INSTRUCTIONS

26750 / 210

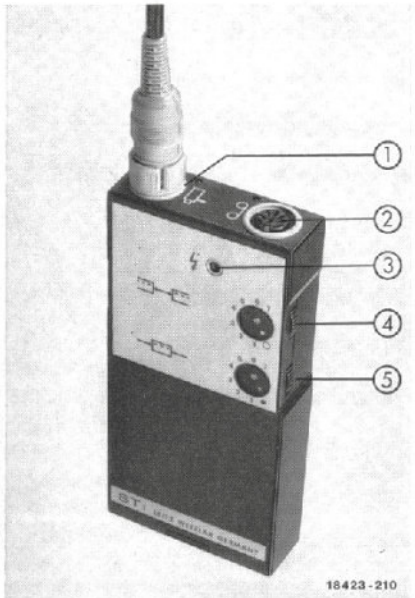
Electronic Control Unit for the LEICINA SUPER

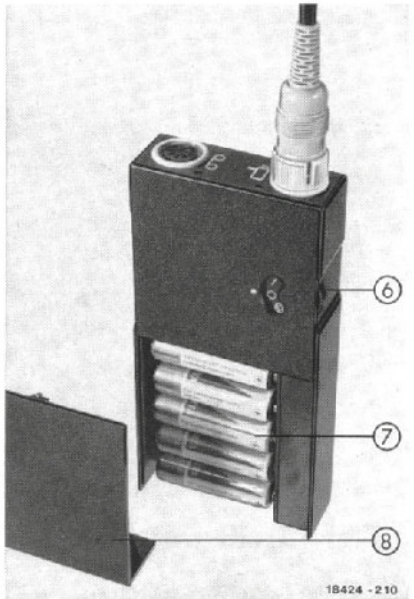
Leitz WETZLAR

216-25/Engl.

The electronic control unit for the LEICINA® SUPER enlarges the practical possibilities of this camera in many repects. These instructions describe the various uses to which it can be put. The control unit has sockets for the standard plug connections. The connecting cable (Code No. 22 225) forms part of the LEITZ production programme.

Contents





Description and brief instructions

① **Symbol**

Socket for the cable connection with the LEICINA SUPER.

② **Symbol**

Socket for the cable connection with the tape recorder, for external power sources, and radio release, light traps and similar accessories (can also be used for connecting a second LEICINA SUPER).

③ **Symbol**

Socket for electronic flash units

④ **Symbol**

Rotary switch for the interval timer and for setting scene or frame intervals between about 0.15 and 180 (Range 1) and 0.3 and 360 sec (Range 2).

⑤ **Symbol**

Rotary switch for the setting of scene durations between about 0.2 and 10 sec and for doubling the scene and frame intervals (Ranges 1 and 2).

⑥ Rotary switch for the automatic exposure control and remote release

6.1 Symbol

Automatic exposure control switched on (corresponds to pressing the measuring button on the camera)

6.2 Symbol

Automatic exposure control and camera switched off

6.3 Symbol

Automatic exposure control and camera switched on.

⑦ Space for five 1.5v midget batteries.

⑧ Lid for battery compartment.

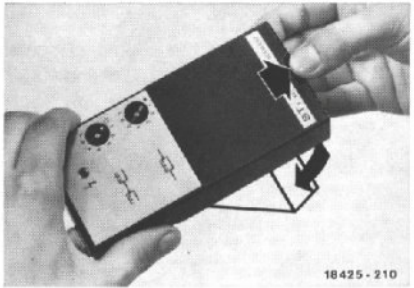


Fig. 1

To open the battery compartment push the lid (8) out of its catch in the direction of the arrow.
Insert the 1.5v batteries with the + markings on the retaining contacts by placing them on the contact springs and pushing them into the correct position on the opposite side.

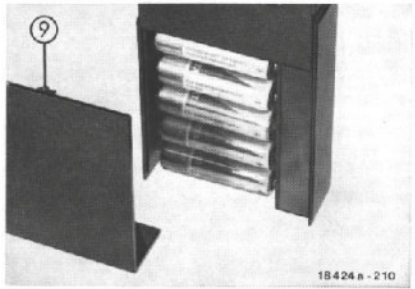


Fig. 2

To close the battery compartment insert the locating lug (9) of the lid (8) into the recess provided for it in the control unit; close the lid.

Connecting the unit

1. Ensure that the rotary knobs 4, 5, and 6 are set at 0.
2. Connect the control unit with the 9-pin cable (Code No. 22225) to the LEICINA SUPER.

External current supply

If 5 midget batteries are inserted in its battery compartment the control unit takes over the power supply of the camera. In this case the battery housing of the LEICINA SUPER should remain empty or be removed. Otherwise the two sets of batteries will be connected in parallel, which leads to a harmful equalizing discharge if the two charges are different.
In cold weather it is advisable to keep the control unit at body heat; this prevents a drop in the battery potentials.

Remote release

When the rotary knob (23) on the LEICINA SUPER is set at ● whole scenes, when it is set at 1 single frames are exposed.

Manual release on the control unit

The manual remote release of single frames or scenes is controlled by the rotary switch (6). The rotary switches 4 and 5 must be in their 0 positions.

Click position ⊛

Automatic exposure control is switched on (this setting corresponds to depressing the measuring button of the camera).

Click position ○

All functions are switched off.

Click position |

Camera and automatic exposure control are switched on (this corresponds to pressing one of the releases on the camera).

Cable-connected remote control is possible across practically unlimited distances, but depends on the cross section of the cable (see table). For longer distances radio release is recommended (see p. 13).

Required cable cross section	0.14	0.25	0.33	0.50	0.75	1.0	(mm^2)
at cable length (with battery set in the camera)	5	10	15	20	30	40	(m)
at cable length (with battery set in the control unit)		3	4	6	9	12	(m)

If all camera functions are to be operated by remote control the wiring diagram B (p. 18) must be used.

Pole 5, 7, 8 and ⊥ = external supply
1 and 8 = remote control
5 and 8 = remote control of the measuring button

2 and 8 = flash synchronization
3 and 8 = synchro impulse for scoring
4 and 8 = tape start and stop

If the battery set remains in the camera the connection must be according to wiring diagram D (p. 19).

Automatic interval timer release (time lapse)

Interval- and scene durations can be set continuously.

Programming for single-frame operation.

1. Set rotary knob (23) on the LEICINA at "single frame".
2. Set the time range on knob (5) on the control unit.
   White dot facing black dot = Range 1
   White dot facing 1 = Range 2
3. Switch on the interval timer with knob (4) and choose interval durations.
   Interval durations range 1
   1 = about 0.15 sec 5 = about 30 sec
   2 = about 1.5 sec 6 = about 90 sec
   3 = about 5 sec 7 = about 180 sec
   4 = about 12 sec

   Interval durations range 2
   1 = about 0.3 sec 5 = about 60 sec
   2 = about 3 sec 6 = about 180 sec
   3 = about 10 sec 7 = about 360 sec
   4 = about 24 sec

Programming for scene operation.

1. Set the rotary knob (23) on the LEICINA dot facing dot.
2. Preselect the desired scene duration with rotary knob (5) on the control unit.
   ● = about 0.2 sec 4 = about 4 sec
   1 = about 0.2 sec 5 = about 6 sec
   2 = about 0.8 sec 6 = about 7 sec
   3 = about 2 sec 7 = about 10 sec
3. Switch on the interval timer with rotary knob (4) and select interval durations.

The values given in the tables are guide values only. Accurate times must be determined in a test run.

The automatic exposure control is not switched on during automatic interval timer operation when the rotary switch 6 is in the click position ○, i.e. the diaphragm setting remains unchanged. Before shooting begins, the appropriate lens stop must be set either with the measuring button on the camera or with the rotary swich 6 on the control unit on position ⊛ (see p. 5).

If the automatic exposure control of the camera is to be adjusted to the object to be filmed the measuring position 6.1 must remain switched on.

The Super-8-film cassette contains 15m (50ft) of film, about 3600 individual frames. With single-frame setting and a 5 min interval, this permits the continuous filming of a scene for 12 days. But since the capacity of a battery set is enough for only 48 hours' recording, it is recommended to supply the camera from an accumulator or a mains unit instead of changing the batteries for prolonged operation. (See "Connecting external power sources", p. 14.)

Control of two LEICINA SUPER cameras

In special cases (different focal lengths or running speeds) a second LEICINA SUPER can be connected to the control unit also through the connecting cable (Code No. 22225) and socket (2). But the automatic exposure control of the camera connected in this way cannot be switched on from the control unit.

In this case power must be supplied to both cameras either by the batteries in the forehead steady rests of the cameras or a common mains unit or accumulator. The battery sets are connected in parallel. Ascertain that they are the same type and that their charges are roughly the same.

Connecting an electronic flash unit

Electronic flash units can be directly connected to the socket (3) of the control unit via a standard cable.

The shortest time interval depends on the recycling time of the flash unit used. The correct lens stop can be set with the measuring button and the button for automatic fade-out of the LEICINA SUPER. The diaphragm setting, once determined, remains unaffected by the brightness of the surroundings, because the automatic exposure control is not switched on during automatic release via the interval timer.

Attention!

When flash is used in the close-up range, flash intensity is very strongly influenced by the general reflection. It is recommended as a precaution to open up the lens

stop calculated

$$\text{Lens stop} = \frac{\text{Guide number}}{\text{Flash distance}}$$

by 1–2 values (e.g. f/11–f/8 instead of f/16). The lens stop calculation must be based on the distance between the flash lamp and the object.

Connecting tape recorders

Several possibilities exist for the production of sound films with the LEICINA SUPER in conjunction with the control unit.

A 1000c/s synchro-generator is built into the control unit, which places 1 impulse every 4 frames on the tape. Thus lip-sync-scored films can be produced according to the standard sound system.

The tape can be started and stopped synchronously with the operation of the camera release, which makes cuts between the scored individual scenes unnecessary.

With stereo tape recorders the cable is plugged directly into one of the stereo sockets of the tape recorder. With other tape recorders an additional impulse sound head can be installed or attached. In four-track recorders this frees a track for additional music or commentary.

The tape recorders are connected through the socket (2) of the control unit. See wiring diagram E (p. 19) and F (p. 20).

Special procedures:

The flash socket (3) of the LEICINA SUPER offers the possibility of recording one impulse per frame on the tape.

It is also possible to start the tape recorder via the premeasuring contacts before filming starts.

These procedures are not very common, but are used successfully by handymen.

Connecting a radio remote control

The receiver of a radio remote control unit, e.g. FK 2 by Ing. Bernd Kranz, 2 Hamburg (West Germany) is connected through socket (2) of the control unit. The connection is set up according to wiring diagramm G (p. 20).

With this device the LEICINA SUPER can be operated at distances of up to 2000m.

If the automatic exposure control of the camera is to react to changing brightnesses, the rotary switch (6) on the control unit must be in the click position 

Connecting a light trap

A light trap for remote release is connected with socket (2) of the control unit exactly like the radio remote control.

Connecting external power sources

In special cases it is desirable to run the camera on e.g. a mains unit or a car battery instead of on dry cells. This external supply is connected with socket (2) of the control unit. The wiring diagrams H and J (p. 21) show two possibilities of external supply.

Connecting the LEICAFLEX SL MOT

The control unit can be used also for operating the LEICAFLEX SL MOT with the motor. Wiring diagram K (p. 22) illustrates the required connections.

Since the two instruments are supplied with power independently from each other, both the LEICAFLEX motor and the control unit must have their own batteries.

The setting knob (5) on the control unit must be set so that dot faces dot. The interval timer is switched on with the setting knob (4) and the desired interval duration chosen.

Connecting cable for sound film projection

See wiring diagram L (p. 22).

Hints and tips for maintenance

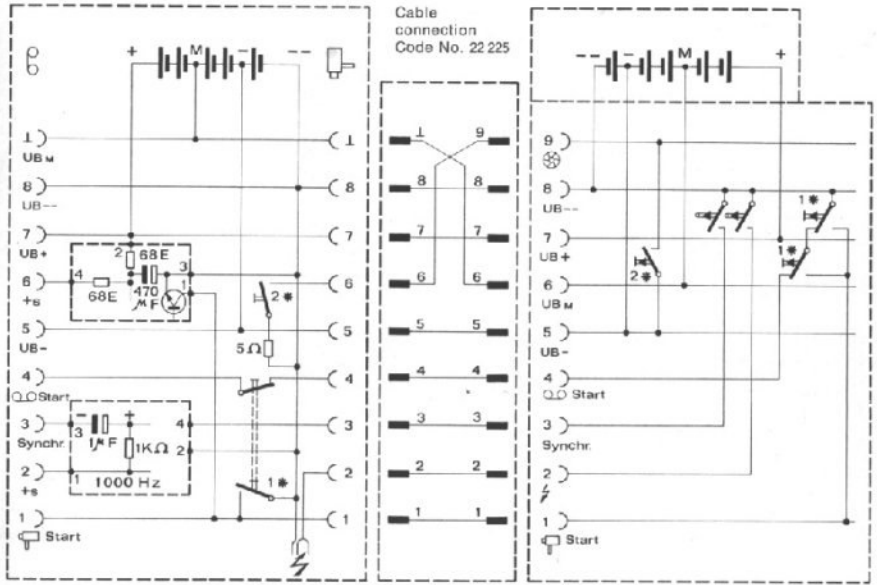
The electronic control unit for the LEICINA SUPER is maintenance-free.

When it is not in use make sure the rotary knob (4) is in the 0 position, so that no current flows. This advice is valid also when the control unit, with batteries inserted, is not connected with the camera.

The control unit should be protected from intense heat (e.g. exposure to direct sunlight in the car).

Wiring diagram A

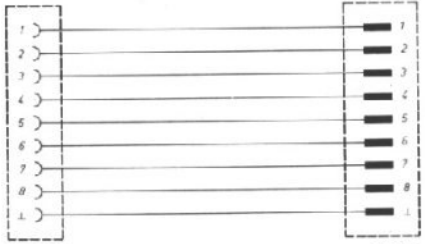
You will find the previously mentioned wiring diagrams on the following pages. The additional correcting cables can be obtained direct from Messrs. Ing. Bernd Kranz, 2000 Hamburg 70, Ellerneck 8 (West Germany). For assembly by the user the required components can be obtained from radio dealers. It ist impossible to describe the numerous possibilities of the LEICINA SUPER. The wiring diagram A on the facing page shows the expert the fundamental design of the electronics of the LEICINA SUPER and the control unit, thereby offering him the possibility of connecting his own accessories.



Control unit Code No. 22 225 1* Release, 2* premeasuring button

Camera Code No. 20 511

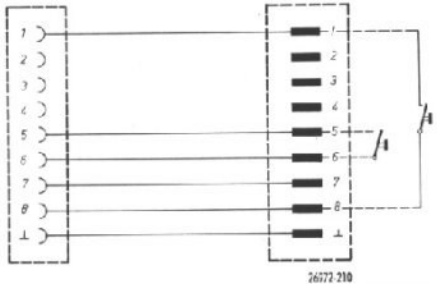
Wiring diagram B



Mak 8 100 S
(to connecting cable)

Mas 8 100 S
(to socket 1 of the
LEICINA control unit)

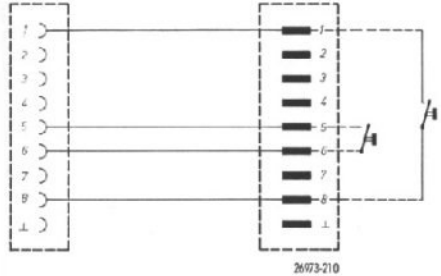
Wiring diagram C



Mak 8 100 S
(to connecting cable)

Mas 8 100 S
(to socket 1 of the
LEICINA control unit)

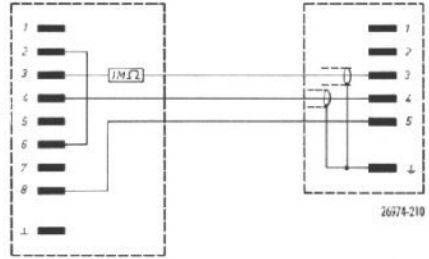
Wiring diagram D



Mak 8 100 S
(to connecting cable)

Mas 8 100 S
(to socket 1 of the
LEICINA control unit)

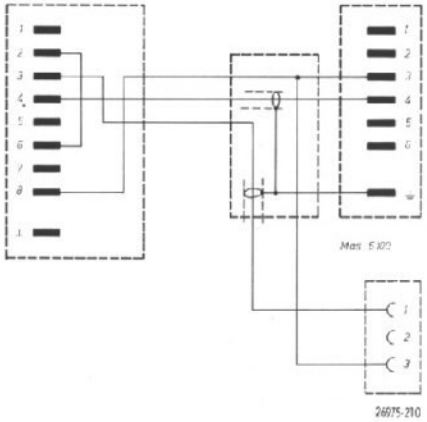
Wiring diagram E



Mas 8 100 S
(to socket 2 of the
control unit)

Mas 5 100 S
DIN 41 524
(to Uher 4200 or 4400 in
stereo microphone
socket channel 2)

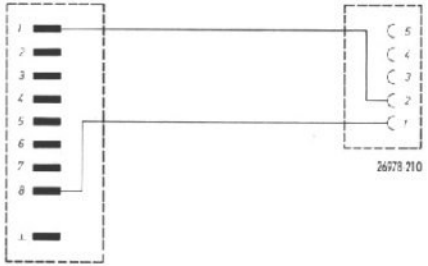
Wiring diagram F



Mas 8 100 S
(to socket 2 of the
control unit)

Mas 6 100
(to remote control socket
of the tape recorder)
Mak 3 100 S or Mak 5 100 S
DIN 41 524
(to separate sound head
for control track)

Wiring diagram G

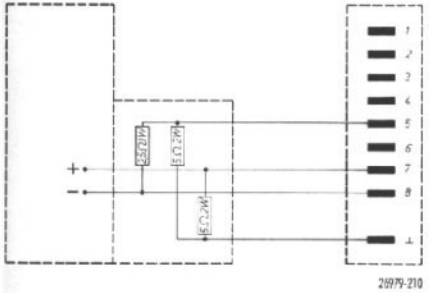


Mas 8 100 S
(to socket 2 of the
control unit)

Mak 3 100 S or Mak 5 100 S
DIN 41 524
(to FK 2 by Messrs.
Kranz, Hamburg)

Wiring diagram H

(for all camera functions)

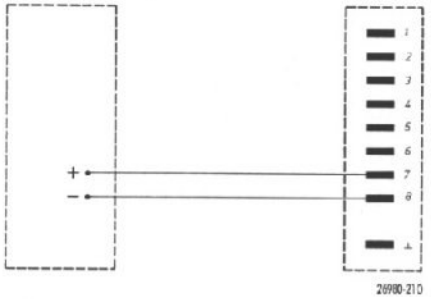


Mains unit or battery
Minimum load voltage 5.5v
Maximum no-load
voltage 8.5v
Constant current ≥ 1.0 amp
Peak current ≥ 1.5 amp

Mas 8 100 S
(to socket 2
of the control unit)

Wiring diagram J

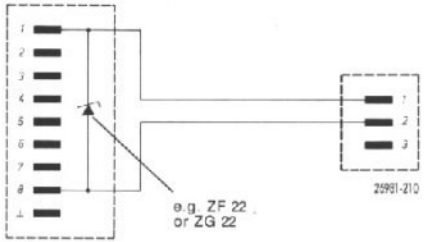
(for camera operation **without** diaphragm regulator and zoom)



Mains unit or battery
Minimum load voltage 5.5v
Maximum no-load
voltage 8.5v
Constant current ≥ 0.5 amp
Peak current ≥ 1.0 amp

Mas 8 100 S
(to socket 2 of the
control unit)

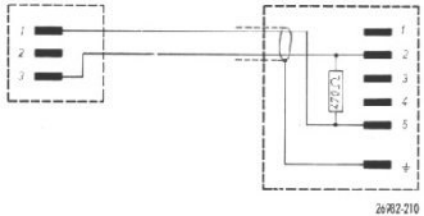
Wiring diagram K



Mas 8100 S
(to socket 1 of the
control unit)

Mas 3100
DIN 41524
(to LEICAFLEX motor)

Wiring diagram L



Mas 3100
DIN 41524
(to Synton 8T by
Messrs. Volland
852 Erlangen, West Germany)

Mas 5100 S
DIN 41524
(to radio phono socket
of Uher 4200 or 4400
Report Stereo)

Symbol of Optical Precision

Design subject to alteration without notice.

ERNST LEITZ GmbH D 6330 **WETZLAR** Germany
Subsidiary: Ernst Leitz (Canada) Ltd., Midland, Ontario

List 216-25/Engl. Printed in Germany XII/70/AX:L