Section 3

General Operating Procedures and Guidelines:

The system operation is straight-forward and designed to be transparent in the general operation of the organ. The system is designed to be transparent and require no intervention on the organists part for normal operation.

New features, revised and improved system features:

The combination action has been designed to have the look and feel of a 'solid state' capture type range-able combination action that most organists are accustom to using. There is one difference. Most Solid State combination actions are limited to the number of combination action 'memories" the organist may have available. Some systems limit the number of memories to 8 or 10. Other systems may have as many as 99. The UniFlex system is virtually unlimited in the number of combination action memories because the combination action settings are simply FILES that are loaded into the PC memory. Once the combination action memory is loaded into memory, it acts just like any other combination action machine. The UniFlex system allows each organist (user) up to 9,999 combination action memory files per system user. The organists may set up multiple system USERS, each with the ability to store 9,999 memories, making this the only unlimited system of it's kind.

Also unique to the UniFlex Combiation Action is the ability to copy the contenets of one combination memory file to another without having to set each files pistons individually. This however requires the necessity of a LOAD and SAVE button for combination action file handling.

Each user may also have 9,999 recording tracks PER user.

Each user may have 9,999 organ definition (specification) files, however, most
use only one, the original organ specification.

The limit of 9,999 files is self imposed. However, if someone has a real valid reason for needing more, we can probably accommodate this.

Controlling the system through COMMANDS:

In general, when you type a system command, the screen will echo back to you in a GREEN highlight, the action taken if the command is accepted. If not, an error message will be returned in a red highlight, giving you some indication of what the error was or the proper syntax to use when entering the command. Commands may be typed in at the computer keyboard, or through the "alphakeys" overlay on the touch screen. Press the ALPHAKEYS button on the control panel to bring up the touch screen keyboard keys.

The system now has the beginnings of a limited subject built in help system. Pressing the F1 key will bring up a general help menu for the area of the system you are currently using. Help keys can also be assigned to console buttons, or to screen buttons that may be accessed by mouse click or by touch screen.

Help on specific topics can be found by typing: HELP followed by the subject you require help with followed by the enter key. Example Help RECORD <enter> will give you help and instructions on how to make a recording. The

help files are incomplete in this version of the system, but should give you the basic information you need for general operation.

If your system was set up for operation with a mouse or optional touch screen, you can use the screen "buttons" to perform commands you previously had to type in from the computer keyboard. Procedures for setting up the mouse or touch screen can be found in the appendix section of the manual.

A special section of this manual explains how to set up and use the combination action portion of the system and the record play features. These are the two areas of the system that most organists should be aware of.

The software is constantly being updated and expanded. In a short period of time, you will be able to down load the latest version of the software from our WEB site.

The system features a 999 step piston sequencer, settable crescendo and SFZ PER combination action memory. Instructions for set up and use of these new features can be found in this section of the manual.

The soft screen buttons have also been revised. In order to use the soft screen buttons, you will need to have a mouse or a touch screen. The following soft button control panel has been included with this release of software:

Help	Organists	System Commands	File Autoload
Keyboards	Comb. Autosave	AlphaKeys	Tools
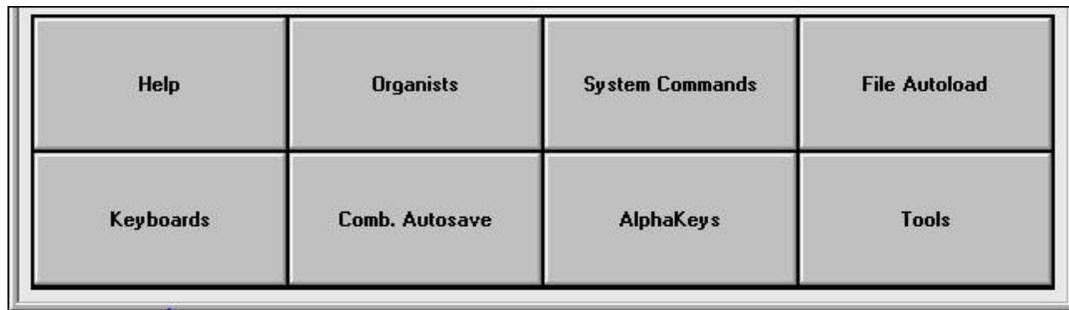
Pressing or left clicking (mouse) on any of these buttons will provide a quick access to commonly used system features. Pressing (clicking) on the **Help** button will display the system help reference (currently under revision).
Pressing the **Keyboards** button will display the realtime console keyboard display.
Pressing the **Organists** button will display the current system USER list.
Pressing the **Comb. Autosave** will toggle the autosave file feature ON and Off.
Pressing the **System Commands** button will display a scrolling list of all the system commands.
Pressing the **AlphaKeys** button will bring up the Touch Screen Alpha Numeric keyboard.
Pressing the **File Autoload** button will toggle the user change D1 and C1 autoload feature On or Off. When you change users, if a D1 and C1 file exist in the user directory, the system will automatically load these files automatically.
Pressing the **Tools** button brings up an overlay window that gives you access to the reset command, and panic restart control buttons.

File Types:

There are SIX types of files used in the relay system, and they have special designation file name letters.

Files beginning with "D" followed by a number; D1 for example, are organ DEFINITION files. This is the file that tells the computer how the input and output (console and chamber) boards are wired, and the specification of the organ .

"C" files, followed by a number are always COMBINATION ACTION files. There may be up to 9,999 Combination Action files per system User. Each C file can be different, including different stop tab settings, and different console ranges.(this will also be explained later in the text).

The Third type of file is a "T" or TRACK file. These are the recording files. Again, each user directory may contain up to 9,999 track recordings.

The Fourth type of file is an "S" or SONG file. A song file is a special type of recording track file. It can contain Multiple track files merged together into one song file. This will be explained in greater detail in the record/play section.

The Fifth type of file is a .PNL file. This is the button control Panel you see on the screen. At the present time, this is a fixed file, but will eventually allow you to custom design your own screen controls. The current .PNL file resides in the C:\UNIFLEX directory.

The Sixth type of file is an .INI file. This is an "innie" file that contains explicit information about your system installation. There is a section in the appendix devoted to the UniFlex.ini file and how to change and tweak the file to your system requirements.

System USERS:

Storage of the definition, combination action and recording files are handled by what we call system USER directories, or simply USERS.

The system may have separate USER directories for each organist or guest organist. There are no limits to the number of system USERS that may reside on the hard disk drive. Users may also be set up on floppy disks to enable you to load and save definition, combination action and recording files directly to user directories on floppy disks. User directories are added to the system with the NEWUSER NAME (8.3 DOS character format) <enter>. Once a user has been added, it's name cannot be changed or deleted unless you do so through DOS using the deldir command. A way to allow you to rename or delete users through the relay system is being worked on.

There are three ways to see what USERS you have on your system:
1) Press the ORGANISTS button on the screen if you have a touch screen.
2) Left Click on the ORGANISTS button on the screen if you are using a mouse.
3) Type USERS <enter> from the computer keyboard.

1 and 2 above will display a panel of assigned user buttons. Simply touch or left click on the mouse to select (change to) the new user name. 3 will display a list tree of the user names. If you want to select a user using the computer keyboard menhod, you simply type the user name <enter> to select (change to) the new user directory.

File NAMES and TITLES:

The Default combination action file is always called the C1 file, just as the Default organ definition is always called the D1 file. Local descriptive names may be attached to the file name as follows: D1 (this is the file name) House definition 4/96 (this is the local description). We call the local description a "TITLE", since the FILE NAME is D1. The System looks for FILE names, NOT titles. To TITLE a file, you simply type TITLE (a space) and the title you would like to give the file. You may use up to 80 letters and numbers in the title name. Pressing the <enter> key finishes the process and sets the title to the file.

Once you give a file a title, you can type DIR <enter> and see the file names and any titles you have assigned them. All three file types may have titles. C1 "Johns comb. action 4/9/96" or T1 "The night before Christmas" are such examples.

Setting Up the Combination Action

As previously stated, when the system initializes, the C1 file will be loaded automatically. You will be starting with this file, and the examples below assume this is the file you will be working with initially. Note! The C1 file that is currently in memory is a shell file and must be setup (ranged) before it can be used. You must not attempt to set a piston in the shell file until you have read the entire discussion on setting up the Combination Action.

Combination Action memories may only be created, saved, or recalled while in the RUN (play the organ) mode. If you exit RUN you loose the ability to play the organ or save combination action files. Generally there is no reason to exit RUN, unless you wish to test something, or alter the definition file.

The combination action is what we call a "range-able", assign-able system. In other words, you are not locked into boundaries of fixed divisions and fixed generals. Every piston and toe stud programmed as a combination action piston may be either a divisional, or general, and all stops may be assigned to any piston, or left neutral. When first set up, all stops are NEUTRAL, meaning they can neither be set or cancelled by the pistons until a range has been assigned.

Combination Action Hardware Definitions:

Before you can understand the combination action, or deal with the definition of it's elements, we must acquaint you with a new term: RANGING. Ranging allows you to define what stops you want to assign to the pistons. Most of you understand how a capture combination action works, you move the stops to the desired position and you capture that combination by setting the piston. But, what determines what stops are controlled by the pistons? Before now, you had no say so in how this was determined. The pistons told YOU what stops they controlled. The RANGE piston concept has changed all of that forever. Now, YOU can tell the system what stops you want controlled by which pistons. Ranging is like setting the pistons to the combination action system.

By turning on a RANGE of stops, or ASSIGNING if you will, the stops you want one or more pistons to control, you can tell the combination action exactly what range of stops each piston is to control. If It's generals, then all the stops in the organ are turned on and that range of stops is then set to the pistons designated as the GENERAL pistons, including the general cancel. If you are setting up the DIVISIONAL's, then all the stops of a division are turned on and that range of stops is set to the the pistons designated as the DIVISION pistons, including the division cancel pistons.

What is unique about RANGING, is that if you have GENERALS, that are suppose to control ALL stops on the organ, but you want to leave out the couplers (making them neutral), you can simply RANGE all the general pistons or just the pistons you choose, to control all stops on the console except the couplers. You now have the ability to set the combination action up as you please.

General Pistons:

General Pistons permit the instant recall of previously stored combination action registration files by simply pressing the appropriate thumb or toe piston. These normally affect all divisions: i.e. control all stops and couplers on the organ. Note, however, that any stops may be programmed to be unaffected by General Pistons.

Divisional Pistons:

Divisional pistons act like generals: i.e. they provide a preset registration, but they affect only those stops, couplers, etc. in the particular division with which the piston is associated. Divisional pistons do not normally affect intermanual couplers, but they can if so desired. Any stop may be programmed to be unaffected by Divisional pistons.

Neutrals:

Any stop on the organ may be set to be neutral from any or all pistons. By assigning the stop as a neutral, it means that it can neither be set nor cancelled by any piston on the organ. The stop would then be manual operation only. It is also possible to set any stop from ever being associated with the combination action or responding to the record/play system. Aside from this, neutrals are voluntary in normal operation.

Cancels:

The General Cancel piston, usually located near the treble end of the Accomp. or Choir (lowest) manual causes all stops on the organ to be turned off. General Cancel and Divisional Cancels may be set up or created (designated) by simply setting nothing on them. Since they are both legitimate pistons, in a pinch, you can always use them as normal pistons!

Set Piston:

The SET piston is used to store a stop registration to a combination action memory file. To SET a general or Divisional piston, first set up the desired registration on the stop rails. Then press and hold the SET piston. Press the piston (General or Divisional) on which the registration is to be set. The computer will "beep" when the piston selected has been "SET" into memory, and written to the disk. Release the selected piston. Then release the SET piston.

Range Piston:

The range piston provides a way of expanding the features of the SET piston.

The Range Concept:

All programmable pistons on the organ (General & Divisional) are range-able. Stops are affected by a particular piston is determined by the range associated with that piston. For example, only stops included in the Great Divisional Range, can be affected by Great divisional pistons. Since the organist can set this range as easily as setting a piston, the organist can decide which stops should be included for use by the Great divisionals. Also, should some stops be added at a later date, these new stops can easily be assigned to the proper divisional pistons by the organist or technician.

You may set "ranges" of stops to each piston, and those "ranges" do not necessarily have to be the same for every piston. Example: You want to have all the pedal stop rail stops and pedal back rail stops ASSIGNED, or RANGED to toe studs 1 through 5. Toe Studs 6 through 10 will control all the Pedal and Great stops.

NOTE! Each time you do a range setup, the system will update the combination action file on the hard drive and at the same time, create a backup 'copy' of the previous settings. Each time you range, or set pistons, the computer will emit a 'beep' to let you know that range and set information has been received.

Step by Step Procedure To set a piston range:

1) Turn *ON* ALL the STOPS you wish to assign to each combination action thumb piston on the console and toe pistons for either GENERAL, or DIVISIONAL operation.
2) Press and HOLD the RANGE button and the SET piston TOGETHER.
3) Press and then release each thumb piston and/or toe piston you wish to range to the stops you have ON.
4) Release the range button.

Specific Example: Setting the RANGE for the GREAT DIVISION PISTONS

1) Turn on ALL the stops on the Great.
2) Hold the SET piston and RANGE button with the thumb and forefinger of one hand. If the RANGE is a switch, turn the range switch ON and then hold the set piston with one of your fingers.
3) Press each division piston on the great manual one at a time with your forefinger, waiting for the computer 'beep' before going to the next piston.
4) Release the SET and RANGE pistons once all the pistons on the GREAT have been ranged. Remember to range any Great division cancel buttons or plates.
5) Press any Great division piston. ALL stops should immediately CANCEL.
6) The Great divisional pistons are now setup and ranged.
7) Use the SET piston to set your Great Division Stop combinations.
8) Look at the screen status indicator lamps in the center of the screen. Check to see if the AUTOSAVE indicator is lit. If so, your pistons have been automatically saved to the disk. You should also see up in the command line a message saying "combination action save time was NNN milliseconds."
9) If the AUTOSAVE indicator is NOT lit up, this means that your combination action file settings were only saved in memory, not written to the disk. You must manually SAVE the combination action file. If this were the C1 file, you would type CSAVE C1 <enter>.
10) If you try to manually save a combination action file (C1), and that file already exists, you will probably get an error message that the file already exists. Again, check the system status indicator lamps. Look for the one labeled OverWirte. If this indicator is not lit, you cannot overwrite a file. To turn the over write feature ON, type OW <enter> and the light will come on. If you are doing this with a touch screen, press the ALPHA KEYS

button just below the indicators and press the O followed by the W keys and then touch the ENTER key. Press the CANCEL key to put away the alpha keyboard keys.

Displaying the RANGE of a Piston:

This procedure assumes you have a separate Range button or switch. In instances where the SET and RANGE buttons are combined in a double touch piston (1st touch SET, 2nd touch RANGE) this will NOT work. The RANGE button must be turned on by itself.

Step by Step Procedure for DISPLAYING (dumping) the RANGE of a Piston.

You can display the range of stops ranged to any piston by simply holding down the RANGE button and pressing the piston who's range you want to see. Procedure:

1)   Hold or turn the RANGE button/switch ON.
2)   Press the desired piston
3)   Release the piston
4)   Release the range button.

As soon as you press the piston, all of the stops RANGED to that piston will turn ON. If your combination action stop magnet power supply is under powered, you may have to press the piston two or three times to dump all the stops, especially when dumping the range of the generals. If you release the range piston, and press the piston again, all stops not set on that piston will cancel, leaving only those stops that are set to ON. If no stops are set on this piston, all the stops will cancel.

The RANGE button is essentially "setting" a range of stops (or looking at it another way, ASSIGNING the stops) to the pistons. Example, To range the accompaniment stops to the accompaniment pistons, manually turn on all the accompaniment and (if desired) all the pedal stops. Press and hold the range button, of if a switch, turn on the range switch. With the range ON, press and hold the set piston. With both the set and range ON, press the accomp manual pistons you wish this range or assign these stops to. If you wanted all the accomp pistons to hold this range, press each piston in the division , waiting to hear the computer 'beep' between pistons. This indicates the computer has received the change information and has saved the change to the current hard drive file.

Press any of the ranged pistons, and all the stops you have on should cancel. The reason they cancel, is at this point, is because they are ranged, but since no combinations have been set, all the stops are set to cancel OFF. Test a few of the stops by turning them on, and then pressing and holding the set piston followed by one of the accomp. pistons. Release the set piston, turn the stops off manually and press the piston you just set. The corresponding stops should turn on.

Once you have the Great pistons set, set up the other manual divisional pistons in the same manner. Remember to wait for the 'beep' before you go to the next piston.

To set up the generals, turn on all the stops on the console, hold or turn on the range, hold the set piston, and then press each general piston and the general cancel. The general cancel in this type of system is simply another general piston, but with nothing set in it.

Stops that are left out of a divisional or general range are considered neutrals and cannot be set or canceled.

Once the pistons are ranged the pistons can be "set" to hold combinations. Each time you set a range, the range settings will be saved on the hard drive in file that is in memory (in this case the C1 file). This is called the AUTOSAVE feature. It is set up in the UniFLex.INI file. At the same time, a backup file is created whenever a new setting is saved to the file. This allows you to go back one save and retrieve a "wrong setting".

If you have made an error and want to use the backup file to restore the previously saved combination action memory, simply use the following procedure:

Check the screen to see what combination action file number you have been working with. For this example we'll assume it was C1. The backup file for C1 is called C1.Bak. The Bak file extension is for BACKUP. If you are sure you want this file back, erase the current C1 file and rename the backup file as follows:

1)   ERASE the C1 file. Type: ERASE C1 <enter> (be sure you want to do this)
2)   Press ESC to hide (clear) the erase confirmation window
3)   Rename the Backup File. Type: RENAME C1.BAK TO C1 <enter>. This will rename the backup file and restore it as the C1 combination file.
4)   Load the newly restored file by typing: CLOAD C1 <enter>.

Once a PISTON has been ranged, it will ONLY control the stops you have selected and assigned, or RANGED to the selected pistons. Ranges may at a later time be expanded, or shortened.

The autosave feature may be temporarily turned off during a session by simply typing AUTOSAVE and press the <enter> key. If you have a touch screen, you can simply touch the **Comb. Autosave** button on your screen. If you later decide to keep the changes, or if you want to save them to a new file, you have two options. You can simply type CSAVE C1<enter> and this will overwrite the current C1 file, or you can save the changes to a new file, by typing CSAVE C# (substitute a number from 1 through 999) <enter>. Typing CSAVE C2 <enter> will create a new file containing all the latest changes under a new name; C2.

IMPORTANT!!! If you have the AUTOSAVE in the OFF mode, and you have added to or changed the current combination action file in memory, all of these changes will be lost if the power is turned off, or if you exit from RUN.

If you want to resume the autosave feature of the system after you have turned it off, simply type AUTOSAVE ON <enter>, or TOUCH the **Comb. Autosave** button on your touch screen. If you are not sure if the file has been saved or not, you can always type a manual save or do a manual save to a new file name. Again, this is done by simply typing CSAVE C# <enter>. You can do a DIR to see what combination action files exist before saving over a file with the same number. This is something you should get into the habit of doing before you overwrite a file you didn't mean to. The software gives you no warning that a file of the same number exists. We have tried to make the system fool-proof, but there is a limit on how far you need to take an issue. You must take some responsibility in file management and be sure that you want to overwrite a file. If unsure, save the file as a high number, like 222. It can always be re-titled or resaved as another file number later on. Use the TITLE command to give your files descriptive titles.

The single session autosave feature On/Off allows a guest to re-range or re-set the combination action pistons without overwriting someone else's pistons. If this person will be a regular or return guest, it is best that he be assigned a USER name so his pistons will always be there when he returns. You don't have to worry about using up valuable combination action memory space, as the system allows thousands of users, each capable of holding thousands of combination action files.

The term System Users will probably be new to all of you. No other system that we know of has this capability.
As organists begin to visit and lay down recordings, each organist may create their own "USER" directory. Here,
they can keep their own organ definition, combination action file(s) and recordings separate from the other users of
the system. It's sort of like having your own private and individual 'locker' at the health club.

The system defaults to the GENERAL user. This is where the house definition and combination action files should
be kept. The General user is a general access directory, and as stated is the directory the system logs onto at start
up.

To find out what USERS are available simply type: USERS <enter> and the user name will be displayed on screen,
or use the mouse to press the ORGANISTS button on the screen display. If you have a touch screen monitor, you
can simply touch the ORGANISTS button on the screen with your finger. To hide the user list or user screen, press
the ESC key on the computer keyboard, or with the touch screen, press your finger anywhere on the command line
or press the cancel button at the bottom of the organists list window and the user list or change artist screen will go
away.

The CURRENT user is always displayed on the main screen display. To the right of the current user is the
Definition file number current in memory, and to the right of the current D file is the current combination action file
loaded into memory. Locate this area on YOUR screen. You can find out instantly what user you are in and what
files are loaded.

| Scanner: 200 | Delay: 8 | Uptime: 7:36 | | Reset: --- | Midi: 0 | Max: 0 | Tot: 0 |
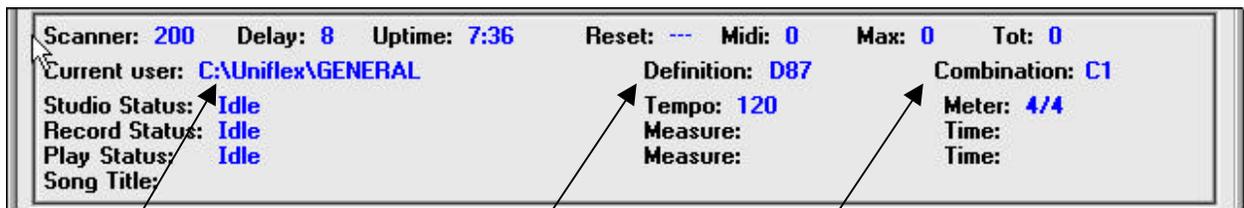
Current User Directory and USER   Current Definition file   Current Combination file

Creating a user directory for a new organist is a very simple matter. You should be in RUN with the default C1
combination action (the 'house' combination action) loaded. The command is NEWUSER followed by the new user
NAME you wish to assign the newuser, followed by pressing the <enter> key.

User names must be 8 characters or less in length, or 8 characters and a .3 character extension (DOS 8.3 file
naming convention). Example: CHRISTOPHER is not a valid user name because it is longer that 8 characters.
CHRISTOP.HER IS a valid user name because it is 8 letters plus a 3 letter extension. It would be best to use
CHRIS as the new user name. This way, you could have CHRIS (without an extension), CHRIS.1, CHRIS.11,
CHRIS.111, etc. as user file names. If you try and use an invalid name, the computer will give you an error
message saying it is unable to create the new user.

Once the newuser name is assigned, the computer will automatically switch to the new user directory. You will also
see a green banner message saying New User "NAME" has been created. You will also notice in the USER
directory area of the screen, the new user name will be displayed.

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Immediately after the new user has been created, SAVE the current house C1 combination action file in the new user's directory. type: CSAVE C1 <enter>.

A green shaded message should appear on the command line saying: Combination action same time was 13 Milliseconds (your millisecond save time may be different).

Next, and very important, type: STOP <enter>. This will put the system into the STOPPED mode. Now you can save the current D1 organ definition file. Do NOT try and save a Definition file while in RUN. You must be in STOP.

Type: DSAVE D1 <enter>. A green shaded message should appear on the command line saying: D1 save time was 330 Milliseconds (your millisecond save time may be different). You're done. You have now created a new user, saved a c1 combination action file and a d1 definition file.

Type RUN <enter> and you're all set up with a new user.

Step by Step Procedure for creating a NEWUSER:

1) From RUN, with a Valid C1 file loaded, type: NEWUSER followed by a valid name. "New User 'name' has been created" will echo back.
2) Immediately save the current C1 file in memory (Csave C1 <enter>).
3) Type STOP <enter>
4) Type: DSAVE D1 <enter> to save the current D1 file in the new user directory.
5) Type: RUN <enter> and play the organ. You are now in the NEW user directory.

To switch to the new user directory, simply type the user name. Example: type: CHRIS <enter>, and the user directory will be changed to Chris, and his D1 and C1 files will automatically be loaded and ready for use. To go to another user or back to the General user, simply type: GENERAL <enter> . The user directory will be switched back to GENERAL, and the D1 and C1 files will automatically be loaded.

At this point, assuming you are still in the Chris user Directory, Chris may now re-set or re-range the combination action to his or her requirements. Any changes he makes in the C1 file in his user directory will be updated automatically IF the autosave feature is enabled.

CHANGING THE RANGE OF A PISTON AFTER STOPS HAVE BEEN SET

If the need arises to add more stops to a range, or delete stops from a piston range, you can do so without worry of loosing the stops settings. To ADD stops to the RANGE, you follow the same procedure you did when you set up the range the fist time, turn *ON* all the stops in the existing range, or hold the RANGE button and press the piston you wish to expand. This will DUMP the range settings by turning on all the stops in the existing range. Now, you can add, or turn on any new stops you wish to include in the new range. The new stops will be turned on in addition to the previous stops dumped when you held the range button and pressed the piston you wish to change. Once you have added the new stops to be included in the new range, Hold the RANGE piston and the SET piston, then press the pistons you wish to include in the new range.

The stop settings you previously set will still be there, but now you can set the new stops onto the newly ranged piston(s).

If you want to delete stops from the range of a piston(s), you follow the same procedure, with one exception. First, Hold the Range button and press the piston you wish to re-range. This will DUMP the current range. Now, turn *OFF* the stops you have selected to remove from the range, then hold the RANGE and SET pistons, and then press the combination action pistons you wish to re-range. The new range will have removed the stops you turned OFF from the previous range.

The only way to truly understand the extended ranging capabilities of the system is to experiment and play with the system. Make some test files and work with them until you understand what the system can do.

Settable Crescendo Pedal:

The system now supprts a settable crescendo from the stop keys on the console. The stops are set to the crescendo just like you would set stops to the combination action, except instead of setting individual stop settings to a piston, you set them to a position number of the crescendo pedal. An on screen indicator tells you the position of the crescendo pedal as it is moved. The range of the crescendo is 000 (off) to 255 (full on).

To manually SET a position on the crescendo, enter the crescendo mode by typing PC (shortcut for Program Crescendo) and press the enter key. Move the crescendo shoe to the desired position. This will be indicated by the three digit display in the crescendo indicator window. Move the stops you wish to program to the selected position, then press the SET piston. You will hear a beep and a message will appear on the screen telling you that position ### has been set. Move the crescendo shoe to the next desired position and repeat the same procedure. Stops may be additive or subtractive. You may NOT save a setting to position 000. This is the crescendo OFF position. You may also leave "blank" positions (spaces) between number settings. Nothing will happen in the positions that are not set.

To DISPLAY the stop settings you have set, while still in the PC (Prog. Cres.) mode, move the shoe to the 000 position. Hold the RANGE switch down. Slowly advance the crescendo shoe. As you move from position to position, the stops will respond mechanically and indicate what stops have been set on each position.

To return to the normal organ operating mode, press the ESC key to exit the crescendo programming mode. You may re enter the crescendo programming mode at any time to modify your crescendo and SFZ settings, simply by typing PC <enter>.

Note that EACH combination action memory may have separate and different crescendo and SFZ settings. It is suggested that you set up your C1 combination action file with a basic crescendo and SFZ setup as your base-line file, then save that file as C2, C3, C4, etc . This way, each time you create a new combination action memory, you will have the bare essentials of a crescendo and SFZ that can later be expanded.

SFZ PROGRAMMING

In this version, The SFZ (Sfortzando) is simply position 255 of the crescendo that is tied to a button rather than the crescendo pedal. SFZ is setup and programmed the same way as the crescendo. When setting up the SFZ, it is important to make sure the crescendo pedal is OFF, or at indicator position 000. Type PC <enter> to get into the setup mode, then press your SFZ reversible button. This will activate position 255 of the crescendo. Make your stop selections and press the SET piston. This will set position 255 to full organ. When finished, remember to press the ESC key to exit the programming mode. To display what is set on the SFZ, enter the programming mode,

hold the RANGE switch ON, then press the SFZ reversible button. Release both buttons. The stops that were set will mechanically turn on. Press the ESC key to exit the programming or display mode.

NOTE: In this version, if you set position 255 as your Sforzando, two things will happen.
1) The Sforzando will be the same as running the crescendo pedal to position 255.
2) When the Sforzando is active (ON) the crescendo pedal will be over ridden by the Sforzando.

We are working on making the Sforzando a separate list from the crescendo.

If you have a touch screen, or are using a mouse, you can use the crescendo control panel to set and edit the crescendo settings more precisely. Refer to Section 4 for setup and control features.

PISTON SEQUENCER PROGRAMMING:

The Piston Sequencer programming (if you have a piston sequincer set up) is essentially the same as the crescendo. To enter the sequencer programming mode, you type PS (Program Sequencer) followed by the enter key. Again, like the crescendo you cannot program position 000 of the sequencer. Press the UP button to position one. Create a combination of stops you would like to store at position one. Press the SET piston and that combination will be storred. Press the UP button to position 2, repeat the same procedure. You may also advance the sequencer position indicator, then press a combination action piston, and then press the SET piston to capture the stop settings of your combination action pistons in the piston sequencer.

If you have a touch screen, or are using a mouse, you can use the Piston Sequencer control panel to set up and edit the Piston Sequencer settings more precisely. Refer to Section 4 for setup and control features.

Press the ESC key to exit the piston sequencer programming mode.

The piston Sequencer creates piston positions on the fly. You may have up to 999 positions in each file. At present only one sequence file is allowed per combination action memory file.

RECORD AND PLAY BACK -- SINGLE TRACK FILES

Recording and playing back are very simple procedures. Generally, the installer includes a RECORD and a FINISH button located on the console or in a swing out panel. If these buttons do not exist on the console, you can use the computer keyboard to accomplish the same thing. By pressing the RECORD button, you automatically put the organ into record.

RECORDING

You can start a recording two ways. You can either press the RECORD button (if installed) at the console, or you can type R <enter> on the computer keyboard. This puts you in the record setup mode. The recording will start when a key, stop or piston is activated. The recording will continue until the system is given a command to end or FINISH the recording. Recording is held in memory, and is written to the disk every 10 seconds. When you have finished a recording, you should press the GENERAL CANCEL to cancel the stops and then either press the FINISH button (if installed) or type F <enter> on the computer keyboard. If you have an optional touch screen monitor, you may simply touch the FINISH button on the monitor screen. If the computer or organ is turned off before the recording sees a finish command, all but the last 10 seconds of the file WILL be automatically saved.

Your computer system must have at least 16-megabytes or more of system memory to handle the record/play features of the system. The system is capable of recording continuously until the hard drive fills up. On some of the larger drives, this could be several thousand hours.

Step by Step Procedure for RECORDING:

1) You must be in the RUN mode to record.
2) Type R <enter> to begin the record setup. Using this abbreviated command, the computer will select the next available track number for recording.
3) Press any piston, turn on a stop, or play a key and the recording will begin.
4) When finished, press the GENERAL CANCEL to cancel the stops on the console.
5) Type F <enter> on the computer keyboard, or press the FINISH button on the touch screen monitor to FINISH the recording.

Recording procedure for a specific track number recording:

The R command, will automatically allocate the next available track for recording, or you may specify a track number. As discussed earlier, recordings are designated as Tracks and may be numbered from 1 through 9,999 per user directory. To force a designated track recording, you would type: R5 <enter> This would select TRACK 5 or T5 and would set up the recording to start upon any change at the console. You may select any (track) number from 1 to 9,999. If the track is already in use a warning screen appears telling you that the file already exists if the OVERWRITE flag is set to OFF (default). If the file OVERWRITE feature is disabled, the OVERWRITE indicator on the run screen will be illuminated. If you try and overwrite an existing file, an error message will appear in the command line of the screen.

Step by Step Procedure for Recording a Specific Track Number:

1) Check the directory. Type: DIR T <enter> to list ONLY the previously recorded TRACKS. If none exist, the directory screen will come up blank.
2) Type: R followed by the TRACK NUMBER you wish to use and press the enter key. Example: R8 <enter> Track 8 will be set up to record as soon as a stop, key or piston is activated.
3) Begin playing
4) Press General Cancel to cancel your stops when finished with the piece.
5) Type: F <enter> to FINISH the recording.

To PLAY BACK a recording, you must be at the computer terminal. To see what is available for playback, type DIR T <enter>. This will bring up the TRACK directory of the current user. Anything with a designator T in front of it is a recording track. The command PLAY or shortcut P is used followed by the track number. Play assumes you mean play a TRACK file, so the command line need not include the T designation. Playback syntax is a follows: Assume there are 3 recording tracks in the current user directory. These are tracks 1,2,and 3. To Play back track 1, you may type: PLAY 1 <enter>, or P1 <enter>. Both of these conventions mean the same thing. You may find it easier to just type P1 <enter>.

To Juke box tracks, you would type P1,2,3 <enter> or P1-3 <enter>. This will play track 1 then track 2 and end with playing track 3. You could also type: P3,1,2 and the system will play them in a different order. At this time, there is no provision in this version of software for saving a juke box type "play-list" file, so for now, you will have to type in your play list manually. If, however you have 10 or 12 tunes you wish to play in succession, you may use the

following shortcut command: P1-12 <enter>. This will play tracks 1 through 12 in succession, and in ascending order.

Refer to Section 4 on using the Record and Playback Control Panels for use with a touch screen or mouse.

STOPPING or KILLING a playback.

If you need to stop a track, or kill a string of playbacks, you may type
F or FINISH <enter> to stop the current track from playing. If you have a jukebox or string of files set to play, you must either stop each of them manually with the F command, or type KILL <enter> which will kill the entire string of playback files in the Que.

MULTI-TRACK RECORDING

This system is uniquely different from any other system in that we are able to accommodate true MULTI-TRACK recording. These are not simply over-dubs, or additive tracks, but each track represents a totally separate console recording, with each track totally independent in keying and combination action from the previous track(s). Multi-track setup is straight forward, when recording, but playback requires some understanding.

Multi-Track Basics.

An Example is the simplest means of understanding.

1) Start a recording (t1). To do this, type R1 <enter>.
2) As soon as you touch some keys or turn on a stop, the recording will start. Play chopsticks or some simple little tune.
3) When finished, type F <enter> to finish (end) the recording file.
4) If you are going to record many tracks for this piece of work, you should keep the swells closed until the final track, and use that as the master expression track. Once expression has been set, subsequent tracks can only ADD to expression, not take away. If you record track one with full expression, you cannot diminish the expression in subsequent tracks. You can always add expression as long as you have expression to add!
5) Now that track one is in the can, start a second recording. R2<enter>.
6) Now, you want to play back track 1. Before you do anything at the console, type P1 <enter>.
7) When Track 1 starts to play, it will automatically start the recording of track 2. Now play harmony with the track one.
8) Once T1 finishes out, type F <enter> for track two. It is important that you do not type FINISH for track 2 before track 1 finishes out on its own.
9) Next, start a recording for track 3. R3 <enter>. Now start the playbacks of track one and two.
10) To do this, you must enter the command to start a multi-track play back. This is the most confusing part.
11) To play a multi-track, you type P(#,#), or P(1,2) <enter>. Track numbers in parenthesis () mean play these tracks together, as a multi-track recording not juke-box style. When tracks 1 and 2 begin to play in multi-track, it will start the recording for track 3, and so on.

Once you have finished your multi-track piece, you may replay it in the following manner:

1) To play the entire piece together, you would type P(1,2,3,4,5,6) <enter>. This command will take tracks 1,2,3,4 5,6 and play them as a complete song, all completely synchronized with each other.

2) If you want to preserve the multi-track recording, you can MERGE all of the individual tracks into what we call as SONG file. A song file is an easy way to take all of the multi-track parts of the piece and merge them into a single file, called a SONG.

3) The procedure to merge tracks 1,2,3,4,5 and 6 into a song file is as follows:

4) MERGE T1,2,3,4,5,6 INTO S1 <enter>.

5) Once this is done, you will get a message telling you that the tracks were merged and that S1 (song-1) has been created.

Now when you check the directory, you will see that there is an S1 file in addition to the other definition, combination and Track files that exist in the complete directory (DIR). Also note that the original T files, t1-through t6 are still in the directory. The system makes copies of the original files, then merges the copies into the song file, but leaves the originals alone.

To play a song file, the procedure is still the same, you just call the file by S (for SONG) instead of T (for TRACK).

To Play S1, you simply type: P S1 <enter>.

If you start getting a mix of Track files and Song files in the same directory, the system will default to looking for SONG files first. If you simply type P1 <enter>, the system will search for S1 before T1. So, in the case of mixed files, you must begin to specify the track type you wish to play. You will have to type: P T1 <enter> in order to play track 1, and P1 <enter> for SONG 1. Remember, S# is the default type. As soon as you play around with this for a while, it will become quite clear how things work.

Note that if you are doing multi-tracking, you can give each of the track parts a TITLE for identification. The system automatically time and date stamps the tracks, but a title is optional. To give a track a title, you use the following syntax:

Title T[#] [your title up to 26 characters] <enter>. Example:
Title T1 1st part of W Tell <enter>

If you want to know what tracks are contained within a song file, you can use the INFO command to identify the tracks. To do this, type: INFO S1 <enter> and you will see a display similar to this:

Track Information for S1:

S1 Fri 10/24/98 11:45:45

<T1> Fri 10/24/98 11:02:33
<T2> Fri 10/24/98 11:03:44
<T3> Fri 10/24/98 11:04:11
<T4> Fri 10/24/98 11:06:32
<T5> Fri 10/24/98 11:09:01
<T6> Fri 10/24/98 11:33:07
Had you given the files individual titles, the display would look like this:

Track Information for S1:

S1 Fri 10/24/98 11:45:45 William Tell Multi-Track

<T1> Fri 10/24/98 11:02:33 1st part of W Tell
<T2> Fri 10/24/98 11:03:44 2nd part harmony of W Tell
<T3> Fri 10/24/98 11:04:11
<T4> Fri 10/24/98 11:06:32
<T5> Fri 10/24/98 11:09:01 …etc, you get the idea.
<T6> Fri 10/24/98 11:33:07