Debitek Vending Interface System

INSTALLATION MANUAL

Table of Contents

General Description

The Debitek Vending Interface System (VIS) is a debit card access vend controller for the majority of vending machines on the market today. Depending on the type of card reader, the VIS can accept either magnetic stripe or chip ("smart") cards as a payment method for the vend.

When a user inserts or swipes a valid card, the available balance is displayed, the vending machine is enabled and normal operation is allowed. After the vend is made, the cost is deducted from the user's card or account.

In addition to the convenience of card access, the system provides accurate sales audit trail information, security, and low maintenance.

Mounting the Card Transport

The first step in setting up your Debitek Vending Interface System is mounting the card transport in the desired vending machine. If you are installing a VIS other than a multi-drop bus (MDB) interface, you must also connect the card reader to the Power Supply Interface Module (PSIM). This document will explain the procedures for installation and connection of the required cables.

Determine where on the vending machine the Card Transport will be mounted. You must make sure to allow for clearances around doorjambs and other possible interference points. The Card Transport requires clearance space that measures 3-3/8" in width, 4-1/8" in height, and 4-1/2" in depth.

If the vending machine does not have enough interior space to allow for the necessary depth clearance, Debitek can provide a Front Extension Kit that will move the Card Transport forward, allowing an additional 1-3/4" in depth.

If the vending machine already has a suitable opening (such as an opening for a bill acceptor), you will not need to cut a hole for the Cad Transport. Simply follow the instructions below, omitting Steps 1 and 2. If the machine does not already have an opening, you will need to use the cutout template and trim ring provided with your VIS.

When the desired location of the Card Transport is determined, adhere the template provided by Debitek over the desired location on the front of the vending machine.

1. Using a drill with a 7/32" bit, drill the eight holes marked on the template. Using a 3/8" bit, drill the four inner holes marked on the template.

2. Using a metal cutting saw or nibbler, cut the hole for the VIS using the four inner holes as starting and ending points. Use the template to determine the

size of the hole. **CAUTION: Make sure that you do not let any metal shavings get into any of the electronics inside the vending machine!**

3. From the front of the vending machine door, insert the trim ring studs into the four outer holes. Then, from the inside of the door, insert the Card Transport and match up the studs in the trim ring with the holes in the unit (see *Figure 1*).

4. Install the four nuts provided by Debitek on the trim ring studs.
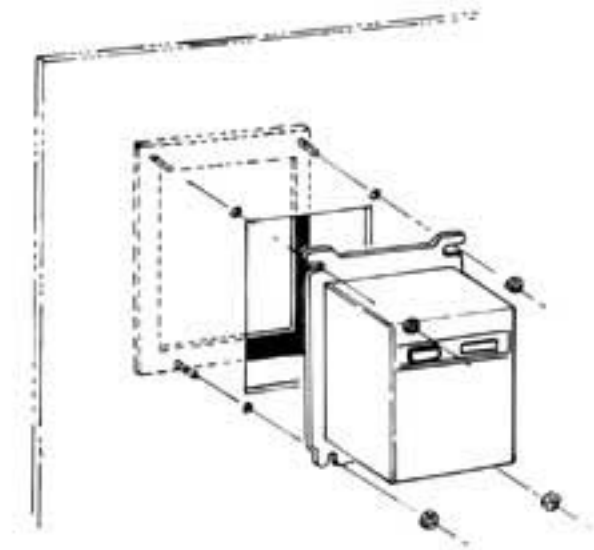
Figure 1 - Trim Ring and Card Transport

The Remaining Steps apply to Non-MDB VIS only

5. Mount the Power Supply Interface Module (PSIM) at any convenient place inside the machine, using the sheet metal screws provided (see *Figures 3* and *4*). Make sure the PSIM is mounted close enough to the Card Transport for all cables to reach. **CAUTION: Avoid mounting the PSIM where damage could occur from liquid spills!**

6. Connect the Card Transport cable by plugging one end into the mating connector on the rear of the Card Transport (see *Figures 3* and *4*). The cable has a 26-pin connector on each end; the connectors fit only one way, so they cannot be connected incorrectly. Make sure the connection is tight, but do not force it. If the connector does not snap into place easily, it is not turned correctly.

7. Plug the other end of the Card Transport cable into the mating socket on the PSIM.

CAUTION: The Card Transport must have a good contact with "green wire ground." If it does not, you must provide a separate #12 AWG wire connection between one of the upper studs on the Card Transport and a known good ground point in the vending machine.

Cable Connection for MDB VIS

The MDB Card Transport comes with the correct cable already attached. This cable must be connected to the MDB bus. How this is accomplished depends on the configuration of the machine.
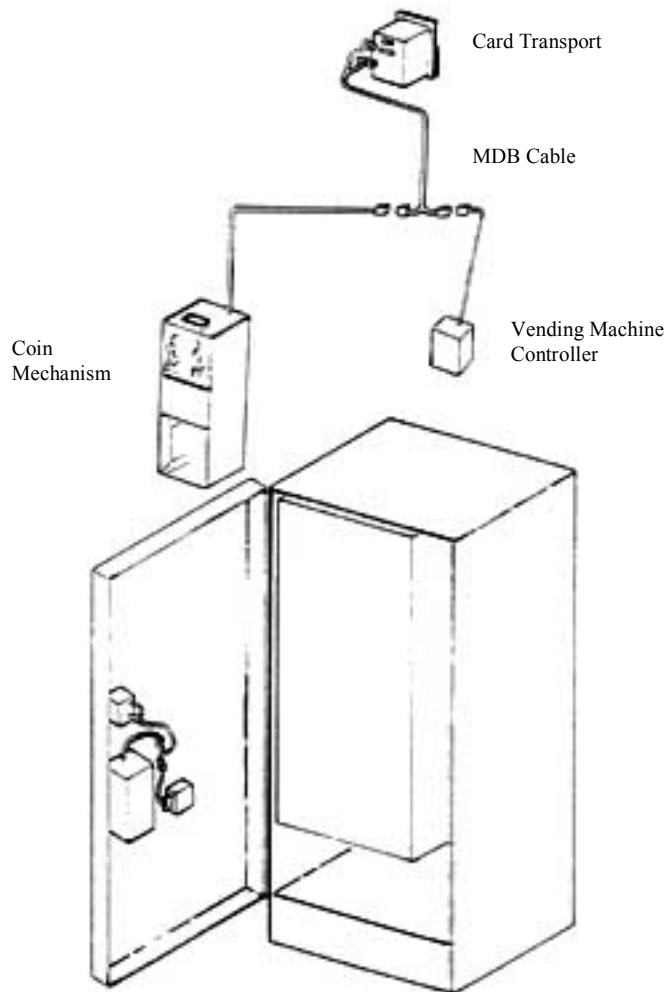
Figure 2 - MDB Cable Connections

Card Only Operation

To operate the vending machine in Card Only mode, simply attach the MDB cable from the vending machine controller to the machine end of the cable from the Card Transport. The other connector on the Card Transport is not used.

Cash and Card Operation

The Debitek Card Transport may be used in conjunction with a coin mechanism and/or bill acceptor. To attach the Card Transport to the MDB bus, find the nearest connection in the bus to the location of the Card Transport. Disconnect the connection, and attach each end to the appropriate connector from the Card Transport. NOTE: If the nearest connection is at the end of the MDB bus, simply attach the cable from the Card Transport using the appropriate connect; the other connector is unused.
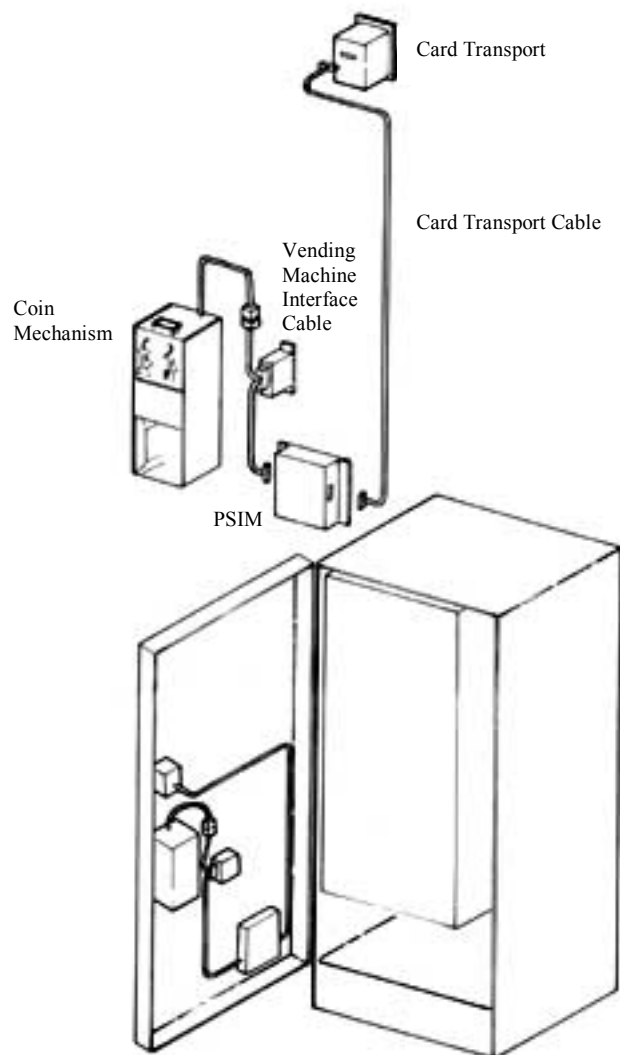
Cable Connection for Single Price VIS

Connecting the Power Supply Interface Module (PSIM) to a Single Price vending machine requires only one cable. The Single Price cable has both male and female Jones 8-pin connectors on one end. This end of the cable connects to the vending machine and to the optional coin mechanism. The other end of the cable has a single 1-1/2" plastic connector which connects to the PSIM.

Card Only Operation

If you are setting up the machine for card only operation, take the coin mechanism out. Connect the terminating plug provided by Debitek into the female connector of the vending machine interface cable.

Card and Coin Operation

To connect the vending machine interface cable, you must first unplug the coin mechanism from the receptacle in the vending machine. If you are setting up the machine for both coin and card operation, install the cable by plugging the male 8-pin connector of the vending machine interface cable into the coin changer receptacle. Next, plug the 1-1/2" connector into the mating connector on the PSIM. Finally, plug the male 8-pin connector of the coin mechanism into the 8-pin female connector of the vending machine cable.

Figure 3 - Single Price Cable Connections

Cable Connection for All Other VIS

The PSIM connections for MicroMech, Ten Price, Four Price and Multi-Price machines require a vending machine interface cable and a coin mechanism interface cable. One of the cables has a male Jones connector on one end and a plastic connector with a red marker on the other end. The other cable has a female Jones connector on one end and a plastic connector with a blue marker on the other end. Make sure you have the proper cables for your type of machine. The Jones connectors should match the connectors on the vending machine and the coin mechanism.

To install the cables, unplug the coin mechanism inside the machine. Insert the male Jones plug of the vending machine interface cable into the coin changer receptacle, and insert the other end (with the red marker) into the mating red connector on the PSIM. Next, plug the coin mechanism into the female connector of the coin mechanism interface cable. Plug the other end of the cable with the blue marker into the mating blue connector on the PSIM.
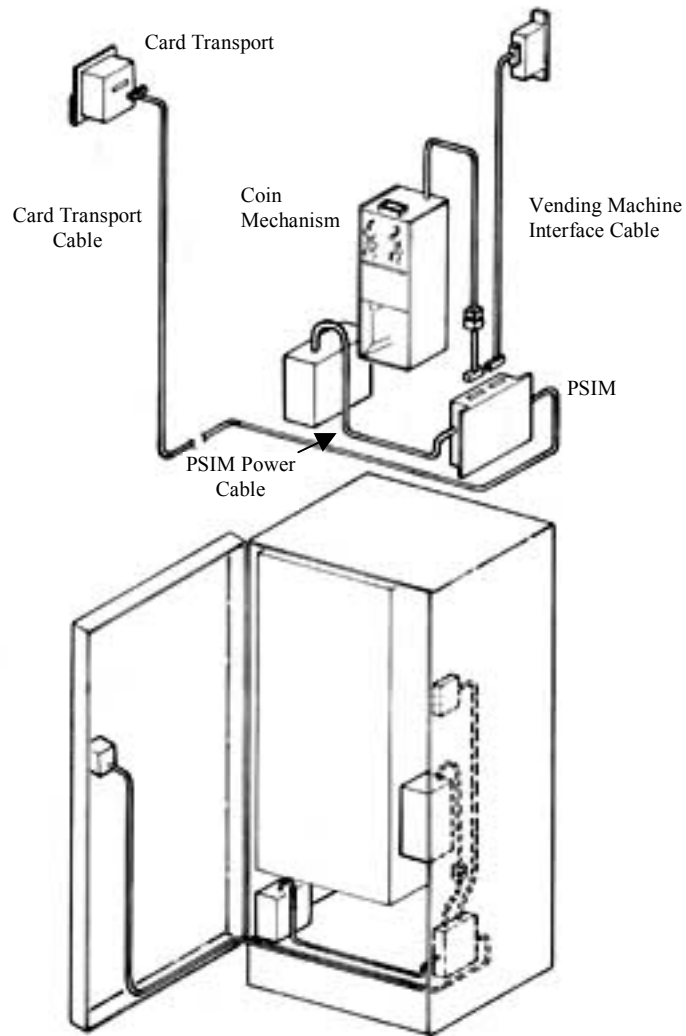
Figure 4 - Multi-Price Cable Connections

If you have a MicroMech machine and you wish to set it up for card only operations, you must configure it for operation without the coin mechanism. For detailed information on configuration of the MicroMech, refer to the Configuration and Programming sections of the Debitek User's Manual.

If you have a machine other than MicroMech, single price, or MDB, you can set it up for card only operation simply by taking out the coin mechanism. If you wish to set it up for card only operation, do not install the cable that connects the coin mechanism to the PSIM. Instead, leave the factory-installed connector in place. **Do not remove the factory installed connector unless you with to set up the machine for both coin and card operation.**

PSIM Power Cable

MicroMech and Multi-Price machines also require 115 VAC power for the PSIM. To install the PSIM power cable, connect the free ends to 115 VAC power source inside the vending machine. Make the connection point so that when you turn on the vending machine, these wires will also have power. Plug the plastic connector on the end of the power cable to the mating connector on the PSIM.

NOTE: MicroMech, MC5000, TRC6000 and DumbMech are equivalent units; however, these are not to be confused with Multi-Price. A Multi-Price coin mechanism refers to a Mars MC5960, Coinco M300-9402, or equivalent. MicroMech is a registered trademark of Mars Electronics.

Some Single Price, Four Price, and Ten Price coin mechanisms may operate with 24 volts instead of 115 volts. These units are clearly marked, but the connections are designed in such a way that it is possible to plug a 24 volt mechanism into a vending machine which operates on 115 volts. If you do this, catastrophic failure will occur. If you are installing a debit card system on a vending machine with a 24-volt changer of the type mentioned above, be sure that the power supply is clearly marked for 24-volt operation. **Note: The Debitek system can be used with either a 24 volt or 115 volt MicroMech coin changer interchangeably; however, the MicroMech coin changer itself must be of the proper voltage for the vending machine.**

Configuration of the VIS

After you complete the installation of your Debitek Vending Interface System, you must configure and program it before it will operate properly. Configuration involves entering the asset number, location description, site codes and unit type. The asset number and location description are optional; however, entering the site codes and unit type are mandatory. The final step in preparing the VIS for use is programming the prices, idle message, discounts and specials into the Card Transport.

Configuration and programming are accomplished with the use of the Debitek Data Collector. Refer to the Debitek User's Manual for complete instructions for configuring and programming.

Cleaning Schedule

The heads of the Card Reader should be cleaned periodically as a preventive measure. The frequency of the cleaning depends on the cleanliness of the environment in which the Card Reader operates. The Card Reader should be cleaned approximately every 2 weeks depending on the amount of use. It may be necessary to clean more frequently under extremely dirty conditions and heavy use.

Cleaning Cards

Use cleaning cards on a regular basis to insure that the Card Reader head, roller, and reader bed are free of foreign material. Cleaning cards can be ordered from Debitek. (Part No. KCRD-PCC-CT.) When using cleaning cards, it is important that you hold onto the card as you insert the card into the Card Reader so that the Card Reader makes several attempts to pull in the card. The Card Reader display should show the message ERROR 16 when it is being cleaned.

Lubrication Schedule

Before performing any of the following lubrication procedures, make sure that the Card Reader is (1) removed from the enclosure housing, and (2) disconnected from all power sources. Do not disconnect the cable to the Card Reader before removing power.

Approximately every six months, lubricate the main shaft, both guide shafts and both gears. Use Moly EP grease (Valvoline, Part No. 632, from your local auto parts store). These parts can be accessed by removing the Card Reader from your device, and then, removing the two phillips screws on the reader cover. After the cover has been removed, refer to *Figures 5, 6,* and *7*.

The parts in these figures will need to be lubricated when you notice either the Card Reader taking in or ejecting cards slowly. You should also use compressed air to blow out any dust that might have collected inside the Card Reader and cover. (Ultrajet; Non-Residue Dust Remover ES 1270.)

A Debitek Customer Service Representative will be glad to assist you with any questions you might have on maintenance procedures. If you need any assistance, please call (423) 894-6177 and ask for a customer service representative.

Tool Requirements:
      1 - 11/32" Nut Driver (long barrel)
      1 - Small Phillips Screwdriver
      1 - TORX Driver (T-15)
Lubricating The Gear Cluster
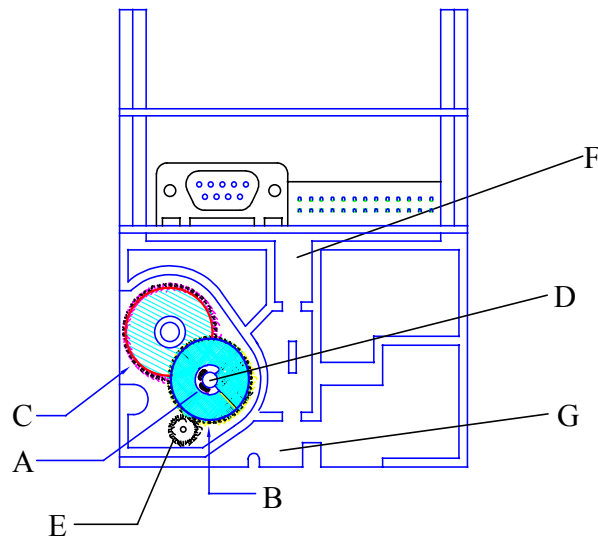
Figure 5 - Rear View

1. Remove the cover of the Card Reader. You should see the parts labeled in *Figure 5*.

2. Remove the Retaining Ring (A).

3. Gently pull Outer Gear (B) off Idler Post (D).

4. Apply a moderate amount of lubricant to the Idler Post (D), to the teeth of the Brass Gear (C), and to the Motor Drive Gear (E).

5. Replace the Outer Gear. Make sure all three gears (B, C, and E) are properly meshed.

Re-attach Retaining Ring (A) to Idler Post (D).

7. Make sure phillips head screws (F & G) are tight; if not, tighten.

Lubricating The Main Shaft

1. Turn the Card Reader so that the Brass Gear (C) and the Head Assembly (B) look like *Figure 6*.

2. Apply a small amount of lubricant along the full length of the Main Shaft (A).

3. Rotate the main shaft to spread the lubricant across the surface evenly. You can move the Main Shaft (A) and the Head Assembly (B) by rotating the Brass Gear (C) with your finger.
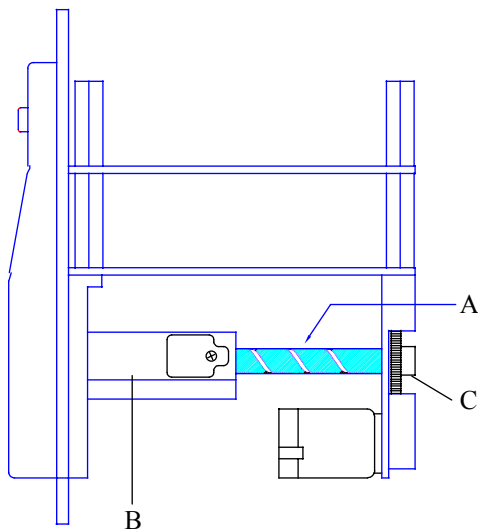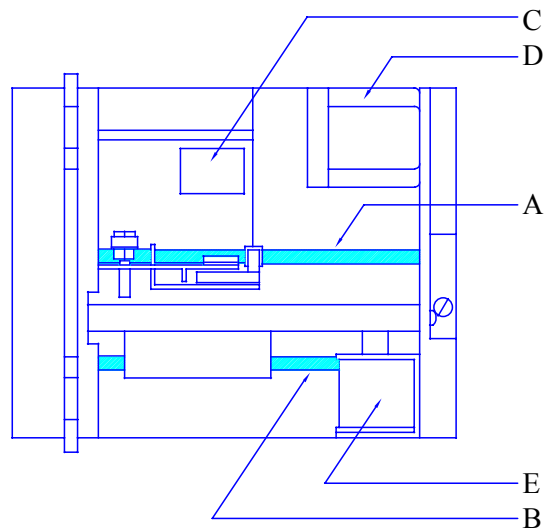
Figure 6 - Right Side View

Lubricating The Guide Shafts

Be sure not to inadvertently get any lubricant on the brown plastic bed of the card reader.

1. Turn the Card Reader over so that the bottom of the Card Reader is facing up as shown in *Figure 7*.

2. Apply a small amount of lubricant along both Guide Shafts (A and B).

Figure 7 - Bottom View

NOTE: C, D, and E are included in this diagram for reference purposes ONLY!

Limited Warranty

Debitek's standard warranty period is 12 months from the date of shipment. Debitek warrants that during the warranty period equipment shall be free from defects in materials, workmanship, and fabrication, and shall conform to applicable specifications, drawings, samples, and/or description. Debitek hardware products are warranted against defects in materials and workmanship when purchased from Debitek or an authorized Debitek distributor and subject to normal use and service during the warranty period. If Debitek receives notice of such defects during the warranty period, Debitek will, at its option, either repair or replace without charge, hardware products which prove to be defective, except as set forth below. All replaced parts become the property of Debitek.

This limited warranty shall not apply to equipment failure resulting from:

1. Improper or inadequate maintenance by purchaser, including failure to follow published lubrication and cleaning schedules. Debitek recommends that the card transport unit and bill acceptor be cleaned every two weeks (minimum). Due to environmental conditions, the cleaning procedure may be required more frequently.

2. Purchaser supplied software, hardware or interfacing, including reprogramming, which may cause excessive repetition of electro-mechanical or electronic drive components.

3. Unauthorized or non-Debitek modifications to the product or misuse of the product.

4. Operation outside the following environmental or electrical specifications for the product:

> 32 - 110°F
> 0 - 90% relative humidity, non-condensing
> 90 - 125 Volts AC, 50/60 Hz

5. Improper site preparation and maintenance.

6. Accident, disaster or vandalism.

The foregoing warranties shall be subject to purchaser's installing and maintaining the equipment in accordance with the specifications and directions supplied by Debitek, and the customer shall be responsible for all transportation charges on warranty replacement or repair items returned to Debitek.

Debitek makes no representations or warranties other than those set forth. The warranty stated herein is expressly in lieu of all other warranties, express or implied, including, but not limited to, any express or implied warranty of merchantability or fitness for a particular purpose, or against infringement, and such warranty constitutes the only warranty made by Debitek with respect to this agreement to the Debitek products listed, articles, materials, replacement parts, or services to be supplied hereby. Debitek shall not be liable for any incidental or consequential damages of any kind.

Repair Policy

Debitek will repair or replace returned equipment[1], regardless of its warranty status, in accordance with this Repair Policy. To return equipment, whether in or out of warranty, the following procedure must be followed:

1. Call a Debitek Customer Service Representative at (423) 894-6177 and explain the problem.

2. Obtain a Return Material Authorization (RMA) number from the Debitek representative. **NOTE: Do not return any part or product to Debitek without first obtaining an RMA number. Failure to follow RMA procedures will result in repair processing delays.**

3. All returns will be considered out-of-warranty returns until warranty status is determined by the Debitek Repair Department at the time of inspection and diagnosis. Repair charges for out-of warranty repairs are determined by a Flat Rate Repair Schedule, and vary according to the equipment. Repair charges for vandalized equipment are determined on a case by case basis according to the degree of damage and cost of parts and labor required to restore the equipment. The Debitek representative will advise you of any possible charges at the time the RMA number is issued, or, in the case of vandalism, prior to performing the repair.

4. The returned equipment is to be preceded by a purchase order or signed request on company letterhead. The request must include a return shipping address, the "Bill To" address, a description of the equipment being returned, a dollar value of the possible repair charges as given you by the Debitek representative, how you wish it returned, the nature of the problem, and the RMA number. The request is to be transmitted via facsimile to Debitek Customer Service at (423) 855-7554. If it is not possible to transmit the required information via facsimile, it may be included in the box with the returned equipment; however, failure to provide the information in advance may result in repair processing delays.

5. Pack the equipment to be returned in the original or similar packaging with sufficient protective inner wrappings to avoid damage in transit. Write the RMA number in large, clear writing on the outside of the box. Determination of return shipping method and freight charges to Debitek are the responsibility of the customer.

   [1]Cables and wiring harnesses are not considered equipment for out-of-warranty repair. Should your cabling fail after the warranty period, new cabling must be purchased.

Under normal circumstances, repairs or replacements are shipped back to the customer within five working days after receipt. Ground freight charges from Debitek to the customer for in-warranty repairs or replacements will be borne by Debitek. If the customer requests rush return shipment, the difference in ground freight charges and rush shipment charges for in-warranty repairs or replacements will be invoiced to the customer. All freight charges from Debitek to the customer for out-of-warranty repairs will be borne by the customer.

Return Policy

Debitek allows a 90-day period from date of shipment from Debitek to the customer for return of unused equipment. All returned equipment is subject to a 15% restocking fee. Return of used equipment and return of equipment after the 90-day allowance period is not allowed. To return equipment within the allowance period for partial credit, the following procedure must be followed:

1. Call a Debitek Customer Service Representative at (423) 894-6177 and provide information on the equipment to be returned for credit.

2. Obtain a Return Material Authorization (RMA) number from the Debitek representative. **NOTE: Do not return any part or product to Debitek without first obtaining an RMA number.**

3. Pack the equipment to be returned in the original or similar packaging with sufficient protective inner wrappings to avoid damage in transit. Write the RMA number in large, clear writing on the outside of the box. Determination of return shipping method and freight charges to Debitek are the responsibility of the customer.

Upon receipt of the return, Debitek will inspect the equipment to determine that it has been unused. After determination, your account will be credited for the full purchase price *less* a 15% restocking fee and the initial outbound freight.