



Avsoft, Inc.
LEARNING MANAGEMENT SYSTEM

ORGANIZATION MANAGER MANUAL

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SYSTEM REQUIREMENTS

Avsoft's web based training software (WBT) is built around Internet Explorer. All the coding has been optimized to work specifically with that brand of browser. There are many different browsers that are freely available from the internet. However, there are no defined set of capabilities that every manufacturer must abide to, and therefore, the various manufacturers of browsers have implemented slightly different capabilities and programming requirements for their browsers. Because of this, the deployment methodology would have to vary from browser to browser, thereby unnecessarily increasing programming time and costs. For that reason, and due to the free nature of Internet Explorer, Avsoft has opted to optimize the web based training software to work with that particular browser. The minimum recommended version of Internet Explorer is 6.0.

In order to maximize the learning experience, the software is designed to automatically detect the user's screen resolution and open up an additional browser to display the module. This additional window is called a pop-up.

As a security feature, most browsers have the capability to block these pop-ups. Therefore, it is important that the pop-up blocker for the browser be disabled. This feature needs to be disabled in two, or possibly three different locations.

1. From the Internet Explorer (IE) menu, select Tools->Pop-up blocker and select the turn off pop blocker menu.
2. From the IE menu, select Tools->Internet Options.... Select the Privacy tab and uncheck the block pop ups option if it has been selected.
3. Some users have downloaded and installed add-ons to IE. These additional tools may appear under the 'Web Assistant' icon (or something similar). The pop-up blocker may have to be deselected there as well.

Additional system requirements:

1. Windows media player to render sound (version 6.0 or higher)
2. Flash player to render animations (version 5.0 or higher)
3. An internet connection. Our software has been tested with a dial-up connection. Our WBT solution incorporates rich media which tends to require a lot of bandwidth, but assuming a normal study pace, the download time is acceptable. However, we do recommend an internet connection of 256KBPS or greater (low end DSL speed).

THE BASICS OF WEB DELIVERY

Web based training is the process of delivering information using a standard browser. The content of the web page can consist of a static html page (in other words, one that is built manually), a flash animation (that is manually built), or an html page that is dynamically generated from a database. Avsoft uses the latter method. The database contains all of the information required to build the various web pages that, in combination, represent a module. This method is the most efficient way (ie, cost effective) to both produce a WBT module as well as deliver one.

No matter how you go about delivering web based training, the assets of a particular page are downloaded to the end user's computer. This information is usually stored in what's called a cache. When you visit a media rich web page, depending on the speed of your internet connection, it may take a relatively long time for the page to 'paint'. However, when you revisit the page, the page is displayed almost instantly. The reason is that all of the media (audio, graphics, flash files, videos, etc...) are already in the cache.

The first time you access an Avsoft WBT module, the first page may take what appears to be an inordinate amount of time to paint. This is simply due to the fact that when you access the page, the graphic that goes with that first page has to be downloaded first. We have put in a lot of effort to minimize the size of the download time without sacrificing graphics quality. However, as you proceed through the module, the download time for the subsequent pages is reduced significantly. The reason for this is that our WBT software includes routines that pre-load the assets used for the next page into the cache. In other words, as you are learning on one page, the assets for the next screen are being downloaded in the background.

Our WBT interface provides the students with the ability to skip to various pages within a module. If they elect to jump to a page that is not the next one (or previous pages), the download time is once again reduced simply because there is no way for the software to know where the student will be going to, and is therefore unable to pre-load the assets for that page.

The bottom line is that the delivery speed increases if the user follows the course sequentially.

WEB BASED TRAINING INTERFACE

All the controls associated with WBT are located at the bottom of the screen. These controls are as follows:



- Home button. This button is used to close the module. When this button is clicked, all the information that has been supplied to the LMS and the data will be stored in the LMS database. The button will also issue an LMSFinish command to indicate to the LMS that the user is done and that the data should be written.

The close box (red X box, in the upper, right hand corner of the browser) can also be used. However, this will only issue an LMSFinish and data may not necessarily be stored in the LMS. The only reliable way to terminate a module and ensure that the data has been written is to use the home button.



- First page button – used to go to the first page (introductory screen) of the module.



- Previous section button. A WBT module is divided into sub-sections. These sub-sections are grouped by sub-topics. Each screen is associated with a sub-topic (which is displayed on the screen), and there may be several screens associated with a sub-topic. The previous section button enables you to navigate to the first page of the previous section.



- Previous page button- used to go to the previous page.



- Next page button – used to go to the next page.



- Next section button- used to go to the first page of the next section.



- Index page. Clicking on this button brings up a selection box that enables the user to jump to any page within the module.



- Glossary button. Clicking on this button shows an alphabetical index. Once in view, the user can click on any of the enabled letters to view a list of terms starting with that letter. Clicking on a particular term will also show the explanation associated with that term.



- System diagram button. Clicking on this button shows a list of all the available system diagrams. A particular system diagram can be displayed by selecting the desired system diagram.



- Interactive system diagrams button. If available, this button enables the user to select a window containing the available interactive panels and system

diagrams. Panels and systems are selected by clicking on the applicable check box and selecting load. The WBT will then display the selected panel/diagram combinations. These interactive systems enable the student to manipulate the selected systems.



- Audio level button. Used to hide or show the volume selection box. The audio volume can be changed by selecting the desired level.



- Replay button. Clicking on this button restarts the animation and replays the audio.



- Audio stop button- mutes the audio. The audio can be restarted by clicking on the replay button.



- Text narration control button- used to hide/show the narration in text format. Once in view, the narration box can be placed anywhere on the screen.



- (New version) Messaging control button. Used to display a window which provides a selection of messaging options.

ADDING USERS TO THE LMS

Your students are added to the LMS by means of a login key. A login key is simply a series of letters (upper case format only) and numbers. These login keys are generated within our online database, so even though the login keys are random in nature, they are valid only if they exist in our database. A login key consists of 26 characters. Only login keys issued by Avsoft are valid. All login keys start with LMSACT.

To add themselves to the roster, students should go to WWW.AVSOFT.COM/CORPORATE2/LMSSIGNUP.ASPX?CID=CRJ2-T000-P&ORG=T000&PER=J-16D&RID=S

Instructor sign up uses the same link, except that RID should be set to T (in other words, change RID=S to RID=T).

The information contained after the question mark in the url is called the query string. This is basically the information that is required by the software in order to properly add a student to the LMS roster.

CID – Course ID. The course ID consists of an aircraft ID code followed by a hyphen and your organization ID code.

ORG – Organization ID.

PER – Course period

RID – user id. A user is either ‘S’ for student, or T for ‘teacher’. NOTE: Please make sure that RID is set to ‘S’ for all of your students. Otherwise, a ‘student’ could end up as a teacher in the LMS, and that user would then have access to everyone else’s information.

It is extremely important that the url sent to the various users be correct. When you sign up to use Avsoft’s WBT solution, you will be issued a specific link to direct your end users to. We strongly suggest that you modify your web page to include a link containing the correct url to minimize confusion.

The url can also contain the Login key by appending &LK=[login key] at the end. This will pre-fill all the information on the web page.

When the page is accessed with that link, the software will perform a search of our database and display your organization’s logo, the name of your organization, and the name of the course. If this information does not appear correctly, it’s most likely due to an error in the url.

Incorrect information will result in alerts from the web page. These messages can be one of the following:

“Invalid organization ID!” – The organization could not be found in the database. Usually the result of an incorrect value after ‘ORG=’, or something has been misspelled/mistyped in ‘ORG=’.

"Invalid course ID!" – The course could not be found in the database. Usually the result of an incorrect value after ‘CID=’ or something has been misspelled/mistyped in ‘CID=’.

Assuming the software found all the correct information, the submit button will be enabled. The user is expected to type in (or paste – highly recommended) the assigned log in key. If the login key was appended at the end of the url, it will also be automatically be pre-filled on the web form.

Once the login key has been entered, clicking on the submit button will continue the process. One of 3 actions can occur:

1. You get a "Invalid Sign up key!" message – This means that either the login key was not entered, or it was mistyped when it was entered. With 26 characters, it’s easy to do. This message appears because the software could not locate this log in key in the database.
2. You get a "This Sign up key has already been used!" message – This means that the login key that was entered has been used by someone else. This will require you to issue your student/instructor a different login key.
3. You get redirected to a page where you can select your preferred user ID and password.

There is no predefined user ID format. You can use whatever combination you desire, including your email address. If your organization intends to use the LMS for a large number of students, we recommend that you direct your users to use your organization ID (an Avsoft ID number), followed by a hyphen, followed by your internal student/teacher ID number. For example, if your Avsoft organization ID is C123, and you have a student with an ID number of 12345, then we recommend that you direct your students to use C123-12345 as a user ID for the LMS. This will make it easier for everyone!

Once a user ID and password has been selected, the software will perform a search of the users database to make sure there is not a duplicate user ID. If yes, the user will be asked to select a different user ID.

Once a user ID has been stored in our database, the user will be redirected to the login page. Assuming the user followed all the required steps, the login screen should be the one branded for your organization. **We HIGHLY recommend that you instruct your students to bookmark the log in page.** This will ensure that they always see your branded log in screen.

OBTAINING ADDITIONAL LOGIN KEYS

When we set your organization up in our LMS, we give designated instructors access to a self-service login key manager web page. From this page, you have the ability to select the number of login keys you would like to obtain. You can also email the login keys to the email address we have on file for the designated instructor.

LMS Log In Key Self-Service

Organization:	Trans Global Airlines
Course:	CRJ200 Systems - Pilots
Number required:	<-- Number of keys --> <input type="button" value="v"/>
Email to:	jerry@transglobal.com
<input type="button" value="Submit"/>	

Use this page to obtain LMS Login keys for your organization. The keys will be emailed to the address on file. You can change the email address by changing the instructors profile in the LMS. There are 2013 keys(s) available in the database.

From this page, simply select the number of keys required. An email containing the login keys will be emailed to the address specified in 'Email to:'. Note: This email needs to be changed by the Avsoft LMS administrator.

Once these keys have been emailed, they will be marked as having been issued. Your organization is NOT billed on the number of login keys issued. However, the login keys that you have been emailed expire within 365 calendar days from the date and time of issue. Past that date, these login keys will no longer be valid.

The email address on file will receive an email containing a student log in link, one for instructors, and a list of login keys. The login keys can be used for students and instructors alike.

Please note: once a login key has been used, it cannot be reset.

LMS CAPABILITIES

Avsoft's LMS is extremely powerful and provides a plethora of capabilities such as:

- Bulletin boards/discussion groups
- News feed
- SCORM/AICC WBT delivery
- Blogs
- Wikis
- Room/Equipment scheduling capability
- Assignments
- Workshops
- Journals
- Calendar/Event reminders (user level and organization level)
- Conduct surveys

Contact Avsoft to set up your organization's course page with the desired features

TRACKING STUDENT ACTIVITIES

Designated instructors have the ability to track detailed information about the student activities assigned to their organization.

Instructors can access activity reports by logging into the LMS. After enter the course, look for the 'Activities' block and click on the SCORM/AICC link. This will bring up a page that lists all the courses for your organization. To the right of the grid, there will be a link: "view reports for xx attempts". By clicking on this link, you will be presented with a web page that lists all the students enrolled in the course. This list will detail the following information:

- Student name: If enrolment into the course is via a login key, you will not be able to see detailed student information by clicking on the name.
- The number of attempts: By clicking on this number, you will be able to see a complete list of all the activities for the associated student. This

includes the date/time the course was started, the status of all the modules, the last access to a particular module, and a grade. You can also click on the 'Tracking Details' link to get a complete footprint of activities, including the ID of the questions that were asked, the answer that was picked, whether the answer picked was correct or incorrect, the amount of time the student took to respond to a question.

- A course score. This score is different than the grade discussed in the section above. That grade is a quiz grade and is based on 100%. The course score is a grade assigned to the whole course. Please see the section entitled 'Grading Method' for more information.

Under the administration block, there is a link called 'Reports'. This link will take you to a page where you can view the same type of activity report. The main difference is that from this page, you can perform sorts on the type of information you wish to display.

In addition, in the administration block, there is a link called grades. This link will display a list of all the students enrolled in the course along with the course grade. This grade was referred to earlier as the course score, but is the same information, in compact format.

Under the 'People' block, you can view a list of all the people enrolled in the course.

GRADING METHOD

When the LMS administrator sets up your course, you have the option of specifying one of 4 different grading methods:

- Learning Objects: In effect, each module is assigned a point. For every module passed (eg, the test in a particular module), a point is assigned to the student. If a course contains 25 modules, then 25 points would indicate that all modules were completed and the test was passed.
- The highest grade – the grade displayed will indicate the highest test grade of all the modules viewed.
- The average grade – the LMS will calculate an average of all the test grades in the module.
- The sum grade – with this method, the LMS will display a grade that represents the sum of all tests. So, if a course consists of 25 modules, and each module was passed with a score of 100%, the LMS will display a score of 2500.

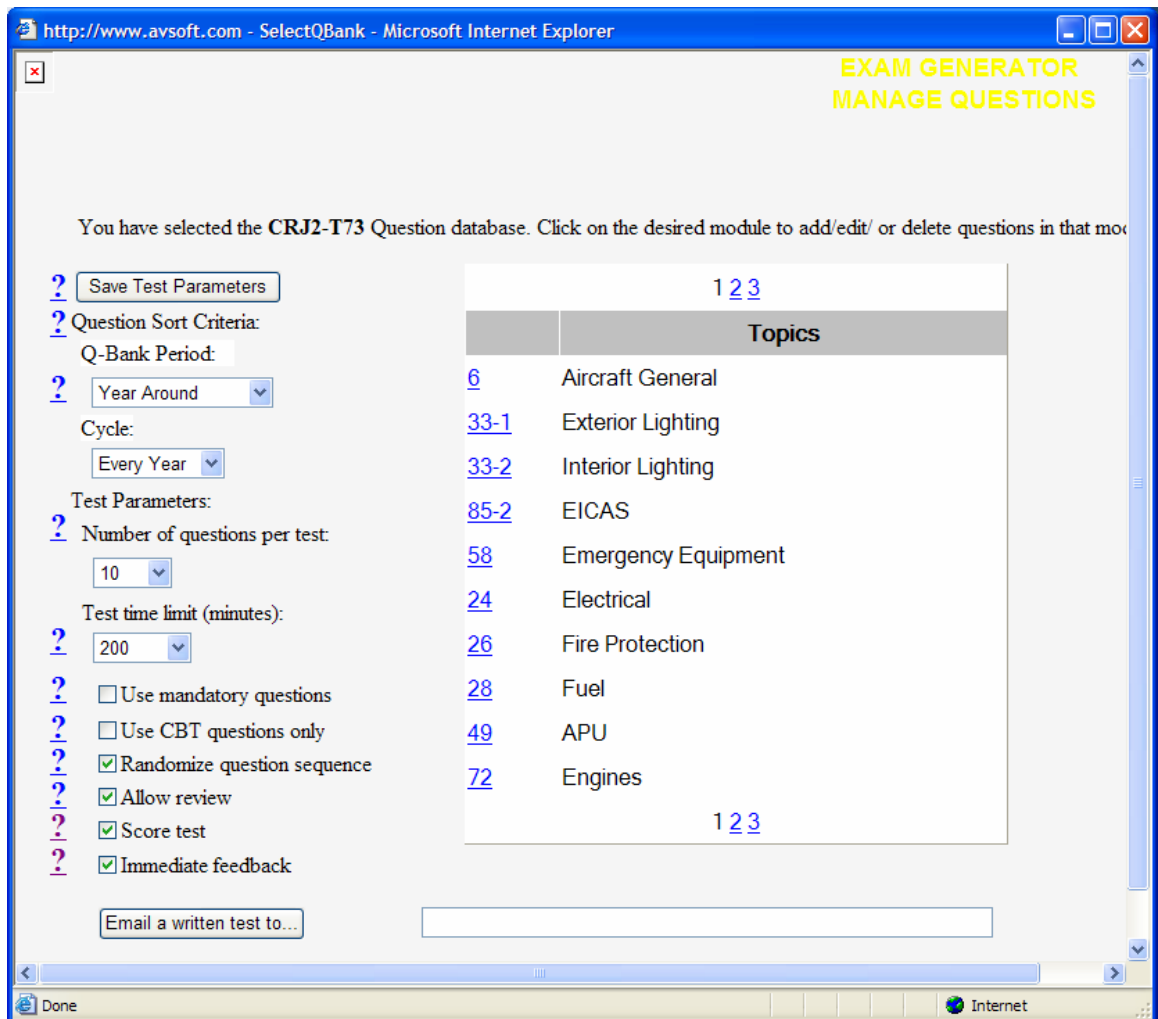
It should be noted that the LMS administrator can change the grading method at any time without affecting the information stored in the LMS database.

CBT QUESTIONS EDITOR

The CBT Questions Editor is a web based tool that enables you to manage the questions that are delivered at the end of the CBT module. Using this tool, you can:

- Add/Edit/Delete questions from the question database
- Manage the way questions are delivered at the end of each CBT module.

The CBT Questions Editor can be accessed via the instructor workstation.



The following functions are available:

Question Sort Criteria: Sorting means that you select questions from the database using certain criteria. The available choices are:

- **Question Bank Period:** Questions can be flagged as being part of a specific part of the year: either all year round, on a specific month; on a specific quarter, or a particular semester. For example, questions marked as First Quarter Year 1 means that these questions are only used during the first quarter of the first year cycle of your training program.
- **Cycle:** Indicates which question cycle to use. Questions can be set to be used on a yearly cycle (up to 5 yearly cycles), or every year.

Number of questions per test: This value indicates the desired number of questions to extract from the specified module. If the database contains a lesser number of questions, the software will return the number of questions contained within the database. If you request that the software produce a test containing questions from all modules, the software will return a number of questions from within each module up to the lesser of the number of questions within a module, or the number specified, whichever is less. For example, if the APU section has 100 questions, but electrical only has 24, and you request a test with all modules and 50 questions within each module, the software will produce 50 questions for APU, and 24 for electrical.

Test time limit: This value specifies, in minutes, the time limit for a test. When the time limit is exceeded, the student will no longer be able to answer questions. Note: This function is only used for stand alone final exams.

Use mandatory questions: Specifies if mandatory questions should be included in the question set. If checked, the software will return a set of questions containing all mandatory questions, up to the maximum number of questions. If you request more questions than there are mandatory ones, the software will select all mandatory questions first; the balance of the questions will consist of non-mandatory questions within a module.

Use CBT questions only: The questions database editor enables you to specify if a question is to be used in the CBT only. This means that only these questions will be produced at the end of a CBT module. Checking the box means that you want the test to only produce questions extracted from the CBT set only.

Randomize question sequence: Checked - The questions will be selected at random; unchecked - The software will extract questions in sequence.

Allow Review: Checked means that the student will have the option to review the section of the CBT that pertains to that particular question, if such reference is specified. If one is specified, the student would be able to click on a button and the section of the CBT discussing the associated question would be displayed. If immediate feedback is checked, the student would be able to review the CBT after answering the question; If immediate feedback is unchecked, the student would be able to review the CBT at the completion and scoring of the test (Standalone test only).

Score test: Checked scores the test; if launched from an LMS, the score would be stored in the LMS database; if launched from within the CBT, the test is scored as questions are answered if the test mode is set to immediate, or at the end of the test if test mode if immediate feedback mode is not selected (standalone test only).

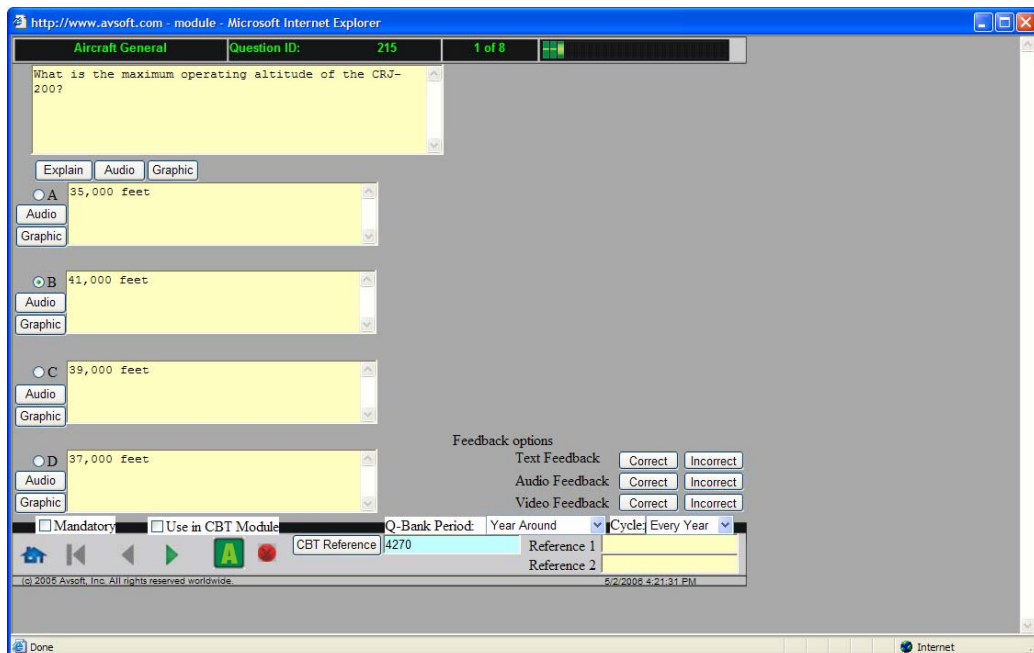
Immediate feedback: Checked means that the student will have the option to review the section of the CBT that pertains to that particular question, if such reference is specified. If one is specified, the student would be able to click on a button and the section of the CBT discussing the associated question would be displayed. If immediate feedback is checked, the student would be able to review the CBT after answering the question; If immediate feedback is unchecked, the student would be able to review the CBT at the completion and scoring of the test (standalone test only).

Once all changes have been made, you must click on the 'Save test parameters' button at the top of the page. This will store your selection in the database.

Based on the criteria you have selected, you can create tests and email them to a specified email address. The test that is produced is a multiple choice test, and an answer key is appended at the end of the test.

Questions can be managed by clicking on the desired module. You will then be presented with the questions available for that particular module.

In the questions editing screen, you can add, edit, and delete questions. You can specify any one of the following parameters for each question:



Question section:

Explain: Click on this button to store a quick explanation of the correct answer.

Audio: You can specify that the software should play an audio clip when the question is displayed.

Graphic: You can specify that the software should display a graphic when this question is delivered.

Answers:

The radio buttons are used to specify which of the 4 possible answers is the correct one.

Audio: This button is used to specify that a particular sound click should be played when this answer is picked.

Graphic: This button is used to specify that a particular graphic (thumbnail) should be displayed next to the associated answer.

Question categorization options:

Mandatory: Check to indicate that this question should be delivered to everyone taking the test.

Use in CBT module: Check to indicate that this particular question should be used as part of the question set for a particular module.

This mode is mainly used when creating standalone final exams.

For example, you may want to deliver some questions at the end of the CBT module, but not in the final exam.

Q-Bank Period and Cycle: used to categorize the associated question with a particular yearly cycle (year 1, 2, 3, 4, or 5, or every year) and the period of the year during which the question should be delivered.

Additional options:

CBT Reference: used to specify the section of the CBT that discusses the answer to the associated question. Clicking on this button will display the CBT narration. To specify a section, locate the CBT section that discusses the topic addressed by the question. Once specified, the student would have the ability to pop up to that particular CBT section for a quick review.

Reference 1 & 2: Enables you to specify a document reference (Ex: COM 6-32)

Feedback options:

Text Feedback: Specify a text feedback in the event the student selects a correct answer. You can also specify one in the event the student selects an incorrect answer.

Audio Feedback: Similar to the text feedback, except that the software will play the sound associated with a correct or incorrect answer.

Video Feedback: Similar to the text feedback, except that the software will play the video or flash file associated with a correct or incorrect answer.

TECHNICAL SUPPORT ISSUES

The Web Based Training Solution is extremely reliable. The vast majority of the issues with the WBT solution are operator problems. These common problems are detailed below:

1. Problems with the Login key – The login key consists of 26 characters. There is not much we can do on our end to fix the issue of typing in the wrong character. However, we can usually solve the problem by doing the initial sign up for the customer. You have the ability to do so as well.
2. Invalid organization ID during the LMS Login key activation process: In the URL, the ORG code must be the one that has been assigned to your organization.
3. Invalid course ID during the LMS login key activation process: In the URL, the CID code must be the one that has been assigned to your organization.
4. Invalid login key: have the student make sure they type in the login key correctly.
5. Clicking on a module does not result in anything: This is a pop-up blocker issue. Once again, we have no control over the end user's web browser settings, and the steps to disable the pop-up blocker are clearly detailed in the LMS-Student manual.

If a student has a problem that cannot be resolved by the manual or online technical support, they can do the following in order of preference:

1. Email us at tech_support@avsoft.net – we usually answer within the hour.
2. Contact us at 303-750-5084, ext. 100 during normal business hours: 9am to 4:30 PM MST, Monday through Friday, excluding holidays.
3. Contact us at 303-750-5084, ext. 101 outside of normal business hours.