Quick Reference

Sequencer Plus Series
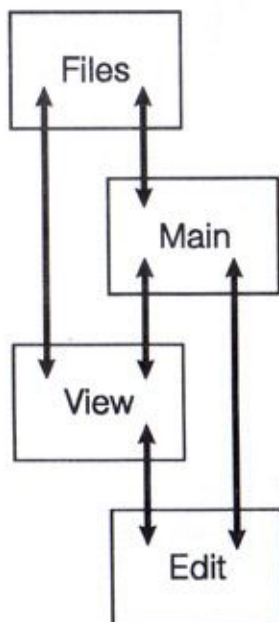
Sp Junior

Sp Classic

Sp Gold

Version 4

Voyetra

Overview

Sequencer Plus (Sp) is a MIDI record, playback and editing program used to create and edit MIDI song files that can be played by Sp or a MIDI File player program. Sp is available in three different levels, called **Sp Junior, Classic** and **Gold**:

Sp Junior   An entry level sequencer that includes all the features required to create compositions for home studios, business and multimedia presentations.

Sp Classic   A professional grade sequencer with advanced features such as the ability to synchronize song file playback to an external sync source such as SMPTE, MTC, MIDI clock, etc..

Classic also offers a complete set of sophisticated MIDI editing and transform enhancements for global editing of MIDI data.

Sp Gold   An integrated sequencer and MIDI network controller offers all of the advanced sequencing features of Classic in addition to a **Universal Librarian** and **MIDI Data Analyzer**.

✳ This Quick reference guide is designed for Sp Gold so that all of Sp's major features can be summarized. As such, some of the features listed may not pertain to Classic and Junior.

Comparison of Sp Series major features

Feature	Junior	Classic	Gold
Number of Tracks	64	500	2000+
Advanced Track Grouping	□	□	■
Multiple MIDI Port Support	■	■	■
Matrix-style Port Assign Window	□	■	■
Universal Librarian	□	□	■
FM Voice Card Editor/ Librarian	□	□	■
MIDI Network Organizer	□	□	■
MIDI Data Analyzer	□	□	■
Generic Sysex up/down load	□	□	■
Advanced File Sorting functions	□	■	■
Play list (jukebox) feature	□	■	■
Multiple Time Signatures on multiple tracks	■	■	■
Multiple Programmable Tempo-tracks	□	■	■
SMPTE/ MTC Support	□	■	■
Generate all 5 SMPTE fps rates	□	■	■
Full- Screen MTC Monitor	□	□	■
Full-Screen Bar Position Monitor	□	□	■
DDL Calculator	□	□	■
On-Screen Vol and Pan per track	□	■	■
On-screen Velocity offset per track	□	■	■
Block Moves across tracks	□	■	■
Memory Buffers	3	6	11
Tap Tempo (Fit improvisation)	□	■	■
Beat Learn Mode	□	■	■
Keyboard Step Entry Mode	□	■	■
Super Quantize/ Swing	□	□	■
Random Transforms	□	□	4
MIDI Transforms	□	12	12
Tempo Transforms	□	6	6
Pitch Transforms	□	5	5
Time Transforms	□	8	8
Velocity Transforms	□	7	7
Split Transforms	□	5	5
Misc Transforms	□	3	3
Metronome on PC Speaker	■	■	■
Metronome as MIDI notes	□	■	■
Enhanced color screen options	□	■	■
QWERTY Keyboard Window	■	■	■
Hardware Configuration Window	■	■	■

Hardware Requirements

Sequencer Plus Version 4 requires the following hardware:

❑ A PC based on the Intel 8088, 80286, 80386 or 80486 microprocessor that is software compatible with the IBM™ PC/XT/AT family of personal computers.

  • For best performance, it is recommended that Sp Classic and Gold be used on a PC based on the 80286, 80386 or 80486 microprocessors. Some of the advanced features can overtax the slower 8088 architecture.

❑ At least 512K of memory (RAM).

❑ DOS 2.0 or above.

❑ Sp Gold and Classic require a hard drive

❑ Any of the following video systems:

  • IBM Monochrome display,
  • Hercules graphics display,
  • IBM Color Graphics Adapter (CGA),
  • Enhanced Graphics Adapter (EGA),
  • Video Graphics Array (VGA).

    ✳ If you have an EGA or VGA display, Sp Gold will automatically switch into its High Resolution Mode, which shows substantially more information per screen.

❑ Sp also works with a mouse, however this is optional since all of the functions are accessible via keyboard commands.

❑ Sp may be used without a MIDI interface, but in order to record and play back via a MIDI keyboard, one of the following MIDI interfaces is required:

  • MPU-401™ compatible MIDI interface, (eg. Voyetra 400x Series)
  • Voyetra V-22™/ V-24s™ multi port MIDI interfaces
  • Sound Blaster™ with MIDI option
  • IBM PS/1™ with MIDI option
  • IBM Music Feature™ Card
  • Yamaha C1™
  • Music Quest MQX-32™/MQX-16s™
  • Roland LAPC™

❑ Sp will also play MIDI files on these PC sound cards:

  • Sound Blaster™ FM synthesizer
  • AdLib™ Card

Sp User Interface

Status Area: General info about current selections.

Work Area: *(In Edit Screens, may be expanded using the Configuration Window Edit Size command.)*

> *POP-UP Window*

Menu Area: *Select commands and access screens by typing the first letter of the word in this area.*
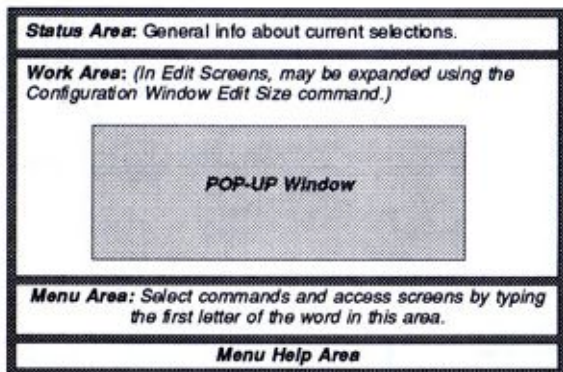
Menu Help Area

Menu Help Area:	Highlight menu item, press the ? key (no need to shift) and a one-line description will appear in the menu area. To remove, press ? again.
Arrow keys	Move the cursor around the computer screen in the direction of the arrow key.
+, -, [and]	Step settings through their available ranges. Numerical settings can also be changed just by typing in new numbers with the number keys along the top of the keyboard.
Command Line Options	To see a list of command line options, start the program with the /? option when typing the program name at the command line.

Using a Mouse

First run the "mouse driver" program supplied with the mouse. If the mouse moves the cursor in Sp, then the mouse driver was installed properly. If not, try the mouse with another program that supports a mouse (there is probably a test program with the mouse package) to see if the mouse driver was installed properly.

The Mouse Menus

Simultaneously pressing the left and right buttons (or the center button, if your mouse has one) will open a mouse-specific window menu with commands and access to other controls (such as Function Keys). To select an item from a pop-up menu, position the cursor on top of the item you want to select and double click the left mouse button. To close the menu without selecting anything, either select the **(Close menu)** option, or double click the right button.

Mouse Actions

❑ Double clicking the left button is equivalent to pressing **Enter**.

❑ Double-clicking the right button is equivalent to pressing **Esc**.

❑ Parameter values can be selected by dragging the mouse up or down while pressing the left button (+/- by 1) or the right button (]/[by 10).

❑ Mouse menus that have the **"Start/Stop"** option (space bar) have **"Start/Stop"** at the top of the menu. To start playing, bring up the mouse menu and double-click the left button.

- ❑ To access the function keys with the mouse, activate the **Function Keys Menu** by double clicking the left button on the **Function Keys** option in the mouse menu.

- ❑ If you are viewing a **Help screen,** page down by double-clicking the left button or by choosing **Page Down** in the pop-up menu. To page up with the mouse, select **Page Up** from the pop-up menu.

- ❑ To load a file from the **Files Screen**, highlight it and double click the left button.

- ❑ To access the Main, View and Edit screens with the mouse, double click the left button to enter the next screen or the right button to return to the previous screen.

Both Buttons Up

Moves cursor in respective direction.

Hold Left Button and Drag up or down

Increments values by +/- 1. (Equivalent to + - keys.)

Hold Right Button and Drag up or down

Increments values by +/- 10. (Equivalent to][keys.)
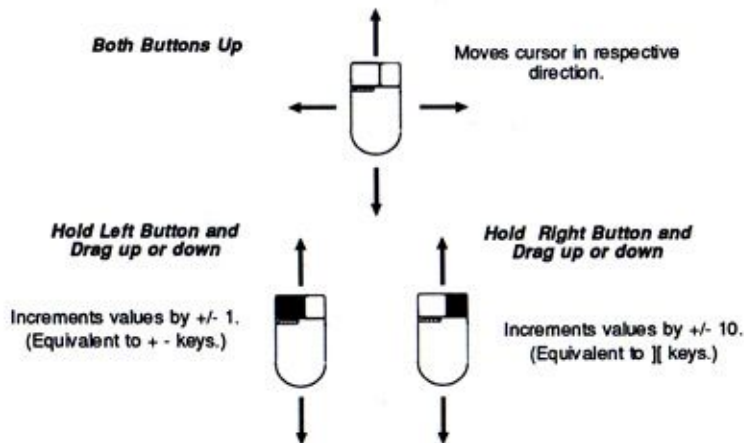
- ❑ To "drag" a note in the edit screens, click on it when it's highlighted, continue to hold the mouse button down, and move the mouse.

```
─────────────────────────── Main ───────────────────────────
Song NEW-SONG                                    STOP    Mem 59000
Tk   1 ──────────────────── BPM 128              1:8    THRU:OFF

Trk Name              Port Chan Prg    Transpose Quantize  Loop    Mute
  1                                                        ────    ────
  2  ───────────────                                       ────    ────
  3  ───────────────   Start/Stop     FILES                ────    ────
  4  ───────────────   (Close menu)   OPTIONS              ────    ────
  5  ───────────────   Function Keys  VIEW                 ────    ────
  6  ───────────────   Delete                              ────    ────
  7  ───────────────   Loop                                ────    ────
  8  ───────────────   Mute                                ────    ────
  9  ───────────────   Name                                ────    ────
 10  ───────────────   Quit                                ────    ────
 11  ───────────────   Record                              ────    ────
 12  ───────────────   Solo                                ────    ────
 13  ───────────────   Tempo                               ────    ────
 14  ───────────────   EDIT                                ────    ────
 15  ───────────────                                       ────    ────
 16  ───────────────                                       ────    ────
─────────────────────────── Main Menu ───────────────────────
Delete  Loop  Mute  Name  Quit  Record  Solo  Tempo  EDIT  FILES  OPTIONS
VIEW
```

Typical Mouse Menu Window

Summary of Function Keys

Key	Alone	With [Shift]
F1	Function Key Help	QWERTY synth
F2	Metronome On/Off	Metronome Window
F3	Options Window	Librarian Options
F4	Configuration Window	Markers Window
F5	Play Range	Programs List
F6	Sync Window	Display Setup
F7	Note Pad	Bar Sync
F8	Current Bar	Solo Current Track
F9	Chase Mode	MIDI Thru Status
F10	Quit	DDL Calculator

Summary of Control Key Combinations

Key Combination	Function
[Ctl]-B	Backup Track
[Ctl]-C	Set MIDI Channel
[Ctl]-G	Go To Track
[Ctl]-J	Jump To Track
[Ctl]-O	Set Port Number
[Ctl]-P	Set Initial Pgm Number
[Ctl]-R	Record

Summary of Alt Key Combinations

Key Combination	Function
[Alt]-I	Sync to internal PC clock
[Alt]-M	Sync to MTC
[Alt]-S	Sync to SPP
[Alt]-T	Sync to SMPTE
	For FM Sound Cards:
[Altl]-D	Toggle between Drum and Instrument Mode
[Altl]-X	Toggle MIDI In/ Out

Summary of Screens

(Esc brings back the previous screen.)

Jr/Cl/Gold	Screen	To Access...	Function
■■■	Main	Sp boots with this screen	Provides an overview of track information and global control of song parameters such as mute, loop, tempo, volume, etc. Play/ record from beginning of song.
■■■	View	\<V\> from Main	Overview of MIDI data contained in every measure of the song. Global cut/ paste of song sections. Transform functions. Play/ record from anywhere in song.
■■■	Edit	\<E\> from Main or View	Edit, insert, move, etc. individual notes in each measure.
■■■	Note Edit	\<N\> from Edit	Edit MIDI note data associated with each note in a measure.
■■■	MIDI Edit	\<M\> from Edit	Edit non-note MIDI data in each measure..
□■■	Step Record	\<K\> from Edit screen	Enter notes from a MIDI keyboard in "step time" rather than real time.
■■■	Files	\<F\> from various screens	Manage song, bank, notepad, etc. files.
□□■	Setup	\<X\> from Main	Configure the MIDI instrument setup for proper program and bank settings.
□□■	Arranger	\<A\> from Setup	Manage program banks for MIDI devices and transfer program banks between an external MIDI device and the PC.
□□■	Grid/ Bulk/ Fmt	\<M\> from Setup, then toggle with D	View MIDI data in various formats.
□□■	MTC Monitor	\<M\> from Grid/ Bulk or Fmt	Monitor MIDI Timecode entering the PC MIDI port.
□□■	MIDI Output Strings	[Shift] with number key from Grid/ Bulk or Formatted	Used to assign a string of MIDI data to each of the ten number keys so they may be easily transmitted to control MIDI instruments.
□■■	Notepad	\<F7\>	Enter text to be saved along with song data.

Summary of Windows

(Esc closes a window)

Jr/Cl/Gold	Window	Enter From	Function
■■■	Options	<F3> or <O> from Main, View or Edit Screens	Set time signatures, clock source, MIDI controller filters, Tempo track reference, lead-in measures, etc.
■■■	Configuration	<F4>	Control default values for file paths, screen size, printer port, etc.
■■■	Display Setup	Shift <F6>	Set up default screen colors
■■■	Hardware Configuration	<H> from Options Window	Shows MIDI interface configuration.
□■■	Play Range	<F5>	Play specified range of song repeatedly
□■■	Sync	<F6>	Controls SMPTE interface functions and other sync settings.
□□■	Bar Number	<F8>	Shows current bar #, beat #, SMPTE time.
□□■	Librarian Options	Shift <F3>	Set Librarian default values
□■■	Punch-In	<P> from Main or View screens.	Record a specified range of measures.
□■■	Tempo Track	<T> from View Screen	Enter tempo changes into the tempo reference track selected in the Options Window.
□■■	Transforms	<X> from View screen.	Access transform functions.
□□■	Super Quantize	<S> from Transforms window.	Controls advanced quantizing functions.
□■■	Key Signature	<K> from Transforms window.	Select key for Harmonic Transpose Transforms.
□□■	DDL Calculator	Shift <F10>	Shows number of ms/beat for a given tempo
□□■	Markers	Shift <F4>	Provides 10 user-definable song position markers.
□■■	Metronome	Shift <F2>	Controls metronome functions.
□■■	MIDI Thru	Shift <F9>	Port assignment settings for multi-port MIDI interface hardware and MIDI thru on/off (note: SpJr MIDI Thru is in Options Window)
■■■	QWERTY synth	Shift <F1>	Play/ record notes from PC keyboard
□□■	FM Voice Editor	<V> from bank arranger	Edit PC bus-based FM synthesizer voice.
□□■	Instruments	<I> from Setup	Assign instruments to Setup.
□□■	Banks	<B> from Setup	Assign instrument program banks to Setup.
□□■	Programs	<P> from Setup	Assign instrument programs from a bank.

Sequencer

The **Sequencer** is comprised of independent, polyphonic "tracks" which are used to record MIDI data generated by an external MIDI keyboard. Once MIDI data is in a track, it can be edited using the View and Edit screens to access individual note and non-note data. By assigning the MIDI data in each track to a different MIDI instrument sound, a complete, orchestrated "MIDI performance" can be created and saved to disk as a song file.

A MIDI song can be created in either "real time" or "non-real time". These two methods of MIDI data entry may be combined to realize virtually *any* performance. Once the MIDI data is entered, the song may be edited on a macro level or a micro scale with a *"piano-roll"* style note display that does not require music reading skills.

❑ In *real-time*, the MIDI data generated by playing an external keyboard is recorded directly into the track as it is played on the keyboard. Because data is being recorded exactly as it is played, this method requires a certain amount of keyboard skills. Basically, "what you hear is what you played." Once the music is recorded, it may be edited to clean up mistakes or add more complex passages that cannot be entered in real time.

❑ In *non-real time*, the song is recorded at your own pace using one or more of several methods. When the notes are played back at normal tempo, they cannot be distinguished from those played in real time. The non-real time methods include:

- The song tempo may be slowed down so that the music can played on the keyboard at a comfortable pace. When the song is sped up to normal tempo, the recorded passages sound as if they were played at a normal pace.

- Notes may be entered one at a time in the Edit screens using the mouse or PC keyboard. This allows the greatest detail to be entered and is often used for "clean up" or editing tasks.

- *Step-time* recording from the **Step Record Screen** allows notes and chords to be entered directly from the MIDI keyboard at a slow and methodical pace. As the notes are released, the cursor advances to the next rhythmic position ready to enter the next note or chord. This method allows for far more complex musical passages than may be humanly possible to play. In addition, individuals with little or no keyboard skills may create music as if they were virtuosos!

Files Screen (F from various screens):

This Files screen provides access to all of the file types used by Sp, including song files, notepad files, program bank files, etc.

To load a file	Highlight the name, press <L>oad and <Enter>. If a song is loaded press the <spacebar> to play it.
To list files in a different directory or drive	Highlight the directory or drive in the list and press <Enter>.
To audition a list of songs	The Classic and Gold <J>ukebox command may be used to automatically play the list of songs in the order they appear. *To use this command, Sp must be run with the /dir:xx command line option.*
To change file types listed	The file type listed will depend upon the screen from which it was entered. For example, entering the Files screen from a sequencer screen will list song files, while entering from the Notepad ([Ctl]-F) will list text files. To change the type of files listed, use the <E>xtension command.
To merge songs or tracks	By using MIDI files (*.MID) instead of Sp files (*.SNG) the data from two songs can be merged together. Sp Classic and Gold can also save and load individual tracks (*.TRK).

Main Screen (Sp boots with this screen):

```
┌─────────────────────────── Main ───────────────────────────┐
│ Song BEBOP                                        ▓▓▓▓  Mon 72848
│ Tk   1 Click            BPM 112   CK:INTERNAL     1:0
│
│ Trk Name          Pt Ch  Prg   Trans Quant Loop Mute  Offset  Vol  Pan
│  1  Bass           1 10   49    ----- ----   ON  ----  ------   .    0
│  2  Hihat          1  0   49    0: 1↑  ----   ON  ----  ------  +27   .
│  3  Drums          1 11   49    ----- ----  0   ON  ----  ------   .   .
│  4  Piano          2 12   12    ----- ----  ----  ----  ------   .    0
│  5  Piano          1  2   11    ----- ----  ----  ----  ------   .   48
│  6  Bass           1  6    6    0: 1↓  ----  ----  MUTE  ------  +10   .
│  7  High Brass     1 16    6    ----- 16t   ----  ----  0:1 →   10   .
│  8  Low Brass      1  4    2    1: 0↓  ----  ----  ----  ------   30   .
│  9  Tenor          2  5   62    ----- ----  ----  ----  0:1 ↔   43   .
│ 10  Trumpet        1  3   12    ----- ----  ----  ----  0:1 →   77  -56
│ 11  Sax Solo       1  9   62    ----- ----  ----  ----  ------   .    .
│ 12  Sax Gliss      1  7   62    ----- ----  ----  ----  ------   .  -64
│ 13  ------------   1  1    .    ----- ----  ----  ----  ------   .    .
│ 14  ------------   1  1    .    ----- ----  ----  ----  ------   .    .
│ 15  ------------   1  1    .    ----- ----  ----  ----  ------   .    .
│ 16  ------------   1  1    .    ----- ----  ----  ----  ------   .    .
│ ──────────────────────────── Main Menu ────────────────────
│ Beat-learn  Chase  Delete  Loop  Mute  Name  Quit  Record  Solo  Tempo  EDIT
│ FILES  H_MULTI  OPTIONS  PUNCH-IN  VIEW
└─────────────────────────────────────────────────────────────┘
```

Main screen

This is the "top" of the Sequencer where the global track parameters are controlled (eg. transpose, offset, program assignment, etc.).

Ports/ Channels/ Programs	When using a PC sound card, (eg. Sound Blaster), the Port number determines whether the track data will be routed to external MIDI synthesizers (Port 1) or internal FM sounds (Port 2). When a multi-port MIDI interface is used (eg. V-22, V-24s), the Port number determines which MIDI port the track data will be sent to. The channel setting determines which MIDI instruments will be played by the track. The Program setting determines the sound played by the MIDI instrument or FM sound card by sending the appropriate program change message to the instrument assigned to the channel.
To record on the highlighted track	Press <R>ecord then the <Spacebar>. When you're done, press the <Spacebar> to stop recording. Press it again to playback all recorded tracks. ✱ When recording, the track's MIDI channel must match the instrument's transmit channel. ✱ The Spacebar always starts and stops record/ playback.
To quantize, mute, transpose, etc...	Highlight the appropriate function in the desired track and use + / - to change the setting. (Use PgUp/PgDn to see tracks that aren't on the screen.)
Group Commands	In Sp Gold, the <G>roup command activates a submenu for assigning tracks to one of 26 groups by using a letter (a - z) in the group column. Tracks with the same group letter can be controlled as a group and muted, soloed, etc. together.

Configuration Window (F4)

Sets the paths for song, help, notepad and librarian files. Press <S>ave to save the settings

Options Window (F3)

Controls background settings such as number of bars for lead-in, MIDI input channels recognized, time signature, filtering of MIDI benders, MIDI Thru (in SpJr), programs transmit and clock source.

View Screen (V from Main):


```
                                        View
Song BEBOP                                                        Man GEEES
Tk    1 Click            BPM 112    CK:INTERNAL         ████       1:8

Trk Name                Pt Ch Op Prg  Bars+      18     116    124    132
    1 Click              1 18  A  49  1  D██████████████████████████████████
    2 Hihat              1  8  A  49  2  D██████████████████████████████████
    3 Brass              1 11  A  49  3  ██████████████████████████████████
    4 Piano              2 12  B  12  4  -██████████████████████████-█████████
    5 Piano              1  2  B  11  5  -
    6 Bass               1  6  C   6  6  -██████████████████████████████████
    7 High Brass         1 16  B   7  7  -██████████████████████
    8 Low Brass          1  4  B   2  8  -██████████████████████
    9 Tenor              2  5  B  62  9  -██████████████████████
   18 Trumpet            1  3  B  12  18 -██████████████████████
   11 Sax Solo           1  9  E  62  11         ------█████████-------
   12 Sax Gliss          1  7  E  62  12                  --------█------
   13 -----------------  1  1  .   .  13 ....-.......-.......-.......-.....
   14 -----------------  1  1  .   .  14 ....-.......-.......-.......-.....
   15 -----------------  1  1  .   .  15 ....-.......-.......-.......-.....
   16 -----------------  1  1  .   .  16 ....-.......-.......-.......-.....
                                         View Menu
Add  Copy  Delete  Goto-bar  Insert  Loop  Mute  Name  Replace  Solo  Width
Zap  BLOCK  EDIT  FILES  H_MULTI  OPTIONS  PUNCH-IN  TEMPO  XFORMS
```

View shows an overview of the song data by indicating the status of individual measures in each track. The ■ symbol indicates measures containing MIDI data. A "-" symbol indicates recorded measures with no data in them. A "." symbol indicates measures not recorded. These symbols allow the song's entire structure to be examined by noting which measures contain MIDI data, which do not and which have not yet been recorded.

View also allows cut-and-paste of song sections to shorten or lengthen the song.

> ✽ In View, song playback (Spacebar) and record (Ctrl-R) starts from the position of the cursor.

|	
To expand the View screen	Use the <W>idth command to toggle the View screen into expanded (72 bars) mode. This removes the track information on the left side of the screen.
To "Cut and Paste" song sections	Use the memory buffers to move or copy a range of measures with the following commands: <C>opy, <D>elete, <I>nsert, <R>eplace, and <A>dd.
To Add/ Delete measures	Highlight the measure and use the **Ins** or **Del** keys. The <Backspace> key deletes measures to the left of the cursor.
To designate a Tempo Reference track	Activate the Options Window (F3) to select the tempo reference track number. This is designated by a letter "T" in the Main and View screens.
To make dynamic Tempo changes	Tempo change events can be inserted into any track, however only one track may be used as the **tempo reference track** that determines how the song will speed up and slow down in response to the tempo events.
	Tempo changes can be entered by activating the **<T>empo Track Window** from Main or View, or from the MIDI edit screen by selecting the "Tempo" Class and manually inserting tempo events. **Tempo transforms** can also be used to alter the tempo in a selected range.
To cut and paste blocks of song data:	The <B>lock command activates a sub-menu with commands used to add, delete, copy or move a range of tracks. Press <C>opy, select the block with the arrow keys, then press <Return>. Move the highlighted block to another location with the arrow keys and press <Y>es to confirm. Other Block functions work similarly.
Transforms Window (X from View):	Used for "global" edits on a highlighted region of tracks and measures. (eg. quantize all of the MIDI notes in a range, reverse note order to play a section backwards, generate random melodies, compress volume, etc.) Highlight a transform, press <Return>, use the arrow keys to select the range to be transformed. Press <Return> again and follow the prompts to enter command-specific values.

Edit Screen (E from Main or View):

To access the notes in any measure of the View screen, highlight the measure and press <E>dit to enter the Edit screen for that measure.
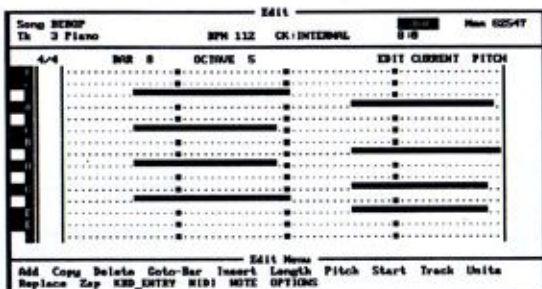
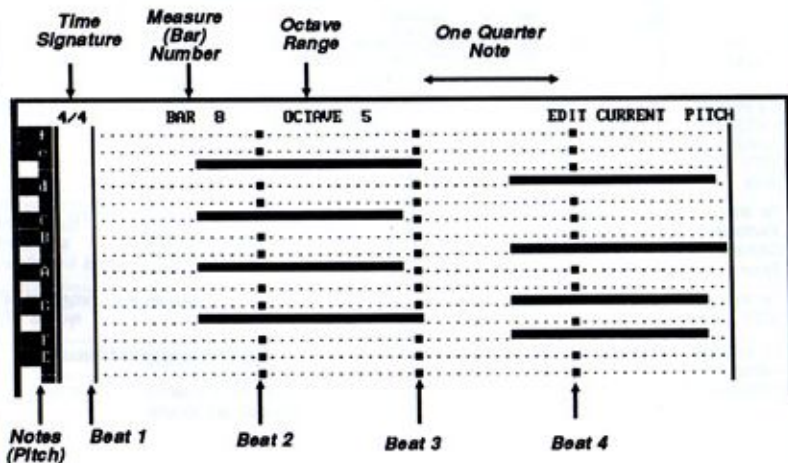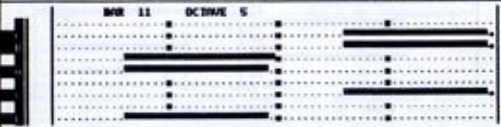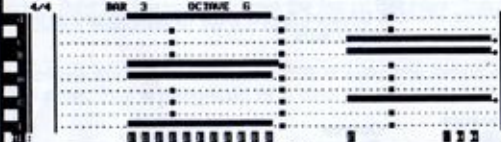| To highlight notes	The **Tab/[Shift]-Tab** keys highlight the next/previous note.
To move notes	Highlight the note, press <P>itch and use +,- <, >, [,] keys to move the note up/down. Press <S>tart and use +,- <, >, [,] to move note right/left. Or, use left mouse button and drag.
To insert notes	Note may be inserted at cursor position with Ins Key. With Classic or Gold, you can insert notes of fixed durations at the cursor position by pressing W, H, D, Q, E, S, or T keys while holding the [Ctrl] key down.
To delete notes	Highlight note and press Del key.
To increase/ decrease note length	Highlight the note, press <L>ength and use +,- <, >, [,] to make the note longer or shorter. (<U>nits command sets the step size.) Or press right mouse button and drag.
To see notes on another track	Press <T>rack followed by the track number to see notes in the same measure of another track.

Note Edit Screen (N from Edit):

The <N>ote Edit screen shows detailed MIDI values for the highlighted note at the top of the Work Area. Press the Tab/ [Shift]Tab key to highlight the next / previous notes. Velocity for each note is also edited in this screen.


```
                              ── Note Edit ──
Song BEBOP                                            Mon 6254T
Th  4 Piano         BPM 112  CK:INTERNAL      11:0

Environment                           CURRENT NOTE         Units: 32nd   Fine
Time Sig:   4/4    Keyboard                               Start:    6    + 0
Time Units: 32nd                      Velocity: 56        Length:  10    + 6
Freeze:     OFF    Note-trig: ON      Off Vel:  64

              BAR  11    OCTAVE  5
     .........................................................
     .........................................................
     .........................................................
     .........................................................
     .........................................................
     .........................................................

                          ── Note Menu ──
Accidentals  Durations  Freeze  Goto-Bar  Hit-point  Length  Note-trig
Off-vel  Pitch  Start  Track  Units  Velocity
```

MIDI Edit Screen (M from Edit):

To edit non-note MIDI data in the measure shown by the Edit screen, enter the <M>IDI Edit screen. The bottom of the Work area shows non-note MIDI data such as pitch bends, program changes, controllers, aftertouch, etc. Notes in the MIDI edit screen cannot be edited, they are shown only to indicate the relative positioning of the non-note MIDI data with respect to the note data.


```
                              ── MIDI Edit ──
Song BEBOP                                            Mon 02467
Th  4 Piano         BPM 112  CK:INTERNAL      3:0

MIDI Line: ALL CLASSES       MIDI EVENT         Units: 32nd   Fine
Time Units: 32nd                                Start:    6
                                                Value:    8

     4/4    BAR  3    OCTAVE  6
     .........................................................
     .........................................................
     .........................................................
     .........................................................
     .........................................................

                          ── MIDI Menu ──
Class  Goto-Bar  MIDI-Line  Pitch  Start  Type  Units  Value
```

To see the various classes of MIDI event data	The <C>lass command allows Program change, Aftertouch, Bender, Tempo, Key Aftertouch, controller or All MIDI data to appear at the bottom of the Work Area.
To see Various Controller Types	When Class is set to Controllers, the <T>ype command selects the controller type to be displayed with the +,- <, >, [,] keys.
To move a MIDI Event	Use the <S>tart command to shift the event left/ right with the +,- <, >, [,] keys.
To change the value of a MIDI event	Use the <V>alue command to change to value of the selected class and type with the +,- <, >, [,] keys.

Network Organizer

Sp Gold's Network Organizer is used to create "Setups" that are screen representations of the settings in your MIDI network. Patches for each instrument are saved as "banks." A Setup specifies which banks of patches are to be transferred from the PC's disk library to the instruments. Up to 32 different instruments may be automatically loaded and set with the sounds required for a particular performance. The settings for a "setup" are stored along with the song so that the instruments may be loaded with the proper sounds before the song begins.

Setup Screen (X from Main):

Each of 32 lines is used to specify instrument type, MIDI channel, MODE, Program Bank and Program Number.

```
                                            ── Setup ──
Setup peter                                                        Mon 43600
Instrument FM1 synth cards

Instrument        Pt  Ch  Mode   Bank      Prog#  Program
FM1 synth : card  2   1   POLY   STOCK      27    SynthBrass4
FM1 synth cards   2   1   POLY   STOCK      61    ElecGuitar1
SIDEMAN DX7       1   1   POLY   BASS3      18    BASS3   111
SIDEMAN DX7       1   1   POLY   ANIMAL     18    Mahlouym 1
───────────────   1   1   POLY   ────────    0    ──────────────────────────
───────────────   1   1   POLY   ────────    0    ──────────────────────────
───────────────   1   1   POLY   ────────    0    ──────────────────────────
───────────────   1   1   POLY   ────────    0    ──────────────────────────
───────────────   1   1   POLY   ────────    0    ──────────────────────────
───────────────   1   1   POLY   ────────    0    ──────────────────────────
───────────────   1   1   POLY   ────────    0    ──────────────────────────
───────────────   1   1   POLY   ────────    0    ──────────────────────────
───────────────   1   1   POLY   ────────    0    ──────────────────────────
───────────────   1   1   POLY   ────────    0    ──────────────────────────
───────────────   1   1   POLY   ────────    0    ──────────────────────────
                                     ── Setup Menu ──
Bank  Delete  Instrument  Link-prog  Open-ana  Program  Report  Single
Transmit  ARRANGER  FILES  MIDI-ANALYZER
```

To assign an instrument to a line in the Setup	Press <I>nstrument to activate the Instrument List window. Highlight the instrument name, then press <Return>.
To delete instruments from the Setup	Move the cursor anywhere on the instrument's line, then press <D>elete.
To set MIDI Channels	Highlight the Chan column and enter the instrument's MIDI channel number using the +/- keys. *MIDI channels on the setup lines must match the MIDI channels on the instruments in order for data transfer to occur.*
To assign a Bank to the Setup	Move the cursor to the row of the instrument and press <B>ank to activate the Banks window. This lists the names of the bank files available for the instrument assigned to the highlighted row. Highlight a Bank name and press <Enter> to assign it to the Setup.
To select Programs from the assigned Bank	Move the cursor to the row of the instrument and press <P>rogram. The Programs window shows the names of all the programs in the assigned Bank. Highlight a program, press <Return> and the program number and name appear on the setup screen.
To transmit the Setup	Press <T>ransmit to send parameters (program numbers, MIDI modes, etc.) to all of the devices in the MIDI network. Press F1 for Instrument Help, which provides the proper switch settings for the MIDI instrument in the highlighted row of the Setup.
To load a Setup	Enter the <F>iles screen from the Setup Screen and press <L>oad to load one of the Setup files.

Universal Librarian

Sp Gold's **Universal Librarian** is used for uploading, downloading, manipulating, naming and storing banks of patches from a list of over 130 pre-defined MIDI instruments. If an instrument is not on the predefined list, patches may be transferred by defining a "generic" instrument for the device.

With the Universal Librarian, the PC's hard disk may be used to eliminate RAM cartridges and cassettes that are normally used to swap sounds in a MIDI synthesizer.

Bank Arranger Screen (A from Setup):

This screen is used for arranging program banks for the instrument assigned to the highlighted line in the Setup screen. Typically, a bank file is loaded into one or both sides of the screen and programs are swapped, moved, etc. between sides or within the same side to create a new arrangement of programs in the bank. This new arrangement is then saved to disk as a new bank file.

```
                          ─── Bank Arranger ───
Bank BASS1
Instrument SIDEMAN DX7          VOICE DATA    8

BANK: BASS1.B6  VOICE DATA            BANK: ANIMAL.B  VOICE DATA
  1  BASS1   1 1                        1 Pig - A1
  2  BASS1   1 2                        2 Cats
  3  BASS1   1 3                        3 Spacebird1
  4  BASS1   1 4                        4 Spacebird2
  5  BASS1   1 5                        5 Spacebird3
  6  BASS1   1 6                        6 Rnd Kard82
  7  BASS1   1 7                        7 Raygun SD1
  8  BASS1   1 8                        8 Warpd Guit
  9  BASS1   1 9                        9 Hillbilly
 10  BASS1   110                       10 Harpsitar
 11  BASS1   111                       11 Mahlosyn 1
 12  BASS1   112                       12 Vulcan Str
 13  BASS1   113                       13 Kplookgup
 14  BASS1   114                       14 Catgut
 15  BASS1   115                       15 String99+1
 16  BASS.   116                       16 String99+2
                          ─── Bank Arranger Menu ───
 Audition  Block-select  Copy  Delete  Erase  Name  Receive  Swap  Transmit
 Xchange  FILES  OPTIONS  VOICE-EDITOR
```

To load a bank of programs from disk	Select an instrument in the Setup Screen, then press <A>rranger to enter the Bank Arranger. If a bank was specified on the Setup Screen, it will automatically load. Otherwise, use the arrow keys to pick which side of the display you want to load a bank into, then press <F>iles to enter the Files Screen, use the arrow keys to select the bank you wish to load, and press <L>oad <Return>.
To load a bank of programs from the MIDI Instrument	Place the cursor in the Setup row for the instrument to be edited. Press <A>rranger to enter the Bank Arranger screen. Use the arrow keys to select the side of the display in which to load bank. Press F1 for instructions about the instrument. Make sure the instrument settings and channel are correct. Press <R>eceive to upload programs from the instrument.
To send a Trigger Note over the current MIDI channel	Press the <Spacebar>. This lets you hear the sound of the instruments assigned to that MIDI channel,. The pitch, velocity, and length of this trigger note can be set from the Librarian Options window [Shift]-F3.
To enter the Librarian Options Window [Shift]-F3.	The left side of this window shows parameters for the Trigger Note. Setting this ON makes the Trigger Note automatic: (i.e., a note will be sent every time anything is changed in a setup or bank.) The other Trigger Note settings (pitch, duration, and velocity) adjust the Trigger Note as necessary for various instruments and sounds. The arrow keys or the letters P, D, or V move among the settings. Change values with +, -, [, or] keys. Press the <Spacebar> to hear the changes.

To audition a program in the Bank Arranger	Place the cursor on the program you wish to audition, then press <A>udition. The program is transmitted to the instrument's "scratch buffer" so it can be heard without altering the bank currently loaded in the instrument. *(Not all instruments support this feature.)*
To name (or rename) a program	Highlight name, press <N>ame and enter the name. Use the arrow keys to change programs while naming. Press <**Return**> or ESC to return to normal program operation.
To swap programs in a bank	Highlight the first program to swap, press <S>wap <**Return**>. (Or, use the arrow keys to select a range of programs to swap before pressing <**Return**>). Use the Arrow keys to select a destination, then press <**Return**>.
To copy programs from one bank to another	Same, except use <C>opy.
To erase programs from a bank	Same, except use <E>rase.

Librarian Options Window ((Shift) F3):

This window is used to set the librarian parameters such as trigger note values, automatic audition mode, etc.

```
================= LIB OPTIONS =================
TRIGGER note          [   ]   Program CHANGES         OFF

Trigger note PITCH     68     Automatic AUDITION      OFF

Trigger note DURATION 1000mS  INPUT Port for Upload    1

Trigger note VELOCITY  127    RECEIVE Buffer Size     6K
```

```
========= Librarian Options Menu =========
Audition  Changes  Duration  Input-port  Pitch  Receive-buffer  Trigger-note
Velocity
```

MIDI Data Analyzer

Sp Gold's **MIDI Data Analyzer** provides a "window to the MIDI world" by turning the PC into a MIDI diagnostic tool. It monitors MIDI network activity in three different display formats, each optimized for various methods of analyzing MIDI data.

The MIDI Data Analyzer also provides a way to transmit predefined strings of MIDI data from the PC keyboard to directly control MIDI devices (eg. initiating a patch dump, etc.)

To enter the Grid Mode screen	Press M from the Setup screen. The **Grid Mode screen** is a table of 16 columns corresponding to 16 MIDI channels and 8 rows corresponding to the 8 types of channel-specific MIDI commands. Thus, generating channelized data (eg. pressing a button or key on a MIDI synth) appears in the column corresponding to the channel on which the data was transmitted from the instrument.
	For instance, if you press any key on a MIDI instrument, the pitch of the note appears in a box in the **Note On** row of the column corresponding to the instrument's MIDI Transmit channel setting. Releasing the key shows the same note number in the first row, which corresponds to **Note Off** for that channel.
To clear the Grid	Press <A>ll-Reset at any time.
To filter "active sensing" data	Use the <C>lock-Enable command.
To enter the Formatted Trace mode screen	From Grid Mode, press <D>isplay. Play some notes and press a few buttons on your keyboard. You'll see descriptions of the MIDI messages, followed by the actual hex bytes received. As you play, the influx of MIDI data will start to scroll up as new commands push the old ones off the screen.
To enter the Bulk Hex Mode screen	Press <D>isplay. This displays as much MIDI Data as will fit on the screen with the status bytes highlighted.
To use History Mode	Press H and the status window at the top of the screen will indicate **History: ON**. Press PgUp/PgDn and you'll see the old MIDI information that scrolled off the screen. MIDI Terminal tells you if its input buffer overflows and if the history buffer is full. Use <A>ll Reset if MIDI Terminal fills up with data.
To send the contents of the History Buffer to an Instrument	Press <T>ransmit.
To define MIDI byte strings	Press SHIFT and the **number 1** key. This is the command to define MIDI string #1 on the #1 key. The other number keys 2 - 0 allow definition of midi strings #2 thru #10 in the same manner. The screen changes to show any previously defined strings along with the one currently being defined or edited in highlighted video. Type any sequence of hexadecimal bytes up to 22 bytes long, separated by spaces. The INS and DEL keys allow editing. Ctrl-End will clear to the end of the line. Press <Return> when the string is correct or ESC to cancel the definition.
To send a MIDI string	Press the number key used to define the string.
To activate the MIDI TIME CODE (MTC) Screen	Press <M> from any of the three MIDI terminal screen modes. Valid MTC entering the MIDI interface will be displayed.

Grid Mode screen

Formatted Mode screen

Bulk Mode screen

MIDI Time Code screen

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