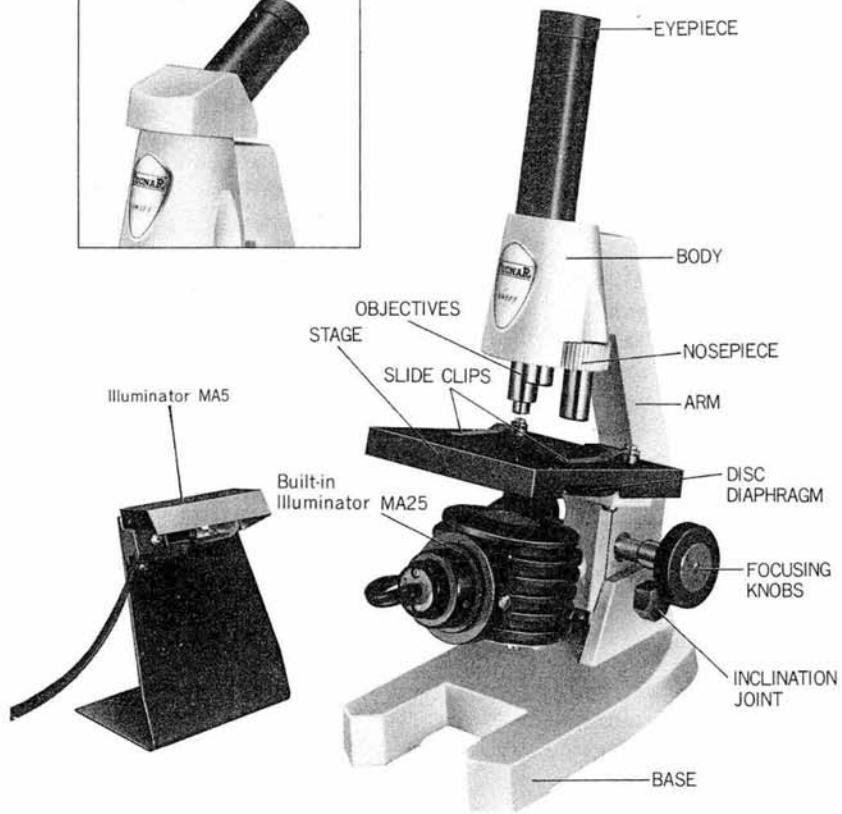


M-11T



M-10T



USE AND CARE OF SWIFT SERIES MICROSCOPE

M 10T AND M11T TECNAR

SWIFT®

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THE USE AND CARE OF YOUR SWIFT M10T AND M11T MICROSCOPE

The SWIFT M10T and M11T microscope is a quality instrument made available to the young science student at a cost within the each of the most modest budget.

UNPACKING

Care should be taken when opening your SWIFT M10T microscope. Once opened, remove the microscope, being careful not to touch the optical surfaces with your fingers. Touching the lenses with your fingers will leave oil deposits which will impair good viewing and may prove harmful to the lens coating. If you should accidentally touch the lenses, refer to the chapter herein entitled "Cleaning".

Before attempting to use your SWIFT M10T microscope, it is important to familiarize yourself with the terminology of the science of microscopy, and the purpose of each component of the microscope. By doing this, use of the microscope is simplified and you will be able to enjoy the microscope to its fullest extent.

COMPONENTS OF THE MICROSCOPE

BASE – this is the foot of the microscope that supports all other components.

ARM – the frame that supports all components above the base.

STAGE – the table of the microscope on which the slide or specimen is placed. The stage has locked on specimen clips to hold the slide or specimen securely.

BODY – the part between the upper optical elements and the lower.

NOSEPIECE – the revolver that carries the objectives.

OBJECTIVE – the optical system that does the initial magnifying to focus the primary image of the specimen.

DISC DIAPHRAGM – the disc attached to the underside of the stage. The disc has five apertures (openings) and is used to increase or decrease contrast in the image of the specimen.

FOCUS KNOBS – these are found on both sides of the arm. By

rotating either or both knobs the stage is raised or lowered to bring the specimen into focus.

USING YOUR M10T AND M11T MICROSCOPE

The following procedure will enable you to quickly and easily begin study of the specimen.

1. Place the slide on the stage and secure it under the slide clips. Be sure the specimen is directly over the opening in the stage.
2. Rotate the disc diaphragm to position its largest aperture with the opening in the stage.
3. Adjust the mirror to direct the light into the optical path.
4. Rotate the nosepiece to place the 4x objective in position over the specimen. Be sure the objective "clicks" into its position.
5. While viewing through the eyepiece, rotate the focusing knobs to bring the specimen into focus; then move the slide to place the specimen directly into the center of the field of view.
6. If the image of the specimen appears weak or pale, the disc diaphragm should be rotated to align the next smaller aperture with the opening in the stage. Each successively smaller aperture will increase contrast in the image of the specimen.
7. Rotate the nosepiece to the 20x objective. A slight turn of the focusing knob may be necessary to bring the image of the specimen into sharp focus, and once this is done the image will be in sharp focus with 20x, 10x and 4x objectives.

You may now study the specimen in a sharp, well contrasted field of view.

FOR YOUR INFORMATION

The focusing knobs of your SWIFT M10T and M11T microscope are equipped, at no additional cost, with a built-in slip clutch. This is designed to protect the precision gears of the focusing mechanism from damage, and is activated at both upper

and lower limits of travel. Once either limit is reached the knobs will slip if turned further.

Field of view will change from one objective to the other. It is advantageous to study the specimen at only high enough magnification as is necessary to reveal its details as the field of view is largest with the lowest power objective.

ACCESSORY

MA-5 Inexpensive, easy-to-use illuminator

MA-6 T-10X Eyepiece

MA-7 T-10XW Eyepiece

MA-8 T-15XW Eyepiece

TROUBLESHOOTING

- A. **PROBLEM** – Image appears “washed out” or weak.
CORRECTION –
1. Rotate the disc diaphragm to a smaller aperture.
 2. Objective lens is dirty. Clean as described under “Cleaning”.
 3. Eyepiece is dirty. Clean as described under “Cleaning”.
- B. **PROBLEM** – Unable to bring specimen into focus with any of the objectives.
CORRECTION – The eyelens of the eyepiece is partially unscrewed. Loosen the set-screw in the eyetube, take out the eyepiece, screw the upper element tightly to the eyepiece tube, reinstall.
- C. **PROBLEM** – Image of the specimen goes out of focus all by itself.
CORRECTION – Tighten the collar found on the spindle of the focus controls with an MT202 wrench which can be obtained from your local SWIFT dealer.
- D. **PROBLEM** – Focusing knobs turn hard even with tension collar loosened.
CORRECTION – Microscope should be disassembled by qualified, authorized technician, cleaned and lubricated.

CARE OF YOUR SWIFT M10T AND M11T MICROSCOPE

The SWIFT M10T microscope is designed to function satisfactorily with only minimum maintenance. Certain components should be cleaned frequently to ensure viewing without interference.

CLEANING

The eyepiece and objective lenses should never be wiped while dry as this will surely scratch or otherwise mar the surface of the glass. These surfaces should first be brushed by a soft camel hair brush or blown off by air from a rubber syringe to remove dust particles. In most cases the lens may then be cleaned by blowing on the lens to moisten it, then wiping with good quality lens tissue folded several times.

If the surface of the lens remains soiled, lens tissue folded several times and moistened with Xylene will easily remove the contaminant.

Painted surfaces should be cleaned frequently using a soft cloth and mild detergent.

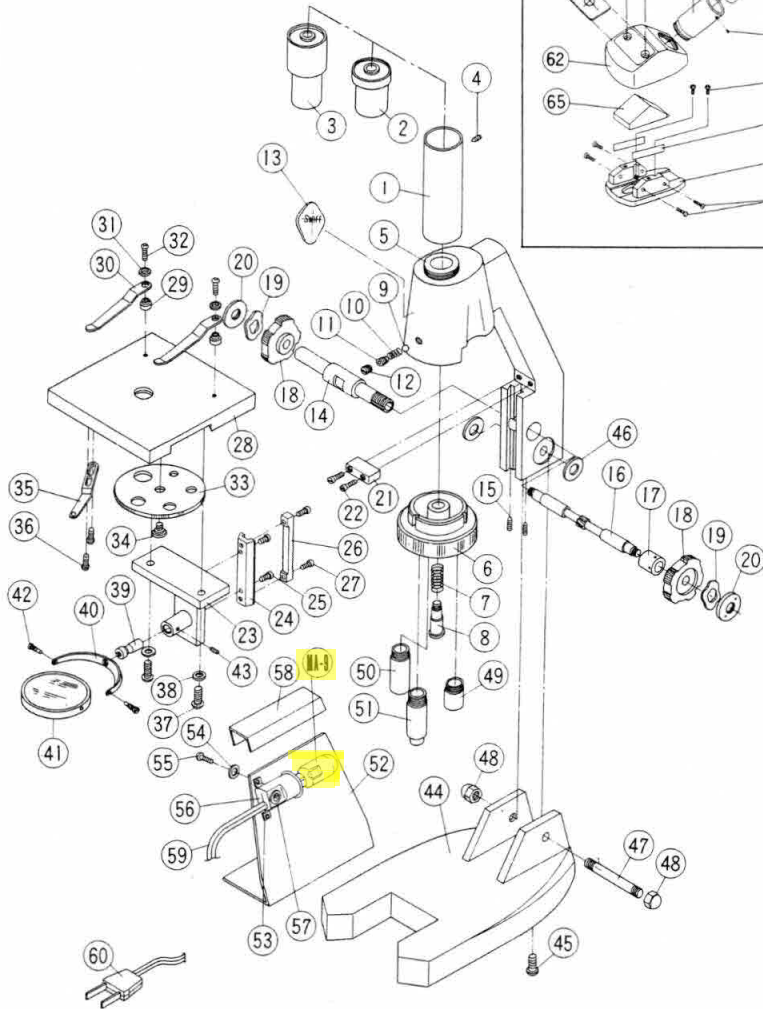
CAUTION: Objectives and mechanical assemblies should never be disassembled. If repairs or internal cleaning should become necessary, this should be done only by qualified, authorized technicians.

Periodic cleaning and relubrication by authorized technicians will insure continued fine performance of the microscope and many years of trouble free use.

Your SWIFT M10T and M11T microscope is backed by the finest warranty available. Information describing other SWIFT instruments may be obtained by writing to Swift Instruments, Inc. Scientific Instrument Division, P.O. Box 562, San Jose, California 95106.

MODEL M10T

M11 T



Parts Number	Description	Parts Number	Description
1.	Eyepiece tube	36	Screw
2.	T-10X Eyepiece	37	Screw
3.	T-10XW Eyepiece	38	Washer
4.	Screw	39	Mirror fork
5.	Arm	40	Mirror bow
6.	Nosepiece	41	Mirror
7.	Spring	42	Screw
8.	Screw	43	Screw
9.	Ball bearing	44	Base
10.	Spring	45	Screw
11.	Washer	46	Washer
12.	Screw	47	Shaft
13.	Marking plate	48	Nut
14.	Pinion metal	49	Objective 4X
15.	Screw	50	Objective 10X
16.	Pinion	51	Objective 20X
17.	Adjuster, pinion tension	52	Illuminator MA5, Stand
18.	Coarse adj. handle	53	Screw
19.	Washer	54	Washer
20.	Nut	55	Screw
21.	Rack stop	56	Bulb holder
22.	Screw	57	Screw
23.	Stage holder	MA-9	Bulb 120V 15W
24.	Rack guide	58	Bulb cover
25.	Screw	59	Cord
26.	Rack	60	Plug
27.	Screw		
28.	Stage	<u>MIIT</u>	
29.	Washer	61	Eyepiece tube
30.	Stage clip	62	Prism housing
31.	Washer	63	Screw
32.	Screw	64	Marking Plate
33.	Disc diaphragm	65	Prism
34.	Screw	66	Prism adjusting plate
35.	Spring	67	Prism seat
		68	Screw
		69	Screw