

The Tandberg IS-10: Is It the Lab that Meets Your Specs?

This is the second in a series of exclusive J.E.T.T. surveys showcasing state-of-the-art learning laboratory systems. It is not the intent or aim of J.E.T.T. to “sell” or endorse any of the systems we feature; we wish to present these systems in an informative and factual light.

In this issue, we feature the Tandberg IS-10 learning laboratory. Our nationwide poll of distributor, endusers, and dealers of this, the latest in the Tandberg laboratory systems, indicates this system, like the others in our survey, has benefited from the rekindled interest in foreign, second, and native language learning; numerous institutions are in the market for learning laboratories: they are replacing out-dated equipment; they are expanding existing systems, or they are installing learning laboratories for the first time.

The J.E.T.T. poll was designed to give our readers information about the IS-10 as a learning laboratory system in the United States; not included in this poll is information about the use of this system outside the U.S.

In preparation of our poll, we devolved three survey instruments—a distributor questionnaire, a dealer questionnaire and an enduser questionnaire—together with corresponding cover letters explaining the purpose of the survey, that is, to inform our readers about the IS-10.

All three questionnaires were intentionally descriptive and oriented toward the elicitation of factual data and not toward analyzation of causes and effects.

The IS-10 distributor questionnaire was sent to George Washington, Jr., who was in charge marketing at Tandberg Educational in Armonk,

New York. In our cover letter to him, we asked for the following: 1) a list of all U.S. installations where the IS-10 was operational; and 2) a list of authorized dealers who service and install the system.

When we received the lists, at an enduser installation close to us, we made arrangements for a “hands on” demonstration of the equipment by the endusers who use the equipment on a regular basis and have done so for more than four months.

Our information on the IS-10 is derived entirely from the questionnaires, our “hands on” experience with the system, and our background research.

The overriding objective of this information survey on the IS-10—as it is with all the laboratories we feature—is to provide useful information so that our readers have enough information to ask the right questions about how this particular learning laboratory meets their specific learning objectives.

We will look at the Tandberg IS-10 from two angles: from the angle of the people who sell it, namely the distributor and dealers, and from the perspective of the endusers who have made it the laboratory of their choice.

However, before we begin, the editors of J.E.T.T. gratefully acknowledge everyone who provided us with information, especially the many endusers who gave so generously of their time, telling us how they felt about the IS-10. Without the cooperation of the people at Tandberg Educational, the dealers, and you, the endusers, this survey would have been impossible to conduct. To all of you, we at J.E.T.T. owe a debt of gratitude.

The Tandberg IS-10 Language Laboratory System

Mention Tandberg to a dozen people at a national or international foreign or second language conference, and the majority could respond, "They make language labs, don't they?". The name Tandberg has been associated with language learning laboratories for over several decades both in the United States and abroad; in all of our surveys for the major systems, when prospective endusers looked at learning laboratories, Tandberg is always included as one of the systems under consideration.

Our IS-10 ("IS" stands for Instruction System) distributor questionnaire was sent to George Washington, Jr., Sales Manager, Tandberg Educational, Inc., P.O. Box 99, Armonk, NY 10504, (914) 273-6516 or 1-800-367-1137. Here is how Mr. Washington answered our questions about the IS-10 language laboratory.

Q.: *What generation of this laboratory system is currently available for purchase?*

A.: There is only one generation of the IS-10, but since its release in 1985, options for it have become available. For example, video switching and computer interactive student recorders.

Q.: *Is the laboratory produced domestically or imported from overseas?*

A.: The IS-10 is imported from Tandberg Educational A/S, PO Boks 164, N-2020 Skedsmokorset, Norway, Phone: 47 2 74 90 30.

Q.: *In order to purchase this lab, must a customer go through an authorized dealer or can the lab be ordered directly from the manufacturer?*

A.: Tandberg Educational, Inc. does a certain amount of direct marketing in the United States where a local area representative may not be close to a prospective customer. All inquiries for specific areas where we do have close representation are fed back to our local agents, who follow up on the inquiry. If, however, the customer does not want to deal with a particular local agent, they do have the ability to place an

order directly with Tandberg Educational, Inc. in New York.

Q.: *How many years has the manufacturer been manufacturing learning laboratory systems?*

A.: Tandberg has been making learning laboratory systems since the late 1950's. I believe the first Tandberg laboratory in the United States was delivered to Harvard University in 1958 or 1959, so we have been making laboratories approximately 28 years.

Q.: *In what part of the world can most learning laboratories of this current model be found?*

A.: U.S.A.

Q.: *In what part of the U.S. are the greatest number of IS-10's to be found?*

A.: Chicago and its surrounding districts.

Q.: *What one feature of this lab is its greatest selling point?*

A.: There are two that tie for first place here—quality of construction and simplicity of operation.

Q.: *In terms of number of student positions, what is the capacity of one IS-10 console?*

A.: The maximum capacity of the IS-10 as standard is 100 student positions with a capability of mirror imaging students in a matrix of 10x10 in any way. So, for instance, you could map out a 40 position laboratory in 5 rows across—8 in each row—with the center corridor of 2 blank.

Q.: *How many different program sources can be transmitted at once to students at normal speed?*

A.: Up to 4 cassette recorders can be connected to a single tutor IS-10. We have also the capability of switching video inputs from three separate sources.

Q.: *List (use one word or phrase) all the separate functions that can be performed by the teacher console.*

A.: On/Off; Monitor Student; Intercom Student; Remote Control Student; Grouping: A B C D F (or Library); Scan Monitor; Automatic Scan Monitor; All Call; Group Call; Manual Program

Transfer; Auto Normal Transfer; Auto Fast Transfer; Group Conference; Cassette Release; Pairing; Test; Test Prepare; Extra Tape; External; Mic; Student; Fast Erase; Internal Fast Copy; Sync On; Rec; Pulse; Dual Teacher (optional); Headset A Volume; Headset B Volume; Off; Internal; External; Internal & External.

Q.: *Into how many groups can the console divide the student positions at any one time?*

A.: Students can be divided into groups of A,B,C,D, and Free Group, so the answer is 5.

Q.: *Describe the nature of the automatic monitor of student positions.*

A.: The automatic monitor process works by designating groups which, of course, can be completely random. When the auto scanning button is depressed, the lowest numerical numbered student in the particular group that is being monitored will be monitored. After a period of 5 seconds, which is factory set (can be adjusted by user), the next numerically highest student will be monitored for yet another 5 seconds and so until the last student in the group is reached. The time can be set by the teacher to be between 1 and 25 seconds. It is possible to manually override the sequence of automatic monitoring by just depressing any of the student monitor buttons within the group. The process will then start from the selected student and then proceed from there.

Q.: *In what function(s) is complete remote control of student recorders possible?*

A.: The teacher can remote control student recorders individually and completely, including all functions of rewind, stop, fast forward, record, recap, play, set/clear bookmarks, counter reset, and both the individual master and student volume control.

Q.: *Can the control console be operated by two teachers simultaneously, permitting division of all the student positions into two separate units?*

A.: The Tandberg IS-10 can be installed in either single tutor or dual tutor formats. When a single tutor is purchased, it is possible to expand the IS-10 to full dual teacher capability by

purchasing a B matrix switching panel which is easily installed and will fit in the master console. If necessary, this B panel can also be placed in a room separate from the original console. In the case of the dual tutor laboratory, upon pressing the dual teacher button, the laboratory is electronically split this way: Teacher "A" can control Group A and Group B, and teacher "B" controls Groups C and D, free group is independent or controlled by either teacher. At this point in time, both teachers can operate their individual groups of students completely and independent of each other and yet have exactly the same control functions at their fingertips.

Q.: *Do the console source (master) cassette decks have "real" time counters?*

A.: Both student and master recorders have "real time" Liquid Crystal Display (LCD) counters graduated in minutes and seconds; from zero seconds to 59 minutes, 59 seconds (i.e., 00.00 to 59.59).

Q.: *Is it possible to copy audio between and among all program sources at normal and 4x speed?*

A.: Copying between master recorders is possible at either normal speed or high speed.

Q.: *Does the console permit "live" testing in which an instructor asks the questions and then sets the student machines into record, thereby recording only the student answers on the master track?*

A.: Yes, this can be accomplished by using a tape and the test and pretest button on the IS-10. In pretest mode, the existing tape with its significant pauses for answers is scanned and indexed. When the tape is subsequently played back under test conditions during transfer of the question, the student recorders are in stop mode. Just as the tutor stops speaking, the tape recorder goes into record automatically recording the student's answer. Thus, all the answers are recorded back to back without the tutor's questions being recorded.

Q.: Describe the console in terms of its electronics . . .

A.: Our engineers combined "state-of-the-art" electronics with the simplicity of operation that Tandberg is well known for. Instead of having to look for various patterns of information on screens or the information not being displayed at a given time, all relevant information is displayed constantly on the console for the benefit of the teacher.

Q.: Is your laboratory system designed specifically for classroom learning or independent learning?

A.: The IS-10 is designed for either type of usage.

Q.: What feature of your lab makes it unlike any other system on the market?

A.: In answer to this question, Mr. Washington used three, double-spaced pages to list not a feature but many features he felt were unlike those in other systems. Space does not permit us to list all features; we wanted a feature. At the end of his three pages, he said, "Our lab is quite simply the most technically advanced system in the world."

Q.: List and describe in detail all the optional and peripheral equipment available with your laboratory . . .

A.: A video switching panel for video distribution and switching between video sources including camera and single standard, or triple standard VCR and triple standard or single standard monitors, computer interface kits for student or master recorders so that either machine can be controlled from a standard computer. An open spool recorder TB5200 for playback of tapes at normal or full high speed transfer into the system, phonograph, external cassette recorders, external radio, external VCR, external video disk player, external microphone, external auto projectors, external color camera stand to give the teacher the ability to transmit video of written material, for example.

Q.: Describe every source jack on the IS-10 console . . .

A.: Microphone, projector, phono, tape (input and output), aux.

Q.: Describe in detail the microprocessor that runs the console . . .

A.: 8031 8 bit microprocessor.

Q.: List and describe all the functions of the student deck . . .

A.: Play, Stop, Record, Rewind (2 speeds), Wind (2 speeds), Recap, programmable for continuous or gap seeking/gap counting, Bookmark Set (4), Bookmark Clear, Counter Reset, Call Teacher, Student Volume (8 segment display/level on LCD), Group Indicator, Master Volume (8 segment), Bookmark (the display shows an open book which can accommodate four bookmark points on the tape each separated by at least 8 seconds), Teacher Control Symbol, Real Time Counter, Extra Nexus Socket (top mounted), and Electronic Locking (operational only in free group or cassette release).

Q.: What feature(s) does your student deck have that make it unlike any other on the market?

A.: A four-motor dual capstan drive system which is built to professional standards; two speed wind/rewind; electronic separate volume controls for both master and student volume levels; four position bookmark; programmable teacher call function; programmable counter reset, silhouette display of teacher control, access plate for easy cleaning of tape drive mechanism, hinge out circuit boards enable easy maintenance, each deck is computer indexed by means of a dip switch which identifies the unit as a master or student unit; and, total metal construction of top plate, chassis and a cast motor drive mechanism chassis.

Q.: Are your decks designed specifically to be rack-mounted for remote control or are they designed to be mounted in carrels only?

A.: Both. 5800 series in booth mount; and 5700 series in rack mount.

Q.: Do you manufacture a line of carrel furniture to house your laboratory—both console and student decks?

A.: Yes, two different types of student furniture for varying budgets plus two types of master furniture.

Q.: *Does console cut off power to any deck not in use?*

A.: No, the individual student decks do this automatically themselves after 5 minutes of non-use.

Q.: *If student decks are interfaceable, what kind of interface is required?*

A.: System IS-10 recorders are computer compatible and will interface with any computer with RS232 communication ports . . . an interface card to enable the computer to talk to the individual tape recorder is needed.

Q.: *Describe in detail the visual display capabilities of your lab system . . .*

A.: Visual display of group position on tape, bookmark, volume levels and status of recorder is standard. AVDU for other functions is optional.

Q.: *What is the signal-to-noise ratio of the student decks?*

A.: S/N 1-7/7 IPS. Unweighted 54dB. Weighted A Curve 58dB.

Q.: *What are the power requirements of the student decks?*

A.: 16 volts DC, 24 watts max.

Q.: *What is the recording bias of the student decks?*

A.: 94KHz.

Q.: *Describe the tape transport of the student decks . . .*

A.: Four motor dual capstan professional quality drive system constructed on a di-cast aluminum chassis. Direct drive wind and rewind motors each with sensors connected to micro-processor for complete control of tape drive functions. A single, longlife flat belt drive for the single capstan motor embraces both flywheels which in turn drive both independent capstans. Due to the physics of the dual capstan system, the tape is held between the dual pinch

rollers and capstans and is always tensioned correctly across the erase and record/playback heads.

Q.: *What type of connectors does the headset have?*

A.: A military grade Nexus connector manufactured in Connecticut.

Q.: *What are the headphone and microphone impedances of the headset?*

A.: 200 ohms each.

Q.: *What is the sound pressure level of the headset?*

A.: 94 dB 1 Pa at 1mw.

Q.: *What is the frequency range of the headset?*

A.: 20-18,000 HZ.

Q.: *Once the lab has been purchased who installs it?*

A.: Manufacturer trained personnel.

Q.: *The warranty period for all parts and labor is how long?*

A.: One year.

Q.: *The prospective buyer of the IS-10 deals primarily with an authorized dealer, the manufacturer, or the distributor?*

A.: Authorized dealer or national distributor.

Q.: *How many authorized language lab dealers are there for this lab system?*

A.: Tandberg Educational does not have a complete nationwide network of dealers, but we have everyone covered inasmuch as we can offer service contracts on any equipment we have ever sold in the country either by our dealer organization which generally covers the most populated areas throughout the U.S., our independent service agents who are located throughout the U.S., or Tandberg Educational direct in Armonk, New York.

Q.: *An engineer thoroughly familiar with the system is stationed where?*

A.: One Labriola Court, Armonk, NY.

Q.: *What is the name, address, phone number of the point person prospective buyers can contact about the IS-10?*

A.: Erik Moseby
1 Labriola Court
Armonk, NY 10504
1-800-367-1137

When we asked George Washington for a list of authorized Tandberg dealers, he did not provide us with a list of names. The contact persons at the enduser installations were delighted to share with us the names of the dealers who installed and/or service their IS-10's. We compiled our own list of Tandberg IS-10 dealers and sent our dealer questionnaire to the names/addresses we had been given.

The response rate of the Tandberg IS-10 dealers was 50%. We extend a special "thank you" to those dealers who took the time to answer our questionnaire. In a personal sense, each dealer is the critical part of any product (How does one relate to a corporate entity like Tandberg Educational, Inc.); we thought it would be helpful to our readers to understand more fully the view of the technical person who is the one endusers are most likely to call when the equipment fails to operate.

Here's how Tandberg IS-10 dealers perceive the IS-10 system they work with and/or service:

Q.: *Describe how you view the installation of the IS-10 system . . .*

A.: Very easy to install; clean and simple; very dependable.

Q.: *From a dealer's point of view, what do you like most about the IS-10?*

A.: Field serviceable. When I install it, it works. I especially like the system's functional capabilities.

Q.: *Describe your relationship with Tandberg Educational, Inc . . .*

A.: Just great. A real pleasure to work with this group; my relationship is a very good one.

Q.: *Describe how you go about selling the IS-10 . . .*

A.: I review customer requirements and identify/demonstrate how the IS-10 supports those requirements. If necessary, I take the prospective customer to an existing installation so that he or she can see the IS-10 in action.

Q.: *Describe your customers' reactions to the IS-10 . . .*

A.: They are usually impressed with the system's capabilities and the hardware integrity. Generally, after seeing the system, customers have a great deal of respect for it.

Q.: *Why do you think your customers buy the IS-10 instead of another system?*

A.: My customers buy the IS-10 solely on the basis of the system's capabilities and overall quality.

Endusers of the IS-10

Without the views of the endusers, the people at whose door the buck stops, the picture of the IS-10 is decidedly incomplete.

Nearly 75% of the IS-10 installations surveyed responded to the J.E.T.T. enduser questionnaire. What follows are the survey results of that poll:

IS-10 Dealer Support and Service

(Type)	(% of Endusers)	
Great; Outstanding	25%	Taken together, 50% of IS-10 endusers rated their local dealer's service and support as being somewhere between outstanding and very good.
None Because None Has Yet Been Needed	6%	
Outstanding	6%	
Very Good; Prompt	25%	
B+	6%	
Superlative; Fantastic	13%	
Poor Installation/Sporadic Service	6%	

Dealings with Tandberg Educational, Inc.

(Kind)	(% of Endusers)	
Attentive; Good	12%	The respondents in the J.E.T.T. IS-10 Enduser Poll described their business dealings with Tandberg Educational, Inc. in Armonk, New York, as "excellent" and "great" in the majority of cases.
No Comment	6%	
Great; Fine; Excellent	31%	
Courteous; Responsive; Cordial	19%	
Generally Favorable; No Problems; Helpful; Above-Average	19%	

Best Feature of Headset

(Feature)	(% of Endusers)	
Lightweight/Flexible	38%	Our IS-10 respondents valued the flexibility of the lightweight headset which most felt contributed greatly to its overall comfort.
Comfortable	31%	
Good Sound	19%	
Only One Jack	6%	
Durability	19%	

No. of IS-10 Consoles

(Console)	(% of Endusers)	
0	6%	IS-10 systems can be configured with dual teacher console. Of the installations surveyed, 13% had that option in place and operational.
1	81%	
2	6%	
unknown	6%	

No. of Persons Using IS-10 System on Daily Basis

(Persons)	(% of Endusers)	
25-99	38%	Almost 40% of IS-10 installations have up to 100 patrons who use the learning laboratory system on a daily basis.
100-110	13%	
111-130	19%	
201-200	13%	
251-300	6%	
unknown	13%	

IS-10 User Profile

(Type)	(% of Endusers)	
High School Students	6%	On the basis of our survey, IS-10 installations support foreign language learning at the college or university level. More and more, however, English as a Second Language (ESL) programs are using laboratories like the IS-10 to assist students in learning English.
Music Students	6%	
College Foreign Language Students	88%	
Faculty/Teaching Assistants	19%	
ESL Students	25%	
High School Teachers	6%	
Staff	6%	
Unknown	6%	

IS-10 Installation Date

(Year)	(% of Installed)	
1985	13%	All IS-10 installations are relatively new—most having been installed and put into operation in 1986.
1986	75%	
unknown	13%	

U.S. Locations of IS-10

(State)

Massachusetts
 Washington
 North Carolina
 Illinois
 Louisiana
 New York
 Kentucky
 California
 Connecticut

For an up-dated list (additional installations have become operational since this poll was taken) contact: Tandberg Educational, Inc., 1 Labriola Court, Armonk, NY 10504
 Telephone: 1-800-367-1137

Other Labs Considered

(Brand)

(% of Endusers)

Sony
 Telex
 ASC
 Revox
 Educational Media SStar

100%
 19%
 19%
 19%
 25%

While they were in the market for a learning laboratory, survey respondents considered other labs as well. The lab considered by all of them was the Sony LLC-5510.

Sources of Information

(Source)

(% of Endusers)

On-Site Visits to IS-10 Installations
 Vendor Demonstrations at Conferences
 Brochures/Literature
 Recommended by Contacts
 Advertisements/Journals
 Lab Dealer Visit

13%
 38%
 6%
 44%
 19%
 6%

Good choices are based on the best possible information. Survey respondents did not look to only one source of information about the IS-10. Most prospective IS-10 buyers became interested in the system after having talked with professional colleagues, acquaintances, and friends—"word of respected mouth" so to speak.

Number of Student Positions

(Positions)

(% of Endusers)

1-15
 25-30
 35-40
 unknown

6%
 69%
 19%
 6%

The minimum number of student positions in laboratories at surveyed institutions was 15. Based on the results of our poll, we can say, at this point, the most-often found IS-10 installation has 25-30 student carrel positions.

Options with IS-10

(Type)

(% Having It)

None
 Video
 Slide Projector
 Film Projector
 Reel-to-Reel Recorder
 Turntable
 16mm Projector
 Video/Computer Interactive
 Monitors
 Tandberg System Analyzer
 Unknown

38%
 19%
 13%
 13%
 6%
 19%
 13%
 19%
 6%
 6%
 6%

The majority of respondents to our IS-10 survey indicated that at the present time they were not using various options in conjunction with the IS-10 system. Of this majority, 15% indicated film and/or future video/computer options as possible purchases.

Future Expansions

(Type)	(% Who Are Planning)	
Computer/Interactive Decks	13%	Half of the respondents in our survey indicated that they planned to interface the IS-10 decks with computers; most indicated, however, that they would begin with "a deck or two" until better software became available.
Video	19%	
More Student Decks	13%	
Computer Interface	50%	
None	13%	

Which is more important to you, the IS-10's technical specs or its instructional functions?

(Type)	(% of Endusers)	
Instructional	69%	Instructional functions are decidedly more important to IS-10 buyers; nevertheless, most respondents to this question also indicated that the technical specs were also important.
Technical	13%	
Both	19%	

If you could send a "wish list" to Tandberg about the IS-10, what would you wish for?

(Wish)	(% of Endusers)	
No wish	38%	Almost 40% of current IS-10 owners have nothing more to wish for when it comes to the capabilities and functions of the IS-10. The remaining 60%, however, had wishes that ranged from two-way communication during Group Call to the wish for a more clearly written instruction manual.
Ability to set Bookmark on All Student Decks from Console	6%	
High Speed Duplication in Two Directions	6%	
Improved Instruction Manual	6%	
Conference Grouping for More Than 8 Students	6%	
Student Selection of Program Source	6%	
Pairing in Free Mode	6%	
Beep When Student Calls	6%	
Ability to Add Booth Once Auto Transfer Has Begun	6%	
Evaluation for Oral Work	6%	

Outstanding IS-10 Feature

(Feature)	(% of Endusers)	
Flexibility	13%	The overall simplicity of operation of the IS-10 had great appeal to IS-10 buyers.
Simplicity of Operation	31%	
Quality/Reliability	19%	
Service	6%	
Tandberg Reputation	19%	
Rack-Mountability	13%	
Testing Function—does not work the way I thought it would, however	6%	

Student Response to IS-10

(Type)	(% of Endusers)	
Positive	13%	User reaction at the installations surveyed is primarily that of students, since they are the ones who are enrolled in language courses. Overall, the IS-10 is liked by the student population who "love it" and are "enthusiastic about it."
Love It	13%	
Pleased/Well-Received	13%	
No Complaints So Far	6%	
Very Favorable	6%	
Good	19%	
Fairly Favorable	13%	
Enthusiastic	6%	

Most-Often Used IS-10 Functions

(Type)	(% of Endusers)	
Intercom	44%	At this point, the most-often used functions of the IS-10 at installations surveyed are Intercom, Library, Group Call, Program Transfer, and Monitor.
Monitor	38%	
Group Call	31%	
Program Transfer	31%	
Library	31%	
Grouping	6%	

Type of IS-10 Program Sources

(Type)	(% of Endusers)	
External Sources (video, slide projectors, film projectors, reel-to-reel recorders)	38%	Although we have heard a great deal about the demise of the "audio only" language learning laboratory, the majority of Tandberg IS-10 installations surveyed indicated that four cassette program sources were important and useful to them.
Record Player	19%	
4 Cassette Program Sources	63%	
2 Cassette Program Sources	13%	

Instructional Uses of the IS-10

(Type)	(% of Endusers)	
Independent, Free Listening	63%	Instructional uses of the IS-10 cluster around three activities in foreign and second language learning primarily: independent work in the lab, testing, and aural/oral exercises.
Testing	19%	
Oral/Aural Classroom Exercises	56%	

Why was the IS-10 selected at your institution?

(Reason)	(% of Endusers)	
Met Budgetary Limits	6%	Tandberg's reputation for quality and reliability were significant factors in selecting the system.
Tandberg's Reputation	38%	
Replacement of Out-Dated System	13%	
Need	25%	
Simplicity and Service	6%	

Who will service the IS-10 system?

(Person)	(% of Endusers)	
Dealer or Tandberg	69%	An issue of considerable importance when purchasing a learning laboratory system is the issue of service and maintenance. Most Tandberg IS-10 installations depend on dealers or Tandberg for service.
After Warranty, Our Technicians	19%	
Unknown	12%	

Problems with the IS-10

(Type)	(% of Endusers)	
Minor	12%	Clearly, most IS-10 installations responding to our survey have had neither major nor minor problems with their IS-10 systems.
Major	12%	
None, So Far	44%	
No Comment	6%	
Unknown	25%	

Problems with Headset

(Type)	(% of Endusers)	
Microphone Too Sensitive	13%	Apparently, endusers of any learning laboratory system are still waiting for the invention of the "student-proof" headset. A critical part of any learning lab system, the headsets used in the IS-10 system are, in the words of an enduser, "touchy and temperamental." It is worth noting, however, that over 60% of endusers surveyed had no problems with their headsets.
Occasional Loose Wires in Earpiece	13%	
Headset Is Difficult to Re-Shape to Fit Head	6%	
None	63%	
Plug Incompatible with Other Audio Equipment	6%	
Microphones Are Touchy and Temperamental	13%	

Once IS-10 was selected, did the proposal go up for bid?

(Response)	(% of Endusers)	
No	44%	Tandberg IS-10 endusers surveyed are about evenly divided between those who purchased the system via the bidding process and those who did not.
Yes	50%	
Unknown	6%	

We have come full circle. We end our feature with the question we posed in the title: The Tandberg IS-10: Is It the Lab That Meets Your Specs? Our aim has been to provide *you* with useful information to help *you* decide if this system can help *you* achieve your pedagogical goals and objectives. *You* must decide if the IS-10 can

help you and the learners who depend on you to aid them in their learning, that is, if this state-of-the-art system can make learning more efficient and effective. If it can do this better than any other system available, then the Tandberg IS-10 is the learning laboratory that meets your specifications.