

**HANDHELD CE TERMINAL SYSTEM
SELF-PACED LEARNING GUIDE**

JUNE 1985



**FIELD
RESOURCE
MANAGEMENT
SYSTEM**

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INTRODUCTION

Before You Begin This Course

This Self-Paced Learning Guide has been designed to optimize the learning experience for the student with a minimum of equipment requirements for successful understanding of the product.

To successfully complete this program you should have:

- A good understanding of the repair details that are required from the Customer Engineers for Customer Support Orders.
- A working HP75C terminal available for the entire program.
- A set of pre-programmed magnetic cards from the training supervisor.

Materials Needed to Take this Course

- This HCETS Self-Paced Learning Guide
- The HCETS Reference Manual (HP Part No. 5957-7016)
- The FIREMAN/HCETS CE Pocket Guide (HP Part No. 5957-7017)

Equipment: HP75C

HP75C FIREMAN template
additional 8K RAM
15 magnetic cards (pre-loaded with HCETS software)
acoustic coupler modem (HP82168A) - *optional*

INTRODUCTION

Product Covered

The software for the Handheld CE Terminal System, to be used with the 75C, will be covered in this manual.

How to Take This Course

Read each lesson. Follow the instructions given before or after each lesson; i.e. Do Quiz 1 Now, Start Lab Project 2 Now, etc. If you correctly answer 8 out of 10 quiz questions, continue with the course. If you miss 3 or more of the ten questions, go back and review the lesson and retake the quiz.

All of the lessons will require the use of the 75C terminal. Only lessons one and nine will require the use of the magnetic cards.

Course Objectives

- To become acquainted with the features and options of the HP75C HCETS application.
- To teach the user to transmit and receive CSOs and messages to/from FIREMAN on the HP3000.
- To teach the user to enter repair details into the 75C.
- To train the user to "decode" edit error messages.
- To train the user to recover, and if necessary, reload the HCETS application.

Notation Note

HCETS uses a custom template which should be fitted over the face of the terminal. Throughout the manual we will refer both to the actual keys on the terminal and also to the "keys" listed on the template.

For the sake of clarity, any time we mean the actual terminal key, the key will be printed in *italics*. If we mean the template "key", that key will be printed in UPPER CASE letters.

INTRODUCTION

Quizzes

A quiz follows each lesson. You should not refer back to the lesson or to the *HCETS Reference Manual* while taking the quizzes. However, you may use the template of the 75C as a reference and in some cases the *FIREMAN/HCETS CE Pocket Guide*.

Following Instructions

You will see as you work through the labs that you will eventually end up with two CSOs in your terminal as well as a few messages.

After you finish a lab, you may want to do some practicing or just playing with what's in there. Please feel free to do this as long as you don't add any data other than what we instruct you to add.

As well, please do not add another CSO. You will see in later labs that the situations depend on exactly the data we expect to be in the terminal.

You are welcome to play as much as you want as long as you are just looking at data. After you finish Lab 8 you may do whatever you want to the data. You can add new information and even create new CSOs; in fact, we encourage you to do this.

NOTE

This manual will not teach the user how to use the features of the 75C. It will only explain the uses of the HCETS application on the 75C. However, no prior knowledge of the 75C is required to complete this course.

LESSON 1

HCETS OVERVIEW

SECTION

1

Overview

This lesson is the introduction to the HCETS application. It will describe how to load the software into the 75C. You will also learn how to turn the terminal on and off; as well as how to recover the program.

Learning Objectives

After completing the Getting Started lesson you will be able to:

- load the 75C software from magnetic cards or cassette tape,
- turn the 75C on and off,
- recover the program without reloading,
- reset the TIME in the terminal once you have loaded the software.

Introduction to 75C

Your HP75C comes with 16K bytes of Random Access Memory (RAM). It also has 48K bytes of read-only memory (ROM) dedicated to its operating system.

The HCETS application requires an additional 8K RAM to be added to the original configuration, bringing the amount of user-accessible memory to 24K.

The actual program file requires 12K of the 24K RAM, thus leaving 12K for data files.

The HCETS application runs automatically once the software has been loaded; however, this does not preclude you from interrupting the program and accessing the operating system of the 75C.

Thus, you will have the capability to use the programming features of the 75C. Please be very careful when you use the terminal for anything other than HCETS. Be aware that you are using valuable memory space, and will be decreasing the memory allotted for CSO data. If you intend to use the terminal extensively (for anything other than HCETS) you may need to offload the program and data files to allow yourself more memory.

Lesson 1 – HCETS Overview

Introduction to HCETS

You probably will have heard a little about HCETS before you start this course, but here's a brief introduction anyway.

Basically, HCETS provides you a method of keeping in contact with the dispatcher electronically. You'll have both a 75C and a modem which you'll use to connect to your area 3000 to transmit and receive data.

Every time you connect, any CSOs that you have in your terminal that have changed in anyway will be transmitted to FIREMAN and will update the data base. At the same time you will be able to send 'general' messages (not pertaining to a particular CSO) to both the dispatcher and to other CEs.

If there are any new CSOs in FIREMAN for you or any pending messages, they will automatically be sent to you at the same time.

The key to HCETS is 'messages'. Since you won't routinely be talking to the dispatcher, the majority of your conversations will be through electronic messages. Every CSO has a Message field attached to it. The dispatcher may use this to send you information about the customer (HE'S FURIOUS or maybe HE DOESN'T WANT YOU TILL 9PM). You can send information back to the dispatcher about the CSO as well.

Messages that are not associated with CSOs, we call 'general messages'. You have an infinite number of these and can use them to converse with both dispatchers and other CEs. (Every message is 40 characters long. You can only have 9 at one time in your terminal but can always clear these out to get more.)

HCETS and FIREMAN Configuration

When you hook up to the 3000, you will not actually be talking directly to the FIREMAN data base. Instead, you'll be conversing with the HCETS Controller. The controller is like a middle man. All your data will go through the controller before getting to the data base. Any information passed to you from the FIREMAN data base will first go to the controller and then be transmitted to the 75C.

Let's get started now. You can't learn about HCETS until you learn how to load the software into your 75C!

HCETS Template

You should have a custom template that you use with the 75C when you are using HCETS. The template is color-coded to help you find the fields you want.

You will learn later how to access all of these fields but briefly, if a label is colored either orange or yellow, you will need to use the SHIFT key along with the keyboard key to access that field. Anything colored either blue or green uses the CTL key along with the keyboard key.

Lesson 1 – HCETS Overview

This will become clearer as you work through the training and actually use the 75C.

Loading Your 75C

The HCETS application requires that five files be present in the 75C terminal. You should have received 15 magnetic cards or a cassette tape containing these five files plus a sixth file. You should load the sixth file (LOAD) first, which will then allow you to load the other five files. When all the files have been loaded, the LOAD file will be purged.

Read section 2 in the HCETS Reference Manual to learn how you load these files into your 75C. (Don't actually load it now. Just read through the procedures for now.)

Turning Your 75C On and Off

Turning the terminal on and off is very simple. It is much like any other calculator you've ever used.

To turn the terminal on, simply press the *ATTN* key in the top left hand corner of the keyboard.

When you're ready to turn the terminal off, hold down the *SHIFT* key and the *ATTN* key at the same time. The display window will go blank after about one second.

To conserve power, the 75C turns itself off if the terminal has been idle about 2 minutes. Whether it is turned off automatically or by you, pressing *ATTN* will turn it back on.

Recovery

With any type of program and any type of hardware, something can always go wrong. To be sure that you will always be able to run the HCETS application, two types of recovery are built in to the system.

The first is the "cool start". Let's say that you use HCETS and when done you stick the terminal back into it's case. It gets jarred when you throw a manual on top of it and accidentally gets turned on. When you toss another manual on top, the *ATTN* key is pressed again and the operating system takes over. Eventually the 75 will time out and turn itself off, but when you try and turn it on the next time, you will see a prompt instead of the program running automatically.

Pressing COOL will activate the "cool start" function of the terminal. This restarts the program and reinitializes the variables, etc. (THIS WILL NOT CAUSE YOU TO LOSE ANY DATA)

The second case is even more radical; it is unlikely that you will have to use this. If COOL doesn't work, you've done something to the memory of your

Lesson 1 – HCETS Overview

terminal. (This might happen if you take the batteries out or let them run excessively low. You could also cause this if you are writing other programs in the 75C and ignore warnings indicating the memory is too low.) If you think the 75C is operating correctly, your only choice now is to reload the software. (** NOTE: You may lose some data in this case depending on when you last connected to the 3000.)

When you reload, the first thing you would do is hold down the *SHIFT*, *CTL* and *CLR* keys at the same time. **THIS WILL CLEAR OUT EVERYTHING IN THE TERMINAL!!!!** Then, you should follow the instructions in the *HCETS Reference Manual* for loading the software.

To recover your CSOs, ask the dispatcher to resend any CSOs where either the repair is not complete or you have not entered the repair details. Data that you had entered into the terminal after your last connection will be lost. It is therefore to your advantage to call in anytime after you have made changes to your CSOs.

There is no way to recover the general messages that were in the terminal.

Resetting the Time

You will initially set the 75C internal clock when you load your software. There will be times (e.g. daylight savings) when you will need to reset this clock. It is important that this clock is correct because you will use it to record **START TIME** and **FINISHED TIME** of repairs.

To reset the clock once the software is loaded, do the following: (Again...don't do this quite yet; you'll get a chance to try it in the lab.)

Make sure your terminal is turned on and enter your password. Then...

1. Press the *ATTN* key.
2. Press the *TIME* key.
3. Type *SET* and press *RTN*.
4. Now enter the correct month, day, year and time and press *RTN*.
5. Press the *EDIT* key and then the *RUN* key.

The HCETS application will begin running in a few seconds. You'll see *HCETS x.x.x* and then *No Entry*.

Using TECHMOD

TECHMOD software was developed for the After Hours program. It allows you to change the employee number and password within your 75C. To run TECHMOD press the *TAB* key. If the software has not been loaded into your terminal you will be asked to load it. You will then be prompted for your current employee number and password. If entered correctly you will be asked to enter your After Hours employee number and password. Once you are no longer working "After Hours", you can use *TAB* to enter your original employee number and password.

Lesson 1 – HCETS Overview

The TECHMOD software will also reassign any existing CSOs in your terminal to the current employee number. The first time you hook up to the Response Center you may see "Invalid CSO-Key". This just means that the area CSOs cannot be transmitted to the Response Center.

NOTE

TECHMOD software takes up two CSOs worth of memory. You should purge TECHMOD if you are not using it.

Complete Lab Project 1 and then do Quiz 1.

Lesson 1 – HCETS Overview

Lab Project 1 – Setting Up and Maintaining the 75C

In this Lab Project, the terminal will be loaded with HCETS application software.

1. Using the instructions contained with the 8K RAM addition, install the additional memory into the 75C.
2. Following the instructions in HCETS Reference Manual, load the HCETS application software using the magnetic cards. Be sure to load all 5 files.

Be extra careful when you load the LOAD, MSG, and KEYS files. These files are only one track. If you load the wrong side, you will load an empty file. Double check that the HP Logo is right-side up and that that is the side that is numbered.

During this procedure you'll be prompted to enter your tech number, your FIREMAN password, and to choose a '75C password' for your 75C. Turn to the reference manual, now and follow the instructions.

When all of your files are loaded you'll see the message *Starting* and then *HCETS x.x.x* and then *No Entry*.

Your terminal is running HCETS now!

3. Using the information you have just read, in the previous section, reset the time.
4. Once *No Entry* is displayed, press the *ATTN* key twice. Whoops! The program isn't running anymore, is it? You are now running under the operating system of the 75C. Do a COOL start to restart the program.
5. Once *No Entry* is displayed, press the *ATTN* key twice again. Follow the instructions below now. What you're doing is just setting up your 'CSO' file with all the password and tech number data you entered previously. Type the commands exactly as you see them below:

COPY 'CSO' to 'CSO:CARD'

Press *RTN* and you will see:

Copy to card: Align & [RTN]

Take the card labeled *CSO* and insert it into the 75C's card reader, rightside up. (This is just like what you did when you were loading the files.) Press *RTN* and you will see

Pull Card...

Pull the card through the magnetic card reader.

If everything goes OK, you will then see the message:

Verify Card: Align & [RTN]

Lesson 1 – HCETS Overview

This is asking you to run the card through again to verify the new file you just wrote onto the card. Do that now.

If that is successful you'll see the message *Copy to card: Align & [RTN]* again. This is asking you to copy the second track of the file now. Simply turn the card around, insert it into the card reader and repeat the sequence of pulling it through and then verifying it.

6. When you see a > again, the CSO file has been copied to the card successfully.

Do a COOL start, it will take a few seconds before the program starts running again.

7. Now turn the terminal off (Remember, that's *SHIFT ATTN.*) . Turn it on again. If for some reason you don't turn it off quite right, the next time you turn it on, you may see a prompt rather than the HCETS program running. If this happens, just use COOL start to start the program running again.

Lesson 1 – HCETS Overview

QUIZ 1

Fill in the answers and then correct the quiz.

1. There are _____ different types of recovery.
2. They are _____ start and a total _____ of software.
3. If you need to recover, you should try the types in the following order:
_____ then _____.
4. Which type of recovery will not lose any data? _____
5. Before you can reset the clock, you must press the following keys: _____,
_____, and then type _____.
6. Which file must be loaded before any of the others may be? _____
7. Can the magnetic cards for the 'CET' file be entered in any order? _____
8. Which key(s) should you press to turn the 75C on?

9. Which key(s) should you press to turn the 75C off? _____
10. What happens if you don't turn the 75C off?

Correct Quiz 1 now using Appendix A.

LESSON 2

CSOs

SECTION

2

Overview

This lesson will describe how to create a new CSO in your terminal. It will then illustrate how to access the fields within a CSO. The text is organized in step-by-step instructions, in some cases describing the end result for clarification. Please use your 75C to follow the instructions as they're explained.

Learning Objectives

After completing this lesson you will be able to:

- create a new CSO,
- enter Customer Information,
- scroll through fields within a CSO,
- directly access fields within a CSO,
- go directly to the beginning or ending field of a CSO.

CSOs

Your 75C terminal running HCETS has the capability of maintaining 9 CSOs, however the optimum number of CSOs is 7. Each CSO can have a maximum of eight parts associated with it; however, there may be a maximum of sixteen parts in the terminal at one time. (i.e.; if two CSOs each have 8 parts, the remaining CSOs in the terminal may not have any. However, if each of 9 CSOs have one part, there are still 7 "part slots" available.)

There are two ways in which a CSO can get into your terminal. The first method involves using your modem and connecting to the area 3000. Every time you connect, any calls assigned to you (that you don't have yet), will be downloaded into your terminal. Most of the customer information will already be pre-filled by the dispatcher.

The only other way that a CSO will be in the 75C terminal is if you create it. With HCETS, you now have the capability to create your own CSOs and not have to hassle with getting the CSO number later! The CSOs you create are exactly like the CSOs you would get from the 3000. The only differences are that you have to fill in the customer information, and the CSO number is a "dummy" number until you transmit to the 3000.

Lesson 2 – CSOs

Creating a New CSO

To create a new CSO follow this simple procedure (you should do this now):

1. Make sure your 75C is turned on.
2. Enter your 75C password and press *RTN*. The displays should say "*No Entry*." This indicates there are no CSOs in the terminal at this point. If for some reason it does not and you get a '>' prompt, it probably means you turned the 75C off incorrectly. Do a Cool start to correct the problem.
3. Once you see *No Entry*, press the ADD key (*DEL*). You will be prompted for *New CSO?*.
4. Type 'YES' or 'Y' and then press *RTN*. You will then be prompted for *OFFICE=>*. (If you just hit *RTN*, HCETS interprets that as NO.)
5. The number you enter here will be used to assign the CSO number once you transmit the CSO to the 3000. It will become the first four digits of the CSO number.
6. Enter '9999' as the office number.

You should now see:

```
CUSTOMER [          ]
```

in your display window. You have created an entirely new CSO. (You actually won't see the closing bracket because the field is longer than the display window.)

**** Note:** If you have no CSOs in your terminal (i.e., you see the NO ENTRY message when the terminal is turned on, adding a CSO is slightly different than when there are CSOs in the terminal.) The procedures above described how it will work with NO CSOs in the terminal.

Every other time you add a CSO, after you have answered YES to the *New CSO?* prompt, you will then be prompted for *New Item?*.

To create an entirely new CSO, you should answer NO to this prompt.

Multi-Item CSOs

You'll also be able to create multi-item CSOs when you're out on site. No more calling the dispatcher to open another item!

You've probably already figured out how to do this. If when you're creating a new CSO, you answer YES to the *New CSO?* prompt and YES to the *New Item?* prompt, HCETS makes a multi-item CSO for whichever CSO was displayed when you pressed the ADD key.

All the customer information for the CSO is copied to the new CSO.

Entering Data

You've probably realized that data entry is very similar to typing on any standard keyboard. Pressing any numeric or alphabetic character will enter that character into the display at the position where the cursor is. Symbols such as '?', '"', or '?' are entered by holding down the shift key along with a numeric key.

All alphas will be entered in capital letters. The *SHIFT LOCK* should be automatically set. This is so you can use both the *SHIFT* and *CTL* keys along with the alphas as direct access keys.

If you make a mistake and need to back up to a character, you can use the backspace key (*BACK*) or the <- key (left arrow) to get there. Try experimenting with these two keys. You should notice that the backspace is 'destructive', i.e., it erases the characters it backs over. When you use the left arrow instead, the letters are not erased.

Any change you make to the display will be placed into permanent memory as soon as you display any other field.

CSO Data

The CSOs in your terminal are divided into three blocks of data. The first block is customer information. It is all the data that describes the customer and this particular job (e.g., Customer Name, City, Received Date/Time, Unit).

The second group of data really is in two pieces. The first piece is all the commonly used repair fields. This group includes the fields that you normally fill in for all repairs (e.g., Start Date/Time, CE Comments). The second piece is the repair fields that are rarely used (e.g., Miscellaneous Charges).

Finally, the last group of data is the parts information.

There are a number of ways to access this information. The most simple way is to "scroll" sequentially through every field. The fields are ordered by grouping (i.e., customer information, commonly used repair details, rarely used repair details, and parts). See Appendix B for the actual order of items. (Also look at the template...the order of the data is by alphabetic key, i.e. A-Customer, B-City, C-HNDL...a-CE Comments, etc.)

You will also learn how to go directly to a field, but we will start with the scrolling.

Entering Customer Information

The best way to see the fields is to scroll through them one at a time. While you do this, you'll enter the customer information for the CSO you just created.

Lesson 2 – CSOs

1. Enter 'AFTER-HOURS CUSTOMER' in the Customer field and then press *RTN*. (You should now see the City field.)
2. Enter your city in the CITY field and then press *RTN*. (You should now see the System Handle field.)
3. *HNDL* (system handle) is a field that may be filled in or may not be. If (when a CSO comes from the dispatcher) it is filled in, it is for your reference only. When you create the CSO, if you know the customer's system handle, fill it in. Otherwise, just leave it blank. Press *RTN* now and leave it blank. (You should now be looking at the Unit field.)
4. *UNIT* is the field that indicates the model needing repair. Enter 7925B and press *RTN*. (You should now see the Unit Serial Number field.)
5. Let's say you don't have the *SERIAL NUMBER* right now. Press *RTN* to see the next field. (It's the system field.)
6. The *SYSTEM* field (and *SYSTEM SERIAL NUMBER* field) are not always used. For this example, we will just skip them. Press *RTN* twice to keep scrolling. (You should now be at the Contract field – it will say *CONTR*.)
7. Enter 999927171A as the *CONTRACT #* and instead of pressing *RTN*, use the *FWD* key (*DOWN* arrow) on the top line. You can see that it works exactly like *RTN*, entering the data and continuing to scroll. There is no difference between how the two keys work. (You should now be at the *FAULT* field.)
8. The problem with this disc is that it had a 'HEAD CRASH'. Enter that in the *FAULT* field and press *FWD* again. (You should now be at *CSO MSG* field.)
9. Hold either the *RTN* or *FWD* key down for awhile. Notice that the fields scroll continually. Hold the key down until you see the *CSO* field. (If you go too far, you can use the *REV(erse)* key (*UP* arrow), on the top row, to back up to the *CSO* field.)
10. What you see in the *CSO* field (AA9999) is a dummy *CSO* number. It will be exchanged for a real *CSO* number once you transmit to the 3000. Now...let's say you went too far when you held the *FWD* (or *RTN*) key down. You want to go back and look at a field you already scrolled through.
11. Press the *REV* key (*UP* arrow) and watch what happens. Continue pressing until you get back to *CONTACT (CONTA)*.

You now know how to go backwards and forwards to access all the fields within a CSO. So far, we've just looked at the customer fields but the groupings all run into each other (i.e., once you see all the customer data, pressing *RTN* or *FWD* will bring up the first commonly used repair data fields.) If you did not do it before, go to Appendix B and look at the actual order that fields will be displayed in.

Cursor Control Keys

You may have noticed that some of the fields are longer than the display window. You will need to use the cursor control keys to see the rest of the field. Cursor control keys are the two keys with the horizontal arrows on them. They're in the top row. The CSO Message field is a good example.

1. Use the REV key to get back to the CSO MESSAGE field.
2. Enter the following message: "WILL YOU LET JACK KNOW I WAS OUT HERE AGAIN". Did you notice how HCETS automatically scrolls the field for you when you type beyond the display window?
3. Use the <- key to get back to the beginning of the field. Just hold it down and watch the letters scroll backwards.
4. Now, suppose you were reading a message for the first time. Hold down the *SHIFT* and the -> (right arrow) keys at the same time. Notice that the cursor moves you to the end of the entire field.
5. Now, hold down *SHIFT* and <- (left arrow) at the same time. You can see that you get back to the very beginning again.
6. Try holding down *CTL* and -> at the same time. This moves you to the end of the display field but not to the end of the field necessarily.
7. Now hold *CTL* and -> again. Watch what happens. You move another 'display-full', which happens to be to the end of this field.

Beginning and Ending Fields

There will be times when you want to get to the beginning or ending field of a CSO. The beginning is defined as the Customer Name, while the end is considered CSO-TYPE. Note: The end is not the end of the parts section. It is the end of the 'seldom used repair details' section.

1. Hold down the BEGIN key (*SHIFT and UP arrow*). Notice you go back to the Customer Name field. If you ended up at FAULT, you did not hold the *SHIFT* key down. So, what you did was actually a REV(erse). Try again.
2. Now hold down the END key (*SHIFT and DOWN arrow*). You can see you are now at CSO TYPE. If you see CITY instead, you did not use the *SHIFT* key. Try again.

Enter a CSO-TYPE of "4H". This should be a valid CSO TYPE in your FIREMAN data base.

Lesson 2 – CSOs

Direct Access Keys

So far you have only learned how to access a field by scrolling to it (or back to it). There will be times when you really don't want to look at all the data. Maybe you just want the phone number, or maybe just the unit number. There are over 50 fields that you can access directly either using the *CTL* or *SHIFT* key along with one of the alphas.

You certainly don't want to go through each and every direct access key, so... we'll just go through a few.

1. Hold down the *SHIFT* key and *Q*. You should see the PHONE field now.
2. Hold down the *SHIFT* key and *I*. This should take you to the FAULT field.
3. Hold down the *SHIFT* key and *S*. You should see the CSO number now.
4. Now hold down *CTL* and *a*. This is the CE COMMENTS field.
5. Try *CTL* and *g*. That is TRAVEL TIME.
6. Now use the REV key a couple of times. You can see that you can go backwards (or forwards) in the list of fields even if you use direct access to get there.

FIREMAN/HCETS CE Pocket Guide

Take a look at your *FIREMAN/HCETS CE Pocket Guide* now. There's a lot of useful information in here that you will probably find helpful. It's meant to be a concise guide that you can carry with you, rather than carrying the Reference Manual.

First, locate the section titled "CSO FIELDS/KEYS". This is an alphabetical list of fields which you can use to cross-reference to the actual key. Next, find the section titled "CUSTOMER DATA FIELDS". This section lists, in the order that you would scroll through in your terminal, all the customer data that would normally be sent to you from the dispatcher. It includes the length of each field as well as some special notes about editing.

Now, go find the section called "75C CONTROL KEYS". You've learned about some of them so far and will learn about the others later. This is just a quick reference if you ever forget how to do something.

You can see that there is much, much more information in the Pocket Guide. We will refer you back to it as you learn more about HCETS.

Complete Lab Project 2 and then do Quiz 2.

Lab Project 2 – Creating a CSO

In this lab project you will create another new CSO. You will also practice viewing the fields within this CSO using scrolling and direct access.

1. Create another new CSO. Answer 'NO' to the *New Items?* prompt so that you do not create a multi-item. Use '9999' as the office.
2. Enter the following information in the fields:

CUSTOMER: ABC CORPORATION

CITY: SAN FRANCISCO

HNDL:

UNIT: 2624B

U S/N: 1222A39178

SYS:

S S/N:

CONTRACT: 501027171

FAULT: SCREEN WAVES

CSO MSG:

MSG STATUS: *** Notice that it is already 'RA'. CSOs you create will be created with this status. (You'll learn more about statuses in Chapter 5.)

TIME IN: (We'll explain this field later.)

REP TYP: 05R

REC DATE: 830228 (Note that the format is YYMMDD.)

REC TIME: 1000

CONTACT: JIM

PH#: 332-3919

P.O.:

3. Use a direct access key to find the UNIT. Use the Pocket Guide to help you.
4. Use a direct access key to find the FAULT.
5. Scroll from FAULT to REP TYP.
6. Scroll backwards to UNIT SERIAL NUMBER.
7. Go to the beginning field of the CSO using BEGIN. Remember you'll have to hold the *SHIFT* and the *UP arrow* key at the same time.
8. Go to the ending field of the CSO using END. Remember it's both the *SHIFT* and the *DOWN arrow* key to go the ending field. Enter "4H" as your CSO-TYPE.

Lesson 2 – CSOs

QUIZ 2

Fill in the answers and then correct the quiz.

1. When you are trying to create a new CSO, you must answer _____ to the *New CSO?* prompt and _____ to the *New Item?* prompt.
2. Before you can use the new CSO you create you must supply the _____ number.
3. The number you supply becomes the first four digits of the _____.
4. The three groupings of data of a CSO are _____, _____, and _____.

You can refer to your template to answer the following questions.

5. You would use the _____ key or the _____ key to scroll forward in viewing CSO fields.
6. You would use the _____ key to go backwards viewing CSO fields.
7. Holding down _____ and _____ will display the first field of the CSO.
8. Holding down *SHIFT* and *END* will display the _____ field of the CSO.
9. Holding down *CTL* and *E* will display _____.
10. Holding down *SHIFT* and *Y* will display _____.

LESSON 3

WORKING WITH MULTIPLE CSOS

SECTION

3

Overview

In this lesson you will learn how to work with multiple CSOs. You need to understand how to identify the CSO you wish to work with and how to access it.

Learning Objectives

After completing this lesson, you will be able to:

- scroll forward through CSOs,
- scroll backwards through CSOs,
- identify whichever CSO is displayed,
- go directly to the first or last CSO in the terminal.

Scrolling Forward Through CSOs

You can think of your 75C as just a pile of CSOs, one on top of the other. If you were trying to find a particular CSO, chances are you would flip through them looking at the Customer name until you found the one you wanted.

The 75C works much the same way.

When you turn the 75C on, after entering the correct password, the oldest CSO in the terminal will be displayed. You then have the capability to flip through your CSOs until you find the one you want. Your CSOs will always be in order from oldest to newest with the oldest one on the top.

To find the next CSO, all you need to do is press **NEXT (EDIT)**. On whatever field you are on, **NEXT** takes you down to the next oldest CSO. If you press **NEXT** when customer name is displayed, you will see the next CSO's customer name. If you had CSO Message displayed, when you pressed next the CSO message for the NEXT CSO would then be displayed.

Scrolling Backwards Through CSOs

You may want to go backwards at some point. **PREV(ious) (APPT)** works just the way **NEXT** does only you go in the reverse direction. If you had the last (newest) CSO in the terminal displayed, continually pressing **PREV** would

Lesson 3 – Working With Multiple CSOs

eventually bring you to the first (oldest) CSO. Again, you stay on whatever field you were on when PREV was pressed.

Identifying the CSO You Are Working On

When you filled out paper CSOs, it was very easy to know which one you were working on. It is not likely you ever entered repair details for one repair on the wrong CSO.

With HCETS you will have to be more careful of this. Since you only have one field displayed at a time, it is possible that you could be working on the wrong CSO.

To guard against this, every time you are going to enter repair details, scroll through the CSOs (using NEXT) on Customer Name. Once you find the Customer Name you want, use either the RTN or FWD keys to scroll or the direct access keys to access the fields you want.

If for any reason you wish to check which CSO you are working on, there are a number of ways to do this. The BEGIN function (*SHIFT UP arrow*) will bring up the Customer Name for the CSO you are currently working on. Using the direct access keys for Customer (*SHIFT A*) would do the same thing. You also might want direct access into CSO number (*SHIFT S*) in case you were doing a multi-item and needed this for more clarification.

Finding Your Newest CSO

Let's say you've been using HCETS for quite awhile now. You have four CSOs in progress and you hook up to the 3000 to see if there are any more jobs. You receive two more!

Rather than having to scroll down through your old CSOs, there is a way that you can get directly to your newest CSO. You'll notice two keys on your keyboard, FIRST (*SHIFT APPT*) and LAST (*SHIFT EDIT*). By pressing LAST, you will bring up the LAST CSO to be received in your terminal, i.e. the newest one!

In the case that you received two CSOs, you could press LAST and get the second of the two, and then press PREV to get the other one.

FIRST and LAST work the same way that NEXT and PREV do. Whatever field you have displayed, is the one that will be displayed once you have pressed either FIRST or LAST. If you had CSO number displayed, once you pressed LAST, you would see the CSO number for the LAST CSO received in your terminal.

You can use FIRST or LAST at any time. If Customer Name happened to be displayed, FIRST would display the Customer Name of the oldest CSO in the terminal.

Complete Lab Project 3 and then do Quiz 3.

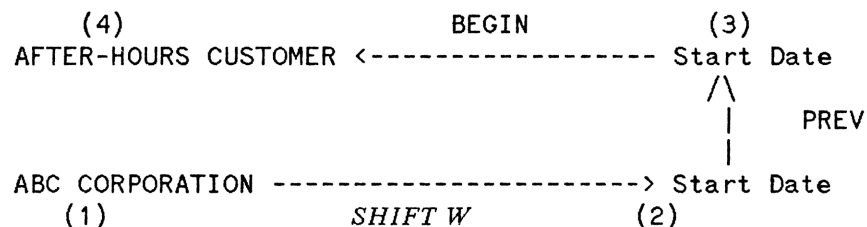
Lesson 3 – Working With Multiple CSOs

Lab Project 3 – Scrolling Multiple CSOs

In this lab project you will not have to enter any customer or repair information. You will simply be using the control keys of HCETS to view multiple CSOs in different ways.

1. Turn your terminal on. If the terminal is already on, turn it off and then turn it on again. Remember you'll have to enter your password.
2. You should be viewing the oldest CSO in the terminal. The Customer Name should say 'AFTER-HOURS CUSTOMER'.
3. Press the NEXT key. That should take you to the next CSO in the terminal. Does the Customer Name say 'ABC CORPORATION'?
4. Press PREV. You can see that takes you back to the 'AFTER-HOURS CUSTOMER'.
5. Hold down the RTN key to scroll through the fields of this one CSO. You're looking for the CSO number. If you go too far, use the REV key to get back to the CSO field. The CSO number should be AA9999.
6. Now press NEXT again. You're back on the CSO for ABC CORPORATION but since you came from CSO number on the first CSO, you will stay on the CSO number field. This one should be AB9999.
7. Let's say you weren't sure which CSO you were working on. Use the BEGIN (*SHIFT UP arrow*) key to figure this out. You should see ABC CORPORATION once you press these keys. (If your terminal is displaying the 'P.O.' field, you did not hold the *SHIFT* key down for BEGIN. So what you actually did is a REV.)
8. Use direct access to get to the START DATE field of this CSO.
9. Press PREV. Which CSO do you think you are on? Use the BEGIN key to figure this out. It should say 'AFTER-HOURS CUSTOMER'.

Do you realize what you just did? Look at the diagram below.



10. Press LAST. The display will say ABC CORPORATION because that is the newest CSO in the terminal.

Lesson 3 – Working With Multiple CSOs

11. Press FIRST. It says AFTER-HOURS CUSTOMER doesn't it? That's the oldest CSO in the terminal and therefore the first one.
12. Now press PREV. Notice that the terminal beeps and still displays AFTER-HOURS CUSTOMER. That's because there is nothing 'previous'. You're already at the oldest CSO.
13. Press NEXT now until you hear the terminal beep. That's when you know you're at the last CSO in the terminal.

Lesson 3 – Working With Multiple CSOs

QUIZ 3

Circle the correct answer and then correct the quiz.

1. When you turn on the HCETS terminal you will see a) the newest CSO received b) the oldest CSO received c) a random CSO.
2. If you think of CSOs in the 75C as a stack of paper CSOs, they will be stacked top to bottom from a) oldest to newest b) newest to oldest c) randomly.
3. When you press LAST, the CSO displayed will be a) the oldest CSO in the terminal b) the last CSO received in the terminal c) a random CSO.
4. You are working on a CSO. You want to verify you are working on the correct one. You should press: a) FIRST b) BEGIN c) FWD d) REV e) NEXT f) PREV.
5. There are two ways to access the CUSTOMER NAME field of a CSO you are working on. They are a) FIRST and through direct access (SHIFT A) b) CSO and through direct access c) BEGIN and CSO d) BEGIN and through direct access (SHIFT A).
6. The PREV key scrolls you backwards to a CSO that is a) newer b) older c) no relation to the CSO you have displayed.

For the next four questions, use the following scenario. You have four CSOs in your terminal. Here is some of the data for them.

Customer	Unit	Contact	Received Date/Time
RCA	2647A	JEFF	830322 1020
A&A INC.	2631B	LOUISE	830322 1240
HAC	9872T	MR. SMITH	830323 0924
CSD	2647A	TERRY	830323 0945

7. You see LOUISE on the display of your terminal. Pressing NEXT will display a) 830322 1240 b) 2631B c) HAC d) MR. SMITH.
8. You have A&A displayed on the terminal. What will you see if you use the LAST key? a) 830322 1240 b) CSD c) 830323 0945 d) RCA.
9. You have 9872T as the Unit Number displayed. You're trying to enter repair details for the 2631B you just fixed. Pressing which key will take you to the CSO you want? a) BEGIN b) NEXT c) PREV d) REV.
10. You have 2647A displayed in the Unit Number. You just fixed this for RCA, but you know that you have two calls for 2647A's in your terminal. Which key should you press to find out which customer you have displayed. a) NEXT b) END c) BEGIN d) FIRST.

Correct Quiz 3 now using Appendix A.

LESSON 4

GOING ON SITE

SECTION

4

Overview

This lesson will illustrate how you use the 75C and HCETS to enter repair details once a job has been completed.

You will see how the automatic TIME feature will help you as well as some of the other features of HCETS.

Learning Objectives

Once you have completed this lesson you will be able to:

- enter repair details into the 75C,
- enter parts data into the 75C,
- use the TIME feature,
- use the INSCH and DELCH features,
- use the UNDO feature.

You will also understand:

- the protected fields in HCETS.

Entering Repair Details

Now that you have a 75C, you will no longer have to write the details on a paper CSO or have to call in the details to a dispatcher. Just think...there will be no more being put on hold!

Instead you'll enter all the details into the 75C. Every time you hook up to the 3000 any CSO that you have changed in any way will automatically be transmitted and will update the database. So... after you make a successful connection you are guaranteed that the CSOs you have in your terminal are the exact duplication of what is in the FIREMAN database. You thus have a backup of your CSOs in FIREMAN.

When you complete the repair and have entered all the details, once you transmit successfully (and pass the edits - see lesson 7) the CSO will be removed from your terminal.

Lesson 4 – Going On Site

Entering Parts Data

Entering parts data is really part of entering all your normal repair details. However, there is one difference – parts data does not have direct access keys.

You could get to the parts data field by just pressing *RTN* or *FWD* continually through all the other fields, but that would take quite awhile. If you look at the list in Appendix B, you'd have to get through all the normal repair details, then the seldom used repair details before you got to the parts.

You've probably guessed there's an easier way... Actually there are two easier ways! The first is the 'END' key (*SHIFT DOWN arrow*). When you use this key, HCETS will take you to the last field of the CSO currently displayed. That is ITEM STATEMENT CODE. Pressing *RTN* or *FWD* from there will take you to the first parts field.

The other way is to hold down the *CTL* and *UP arrow* keys. Since this is not marked on the template, you'll have to remember this function. When you use these two keys, they will automatically take you to the first parts field of the CSO. You can then use *RTN* or *FWD* to access Quantity, and the rest of the parts fields.

Since you may want to go just to the part number of the parts field, you can scroll through just the part numbers. Once you are in the parts data, *CTL DOWN arrow* will take you to the next part number of the CSO. *CTL UP arrow* will take you to the previous part number.

You'll understand this better when we go through it in the lab.

Dates and Times

The CSO requires that three dates and times be filled in: received, start and finished. Usually the received date will be filled in for you when the dispatcher logs the call. If you've created the CSO, however, you will have to enter that date and time.

HCETS provides you with a very easy way of entering the date and time. Since the 75C has an internal clock, the program makes use of that. Whenever you have a DATE field displayed (received date, start date, or finished date) when you press *TIME*, the current date and time will be entered into the date and time fields.

If you were at RECEIVED DATE, after pressing *TIME*, the date and time fields will be filled and you will be left viewing the CONTACT field. After pressing *TIME* when START DATE is displayed, you will see FINISHED DATE. If you press *TIME* again, you will see CE COMMENTS.

The *TIME* function does not work unless one of the three date fields is displayed. If you try to use it when another field is displayed, nothing will happen.

Lesson 4 – Going On Site

Hours

As on a normal CSO, you have the opportunity to enter four different hour values: Standard time, Overtime, Sold time and Travel time. For each of these, when the field is displayed, you will also see (HHHT). This stands for HOURS and TENTHS and has to do with how you should enter the data.

You do not need to enter the decimal point in this field as HCETS assumes one. Therefore, if you want to enter one hour, enter 10. This will be interpreted as 1.0.

Look at the examples below for the data entry format.

Entered in the 75C	Interpretation
10	1.0
5	.5
200	20.0

Pre-Labeled Repair Fields

There are currently five fields on the CSO that can be marked to indicate certain standard repair types. When you switch to HCETS, these fields will go away. Instead, you will always have to enter the three character repair type and sub-type. You will find a complete listing of these in your FIREMAN/HCETS CE Pocket Guide.

Data Entry Tools

There are some other keys which will help you enter repair details.

You already saw how to read fields that were longer than the display area by using the cursor keys along with *SHIFT* and *CTL*. But, as you probably can guess, the cursor keys work without *SHIFT* and *CTL*. Pressing *->* will move the cursor one space to the right and *<-* will move the cursor one space to the left.

There is also an 'insert character' and 'delete character' available with the terminal. You might want to use the cursor keys to get you to a specific character, then pressing *INSCH* (*SHIFT I/R*) will put you into 'insert character' mode. Anything you type at this point will be entered in to the left of the cursor. All the characters will be scrolled to the right. If you enter too many new characters, the right end will be truncated. Pressing *INSCH* again will take you out of 'insert character' mode.

On the other hand, you might want to delete characters. You can use the cursor keys to get to the character you wanted and then press *DELCH* (*SHIFT FET*). The character under the cursor will be deleted and the rest of the characters will be shifted one place to the left.

Lesson 4 – Going On Site

The last tool you have is UNDO (*SHIFT CLR*). Using UNDO will let you restore data once you have changed it. For example, if you had begun to type a message to the dispatcher over one that she had sent you, and then decided you wanted to review her message, pressing UNDO will restore the original message.

Be very careful because UNDO will not work in all cases. When you make a change, as soon as you go to another field, the changes you have made are entered into memory and you can no longer use UNDO to go back to the previous contents of the field. It is only when you are still in the field and have made changes that you can use UNDO to restore the earlier contents.

Protected Fields

There are two fields within every CSO that you may not ever change. They are: CSO Number and TIMEIN. The reasons for that are manifold.

The CSO Number should never be altered because if it were changed, this could lead to a corrupt database.

TIME IN is the field which displays the time the CSO was transmitted to you. It is different from the RECEIVED DATE/TIME, the time the call was logged into FIREMAN. If you picked the call up fifteen minutes later, TIME IN would be fifteen minutes later than received date/time. It is protected so that you can always tell what time you received the call from FIREMAN. This field is not used on CSOs that you create.

Complete Lab Project 4 and then do Quiz 4.

Lab Project 4 – Going on Site

In this lab, you will enter repair details as though you had just completed a repair. You will get some practice in using the data entry tools as well as learn to change statuses.

1. Turn on the 75C and enter your password.
2. The terminal should display 'AFTER-HOURS CUSTOMER'.
3. Use the direct-access key to get to the START DATE.
4. Suppose you had just gotten on-site and were about to start the repair. Use the HCETS function TIME to enter the start date/time.
5. You should now be looking at FINISHED DATE. Use the TIME function again to say you've completed the repair. Are you now looking at a blank CE COMMENTS?
6. Fill in CE comments with 'TESTED BOARD 12A' but don't press return.
7. Whoops! You just realized that it was actually 112A. Use the <- key to go back to the 2. Now press INSCH. (If you ended up back at the Customer Name it means that you did not hold the *SHIFT* key down with the INSCH key. Use *CTL A* (direct access) to get back to CE comments and then try again.)

Enter 1 and watch what happens. Press INSCH again to get out of INSCH mode. (If you forget to do this, the next time you change fields, you are automatically taken out of 'Insert Character' mode.) Now press *RTN*.

8. You should be at REP CL (repair class). Let's say you don't like what you entered in CE Comments. Go back there using the REV key. Start to delete the message using the DELCH key. Be sure to hold the *SHIFT* key down otherwise you'll end up with general messages! Be careful not to go too fast or you'll end up deleting the whole thing! (Also, remember you're looking for DELCH not DELETE.)
9. Delete characters up until BOARD. The message should read 'BOARD 112A'. Now press INSCH again and type in characters until the message reads 'TESTED AND REPLACED BOARD 112A'.
10. Now, you're totally disgusted and can't figure out what to enter. Press *CLR* to clear the whole message out!
11. You think a while and then enter 'INTERMITTENT;REPLACED 112A;WILL CHECK IN ONE WEEK'. You could use *SHIFT <-* now if you wanted to get back to the beginning of the message.
12. Now go back to the ZONE field and check to be sure that's entered. Use the direct access method with *SHIFT V*. It's blank, right? Enter 01.

Lesson 4 – Going On Site

13. Let's look at parts data now. Get to the first part number by using *END*. Hold down the *SHIFT* and *DOWN arrow* keys to do this. You should now be at *CSO TYPE*. Press *RTN*. You should now be looking at the first part number field.
14. So you can see the other way to get to the parts fields, use the direct access key to go the Customer Name (*SHIFT A*). Now hold down *CTL UP arrow*. You should now be at the first part number field again! You now know two ways to get to the parts data.
15. Enter the following information in the fields, pressing *RTN* after each one to get the next field:

P/N: PART 1
QTY: 1
OFFICE: 1111
T/K: T
LOC:
FAIL CODE: 00
DEF S/N:
NEW S/N:
USE CODE: Y

You should now be at the second part number.

16. Enter PART 2. Now press *CTL DOWN arrow*. You should see a blank P/N field. Enter PART 3 there.
17. Now press *CTL UP arrow*. Are you back at PART 2? Try *CTL DOWN arrow* again. You should be back at PART 3.
18. Now press *CTL UP arrow* again. Back at PART 2? See what happens when you do it again. You should be back at PART 1. Do you understand how you can get each part number now without going through all the parts fields?
19. Now change PART 1 to PART 88. Before you press *RTN* or change to any other field, press *UNDO*. If the whole thing disappears, you didn't hold down the *SHIFT* key so you cleared the entire field. Enter PART 1, and then restart this step.

If you did use *UNDO* correctly, you should see PART 1 again. See how that works?

20. Go back to the Pocket Guide again. Locate the section that says "CE INFORMATION FIELDS". It's just like the "Customer Data" section only it lists all the fields that you will fill in once you've completed a repair. Again, you can see that the length of the field is listed as well as some edit notes.

Also, notice the "CSO CODES" section. There is all sorts of information in here for you to use. Many of the special codes you must fill in on the CSO are listed here.

QUIZ 4

Answer True or False to the following question and then correct the quiz using Appendix A.

- _____ 1. The TIME function only works when a DATE or TIME field is display
- _____ 2. The TIME function uses the 75C internal clock to enter the current date and time.
- _____ 3. You must press INSCH for each character you wish to add.
- _____ 4. When you use INSCH, characters to the right of the cursor will be shifted one character to the right.
- _____ 5. DELCH clears out the contents of the field displayed.
- _____ 6. UNDO lets you return to the previous contents of the displayed field whenever you return to that field.
- _____ 7. Received Date and Time, CSO Status, and CSO Number the only fields you may not change in the 75C.
- _____ 8. To enter one hour in the Overtime field, you must enter 10.
- _____ 9. Holding down *SHIFT DOWN arrow* (END) will bring up the first number field of that CSO.
- _____ 10. Once you are in the parts data fields, you can get to the next or previous part number (bypassing the other parts fields) by using *SHIFT DOWN arrow* and *SHIFT UP arrow*.

LESSON 5

CHANGING STATUSES

SECTION

5

Overview

This lesson will explain some of the FIREMAN status codes and how and why you will use them.

Learning Objectives

Once you have finished this lesson you will:

- understand the FIREMAN status codes available to you,
- be able to change the status of any of your CSOs to reflect the current status of the job,
- know how to reroute a call,
- know how to remove a CSO you should not have from your terminal,
- understand when CSOs will be removed from your terminal.

Purpose of Status Codes

Status codes are used for three purposes. To begin with, the status flow informs the dispatcher of the progress of the repair and the state of completeness of the CSO. It is VERY IMPORTANT that before you transmit, you change any CSOs to reflect any status changes that have occurred. Remember, this is the only way that the dispatcher will be able to keep track of your workload and your whereabouts.

Secondly, they trigger HCETS to edit the CSO for correctness and completeness. Once you have transmitted, the HCETS Controller is triggered to edit the CSO. All of lesson 7 is devoted to explaining these edits.

Finally, they cue the the HCETS application to purge (or not purge) a CSO from the terminal after a successful transmission.

Lesson 5 – Changing Statuses

Status Keys

HCETS shares a number of status codes with FIREMAN. Every CSO has a status associated with it which allows you or a dispatcher or a DM to know exactly what phase of a repair the job is in.

Here are the statuses available to you and what they mean. We'll go through each in more detail below. (** Note: Not every status is mandatory. Some will rarely be used.)

RL – Repair Logged – If a CSO has a status of RL, this call is being rerouted.

RA – Repair Acknowledged – A CSO in your terminal with a status of RA means that you have accepted the responsibility for doing this repair.

IT – In Transit – You will use this status to indicate you are on your way to the customer's site to do the repair.

OS – On Site – You will use this status to indicate you are at the customer's site doing the repair.

RC – Repair Complete – Once you have finished the repair and entered all the details, you can change the CSO status to RC.

NC – Not Complete – There will be times when you will have to leave a customer's site and return at a later date. You should change the status of the CSO to NC, indicating you started the repair but had to leave it incomplete.

VO – VOid – Use this status if the CSO should be voided for any reason.

CN – CaNcel – This is a special status. We'll explain it later.

Changing Status

Once you are in CSO mode (i.e., you have CSOs displayed), find the CSO you want to update. You can do this by using NEXT, PREV, FIRST, LAST, etc. Once you have any field of the CSO displayed that you want to change the status for, hold down the CTL key plus one of the numeric keys. The corresponding numerics are listed below. You will automatically go to the STATUS field and the new status will be displayed.

Repair Acknowledged – ACK (CTL and 1)

When the call is transmitted to you, or when a call is created in the terminal by you, it has a status of 'RA'.

This implies that you can take the call and it is now your responsibility. If the call did come from FIREMAN and you are unable to take it, you do have the option to reroute the call. We'll talk about how to do this later.

Lesson 5 – Changing Statuses

In Transit – INTR (*CTL and 2*)

'IT' indicates you are IN TRANSIT to the customer's site. You would use this status if you were hooking up to the 3000 and you knew you were on your way to this site.

This is an optional status. You will probably use this when you are calling in either to receive new CSOs or to transmit completed ones, AND are on your way to the next site. If you ever enter the start time of a repair and then hook up to transmit, even if you have not changed the status yet to IT, if the start time is greater than the current time, the status will be updated to IT in the FIREMAN data base.

On Site – ONST (*CTL and 3*)

'OS' indicates you are on site. You might change the status to 'OS' for a CSO if you were hooking up to the 3000 to transmit or receive and you were already on the Customer's site.

It will be helpful to both the dispatcher and the DM if you would use both 'IT' and 'OS' when it is appropriate. This does not mean you must hook up just to transmit an updated status; however, if you are connecting anyway, you should think about updating the statuses. This will help the dispatcher know where you are and what you're doing. It's basically giving the dispatcher the information that used to be on a scheduling board.

If you happen to transmit a CSO with the start time already entered, if it is earlier than the current time, the status will be updated to OS in the FIREMAN database, even if you have not changed the status in the terminal.

Not Complete – INCO (*CTL and 4*)

'NC' would be used in an exception case. Let's say you go out to a customer's site but can't complete the repair because you don't have a part. The part is not in the office and it will be a couple of days before you will be able to get the part and go back to finish the repair.

So that the dispatcher will be able to judge your workload accurately, it is important that you let the dispatcher know the repair is incomplete. You would do this by changing the status of the CSO to 'NC' (*CTL 4*) for Not Complete. This will update the FIREMAN database but will not remove the CSO from your terminal. When you're done with the repair, you can enter the repair details, change the status to RC (*CTL 5*) and transmit. At that point, the CSO will be removed from your terminal.

Repair Complete – COMP (*CTL and 5*)

The last status you will normally use is 'RC'. This is the status that indicates the repair is complete. There are many complicated edits associated with this status, and we'll talk more about it in lesson 7.

Lesson 5 – Changing Statuses

Void – VOID (*CTL and 8*)

Another scenario...you receive a CSO from FIREMAN. When you call the customer, you are able to tell him how to fix the problem over the phone. You want to void the call. All you have to do with HCETS is change the status to VO (*CTL 8*).

You must also enter something in the Message field of this CSO indicating why you voided the call. Then once you transmit, the FIREMAN database will read VOID, and the CSO will be removed from your terminal.

Rerouting – ROUT and Cancelling – CAN (*CTL and 6 & CTL and 7*)

There are two more statuses, RL and CN, which allow you to reroute and cancel. These are special statuses, and each deserves its own special section below.

Rerouting a Call

Rerouting a call is as easy as changing a status, but since it potentially could affect meeting a customer's response time, you must be very aware of what you are doing.

To reroute a call, all you do is change the status to 'RL'. Notice the key that says ROUT – that would be *CTL 6*. First you must find the CSO you want to reroute. Then you can change the status to 'RL'. You must also enter something in the Message field explaining why you are rerouting the call, or to whom to reassign it. The next time you transmit, the call will be rerouted back to the dispatcher.

Every area has its own procedures for what to do when you can't take a call. For many of you, if you can't take a call, you are probably responsible for finding someone who can take the call. Please understand that your current procedures probably won't change in this regard. As before, you would contact the CE who could take the call. Then, before transmitting the CSO, you would leave a note in the CSO message field for the dispatcher, indicating to which CE to reroute the call.

Once you transmit, the dispatcher will be flagged that you have rerouted a call, and will then look at your message to find out what to do with this CSO. If you have indicated to whom the call should be reassigned, the dispatcher will do just that. The other CE can then call in and get the call.

So you can see, rerouting a call is easy; however, you should not use this feature unless absolutely necessary. Please understand that when you reroute a call it does not reroute the call to another CE. The call goes back to the dispatcher, and then the dispatcher will pass it on to another engineer.

Lesson 5 – Changing Statuses

Cancelling a Call

Cancelling a call is very different from VOIDing a call.

You should use void once a real CSO number is given to the call but you don't actually need to use the CSO. An example would be if a CSO were transmitted to you by FIREMAN, but it really wasn't a service call. This call should be voided, because it should never have been given a CSO number.

There are two situations in which you would want to use CANCEL rather than VOID. The first is in the case that you create a new CSO or new item in your terminal by accident. If you really don't need it, you can cancel the CSO and there will be no record of it left.

However, you can only do this if the CSO still has a temporary CSO number. Once FIREMAN assigns it a true CSO key, if you really don't want it, you will have to void it to get rid of it. Therefore, you can only cancel one of your 'created' CSOs if you cancel it before the first time you transmit with it in your terminal.

The second case is somewhat more complicated. There is the possibility that two CEs could end up with the same CSO in each of their terminals. This could happen if the dispatcher makes a mistake, but the most likely scenario where this could happen is as follows:

You receive a call which you cannot take. You call 'BILL' who says sure he can take it and he'll start on it right away.

At this point you should reroute the call and transmit it back to the dispatcher so she can reassign it to Bill. If you don't do this (for whatever reason – you might not be able to get to a phone), and Bill needs the CSO so he can get started, he might send a message to the dispatcher asking that the call be rerouted to him.

Once the dispatcher does this and Bill calls in to get the call, the CSO exists both in your terminal and in Bill's!

The only way for you to get the CSO out of your terminal now is to cancel it. If you tried to transmit it without doing this, FIREMAN would reject it because the CSO is no longer assigned to you.

You actually won't be able to get it out of your terminal until Bill finishes the repair and all the details are entered. This is so that no CSO can ever get lost. You can cancel the CSO right away, but it will not be taken out of your terminal until Bill has finished the job and transmitted his information to FIREMAN.

JUST TO REVIEW... There are only two cases where the HCETS Controller will accept a CANCELLED CSO. The first is if the CSO being transmitted has a temporary CSO key or temporary item number. The second case is if you transmit one with a real CSO number but you are not the assigned CE in the FIREMAN database, and then, only if the assigned CE has transmitted repair details for that CSO back to FIREMAN.

Lesson 5 – Changing Statuses

Removing CSOs From Your Terminal

Earlier we said that the status codes trigger the HCETS application when to remove the CSO from your terminal.

Since you will be calling in to the 3000 periodically, sometimes updating just a status, you will not always want to remove all CSOs that have "changed". Therefore the status code tells the program when the CSO should be removed.

Whenever you reroute a call (status 'RL') the CSO will be taken from your terminal as soon as you transmit.

Once you indicate the repair is complete ('RC'), and if you pass all the edits, the CSO is removed from your terminal.

If you void a call (status 'VO'), the CSO will be purged from your terminal the next time you transmit.

If you must cancel a call (status 'CN'), the CSO may or may not be purged the next time you call. If it happened to be a CSO you created, the CSO will disappear the first time. However, if it happens to be a case where more than one CE has the CSO, the job will not be removed from your terminal until the status of the CSO is 'SS', 'AW', 'PF', 'RE', 'CL', 'VO', or 'OK' in FIREMAN (these are statuses the dispatchers use; they indicate the call has been completed to the point where it can be sent to SIS/SORDS).

If the CSO is any of the other statuses, 'RA', 'IT', 'OS', or 'NC', the FIREMAN data base will be updated when new information is transmitted but the call will remain in your terminal.

Complete Lab Project 5 now and then do Quiz 5.

Lesson 5 – Changing Statuses

Lab Project 5 – Changing Statuses

This is a very short lab. All we'll do in it is change some statuses so you can see how it is done.

1. In the last lab, you entered all the repair details for the 'AFTER-HOURS CUSTOMER' job. Let's say you think everything is OK, but since the problem has been intermittent you want to leave this CSO open rather than indicating it really is closed. Set the status to NC because you will be coming out in a week to check it again. Use *CTL 4* to do this.

Notice how you automatically went to the STATUS field by doing that.

2. Since you're already at the status field, try to change it to XX by typing XX in the field. Notice that it won't let you. That's because status is a protected field.
3. Now, you're going to leave for ABC Corporation. Since you're going to hook up to the 3000, to transmit the AFTER-HOURS details you want to update the status of the second CSO as well. Use NEXT to get to the next CSO. Now use *CTL 2* to indicate you are IN TRANSIT to this site.
4. Go back to the *FIREMAN/HCETS CE Pocket Guide* again. Find the section called "CSO STATUSES". Notice one of the tables underneath the heading. You can see that it gives you a summary of all the status codes available to you, their meanings, and how you access them from the keyboard. The information under NOTES will become clearer in a later exercise.

Lesson 5 – Changing Statuses

QUIZ 5

Answer the questions and then correct the quiz using Appendix A.

1. To indicate you have completed a repair, you would need to hold down the _____ and _____ keys to change the status.
2. You received a call from FIREMAN. When you talked to the customer he said that the printer seemed to have fixed itself and he didn't need you to come out. Should you void or cancel the call in HCETS? _____
3. You finished a repair at ABC Corporation but could not transmit the repair details because their phone lines were down. When you got to XYZ Inc. you decided to connect to see if you had any messages as well as to transmit ABC's details. What should you change the status to and which keys would you use to do this, to let the dispatcher know what the status of the XYZ job is?

4. You go on site to do a repair. Once you get started, you realize you need a part that is not kept in stock. You will have to delay this repair and come back when the part comes in. What status should you change the job to?

5. Continuing the situation from Question 4, once you transmit this CSO to the 3000 will the status be changed in FIREMAN? _____
Will the CSO be purged from your terminal? _____
6. You want to reroute a call. You contact your backup CE and she agrees to take the call. She's almost next door at another customer so will go right over. You change the status to 'RL' to indicate a reroute. What other field do you have to fill in before FIREMAN will accept it as a reroute?

7. When you try to reroute the call, you realize you left the modem to transmit in your car. You decide to wait until you get to the next site to send the call back to FIREMAN. Once you get there, you get an error message and FIREMAN won't accept the CSO because it says you're not the CE assigned to the CSO!

(What has happened is that the dispatcher has already reassigned the call to your backup CE. The backup CE probably sent a message to the dispatcher asking her to do this, after she connected to receive your reroute and it wasn't there.)

How are you going to get this CSO out of your terminal?

8. If you transmit a CSO with a status of 'IT', will it be removed from your terminal?

9. Can you reroute a call directly to another CE? _____
10. Can you reroute any call that is in your terminal? _____

Overview

With HCETS, you have the capability to receive general messages from the dispatcher, send messages back to the dispatcher, and send messages to other CEs.

Since these messages are not CSO-related, they are deleted from the FIREMAN data base as soon as they are picked up and will never be kept in history.

The dispatchers will use this facility to send messages to you that are not customer-related. You can send messages back to the dispatcher or to another CE. If you are communicating with another engineer, the message will first go to FIREMAN and then when the second engineer calls in, the message will be transmitted.

This lesson will illustrate the general message features of HCETS.

Learning Objectives

Once you have completed this lesson, you will be able to:

- move from CSOs to messages and back to CSOs,
- enter a new general message for the dispatcher or another CE,
- scroll through different messages in the terminal,
- delete a message.

Messages

Your 75C has the capability to contain messages as well as CSOs. A while ago, we described the terminal as a pile of CSOs. That was not actually true. It is more accurate to say that it is a pile of CSOs as well as a pile of message slips. Each one is kept separately, as though in two different drawers. The 75C can contain up to 9 messages at one time.

When you are looking at CSOs you are in 'CSO mode'. You can only view CSO data not message data.

When you want to look at messages (i.e. go into 'message mode') you must first close the CSO drawer and then open the message drawer. All this means

Lesson 6 – Messages

is that when you're looking at messages you cannot look at CSOs at the same time.

HCETS makes it very easy to define which mode you want to be in. When you want to look at CSOs press CSO (*I/R*). When it's time to look at messages, you press MSG (*FET*).

When you turn the terminal on, you are automatically in CSO mode. If you remember, the terminal automatically displays the oldest CSO in the terminal.

To get into message mode, you just have to press the MSG key. That will display the oldest message in the terminal. You flip back and forth between the two modes by either pressing CSO or MSG. You will stay in the current mode until the other key is pressed or the terminal is turned off.

Message Structure

Every message has three fields. The first field is either TO or FROM. Obviously, the TO messages will be ones you create to send either to a dispatcher or another CE. Messages where the first field is FROM are notes that have been sent to you from the dispatcher or another CE.

The second field is the actual message. It is a free-form 40 character field.

The third field is only used for messages that are sent to you. It is labeled TIMEIN and is the time the call was actually put into FIREMAN. If the call came from a dispatcher, TIMEIN is the time the call was logged into FIREMAN. If the call came from another CE, it is the time he transmitted the message to FIREMAN.

Viewing Messages

Once you are in 'message mode', there are two ways to view the messages. The first way is very similar to the keys you used with CSOs.

NEXT and PREV work exactly the same way. If you are on the TO/FROM field, the TO/FROM field of the next message will be displayed when you press the NEXT key. (Messages are also stacked so the oldest one is on the top.)

If you were on a different field (e.g. message), the same (e.g. message) field of the next message will be displayed when NEXT is pressed. PREV is also the same, however, the scrolling is reverse rather than forward.

You can also use FIRST and LAST with messages. LAST will take you to the newest message in the terminal and stay on the same field as the one you were previously on. In reverse, FIRST will take you to the oldest message in the terminal.

BEGIN and END are also still active. No matter what field you are on, BEGIN will take you to the TO/FROM field of that message. END will take you to the TIMEIN field of that message.

Lesson 6 – Messages

Wrapping Around

You cannot use direct access keys to view the messages in your terminal. You will have to rely on *RTN* or *FWD* to scroll forward through the three fields and *REV* if you need to go backwards.

An additional feature that applies to messages but not to CSOs is wrap-around. If you continue to hit *RTN* you will see the following: *TO/FROM, MESSAGE, TIMEIN, TO/FROM, MESSAGE, TIMEIN*, etc. Basically, if you just kept hitting *RTN* you would eventually see every field of all the messages in your terminal.

When you reach the last field of the last message in the terminal, if you continue to press *RTN* or *FWD* a beep will sound to alert you that there are no more messages.

Sending a Message

Sending a message is simple with HCETS. Whether it is to the dispatcher or to another CE you will do exactly the same thing.

First go into message mode. Then press 'ADD' (*DEL*).

You will be prompted whether or not you want to add a general message. If you type 'Y' or 'YES', you will see a blank 'TO' field for you to fill in. (*RTN* will be interpreted if NO.) You should enter DISPATCH (or the dispatcher's FIREMAN name) or the CE's FIREMAN name or number. If you leave this field blank, it will default to DISPATCH.

You can then press *RTN* to fill in the message.

When you hook up to the 3000, all your new messages will be transmitted. If you happened to enter a name that was not in the data base or entered a CE that was not identified in the FIREMAN data base as having a handheld terminal, the message will be sent back to you. You can then correct the name or delete the message if necessary.

Deleting a Message

You will want to delete messages that are sent to you once you have read them. You may also want to delete messages that you sent to FIREMAN but were sent back because of an invalid name or because the CE didn't have a handheld terminal.

To do this is very simple. All you have to do is first get into message mode and find the message you want to delete. Then press DELETE (*SHIFT DEL*). You'll be prompted to be sure you really do want to delete this message. If you answer 'YES' the message will be gone. DELETE will delete whichever message was displayed when you pressed *SHIFT DEL*.

Complete Lab Project 6 and then do Quiz 6.

Lesson 6 – Messages

Lab Project 6 – Messages

In this lab you will practice creating messages to send to dispatchers and other CEs. You'll also get to use the terminal to view these messages.

1. Turn the terminal on. Get out of CSO mode and into message mode by pressing MSG (*FET*).

It will say *No Entry* because there are no messages stored in your terminal yet. There are CSOs but remember, there in a different "drawer."

2. Add a new message. You can do this by just pressing ADD (*DEL*). Notice that this is exactly what you did to create a new CSO but since you're in message mode now, you'll be adding a new message not a new CSO.

You'll be prompted for *New GMSG*. Answer 'Y' or 'YES' and press RTN. You should then see *TO=[]*. Make the message to the dispatcher, 'JACKIE' and press RTN to enter the message. It should say 'I WILL BE IN CLASS ALL NEXT WEEK'. Press RTN again and you'll see TIMEIN. Remember, you won't use this field when you are sending messages. It's only important in the messages that get sent to you.

3. Add another message. Make the message to JOE (another CE) and the message should say 'REMEMBER INSTALLATION AT CSD WED.'.
4. Begin to add a third message, but when it prompts you for *New GMSG?*, just press RTN. The 75 took this to mean you decided not to add message (i.e. it interprets RTN as NO). Notice that it takes you back to the TO/FROM field of the newest message.
5. Now, really add a third message. Make the message to JOHN (your backup CE) and the message should say 'REMEMBER I'M IN CLASS STARTING MONDAY'.
6. OK. You now have three messages in the terminal. Go back to the very beginning of the very oldest. (You can do this by pressing MSG again.) It should say *TO=[JACKIE]*.
7. Now scroll through all the fields of all the messages by just pressing RTN. Notice the wrap-around when you get to the end of one message. Keep pressing RTN until you get to the last field. You'll hear the beep when you get there.
8. Use BEGIN now to find out who this message was actually sent TO.
9. Now use FIRST to get back to the FIRST message in the terminal. If your display says *TO=[JOE]* then you did not hold down the *SHIFT* key when you pressed *APPT*. So what you actually did was PREV(ious). Try again.
10. Press RTN to get to the Message field of this message. Now use NEXT. You should be looking at the message field for the next message.

Lesson 6 – Messages

11. Press NEXT again. Now press PREV. You should be back at the Message field for the second message in the terminal.
12. Let's say you want to delete this message. Use *SHIFT* and *DEL* to do this.

If you lost the first character of this message rather than getting a prompt asking about a Delete, you pressed the wrong key. What you did was a DELCH (*SHIFT FET*) which is delete character. You wanted *SHIFT DEL* for Delete. You should see the prompt *Delete?*. Answer 'YES'. Pressing *RTN* without entering anything (or just 'Y') would have been interpreted as NO.

You can see that you're put back at the TO/FROM field of the oldest message.

13. Use LAST to get to the newest message.

Lesson 6 – Messages

QUIZ 6

Fill in the answers and then correct the quiz using Appendix A.

1. There are two types of modes in the 75C, _____ mode and _____ mode.
2. You get to the mode you want by pressing either the _____ key or the _____ key.
3. To add a new message you must first be in _____ mode and then press the _____ key.
4. The three fields in every message are _____, _____, and _____.
5. The _____ field is not used for messages that are sent by you.
6. The _____ key will take you to the newest message in the terminal. The _____ key will take you to the oldest message.
7. If you are on the message field of the first message, pressing _____ will take you to the message field of the next oldest message.
8. If you were in the TIMEIN field of a message, you could find out who the message was TO/FROM by pressing the _____ key.
9. Once you have read a message, if you wish to delete it you should hold down the _____ and _____ keys.
10. The first field of a message that is sent by the dispatcher to you will be labelled _____. A message you send to another CE will be labelled _____.

LESSON 7

LOCAL TERMINAL EDITING

SECTION

7

Overview

In this lesson we will try to explain the edits that every CSO goes through. The lesson will not explain the SIS/SORDS requirements; however, it will explain the edits the 75C uses.

Learning Objectives

Once you have completed this lesson you will understand:

- the three different levels of editing,
- how to correct local terminal edits,
- how to correct 3000 controller edits.

Three-Tiered Editing

HCETS has provided three different levels of edits to assure that the data that gets into FIREMAN is correct.

The first editing takes place as you enter data into the terminal. You may have already noticed that certain fields will not let you enter alpha characters in them. The alpha keys are locked out when those fields are displayed.

The second level of editing takes place when you indicate you're ready to transmit data. Before you actually hook up, each CSO is edited within the terminal. Depending on the status assigned to the CSO, certain fields are required. If those fields are not entered, you will not be allowed to transmit that CSO. You can also perform these edits without actually transmitting the CSOs. This allows you to check for errors prior to transmit time.

The final editing is done once you connect. When the controller receives a CSO with a status of 'RC', the CSO is put through the FIREMAN 'DC' edits. You actually go through these edits now when you're on the phone with the dispatcher.

If you pass the edits, the CSO goes into the data base with a status of 'DC' indicating the details are complete. If you fail the edits the CSO will be sent back to you a certain number of times. This number is configurable by area. If you still cannot get past the edits, the CSO will still be accepted; however, it will be in the data base as RC (repair complete, details are not) rather than DC.

Lesson 7 – Local Terminal Editing

Data Entry Edits

As explained briefly above, the data entry edits simply prevent you from making gross errors while entering data.

For the following fields, the alpha characters will be locked out so that only numeric data will be entered in the fields: Received Date/Time, Start Date/Time, Finished Date/Time, Standard Time, Overtime, Travel Time, Sold Time, Work-done-for department/discipline, Miscellaneous Charge Amounts, Quantity, Product Type, Invoice Statement Code, and Item Statement Code.

Repair Class and Charge Description locks out the numeric keys so that only alphas may be entered.

And finally, the TIME function may only be activated if Received Date, Start Date, or Finished Date is displayed.

Local Transmission Edits

Once you have indicated you're ready to transmit, the CSOs will all go through local editing. (You can also perform the edit function without transmitting.)

If the status of the CSO is RA, IT, OS, NC or RC the following fields must have some data entered: Customer Name, Unit, Fault, Received Date/Time, Contact, CSO Key, Office Number, CE number, CSO type and CSO status.

If the status is RC, these additional fields must also be entered: Zone, Start Date/Time, Finished Date/Time, Unit Serial, Repair Type, Part Qty (if part present), CSO type, and CE Comments.

If you have rerouted a call (RL) the CSO message field must have data entered explaining why. CSO status, CSO type and CSO key must also be entered.

If you have voided a call (VO), fill in CE comments, CSO status, Finished Date/Time, and CSO type. You must also blank out all parts information and hours.

Go look in the Pocket Guide again. Go back to the "CSO STATUSES" section. Notice that there is a list of which items are required for which statuses. You can use this if you ever want to check before actually doing the editing.

Lesson 7 – Local Terminal Editing

Terminal Controller Edits

Once you've indicated you want to transmit the CSOs, and you have passed the local edits, the data will be transmitted to the 3000. At that point, any CSO that has a status of RC will be edited further.

Basically the edits that are performed are done to assure that you have entered the necessary fields and that they are entered correctly. To see a full list of these edits, refer to the *FIREMAN Reference Manual - Data Element Dictionary*. All of the edits marked 'RL' or 'DC' will be applied to the CSOs transmitted as 'RC'.

As explained before, if you transmit a CSO with a status of RC and it does not pass the HCETS Controller edits, the CSO is sent back to you with an error message (in the same transmission).

You have a configured (by area) number of times that you're allowed to fail and get the CSO back. When you exceed that, the CSO will be accepted regardless of the data, and the dispatcher will be flagged that there is a problem with this CSO.

For example, say your area allows three tries. The first time you transmit, if you fail some edits, the CSO and the errors are returned. The next time you connect, if the data is still not correct, the CSO and the outstanding errors will again be returned. The third time, however, if there are still errors, you will get the message that the CSO failed but when you go to look for it, the CSO will not be there.

Initiating Editing and Transmission

To initiate the editing without transmitting the CSOs hold down the *CTL* and the *TIME* key. If you want to edit and transmit your CSOs hold down the *SHIFT* and the *TIME* key. You'll notice this function is labelled I/O.

Once you press either of these keys, you will see the message:

*Editing**

If any of the CSOs fail the local edits, you will be given the CSO number that failed.

Format of CSO Number

The CSO Number you will see has a special format.

You may see this number represented in three different ways. Most of the time you will see a regular "CSO Key". The CSO key is the CSO Number, plus the sequence number (which will probably always be zero), plus the item number, plus the message type (it will usually be 41). An example would be 2403A034100141. The actual CSO number is 2403A0341, sequence 0, item 01, message type 41.

Lesson 7 – Local Terminal Editing

The CSO key is the unique identifier FIREMAN uses for CSOs.

If a CSO that you created fails edits, you'll see a slightly different looking CSO key. It will look more like 'AAnnnn', where the A's are alpha characters and the n's are the office number you supplied when creating the CSO.

If you have created a multi-item CSO in your terminal and it fails edits, the CSO key will look much like a normal CSO key only the item portion will be alphabetic rather than numeric.

Failing a Local Edit

If you fail one of the local edits, you will see the following error:

You will see the error:

CSO _____ Fails Edits

An error message listing the fields that failed will overlay the CSO Message field of the CSO that failed. Please note that if you were sending a message back to the dispatcher, you will have to retype the message because the error listing will have written over it.

Before you can look at the error messages, you will have to scroll through the HCETS displayed message (i.e. CSO _____ Fails Edits) for every CSO with an error. You can do this by just pressing any key. Once you have seen all the messages, the program will restart and you can then look for the individual error messages.

The error message you will see has a special format. You'll see a '?' in the first character of the CSO message field, and then some letters separated by spaces. Here's an example:

? M V a P I

The number of letters you see will be the number of fields that are required that you have not filled in at all.

Decoding Local Edit Error Messages

The error message is actually very easy to read.

An example of what you might see is:

? M V a P I

That probably doesn't look easy to understand, does it?

However, what that message means is that you are missing both Repair Type, Zone, and CE comments. You would find the repair type field by holding down *SHIFT M*, you could find the Zone holding down *SHIFT V*, and you could find CE comments by holding down *CTL a*. Do you see the pattern?

Lesson 7 – Local Terminal Editing

Given the error listing, you can correct your errors by filling in the fields required. For all the upper case alphabetic characters in the error message, you can find the missing field by holding down the *SHIFT* key plus that letter. If there are any lower case characters in the error message, you'll find these fields by using the *CTL* key plus the letter.

The "P" error indicates that you have a part error. The number references which part is in error. For voided CSO's this would mean a part is present that shouldn't be. For a CSO at "RC" status, this would indicate that QTY was not filled in for an entered part.

Failing an HCETS Controller Edit

If you pass all the local edits, and begin a successful transmission (we'll explain more of this in the next lesson), all CSOs with an RC status will be edited by the HCETS controller.

If the CSO fails an edit there, you will get the same message:

CSO _____ *Fails Edits*

Again, the error message will overwrite whatever is in the Message field of the CSO that failed.

Failing an edit does not abort the transmission. Once all your CSOs are edited and any error messages have been returned, your terminal will begin receiving any new CSOs or messages.

The format of this type of error message is slightly different than the error message given for failing local edits. These error messages will begin with '??'. The question marks will be followed with up to 9 error codes indicating the first nine errors found by the HCETS Controller.

The error codes are a single alphabetic character followed by a three-digit code. Again, the alphabetic character identifies the field in error, where an upper case letter can be found by using *SHIFT* and lower case letters are found using *CTL*.

All of the three-digit error codes are listed, with their translations, in your *HCETS Pocket Guide*. You can use it to determine the exact error.

Decoding HCETS Controller Edit Error Messages

The error messages from the HCETS Controller are not hard to read either. An example of what you might see is:

?? D597 Y634

This would mean you had two errors.

By the alphabetic characters you can tell the problems are with UNIT (*SHIFT D*) and with F(inished) DATE (*SHIFT Y*).

Lesson 7 – Local Terminal Editing

By looking in the the Pocket Guide, you can see that 597 says "REPAIRED UNIT not found on PRODUCT FILE." This means that whatever is in the Unit field is not a valid HP Product number.

The second error, 634, says "FINISHED DATE must be later than START DATE." You probably manually entered the Finished Date rather than using the TIME function and may have mistyped it. FIREMAN makes sure that all your dates are in a reasonable order.

Finding the CSO That Failed

Whenever you have an edit failure, either local or an HCETS Controller edit, you will need to find the CSO and correct it.

If you have many CSOs in your terminal, you will have to scroll through them until you find the one with a mistake.

There are two different ways to do this. The first involves using the CSO key given to you when the CSO fails. In this case, you would use the direct access key to go to the CSO field (*SHIFT S*) of the first CSO in your terminal. You would then use the NEXT key to scroll through the CSO Keys until you found the one you wanted. You could then use the REV key to get back to the CSO Message field or you could use direct access again (*SHIFT J*) to get to this field.

The other way is probably simpler. The first thing you should do is use the direct access key to get to the CSO Message field of the first CSO (*SHIFT J*). Then use NEXT to scroll down through the CSO Message fields until you find one with a '?' or '??' in the first character. You then have the error message and the CSO that failed.

Complete Lab Project 7 and then do Quiz 7.

Lesson 7 – Local Terminal Editing

LAB PROJECT 7 – EDITS

In this lab you'll get to go through the local edits. You'll get a little practice finding the CSO and also correcting the edits.

1. Turn the terminal on and enter your password. Use the I/O key to initiate the local edits. If nothing happens, you probably used TIME. Remember it's *CTL TIME*. You'll first see the message

*Editing**

A star (*) will flicker on and off to let you know the terminal is still editing.

2. When it's through, you should see the message *CSO AA9999 Fails Edits*. The format of the CSO key tells you this is one that you created. If you had passed all the edits, you would have seen the Customer field.
3. Press *RTN*. Look carefully. The message should have changed to *CSO AB9999 Fails Edits*. You can see that HCETS will give you all the CSOs that failed the local edits at one time.
4. Press *RTN*. You should now be at the Customer Name of the oldest CSO in the terminal. You're back in normal operating mode.
5. Use the direct access key to get to the CSO Message field of this CSO. You should see the error message '? N O P T'. That indicates you failed a number of edits.
6. Now go to *SHIFT N*. Try entering ABC. Notice that nothing happens. This is one of those fields that allows numeric data only. Press TIME to use the automatic clock now and you'll take care of both N and O, Received Date and Time.
7. You should be at 'P' now which is Contact. That was also one of your failures. Enter JILL as the Contact.
8. The last one you have to deal with is T. Go to that field using *SHIFT* and *T*. That's the office field. Enter 9999 for now.
9. The last thing you should do is go back to the message field and reenter your original message. It should say 'WILL YOU LET JACK KNOW I WAS OUT HERE AGAIN'.
10. We're not going to correct the second one now so that you can practice finding the CSO that has failed an edit.
11. Use the *CTL TIME* to initiate editing.
12. Do you see the message: *CSO AB9999 Fails Edits*? Press *RTN* to get back in normal operating mode.

Lesson 7 – Local Terminal Editing

15. We're going to use the second way of finding the error messages. The first thing you should do is use the direct access method to get to the CSO Message field. You should find a valid message there.
16. Now press NEXT. You should see ? T. You've found the CSO that failed. To correct the problem go to the field in error. It's Office. Enter 9999 and you're all set.

We're not going to transmit just yet, we'll do that in the next lab. Go on to the Quiz now.

Lesson 7 – Local Terminal Editing

QUIZ 7

Answer true or false to each question and then correct the quiz using Appendix A.

- _____ 1. The software prevents you from entering alphabetic characters in certain fields.
- _____ 2. If you do not pass the local terminal edits for all your CSOs, you will not be able to transmit or receive any CSOs.
- _____ 3. The listing of errors you receive for a CSO that has failed local edits may not be interpreted without using a reference of some kind.
- _____ 4. To initiate the local edits without transmitting, you should press the EDIT key.
- _____ 5. The error message 'H628' indicates a CSO has failed a local edit.
- _____ 6. All CSOs that pass the local edits and are transmitted will be edited by the HCETS Controller.
- _____ 7. The status of the CSO determines which fields must be filled before the local edits are passed.
- _____ 8. If you pass the local edits but cannot pass the HCETS Controller edits, the CSO will be returned to you infinite times until you correct the mistakes.
- _____ 9. If you fail either a local or an HCETS Controller Edit, the error message overlays whatever was in the Message field of that CSO.
- _____ 10. You must know the CSO Key of the CSO that failed to find it in your terminal.

LESSON 8

TRANSMISSION

SECTION

8

Overview

This lesson will explain a little bit more about the actual transmission procedures. We'll discuss the messages you might receive during a 3000 connect session and how you interpret these.

The lesson will also hopefully answer some questions you may have about protection of your CSOs.

Learning Objectives

After you have finished this lesson you will be able to:

- hook up to the 3000 to transmit and receive data,
- interpret messages you may receive during a transmission.

You will also understand:

- how the HCETS system protects your CSOs.

Transmitting and Receiving

HCETS was designed so that you never have to state specifically whether you wish to transmit or receive. Every time you connect to the 3000, you will both transmit and receive.

When you first connect, any CSO that you have altered will automatically be transmitted to the HCETS Controller. The changes will be communicated to and updated in the FIREMAN data base. This means if you have added data to a CSO it will be added to the FIREMAN data base the next time you connect. As well, if you just change the status, the next time you connect, the status of this CSO will be updated in the FIREMAN data base.

After your CSOs are transmitted, any new messages you have entered will be transmitted to FIREMAN. By transmitting the CSOs and Messages first, the program makes room for any new ones that will be coming from FIREMAN.

After all transmissions are completed, the HCETS Controller checks to see if there are any new CSOs in FIREMAN for the CE who has connected. If there are, these CSOs are transmitted to the 75C.

The Controller then checks for any pending messages. These, too, will be automatically received by the CE.

Lesson 8 – Transmission

Setting Up to Transmit

When you are ready to finally transmit, you will follow the steps described below. Please just read the steps below for now. We will work through them in the lab that follows.

1. Connect the two HPIL cables to the HCETS terminal and the acoustic coupler.
2. Press the *CTL TIME* key. HCETS is now beginning to edit the CSOs. Since we've already gone through this, you should have no edit failures but you will first see the message:

*Editing**

3. Once the CSOs pass the edits, you will see the following message:

Modem Set-up

At this point, HCETS sets the acoustic coupler to ODD PARITY and X-ON/X-OFF protocol. You should see the red light on the modem begin to glow when this is done.

4. If the modem is set up properly, the next message you will see will say:

*Call**

This lets you know you can now make a connection with the 3000.

5. You should dial the FIREMAN system phone number and when you hear the carrier, place the phone receiver firmly in the cups of the acoustic coupler. If you do not get a good seal here, the modem will not be able to pick up the carrier.

If the modem accepts the carrier, the green light on the modem should begin to glow. If you ever think there might be a problem, this is the first thing you should check to be sure you haven't lost the carrier.

Once you have made a connection, you'll see:

*Transmitting**

6. The HCETS Controller will verify your tech number, password and terminal type. Then all your altered CSOs and messages are transmitted to the 3000. It is also at this point where 'RC' CSOs will be edited by the Controller.
7. Assuming no CSOs fail the Controller edits, the next thing you will see when the transmission is completed, is:

*Receiving**

indicating new CSOs and messages will now be transmitted to the 75C.

Lesson 8 – Transmission

8. After all CSOs and messages have been received, the terminal displays a messages summarizing the number of CSOs and messages received:

Rec'd CSO _____,GM _____Errors _____

9. You will have then completed a successful connection. You can hang back up and press any key on the terminal to return to normal HCETS operation.

Display Messages

There are many, many possible messages you could receive during a transmission. Since phone lines are not always reliable, HCETS must be very careful about data integrity.

The messages you could receive are listed as an appendix in the *HCETS Reference Manual* as well as in your *FIREMAN/HCETS CE Pocket Guide*. Please take a look at the Pocket Guide now. Skim through the messages to see the types of errors there could be. (Notice also there's a section which includes the messages you might receive when you're not actually transmitting.)

Every message listed gives the text of the message, a description of why this message would be displayed, and the action you should take if appropriate.

You can see that the messages are separated into two categories. The second lists messages that are related to a transmission session. The second is a list of all those messages that you might receive during normal operation of the terminal. It is the first list we are concerned with now.

Transmission Error Messages

A majority of these messages have to do with data integrity. Others have to do with not getting response from the computer or from the modem.

In many cases, we suggest just trying again or resetting the batteries. Datacomm is a complicated matter all by itself. Transmitting once might cause a problem where the next time you try, the data might go right through. If there is any question of data integrity and HCETS cannot recover, the transmission will be aborted.

The modem batteries are also very sensitive. Be sure to keep them always charged. If you seem to be having trouble transmitting, resetting the batteries may work. All this entails is taking the batteries out, and putting them in again, and then trying again.

If you cannot successfully transmit, there could be a number of reasons. They range from a line problem to a modem problem to an actual 75C problem. There will be one person identified in each Area to deal with these issues. Make sure you know who this is.

Lesson 8 – Transmission

Protection

You've probably come up with a number of questions by now all dealing with protecting your CSOs. Here are some you should know the answers to:

- Could data become "garbage" during transmission?
- Can a CSO be lost during transmission to the 75C?
- Can a CSO be lost during transmission to the 3000?
- Can a CSO in my terminal be overwritten if the dispatcher tries to send the CSO again?
- Could my data be overwritten in FIREMAN once I have transmitted?
- What happens when I run out of room?

The answers follow below.

Protecting Data During Transmission

HCETS uses its own special protocol to ensure data integrity. There are many layers of "handshaking" built into the protocol system to ensure that every byte is correct.

Before giving you "garbage" data, HCETS will abort the transmission. It is close to impossible, then, for you to receive CSO data that is not accurate.

Transmitting to the 75C

There is no possibility that anything could be "lost" during a transmission to your 75C. When the HCETS Controller determines it has a new CSO for you, it reads the CSO but does not delete it from the queue of outstanding CSOs. It then begins to transmit the CSO to you.

Your terminal will send the Controller a flag when it has received the new CSO in its entirety. It is not until the Controller gets this flag that it deletes the CSO from the queue of outstanding CSOs.

Rest assured that this does not delete the CSO from the FIREMAN data base altogether. It's still in there in case you ever lose all your terminal memory and need to have it resent. It's just taken out of the "pending" queue.

Transmitting to the 3000

There is similar protection for transmitting in the opposite direction. Again, there is no way, when you are transmitting data to the 3000, that the data will be deleted from your terminal before it has reached the FIREMAN data base.

Lesson 8 – Transmission

When you transmit a CSO or message to the 3000, it is actually a copy. This copy is then intercepted by the HCETS Controller. The Controller then updates the FIREMAN data base and when that transaction is complete (and successful), sends a flag back to the 75C. It is not until then that the CSO or message will be purged from the 75C (if appropriate).

Overwriting Data in the 75C

You should have no worries about data once it is in your 75C. There is no way that a CSO, once it is entered in your terminal, can be overwritten by the same CSO being retransmitted.

Even though the dispatcher does have the capability to send you the same CSO a second time, you are protected. This capability exists so that the dispatcher can resend your CSOs in case you ever lose the memory in your terminal.

Any time a CSO is transmitted to you, the Controller first checks to see if you already have that CSO. If you do, the CSO is not accepted. The dispatcher will get a message indicating the CSO was a duplicate but you will not be informed of this error. No data in your terminal will be overwritten.

Overwriting Data in the 3000

We've already discussed how this problem is avoided. Remember the cancel status? If two CEs do have the same CSO, CANCEL will protect the real CSO from being overwritten by the wrong one.

However, once the CSO is in FIREMAN (and no longer in the 75C), the dispatcher will bring the CSO up to finish entering some SIS/SORDS details. The dispatcher does have the capability of changing data if necessary.

Storage Restrictions

Your terminal will hold a combination of 7 CSOs or 7 messages. If you reach this limitation, new CSOs and messages will not overwrite the ones already in your terminal.

If the Controller has more CSOs to send you but there is no room, you will get the message:

CSOs Full

The additional CSOs will remain in FIREMAN waiting for you to pick them up, until there is room in your terminal. (You should probably call the dispatcher to find out what these calls are if you cannot clear out your terminal!)

If your messages are full, the new messages will wait until there is room in the terminal. You'll see the message:

Lesson 8 – Transmission

Messages Full

You would then need to read your messages and delete some of them. When you called back in again, you would receive the remaining messages.

And...if both your CSOs and Messages are full, you'll see a message saying:

Mem Full

Complete Lab Project 8 and then do Quiz 8.

LAB PROJECT 8 – TRANSMITTING

This is an "optional" lab. Everyone should read the lab, however, you may not actually be able to do every step. This lab requires that a training data base be set up with a port to access it.

If this data base is not available to you, read through the lab anyway. Follow the steps up to the transmission step (step 5).

If you do have a training data base available, advise your training supervisor that you're ready to do this lab. Make sure that the supervisor logs a call and assigns it to you so that you can receive it when you connect. Have the supervisor send a general message to you too.

Be sure you get the phone number to call to access this data base. It will be different from the one you will use for the actual FIREMAN data base.

1. Turn your terminal on. Let's say that you've been back to that customer with the intermittent problem and whatever you did seems to have worked. The only thing you want to do to that CSO now is indicate the repair is complete and then transmit it. It's the first CSO in the terminal, so it is already displayed. Just change the status to 'RC' by holding down *CTL* and 5.
2. Now, read back over page 8-2/3 to review the actual transmission procedures.
3. Connect the HPIL cables to the modem and your terminal.
4. Press the I/O key. Remember, it's *SHIFT TIME*.
5. When you see the *Modem Set-up* message, note that the red light begins to glow on the modem.
6. When you see the *Call* message, dial the phone number. Once you get the carrier, put the phone into the cups of the acoustic coupler.
7. Notice that you automatically get the *Transmitting* message. That's because HCETS can tell when the line is ready and automatically starts the transmission process for you.
8. You'll see that one of your CSOs actually will fail the edits in the HCETS Controller. You'll see the message *AA9999 Failed Edits*.
9. After a little bit, you should see the message change to *Receiving*.
10. When the transmission is completed you should see the following message:

Rec'd: CSO 1 GM 1 Errors: 1

That tells you received one CSO, one Message and there were one errors, the CSO that failed edits.

Lesson 8 – Transmission

11. Press *RTN* and you should see *Restarting*. You will soon be back in normal operating mode.
12. Now that you have actually transmitted there are a number of things you should look for. Let's start with the two CSOs that were already in the terminal.

These were both CSOs that you had created. They had temporary CSO Keys when you started. Let's look at them now. Use the direct access key (*SHIFT S*) to get to the CSO field. There isn't a temporary key there any more, is there?

13. Now press *NEXT* to look at the second one. There should be a real CSO Key there too.
14. You have a new CSO to look at now as well. Press *NEXT*. You should be looking at the CSO Key of this CSO.
15. Use *BEGIN* to see who the customer is. You should see 'ACME CO.'. Use *RTN* to scroll through all the data you just picked up.
16. Now let's go look at the new message. Press *MSG* to get into Message Mode. Notice that the messages you had entered are gone! The only one there is one that the training supervisor just sent you. The training supervisor can show you that the messages you sent are now in *FIREMAN*.
17. Use *RTN* to look at the message text.
18. We're now going to go back and correct the problems with that one CSO..... First use *CSO* to get into 'CSO mode'. Once you're there, use the direct access key to go straight to the Message field.
19. You can see you have the right CSO because there's already an error message there. If there had not been, you could have used *NEXT* until you did find a message field with an error message.
20. The entire message field says, '?? D597 D614 g645 X636 Z638 1676 1683 2698 3698'. There certainly were a lot of errors. If you look in your Pocket Guide, you'll be able to cross reference them to the following:

D597 - REPAIRED UNIT not found on PRIME.

D614 - REPAIRED UNIT check digit must be numeric or R.

g645 - TRAVEL TIME is required.

X636 - START TIME cannot be earlier than RECEIVED TIME.

Z638 - RECEIVED TIME cannot be later than FINISHED TIME.

1676 - 1st two digits of REPAIR OFFICE must be equal to the 1st two digits of the PART OFFICE.

1683 - PART LOC is required if a PART OFFICE is coded.

2698 - USE CODE is required.

3698 - USE CODE is required.

21. We'll take care of the errors one at a time... The first error 'D597' is one that you very well may see. It indicates that whatever was in the Unit

Lesson 8 – Transmission

field (*SHIFT D*, right?) is not a valid HP product. You've either mistyped the model number or you've entered something that you may think is the model number but it actually isn't.

Go to the Unit field now. It says 7925B, doesn't it? That looks like a good number; you'll actually find it on the front of the disc drive. This is one of the model numbers you need to be careful of. In most cases, what is on the unit is the valid model number. This happens to be one of those exceptions. If you actually looked at the contract number, you'd see the product listed as 7925S. This is just one of those exceptions you'll run into. Change the 'B' to an 'S' now.

22. The second error, D614, is related to the first problem. You're actually allowed to force a unit number through if you really think you have the right number. In this case, you put an 'R' in the last byte of the unit number field. You shouldn't do this unless you're positive you have the right number. You'll find that it causes a lot of different errors, which may cause you other problems.

Since we already changed the unit number, you don't need to do anything to take care of this problem.

23. The next error, 'g645', tells you you tried to transmit this CSO as though all the details were complete but you did not enter a TRAVEL TIME. This is always a required field, even if you just want to put in 0. Go to that field now and enter 0.
24. The fourth and fifth error are certainly related. These messages are telling you that the Received Date/Time, Start Date/Time, and Finished Date/Time are not in chronological order. Go take a look at them. Correct Received Time so that the three dates/times are in a chronological order.
25. The next error, '1676', is caused because your REPAIR OFFICE is 9999 but you entered 1111 in the PART LOCATION office. Notice that the four-character code has a one in the first position. This tells you the error is related to the first part number. Go to the OFFICE field of the first part number now. Change it to 9999.
26. The next error is also related to the first part, '1683'. You haven't entered the LOCATION part for the tech inventory. Go to the LOCATION field and enter 2222. You've now taken care of the first part number.
27. Both of the last two errors are the same. The first is for the second part and the second is for the third part. You're missing the USE CODE in both. Enter an 'N' in both and that should take care of it.
28. When you're finished retransmit it.
29. After you've successfully passed the edits, and completed the transmissions, go look for that CSO. It's gone isn't it!

Lesson 8 – Transmission

Well you've now transmitted, received and transmitted again. We hope you feel somewhat more comfortable with HCETS than when you first started.

It will take a while to really get used to the 75C, but after a week or so of using it, you'll have no problems.

QUIZ 8

Answer true or false to the following questions and then correct the quiz using Appendix A. You may use your Pocket Guide for this quiz.

- _____ 1. The first step in initiating a transmission is to press the I/O key.
- _____ 2. You must specify whether you want to transmit or receive.
- _____ 3. If you fail an edit in the HCETS Controller, the rest of the transmission is aborted.
- _____ 4. You see the message *Invalid Block Type*. This is caused by an error you have made.
- _____ 5. Your transmission is aborted and you receive the message *Transmission Error*. You should hang up and try again.
- _____ 6. If a transmission is aborted in the middle of a session, you could potentially lose data.
- _____ 7. If a dispatcher retransmits a CSO, it will overwrite the one in the terminal.
- _____ 8. A datacomm transmission problem probably means the 75C is broken.
- _____ 9. If you are having problems transmitting, resetting the batteries is a good idea.
- _____ 10. The modem operates as normal until the batteries completely run out.

LESSON 9

A FINAL NOTE

SECTION

9

Summary

You have learned an incredible amount in the last half day or so. There is no way that you can absorb that much in just one sitting. It will take a while for you to digest everything and even longer to really get comfortable with the 75C.

We recommend that you play with the 75C a little bit more. Tomorrow, after you've had time to digest for awhile, sit down and read the *HCETS User Guide*.

Reading this manual is important. Most of the information in the manual is included in the training you worked through. However, there is additional information.

It will be beneficial for you to read this manual because it will be this that you will use as a reference once you really start using HCETS. Spending some time tomorrow will reinforce everything you learned today as well as familiarize you with your reference manual.

The 75C Itself

Remember, as you use the 75C, that it is a small computer. It's not likely that it will be damaged if you drop it accidentally, however, you should never forget that you're dealing with an electronic instrument.

Specifically, if you see either 'batt' or an explicit warning that your batteries are low, DO NOT continue using the terminal until you've changed or recharged the batteries. If you ignore these warnings, you may lose the data in your terminal.

Similarly, if you choose to use your 75C for uses other than HCETS you must be careful. If you ever receive warnings indicating low or not enough memory, if you continue adding to the data in the 75C you may corrupt or lose the memory. This would force you to reload the 75C from your magnetic strips.

Finally, the 75C is sensitive to heat. It can sustain up to 130 degrees in a non-operating mode and up to 113 degrees operating. Therefore, during the summer, you should be careful not to leave the 75C sitting in a hot car for hours at a time.

Lesson 9 – A Final Note

Before You Go Live

If you want to play some more with the 75C, do not do Lab 9 right now. The subsection immediately following are some examples of things you might try doing.

However, it is very important that you complete this lab before you are scheduled to go live with HCETS and the real FIREMAN data base.

This lab will get rid of the data you've entered into the terminal during this training session.

If you do not do this, you will cause extra work for both yourself and the dispatcher.

Things to Try

The list below is just some things you might try doing.

- Make a multi-item CSO.
- Create another new CSO.
- Practice scrolling through these CSOs using NEXT, PREV, LAST, FIRST, etc. using all sorts of different combinations.
- Try making a multi-item CSO for the new CSO you created. See what happens.
- Reroute a call and then transmit it.
- Cancel a real CSO and transmit it. See what happens.
- Try to delete one of your CSOs using the DELETE function.
- Experiment with INSCH, DELCH, CLR, and UNDO.
- Transmit a CSO with a status of 'RC' with lots of bad data. Practice correcting the errors and retransmitting.
- Transmit a CSO with a status of 'RC' and fail the edits. Transmit again without correcting the errors until you fail for the xth time and the CSO is accepted regardless of the errors.
- Try anything else you can think of. You really can't hurt any of the data.

LAB 9

This is the last lab in the *HCETS Self-Paced Learning Guide*. It is essential that you complete this lab before actually going live with HCETS and the FIREMAN data base.

1. Turn the 75C on. Hold down the *SHIFT*, *CTL*, and *CLR* keys down all at once.
2. If you remember from the first lesson, you just cleared out all of the terminal memory. We apologize for making you reload all the software; however, you must do this so that you can start new with only data from the true FIREMAN data base. It's also good practice.
3. Use the instructions in the *HCETS User Guide* to reload all the software.
4. Now that you're done, you're ready to go.
5. You can have the dispatcher initialize your terminal by sending you all your CSOs that are still open on the FIREMAN data base.
6. Don't forget to get the phone number to dial to access the system. You should also check to see exactly what hours the system is unavailable for transmissions.

The procedures in this lab are exactly what you would do if you ever lost the data files in your terminal. You would need to reinitialize the 75C, reload the software, and have all your CSOs resent to you.

These are also the procedures you should follow if you ever have reason to believe the data in your terminal has been corrupted. You should start from the beginning and reload the software, and then have the dispatcher resend your CSOs. If the problem still persists, it may be something else and you'll have to contact the person in your Area supporting HCETS.

Good Luck!

Quiz Answers

APPENDIX

A

Quiz 1

Answers:

1. Two
2. Cool Start and Reload
3. Cool, Reload
4. Cool Start
5. ATTN, TIME, SET
6. LOAD
7. Yes. Actually, all the tracks of one file must be entered before you start another file, however, the tracks of that file can be entered in any order.
8. ATTN (ON)
9. SHIFT ATTN (OFF)
10. It times out after two minutes.

Quiz 2

Answers:

1. Yes, No
2. Office
3. CSO Number
4. Customer Data, Repair Details, Parts Information
5. FWD or RTN
6. REV
7. SHIFT and A or SHIFT UP arrow (BEGIN)
8. CSO TYPE or LAST
9. Overtime
10. Finished Date

Quiz 3

Answers:

1. b
2. a
3. b
4. b
5. d
6. b
7. d
8. b
9. c
10. c

Appendix A – Quiz Answers

Quiz 4

Answers:

1. False. TIME only works if a DATE field is displayed.
2. True.
3. False. You stay in 'insert character' mode until you press 'INSCH' again.
4. False.
5. False. No, 'DELCH' deletes the character under the cursor. CLR clears the whole field.
6. False. Once you've displayed another field you may not 'undo' a previous field.
7. False. TIMEIN and CSO Key are the protected fields.
8. True. HCETS assumes a decimal point; 10 is interpreted as 1.0.
9. False. END will take you to the CSO-TYPE field. You would have to press RTN from here to get to the parts data.
10. False. CTL DOWN arrow and CTL UP arrow will do this, not SHIFT.

Quiz 5

Answers:

1. CTL and 5
2. Void
3. OS – On Site (ONST on the template), CTL 3
4. NC – Not Complete (INCO on the template)
5. Yes, No
6. CSO Message field
7. Cancel it and then wait for the other CE to complete the repair.
8. No
9. No. It must always go through the dispatcher.
10. Yes

Quiz 6

Answers:

1. CSO and Message
2. CSO and MSG
3. MSG, ADD
4. TO/FROM, (GEN)MSG, TIMEIN
5. TIMEIN
6. LAST, FIRST
7. NEXT
8. BEGIN
9. SHIFT and DEL
10. FROM, TO

Appendix A – Quiz Answers

Quiz 7

Answers:

1. True.
2. False.
3. False. By holding down *SHIFT* with each upper case letter in the error message, will find the fields in error. *CTL* and the lower case letters will find the remaining fields.
4. False. You should use *I/O (CTL TIME)*.
5. False. Two '?'s mean the error is from the HCETS Driver.
6. False. Only those with a status of 'RC' & 'VO' are edited by the HCETS Driver.
7. True.
8. False. The number of attempts you get will be configured at your area.
9. True.
10. False. Refer to the lesson to see a way without knowing the CSO Key.

Quiz 8

Answers:

1. True.
2. False. HCETS automatically transmits first and then receives.
3. False. The remaining CSOs will be transmitted and you will receive any new CSOs or messages.
4. False. This is probably a datacomm error.
5. True.
6. False. Refer back to the lesson.
7. False. It will be rejected by the 75C.
8. False. It could mean many different things.
9. True.
10. False. When the batteries are low, you may see an increase in transmission errors.

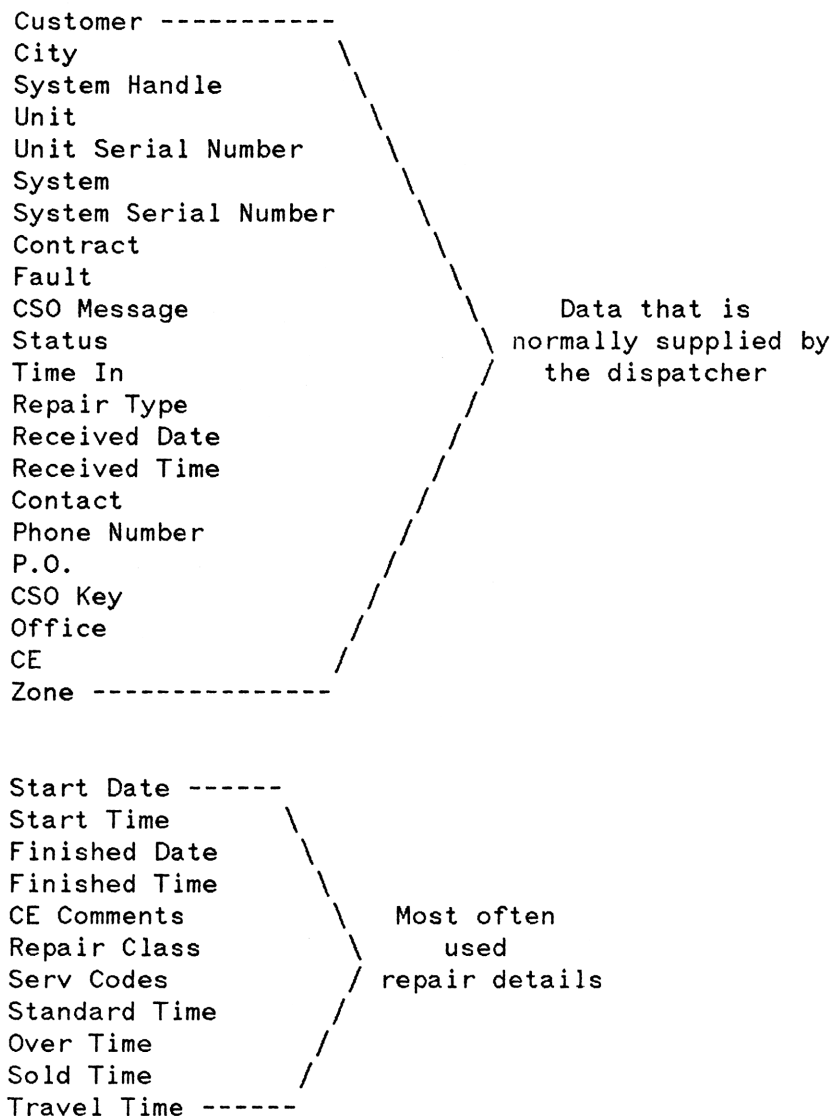
CSO Fields

APPENDIX

B

What you see below is a list of all of the CSO fields that are available to you with HCETS.

They are listed in the order that you would see them if you started at the beginning (Customer Name) and used *RTN* or *FWD* to scroll through every field.



CSO Fields

Work-Done-for Department -----
Work-Done-for Discipline
Safety
Repeat/Delay
Miscellaneous Charge Description 1
Miscellaneous Format 1
Miscellaneous Amount 1
Miscellaneous Charge Description 2
Miscellaneous Format 2
Miscellaneous Amount 2
Miscellaneous Charge Description 3
Miscellaneous Format 3
Miscellaneous Amount 3
Miscellaneous Charge Description 4
Miscellaneous Format 4
Miscellaneous Amount 4
Supply Division
Product Type
Product Line
Invoice Statement Code
Item Statement Code-----

Seldom
used
repair
details

CSO Type ----- needed for every CSO

Part Number -----
Quantity
Office
T/K
Location
Fail Code
Defective Serial Number
New Serial Number
Use Code -----

Parts detail
(occurs 8 times)

**** END OF FORMATTING ****

TDP/3000 (A.03.10) HP36578 Formatter

WED, AUG 14, 1985, 8:07 AM

NO ERRORS

INPUT = CETRNJN.FEWGRP.PRODSUP

OUTPUT = *HP2680