

**COLLIGATED CHECKOUT AND
CALIBRATION PLATFORM WITH
LF-3 INSTRUCTION MANUAL**

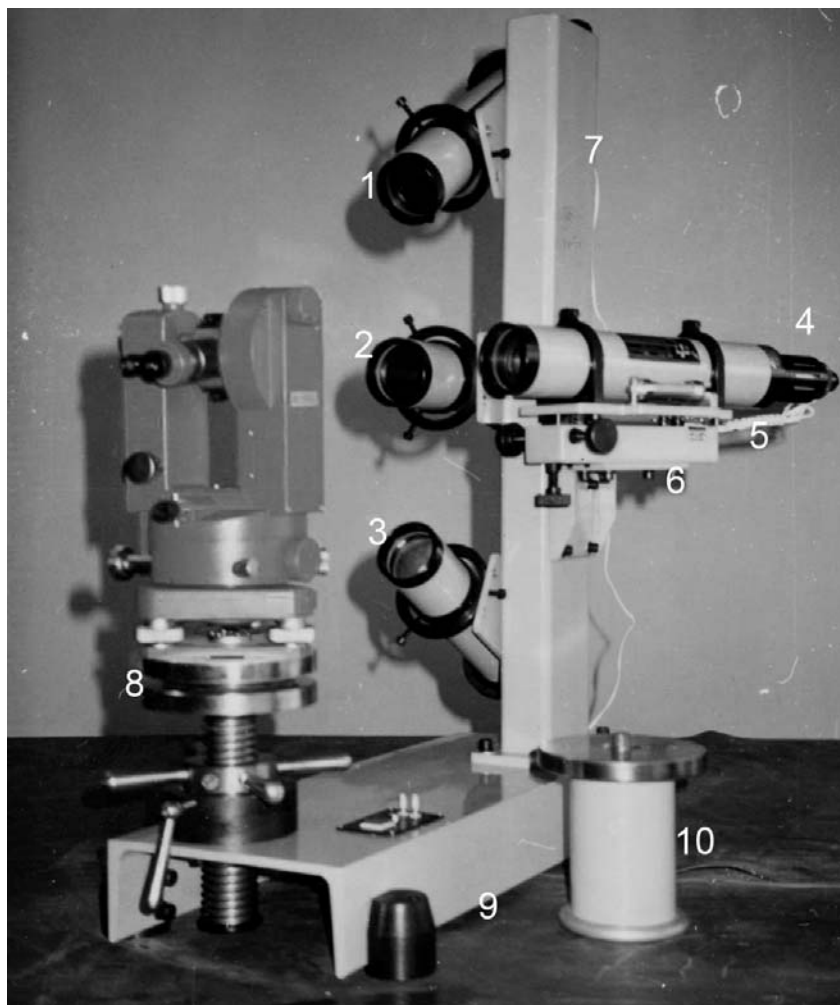
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I. Structure

The collimated checkout and calibration platform with LF-3 consists of optical collimator, fine adjustment platform, column, rising and falling adjustment platform and base, etc. To be convenient for carrying, the collimator, fine adjustment platform, column, rising and falling adjustment platform are assembled on the same base. (see fig.)

1. Collimator with angle of depression
2. Collimator with horizontal angle
3. Collimator with elevation
4. Collimation collimator
5. 10" level bubble
6. Fine adjustment platform
7. Column
8. Rising and falling adjustment platform
9. Accessories (heightening tube, connecting plate with screw thread of British measurement)



II. Application Scope

The instrument is applicable to checkout and calibration of various instruments such as transit instrument, water level, plane table, electronic theodolite and omnibearing apparatus, etc. being the main testing device, indispensable by sale department of surveying instruments, maintenance department, professional surveying sector and construction unit with large-scale, etc. the checkout and calibration platform is classified into three kinds which may be selected by the users according to their demand.

Type	Quantity of Collimator	Remark
LF-3A	2	Collimation collimator Collimator with elevation
LF-3B	3	Collimator with angle of depression Collimation collimator Collimator with elevation
LF-3C	4	Collimator with angle of depression Collimator with horizontal angle Collimation collimator

Precision of level bubble: 10"

Focus glass scale value: 20"

Screw thread of link implementation: Metric: 16/British:5/8"

The adjustment benchmark of the colligated checkout and calibration platform is collimation collimator and 10" level bubble. Before using, the 10" level bubble and collimation collimator should be leveled, which shall make the checkout and calibration platform into level position. With collimator with elevation and collimator with angle of depression combined, it may be used for checking and calibrating the various indexes of transit instruments and i angle of leveling instrument, etc.

III. Method of Application

After assembling or moving, it should be checked and calibrated, the steps of which are stated as the follows:

1. Have the qualified transit instrument with second precision assembled onto rising and falling adjustment platform.

2. Have the rising and falling platform adjusted to make the center of observation mirror of transit instrument approximately at the same height with that of collimation collimator of checkout and calibration platform.

3. Have the transit instrument leveled and have the angle adjusted into 90° (meaning have the observation mirror leveled).

4. Turn on the lighting switch of the colligated checkout and calibration platform and have graduation of the collimation collimator

adjusted and coincided with that of the transit instrument. Have the collimation collimator adjustment bolts tightened.

5. Have the 10" level bubble leveled with adjustment bolts tightened.

6. Have the graduation contact ratio of collimation collimator of the colligated checkout and calibration platform and the transit instrument checked. If not well done, do it once again according to the above steps.

7. When the graduation center of collimation collimator of the colligated checkout and calibration platform has coincided totally with graduation center of the transit instrument, with the bleb of the 10" level bubble at the center, it shows that the collimation collimator of the colligated checkout and calibration platform is leveled for putting into working, with level error not more that 2" (now, the height, angle reading of the transit instrument should be recorded in the data sheet for comparison later.)

8. The transit instrument may turn left by 22° or so. (Note: only can the type C, i.e. the checkout and calibration platform with four collimators be turned like this.)

9. Have the collimator with horizontal angle of the checkout and calibration platform adjusted to totally coincided with the graduation of the transit instrument, with the adjustment bolts of the collimator locked tightly and with the height and angle reading of the transit instrument recorded in the data sheet.

10. Have the transit instrument adjusted upward 30° with the collimator with angle of depression of the colligated checkout and calibration platform adjusted to have its graduation totally coincided with that of the transit instrument, then having the fastening screw locked, with the height and angle reading of the transit instrument recorded in the data sheet.

11. Have the transit instrument adjusted downward by 30° with collimator with elevation of the colligated checkout and calibration platform adjusted to have its graduation totally coincided with that of the transit instrument, then having the adjusting screw locked with the height and angle reading of the transit instrument recorded in the data sheet.

12. To fit in with the different height and connecting screw thread (the metric system or British measurement), the checkout and calibration platform has equipped with height adjusting tube and connecting fittings with screw of British measurement, which may be taken down or installed for necessity. With its rising and falling adjustment platform equipped, the checkout and calibration platform shall meet the demands form different instruments.

13. With plumb measurement combined, the colligated checkout and calibration platform may be used to conveniently determine the tilt error of the graduation.

IV. Maintenance

The collimated checkout and calibration platform with LF-3 is structured of the principle in self-checking and self-calibration, which has offered great convenience to maintenance and regular calibration, not necessary to use special site and professional personnel, supplementary instrument.

For operating, only with the above steps and method followed and with a set of qualified transit instrument with second precision used, the entire checking and calibration shall be finished.

To guarantee the checkout and calibration platform works stably for a long-term, the following has to be paid attention to:

1. In carrying and transporting the checkout and calibration platform, please be careful to have it taken down gently.
2. The environment where the instrument is used should be kept away from vibrating source and strong light source.
3. Don't loosen the non-adjusting screw.
4. Have it cleaned, avoiding damage to it. After using, the lens cap of the collimator should be well covered to prevent it from dust or damage.
5. The lens of the collimator should be cleaned with clean flannelette or paper, preventing it from dirt or damaged by hard things.