1
48	029 037	Exzenterstück	ECCENTRIC WASHER	1
49	640 007	Linsenschraube	SCREW	1
50	109 205	Hebel	LEVER	1
51	712 011	Spannring 4, 5	CLIP RING	1
52	640 061	Linsenschraube M 3 x 22	SCREW M 3 x 22	1
53	692 009	Scheibe 3, 2	WASHER 3,2	1
54	205 444	Druckfeder	PRESSURE SPRING	1
55	103 830	Tonarm, vollst. mit System	tone arm, ASSY with SYSTEM	1
56	200 410	Tonarmrohr	tone arm TUBE	1
57	103 829	Tonarmlager, vollst.	tone arm BEARING, ASSY	1
58	100 003	Winkel	SPRING BRACKET	1
59	640 007	Linsenschraube M 3 x 6	SCREW M 3 x 6	1
60	710 004	Sicherungsscheibe 3	LOCKWASHER 3	1
61	103 851	Tonarmleitung, vollst.	tone arm CABLE, ASSY	1
62	224 106	Magnet-Stereo-Doppelsystem (Shure)	MAGNET PICK UP STEREO-SYSTEM (SHURE)	1
63	224 107	Ersatznadel (Styli N 17 CM)	DIAMANT (STYLI N 17 CM)	1
64	601 021	Zylinderschraube M 2,3 x 10	SCREW M 2,3 x 10	1
65	648 018	Sechskantmutter B M 2,3	HEXAGON NUT B M 2,3	1