This is an early version of the manual. The chapters describing the tracker is not complete.

ACE
T R A C K E R

A New Beat production in 2003
for the ATARI Falcon030

Rights

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Table of contents

1 Getting started

ACE is delivered on both CD and floppy disc. This chapter describes how to install the program and getting started using the program.

1.1 Start the program

Unzip the ACE Tracker archive. Start the program by clicking on the ACE.PRG file.

1.2 Requirements

The requirements for running ACE are:

- At least 4 Mb ST-ram.
- A colour display. ACE does not work with monochrome monitors such as the ATARI sm124.
- An ATARI compatible mouse.
- A IDE or SCSI hard drive

*For information on how to copy files, see your computers manual.

1.6 Connecting

The figure below shows an example how you can connect the Falcon running ACE Tracker.

Effect box

Left   Right

Mixer

ACE

Output 1 (L)
Output 2 (R)
Output 3 (Send 1)
Output 4 (Send 2)

Falcon030 running ACE MIDI.
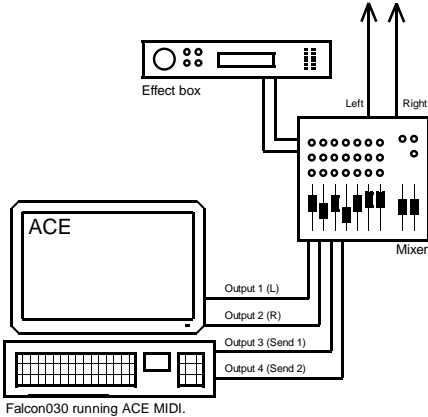
2 Interface

ACE has 3 main sections; patch edit, message window and edit section. The edit section has 3 different editors; pattern edit, patch overview and master.

2.1 Program overview

2.1.2 Patch

2.1.3 Message window
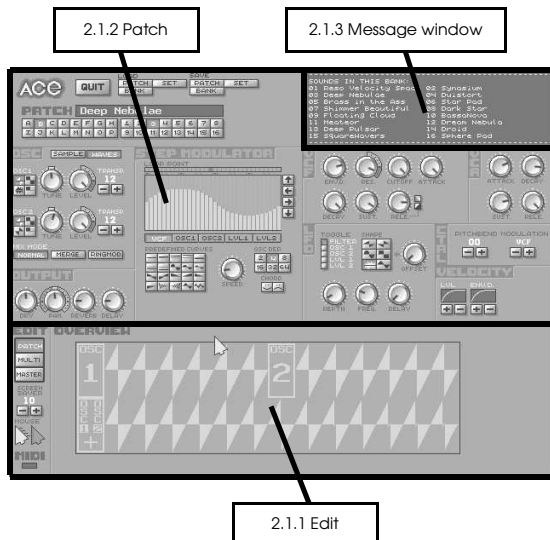
2.1.1 Edit

2.1.1 Edit

The EDIT section of the program is the workspace for a number of editors. The three big buttons to the left, are the selectors for which editor you want to enter.

3.3 Patch

13 Tracker

12 Master
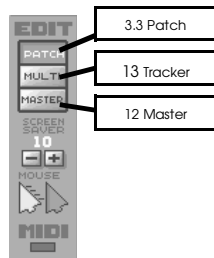
2.1.2 Patch

In this section of the program, all the patch editing is done. All patch parameters is found in this section of the program. The sections are divided into several subsections for each controller. Read more about the controllers in their respective chapter.

11 Patch

5 VCF   9 CTRL   4 VCA

8 Output   3 OSC   6 Step modulator   7 LFO   10 VEL
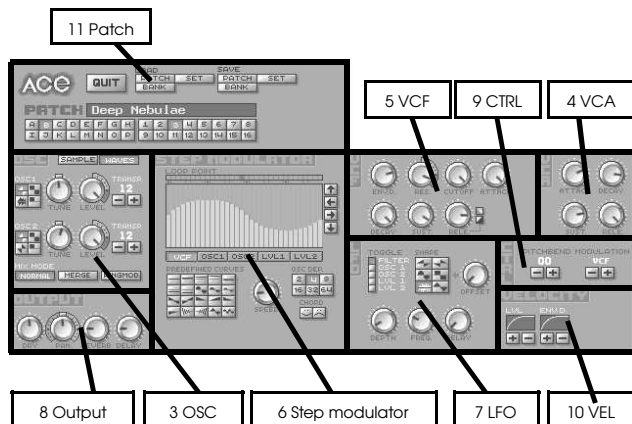
2.1.3 Message window

The message window in ACE is there to give help and important information. You should always read what is written in the message window. It also displays patches when you click on one of the BANK buttons, this makes it a lot easier to find the sound you're looking for.

The message window, currently displaying the sounds in one of the banks.
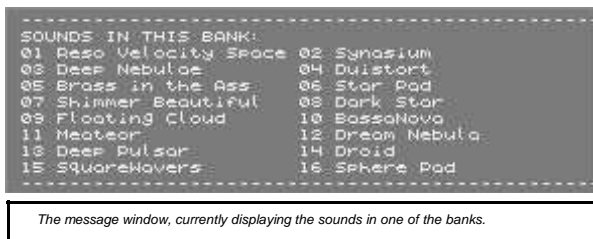
2.2 Mouse

Most functions in ACE are only possible to edit by using the mouse. There are functions that behave differently depending if you use the left or the right mouse button. For example, sometimes it's necessary to have the fine-tune knobs of oscillator 1 and 2 exactly the same (see 3.2.2 Mix mode). Turn the fine tune knob by using the right button and both oscillators fine-tune will be set to the same value.

2.3 Keyboard

When editing patches you may want to test the patch you have created without playing from a MIDI device. This is possible by playing notes on the computers keyboard. A note can be trigged from most of the alphabetic keys on your computers keyboard. It is always the active patch in the top on the screen that is triggered.

2.4 Knobs

Some of the patch parameters in ACE is set by knobs. To turn these, click and hold the knob and move the mouse up/down OR left/right to increase/decrease the parameter value.

Do this way…   *…or this…*   *…but NOT this!*
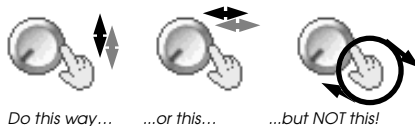
2.5 Plus/Minus buttons

The plus/minus buttons in ACE sometimes behaves differently depending on if you use the left or right mouse button when you click on it. For example, the transpose parameters in the OSC section will increase/decrease by 1 if you use the left button and by 12 (one octave) if you use the right button.

3 Oscillators

ACE has two oscillator modes; wave and sample. The wave mode has 4 different waveforms and the sample mode let you use a sample as oscillator.

3.1 Sample

Enable the sample mode by clicking on the SAMPLE button in the OSC section. You can load samples by clicking on the LOAD button beneath (see 3.1.2 Load). To choose from the samples loaded in memory you can click on the buttons marked with "+" and "-".

3.1.1 Load

To load a sample into memory, find a sample index that does not have a sample loaded, or remove (see section 3.1.3 Remove) the sample you have selected. Then click on the "LOAD" button and choose the sample you want to load in the file selector. ACE supports WAV and AVR file formats. Note that samples larger than the currently available memory will not be loaded. It is not possible to load samples larger than 20000000 bytes.

3.1.2 Remove

This button will remove a sample from memory. All patches using this sample will be set in WAVES mode. When a sample is removed it will give the memory it was using back to the system for another sample to be loaded.

3.1.3 Sample points

There are 3 sample points to set. The first one is SAMPLE START, which defines the location of where you want the sample to start playing. The other two are loop points, LOOP START and LOOP END. When the sample reaches the loop end point, it will jump to the loop start point and continue playing from there. If you don' t want any loop, just set the loop start and loop end to the same position. It is also possible to set these points graphically (see 3.3 Patch edit).

3.1.4 Transpose

The transpose parameter let you set the key for the wave in half note steps, 4 octaves up or down. The left mouse button increases or decreases the transpose by 1, and the right by 12, one octave.

3.1.5 Fine tune

In addition to the transpose parameter, It' s also possible to change the tuning in finer steps by using the fine tune knob. Simply move the knob until you get the tuning you want.

3.1.6 Level

The level knob sets the volume for the sample patch.

3.2 Waves

Enable the sample mode by clicking on the WAVES button in the OSC section. The wave mode's two oscillators build the oscillator and they have separate controllers for tuning and volume. The mix mode gives you even more variation when creating sounds (see 3.2.2 Mix mode).

3.2.1 Oscillator

The wave mode has two sources, oscillator 1 and oscillator 2, both periodic waveforms. The waveforms for the oscillators respectively are:

Oscillator 1	Oscillator 2
● Sawtooth ramp up	● Sawtooth ramp up
● Square	● Square
● Noise	● Sawtooth ramp down
● Square positive	● Square positive
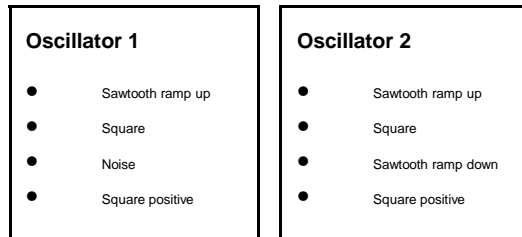
3.2.2 Mix mode

The mix modes let you choose between 3 methods of mixing the two oscillators together. NORMAL is what the name suggest, normal mixing. It adds oscillator 1 and 2 together. Here, you can also set the waveforms volume individually by turning the LEVEL knobs. MERGE mixes the oscillators by using Exclusive OR. The last one, RINGMOD multiplies oscillator 1 and 2. It' s not possible to set the volumes individually in the later two modes. To give even more mixing possibilities there is a knob called OFFSET in the MERGE and RINGMOD modes. This let you choose the phase of the OSC 1 waveform, where the waveform should start. This is mostly useful when the fine-tune and transpose parameters of oscillator 1 and 2 are exactly the same.

3.2.3 Transpose

The transpose parameter let you set the key for the waves in half note steps, 4 octaves up or down. The right mouse button increases or decreases the transpose by 12, one octave, the left one by 1.

3.2.4 Level

The level knobs sets the volume for the oscillators. If you use MERGE and RINGMOD there is only one level knob for the mixed oscillator.

3.2.5 Fine tune

In addition to the transpose parameters, it' s also possible to change the tuning in fine steps, by using the fine-tune knobs. Simply move the knob until you get the tunings you want. Sometimes it's necessary to have both oscillators fine-tune exactly the same. To achieve this, turn the knob with the right mouse button. This way, if you change the first oscillators fine-tune, the second oscillator will be updated to the same value as the first oscillator, and v.v.

3.3 Patch edit

Sometimes you may want to see what your patch looks like graphically, then click on the PATCH button to the left at bottom of the screen.

3.3.1 Wave overview

The OVERVIEW window let you see your patch graphically. For patches using WAVES mode as oscillator source, the window will display both oscillators plus the resulting wave, coming from the mix of the two oscillators.
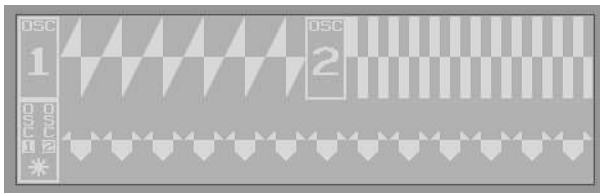
This figure is showing a sawtooth waveform for OSC 1 and a square waveform for OSC 2. This sound uses the "RINGMOD." mix mode.

3.3.2 Sample overview

The sample overview let you see what the sample you are currently using looks like. It is also possible to change the sample points by moving the bars around the window. To do this, click and hold the bar you want to change and move it to the location you want. To zoom in the sample, left click on the lower half of the window. To zoom out, click on the right button. You can also scroll the sample by clicking in the upper half of the window. Just click and hold the left mouse button and move the mouse to the direction you want the window to scroll. The sample will now automatically scroll until you release the mouse button. If you do the same with the right mouse button, the window will only scroll as far as you move the mouse.
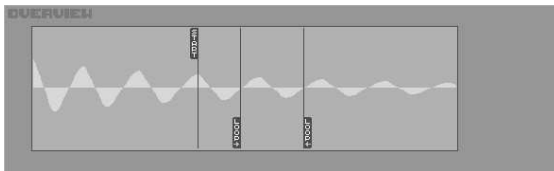
This picture is showing a sample with its sample point bars.

4 VCA

VCA is short for Voltage Controlled Amplifier. Basically, it is a volume controller that changes over time based on how the parameters of the VCA envelope is set.

4.1 Attack

The attack parameter defines how fast the patch will fade in. A low value makes the VCA fade in quickly and a high value will give a slow fade in. The attack parameter is useful to give a sound the characteristics of a "hard" or "soft" sound.

4.2 Decay

While the attack sets how fast the sound will fade in, the decay parameter defines how fast the sound should fade out. The sound will not fade out to silence though. It will fade out to the value defined by the sustain (see 4.3 Sustain).

4.3 Sustain

The sustain level is the value which will be "hold" as long as the sound is playing, e.g., while you hold a key on your keyboard or synthesiser. If the sustain is set to zero, the sound will automatically be "killed" as soon as the decay has reached zero.

4.4 Release

When a key on the synthesiser is released, the release parameter decides how fast the sound will fade out.

4.5 Diagram

The diagram shows how the different parameters affect the amplifier over time.

The diagram shows how the different parameters affect the volume over time.
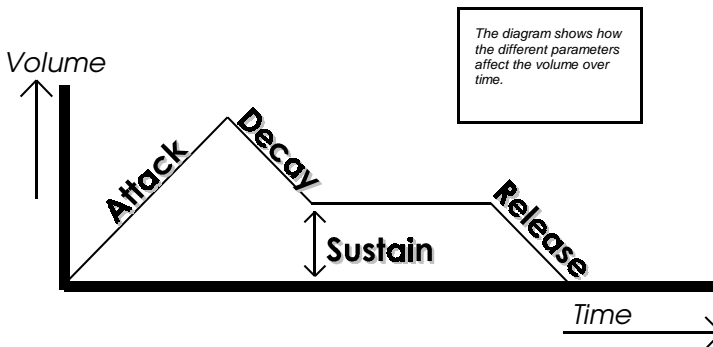
5 VCF

VCF is short for Voltage Controlled Filter. The filter in ACE is of the type low pass. Low pass means that the filter removes high frequencies and lets low frequencies pass. The different parameters defines how the filter should open and close over time.

5.1 Envelope depth

The envelope depth defines how deep the envelope can go. If you set this parameter to the minimum value, the ADSR (Attack, Decay, Sustain and Release) paramters won't affect the envelope at all. If you set it to maximum, the envelope will have full depth and the filter will open and close according to the ADSR parameters.

5.2 Resonance

The resonance sets the peak level of the filters cut-off frequency.

5.3 Cut-off

This parameter is the main level of the whole VCF envelope and it controls how much the filter can open in total.

5.4 Attack

The attack parameter defines how fast the filter sound open. A low value makes the filter open quickly and a high value will make the filter open slowly.

5.5 Decay

The decay parameter defines how fast the filter sound close, going from the fully open filter down to the sustain level (see 5.6 Sustain).

5.6 Sustain

The sustain level is the filter value which will be "hold" as long as the sound is playing, e.g., while you hold a key on your keyboard/synthesiser.

5.7 Release

When a key on the synthesiser is released, the release parameter decides how fast the filter should open or close (see 5.8 Release slope).

5.8 Release slope

The two buttons to the right of the release knob let you decide if you want the release envelope to have a positive (open filter) or negative (close filter).

5.9 Diagram

The diagram shows how the different parameters affect the filter over time.
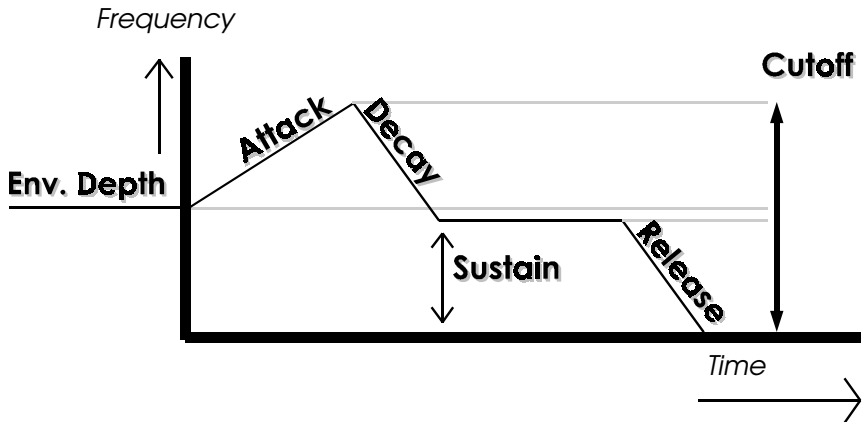
6 Step modulator

The Step modulator in Ace could be described as a LFO (see 7 LFO), an envelope (see 4 VCA and 5 VCF), portamento or even a sequencer. It has 32 steps that can be set individually for filter, frequency and volume. You can draw your own curves with the mouse or use one of the 20 predefined curves.

6.1 Edit a curve

The 7 buttons under the bar window let you decide which one of the parameters to edit. There are 5 parameters to edit (Filter, Oscillator 1 frequency, Oscillator 2 frequency, Oscillator 1 volume and Oscillator 2 volume). Click on the button of which parameter you wish to edit. The "&" buttons can be used to edit frequency and level curves by pairs.

Each bar in the curve represents a value between 0 and 63. There are two ways to edit these values; absolute and relative. By using the left mouse button and drag a bar, the bar will increase or decrease relatively to the mouse movement. The right mouse button sets the bar value to the current position of the mouse. The latter makes it possible to "draw" a curve. A max bar value (value 63) opens the filter as much as possible, and a value of 0 represents a closed filter. The same procedure applies to the volume curves. The oscillator curves has a zero point in the middle of the curve. Values lower than this zero point will tune down the oscillator and a value higher than the zero point will tune up the oscillator.

6.2 Speed

This knob defines the how long time should go between every step in the step modulator.

6.3 OSC Depth

OSC DEPTH is the value each bar will represent to control the oscillator frequency. Ace have 64 fine steps between every half note. By setting the OSC Depth to "64" each bar will represent a note. This can be used to make sequences with arpeggio characteristics. If you want to make a vibrato effect to your patch, you probably don't want each bar to represent a full half note key, then, set the OSC DEPTH to a lower value.

6.4 Predefined curves

To edit bar by bar may be quite difficult when you want a perfect triangle or sinus shape. The predefined curves do this for you by a simple click on one of the buttons.

6.5 Loop

Above the bars window there is a row of small switches, all grey except one that is red. The red one is the bar the Step modulator will jump to when it has reached the end of the Step modulator sequence.

6.6 Chords

There are two "chord" buttons. One has a happy face and one with a sad face. The happy face symbolises "major" and the sad "minor". With these buttons it's easy to make minor and major chord "arpeggio" sequences. Just set the bars to whatever you feel like and click on either of the two buttons. ACE will now set the bars to a value in the correct minor/major scale. Observe that the OSC

6.7 Move

The move arrows makes it possible to move around the bars in the sequence. This is very handy if you want to tune a chord to a certain key, or if you want to open a filter sequence a bit. The left/right arrows move the bars one step to the left/right and the up/down arrows move the bars one value up/down.

7 LFO

A LFO is a Low Frequency Oscillator. The word oscillator may fool you to think that the LFO makes a sound. It doesn't. The LFO's job is to modulate the oscillators (see 3 OSC) in different ways. You can make vibratos, tremolos, filter wah-wah's, etc.

7.1 Switches

The switches make it possible to turn on/off LFO functions. There are 5 switches; Filter, OSC 1, OSC 2, Level 1 and Level 2. To modulate the filter, simply activate the filter by clicking on the filter switch, etc. Note that at least one of these switches must be activated for the LFO to modulate.

7.2 Depth

The strength of the LFO is defined by this parameter. A low value won't affect the sound much at all while a high value will make very strong influence on the sound.

7.3 Frequency

This parameter sets the speed of the LFO. A low value makes the LFO go slow and a high value makes it go fast.

7.4 Offset

The waveforms (see 7.6 Shape) are all cyclic waveforms except for the random waveform. They all have a positive and a negative period half. When the LFO comes to the end of the period it wraps around and starts from the beginning again. The Offset parameter let you decide where on the period you want the LFO to start. For example, the triangle waveform has a zero crossing point it the middle of the period. If you want the LFO to start at this position you should set the Offset parameter to a middle value. A low value makes the LFO start at the beginning of the waveform period and a high value makes it start in the end of the period.
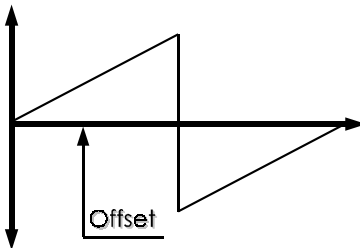
The Offset parameter on a sawtooth waveform. The LFO will start at the position of the arrow instead of starting at the beginning of the period as it would have if the Offset value was set to zero. A max value of the Offset parameter will make the LFO start at the end of the period.

7.5 Delay

For some patches you may want the LFO to start a little bit later than the sound starts playing. This parameter delays the LFO a while before it activates it.

7.6 Shape

There are 6 different waveforms to choose from. They are all cyclic waveforms and has the zero crossing point in the middle of the period. This applies to all waveforms except the random waveform which makes the LFO to pick out a random value and use this to modulate the sound.

8 Output

ACE has 2 output modes, "internal effects" and external. Depending on which mode currently selected, the output parameters in the sound section are changed. See section 12 Master for more information about this.

8.1 Dry

This parameter is used to set how much direct sound that should be send to the outputs. Direct sound means sound that is not affected by the reverb and delay units.

8.2 Pan

The Pan parameter let you decide the location of the sound in the stereo picture. The tiny button placed on top of the Pan knob sets the Pan to centre (equal in Left/Right channel).

8.3 Reverb

This function is only activated in "internal effects"-mode (see 12 Master). This parameter sets the level of the sound sent to the reverb unit.

8.4 Delay

This function is only activated in "internal effects"-mode (see 12 Master). This parameter sets the level of the sound sent to the delay unit.

8.5 Out 3-4

This function is only activated in external mode (see 12 Master). The two out knobs are only available in the external mode. They are used to set the levels of the 3rd and 4th output on the external DAC.

9 Controllers

ACE supports two of the most common MIDI controllers. Pitch bend and Modulation wheel. Both of them are important to give the patches that extra expressionallity in a song.

9.1 Pitch bend

Use the plus/minus buttons to set the pitch range. The pitch can be set from 0 to 12, where 0 means that the pitch function is turned off, and 12 meaning 1 octave up/down.

9.2 Modulation

The modulation wheel can be assigned to LFO Depth, RES (VCF Resonance) or VCF (VCF Envelope depth). The parameter assigned to the modulation wheel must be set before it can be controlled. The easiest way to set the parameter assigned to the modulation wheel is by first turning the modulation wheel OFF. Then set, for example, the LFO to a vibrato you think sounds nice. Now turn the modulation to LFO and you will be able to control the LFO depth from 0 (LFO OFF) to maximum LFO strength.

10 Velocity

Velocity can be assigned to both VCA (amplifier) and VCF (filter). Both parameters can be set to one of 4 different curves. This will make the sounds in ACE respond differently on different velocity values.

10.1 VCA

Use the plus/minus buttons to set the curve for the VCA. The first curve (straight line) turns the velocity OFF and when using the last curve you have to play real hard to make the VCA go up. The two curves in between are a mix of these two. The last three curves are "reversed" curves. If you use these curves you will have to play very soft on the keyboard to obtain high volume..

10.2 VCF

Use the plus/minus buttons to set the curve for the VCF. The first curve (straight line) turns the velocity OFF and in the last curve you have to play real hard to make the VCF open. The two curves in between are a mix of these two. The last three curves are "reversed" curves. If you use these curves you will have to play very soft on the keyboard to open the filter.

10.3 Offset

By enabling this switch, you can control the offset parameter of oscillator 1. Please note that the offset parameter is only available in MERGE and RINGMOD mix modes.

11 Patch

The patch operations consists of the patch select buttons and the disc operations for loading and saving patches. See also chapter 14 Sharing files for more information.

11.1 Bank

The 16 buttons marked A-P, selects the active bank. This will be the bank selected if you for example load a bank. Each bank holds 16 patches. A right click on one of these buttons will print the names of the patches in the message window.

11.2 Patch

The 16 buttons marked 1-16, selects an individual patch within the currently selected bank. There are 16 patches per bank. This gives you access to a total number of 256 patches.

11.3 Name

To name or rename a patch, click on the name display and type the name. Press return to exit the text mode.

11.4 Load

The LOAD operations load a number of patches into ACE. There are 3 different quantities; patch, bank and set. All 3 operations will always try to load all patches of the specified type. If there are samples used and the memory left is not enough, ACE will dismiss the sample and set the patch into WAVE mode. Also note that all LOAD operations will destroy the patch(es) previously in memory, at the destination locations.

11.4.1 Load patch

To load a patch, start by selecting the bank and patch slot you want your patch to be located at. Click on the load button and chose the patch (files with the APH extension) you want to load in the file selector and click on the OK button.

11.4.2 Load bank

To load a bank, select the bank (A to P) you want to load your bank into. Click on the load button and chose the bank (files with the ABK extension) you want to load in the file selector and click on the OK button.

11.4.3 Load set

Click on the load button and chose the set (files with the AST extension) you want to load in the appearing file selector and click on the OK button. ACE can also load a set by default. Place a file called "DEFAULT.AST" in the ACE directory and ACE will load this set when you start the program.

11.5 Save

There are 3 ways to save patches. You can save each individual patch as an individual file or group them by 16 (bank) or 256 (set). Note that sample data is not saved, only the path to the sample. When you are about to overwrite a file, ACE will ask you to confirm this operation. This will hopefully prevent you from overwriting important files by accident.
For exporting patches between different computers or users, see chapter 14 Sharing files.

11.5.1 Save patch

To save a patch, start by selecting the patch you want to save with the select buttons. Click on the SAVE button and type the filename you want the patch to be saved as. Click on OK in the file selector.

11.5.2 Save bank

To save a bank start by selecting the bank you want to save with the select buttons. Click on the SAVE button and type the filename you want the bank to be saved as. Click on OK in the file selector.

11.5.3 Save set

Click on the save set button and type the filename you want your set to be saved as. Click on OK in the file selector.

12 Master

The master section of ACE has the parameters for the most basic operations and settings of ACE.
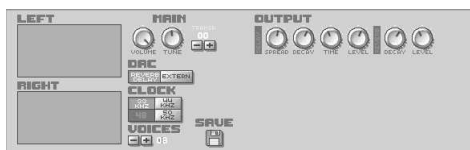
12.1 Volume

The volume knob sets the volume for the whole synthsiser.

12.2 Tune

Here you can tune the whole synth. Min value gives one key down pitch and max value gives one key up pitch. The middle value is the normal pitch following the 440 Hz A-key standard.

12.3 Transpose

Here you can transpose the whole synth in semi tone steps. Min value (-12) gives one octave down pitch and max value (+12) gives one octave up pitch.

12.4 Clock

There are 4 master frequencies in ACE, 32780 Hz, 44100 Hz*, 48000 Hz* and 49170 Hz. Remember that a higher frequency lowers the number of voices you will be able to play. See 12.4 Voices below for more information on how to set the number of voices.

Note, if you want to connect a sp/dif interface to your Falcon and transfer sounds to another device, you should check what different frequencies the device supports. Some equipment only works with 44100* or 48000* Hz clock frequencies.

12.5 Voices

Use the +/- buttons to set number of voices. This is the maximum number of voices that can be played simultaneously. ACE can play up to 16 voices. If you get an OVERLOAD message in the message window, you should lower the number of voices and continue this way until you don't get any error messages.

12.6 Save settings

Click on the green disc icon to save your master settings.

12.7 Oscilloscope

The oscilloscope displays the output directly from the DSP. If you use 4-output mode instead of the internal effects (see section 9.7) the left channel represents channel 1 and the right channel 2.

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* 44100 and 48000 Hz are only available if you have an external sample clock connected to the DSP port.

12.8 DAC

Ace has two different output modes. The first one is the standard stereo mode, with internal effects. The second one is the external mode, with 4 individual channels for external effects. Note that you need an output box such as the Line Audio FAD 8/2 or 8/8, Steinberg FA8 or Soundpool connected to the DSP port for the 4-channel mode to work properly.

12.8.1 Internal effects

The internal 2-channel mode has two post processing effects, reverb and delay. Reverb simulates the reflections in a room. By enabling reverb on your patches you can make them sound like they were played in a church or hall. Delay can be described as an echo. The delay in ACE is of ping-pong type, meaning the echo bounces between the left and the right speaker. Read more about the parameters in chapter 12.8 for delay, and 12.9 for reverb.

12.8.2 External effects

The 4-output mode was implemented for those who want to use external effects with Ace. This enables you to send patches to different external effect boxes. Output 1 and 2 on your external output box is left (1) and right (2) channel. Output 3 and 4 are effect send channels.

12.9 Delay

The delay effect is best described as an "echo". This can give your sounds very nice stereo picture and add some depth to the sounds. There are 4 parameters to change the characteristics of the delay. See the following 4 sections.

12.9.1 Spread

This parameter set the delays "width". A full value makes the echo jump from left to right channel, like a ping-pong effect. A min value makes the echo sound in the middle of the channels, like in mono.

12.9.2 Decay

The delay knob sets how fast the echo will fade out. A max value will make the delay echo for a long time and a min value will make it fade out quickly.

12.9.3 Time

This parameter defines how long time there will be between every bounce.

12.9.4 Level

This sets the delays volume for ACE.

12.10 Reverb

The reverb is a simulation of a room, it can make your sounds sound like they were played in a large hall or a tiny chamber. It gives ambience and depth to the patches.

12.10.1 Decay

The decay parameter set the size of the room. A max value gives a large room, like a church or a hall, while a low value gives a small room.

12.10.2 Level

This sets the volume of the reverb for all sounds.

13 Tracker

The tracker in ACE Tracker is a 16 channel pattern based tracker. The normal edit window is backed up by the overview windows which gives a good view over the pattern, great for editing and marking blocks and patterns.

13.1 Position

Think of a song that starts at position 0 and has a maximum length of 255 "positions". Each position can point to a (seperate) pattern. Position 1 may point to pattern 16, position 2 may point to pattern 1, etc. While the pattern defines how the notes and commands should execute, the song positions defines in which order the patterns should be played.

13.1.1 Insert

This functions inserts a new position at the currently selected position. In case you forgot a pattern or later, for some reason, realise that you must insert a pattern. If you have a song

13.1.2 Delete

This function deletes a position. Please note that the pattern pointed to by this position is not deleted. This have to be done seperately.

13.2 Pattern

As mentioned earlier, a pattern defines how the notes and commands should execute. In ACE, a pattern can use up to 16 tracks, or voices, at once. It may be 64 lines long, and a tempo command defines how much time should elapse before the next line is played.

13.2.2 Create

To create a pattern, click on the CREATE button. ACE Tracker does not have a fixed pattern size. You can choose from 1 to 16 tracks and 1 to 64 pattern lines.

13.2.3 Clone

The clone function creates a new pattern and copies the content of the pattern you are currently on to the new pattern.

13.2.4 Remove

This function removes the pattern from the pattern list. Please be carefull as it is not possible to recover a pattern that you removed.

13.2.5 Clear

Unlike the REMOVE function, this function only clears the pattern data, not the pattern itself.

13.2.6 Name

To name or rename a pattern, click on the name display and type the name. Press return to exit the text mode.

13.3 Edit pattern window

The edit pattern window is a very powerful tool for making music. Combined with the Pattern Overview window (see 13.4) you get a very good picture of what the pattern looks like at the moment. Press the space key to enter the edit mode, the yellow edit marker will now appear. Use the up/down arrow keys to move up and down in the pattern and the left/right arrow keys to choose which field to edit.

Please note that you can not use the arrow keys to jump to the next track as in most trackers. Use the [Tab] (or [Undo]) key to choose the track to the right of the current track and [Tab] +[Alternate]

(or [Help]) for the left. It is also possible to use the mouse to move the marker. Right click on the track and line in the Pattern Overview window.
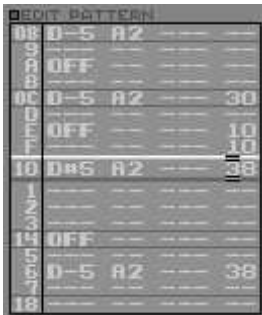
There are four fields to edit in each track. The first and left most field is the note, and it ranges from C-1 to B-8. The next one is the Patch number, and it ranges from A-01 to P-15 (P-16 can not be used for technical reasons). The third field is the command field and this field can be used for various things. For example, input the command "J01" and the song will start from position 01 when this command is executed. J is short for "Jump to position".

The fourth field the volume and/or filter and/or oscillator offset for the currently played patch. In section "Column 4" you can set how the patch should respond to the values in this field.

13.4 Pattern Overview window

To be continued…

14 Sharing files

When you are about to share files with other people, there are some things to think about.

14.1 Sharing patches, banks, sets and work

The most important thing to think about when sharing patches, banks, sets and work files are when there are samples involved. When a patch has a sample as oscillator it is important to also include the sample file as the sample data is not saved in the patch file. Follow the following easy steps:

1. Start by creating a directory on your harddrive:

```
D:\ACEFILES\MYOWN\
```

2. Copy the patch, bank, set or work to the directory, for example a patch:

```
D:\ACEFILES\MYOWN\TB303.APH
```

3. Copy the sample file to the same directory:

```
D:\ACEFILES\MYOWN\TB303.AIF
```

4. If you want, create a small readme file to be included in the archive:

```
File:              TB303.APH (TB303.AIF)
Made by:           Thomas Bergström
Date:              2002-02-15
Comment:           Use this patch with alot of delay effect
                   on it.
```

5. Use some packer to archive the directory, for example ZIP.

6. Your archive is now ready to be shared.

Command table

Command	Key	Desc	Min	Max
-xx	[0]	Tempo (3C ~ 120 BPM)	0x01	0xFF
Jxx	[J]	Jump to position	0x00	0xFF
Umn	[U]	Portamento Up (m = lines, n = notes)	0x00	0xFF
Dmn	[U]	Portamento Down (m = lines, n = notes)	0x00	0xFF

Commands to set Patch parameters

Command	Key	Desc	Min	Max
AAxx	[1] + [A]	VCA Attack	0x00	0x3F
ADxx	[1] + [D]	VCA Decay	0x00	0x3F
ASxx	[1] + [S]	VCA Sustain	0x00	0x3F
ARxx	[1] + [R]	VCA Release	0x00	0x3F
FAxx	[2] + [A]	VCF Attack	0x00	0x3F
FDxx	[2] + [D]	VCF Decay	0x00	0x3F
FSxx	[2] + [S]	VCF Sustain	0x00	0x3F
FRxx	[2] + [R]	VCF Release	0x00	0x3F
FExx	[2] + [A]	VCF Envelope depth	0x00	0x3F
FCxx	[2] + [D]	VCF Cutoff	0x00	0x3F
FOxx	[2] + [S]	VCF Resonance	0x00	0x3F

Channel table

Here is a table of how many voices you can expect on your Falcon. Note that if you have an accelerator installed these values will not be accurate.

WAVE	33 KHz	44 KHz	48 KHz	50 KHz
Internal	14	11	10	9
External	16	16	15	14

SAMPLE	33 KHz	44 KHz	48 KHz	50 KHz
Internal	9	7	6	5
External	9	7	7	6

Short cuts

CTRL + ↑ .... bank up

↓ .... bank down

→ .... patch up

← .... patch down

CTRL + C .... copy patch

CTRL + V .... paste patch

CTRL + S .... select the patch in the current pattern cell

In Tracker mode:

Most keys on the keyboard .... insert / play a note

[Esc] .... insert note OFF

↑ .... move marker up one pattern line

↓ .... move marker down one pattern line

→ .... move marker right

← .... move marker left

ALT + ↑ .... mark pattern block up

↓ .... mark pattern block down

→ .... mark pattern block right

← .... mark pattern block left

ALT + [C] .... copy pattern block

ALT + [V] .... paste pattern block

ALT + [D] .... delete (clear) pattern block

ALT + [+] (Num pad) .... transpose block 1 semi tone up

ALT + [-] (Num pad) .... transpose block 1 semi tone down

[Tab] (or Undo) .... move marker to next track

ALT + [Tab] (or Help) .... move marker to previous track

ALT + [1] thru [8] .... octave

[Return] .... play pattern

ALT + [Return] .... play song

[Space] .... toggle stop / edit

Undo (or Tab) .... move marker to next track

Help (or ALT + Tab) .... move marker to previous track

({Num. Pad} .... position decrease

) {Num. Pad} .... position increase

/ {Num. Pad} .... pattern decrease

* {Num. Pad} .... pattern increase

. {Num Pad} .... set custom play position

...short cuts

Credits

Ace was made by:

Thomas Bergström, programming, graphics, design, patch programming and testing.

Beta testing:

Anders Eriksson
Robert Högberg
Janez Valant

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Program history

Version	Updates
0.99	First released version

Manual history

Revision	Changes
R1.0	First released revision