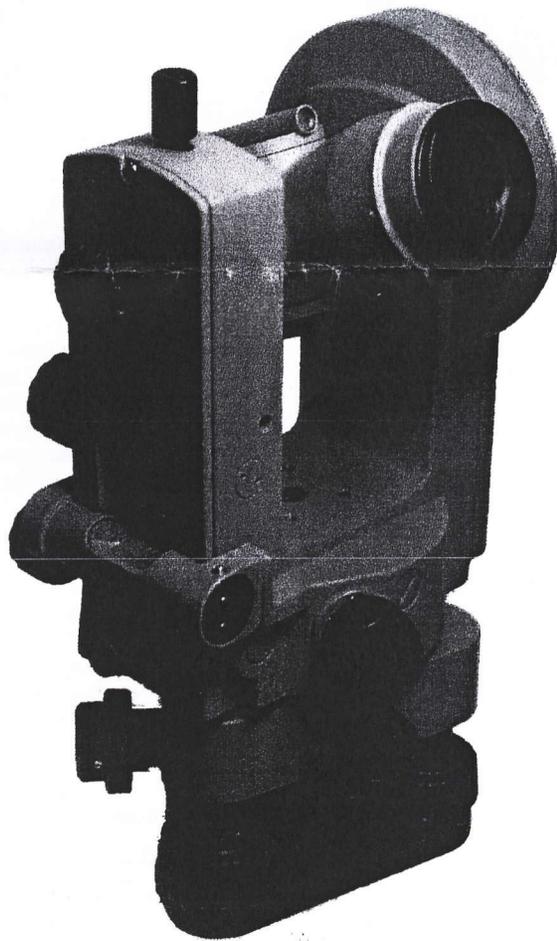
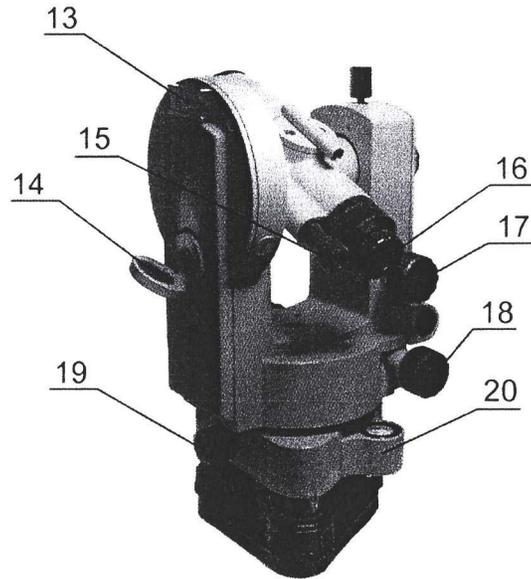
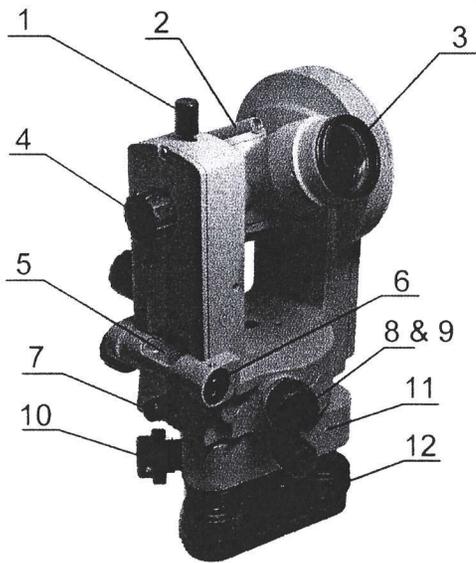




# **Bedienungsanleitung User Manual**

## **Theodolite FET 500 Manual Utilizare**





#### Parti Componente

1. Surub blocare vertical
2. Tinta optica
3. Lentila Obiectiv
4. Surub Focusare
5. Nivela Torica reglaj
6. Surub ajustare
7. Surub blocare orizontal
8. Setare cerc Orizontal
9. Reglare cerc Orizontal
10. Fir cu plumb Optic
11. Ambaza
12. Suruburi reglaj Teodolit
13. Suport pentru busola tubulara
14. Oglinda
15. Ocular pentru citire valori gradate
16. Ocular pentru citire tinta
17. Reglaj fin vertical
18. Reglaj fin orizontal
19. Clema blocare Ambaza
20. Bula rotunda reglaj

Setul de livrare contine:  
Teodolit FET 500, ac ajustare, surubelnta mica manual, in cutie de transport.

#### Features

- |    |                                |
|----|--------------------------------|
| 1  | Vertical clamp                 |
| 2  | Optical sight                  |
| 3  | Objective lens                 |
| 4  | Focussing device               |
| 5  | Tubular level                  |
| 6  | Adjustment screws              |
| 7  | Horizontal clamp               |
| 8  | Securing Hz-circle             |
| 9  | Hz-circle turn handle          |
| 10 | Optical plummet                |
| 11 | Tribrach                       |
| 12 | Foot screw                     |
| 13 | Mount of tubular compass       |
| 14 | Mirror                         |
| 15 | Eyepiece of reading microscope |
| 16 | Eyepiece of telescope          |
| 17 | Vertical tangent screw         |
| 18 | Horizontal tangent screw       |
| 19 | Clamp of tribrach              |
| 20 | bubble                         |

#### Kit consists of

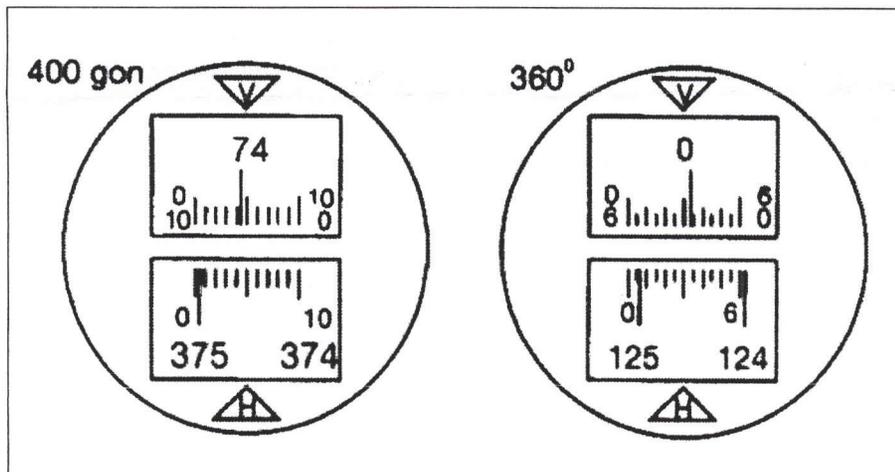
FET 500, Adjustment needle, small tools, user manual, carrying case

**Technische Daten / Technical Data**

Vergrößerung / Magnification / <b>Marire</b>	20 x
Objektivöffnung / Objective aperture / <b>Diametru Obiectiv</b>	30 mm
Kürzeste Zielweite / Shortest foc. Distance / <b>Dist. Minima</b>	1,2 m
Kreisstellung / Circles / <b>U.M. Cerc</b>	400 gon / 360°
Direkte Ablesung / Direct reading / <b>Citire directa</b>	0,1 gon/5'
Schätzung / Estimation / <b>Precizie</b>	10 mgon/0,5'
Alhidadenlibelle / Tubular level / <b>Nivela torica</b>	45''
Fernrohrlibelle / Telescope bubble / <b>Bula rotunda</b>	20''
Temperaturbereich / Temperature range / <b>Interval Temperatura</b>	-40°C bis +50°C
Abmessungen / Dimensions / <b>Dimensiuni</b>	120 x 130 x 230 mm
Gewicht / Weight / <b>Greutate</b>	2,3 kg

**Ablesebeispiel / Reading Example / Exemplu Citire**

400 gon	360°								
<table border="0" style="margin-left: auto; margin-right: auto;"> <tr><td>V</td><td>74,46</td></tr> <tr><td>H</td><td>375,05</td></tr> </table>	V	74,46	H	375,05	<table border="0" style="margin-left: auto; margin-right: auto;"> <tr><td>V</td><td>0°26'</td></tr> <tr><td>H</td><td>125°05,5'</td></tr> </table>	V	0°26'	H	125°05,5'
V	74,46								
H	375,05								
V	0°26'								
H	125°05,5'								



## Reglarea si punerea in Functiune

1. Fixati Aparatul pe trepied. Rotiti teodolitul in jurul axei verticale astfel incat nivela torica Nr. 5 sa fie situata paralel cu 2 din suruburile de reglaj nr. 12. Centratii nivela torica Nr. 5. Intoarceti aparatul cu 90 grade regland din cel de-al treilea surub. Repetati operatiile cu toate cele 3 picioare, astfel incat nivela torica sa indice centrul in orice pozitie. Daca nu, corectati jumătate din abatere cu al treilea surub reglaj opozabil si cealalta jumătate cu ajustarea surubului Nr. 6. de la nivela torica.
2. **Cercul Orizontal**  
Telescop pentru citire pe distante de 100 m de la nivelul ochilor. Citirea. Intoarceti telescopul in jurul axei sale verticale cu 180 grade. Diferenta intre prima citire si cea de-a doua trebuie sa fie de 200 gon sau 180 grade.  
Pentru reglaj fin se foloseste surubul nr. 18. Surubul 7 asigura blocarea pentru a putea actiona surubul reglare fina.  
Deblocarea Surubului 7 permite miscarea usoara in jurul axei.
3. **Cerc Vertical**  
Se procedeaza la fel ca la punctul de mai sus. Rotirea telescopului se face in jurul axei orizontale, diferenta rezultata trebuie sa fie de 180 grade.  
Pentru reglaj fin se foloseste surubul nr. 17  
Surubul 1 asigura blocarea pentru a putea actiona surubul reglare fina.  
Deblocarea Surubului 1 permite miscarea usoara in jurul axei.
4. **Verificarea axei**  
Asezati teodolitul in fata unui perete.  
Marcati pe perete un punct. Apoi inclinati telescopul si marcati un punct (o pietricica) de pe sol. Intoarceti teodolitul in jurul axei sale si verificati din nou daca cele doua puncte sunt in continuare pe aceeasi axa.  
Important este ca teodolitul sa fie calibrat corespunzator.
5. **Inauntru in cutia de transport se gaseste o bula torica ce poate fi montata in locul uneia din cele doua sisteme optice pentru "linia de ochire". Aceasta operatie se face prin desfacerea celor 2 suruburi si montare bulei. Telescopul trebuie asezat la 90 grade, si reglata bula din suruburile de ajustare Nr. 6.**

Als Sonderzubehör sind Steilsichtprismen und eine Röhrenbussole lieferbar.

## Check out and controls

1. Fix the instrument on tripod. Turn theodolite around its vertical axis so that the tubular level No. 5 is situated parallel to two foot screws No.12. Centre tubular level No. 5. Turn instrument by 90° and centre tubular level by means of third foot screw. Repeat procedure until tubular level is coming back to centre in all directions. If not remove half of deviation by opposite foot screw and other half by adjustment screws No. 6 of tubular level.
2. **Horizontal circle**  
Direct telescope to well visible mark at distance of approx. 100m and at above eye level. Take reading. Turn theodolite round its vertical axis and transit telescope. Take second reading of same mark with telescope in reverse position. Difference between readings should be 200 gon. If this is not the case half of collimation error is to be removed by turning tangent screw No. 18 and the remaining half by means of two reticule adjustment screws which become accessible unscrewing cap placed next to eyepiece part No. 16.
3. **Vertical circle**  
Proceed as described in afore mentioned paragraph (2.) and check vertical accordingly. The sum of both vertical readings must be exactly 400 gon. Any deviation to be removed by means of vertical tangent screw No. 17 and two reticule adjustment screws.
4. **Tilting axis**  
Set up theodolite in front of wall. Direct telescope to clearly visible mark at steep angle. Transit telescope to ground mark. Fix ground mark for example by means of little stone. Turn theodolite round its axis and repeat procedure in reverse telescope position. Cross hair should hit ground mark when transiting telescope. Otherwise theodolite should be send to service station for adjustment because of tilt axis error.
5. Inside the container you'll find a telescope bubble which can be mounted instead of one of the two optical sights. After mounting bubble it has to be adjusted parallel to telescope: Move vertical circle to 100 gon and adjust telescope bubble by means of two adjustment screws No. 6.

Further available accessories: 90° eyepiece prism, tubular compass.

## Ingrijire si Curatire

Va rugam sa tineti aparatul curat.  
Curatati cu o carpa moale dupa fiecare utilizare.  
Daca este necesar, inmuati carpa cu putina apa.  
In cazul in care aparatul este umed, curatati-l  
cu o carpa uscata. Asezati-l in cutie doar dupa ce  
este uscat. Transportati-l doar in cutia originala.

## Aplicatii utilizare Instrument

Stabilire inaltime, diferente inaltime, planuri orizontale  
sau verticale, unghiuri drepte, diverse unghiuri,  
fir cu plumb, etc

## Instructiuni protectie

- Va rugam respectati instructiunile din acest manual
- Utilizati Aparatul doar in scopuri de masurare
- Nu desfaceti carcasa Aparatului. Reparatiiile trebuiesc efectuate doar de catre un Atelier specializat.  
Va rugam sa contactati furnizorul dumneavoastra.
- Nu lasati Aparatul la indemana copiilor
- Nu folositi aparatul in medii explozive

## Cand pot sa apara erori de masurare

- Masurarea se face printr-o fereastră din plastic sau din plastic transparent.
- Dupa ce aparatul a fost tinut in soare sau la ger. Va rugam verificati precizia.
- Cand sunt largi fluctuatii de temperatura:  
Daca aparatul a fost tinut la alta temperatura fata de cea la care se utilizeaza, dupa ce este scos din cutie trebuie lasat cateva minute inainte de efectuarea de masuratori.

## Care and cleaning

Please handle measuring instruments with care.  
Clean with soft cloth only after any use. If necessary damp cloth with some water. If instrument is wet clean and dry it carefully. Pack it up only if it is perfectly dry. Transport in original container / case only.

## Intended use of instrument

Setting up heights, horizontal and vertical planes, right angles and plumbing points.

## Safety instructions:

- Please follow up instructions given in operators' manual.
- Do not stare into beam. Laser beam can lead to eye injury. A direct look into the beam (even from greater distance) can cause damage to your eyes.
- Do not aim laser beam at persons or animals.
- The laser plane should be set up above eye level of persons.
- Use instrument for measuring jobs only.
- Do not open instrument housing. Repairs should be carried out by authorized workshops only. Please contact your local dealer.
- Do not remove warning labels or safety instructions.
- Keep instrument away from children.
- Do not use instrument in explosive environment.

## Specific reasons for erroneous measuring results

- Measurements through glass or plastic windows;
- After instrument has been dropped or hit. Please check accuracy.
- Large fluctuation of temperature: If instrument will be used in cold areas after it has been stored in warm areas (or the other way round) please wait some minutes before carrying out measurements.

## Elektromagnetische Verträglichkeit

Es kann nicht generell ausgeschlossen werden, dass das Gerät andere Geräte stört (z.B. Navigationseinrichtungen) oder durch andere Geräte gestört wird (z.B. elektromagnetische Strahlung bei erhöhter Feldstärke z.B. in der unmittelbaren Nähe von Industrieanlagen oder Rundfunksendern).

## CE-Konformität

Das Gerät hat das CE-Zeichen gemäß den Normen EN 61326:1997, EN 55022, EN 61000-4-2/-3.

## Garantie

**Acest produs este garantat fiind fabricat de producatorul original, si pentru toate defectiunile de fabricatie si de material, in situatia utilizarii in conditii normale, pentru o perioada de 2 ani de la data cumpararii.**

**Pe perioada garantiei, daca apar astfel de defectiuni, cumparatorul va lua hotararea de reparatie sau de inlocuire a pieselor componente sau totale a aparatului. In cazul constatarii unei defectiuni, aparatul trebuie insotit de ambalajul original ( cutie transport). Acest agarantie nu se acorda cand a existat o utilizare abuziva ce a determinat modificari mecanice ale pieselor componente ale teodolitului.**

## Haftungsausschluss

Der Benutzer dieses Produktes ist angehalten, sich exakt an die Anweisungen der Bedienungsanleitung zu halten. Alle Geräte sind vor der Auslieferung genauestens überprüft worden. Der Anwender sollte sich trotzdem vor jeder Anwendung von der Genauigkeit des Gerätes überzeugen. Der Hersteller und sein Vertreter haften nicht für fehlerhafte oder absichtlich falsche Verwendung sowie daraus eventuell resultierende Folgeschäden und entgangenen Gewinn. Der Hersteller und sein Vertreter haften nicht für Folgeschäden und entgangenen Gewinn durch Naturkatastrophen wie z.B. Erdbeben, Sturm, Flut, usw. sowie Feuer, Unfall, Eingriffe durch Dritte oder einer Verwendung außerhalb der üblichen Einsatzbereiche. Der Hersteller und sein Vertreter haften nicht für Schäden und entgangenen Gewinn durch geänderte oder verlorene Daten, Unterbrechung des Geschäftsbetriebes usw., die durch das Produkt oder die nicht mögliche Verwendung des Produktes verursacht wurden. Der Hersteller und sein Vertreter haften nicht für Schäden und entgangenen Gewinn resultierend aus einer nicht anleitungsgemäßen Bedienung. Der Hersteller und sein Vertreter haften nicht für Schäden, die durch unsachgemäße Verwendung oder in Verbindung mit Produkten anderer Hersteller verursacht wurden.

## Electromagnetic acceptability (EMC)

It cannot be completely excluded that this instrument will disturb other instruments (e.g. navigation systems) will be disturbed by other instruments (e.g. intensive electromagnetic radiation nearby industrial facilities or radio transmitters).

## CE-Conformity

Instrument has CE-mark according to EN 61326:1997, EN 55022, EN 61000-4-2/-3.

## Warranty

This product is warranted by the manufacturer to the original purchaser to be free from defects in material and workmanship under normal use for a period of two (2) years from the date of purchase.

During the warranty period, and upon proof of purchase, the product will be repaired or replaced (with the same or similar model at manufacturers option), without charge for either parts or labour. In case of a defect please contact the dealer where you originally purchased this product. The warranty will not apply to this product if it has been misused, abused or altered. Without limiting the foregoing, leakage of the battery, bending or dropping the unit are presumed to be defects resulting from misuse or abuse.

## Exceptions from responsibility

The user of this product is expected to follow the instructions given in operators' manual. Although all instruments left our warehouse in perfect condition and adjustment the user is expected to carry out periodic checks of the product's accuracy and general performance. The manufacturer, or its representatives, assumes no responsibility of results of a faulty or intentional usage or misuse including any direct, indirect, consequential damage, and loss of profits. The manufacturer, or its representatives, assumes no responsibility for consequential damage, and loss of profits by any disaster (earthquake, storm, flood etc.), fire, accident, or an act of a third party and/or a usage in other than usual conditions. The manufacturer, or its representatives, assumes no responsibility for any damage, and loss of profits due to a change of data, loss of data and interruption of business etc., caused by using the product or an unusable product. The manufacturer, or its representatives, assumes no responsibility for any damage, and loss of profits caused by usage other than explained in the users' manual. The manufacturer, or its representatives, assumes no responsibility for damage caused by wrong movement or action due to connecting with other products.

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Technische Änderungen vorbehalten.  
All instruments subject to technical changes.

  
10 / 2007