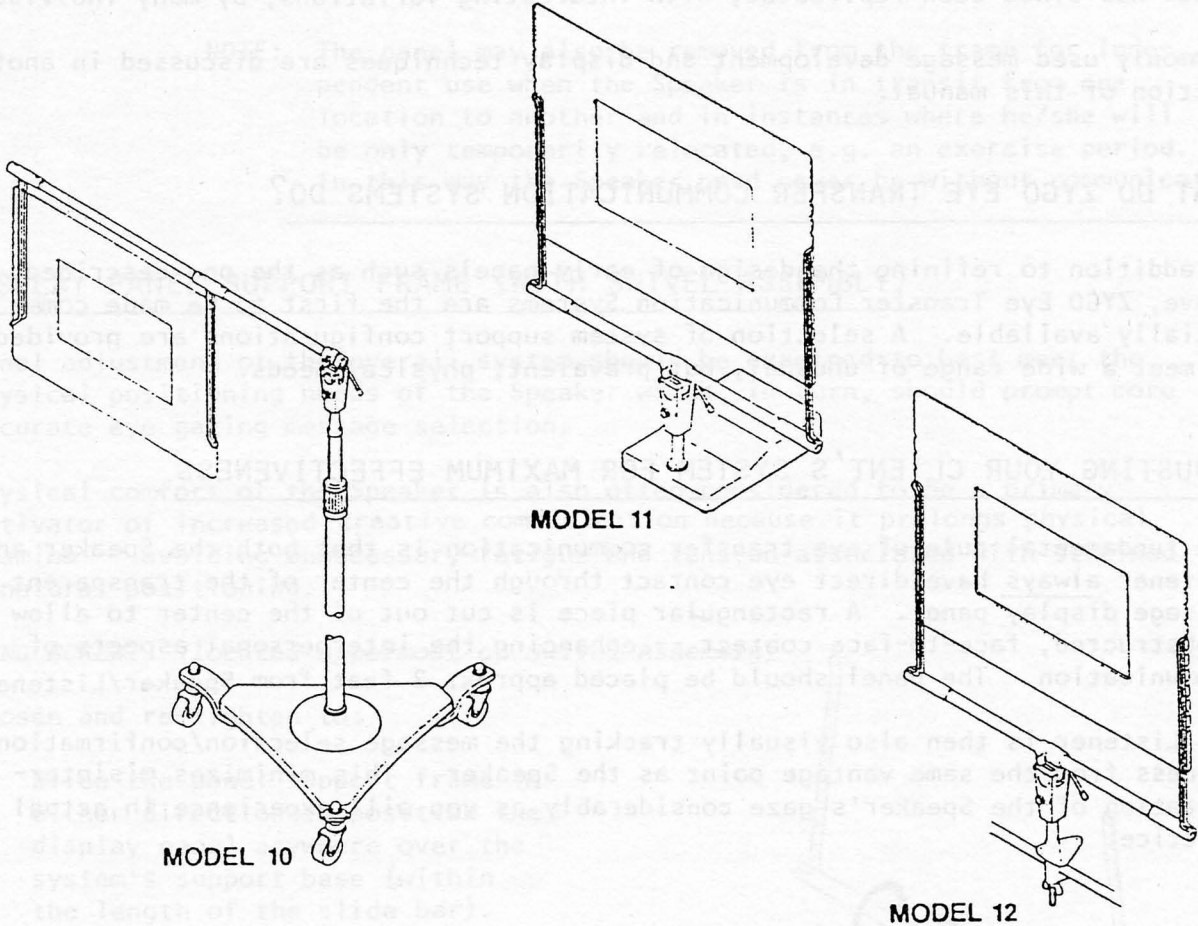




EYE TRANSFER COMMUNICATION SYSTEMS

OPERATION MANUAL



ZYGO EYE TRANSFER COMMUNICATION SYSTEMS COME COMPLETE WITH:

- Selected Mounting Base
- DP-15 Message Display Panel (Blank)
- Message Positioning Template (on DP-15 Packing Carton)
- Black Vinyl Lettering Set

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WHAT IS EYE TRANSFER COMMUNICATION?

Eye transfer communication is an alternative to oral speech for persons so severely disabled that their only reliable voluntary action is eye movement.

Jack Eichler, a Connecticut businessman, created the first publicized eye transfer communication system (ETRAN) for a totally paralyzed friend in the early 1970s. His concept of messages displayed on a transparent Plexiglas^R panel has since been replicated, with interesting variations, by many individuals.

Commonly used message development and display techniques are discussed in another section of this manual.

WHAT DO ZYGO EYE TRANSFER COMMUNICATION SYSTEMS DO?

In addition to refining the design of early panels such as the one described above, ZYGO Eye Transfer Communication Systems are the first to be made commercially available. A selection of system support configurations are provided to meet a wide range of unusual, but prevalent, physical needs.

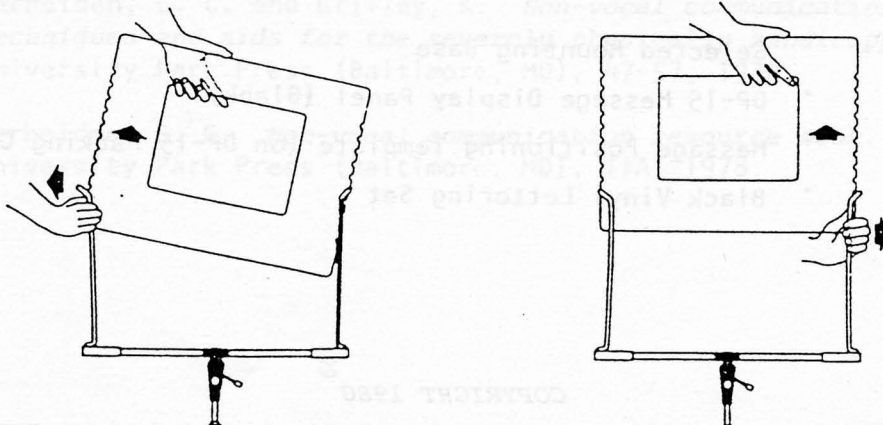
ADJUSTING YOUR CLIENT'S SYSTEM FOR MAXIMUM EFFECTIVENESS

1 The fundamental rule of eye transfer communication is that both the Speaker and Listener always have direct eye contact through the center of the transparent message display panel. A rectangular piece is cut out of the center to allow unobstructed, face-to-face contact -- enhancing the interpersonal aspects of communication. The panel should be placed approx. 2 feet from Speaker/Listener.

The Listener is then also visually tracking the message selection/confirmation process from the same vantage point as the Speaker. This minimizes misinterpretation of the Speaker's gaze considerably as you will experience in actual practice.

HANDLING THE MESSAGE DISPLAY PANEL

A series of notches on both sides of the 15" x 20" acrylic panel allow it to be adjusted vertically within its support frame. Follow the sequence shown in these drawings:



Pull outward on the side rails GENTLY. There is enough resilient spring-action for them to readily return to their holding position when released to the desired notch.

IMPORTANT: Pulling too hard on these rails (or long-term, repeated height adjustment of the panel) may bend the rails outward beyond their present spring ability. If this happens, remove the panel and exert just enough inward push to return the rails to their original position -- until they are again snug against the panel.

NOTE: The panel may also be removed from the frame for independent use when the Speaker is in transit from one location to another and in instances where he/she will be only temporarily relocated, e.g. an exercise period. In this way the Speaker need never be without communication.

DISPLAY PANEL SUPPORT FRAME (WITH SWIVEL ASSEMBLY)

Final adjustment of the overall system should be examined to best meet the physical positioning needs of the Speaker which, in turn, should prompt more accurate eye gazing message selection.

Physical comfort of the Speaker is also often considered to be a primary motivator of increased creative communication because it prolongs physical stamina -- avoiding unnecessary fatigue and tension associated with strained, unnatural positioning.

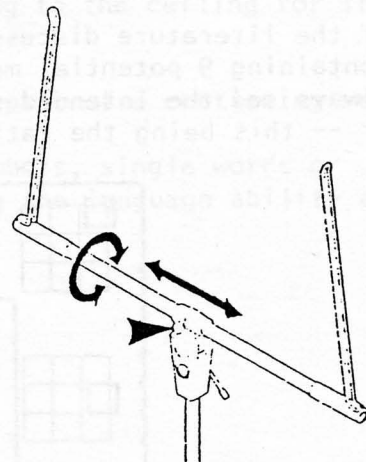
WING SCREW: (located uppermost on Swivel Assembly)

Loosen and re-tighten to:

1. Slide the panel support frame in either direction to position the display panel anywhere over the system's support base (within the length of the slide bar).

and/or

2. Tilt the entire frame either toward or away from the system's support base.



These adjustments are particularly helpful in setting the system up for someone in a supine position or in a special seating device.

EXAMPLES:

- System placed on a table or rolling cart next to a bed or wheelchair
- Over a Speaker's head while he is lying on a floor mat

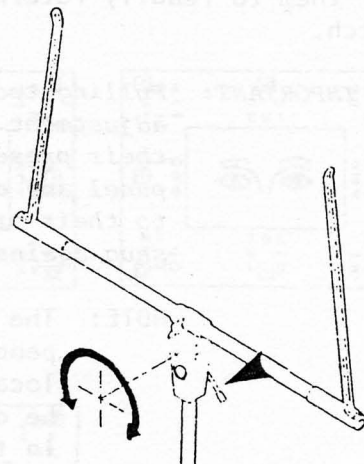
SLIDE-HANDLE SCREW: (located on back side of Swivel Assembly)

Loosen and re-tighten to:

Angle the display panel for best direct eye contact between the Speaker and Listener.

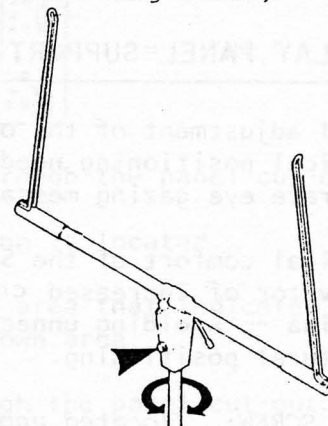
EXAMPLES:

- Speaker is lying on his side
- Speaker's head is out of direct line position with the rest of his body



*THUMB SCREW: (located mid-point on Swivel Assembly; beneath wing screw)**

Loosen and re-tighten for desired free rotation of the support frame on a horizontal plane. This adjustment is pre-set at the factory for easy, but forced, swivel in either direction. Use a pair of pliers to adjust for more or less tension. Do the same if any wobbling occurs in the area of the assembly after prolonged use.

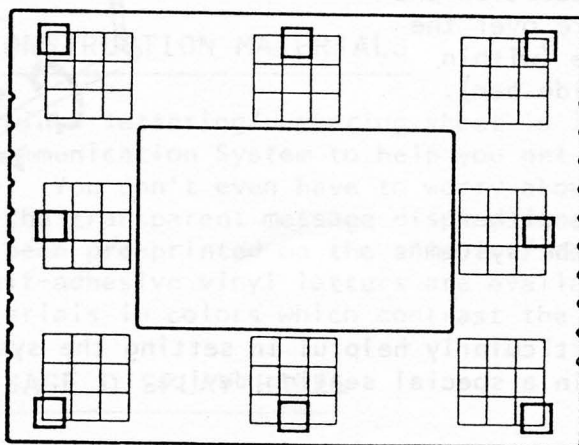


MESSAGE DEVELOPMENT AND DISPLAY TECHNIQUES

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MESSAGE DISPLAY MATRIX:

Most of the literature discusses display panels having 8 message areas with each area containing 9 potential message units (a tic tac toe format). The Listener must always see the intended selection in exactly the same location as the Speaker -- this being the rationale for transparent display panels.



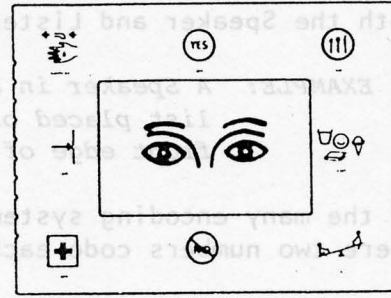
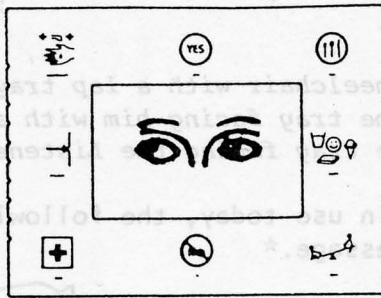
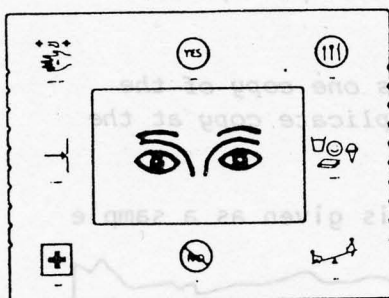
CONFIRMING MESSAGE SELECTIONS:

There is a 'universally' accepted message selection/confirmation technique which should be trained immediately. It is consistent, seldom mis-understood and has direct correlation to the 8 areas described above. This technique is outlined in each of the following basic formats for message display panels:

- Simple Displays
- Encoded Displays
- Complex (advanced) Displays

*Some units have a small Slide Handle Screw.

SIMPLE DISPLAYS: (only single items in each of the 8 message areas)



Communication begins with:

- a. the Speaker and Listener making direct eye contact through the panel's center cut-out.
- b. the Speaker looks to the area he/she wants.
- c. the Speaker returns his gaze to the Listener through the panel cut-out.
- d. the Listener says aloud the message selected to confirm his understanding to the Speaker.
- e. a YES/NO response may be appropriate for awkward and/or rapid Speakers. They may be incorporated as selections on the panel itself or trained as secondary actions where feasible, e.g. eye gazing to the ceiling for YES and to the floor for NO.
- f. the Listener writes the selection down if it is part of a continuing message.

Simple message display panels may have pictures, symbols, single words or complete sentences in each of the 8 areas, reflecting the language ability and environmental/social needs of the Speaker.

Such displays are often used for:

- Assessment and evaluation of language skills
- Beginning communication system training
- Beginning language/cognition training
- Progressive diseases where needs and ability become increasingly limited
- Unambiguous emergency needs where speed is essential

ENCODED MESSAGE DISPLAYS:

Encoding allows you to create a growing, documented expressive language -- again using symbols, words, phrases, etc. This 'next step' toward expanded, flexible conversation uses a consecutive double eye gaze for faster communication.

First create a reference list of all the messages from which the Speaker will make selections. This list is then placed within easy visual perception of both the Speaker and Listener.

EXAMPLE: A Speaker in a wheelchair with a lap tray has one copy of the list placed on the tray facing him with a duplicate copy at the front edge of the tray facing the Listener.

Of the many encoding systems in use today, the following is given as a sample where two numbers code each message.*

*Repeat numbers
(11, 22, 33, etc.),
9's and 0's are not
used.

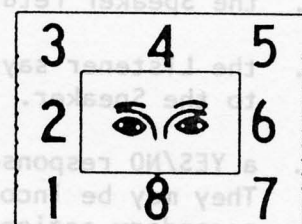
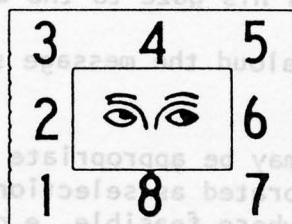
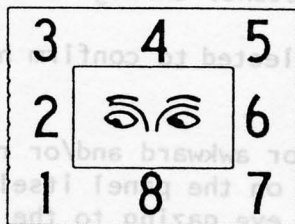
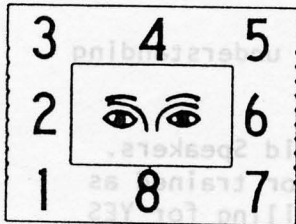
12. I want Mom.

13. Take me home.

14. I'm hungry.

15. Talk to me.

16. Leave me alone.



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- a. the Speaker finds his intended message on the message list.
- b. the Speaker makes eye contact with the Listener through the panel cut-out.
- c. the Speaker looks at the first number of the 2-number code and holds his gaze there momentarily.*
- d. the Speaker then goes directly to the second number and stays there momentarily.*
- e. the Speaker returns his gaze to the Listener through the panel cut-out.
- f. the Listener says the 2 numbers selected aloud, looks up the code on the reference list and reads that message aloud for Speaker confirmation.*

*In teaching the encoding selection technique, the Speaker may initially be trained to look through the cut-out to the Listener for confirmation of each single number in the 2-number code. He can then learn the uninterrupted double gaze from one number to the other to speed up communication with the return gaze to the cut-out to 'close' or 'complete' the communication. It is important that the Listener verbally confirm the first selection during the extended gaze period as reinforcement to the Speaker that it was read properly and as permission for the Speaker to go on to make the second selection.

Encoded display panels may use numbers, letters, colors, combinations of these, etc. But these systems do rely on the reference list which must accompany the Speaker at all times.

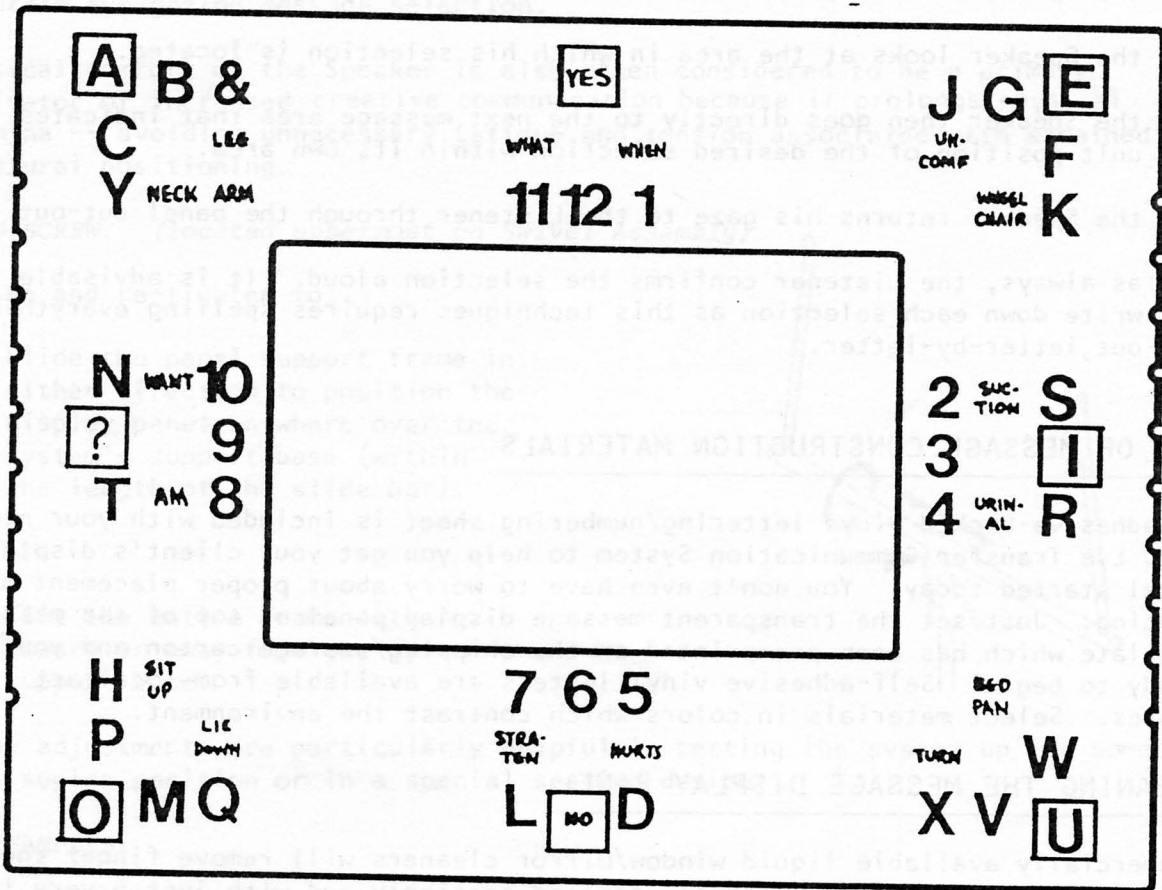
COMPLEX (ADVANCED) MESSAGE DISPLAYS:

The last technique to be discussed here requires:

- good spelling and number skills
- a still more sophisticated double gaze selection process

Similar to Mr. Eichler's original ETRAN system, this display employs alpha-numerics for maximum use of the 9 individual message units within each of the 8 message areas.* It was designed to facilitate rapid grammatical communication independently composed by the Speaker. It is the most creative, personal and truly expressive of the three techniques described.*

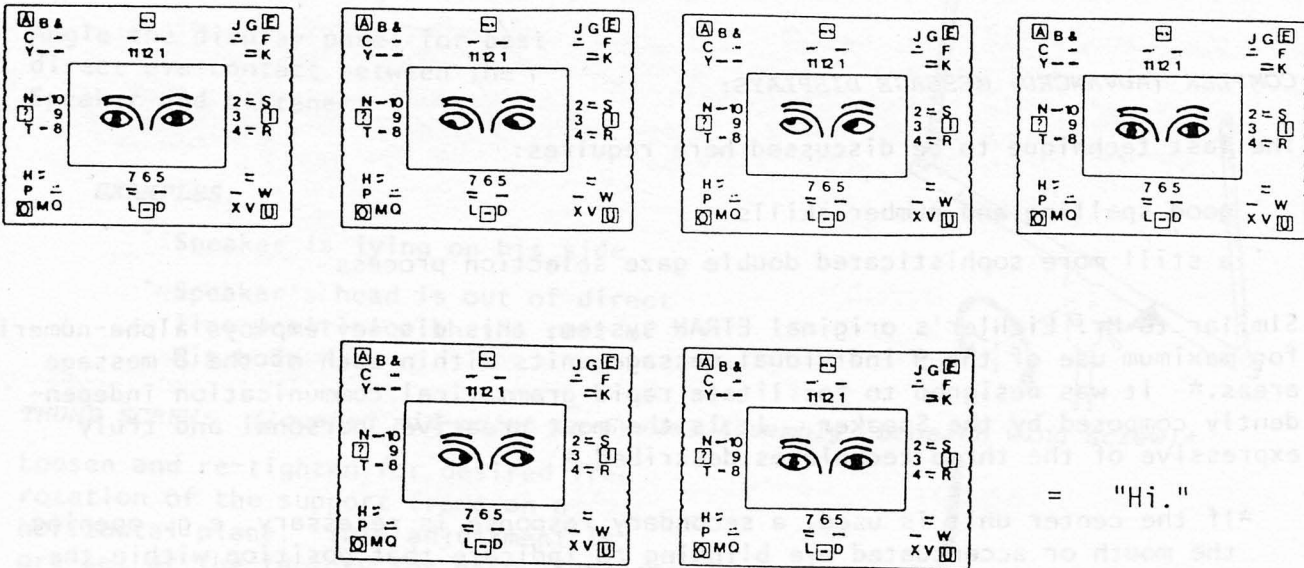
*If the center unit is used, a secondary response is necessary, e.g. opening the mouth or accentuated eye blinking to indicate that position within the 9 units.



The placement of letters and numbers is very deliberate -- the most frequently used being put in units of easiest selection. Boxed items are primary use letters and, because of the highlighting, require only a one-gaze selection with eye return to the cut-out for confirmation.

*REF: Rosen, M. and Durfee, W. - see BIBLIOGRAPHY #7

Other selections require that the Speaker learn to gaze according to the literal 8-area/9-unit configuration.



- a. the Speaker makes eye contact with the Listener through the panel cut-out.
- b. the Speaker looks at the area in which his selection is located.
- c. the Speaker then goes directly to the next message area that indicates the unit position of the desired selection within its own area.
- d. the Speaker returns his gaze to the Listener through the panel cut-out.
- e. as always, the Listener confirms the selection aloud. It is advisable to write down each selection as this techniques requires spelling everything out letter-by-letter.

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USE OF MESSAGE CONSTRUCTION MATERIALS

An adhesive-backed vinyl lettering/numbering sheet is included with your new ZYGO Eye Transfer Communication System to help you get your client's display panel started today. You don't even have to worry about proper placement and spacing. Just set the transparent message display panel on top of the message template which has been pre-printed on the shipping/storage carton and you're ready to begin! Self-adhesive vinyl letters are available from local art supply stores. Select materials in colors which contrast the environment.

CLEANING THE MESSAGE DISPLAY PANEL

Commercially available liquid window/mirror cleaners will remove finger smudges and smears. A dab of tooth paste, applied sparingly and with just a very light rubbing pressure, will remove superficial surface scratches that may build up with routine handling. If any clouding appears in the area of cleaning -- remove with the liquid window cleaner.

LIMITED 1-YEAR WARRANTY

ZYGO Eye Transfer Communication Systems are warranted for 1 full year from the DATE OF SALE only if their Warranty Registration Cards are filed with the factory immediately. Obvious abuse, negligence, excessive periods of storage, unauthorized service and accessories are excepted.

REPAIR SERVICE

These Eye Transfer Communication Systems should be handled and transported with care and given conscientious, routine maintenance.

Repair Service needs and inquiries for these products should be directed to either an Authorized ZYGO Dealer or the factory.

Prior to any potential return or other action, call or write:

CUSTOMER SERVICE DIVISION
ZYGO Industries, Inc.
P. O. Box 1008
Portland, Oregon 97207

Telephone: (503) 297-1724

Units under Warranty will be serviced at NO CHARGE for parts/labor.

Units out of Warranty will be charged the current published fees for parts/labor, plus shipping.

Product upgrading to latest specifications is performed, at NO CHARGE, regardless of Warranty status.

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