

Digital Recording Studio

D1600 Guided Tour

Getting Started:	
Audio connections, Recording sources for this guide	3
Power-up, Load and play the demo song	4
Demo song Track Layout	5
Quick Tour of D1600 modes:	
Quion Tour of Brood moudor	6
D1600 Additional Features	13
Working with the D1600:	
Select and work with the demo song	15
Using the FF and REW keys in a song	15
Copy the demo song to a new song location for editing	15
Un-protect and rename the demo song	15
Disable Scene Memory and work with the MixView display	16
View the Post Fader levels as you mix	16
Mute/un-mute tracks with the TRACK STATUS keys	16
Work with the EQ function	16
View the Insert effect assignments for the demo song	17
Overview of Insert effect configurations	17
Work with the lead vocal track in "SISTER DANCE"	18
Set a new Locate point in the song	18
Work with the lead vocal Insert effect	18
Work with the Counter	19
Work with the lead guitar track	19
Scrub the audio to find and set a new Locate point	19
Assign and work with a new Insert effect for track 3	20
Store IN and OUT points, and use the Loop Playback function	21
Work with the Master and Final effects	21
Set new Master effect send levels	22
Work with the Final effect	22
Store the new Final effect in a user location	23
Playback the song and make any final mix changes	23
Store a new initial Scene for the song	23
Additional tips when working with Scenes	24
Work with the Solo function	25
Work with the Monitor Cue function	<u>25</u>
Work with the Metronome and Rhythm patterns	26

Owner's Manual References

Recording and Editing Basics: Create and rename a new song 27 Connect a microphone and set the input level 27 Check the Pre Fader Level and adjust the input signal 28 Recording new tracks 28 Working with the Virtual tracks 29 Create a "16-2" Virtual Mixdown 30 Work with the Clipboard, Fade and Undo functions 32 **Guitar and Insert effect / Rhythm Pattern Demo:** Create a new song and connect a guitar 35 Assign an Insert effect chain on input, for recording 35 Audition the Metronome and Rhythm patterns 36 Create a Tempo Map 36 Record the new Tempo Map to stereo tracks 37 Record a guitar track as the rhythm track plays back 37 Creating an Audio CD on the D1600: Create a blank region of audio at the start of the new song 38 Write and finalize a CD 39 Playback the new song from CD 39 D1600 QuickSteps: **Basic Operations** 40 Song and Track Editing 42

43

D1600 Guided Tour

Getting Started:

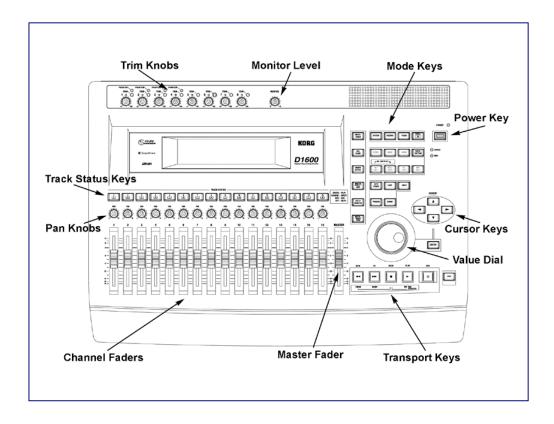
D1600 Hard Drive Installation: Detailed instructions for installing the included 20GB hard drive in the D1600 drive bay are located in the original shipping carton, and in the Owner's Manual, page 134.

Audio connections: Connect the rear panel <u>MONITOR L / R</u> outputs to a stereo monitoring system for playback/recording, and connect headphones to the front panel **PHONES** jack. **Note:** Use the rear panel **MASTER L/R** outputs when mastering to external DAT, MD, etc.

Recording sources for this guide: You'll be recording with an external microphone for some of the exercises in this guide. You'll need a lo-impedance microphone (or condensor mic) and cable.

Important! Make sure that the **PHANTOM POWER** switch is set to **OFF** (Inputs 1-4) when connecting unbalanced/ non-condensor microphones! Also, the **PHANTOM POWER** switch must be set to **OFF** before connecting a mic that requires phantom power, or serious damage to your mic could result! Switch it **ON** after connection.

Objects referred to in this guide: D1600 top panel objects that you'll work with are: Keys, Dial, Faders and Pan knobs. D1600 TouchView objects that you'll work with are: Tabs, Popup and Radio buttons, Dialog boxes and Icons.



Power up:

Note: The included **hard disk** needs to be installed before the D1600 will operate. See the Owner's Manual, page 134 for more information, and visit **korg.com** for the latest listings of compatible IDE Hard Disks and CD-R/CD-RW drives.

- 1. With the MASTER fader in the minimum position, connect the AC cable, and then press the POWER switch on the rear panel.

 Note that the STANDBY LED indicator lights on the top panel.
- Press the POWER key on the top panel to power up the D1600.

Many of the examples and exercises in this guide refer to the demo song "SISTER DANCE", included on the D1600 DEMO SONG DATA CD. If you are unable to locate and load this demo song, you can still follow this Guided Tour, and gain a basic understanding of the D1600 features and operation modes.

Load and Play the CD Demo Song:

Note: If you do not have an internal CDR/RW drive installed, you can load the demo song data via the SCSI connector on the D1600 real panel, using an external compatible CDR/RW drive.

- Press the CD EJECT button on the front of the CDR/RW drive, and then insert the enclosed D1600 DEMO SONG DATA CD, and press gently to close the CD drawer.
- 2. Press the **SYSTEM** key, and then press the "B-U/Rst" tab in the display.
- 3. Press the "Drive" button, and then press the Radio button to the left of "G:CD [B]", followed by pressing the "OK" button.

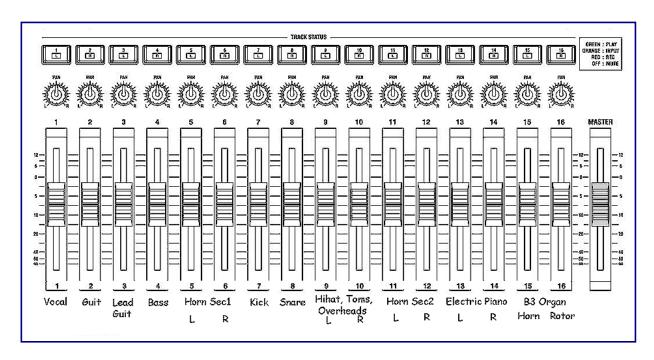
 Note: The "[B]" indicates that the CD contains Backup data.
- 4. Press the ">" popup button to the left of "Backup 1 Song", and then press "Restore", followed by pressing the "OK" button. The display indicates "G > 001 → I 001" (load song G001 to I001). If you have song data in the I001 location that you do not want to overwrite, press "I001" and use the DIAL to select another available song location. If I001 can be overwritten, continue with the next step.
- 5. Press the "Exec." button in the display, and then press the "Yes" button. The display will indicate "Restoring", along with a "% Finished" bar graph to indicate the data being restored.

Note: The Restore function allows you to select one, or all data to restore. Since there is only one demo song on the CD, you do not have to "Select All" data to load. For more information on the Backup and Restore functions, see the D1600 Owner's Manual, page 65.

- When the restore process is complete, the CD will automatically eject from the CDR/RW drive. Remove the CD, and then press gently to close the CD drawer.
- 7. In the display, press the "Yes" button if you haven't saved any user effects in the D1600, then press "OK". Note: Pressing "Yes" will overwrite any internal user effects with the user effects backup data.
- 8. Press the **SONG** key, and then press the **SelSong** tab in the display.
- 9. Press the ">" button to the left of the current song name.
- 10. Press the "↑" button in the display until the demo song "001: SISTER DANCE" is highlighted, then press the "OK" button to select the demo song.
- 11. The **TRACK STATUS** LED's should all be lit **green**. If not, press any of the **TRACK STATUS** keys that are not green (Play status).
- 12. Raise your external monitoring system levels, and then press the PLAY key on the D1600.

- 13. Slowly raise the **MASTER** fader to the "0" position, and rotate the D1600 **MONITOR** knob to a comfortable listening level (or raise the **PHONE LEVEL** knob if you're using headphones).
- 14. When the demo song has finished playing, press the STOP key.

D1600 Demo Song "SISTER DANCE" Track Layout:



Effects used in the demo song:

Insert effects (4 used)

Track 1 Vocal: I105 MM33: Mic/Sm57/414
 Track 2 Guitar: I069 MM1: P4EQ-Exciter
 Track 7 Kick: I106: MM33: Mic/Sim57/20

4) Track 8 Snare: I086 LimP4EQ

Master effects

1) M002 RV2: Smooth Hall 2) M004 RV4: Dry Plate

Final effect

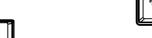
F008 DY2: StudioLimitr

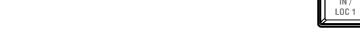
Important! To power-off the D1600 and auto-save any recording/editing you've done, press and hold the STANDBY key. When the display indicates "Power Off?", press the "Yes" button in the display, and the D1600 will automatically save your work and remain in a "Standby" state. Then if necessary, you can safely power off the D1600 with the POWER switch on the rear panel.

A Quick Tour of the D1600 Modes

Refer to the Demo Song "SISTER DANCE" Track Layout on page 5 for the following tours:

METER / TRACK VIEW mode:





- Reset the song to the beginning, by pressing the IN/LOC1 key, or press and hold the STOP key and then press the REW
 key once.
- 2. Press the PLAY key. As the song plays, press the METER/TRACK VIEW key, and work with the Channel Faders the display will indicate all track level changes, and you can also view the Send, Monitor and Master levels. Note that the top line in the display indicates "CLP" (clipping). As you mix, watch the display and avoid clipping on any of the tracks! Note: Each time you press [METER/TRACK VIEW] it will "toggle" between the meter and previously selected mode displays.

Note: Make sure that the display mode is set to **PostFdr** in the upper-left of the display - if not, press the ">" button in the upper-left, and select "**PostFaderLevel**" from the dialog box, then press the "**OK**" button.

The **METER/TRACK VIEW** page features five ways to see overall mix and track data: PreFader and PostFader, for accurate metering of all signal levels, plus TrackView1-8, TrackView9-16 and Track View 1-16, to check whether tracks contain audio events.

PAN controls:

1. As the song continues to play, adjust the PAN knobs for Channels 1-16. (Refer to the Track Layout on page 5)

Note: When you reset the demo song to the beginning, the original settings for fader, pan, EQ, effect settings, and effect and aux send levels will be reset to the values stored in the initial **Scene**.

The D1600 features a **Channel Pairing** function to group adjacent channels for controlling Track Status, Pan, EQ, Effect and Aux send settings as well as fader position.

SCENE MEMORY mode:

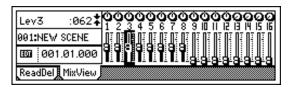
The D1600 features 100 -Scene Memory for "snapshot" automation of channel faders, pan, EQ and Effect settings and effect and aux send levels! **The Demo Song "SISTER DANCE" has an initial Scene stored**. When the song is selected, the **SCENE** key will light and the original mix settings will be recalled.

Note: More "hands-on" work with the SCENE function later in this guide.

SCENE MEMORY MIX VIEW tab:

The "MixView" tab is helpful when selecting and viewing the stored Scenes in a song.

1. Press the **SCENE** key (lit), and then press the "**MixView**" tab in the display. As you mix, the display will indicate the changes you make to the channel faders and pan controls.



EQ mode:





- 1. Press the EQ/PHASE key, then press the "Eq1-4" tab in the display. Here you'll see EQ settings for tracks 1-4.
- 2. Try pressing any EQ "knob" icon in the display and rotating the DIAL, to make changes to the track EQ.
- 3. As the song continues to play, select another "Eq" tab and work with the track EQ settings. The upper-left of the display will indicate the EQ parameter and track you are working with. Note: Use the Track Layout on page 5 of this guide to reference tracks that you are working with in the demo song.

Lo, Mid and Hi EQ plus Mid frequency control for every track, available as you record, or during track playback!

INSERT EFFECT mode:



8 Insert, 2 Master and 1 Final mastering effect: 11 simultaneous per song!

- 1. Press the INSERT EFFECT key: On this page you can set Insert effect assignments for each track and assign the effect type.
- 2. By pressing one of the Insert effect tabs ("InsEff1", etc.) you can apply an Insert effect. Once selected, you can press the effect name button to access the icons and editing parameters for the Insert effect program you've selected.

There are **128 preset** insert effect programs to choose from, **including 98 chains of up to 5 effects at once.** The D1600 features Korg's famous **REMS** modeling effects - accurate amp, cabinet and microphone simulations. You can edit any of the preset effect programs, then store your edits to **128 user** effect programs. Plus, many of the effects like **wah** can be controlled in realtime using the D1600's exclusive **Expression Pedal** input!

MASTER EFFECT mode:



Send your mix through Master and Final effects - for ultimate processing!

1. Press the MASTER EFFECT / AUX key, then press the MstEff1 tab in the display. For both Master effect 1 and Master effect 2, you can select one of 32 available effects, set return levels and balance, and easily-edit the effect parameters! The "Eff1" and "Eff2 tabs" let you set individual send levels for all sixteen tracks.

The highest-quality effect algorithms are onboard, and if you need more external processing or audio sends, there's an **AUX send** for every track. The Master and Final effect programs let you polish your mix for **CD-ready mastering**. You can choose from **32 preset** effects, and store edited effects to one of **32 user** locations.

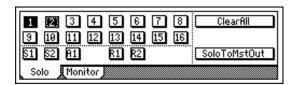
Note: The demo song "SISTER DANCE" includes Master and Final effects. You can view the effects by pressing the MASTER EFFECT / AUX key, followed by pressing the "MstEff1", "MstEff2" and "FinalEff" tabs. The effects used for the demo song are referenced on page 5.

SOLO mode:



The SOLO function lets you isolate and listen to specific tracks, as well as effect and send / return levels.

- 1. Press the **SOLO / MONITOR** key. You can listen to one or more sources by pressing the desired buttons in the display. The solo audio can be routed to the MONITOR L/R outputs or MASTER L/R and HEADPHONE outputs. You can solo effect send 1 and 2 levels, aux level, as well as return levels for Master effects.
- 2. Press the "ClearAll" button to disable solo for all tracks.

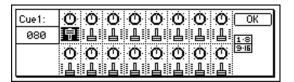


Tip: You can also press the TRACK STATUS keys during playback, to mute/un-mute desired tracks.

Note: More "hands-on" work with the SOLO function later in this guide.

MONITOR mode:

The MONITOR function gives you an independent cue mix for all sixteen tracks!



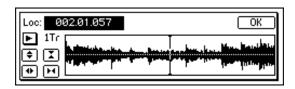
- 1. Press the "Monitor" tab, then press the "Level" button to view the display.
- 2. Press the "**OK**" button to return to the previous page.

The D1600 features Monitor Cue level and pan settings, to dial in your own separate mix, without affecting the mix routed to the Master outputs. See the Owner's Manual, page 39 for more information.

SCRUB mode:







- STOP playback, then press the SCRUB key. Here you can view track waveform data (selected by the ">" popup button next to
 "1Tr"), and use the "ZOOM" buttons to resize the waveform. Once you've selected a track, you can use the DIAL to scrub the
 audio.
- 2. Press the "OK" button in the display to return to the previous page.

Tip: Pressing the **FF** key while the **SCRUB** function is **ON** sets the audio data to play back at half-speed - an octave lower than the original pitch. This is a great way to rehearse and learn intricate solo lines!

Note: More "hands-on" work with the SCRUB function later in this guide.

TUNER mode:

The D1600 features a built-in auto-chromatic tuner!





 STOP playback, then press the INPUT key, followed by pressing the "Tuner" tab. Here, you can tune an instrument connected to the INPUT 8 / GUITAR IN jack.

When you select the "Input 8" radio button, you can precisely tune connected instruments. If you select the "Track" radio button you can check the tuning of any previously recorded track!

TEMPO / RHYTHM modes:





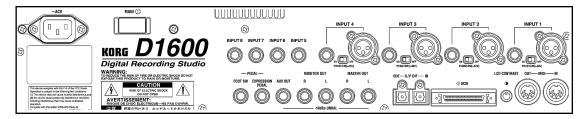
Press the TEMPO/RHYTHM key. On this page you can set tempo, time signature and rhythm settings for a song.

The D1600 provides you with the "ultimate metronome" - the sampled drum patterns in memory provide a great tempo "guide" for many music genres. The drum patterns can be recorded to tracks, and you can create up to 200 tempo map events per song, allowing tempo, time signature and rhythm patterns to change during recording and playback!



Note: More "hands-on" work with the Tempo, Metronome and Rhythm functions later in this guide.

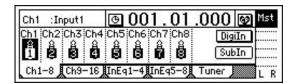
REAR PANEL view, and INPUT ASSIGN / INPUT EQ modes:



The D1600 features 8 TRS-balanced audio inputs, plus 4 XLR inputs with switch-able phantom power. All inputs have TRIM control, and can be instantly routed to any channel!

1. Press the INPUT key. Here, you can quickly route inputs to specific channels, and apply EQ on input for tracks 1-16.





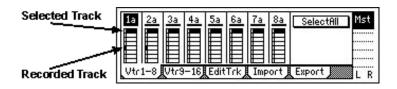
The **S/PDIF** (Digiln) input allows stereo digital sources to be routed to channels 1-8, and the **SUB** inputs can be used to input synchronized sequenced audio and returns from external processors via the AUX send.

VIRTUAL TRACKS / BOUNCE modes:



The D1600 has 16 tracks, each with 8 Virtual tracks, providing 128 onboard tracks!

1. Press the TRACK key. The Vtr1-8 and Vtr9-16 tabs let you select the Virtual tracks for recording.



You can record solo parts etc. on the virtual tracks and then select your favorite take!

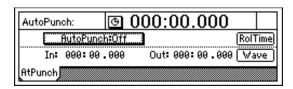
Bouncing tracks has never been easier! In addition to basic track bouncing functions, the D1600 features an <u>exclusive</u> "16 to 2" function. This lets you bounce 16 tracks of audio to 2 Virtual tracks to create virtual mixdowns <u>internally</u>, and then select your favorite mix for mastering to CD!

PUNCH IN / OUT mode:



The Manual and Auto Punch In/Out functions let you re-record specific sections seamlessly! Manual Punch In/Out on a selected track can be set by pressing the REC key or a footswitch during playback, to instantly enter record mode.

1. Press the AUTO PUNCH key: In the display you'll see "In" and "Out" time locations, to set for punch in / out recording with the STORE and IN/LOC1 and OUT/LOC2 keys.



You can also set In / Out times by pressing the "Wave" button in the Auto Punch page - a great feature that lets you set precise punch in / out times while viewing a waveform display. And you can easily set Pre and Post-roll times to specify playback time before and after recording.

D1600 Additional Features:

Uncompressed recording and playback at 44.1kHz:

The D1600 provides the utmost in sound quality, with no data compression in recording and playback! Select 8 track simultaneous recording / 16 track playback @16 bit, or 4 track simultaneous recording / 8 track playback @24 bit. Your projects will sound amazing, from initial recording to final mastering!

Interchangeable Hard Disk feature:

When the internal hard drive is full, you can easily remove it, along with the hard disk cartridge, and install another hard disk and cartridge. The low cost and high memory capacity of IDE hard drives allows for fast and efficient management of your projects in this way!

Included SCSI-2 50 pin connector:

For recording and backing up your projects to external hard disk and removable media such as Jaz, Orb, etc. Also for connection to compatible CDR/RW drives, if you don't have an internal CDR/RW drive installed.

Produce and burn an audio CD, or backup your audio data to CDR/RW media- directly on the D1600:

Install a Korg or compatible CDR/RW internal drive, and create audio CDs with the D1600. Or use the CDR/RW drive to economically-backup your valuable data. **Note:** The latest listing of compatible drives can be found by visiting the Korg website: **korg.com**.

Phantom power, switch-able for Channels 1-4:

Rear panel XLR and 1/4 inch connectors for Channels 1-4, plus switch-able phantom power for each of the XLR inputs!

Built-in cooling fan:

The internal fan is configured to run when the D1600 is stopped or during playback, but automatically shuts down when you begin recording!

100 Scenes, 100 Mark points and 4 Locate points per song:

Store "snapshot" Scene automation of fader, pan, EQ and effect send levels, and name your scenes for easy recall! Create specific Mark points in the song structure, name them for convenient access to "Verse", "Chorus", "Solo" etc., and immediately jump to these registered locations. Store four Locate points for instant access to specific areas in your song with top panel keys.

Selectable levels of UNDO:

Use the UNDO / REDO function to step back through the previous recording or editing operations, so that you have plenty of opportunity to fix any mistakes that happen. Select 99, 8 or 1 as UNDO levels.

Time Stretching:

Match tempo between recordings of different tempo, or fit recording into a specific time length.

Reverse playback:

Reverse specific regions of audio data using single or multiple tracks, then copy the results to new audio regions or tracks.

Optimizing Track Data:

After editing your tracks, this feature lets you create one piece of audio data from several "fragmented" regions, resulting in perfect track playback and better conservation of hard disk space!

Auto-Save Feature:

It's good to know that your valuable song data will be saved automatically, when selecting new songs and on power-down!

Loop recording and playback:

Set specific in / out points in your song and loop the audio - then rehearse intricate parts to be recorded, or use the punch-in function while looping, and add new data as the loop plays. Use the loop playback feature to audition specific regions of recorded audio.

Trigger Recording:

Set recording to begin automatically in response to an audio input!

Record Tap Tempo:

This function lets you record the tempo after you've recorded a song that has no tempo settings - a great feature! This way you can then edit your tracks in units of measures or synchronize the D1600 to external MIDI devices.

Use MIDI to automate D1600 functions:

Besides using MIDI to synchronize the D1600 to other devices (including another D-series recorder!), you can automate your mixes: fader, pan, EQ, etc., parameters with an external sequencer, control the effects in real time, and change scenes via MIDI program change messages!

Program Play function:

Playback multiple songs in any order, from the internal drive and external drives! This function is also great when mixing down to DAT. MD. etc.

Normalize function:

Boosts the level of track data that was recorded at lower than optimal level, to the maximum volume without clipping.

Use the SUB INPUTS to send external signals directly to the Master bus:

Assign any of analog inputs 1-8 as Sub Inputs, and input the audio from an external sequencer in sync, direct to the D1600's Master bus, or record any external audio final pass, along with the internal tracks, direct to your mastering deck. You can also use the Sub Inputs to return audio from an external processor connected to the AUX OUT.

Import and export WAV data:

Audio data in **WAV** format can be imported or exported via FAT16 DOS formatted SCSI external drives, and imported from ISO9600 Level1 format CD's. WAV files can be copied to the D1600's clipboard for pasting into new song locations. For more information, see the Owner's Manual page 86.

Working with the D1600

Select and work with the demo song:

- 1. If "SISTER DANCE" isn't already selected, press the SONG key, then press the "SelSong" tab.
- 2. Press the ">" popup button to the left of the current song name.
- Press the "↑" button in the display, and press to highlight demo song "I001 SISTER DANCE".
- 4. Press the "OK" button to select the song, then press the PLAY key to begin playback.

Note: This demo song is protected, as indicated by the "lock" icon to the right of the song name. Following the next section, you'll learn how to copy this song to a new location so that you can freely-edit it.

5. As the song plays, work with the **FF** and **REW** keys as follows:

Using the FF and REW keys in a song:

To move towards the beginning of the song from a point in the song, while stopped:

Press [REW] repeatedly to move in increments, or **hold down** [REW] to "rewind" continuously, then release the key to stop at the new location.

To move towards the beginning of the song during playback:

Press [REW] once to begin rewinding, then press [PLAY] to continue from the new location, or press [STOP] to stop playback.

To move towards the end of the song while stopped:

Press [FF] repeatedly to move in increments, or hold down [FF] to "fast-forward" continuously, then release the key to stop at the new location.

To move towards the end of the song during playback:

Press [FF] once to begin fast-forwarding, then press [PLAY] to continue from the new location, or press [STOP] to stop playback.

To move to the beginning of the song while stopped:

When you are at a point in the song, Hold down the STOP key and press the REW key.

To move to the end of the song while stopped:

When you are at a point in the song, Hold down the STOP key and press the FF key.

Copy the demo song to a new song location for editing:

- 6. STOP song playback, then press the "EditSong" tab.
- 7. Press the ">" popup button, then press the "Copy" radio button, followed by pressing the "OK" button.
- 8. The next available empty song location is indicated above the "CDR/RW" tab. Press the "Exec." button, then press the "Yes" button to copy the song. Press "OK" to return to the previous page.

Un-protect and rename the copied song:

- 9. Press the ">" popup button again, then press the "Protect" radio button, followed by pressing "OK".
- 10. Press the "Exec." button so that the "lock" icon disappears in the display.

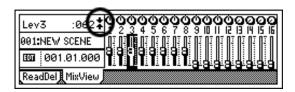
- 11. Press the "SelSong" tab, then press the "Rename" button. Repeatedly press the ">" button in the display, until the space just to the right of "DANCE" is highlighted, and then press the "0..9" button. Rotate the DIAL until the highlighted space indicates "2", and then press the "OK" button, to rename the copied song "SISTER DANCE2".
- 12. The **TRACK STATUS** LED's below the display should all be lit green. If not, press any of the **TRACK STATUS** keys so that they all light green (Play status).

Disable Scene Memory and work with the MixView display:

- Press the SCENE key (lit), and then press the "SceneRead:On" button, so that the stored scene for this demo song is disabled. It's important that "SceneRead:Off" is indicated in the display for the following steps!
- 2. Press the PLAY key to begin playback.
- 3. Raise the CHANNEL faders and MASTER fader to create an initial mix of the demo song. Press the "MixView" tab:

You can accurately set the faders and pan knobs to the same settings as the stored scene by referencing the "MixView" display.

Move each of the faders and pan knobs, and as you do this, watch the upper-left of the display. The original values of level and pan placement for each channel will be indicated when two arrows appear to the right of the fader or pan parameter:



Note: Pan setting original values are indicated by

\$

Note: Use the Track Layout on **page 5** of this guide as your mix reference.

View the Post Fader levels as you mix:

4. As the song plays, press the METER/TRACK VIEW key, and make sure that the upper-left popup button is set to "PostFdr", so that you can view the track levels as you mix. Be careful not to set channel and master fader levels so that the meters reach the "CLIP" line in the display.

Mute / Un-mute tracks with the TRACK STATUS keys:

- 5. While the song continues, try muting and un-muting tracks, by pressing the TRACK STATUS keys (unlit: mute / green: play).
- Mute all tracks except tracks 4, 7, 8, 9 and 10 (Bass, Kick, Snare, Hi Hat, Toms and overhead mics L/R).

Note: Use the Track Layout on **page 5** of this guide as your mix reference.

Tip: To reset the demo song to the beginning when stopped or during playback, press the IN/LOC1 key.

Work with the EQ function:

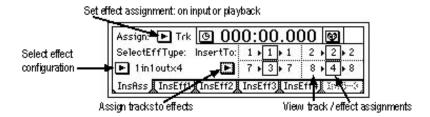
- 1. While the song plays, press the **EQ/PHASE** key, then press the **"Eq1-4"** tab.
- 2. Press to highlight different EQ **"knob"** icons in the display (or use the **CURSOR** keys), and the upper-left corner of the display will indicate which EQ parameter and track you are working with.
- 3. Press the "HiEq" knob for track 4 the display will indicate "HiEq4".
- 4. Rotate the DIAL to apply new High EQ settings to the bass track.
- 5. Press to highlight the "MidEq4" knob icon, and use the DIAL to apply Mid EQ settings.

Press the "MidFc4" knob, and use the DIAL to set a new Mid frequency for the bass track, and then work with the "LoEQ4" values to finish working with the track.

Note: The upper-left of the display indicates the EQ parameter and track you're currently working on.

View the Insert effect Assignments for the demo song:

- 1. Press the STOP key, and then press the IN/LOC1 key to reset the song to the beginning.
- Press the INSERT EFFECT key. The diagram below indicates the settings for this song:



- With playback stopped, press the "InsAss" (Insert Assign) tab in the display.
- 4. Press the ">" popup button to the right of "Assign:" in the upper-left of the display.
- 5. Make sure that the "PlayTrack" radio button is selected (you'll be applying an insert effect to a playback track). Press "OK" to return to the previous page.
- 6. In the display, note the Insert effect track locations for playback: Track 1>Insert effect [1], Track 2> Insert effect [2], Track 7> Insert effect [3], Track 8> Insert effect [4]. The effect configuration is set to use four insert effects on playback.

Overview of D1600 Insert effect Configurations:

There are four configurations available in the Select Effect Type menu:

1in2outx2:

Primarily Guitar and Bass Chains of 3-5 effects each, Use for recording / on input only. This configuration is good for mono-in, stereo-out sources.

2in2outx2:

Great selection of effects for keyboards and stereo output instruments.

1in1outx4:

The default setting for new songs. Good to use for fixed panning sources like rhythm guitar - selecting this configuration lets you select from four mono Insert effects to be used in the song.

1in1outx8:

The largest configuration of multiple effect choices - use this one when you need up to eight mono effects in a song. Ideal for fixed pan sources that need effect isolation, like drums.

Note: For more information on setting assignments, configurations and locations of insert effects, see the D1600 Owner's Manual, pages 43 and 105.

Work with the lead vocal track in "SISTER DANCE":

1. Press the **Channel 1 TRACK STATUS** key so that it lights **green** (un-muted). Tracks **4**, **7**, **8**, **9** and **10** should also be un-muted (TRACK STATUS keys lit green).

Set a new Locate Point in the song:

- 2. Press the IN/LOC1 key to reset the song to the beginning. The display should still be on the INSERT EFFECT page.
- 3. Press to highlight the "Counter", and use the DIAL to set it to "000:30.000".
- Press the PLAY key to resume playback from this point.
- 5. As the song plays, listen to the lead vocal track. Just after the first verse ends, press the STORE key and then press the OUT/LOC2 key. This sets an "on-the-fly" locate point for you to use as you go through the following steps and audition new insert effects for the lead vocal track. Let the song continue for now...

Note: The default setting for all four locate keys is at the beginning of each new song.

Also Note: Waveform viewed Locate points can be stored by using the SCRUB function, for setting even more precise locations.

More on this in the following exercises:

Work with the lead vocal (Track 1) Insert effect:

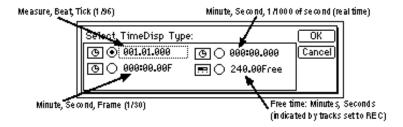
- 6. As the song continues, press the **OUT/LOC2** key, and then press the **"InsEff1"** tab at the bottom of the display. As you audition effects while the song plays, press the **OUT/LOC2** key whenever you like, to reset to the stored locate point and continue playback.
- 7. Press to highlight the effect **number "1105"**, to the left of the effect name button. This is a microphone modeling/limiter chain, assigned to the lead vocal track.
- 8. Slowly rotate the **DIAL** left or right, to select and listen to new insert effects. *Note that you'll find additional mic modeling effects in locations "I101-108"*.
- Rotate the DIAL until you recall effect "I105", then press the "MM33:MicSM57/414" button, followed by pressing the "MicSim" and "Limiter" effect "icons" to view, select and adjust a few parameters for these effects.

Tip: Once you've edited an effect, the display will indicate **"EDIT"** to the left of the effect name. You can then press the **"Store"** button in the display, and save the new effect to one of 128 user effect locations. Note that the factory user effects are identical to the preset effects. For more information, see the D1600 Owner's Manual, page 46.

Work with the Counter:

- 1. Press the STOP key to stop playback, and press the IN/LOC1 key to reset the song to the beginning.
- 2. Press to highlight "000:00: 000 on the "Counter", then rotate the DIAL until the "Counter" reads "001:50:000".

The Counter display type can be set to read in four formats, by pressing the "Clock" icon to the left of the "Counter", and selecting a display type from the menu:



Note: In addition to the Counter display, the display can be set to read in **Tempo**, **Mark**, or **Scene** formats, by selecting from the popup menu below the song name edit cell.

Note: If you've just made changes to the "Counter" settings, reset the counter to read in Minutes, Seconds, 1/1000 of second (realtime) as originally set. Also note that the Counter time location display defaults to Measures, Beats, Ticks when a new song is created.

Work with the lead guitar track (Track 3):

Press the Channel 3 (lead guitar track) TRACK STATUS key so that it lights green (un-muted). Tracks 1, 4, 7, 8, 9 and 10 should also be un-muted (TRACK STATUS keys lit green).

Scrub the audio to find and set a precise locate point:

- 4. Press the SCRUB key, then press the ">" popup button in the upper-left of the display. Press the "Track 3" radio button.
- 5. Rotate the **DIAL** to the right, until you see (and hear) just the lead guitar track's waveform (beginning at approximately "001:51:367"). You can press the "**ZOOM**" buttons to the left of the waveform display, to resize the waveform view, and you can rotate the **DIAL** to the right or left to scrub the audio.
- 6. Rotate the **DIAL** until the "**crosshair**" is at the beginning of the waveform (approximately "001:51:367").
- Press the STORE key, then press the TO/LOC3. You can use this new locate point whenever you like, to reset to the stored locate point for this track.
- 8. Press the **SCRUB** key once again, to return to the SCRUB page, then try the following functions available in SCRUB mode:

Try the "Play From" function:

9. Press the **PLAY** key. The audio data will begin playback at the currently stopped position, and play for two seconds, before automatically returning to the stored locate point.

Try the "Play To" function:

10. **Hold** the **STOP** key and press the **PLAY** key. Watch the display, as playback begins two seconds before the currently stopped position and stops at the stored locate point.

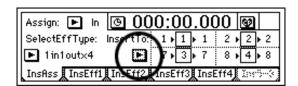
Try the "Slow Play" function:

- 11. The **Slow Play** function lets you playback audio at half-speed, one octave below the normal pitch. This feature is good for learning and practicing difficult phrases. To do this: While playback is **stopped**, press the **FF** key. The track will playback at **half-speed**.
- 12. Press the **STOP** key, and you'll return to the stored locate point.
- 13. Press the "OK" button to exit SCRUB mode.

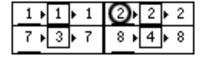
Note: When selecting SCRUB mode, all tracks are set to **green** (Play status).

Assign and work with a new Insert effect for Track 3:

- 14. Make sure playback is **STOPPED**, then press the **INSERT EFFECT** key.
- 15. Press the "InsAss" tab in the lower left of the display.
- 16. Refer to the diagram below, and press the "InsertTo" popup button in the display:



17. Press the Insert effect 2 "2" track parameter, then rotate the DIAL to select "3":



18. Press the "OK" button in the display. You've just assigned Insert effect 2 to Track 3.

Store IN and OUT points, and use the Loop Playback function as you audition new insert effects for Track 3 (lead guitar):

- Press the SONG key, then press to highlight each time position on the "Counter", and rotate the DIAL so that the Counter reads: "001:54:159".
- 20. Press the STORE key, then press the IN/LOC1 key, to set this new IN point.
- 21. Press to highlight the "Counter" time positions again, and set to read "002:29:546".
- 22. Press the STORE key, then press the OUT/LOC2 key, to set this new OUT point.

Set Loop Playback:

- 23. Press the **LOOP** key, and note that your new IN/OUT points are indicated in the display.
- 24. Press the "Loop:Off" button in the display, so that it reads "Loop:On".

Play-enable all tracks, and assign a new insert effect to Track 3:

- 25. Press the PLAY key, and make sure that the remaining TRACK STATUS keys are lit green (Play status).
- 26. Press the INSERT EFFECT key. Loop Playback will continue as you work with the track:
- 27. Press the "InsEff2" tab in the display, then slowly rotate the DIAL to select and audition new Insert effects for Track 3.
- 28. **Once you've selected an effect you like**, try working with the effect parameters: Press the "**Effect**" button to the right of the effect "number" selected, then press the desired effect "**icons**" in the display, and make edits to the effect.
- 29. When you're satisfied with the edits, press the "OK" button 2x to return to the main Insert effect page. Here, you can press to "toggle" the "Bypass" button to "mute" the newly-assigned effect from the original audio track (which was originally recorded with another Insert effect assigned).
- 30. Press the STOP key, then press the LOOP key. Press the "Loop:On" button in the display, so that it reads "Loop:Off".

Tip: You can use the **Loop playback/record** function in conjunction with the **Auto-punch** recording mode. This method lets you record repeated takes over the same section, and then use the **Undo** function to select the best take! For more information, see the D1600 Owner's Manual, page 31.

Work with the Master and Final effects:

Two Master effect processors can be used simultaneously, with individual send levels for each channel. The Master effects are used for overall processing of the mix, and there are 32 Preset programs, plus 32 user programs available. **Note:** The Master and Final effects are not "printed" to the hard disk when used in a song, unlike Insert effects that have been assigned **on input**. The only time they are actually recording is in mastering to an external recorder via the master outputs, or when using the bounce recording functions, covered later in this guide.

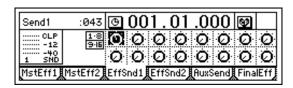
You'll continue to use the currently selected song for the following exercises...

View the current Master effects and send levels:

- Press the MASTER EFFECT / AUX key, then press the "MstEff1" tab in the display note that "M002 RV2:SmoothHall" has been assigned. View the "RetLev" (return level) and "RetBal" (return balance) settings in the display by touching their dial icons: the value is then displayed in the upper left corner.
- 2. Press the "EffSnd1" tab in the display, and view the send level "knob" icons for each track.
- Press the "MstEff2" tab in the display ("M004 RV4: Dry Plate" has been assigned), and then press the "EffSnd2" tab to view the send levels.

Set new Master effect send levels:

- 4. With playback **stopped**, **hold** the **STOP** key and press the **REW** key (or press the **END/LOC4** key) to reset the song to the beginning (these locate keys are currently set to locate to the beginning of the song).
- 5. Press the **PLAY** key, and make sure that the **Channel faders** are raised, and the **TRACK STATUS** keys are all lit **green** (Play status).
- 6. Press the "EffSnd1" tab, and as the song plays, press to select the "knob" icons (or use the CURSOR keys) and rotate the DIAL to set new send levels for desired tracks to Master effect 1. Note: Refer to the Track Layout on page 5, and remember that the upper-left of the display indicates the selected track and send value.



7. Press the "EffSnd2" tab, and set new send levels for desired tracks into Master effect 2.

Tip: To reset the demo song to the beginning during playback, press the **END/LOC4** key.

8. When you've finished setting new send levels, press the **STOP** key to stop playback.

Note: Channel Pairing of send levels, EQ, Track Status and more is available for adjacent (odd/even) channels. For more information, see the D1600 Owner's Manual, page 38.

Work with the Final effect:

The Final effect is an independent processor with 32 preset and 32 user Final effect programs available. It is located at the end of the effect routing scheme in the D1600, and is used for "mastering" and dynamics applications. During mixdown you can use a Final effect to "polish" your mix as you master your work to external DAT, MD, etc. The assigned Final effect will also be "printed" to tracks (including Virtual tracks) during bounce recording operations. **Note:** Like the Master effects, the demo song includes an already assigned Final effect.

- 1. Reset the song to the beginning, and then press the PLAY key to begin playback.
- In the MASTER EFFECT page, press the "FinalEff" tab, and note that "F008 DY2:StudioLimitr" is the effect assigned.
- Press to "toggle" the "Bypass" button and "Cancel" button, to listen to the song without and with the Final effect.
- 4. Press the "Cancel" button to recall the effect.
- 5. Press to highlight "F008", and rotate the DIAL to audition new Final effects while the song plays. When you've selected a Final effect that you like, press the "effect" button to the right of the effect number, and select and edit the parameters to suit. Note:

 The "Next:" or "Prev" buttons in the display select the pages of edit parameters available.

Store the new Final effect in a user location:

- 6. Once you've completed editing desired parameters, press the "OK" button 2x, then press the STOP key.
- Press the "Rename" button, then press the ">" button to move through the effect name cell, and use the additional "buttons" and the DIAL to enter a new name for the edited effect.
- 8. Press the "OK" button, then press the "Store" button in the display.
- 9. Press to highlight "u033" (the first user effect), and rotate the DIAL to select "u040 DY2: StudioLimitr", then press the "Exec." button to store the effect. Note: The new assigned effect is now indicated in the display and is stored with this song.

Playback the song and make any final mix changes:

- 10. Reset the song to the beginning, press the **PLAY** key, and set the faders, pan knobs, EQ and effect settings for a final mix setup. (*Track playback EQ is accessed with the EQ/PHASE key and the EQ tabs in the display*).
- 11. When you're satisfied with the mix, press the STOP key and reset the song to the beginning.

Store a new initial Scene for the song:

- Press the SCENE key, then press the "ReadDel" tab.
- 2. Press the "Filter" button. This page lets you filter (disable) EQ, pan, fader, etc. for specific channels. In multiple Scene playback during a song, filtering allows you to disable pan, EQ, etc. settings for specified tracks or overall parameters. For this exercise, you'll turn all Scene Filtering OFF:
- 3. Press each of the following Channel Filter "buttons" at the bottom of the display so that they are not highlighted: "EQ, Pan/Bal, Pair, Aux, Send1, Send2".
- Press the "Next>" button, and press to disable filtering for all of the Overall Filter "buttons" on this page, then press the "OK" button.

Note: The original demo song uses scene filters for specific tracks, as indicated by highlighted tracks for each mode (EQ, Pan/Bal, etc.) For this exercise it is not necessary to individually-disable track filters, as you've just pressed to disable each of the mode buttons "globally.

- Press the "Delete" button, then press the "SelectAll" button, followed by pressing the "Yes" button, to delete all previously stored Scenes in the copied song.
- 6. Press the STORE key, then press the SCENE key, to write the new scene. The display will indicate "001:NEW SCENE".
- 7. Press the "SceneRead:Off" button so that it reads "SceneRead:On". The SCENE key will light, and your new mix will be stored in memory (and automatically saved on power-off). The next time you power-on, the SCENE key will light when you select this song, and the initial SCENE will be recalled.

- Tip: You can view Scene fader and pan settings from scene to scene, by disabling "SceneRead:On", and selecting the "MixView" tab. Then highlight the "Scene number" and use the DIAL to move from scene to scene, and the MixView display will indicate the changes.
- **Tip:** Scene changes (up to 100 per song) can be transmitted and received via MIDI program change messages. For more information on Scene mode operations, see the D1600 Owner's Manual, pg. 41.
- **Tip:** In any song where Scene Memory is enabled (SCENE key lit when song is selected), the settings originally stored as scenes will be recalled each time you restart the song. Disable Scene Memory if you want to edit, create or overwrite new scenes in a song.

Additional tips when working with Scenes:

Creating multiple Scenes in a song:

You can create a number of scenes in a song, including fader, pan, EQ, effect settings and send levels, and AUX send levels. Try working with the copied song "SISTER DANCE", and add multiple scenes to your new mix. For example, there may be places in the demo song where you'd like to pull out the horn or keyboard audio. Just move to these locations, set the appropriate faders to "oo", and then store a new scene. Bring the faders back up at the point in time where you want the instruments back in the mix, and store another scene for the new fader settings. Your scenes will playback seamlessly, when you playback the song with ("Scene Read: On").

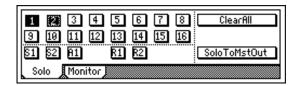
To Copy Scenes to new time locations:

- 1. Press the **SCENE** key, and in the display, press the "**ReadDel**" tab.
- 2. Press to turn "SceneRead Off" (if it is On).
- 3. Select a Scene that you want to copy. (This can be done either in ReadDel page or MixView page).
- 4. Press the **SONG** key, then use the "**Counter**" and **DIAL** to select a location where you want to store the Scene you've just selected. (This can also be done by playing and then stopping the song, or by pressing the REW or FF key.)
- 5. Press the **SCENE** key, then press the **STORE** key, followed by pressing the **SCENE** key again, to copy the scene to the new location.
- Select the "ReadDel" tab, and press to turn "SceneRead On".

Work with the Solo function:

The Solo function lets you isolate and monitor individual tracks, master effect sends and returns, and aux sends. The faders on the D1600 control both recording and monitoring levels, and a **Cue Level** function is provided for separate adjustment of level and pan while you record.

- Press the SONG key to return to the main song menu. Make sure the copied demo song you've been working with is still selected.
- 2. Press the PLAY key to start playback of the song.
- 3. Press the **SOLO / MONITOR** key, then press the "**Solo**" tab in the display:



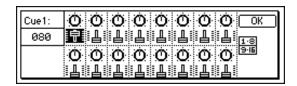
- 4. As the song plays, press the track button "4", to solo the bass track.
- 5. Try pressing additional track buttons to create solo "groups", or press **highlighted** track buttons to turn solo off for the desired tracks. **Note:** Refer to the Track Layout on page 5.

Important! Make sure that the D1600 is connected via the MONITOR L/R OUTPUTS.

6. When you're finished trying the Solo function, press the "Clear All" button in the upper-right of the display, then press the STOP key.

Work with the Monitor Cue function:

- 1. Reset the song to the beginning (make sure you've cleared the solo function in previous step) and press the **PLAY** key to begin playback again.
- 2. Press the SOLO/MONITOR key, then press the "Monitor" tab in the display.
- 3. Press to turn off the "MasterLR" button in the display.
- 4. Press the "Cue" button, then press the "Level" button. Press to highlight (or use the CURSOR keys) additional track "faders" and "pan" icons, then use the DIAL to set the desired cue mix.
- 5. When you've finished working with the Cue function, press the "**OK**" button in the display, then press the "**Cue**" button to turn it off, and press the "**MasterLR**" button to turn it on. The mix will be re-routed to the master bus.
- 6. Press the **STOP** key to stop playback.



Tip: The "Autoln" function: When On, mixer channels that are set to REC will monitor track playback, and will automatically switch to monitoring the external input sound when recording or in rehearsal mode, and when stopped. When Off, you will always hear the input sound for channels set to REC.

Work with the Metronome and Rhythm patterns:

- 1. Press the **SONG** key, then press the "**SelSong**" tab in the display.
- 2. Press the "New" button in the lower right of the display. On the "MakeNewSong" page, press the "OK" button. The next available empty song location will be selected.

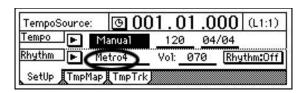
Note: You can set "16 Bit / 16 Track" or "24 Bit / 8 Track" SongType in the "MakeNewSong" page. For this exercise, leave the song type set to "16 Bit / 16 Track"...



3. Press the **TEMPO / RHYTHM** key, then press the "**Rhythm:Off**" button to set "<u>Rhythm:On</u>", and you'll hear a standard metronome "click":

Audition some PCM rhythm patterns:

4. Press to highlight "Metro4":



- 5. Slowly rotate the **DIAL** to the right, to select and listen to some of the patterns in memory. Press the "**Vol**" parameter and use the **DIAL** to set the rhythm level. Use the **MASTER** fader to control the overall volume level.
- 6. After you're finished auditioning patterns, press the "Rhythm:On" button to turn "Rhythm:Off" and stop pattern playback.

Note: There are 215 PCM Rhythm patterns in memory. The rhythm patterns indicated by "I", "F", or "E" indicate intro, fill, or ending type patterns. More information on recording patterns to tracks later in this guide.

Recording and Editing Basics

Create a new song:

- Press the SONG key, then press the "SongSel" tab in the display.
- 2. Press the "New" button, then press the "OK" button. The next-available empty song location ("NEW SONG") will be selected.

About the D1600 recording formats available:

In the "SongSel" tab, the SongType can be set for 16 bit / 16 track, allowing 8 track simultaneous recording with 16 track playback. Setting SongType to 24 bit / 8 track mode gives you 4 track simultaneous recording with 8 track playback. Both formats provide uncompressed recording at 44.1kHz.

Note: For the exercises in this guide, leave the radio buttons set as they are: "16Bit / 16Track" and "New MixerSet".

Rename the song:

- 3. Press the "Rename" button in the display. (You'll name the song "My Demo"):
- 4. Press the "ClearAll" button, then press the "A.../ a..." button to insert letters in the name cell (press the "A.../ a..." button repeatedly to select between upper and lower case characters).
- 5. Rotate the **DIAL** to change characters, and use the "<>" buttons to move the cursor left or right in the song name cell. Use the "0..9" and "Mark" buttons to change character types, and press the "Space" button to insert spaces in the name cell.
- 6. When you've finished inputting characters, press the "OK" button to finish naming the new song.

Basic Recording

To get started, you'll use the **new song** you just created, and record basic tracks. For the following exercises, you'll need a **lo** - **impedance microphone** and **headphones**. You can use an electric guitar or another mono output instrument if you like, however the steps in each exercise refer to the use of an external microphone...

Connect a microphone and set the input level:

- Connect headphones to the front panel PHONES jack, then lower the front panel PHONE LEVEL knob and the top panel MONITOR knob (behind the display) to the minimum (0) position.
- 2. Lower the MASTER Fader and all the Channel Faders to "oo".
- Connect your mic to INPUT 1 (XLR) on the rear panel. Important! Make sure that the PHANTOM POWER switch is set to the
 OFF position before connecting any type of mic. If you're using a mic that requires phantom power, set the switch to ON after
 connection! Note the status of the PHANTOM LED indicator above the INPUT 1 TRIM knob, just behind the display.
- 4. Press the Track 1 TRACK STATUS key 2x, until the LED lights RED (Record status).
- 5. Raise the Channel Fader for TRACK 1 to the "0" position, and set the PAN knob to center.
- 6. Raise the **MASTER Fader** to the "0" position.

Check the Pre Fader Level and adjust the input signal:

- 7. Press the METER / TRACK VIEW key.
- Press the ">" popup button in the upper-left of the display, then press the "PreFdr" radio button, followed by pressing the "OK" button. Now speak into the microphone, and watch the "Pre Fader" level meter as you speak.
- 9. Rotate the **INPUT 1 TRIM** knob (behind the display) as high as possible without allowing its LED (above the knob) to light red (input clipping), and raise the **PHONE LEVEL** (front panel) to a comfortable listening position.
- 10. If the input signal reaches the "CLP" line on the level meter, lower the INPUT 1 TRIM knob. Set plenty of input signal (-6dB), without clipping.

Record Track 1:

- 11. Press the **REC** key on the lower right of the top panel (the REC and PLAY keys will flash).
- 12. Press the **PLAY** key and then **record** some audio (Example: "This is Track 1...recording Track 1"...etc.). While you're recording, watch the **Counter** run in the upper right of the display, and record for about 8 measures ("008.01.000").

Note: When selecting a new song, the Counter time display defaults to "Measures, Beats, Ticks" ("001.01.000"), unless "PreviousSong" MixerSet is selected in the "MakeNewSong" dialog box.

- 13. When you're finished, press the **STOP** key, then press the **IN / LOC1** key (lit) to **reset** the song to the beginning (check the Counter: "001.01.000").
- 14. Press the **PLAY** key to hear your new track, then press the **STOP** key.

Select, assign and record another track:

- 15. Press the IN / LOC1 key (lit) to reset to the song beginning.
- 16. Press the Track 1 TRACK STATUS key 2x, until its LED lights GREEN (play status).
- 17. Press the Track 2 TRACK STATUS key 2x, until its LED lights RED (record status).
- 18. Press the **INPUT/TUNER** key, then press the **"Ch1-8"** tab in the display.
- 19. Press the "Ch2" icon, then rotate the DIAL to the left, until the "Ch2" input icon reads "1". Note: You've just eliminated the need to re-patch your mic to another analog input!
- 20. Speak into your mic and raise the **Channel 2 Fader** to the "0" position. Then set the **PAN** knob to center. You've already set the input gain for analog input 1, so there's no need to worry about adjusting trim on the new track.
- 21. Press the METER / TRACK VIEW key, then press the REC key.
- 22. Press the **PLAY** key and record another vocal track. **Watch the counter** in the upper right of this page, and record for about the same amount of time as the first track (adjust playback with the **TRACK 1 Fader** to suit).
- 23. When you're finished, press the STOP key, then press the IN / LOC1 key to reset to the song beginning.
- 24. Press PLAY, and you'll hear both tracks playback.
- 25. Press STOP.

Note: The D1600 has an internal fan, and when recording, the fan automatically shuts down, and starts up on playback and when stopped. Fan control can be set to "Off", "Rec&PlayOff" (default setting), and "On" in the "SYSTEM > Control" tab.

Tip: To go to the end of a song (end of actual recorded data) press and **hold** the **STOP** key and press the **FF** key. To go to the song beginning from midway in a song, press and **hold** the **STOP** key and press the **REW** key.

...for the following exercise, you'll continue working with the current song, input and track:

Working with Virtual Tracks

The D1600 features 8 Virtual tracks for every track - 128 tracks per song! Virtual tracks give you the benefit of being able to record several takes without overwriting any previous takes. Then you can select from your favorite Virtual track(s) for playback, bouncing or in mixdown.

Record a new Virtual track on Track 2b:

- 1. Press the IN/LOC1 key to reset to the song beginning.
- 2. Press the **TRACK** key, then press the "**Vtr1-8**" tab in the display. Note the highlighted "**1a**" and the left column of the display. The top "bar" is black in this column, because you have recorded on Virtual track "1a". Also note that the track "2" column indicates data has also been recorded on Virtual track "**2a**".
- 3. Press to highlight "2a" in the display, then slowly-rotate the DIAL to the right, until the second column in the display reads "2b" (Virtual track "2b").
- 4. Press the RECORD key, then press the "RecMode" tab, and make sure that the "Input" radio button is selected.
- 5. Press the METER / TRACK VIEW key (PreFdr view), then press the REC key.
- 6. Press the **PLAY** key, and record about 8 measures of your voice on Virtual track 2b. (Example: "This is Virtual track 2b"). Set the Channel 1 fader level to suit.
- 7. Press the STOP key, then press the IN / LOC1 key to reset to the song beginning.
- 8. Press the **PLAY** key to hear Virtual track 2b and the original track 1a, then press the **STOP** key.
- 9. Press the TRACK key, and take a closer look at the display. Notice that the Virtual tracks you just recorded indicate recorded audio data (by the small bars) on the left of each column. Also note that the Virtual track currently selected is indicated by the solid black bar and highlighted "2b" in the track 2 column:



Important!

In editing procedures like copying or deleting track data, you must make sure that the correct Virtual track is selected **before** performing an edit. Example: You've recorded audio on Virtual tracks 2a and 2b, and you want to delete track 2b. Press to highlight the track (see the above graphic) and rotate the DIAL to the desired Virtual track "bar" for editing. Then you can go to the "EditTrk" tab, and perform the delete function. For more information on track editing procedures, see the D1600 Owner's Manual, page 51.

Create a "16-2" Virtual Mixdown:

The D1600 features a number of ways to bounce multiple tracks, including an exclusive "16-2" function that lets you bounce multiple mixes to selected Virtual track pairs, with varied effects and EQ, and then select your favorite mixdown from the Virtual tracks.



Copy the demo song "SISTER DANCE" to a new song location:

- 1. Press the **SONG** key, then press the "**SelSong**" tab in the display.
- 2. Press the ">" popup button to the left of the current song name, then press the "↑" button to move up in the song list and select the copied song "I001:SISTER DANCE".
- 3. Press the "OK" button to load the song.
- 4. Press the "EditSong" tab, then press the">" popup button in the upper left, and press the "Copy" radio button, followed by pressing the "OK" button.
- 5. The "edit cell" to the left of "Exec." will indicate the next available empty song location. Press the "Exec." button, then press the "Yes" button, followed by pressing the "OK" button, to copy the song.
- 6. Press the ">" popup button again, and press the "Protect" radio button, followed by the "OK" button.
- 7. Press the "Exec." button to make the "lock" icon disappear and un-protect the copied song.

Perform a Virtual "16-2" mixdown:

- 1. Press the **RECORD** key (to the left of the TRACK key), then press the "**RecMode**" tab.
- 2. Press the "Bounce" radio button, then press the "Bounce" tab.
- 3. Press the "16Tr>2Tr" radio button.
- Press the "edit cell" "<u>Current</u>" and rotate the DIAL to set to "<u>b</u>" (Virtual track "b"). This sets the bounce destination Virtual track.
- 5. Press the SCENE key (lit), then press the "MixView" tab. Move the Channel 13 and 14 faders and Pan knobs so that the original values for each are displayed. The "icons" in the MixView display will help you to set these controls. When the faders and pan knobs reach the original positions, the arrows to the left of the MixView display will "double", indicating that original values have been recalled.

Note: Tracks 13 and 14 were selected for this bounce exercise because their original pan positions were set to be recorded in stereo. This way, the Virtual mixdown will include all track original pan settings, and end up mixed in full stereo imaging. But bouncing to existing tracks within the same Song can be a problem, since the destination tracks may have panning, level and effect assignments which you don't want your final mix to play through. For that reason we suggest that whenever possible you use our ultra-cool "Copy to Clipboard, then to a new song" exercise in the following section after bouncing your final song to two tracks. For now, let's continue with the current process...

6. Press the Channel 13 TRACK STATUS key 2x, so that both 13 and 14 light red (Record status).

- 7. Press the **METER/TRACK VIEW** key, then press the ">" popup button in the upper left of the display, and press the "**PostFdrLev**" radio button, followed by pressing the "**OK**" button.
- 8. Check to see that the "Counter" is set to "000:00.000".
- 9. Raise the MASTER fader to an appropriate level and then press the REC key (the REC and PLAY keys will flash).

Note: The **MASTER** fader controls the level sent to the bounce destination tracks. When you begin bounce recording, make sure to avoid clipping the MASTER levels in the METER/TRACK VIEW page.

- 10. Press the **PLAY** key. Bounce recording will begin. Let recording continue until the "**Counter**" indicates approximately "**001:12.000**" (at the end of the first verse), then press the **STOP** key.
- 11. Press the IN/LOC1 key to reset to the song beginning.

Listen to the new Virtual mixdown:

- 12. Press the TRACK key, then press the "Vtr9-16" tab.
- 13. Press the "SelectAll" button.
- 14. Slowly rotate the **DIAL** to the right, to select Virtual tracks "b" for **all** tracks.

Note: This makes it quick and easy to audition only Virtual tracks 1b and 2b, as you've just disabled playback on any other tracks.

15. Press the Channel 13 and 14 TRACK STATUS keys until they both light green (Play status).

Note: In Virtual mixdown or any bounce operation playback, make sure to disable any applied Insert effects and Master send levels, as well as setting EQ parameters to "0" positions – for the tracks you are auditioning. Otherwise in playback, you will hear all of the processing applied to these tracks again. (In the bounce operation, the effect and EQ processing for all tracks is "printed" to the Virtual track destination) The best method is not to audition the Virtual track playback, but to use the "Copy to Clipboard, then to a new song" exercise in the following section.

- 16. Press the METER / TRACK VIEW key, then press the PLAY key to playback and view the post fader levels for Tracks 13 and 14.
- 17. When you're finished playing back the mixdown, press the **STOP** key, then press the **IN / LOC1** key to locate to the song beginning.

Work with the Clipboard, Fade, and Undo functions:

The following exercises use the current song...

Set an OUT point for the bounced audio tracks:

- 1. Press the SONG key, then press the "Counter" and use the DIAL to set it to read: "001:12.000".
- Press the STORE key, then press the OUT/LOC2 key, to set an OUT point (the IN point is already set to the beginning of the song).

Copy the selected audio region to the "Clipboard":

The "Clipboard" allows you to copy selected data from one song to another. The IN and OUT points set in the previous steps indicate a selected audio range. The TO point needs to be set in the destination song **only** if you want the audio data in the Clipboard to be copied to a location other than the beginning of the song.

- 3. Press the TRACK key, then press the "EditTrk" tab.
- 4. Press the ">" popup button and press to select the "Copy" radio button, followed by pressing the "OK" button.
- 5. Press to highlight the "edit cell" "1" in the left area of the display, then rotate the DIAL to read "13-14".
- 6. Press to highlight the "edit cell" "1" above the "EditTrk" tab, then rotate the **DIAL** to read "Clip2". **Note:** The edit cell reads "Clip2" when two or more tracks have been copied, and reads "Clip1" when a single track is copied.
- 7. Press the "Exec." button, then press the "Yes" button. Press the "OK" button to copy tracks 13b and 14b to the Clipboard.

Copy the Clipboard contents to a new song:

This is an efficient way to "import" your two track mixdown to a new song, where no effect or EQ processing is assigned to tracks 1 and 2.

- 8. Press the SONG key, then press the "New" button in the display, followed by pressing the "OK" button.
- 9. Press the **TRACK** key, and press to highlight the "edit cell" "1" in the left area of the display, then rotate the **DIAL** to read "Clip2".
- 10. Press to highlight the "edit cell" "1" above the "EditTrk" tab, then rotate the DIAL to read "1-2".
- 11. Press the "Exec." button, then press the "Yes" button. Press the "OK" button to complete the copy procedure.
- 12. Press the METER/TRACK VIEW key, then press the PLAY key, and raise the Channel 1 and 2 faders and MASTER fader for playback, avoiding clipping.

Important!

In mixdown and bouncing operations, assigned Insert, Master and Final effects, as well as EQ settings are "printed" to destination bounce tracks. If in the future you decide to master to CD after performing a bounce operation, and do not want to use the previous "Clipboard" technique, make sure to disable all of the destination bounce track's effects and EQ settings after bouncing operations are completed, or on playback, the current effects and EQ settings will still be applied!

Tip: Before conducting mixdown, bounce or CD mastering operations, it's a good idea to copy the entire song you're working with to another location (or backup to CD or external media). Although the UNDO function allows you to recall earlier edit operations, you may want to start "from scratch", especially if you've made extensive edits to the song.

Tip: Make it a practice to backup your song data to CD or external media, even if the project is in an incomplete state. By doing this, you can always get the original project back if you decide to re-mix your work and master a new CD!

Create a Fade-out at the end of the new song:

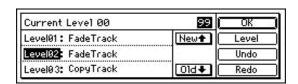
- 1. Press the **SONG** key, then press the "**clock**" icon to the left of the "**Counter**", and set it to read in absolute time: press the "**000:00.000**" radio button.
- 2. Press to highlight "000:00.000" and use the DIAL to set the counter to "01:000.000" (1 minute).
- 3. Press the STORE key, then press the IN/LOC1 key to set a new IN point.
- Press to highlight "001:000.000" and use the DIAL to set the counter to "01:012.000" (1 minute, 12 seconds).
- 5. Press the STORE key, then press the OUT/LOC2 key to set a new OUT point.
- 6. Press the **TRACK** key, then press the "**EditTrk**" tab, and press the ">" popup button.
- 7. Press to select the "Fade" radio button, then press the "OK" button.
- 8. In the "edit cell" below "Fade Track", press to highlight "1", and use the DIAL to set to "1-2" (tracks 1-2).
- 9. Press the "Mode" button, then press to select the "D." radio button, followed by pressing the "OK" button.
- 10. Press the "Exec." Button, then press the "Yes" button to perform the fade-out. The display will indicate "Making Track" and "% finished".
- 11. When the fade operation is complete, press the "**OK**" button.
- 12. Press the IN/LOC1 key, then press the PLAY key. You'll hear the new fade-out playback. When finished, press the STOP key.

Note: Single and multiple tracks can be set to fade-in and out by a selected mode (curve), as indicated in step 9 above. Crossfades can also be set by using fade-in and fade-out in conjunction with each other. For more information on fades, see the D1600 Owner's Manual, page 56.

Perform another fade-out, and work with the Undo function:

The Undo function can be set for 99, 8 or 1 level of undo, allowing you to view and recall previous recording or editing operations in the Undo list. Setting a level of 8 gives you plenty of opportunities to go back to earlier operations, and will free-up hard disk space. When you change tracks or songs and then record or edit, the contents of the Undo list will be deleted from the song. However, it remains on the hard disk as long as the D1600 is on, and consumes disk capacity. If you've completed recordings and edits on a song and want to free up as much hard disk space as possible, power-off the D1600 and the Undo history of up to 99 recordings, edits or operations will be deleted from the hard disk.

- 1. Press the TRACK key, and make sure that "FadeTrack" is still in the display as the edit procedure selected.
- In the "edit cell" below "Fade Track", press to highlight "1", and use the [DIAL] to set to "1-2" (tracks 1-2).
- 3. Press the "Mode" button, then press to select the "F." radio button, followed by pressing the "OK" button.
- Press the "Exec." button, then press the "Yes" button to perform a new fade-out on tracks 1-2.
- 5. When "Making Track" is completed, press the "OK" button, then press the IN/LOC1 key.
- 6. Press the **PLAY** key to hear the new fade. When finished, press the **STOP** key.
- Press the UNDO key (lit), and note the two "Levels" of "FadeTrack" indicated in the display, as well as the "CopyTrack" procedure you performed in a previous section.
- 8. Press to highlight "Level02" ("FadeTrack"), then press to highlight the "Undo" button.



- 9. Press [IN/LOC1], then press [PLAY] to playback the audio before the first fade-out that you performed (Level02), then press [STOP].
- 10. Press to highlight "Level01", then press to highlight the "Redo" button.
- 11. Press the IN/LOC1 key, then press the PLAY key to playback the last fade-out you performed (Level01).
- 12. Press the **STOP** key, then press the "**OK**" button to exit Undo mode.

Note: The Undo/Redo function can be used for recording, track editing, and WAV file import operations. The "Current"

level of Undo is indicated in the upper left of the UNDO display.

Also Note: The levels (99, 8 or 1) of undo can be set by selecting the "Level" button in the UNDO page, and then selecting the

desired level. For more information on the UNDO function, see the D1600 Owner's Manual, page 99.

Guitar and Insert effect / Rhythm Pattern demo

Recording source for this section: The following section suggests a guitar as the input source. If you would like to use another instrument such as keyboards, connect the stereo outputs to any available rear panel adjacent inputs (3/4, 5/6 etc.) and set the pan knobs for these channels to L/R. Alternatively, you can continue to use a microphone, as you did in previous exercises.

Create a new song and connect a guitar:

- 1. Press the **SONG** key, then press the "SelSong" tab in the display.
- 2. Press the "New" button, then press the "OK" button in the display to select a new empty song location.
- 3. Lower the PHONE and MONITOR levels to "0", and the MASTER / Channel faders to "oo".
- Connect a guitar to the front panel GUIT IN / 8 jack.
- Press the Channel 8 TRACK STATUS key 1x, until it lights orange (Input status, not record status).
- Rotate the INPUT 8 TRIM knob (behind the display) as high as possible without allowing the LED to light red (input clipping) as you play, and then raise the Track 8 Channel fader to the "0" position. Note: View the Pre Fader level in the METER/TRACK VIEW display.
- 7. Play the guitar, and set the MASTER Fader and PHONE or MONITOR Levels to comfortable listening positions.
- 8. Press the INPUT/TUNER key, select the "Input 8" radio button, and tune your guitar.

Assign an Insert effect chain to the guitar, for recording:

- First, let's make sure that the Insert Effects are being routed in line with the Inputs (for recording) instead of the Tracks (for mixing).
- Press the INSERT EFFECT key, and confirm that the display shows Assign: > Input. If it is set to "Trk" touch the ">" popup, select "Input" and then press the "OK" button.
- 3. Press the ">" popup button to the left of "1in1outx4".
- 4. Select the "1in2outx2" radio button, then press the "OK" button.
- 5. Press the Insert To: ">" popup button (just above "InsEff2" tab), then press the "Off" parameter just to the right of the Insert effect "1" box.
- 6. Rotate the **DIAL** until the **Insert Effect 1** edit cell reads "8>1>8" (input 8 bussed to insert effect 1), then press the "**OK**" button.
- 7. Press the "InsertEff1" tab, then rotate the DIAL, play to audition and select any desired effect (I039-I068 are guitar multis available in this effect configuration).

Tip: Press the selected Insert effect "button" to view the chain of effects, then press the effect "icons" to select parameters and program the effects to suit. Press the "Store" button to store your edited effect chain to a user location.



Audition a few of the 215 metronome and rhythm patterns:

- Press the TEMPO / RHYTHM key, then press the "Rhythm:Off" button to read "Rhythm:On". You'll hear the metronome, and the display will indicate the current settings. To adjust the metronome volume level, press to highlight "Vol:070" in the display, then rotate the DIAL.
- Press to highlight "Metro4" in the display.
- 3. Slowly-rotate the **DIAL** to the right, to audition some of the metronome and PCM rhythm patterns in memory. *Note that some of the patterns are indicated as Intro, Fill, or Ending by an I, F or E preceding the pattern name.*
- 4. Play your source instrument along with the rhythm patterns, and select and pay particular attention to the rhythm pattern group named "8bt Rock 1", as you'll be creating a Tempo Map with these patterns in the next exercise.
- 5. To set desired tempo, press to highlight "120" in the display, then rotate the DIAL. The display will indicate the new tempo setting.
- 6. The time signature can be set as desired, by pressing to highlight <u>04/04</u> in the display, and then rotating the **DIAL**. However, leave the time signature selection at "04/04" for now…
- 7. Press the "Rhythm:On" button to set "Rhythm:Off" and stop pattern playback.

Note: For time signatures 3/4, 4/4 and 6/8, all patterns can be selected. If you choose any other time signature, only the Metro or Hihat can be selected. For this exercise, leave time signature set to 04/04.

Tip: Song tempo can be set manually, by tempo maps, or with a tempo track which can be recorded via MIDI clock or by tap tempo. For more information, see the D1600 Owner's Manual, page 62.

Create a new Tempo Map:

Tempo maps let you specify tempo, time signature and rhythm patterns for each measure in a song. There are 200 tempo map events available for each song.

- In the "Setup" tab of the TEMPO page, press the ">" popup button to the left of "MANUAL" (tempo source), and select the "TempoMap" radio button, then press "OK".
- 2. Press the "TmpMap" tab, and make sure that "Map001" is selected (the initial song tempo).
- 3. Press the "Edit" button, then press the "edit cell" to the right of "Rhythm>", and rotate the DIAL to select pattern "I8bt Rock1". Leave the other parameters set as follows: "Measure 001-004, Tempo 120, Beat 04/04".
- Press "OK", then press the "New" button. Press "18bt Rock1" and rotate the DIAL left to select pattern "<a href="8bt Rock1".
- 5. Press the **END MEASURE** "005" (above "Beat:"), and rotate the **DIAL** to select "019". (Now you've entered a 4-bar intro, followed by a 15-bar, 8 beat pattern. Get the idea? Now to add a fill-in pattern...
- 6. Press "OK", then press the "New" button. Press "8bt Rock 1" and rotate the DIAL to select pattern "F8bt Rock 1".
- Press the END MEASURE "019" and rotate the dial to select "20" (1-bar fill-in), then press "OK".
- 8. Press the "New" button, then press "F8bt Rock 1", and rotate the DIAL to select pattern "8bt Rock1".
- 9. Press the END MEASURE "21", and rotate the DIAL to select "28", then press "OK".
- 10. Finally, press the "New " button, press "8bt Rock1", rotate the DIAL to select "E8bt Rock 1". Notice that the END MEASURE is already set to "032", because each time you enter a new pattern, the length is indicated to the right of the end measure. This pattern is a 4-bar ending, so simply press "OK".

The tempo map has been created, and you can view each event by pressing the "Map005" parameter in the upper left of the display, and rotating the DIAL left or right. You'll see the measure, tempo and pattern information for each event entered.

Tip: If you like, you can practice playing while the tempo map plays back. To do this, you'll need to press the "SetUp" tab, then press "Rhythm:Off" to turn "Rhythm:On". Press the IN/LOC1 key to reset to the song beginning, then press the PLAY key. When finished practicing, press the STOP key, then press "Rhythm:On" to turn "Rhythm:Off".

Record the new Tempo Map to stereo tracks:

The metronome and rhythm pattern playback can be assigned to any inputs and recorded. You can even add EQ and effects to the recorded rhythm tracks on playback. You can also playback rhythm patterns and tempo maps without recording to tracks, as you record guitar or other instruments.

- 11. Make sure that you've set "Rhythm:Off". If on at this point, the sound will be recorded to the tracks in duplicate, and also to the master L/R bus.
- 12. Press the INPUT/TUNER key, then press the "Ch1-8" tab.
- 13. Press the "Ch1" icon and rotate the DIAL to select "L" (the last available setting). The upper left of the display indicates "RhythmL".
- 14. Press the "Ch2" icon and rotate the DIAL to select "R" (the last available setting). The upper left of the display indicates "RhythmR".
- 15. Press the **RECORD** key, and make sure that "Input" is selected as the record mode.
- 16. Press the **TRACK STATUS** keys for **Channels 1** and **2** so that they each light **red** (Record status), then raise the **MASTER** and **1/2 faders** to "0". Set the **Pan knobs** to L/R to record in stereo.
- 17. Press the METER/TRACK VIEW key, then press the REC key (REC and PLAY will flash) and you will hear the initial pattern in the tempo map (looping)...
- 18. Press the PLAY key, and record the tempo map. After the tempo map has been recorded (32 measures), press the STOP key.
- 19. Press the **PLAY** key to playback the recorded Tempo Map.
- 20. Press the STOP key to stop playback, then press the IN/LOC1 key to locate to the song beginning.
- 21. Press the Channel 1 and 2 TRACK STATUS keys 2x, until both LED's light green (Play status).

Record a guitar track as the recorded rhythm track plays back:

- 1. Press the Channel 8 TRACK STATUS key 1x, until the LED lights red (Record status).
- Check the METER/TRACK VIEW display and make sure it is set for "PreFdrLevel" view. Play your guitar and adjust the Channel 8 fader and trim knob so that the input signal does not clip.
- 3. Press the **REC** key, then press the **PLAY** key, and record the guitar track.
- 4. Press the STOP key when finished, then press the IN/LOC1 key to reset to the song beginning.
- 5. Press the Channel 8 TRACK STATUS key 2x, (green), then press PLAY to playback the song.

Creating an Audio CD on the D1600

Go through this section once you have one or more songs completed on the D1600.

You can produce an audio CD on the D1600, if the Korg CDRW-2 or other compatible CD-R or CD-RW drive is installed. Most consumer CD players will not playback CD-RW disks. If you plan to playback any D1600 CD masters on consumer CD players, use good quality CD-R media for mastering.

Note: You can also master to compatible external CD-R/CD-RW drives via the D1600 SCSI connector.

- Before a CD can be mastered on the D1600, all track data must be mixed down to tracks 1 and 2.
- If no audio data exists on tracks 1 and 2, you can bounce record tracks 3-16 to tracks 1-2 (see Owner's Manual, pg. 29 for more information).
- If audio data <u>doe</u>s exist on tracks 1 and 2, you can create Virtual mixdowns of all 16 tracks, to tracks 1 and 2 Virtual tracks b-h. (Up to 7 mixes can be created, and the best Virtual mix can be selected for mastering). When writing to CD, the D1600 writes from the audio source on the currently selected Virtual tracks. See the section in this guide titled "Create a 16-2 Virtual Mixdown". Also see the D1600 Owner's Manual, page 30.

Once you've mixed down each of your songs to tracks 1 and 2...

Insert a blank region of audio at the beginning of the song:

This only needs to be done for the **first song** you write to CD, because some audio CD players may "skip" over the first several hundred milliseconds at the beginning of an audio track. Then in the writing process, the D1600 automatically creates a two second region of silence before the next song is written to CD.

- 1. Press the **SONG** key, then press the **"SongSel"** tab.
- 2. Go to the song beginning, then change the ""Counter" display so that it indicates minutes, seconds, and milliseconds ("000:00.000").
- Press the STORE key, then press the IN/LOC1 key to store an IN point at the song beginning.
- Press to highlight the millisecond location on the "Counter" ("000:00.000"), then rotate the DIAL to set the milliseconds to read
 ".300".
- Press the STORE key, then press the OUT/LOC2 key to store an OUT point.
- Press the TRACK key, then press the "EditTrk" tab, and select the "Insert" radio button, followed by pressing the "OK" button.
- 7. Press to highlight the "1" edit cell, then rotate the **DIAL** to read "1 2".
- 8. Press the "Exec." Button, then press the "Yes" button. You've just inserted 300 milliseconds at the beginning of tracks 1 and 2.

Write and finalize a CD:

- 9. Press the CD-R/CD-RW drive eject button, then insert a blank CD-R disk and press to close the drive bay.
- 10. Press the **SONG** key, then press the "CDR/RW" tab.
- 11. Press the "WriteToCD" button, and a "Copyright" dialog box will appear.
- 12. Select the write speed (2x or 4x) by pressing the "4x" button, then press the "Yes" button. The writing process will begin, and when the display indicates "Completed", press the "Yes" button.
- 13. Select the next song in the "SongSel" tab, then press the "CDR/RW" tab, and continue from step 3 above. Note: All songs must be in two track format (tracks 1 and 2) before writing to CD.

14. Once all of the songs are written to CD, press the "Finalize" button, then press the "Yes" button. When the finalizing is completed, the CD will automatically eject.

Playback the new song from CD:

- 15. Re-insert the CD in the drive, then press the INPUT/TUNER key, and set input channels 1 and 2 to "CD-L" and "CD-R".
- 16. Press the **SONG** key, then press the "CDR/RW" tab.

17. l	Press the "Play/Stop" button to playback the CD:	⊳/□

Tip: For more information on CD mastering with the D1600, see the Owner's Manual, page 49 and 91.

Tips: After you've completed this guide, make sure to **Delete** all of the **copied** and **new** songs you created as you went through each exercise – see the **QuickSteps** that follow for the procedure. And you may want to **backup** the demo song to CD before deleting it from the internal hard disk.

QuickSteps

D1600 Basic Operations

The following modules provide quick steps for basic operations. D1600 Owner's Manual page references are included at the lower left of each module:

Creating a new song:

SONG key → SelSong tab → Press New → Set SongType and MixerSet → OK → OM pg. 21

Naming a song:

SONG key → Press Rename → Press ClearAll → Use buttons in display to change characters → Use < > buttons to move cursor → OK → OM pg. 21

Selecting songs:

- SONG key → With D1600 stopped at current song beginning: Hold STOP and press REW 1 or more times to go to previous song(s) → Hold STOP and press FF 2 or more times to go to next song(s).
- 2. Or...SONG key → SelSong tab → Press song number → Rotate DIAL to go to new songs
- 3. Or...SONG key → SelSong tab → Press > at left of song → Rotate DIAL or press arrows to move through song list → OK
- → OM pg. 22

Moving to the beginning or end of a song:

From a point within the song, hold STOP and press REW 1x, or press IN/LOC1 key if not assigned to another location / To move to the end of a song: From a point within the song, hold STOP and press FF 1x.

→ OM pg. 35

Using REW and FF keys during song playback:

While song is playing, press either key 1x to rewind or fast forward continuously → Press PLAY key to stop REW or FF and continue play from that point. → OM pg. 35

Changing Drives:

SONG key → SelSong tab → Press > at left of song → Press Drive → Select drive from list → OK → OM pg. 22

Connecting instruments and assigning inputs:

Connect instrument to appropriate rear panel input (use front panel GUIT/8 jack for guitar) → INPUT key → Ch1-8 or 9-16 tab → Press "plug" icons to assign input to desired channel → METER/TRACK VIEW key → Set to PreFaderLev → OK → Play and adjust TRIM knob and Channel fader / MASTER fader / PHONE level knob → OM pg. 23-25

Using the built-in tuner with a guitar:

Connect guitar to front panel GUIT/8 jack → INPUT /TUNER key → Tuner tab → Select Input 8 → Set Calib: 440 Hz → Play and set tuning so that center triangle in tuner display remains highlighted for each string played → OM pg. 25

Auto-Punch recording:

AUTO PUNCH key → Set Counter location → STORE key: set IN point → Set Counter location → STORE key: set OUT point → Set desired TRACK STATUS to RECORD (red) → Press RolTime and set pre-roll and post-roll time → Press AutoPunch:On → Press REC → Press PLAY → Recording begins at IN point and ends at OUT point → STOP

→ OM pg. 29

Manual-Punch recording:

Set desired TRACK STATUS to RECORD (red) → Press PLAY → Press REC at point of punch-in → Record the track → Press PLAY or REC at point of punch-out → STOP

→ OM pg. 28

Trigger recording:

Set TRACK STATUS to RECORD (red) → TRIGGER key → TriggerRec:On → Press REC → Play instrument: when input level exceeds threshold, recording will begin → STOP

→ OM pg. 31

Loop recording:

LOOP key → Set Counter location → STORE key: set IN point → Set Counter location → STORE key: set OUT point → Set Loop:On → AUTO PUNCH key → Press RolTime and set pre-roll and post-roll time → Set Auto-Punch:On → Set TRACK STATUS to RECORD (red) → → Press REC → Press PLAY → Auto-punch recording at IN point and ends at OUT point, then continues to loop → STOP → Press UNDO key and select best take from list → OM pg. 31

Recording on virtual tracks:

TRACK key → Vtr tab → Set Virtual track with DIAL → Set TRACK STATUS to RECORD (red) → Record the track → STOP → OM pq. 27

Loop playback:

Set TRACK STATUS to PLAY (green) → Set Counter location → Set IN point → Set Counter location → Set OUT point → LOOP key → Set Loop:On → Press PLAY to start loop playback → STOP → OM pg. 33

Setting the Counter display:

SONG key → SongSel tab → Press the "clock" icon to the left of the Counter → Select time display → OK → OM pg. 35

Moving to a specific time location with the Counter:

SONG key → SelSong tab → Press to highlight the Counter position desired → Rotate DIAL →OM pg. 35

Storing and moving to Locate points:

Set Counter location → STORE key → IN/LOC1, 2, 3 or 4 key / To move to a Locate point, press the desired LOCATE key. Note: You can also set and recall Locate points during playback.

→OM pg. 35

Storing and moving to Mark locations:

SONG key → SelSong tab → Move to Counter location desired → STORE key → MARK key / To move to a Mark location: MARK key → Press Mark number → Rotate DIAL to desired number → Press Recall. Note: You can also set and recall Mark points during playback.
→OM pg. 36

Storing Scenes:

SONG key → Move to Counter location desired → Adjust Fader, Pan, EQ and Effects as desired → STORE key → SCENE key. Note: Scenes can be stored during playback and recording.

→OM pg. 39

Automatically switching Scenes during song playback:

SONG key → SCENE key on (red) → Move to Counter location desired → Press PLAY key → OM pg. 39

Using the Scrub function to find a time location:

SCRUB key → Press > to select track → OK → Rotate DIAL to desired location → OM pg. 36, 101

Using the Scrub function to playback tracks at half-speed:

SCRUB key → Press > to select track → OK → Press FF to playback → STOP → OM pg. 101

Setting song tempo with the Tap Tempo method:

TEMPO key → Press TmpTrk tab → Select MeasTap or BeatTap → Press RecStart → Tap PLAY key as song plays → STOP at 1st beat of next measure → Press SetUp tab → Press > to select TempoTrk → Reset song → Press PLAY key → OM pq. 63

Rehearsal mode with Auto-Punch recording:

AUTO PUNCH key → Set Counter location → STORE key: set IN point → Set Counter location → STORE key: set OUT point → Set TRACK STATUS to RECORD (red) → Press RHSL key → Set AutoPunch:On → Press REC key → Press PLAY key → Rehearsal recording will begin → When ready to record, press RHSL key (unlit) → Press REC key → Press PLAY key → Record → STOP / Note: can also use with Loop Recording method → OM pg. 112

QuickSteps

D1600 Song and Track Editing

Song Editing

Copy Song: (copies entire song to internal or external drive)

SONG key → SelSong tab, select song to be copied →EditSong tab → Press > to select Copy → OK → Press destination internal song <u>number</u> and use DIAL to select (or press Drive and select destination drive/OK) → Press Exec. → Yes → OK → OM pg. 89

Move Song: (to change song order on internal drive)

SONG key \rightarrow SelSong tab, select song to be moved \rightarrow EditSong tab \rightarrow Press > to select Move \rightarrow OK \rightarrow Press destination internal song <u>number</u> and use DIAL to select \rightarrow Press Exec. \rightarrow Yes \rightarrow OK

→OM pg. 89

Delete Song: (deletes entire song)

SONG key → SelSong tab, select song to be deleted →EditSong tab → Press > to select Delete → OK → Press Exec. → Yes → OK → OM pg. 89

Protect Song: (use to avoid recording over or modifying song data)

SONG key → SelSong tab, select song to be protected →EditSong tab → Press > to select Protect → OK → Press Exec. And "lock" icon appears / Note: Use same procedure to un-protect song

→OM pg. 90

Copy All Songs: (copies all songs from current drive to external drive / overwrites all data on ext. drive)

SONG key → EditSong tab → Press > to select CopyAll → OK → Select destination drive → OK → Press Exec. → Yes → OM pg. 90

Track Editing

Note: IN-OUT-TO-FROM select regions are noted in parenthesis for each track edit procedure.

Copy Track: (copies selected region (IN/OUT) of track(s) from one region to another (TO)

TRACK key → EditTrack tab → Press > to select Copy → OK → Select destination track(s) and repeat times → Press Exec. → Yes → OM pg. 82

Insert Track: (inserts blank data in selected region (IN/OUT)

TRACK key \rightarrow EditTrack tab \rightarrow Press > to select Insert \rightarrow OK \rightarrow Select track(s) \rightarrow Press Exec. \rightarrow Yes \rightarrow OM pg. 82

Erase Track: (erases track(s) data in selected region (IN/OUT)

TRACK key \rightarrow EditTrack tab \rightarrow Press > to select Erase \rightarrow OK \rightarrow Select track(s) \rightarrow Press Exec. \rightarrow Yes \rightarrow OM pg. 83

Delete Track: (deletes track(s) data in selected region (IN/OUT)

TRACK key \rightarrow EditTrack tab \rightarrow Press > to select Delete \rightarrow OK \rightarrow Select track(s) \rightarrow Press Exec. \rightarrow Yes \rightarrow OM pq. 83

Swap Track: (exchanges track(s) data in selected region with same region of other track(s) (IN/OUT)

TRACK key \rightarrow EditTrack tab \rightarrow Press > to select Swap \rightarrow OK \rightarrow Select track(s) to swap \rightarrow Press Exec. \rightarrow Yes \rightarrow OM pg. 83

Reverse Track: (reverses track(s) region (IN/OUT) and copies to destination track(s) region (TO)

TRACK key → EditTrack tab → Press > to select Reverse → OK → Select destination and source tracks, times to copy → Press Exec. → OM pg. 84

Optimize Track: (optimizes track data to prevent "disk busy" errors when blank audio regions occur)

TRACK key \rightarrow EditTrack tab \rightarrow Press > to select Optimize \rightarrow OK \rightarrow Select track(s) \rightarrow Press Exec. \rightarrow OM pg. 84

Exp/Comp Track: (expand/compress: time stretches audio data (IN/OUT) to fit in specific region (TO/END)

TRACK key \rightarrow EditTrack tab \rightarrow Press > to select Exp/Comp \rightarrow OK \rightarrow Select source/destination track(s) and times \rightarrow Press Mode, select conversion mode and fixed or variable pitch \rightarrow OK \rightarrow Press Exec.

→OM pg. 84

Copy Whole Track: (copies entire source track(s) to selected destination track(s)

TRACK key \rightarrow EditTrack tab \rightarrow Press > to select CpyWhole \rightarrow OK \rightarrow Select source and destination track(s) and Virtual track (a-h) \rightarrow Press Exec. \rightarrow OM pg. 85

Swap Whole Track: (exchanges entire source track(s) with selected destination track(s)

TRACK key \rightarrow EditTrack tab \rightarrow Press > to select SwpWhole \rightarrow OK \rightarrow Select source and destination track(s) and Virtual track (a-h) \rightarrow Press Exec. \rightarrow OM pg. 85

Fade Track: (performs a fade-in or fade-out on selected track(s) (IN/OUT)

TRACK key \rightarrow EditTrack tab \rightarrow Press > to select Fade \rightarrow OK \rightarrow Select track(s) \rightarrow Press Mode, select "curve" for fade \rightarrow OK \rightarrow Press Exec. \rightarrow OM pg. 86

Normalize Track: (boosts level of specific region (IN/OUT) for maximum level before clipping)

TRACK key \rightarrow EditTrack tab \rightarrow Press > to select Normalize \rightarrow OK \rightarrow Select track(s) \rightarrow Press Exec.

→OM pg. 86

Additional D1600 Owner's Manual References:

Installing hard disks and CD-R/RW drives	134
CD Mastering	49 / 91
D1600 MIDI sync procedures	73 / 76
Recording MIDI clock from an external sequencer	63 / 96
Using MIDI to control Scenes	41 / 74
MIDI Machine Control (MMC)	77
Working with WAV files and the Import/Export function	86
Initializing/formatting internal or external hard drive	67 / 79
Backing up and restoring data	66 / 77
Connecting external drives	67
Updating system software	139
Troubleshooting	127