

G-Dec Deep

**A Guide to Tips, Ideas and Uses
for the G-Dec**

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Family Tree

The Cyber Twin is the patriarch of the Cyber family. It is not only the original Cyber amplifier, but it is most powerful in both wattage and computing power. The Twin is a very capable performing/recording amplifier. It was upgraded to become the current model: Twin SE.

The Cyber Twin's little brother is the Cyber Deluxe. Although smaller, the Deluxe is a good amplifier. It has enough power to easily compete with a drum kit and fill a medium size club with sound. It is not a small replacement for the Twin. It has its own set of advantages.

The Cyber Champ is the tiny cousin. It fell victim to the "down size and reduce features to lower price" strategy. It really didn't have enough features to be used as a recording tool. It was too small to use on stage. It was too expensive to compete as a practice amp. It was the first member of the family to be discontinued.

The remainder of the family tree discussion will concentrate on the Cyber Twin, Deluxe and the G-Dec family. The Cyber Twin and Deluxe are stereo amplifiers. The Twin has a stereo pair of 12 inch speakers and external speaker jacks. The Deluxe has a pre-amp out with a level control to feed a slave amplifier's effects return or power-amp in. This gives you stereo effects with the separated cabinets.

The Twin has most flexibility on modeling a specific amplifier or sound. The Twin allows individual selection of the pre-amp/tone stack and the power amp. This lets you mix a vintage tone stack with a modern power amplifier for example. You have the option to move the tone stack before or after the pre-amp distortion section. The Deluxe reduces your choices to a limited number of pre-amp/power-amp combinations. The Deluxe has the same amp choices available as the basic G-Dec.

The Twin and the G-Dec have a feature not available in the Deluxe: Timber. This is a global EQ. Think of it as a speaker emulator or graphic EQ after the normal amplifier. After the amplifier controls are set, pick a timber. Then, go back and make small adjustments to the tone controls.

The effects section is very different in all three amps. In the Deluxe, the reverb, delay and the modulation effects are three separate elements; each with their own menus. In the Twin and the G-Dec, there is only one effects menu. You may have delay, an effect or a combined effect/delay. Because there are only 6 adjustable parameters, when you choose the delay/effect combinations, you are limited on how much control you have on either the delay or the effect. This is one area where the Deluxe is better than the Twin; reverb, delay and effects are three independent features. The G-Dec has a subset of the Twin's effects selections. For Reverb, the G-Dec only has type and level controls. The Cyber brothers have 6 adjustable parameters for a fully modeled reverb.

There are two effects missing from the Deluxe: Overdrive and Fuzz. One, models a small lime green stomp box. The other, models an odd round device from the '60s. Both of these effects operate in front of the pre-amp. They sound great in both the Cyber Twin and the G-Dec, but they are missing from the Deluxe. The G-Dec has the same effects structure as the Twin, with fewer choices and only 5 parameters rather than 6.

Both the Twin and the Deluxe have balanced line-outs. They are adjusted to sound like the installed speaker(s). Use both for stereo. The left side alone is a summed mono. All the amplifiers have a headphone jack, which mutes the speaker but doesn't mute the line-outs. The base G-Dec and it's cousin the G-Dec Junior don't have any capability for line-out or external speaker. You can use the headphone out; however, its stereo and mutes the speaker. The G-Dec 30 has right and left line outs and a external speaker out.

G-Dec's Place

The G-Dec followed the simple path for the menus and programmability. It has the Cyber Deluxe's simplified amp selection system; however, it has the Twin's Timber control. This may actually be the best of both worlds. It has the Twins simplified effects menus with fewer selections and one less adjustable parameter on all the effects. Again, this makes things very convenient to operate. Also, the G-Dec's reverb is only adjustable in type and level. Real amplifier reverb typically has only a level control. The G-Dec family is missing the line-outs, effects loop and speaker outs available in the other amps. Again, there is one exception; the G-Dec 30 has right and left line outs and a external speaker out.

The G-Dec family has a few features not available in the other Cyber amps. On the back panel you will find a second guitar in and RCA jacks for almost any audio source. An instructor and student may play together, play along with a recording or both. There is a phrase sampler and drum/rhythm backing tracks as well.

All of the Cyber and G-Dec amplifiers use MIDI to upload and download patches. In the Twin and the Deluxe, MIDI is used to control the amp parameters. MIDI foot controllers or a PC can control the operation of the Twin or the Deluxe. In the G-Dec, MIDI is used to play through with MIDI files. There are no MIDI operable controls available on the G-Dec line.

While the Cyber Twin and Deluxe are clearly stage and recording amps, the G-Dec is clearly not intended for use on stage. The G-Dec and the Junior are great practice and teaching tools. The ability to play almost any audio signal including raw MIDI files puts it in a league of it's own. There are other practice amps with a drum machine. And there are others with CD players or audio capability. This is the only amp with the programming/modeling power similar to the Cyber series amplifiers, audio in/out, MIDI playback, looping and a second guitar in.

The G-Dec has a small family of it's own. From the base G-Dec, there is a G-Dec 30. It has more power, for a total of 30 watts and larger cabinet/speaker for better low end response. There are several more changes making it something closer to a stage amp. There are line outs, and speaker outs. There is a foot switch that operates the tuner, changes presets and operates the phrase sampler. You can also save MIDI files to the amp; making it a 'one man band' tool.

Going the other way, there is a G-Dec Junior. If you removed all the menus and added knobs to select amp types and effects you have the Junior. Also the chromatic tuner is reduced to a single Led and only tunes the note "E". With the Utility menu missing, the Junior can't control the volume of the individual parts of the midi loops separately. Also, the 50 backing tracks are reduced to 15. The Junior has only MIDI in to play files and not in and out as the other amps. The number of effect and amp type selections are reduced as well.

This guide will stay, primarily, with the base G-Dec. Exceptions and additions for the other two models are noted where applicable.

G-Dec; A Closer Look

To unlock the programming power of this gem, you access the menus through one of 4 buttons: Amp, FX, Drums and Utilities. Each button gives you a particular menu. The first choice is always a “type” selection and the second is almost always a “level” selection. If you want more control, there are additional parameters you can adjust. Drums operates differently. Type is still the first menu item with tempo as the second item. It makes sense, these are the two most adjusted items.

There are a few things to keep in your mind when using the menus. When you select an amp or FX type, the parameters change to their most common positions. For example, if you select chorus, you get a normal chorus sound. The first parameter after picking chorus is level. If you want a normal chorus, you can exit the menu here. If you want to change the rate, depth or stereo separation, you can continue. This is very convenient most of the time. When you select an amp type, the volume, gain and tone and timber controls will change to a position giving you the most representative sound for your selection. Just because you can't see the controls, doesn't mean they haven't changed. From here on, the discussion assumes you understand how to find your way through the menus. We will discuss what some of the choices do or mean.

Amp Selections

In the menus under “amp,” most of the selection items are common controls on any amplifier. The two controls not found on regular amplifiers are: Amp Type and Timber.

Think of Amp Type as letting you select between 6 different families of amplifiers. In each family there are 3 or 4 choices except Acoustic. Acoustic, in the amp types, is a very clean amplification like you would get with a dedicated acoustic amplifier and appears to be adjusted for a lower input level; for an acoustic under bridge pickup.

To understand the amp families we need to take a little journey through history. The original Fender amplifiers were covered in tweed. They were designed for high gain with minimal distortion as portable PA systems and then later modified for guitar. The tone controls, as they evolved, were very broad and overlapped. In other words, they affected each other. For example, turning up bass would also boost some mid range. From this circuit we get the “Tweed” family.

This original amplifier circuit was copied in England and adapted to European voltage and tubes. This evolved into two very popular amplifiers in rock circles: one a small combo and the other normally a stack. From this circuit we get the “British” family.

The original tweed amplifier circuit was modified for more, clean volume and better tone controls. Amps with this circuit were normally covered in black Tolex and had black painted panels. From this circuit we get the “Blackface” family.

Another California company started with the American, “Blackface” pre-amp and tone controls. They added a built in tube overdrive to the pre-amp and used a British like power amp. Then, they fitted each channel with its’ own power rectifier. Later the tone controls were revised making them more frequency specific and capable of greater boost and cut. From this circuit we get the “Modern” family.

Fender developed a line of solid-state amplifiers that act very much like tube amplifiers as you increase the gain. All solid-state amps, when driven hard, seem to have a more defined, tight, low frequency range and stronger high frequency range when compared with tube amplifiers. Although they make a tube like distortion and overdrive sounds, the tightness of the signal gives it a more edgy, modern feel. From this circuit we get the “Dyna-Touch” family.

In each family there are numbered selections. Except for the British and Modern amp families, 1 is very clean. In all families, as the number increases, there is more gain. If you listen closely, you may hear more than a gain difference. In the old Cyber-Twin literature, there was a history of amplifiers and discussion of the “Cyber” concept. There, Fender explained the progressive numbers were different variations of the same circuit, not just more gain. This is particularly noticeable in the British and Modern types. Fender was not interested in modeling a specific amplifier model, but emulating a group or family of related amplifiers.

The G-Dec Junior doesn’t have any menus, so the tone, volume and gain controls available in the other G-Dec amps are missing. To compensate, there are a couple extra amp modes available on the amp select knob. For example there are 2 acoustic settings; one for lead and one for rhythm.

More information on the historical relationships of different manufacturers and the concept behind the Cyber amplifiers is available in the old literature for the Cyber Twin and Deluxe. You can find some historical information, particularly amp design, in the VOX Valvetronic manuals. Also, the web is a good source for those interested in history and trivia.

The chart below is copied from the Cyber Deluxe's manual. This gives a better insight to the amp type choices available. Of course, Acoustic is missing from the list. It is not available in the Deluxe.

AMP TYPE	SELECTION	GAIN	GENERAL DESCRIPTION	STONE CONTROL LOCATION
TWEED	1	Clean	Tweed-era with '59 Bassman tone controls	Pre-Distortion
	2	Crunch		
	3	High		
BLACKFACE	1	Clean	Vintage Fender Blackface amplifier tone controls	Pre-Distortion
	2	Crunch		
	3	High		
DYNA-TOUCH	1	Clean	Direct from Fender Dyna-Touch series amplifiers	Pre-Distortion
	2	High		Post-Distortion
	3	Higher		
	4	Max		
BRITISH	1	Crunch	Jangly British Combo	Pre-Distortion
	2	High	Vintage British Stack	Post-Distortion
	3	Higher	Modern British Stack	
MODERN	1	Max	Modified Combo	Post-Distortion
	2		Heavy Metal Stack	
	3		Heavy Metal Combo	

One more thing before we leave the amp selections. The Cyber Twin and Deluxe have a "Trim" setting. This is used to adjust the guitar signal strength to optimize the pre-amp. The G-Dec is missing this control. So, there are some things to be aware of.

First, a weak input signal will sound dull and lifeless. There is too little dynamics and tone in a weak signal for the amp to work with. No matter how much you turn up the amp volume knob, you will still sound lifeless and thin.

Second, if you have too strong of signal, you will over drive the analog to digital converter and/or pre-amp. This will result in an ugly, tinny, fuzz like sound riding over everything else. Have you noticed a tinny buzz that remains unchanged as you make adjustments? I found I could make this sound very easily in the base G-Dec with many humbucking pickups.

To determine if you need to adjust your guitar volume, select a clean amp setting. Either Blackface1 or Dynatouch1 will be perfect. Set the amp volume knob for a reasonable setting; 4 or 5 on the volume knob. Set the guitar volume full up and play hard. If you hear the fussy distortion sound, you have too much signal strength. Turn down the guitar's volume a little at a time until the ugly sound is gone. This is the max guitar volume for that specific pickup. Write this volume setting down. Now, do it again with the next pickup selection. On my Sheraton, I get a different level with each pickup and slight differences with different amp types. Using this number as your maximum guitar volume settings will drastically improve the sound quality from the G-Dec if you are playing a high output or active guitar. This seems to not be a factor in the G-Dec 30.

Most Guitars roll a little treble off when you reduce the volume. You may want to try using a clean effect between the guitar and the amp to control the maximum level. A compressor or a volume pedal works fine. Use the compressor switched to the clean or bypass setting and control your volume with the compressor's volume control.

In the course of experimenting with a number of variables, I have discovered each amp type distorts at a slightly different input level. The acoustic amp type distorts at a significantly lower level than the other amp types. Acoustic guitars with under bridge pickups produce much less signal than an electric.

Timber

Timber is a very interesting parameter. It is best thought of as a post amp EQ or speaker emulator. You could think of it as the 'sound of the room.' It adds a particular edge or personality to the overall sound of the G-Dec. The following table is based on what little information I could find and experience.

Full body is like changing to a closed speaker cabinet. I think of it as Fender's 410 cabinet.

Full Stack is the same, only bigger. Think of this as a 412 cabinet.

Razors Edge has an aggressive "Boogie" like feel with a strong mid range..

Nu Metal is Razors Edge only more and a scooped EQ.

Bright Lite is like changing to a fully open cabinet, like a classic Fender combo.

Super Bright is more brightness, very bright and high-end heavy.

Acoustic as a timber adds the brittle hollowness or ringyess like an amplified acoustic guitar to your electric.

Bass Boost does just that, it adds bottom end without effecting anything else.

These are very handy in helping you obtain a special sound. For example, you could select the British 2 amp type and be close to a Marshall sound. Then add the timber "Full Stack" and sound very close.

Effects

Effects operation is more straightforward in the G-Dec than in the other members of the Cyber family. After pressing the FX button, turn the big knob to select an effect. Press FX again. The next menu is level or the amount of the effect. The next is time or rate except for the fuzz and overdrive effects. Their third selection is gain.

When you select an effect type, all of the other menu values change to the most common sound for that specific effect. For example, if you chose Sine Flange, the rate, depth and feedback change to give you a typical flange sound. You may not need to make any other adjustments. After choosing an effect, the most common adjustment is level and so on.

With the G-Dec, the elements of the menu are in the order of greatest probability of being used. Even better, the menu items are in the same order for all the effects: level, rate, depth, etc. This is much better than either of the two Cyber cousins.

If you are converting patches from the other amplifiers, be careful. From the Cyber Twin, the effects are almost the same, except some of the effect menus may be in a different order. The Twin has many more choices for effects. Ultra Clean is the only Twin effect I couldn't find a reasonably close replacement. It is a clean boost with a touch of chorus. The Cyber Deluxe has a completely different set of effects. You will have to guess, particularly with the combined "effect/delay" effects. Converting patches is discussed in greater detail later in this text.

Look at the effects table in the G-Dec manual. It shows the layout of the menus. Once you discover how simple Fender made the menus, you will never need this table again unless you are converting patches designed for other amplifiers.

Again, the G-Dec Junior doesn't have menus. You may only select the effect you desire and adjust the level. You don't have the other adjustments available, but you have simplicity. The effects, when selected, are fairly close to what you would want anyway. The selections are appropriate to get the feeling typically associated with the effect. The only time you need the menu selections is you are trying to copy a specific artist or sound.

Pitch shift is another effect needing a little more explanation. The effect creates a second signal. Then the second signal is shifted based on the amount you set. The center point, 5.5 doesn't shift any pitch. As you adjust towards either end, you gradually shift the second signal until it reaches a full 2 octaves. The table below shows greater detail. The examples in the table are based on the key of C.

NOTE	VALUE	DISTANCE	NOTE	VALUE	DISTANCE
C	1.0	Two Octaves Down	C	5.5	Unison
D	1.1		D	5.9	2nd
E	1.5		E	6.1	Maj 3rd
F	1.7		F	6.4	4 th
G	2.2		G	6.8	5 th (Default)
A	2.6		A	7.1	6 th
B	3.0		B	7.5	Maj 7 th
C	3.3	One Octave Down	C	7.8	One Octave Up
D	3.5	Dom 7 th Down	D	8.0	
E	4.0	Aug 6 th Down	E	8.4	
F	4.1	Min	F	8.6	
G	4.5	4 th Down	G	9.0	
A	4.9	Min 3 rd Down	A	9.5	
B	5.4	Min 2 nd Down	B	9.9	
C	5.5	Unison	C	10.0	Two Octaves Up

The table on the next page contains definitions for the effects available in the G-Dec and G-Dec 30. This list is from the Cyber Twin SE's manual. These should give a good idea of the effects available in the G-Dec and how they could be used.

EFFECT	DESCRIPTION
MONO DELAY	The most basic delay with a straightforward, single tap delay. Delay time is the distance between the echoes. Feedback is the number of delays. Brightness is the amount of brightness in the echo.
TAPE DELAY & STEREO TAPE DELAY	Delay effects with variations to simulate a tape echo sound. Tape delay is a mono delay. Stereo delay is a two-tap echo. Wow and Flutter adjusts the amount of tape like sound.
DUCKING DELAY	This is a mono delay that goes away when you play. Sensitivity is the amount of signal it takes to cause the echo to "duck."
REVERSE DELAY	An effect that repeats the input signal in reverse.
AUTOPAN DELAY	A delay effect where the delay echo is panned from side to side in the stereo field.
SINE CHORUS	Stereo chorus effect with a more swirly, uneven sound. Phase changes the stereo effect. A greater value makes the stereo spread sound wider.
TRIANGLE CHORUS	Stereo chorus effect with a more even sounding chorus. Phase changes the stereo effect. A greater value makes the stereo spread sound wider.
SINE FLANGE	Stereo flange effect with a more swirly, uneven sound. Phase changes the stereo effect. A greater value makes the stereo spread sound wider.
TRIANGLE FLANGE	Stereo flange effect with a more even sounding flange. Phase changes the stereo effect. A greater value makes the stereo spread sound wider.
PHASER	A twelve-stage stereo phaser effect.
TREMOLO	A sing-wave tremolo effect used to approximate grid-bias tremolo or repeat percussion as found in a Tweed Tremolux amp.
RING MODULATION DELAY	A Ring Modulator plus a mono delay. The Ring Modulator creates tones above and below your original signal.
PITCH SHIFT	A semitone variable pitch shifter and detuner. Select Pitch to 1.0 for a shift two octaves down and 10.0 for a shift two octaves up. Select detune to 1.0 for one semitone flat and 10.0 for one semitone sharp. For both parameters, 5.5 is the center, no change position.
TOUCH WAH	Dynamic, volume controlled wah. The wah filter sweeps up and down in response with your playing volume.
FIXED WAH	A fixed wah that moves based on the effect settings.
VIBRATONE	A rotating speaker effect based on a CBS-era Fender Vibratone amp, which is a cabinet equipped with a single speaker and a two-sided rotating baffle.
AUTOSWELL	An automatically triggered volume swell effect. The AutoSwell is triggered when triggered when you play at reasonable volume. In order for the trigger to reset, you must not play for a short time before you wish the effect to swell a new note or chord.
ALIENATOR	A strange effect similar to a random ring modulator providing additional tones reminiscent of sci-fi B-movies.
RESOLVER	A low-fidelity effect purposely reducing the quality of the input signal. Effective for "low-fi" filtering of song introductions for example.
FUZZ	A classic 60's Fuzz effect rich with overtones located before the pre-amp. It includes an octave higher overtone.
OVERDRIVE	A popular overdrive effect located before the pre-amp sounding very similar to a small green pedal.
TOUCH WAH FUZZ	Two pre-distortion effects, wah plus fuzz.
FUZZ DELAY	Pre-distortion Fuzz plus a post-distortion mono delay.
OVERDRIVE DELAY	A pre distortion Overdrive effect plus a post-distortion mono delay.
CHORUS DELAY	Mono delay plus a stereo Triangle Chorus.
FLANGE DELAY	Mono Delay plus a stereo Triangle Flange.
PHASE DELAY	Mono Delay plus a stereo Phaser.
ALIENATOR DELAY	The Alienator effect plus a mono delay.

Drum Tracks

Drum Tracks are a mis-named tool. The Drum tracks are actually MIDI files. They contain drums plus bass and backup rhythm instruments, mostly keys. Because they are MIDI files played through the G-Dec's internal player, the tempo and key are adjustable. Also, the drum, base and other instruments are controlled with three different volume controls. The individual volume controls are in the Drum menus.

There are 50 of these MIDI tracks hard recorded in the G-Dec covering a wide variety of sounds. Admittedly, there are more rock-oriented tracks than any other style. Many of the tracks, like: Chicago, Country, 50's Shuffle and Western are complete progressions. Others are only one or two chords and a small number are single note bass lines.

The names of each track are descriptive making it easy to determine a use for each track. It will take the average player a long time to exhaust the possibilities provided by these tracks. For instance, Chicago is a 12 bar blues track. You can reduce the volume for the bass and keys and use the phrase sampler to record a slow I-iv-ii-V progression to loop with the phrase sampler. You could record an 8 bar blues pattern over the old drum shuffle. Your imagination is the only limit.

The G-Dec Junior Reduces the number of selections to 15 selectable through a rotary switch. Also, without the utility menus, you don't have the ability to adjust the volume of the different parts independently.

Utilities

The Utility menus are the functions that don't fit in the other menus. The Utility menus discussed here are from the base G-Dec. The G-Dec 30 has a different, but similar, set of items. The Junior doesn't have any menus, so these functions are not available.

The one item I most use on the Utilities menu is number 1, the RCA input volume control. This was moved to the panel on the G-Dec -30.

Menu 2 is a filter for the RCA inputs. It defaults to none. It doesn't actually cut individual instruments like the selections imply. It removes a frequency range containing most of that instrument's sound.

Menu 3 controls the playback level of a recorded phrase.

Menu 4 either gives you a four beat lead in or no lead in for the phrase sampler. The 4 beat lead is default.

Menu 5 selects sources for the phrase. It defaults to All. To record the drums, they need to be on before starting the recording.

Menu 6 allows you to reduce the phrase to half speed. It defaults to Normal.

Menu 7 plays the phrase once or repeats continuously. It defaults to continuously.

The G-Dec 30 has several additional utility menu items to operate the added phrase over-dub and MIDI storage features. The original first menu item, aux volume control, was moved to a volume control knob on the front panel. The Junior, doesn't have utility menus.

Presets

There are 50 fixed presets and 50 editable presets. In the beginning, every G-Dec has two copies of each preset patch; one fixed and one editable. You could quickly adjust any of the factory patches to fit your instrument and playing style. You could easily add your own patches and still have the factory material available. At any point you can flush the memory and go back to the original presets. An improvement over the other Cyber amplifiers, the starting position is a programable, user preset - U00.

The presets themselves are not magic. They are actually a MIDI track from the Drum Tracks menu plus user settings from the Amp and FX menus. You can change these to anything you can imagine. For example, I have used the "Surf" preset for progression practice because the chord progression is so common to a wide variety of musical styles. After turning off the keys sound, I change the amp type to acoustic and phrase sample an acoustic 12 string. Then I play over the looped sample with a Startocaster using the "Red House" patch from a G-Dec forum.

Please don't feel limited to the full preset. Because each element of the preset is a variable, use the portions you find useful and experiment with the rest. The 50 factory presets use about half of the available drum MIDI files. So, you can see, there is a significant amount of improvisation available in making your own presets. Imagination is the only limit. Unfortunately, the G-Dec will not allow us to replace the internal MIDI files. The G-Dec 30 has storage for additional MIDI tracks.

There are 50, fixed presets. Many of the initial presets seem to be patterned after a songs, some are close and some are a little loose. Most don't contain the full chord progression. Here is a guess, from the G-Dec Posse thread, at the songs a few of the presets may have been patterned to resemble:

Original Punk: I Wanna Be Sedated - Ramones
Run Maiden: Run To The Hills - Iron Maiden
Mambo Again: Do It Again - Steely Dan
Wah Leader: Stranglehold - Ted Nugent
Screaming: You Got Another Thing Comin' - Judas Priest
Take Five: Dave Brubeck
Hammer O'Gods: Led Zeppelin - Immigrant Song
Think Floyd: Gilmour's "Comfortably Numb" sound.
Lefty Haze: Purple Haze
Blue House: Red House
Black Cat: Stray Cat Strut
Latin Lead: Black Magic Woman
Aussie Born: Several AC/DC
Voltage: Several more AC/DC
One Glove: Billie Jean - Michael Jackson
Surf's Up: Pipeline (and just about anything Dick Dale)
Smoke: Smoke on the Water
Dixie Rock: Gimme Three Steps
Aerospace: Walk This Way
RockClock: Rock Around the Clock, using the 50's Shuffle pattern.
Seattle: Nirvana
ChicagoBlues: A basic 12-bar blues, using the Chicago pattern.
Four Brits - Beatles
Hot 101 - Hot For Teacher (Van Halen)

Upgrades & Modifications

All three of the G-Dec family members are good products. As with any fun toy, as the newness wears off, people will think of ways to improve specific aspects. This section addresses modifications made by several of the G-Dec owners. Some of these modifications may be of use to you. However, all modification requiring you to open the amp will void the warranty. This small cost must be measured against the benefits of the modification.

G-Dec 30

You could look at this as Fender's own Hotrod of the original G-Dec. There are a few short falls noted for the original G-Dec. Most of these are related to using the G-Dec for live play. An upgraded model, the G-Dec 30 addresses many of these shortfalls. The "30" offers an external speaker cabinet option. Also, there are line-outs. The line outs are marked Left & Right. There isn't a summed mono where both stereo channels are added together. There is an optional 4 button foot switch allowing changing presets while your hands are busy. It also operates the phrase sampler and tuner controls. The larger, Fender Cyber Controller is not supported.

The front panel gained a knob to control the auxiliary source volume. This was the first item on the old Utility menu. The new Utility menu has many extra parameters for controlling the new features.

The G-Dec 30 allows you to load and store MIDI files. You can record and build your own MIDI files. The phrase sampler is expanded from a 14 second loop to a 28 second loop and allows over-dubbing and saving as a song. You can assign 3 different 'voices' (patches) to your songs. These modifications won't make the G-Dec 30 a full, road capable stage amp, but it will allow small venue and solo play.

Cabinet Mods

Stuffing the G-Dec's speaker cabinet with fiber-fill is a very inexpensive and easy modification providing large results on the base G-Dec. You will notice more bass and less treble. You will need enough fiber-fill to make a 2 inch thick pad the full height and width of the cabinet. Simply unscrew the back. The back fits very closely, so you may need to push a phillips screw driver into one holes to get some leverage to lift the back out of position. Lay the fiber-fill over the speaker. You want to make sure the fiber covers the two vent holes, but don't pack it in very close to the back of the speaker. Then replace the back. You will be pleasantly surprised at the improvement in the sound. It won't be perfect, but will be much better than the stock G-Dec.

For greater improvement, you can tune the vent ports. If you're interested, you need to find an audio supplier. Plastic port extensions are not expensive. Reports from the G-Dec Posse indicate you will need one port 3 inches long and the other 2 inches. This should bring out more of the mid and lower mid-range sound.

The G-Dec cabinet is made of press board; a thick card board. It doesn't seem to work well n this thickness for a speaker inclosure. Dyna-mat, a rubber sound absorbing matting, may be used to reduce the cabinet vibrations and improve the sound. Also, replacing the existing cabinet with one made of wood is an option. Fender's G-Dec Exec is an example where the manufacturer made the modification for you. Better wood and more space improves the sound quality.

The G-Dec 30 has a larger, sealed cabinet. This adds to the lower frequency response. Its better speaker improves sound quality throughout the full range of the amp.

External Speaker Jack

You can easily add an external speaker jack to the G-Dec. You will need a small amount of wire, a speaker jack and 1 double pole double throw switch. The speaker jack can be a 1/4 inch mono jack or it could be something similar to a home stereo speaker RCA jack. The switch will have 6 posts on the back and preferably no center position. I would choose one with slip on connectors. This way you can plug the current speaker leads to the switch and be able to remove the leads if you want to remove the amp back. All the parts are available at Radio Shack or a similar electronics parts store.

Remove the back of the amplifier. Near the top drill a small hole for the switch and a second hole for the speaker plugs. Remove the current leads from the

speaker and attach them to the center two posts on the switch. Run two wires from one end of the switch to the installed speaker. Run two wires from the other end of the switch to the speaker jacks.

After you install the parts on the amplifier back, reinstall the back. Label the switch “internal” and “external.” Also, add a label explaining, “8 ohms only.” Labels can be easily constructed from rub on letters or stick on labels. You can make your own, durable labels by printing out the labels you need on regular paper. Then cut them out leaving some white border around the text, but small enough to be more narrow than scotch tape. Then stick the paper cutout on to a strip of scotch tape. Cut the tape to length and stick it on the amp. You have labels with a clear film to protect the print.

The G-Dec 30 comes with an external speaker jack. The 1/4 inch plug is designed for adding musical instrument extension cabinets. You can make a patch chord to attach any book shelf or monitor speaker. You will be amazed by the increase of sound quality.

Speakers

Several people have tried different types of speakers. If you are using the G-Dec primarily as a guitar amp, patching into a musical instrument cabinet will work fine. If you are interested in using the backing tracks, the aux in on the back panel, or hear the full richness of the G-Dec’s potential, you should use a studio monitor or full range bookshelf speaker for the best sound.

You can run a patch chord from the leads going to the stock speaker directly to a single book shelf speaker or monitor. Make sure you extension cabinet is an 8 ohm load. Installing the speaker jack mentioned above makes this easier.

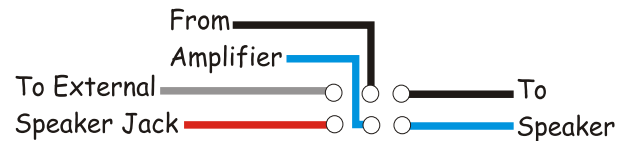
You can also run the headphones out to your home sound system aux in. You will need a 1/4 inch male stereo plug to 2 RCA male plugs. Radio Shack or a similar electronics dealer will have a chord. You will find all the effects are in stereo. It will be a very pleasant surprise. Another benefit; this will not void the warrantee where most of the other modifications listed will.

The G-Dec 30 has a right and left line out and an external speaker out. You will need a patch chord to connect the 2 line outs to a home sound system auxiliary in.

Original



With External Speaker Switch



You will also need a patch chord to connect the speaker out to any monitor or book shelf speaker. A normal 1/4 inch speaker cable will connect the -30 to any musical instrument cabinet. Make sure you are using 8 ohm cabinets/speakers.

If you are considering replacing the internal speaker, the same advice is true. A musical instrument speaker will work as a practice amp speaker, but you will not get the best sound for song reproduction. This is most noticeable on the auxiliary and MIDI use. Full range speakers will sound the best. Car audio speakers are a good choice for a cabinet this small. Most modern car audio speakers are 4 ohms. This means you will need to install 2 in parallel to get an 8 ohm load. Two 6x9 speakers will have slightly more speaker area as the stock 8 inch speaker. This means it will be slightly louder. Unfortunately, you will need a bigger cabinet. I would suggest using 3/4 inch pine for the cabinet.

Sony makes 5.5 inch speakers with the best base response. A pair of 5.5's will fit the original G-Dec cabinet. You will have less speaker area, so the volume will be slightly less; however, the sound will be more clear and defined.

If you have a G-Dec 30, the amp is large enough to accept 2 6x9 speakers. You can replace the speaker board with a new one cut for the new speakers. They will have a little less area than your stock speaker, so you will lose some volume. What you gain in clarity will make up for the lost volume. A woofer and a small tweeter with a crossover will also work.

There are a few closing thoughts. The larger the cabinet, the more bass and fullness you will hear. You can simulate a larger cabinet by adding fiberfill or ports. The material used in cabinet construction makes a difference. More stiff construction, using wood rather than MDF, will give better sound reproduction. Separate bass and treble speakers will have better sound definition, particularly if you use the aux inputs or the backing tracks.

The easiest method of improving the G-Dec's sound is to use an extension cabinet jack and plug into a good quality book shelf or monitor speaker.

G-Dec In Use

Now that we have discussed some of the background and defined many of the functions, it is time to start using this tool. There is a surprising number of things you can do with a G-Dec. The ideas and information presented here are gathered from several users from around the world.

Converting Patches

There are a few things to keep in mind when using patches developed by other people. Because different people use the amp at different volumes, the patches will come in several different volume and gain levels. Each patch probably sounded great using the guitar they were made with. Changing instruments or changing pickups can make a significant change in the patch's sound. Also, switching from headset to speaker can make a significant change. I use a full coverage headset when I make or adjust patches. You may need to make small adjustments to accommodate your instrument, the sound of your room and your style.

There are 138 patches at Patchwizard.com for the Cyber-Twin and 70 odd patches for the Cyber Deluxe. Patchwizard maintains both SYX files and text of all the patches. Because the other Cyber amps have more effects, more adjustable parameters and different amp selection possibilities, I figured the SYX files would not work. I use the text files.

There is also text for Cyber Deluxe patches at the Yahoo Cyber Deluxe group. The patch cash in the Yahoo group contains all the Cyber Deluxe patches from Patchwizard plus all the patches from the Fenderforum thread.

From the Cyber Twin

These instructions are based on using the text printouts from the Patchwizard site. Other sites may change the order of the information, but the translations from the Twin to the G-Dec remain the same.

The Twin can change tone stacks, pre-amps and power amps independently. For the most part, I used the “Drive type” for choosing the amp type. One point to remember, the older amp types, Tweed and some of the British types have very wide tone controls before the pre-amp. The more modern amp types have very narrow, powerful tone controls after the pre-amp. If the tone stack was Dynatouch or modern and the Drive type was Tweed, you may want to also try Dynatouch or one of the Modern types. These may be closer to the original patch than simply following the power amp selection.

“HMB” short for “Her Majesty’s Bassman,” is the same as our “British.”

“Hot Rod” is an emulation of the new Fender Hot Rod amps. We don’t have an equivalent setting in the G-Dec or the 30. Hot Rod’s sound is somewhere between Tweed and Modern. The Hot Rods have more powerful tone controls and solid state power rectifier, giving more bite than the old tweed amps while retaining some of the warm tone. You may want to try British, Modern 1 or 3. The G-Dec Junior has 2 Hot Rod selections rather than Tweed 3 & 4.

Skip to the 3rd paragraph for “Gain” and use the next 5 values for the rest of the amp settings. Be careful, the tone settings are in reverse order. Also the Twin has a “presence” control. This is upper high frequencies. If the value was exceptionally high or exceptionally low, above 8 or below 3, you may want to adjust the treble by “1.” Go back to the first paragraph for “compression,” “timbre” and “noise gate.” The only trick here: “Even Higher” is the same as our “Super.”

For “FX,” go to the last paragraph of text. There are some effects we just don’t have. Ultra-clean is one I can’t find anything similar. The others you can easily pick a similar sounding name and be very close. Take your time putting in the settings. The menus are in a different order in some of the Twin effects. Also, many of the effects have a 6th parameter. Ignore it, the 6th parameter works with the Cyber Twin’s MIDI foot controller.

Reverb in the Twin has several adjustable parameters. We use only type, 4th line from the top of the page, and level, listed as “Reverb” – the last line in the third paragraph. “Blackface” reverb is the same as our “Spring.” “Fender Reverb” is the same as our “63 Spring.” “Gated” doesn’t have an equivalent type. A gated reverb is silent when you are playing and sounds when you are quiet. Use “Large Room” as a starting point.

From the Cyber Deluxe

The amp type selections for the Deluxe is exactly the same as the G-Dec. Be careful, like the Twin, the tone controls are reversed. The Deluxe doesn't have a timber control, so start with none when converting the patch to G-Dec language. We discuss the timbers more at the end of this section.

The Deluxe has a completely different setup for effects. The Deluxe effects and reverb need a little experimentation to translate. For example, "Reverb, Spring 4" is the same as the G-Dec's "63 Spring" selection. "Spring 3" is also an external spring reverb, but with a darker tone. There are also 2 choices for a "Blackface" or our "Spring" reverb. "Spring 1" is very close to the G-Dec's "Spring." "Spring 2" is darker with less high frequency overtones. You could think of the Deluxe's effects, reverb and delay selections as each having a "timber control" of their own in addition to the other normal controls available.

My best advice it to pick something close on the G-Dec based on the reverb or effect name. Use as many of the other values as you can match based on their names. Then, make adjustments from there.

The tables below are based on the Owner's Manual from the Cyber Deluxe. They show the closest approximations from the Deluxe selections to the G-Dec choices. In some cases they are a match, in other cases they are the closest choice.

Some settings need a guess. For example, the Deluxe "Reverb, Ambient 2" is a smaller space than the G-Dec "Ambient," but its much darker than "Small Room." You won't find a perfect match. You'll have to try a few guesses to see what works best for you.

One other small trick, the Cyber Deluxe display doesn't indicate time. The display is only 2 large digits. Delay time is represented with the values 1.0 through 9.9 for the times 30ms through 1450ms. In other words, a setting of 1.1 is 30ms. For each increase of 1 you get an additional 142ms until you reach 9.9 where the delay is 1450ms. So: 2.1 equals 172ms, 3.1 equals 202ms and so on linearly to 9.9. The Cyber Deluxe display is only 2 digits, so it doesn't have a 10.0 setting. Another way to do the conversion is to use this formula: $(\text{Setting number} - 1) \times 142 + 30 =$ approximate delay time in milliseconds. Then use the closest setting available in the G-Dec.

REVERB TYPE	SELECTION	GENERAL DESCRIPTION	G-DEC EQUIVALENT
Ambient	1	Very small space with typical brightness	Ambient
	2	Small space with darker frequency response	
Room	1	Dark room with short delay	
	2	Bright room with medium delay	Small Room
	3	Medium room with medium delay	Large Room
Hall	1	Dark hall with medium delay	
	2	Bright hall with medium delay	Small Hall
	3	Medium hall with long delay	Large Hall
Arena	1	Dark frequency response with long decay	
	2	Bright frequency response with long decay	Arena
Plate	1	Medium plate response	Small Plate
	2	Bright plate response with long delay	Large Plate
Spring	1	Medium Blackface reverb	Spring
	2	Bright blackface reverb with longer delay	
	3	Dark '63 Fender reverb unit	
	4	Bright '63 Fender reverb unit	'63 spring

FX TYPE	SELECTION	GENERAL DESCRIPTION	G-DEC EQUIVALENT
Chorus	1	Slow sweep rate with high depth	
	2	Medium sweep rate with high depth	Triangle Chorus
	3	Fast sweep rate with low depth	
Flange	1	Slow sweep rate with medium depth	
	2	Medium sweep rate with high depth	Triangle Flange
	3	Fast sweep rate with medium depth	
Phaser	1	Medium sweep rate with medium depth	Phaser
	2	Fast sweep rate with low depth and feedback	
Wah	1	Touch – playing strength	Touch Wah
	2	Pedal controlled	
Tremolo	1	Medium rate with high duty cycle	Tremolo
	2	Fast rate with high depth	Tremolo
	3	Fast rate with medium depth and cycle	
Vibratone	1	Slow rate with medium depth	Vibratone
	2	Fast rate with high depth	Vibratone
	3	Fast rate with medium depth	Vibratone

DELAY TYPE	SELECTION	GENERAL DESCRIPTION	G-DEC EQUIVALENT
Tape	1	130ms, Low feedback, Medium wow & flutter	Stereo Tape Delay
	2	120ms, High feedback, Med-high wow & flutter	
	3	300ms, Low feedback, Medium wow & flutter	
	4	450ms, Low feedback, Low wow & flutter	
	5	600ms, Low feedback, Med-high wow & flutter	
	6	650ms, Low feedback, High wow & flutter	
Digital	1	100ms, Medium feedback, Bright Repeats	Autopan Delay
	2	230ms, Single repeat	
	3	400ms, Low feedback	
	4	460ms, Medium feedback, Bright repeats	
	5	800ms, Medium feedback, Dark repeats	
	6	1.4 seconds, Medium feedback, Bright repeats	
Ducking	1	220ms, Medium feedback	Ducting Delay
	2	350ms, Med-high feedback	
	3	460ms, Medium feedback	
	4	650ms, Medium feedback	

Once you have the text patch from the Cyber Deluxe converted to G-Dec language you are almost done. The Cyber Deluxe is a guitar amplifier designed for stage and recording use. It has a cabinet and speaker that color the sound as do all full size amplifiers. The G-Dec is designed with a full range speaker with the intention of not coloring the sound. This means that with the controls set to the same settings, the sound will be different. So, we need to make some corrections for the speaker cabinet. The following corrections are from a side by side comparison. These corrections are an average of all the selections of each amp type. They are not perfect, but are very close.

Patches using:

Tweed amp types - Set the timber to Full Body. Add 1.0 to the bass. Add 1.0 to the mid range. Subtract 1.0 from the treble.

Blackface amp types - Set the timber to Full Body. Subtract 1.5 from the treble.

DynaTouch amp types - Set the timber to Razor's Edge. Add 0.5 to the bass.

British amp types - Set the timber to Full Body. Subtract 1.5 from the treble.

Modern amp types - Set the timber to Razor's Edge. Add 0.5 to the bass. Add 1.0 to the mid range. Subtract 1.3 from the treble.

To and From G-Dec Junior

The G-Dec and G-Dec 30 have the same interface with minor changes to the Utility menu. The Junior is very different. To product a simple, fun product, Fender changed to control knobs rather than the computer menu system. This caused changes in how things actually work. To make the patches from the other G-Decs work with the junior there are a few things to think about.

Amp Type

Because of the timber and full set of tone controls are missing, the Junior amp selections are already tweaked for particular sounds, like a modeling amp; however, Fender retained the type and number naming conventions of the other G-Dec models. The G-Dec Junior manual has a good descriptions of the each of the amp type selections. A quick comparison follows.

British 1, 2 & 3 are the same as the base G-Dec. British 4 is added. It is a higher gain, more modern sound from British 3; possibly British 3 with the 'Nu-Metal' timber added. If you see G-Dec patches using British 2 or 3 and a timber of Razor's Edge or Nu-Metal, use the Junior's British 4.

The Jr's Tweed 1 & 2 are similar to the G-Dec's Tweed 2 & 3. For G-Dec patches using Tweed 4, use the Junior's Hot Rod types. Patches using Tweed 1 are more difficult. Blackface 1 will be close with less midrange and more treble. Using the Junior's Tweed 1 with significantly less gain would be another option.

The Blackface amp selection is unchanged.

The single Acoustic of the G-Dec is now: Acoustic 1, optimized for finger picking and single note work and Acoustic 2, optimized for strumming. I think the primary difference is the amount of volume boost; Acoustic 1 being slightly louder than Volume 2.

The G-Dec's Dynatouch and Modern are omitted completely. It is replaced by two selections. Metal 1 seems like the old Modern 2. Metal 2 seems like the old Modern 3. Dynatouch patches will be difficult to convert. Dynatouch has more bottom and treble and less midrange than the HotRod selection, but less dirty/gravelly sound than the Metal selections.

There are two Amp Types that are not in the base G-Dec. Hot Rod is an emulation of the Fender Hot Rod amplifiers. For those of us with a G-Dec or G-Dec 30, Hot Rod is similar to the Tweed amplifiers with a Blackface like tone stack and a more modern power amp. So, if you look at the G-Dec patches and see Tweed 2 or 3 plus an aggressive timber, use the Hot Rod amp types.

Effects

The Jr's effects have a similar situation as the amp types. Because the menus are missing, the effects selections are pre-assembled; meaning there are no parameters or adjustments. To use the G-Dec patches, select the effect with the same name. The Junior manual has a table describing the selections. For example, there are 3 delay selections: 130, 300 & 500 ms. Look at the parameters called for in the patch and use the one that fits most closely. There will be several that don't have a match in the Junior.

Overall, the Junior is a good practice and playing around tool. Although the fine detail available in the G-Dec and G-Dec 30 is not present, the selections made through the knobs will give you the general idea of a sound or style.

Copying Sounds

The G-Dec has the ability to produce almost every sound you hear in music today. The programming power is available to match or get very close to any sound. The tools are available through a simple menu system. The trick is having a systematic method and a trained ear.

To match other people's tone, to emulate someone else's sound, it would be logical to hear both the G-Dec produced sound and the artist's tone at the same time. Fortunately, the G-Dec makes this very easy. Play the selected song through the RCA inputs on the back panel. I recommend listening with a headset rather than the speaker. The speaker sound is very muddy and compressed compared to the headset.

I like to work with my guitar Volume and Tone controls at 10. Be careful with the guitar volume. Particularly, with humbucking pickups, the volume may need to be attenuated to prevent over driving the input stages of the G-Dec. A compressor, EQ or volume pedal are perfect tools to control the signal strength. Use the Utility menu to adjust the recording level to be similar to the guitar volume. Then use the amp volume knob to adjust both to a comfortable level. If the sound is too loud, your ears will tire faster and you won't hear as clearly. Set the amp tone knob to 5.

Set FX to "None." Start with the amp-type selections. Pick an amp-type you think will be close. If you know something about the persons gear, you can make a better initial guess. Don't forget, most bands record with one set of equipment and perform live with another. Maximize the volume with the amount of gain to get close to the sound on the recording. Try using the timber control to get as close as you can.

Now, proceed to the Tone settings in the amp menu. I prefer to set the bass first with the treble and mid tone controls off. Don't OD on the 6th string bass tone, but get the bass close. Then I roll up to attain the mid-range frequencies paying attention to the 1st string tone. Lastly, work the treble to match the recordings high overtones. Try Timber again, if necessary, to get closer to the recorded sound. Changing Timber may cause adjustments in the tone controls.

If you have matched the tone pretty accurately, the biggest part of the settings is done. Before you go on, it is time to make sure there isn't another Amp setting or timber to get your sound closer to the recording. If you think another amp sounds closer to the recording, return to the tone adjustments one more time. Again, each time you select a different amp type the volume, gain and tone controls change.

Next, decide whether or not to go with Compression and what degree. Sometimes adding compression and reducing the gain will give a closer match to the recording. It smooths out the graveliness of the G-Dec going into tits' over-driven mode. Then, you are ready to bring in the different types of Effects and Reverb. The noise gate is very transparent. It can be added later and will not change the sound. It could, just as effectively, be added near the beginning when higher gain setting and amplifiers are used. When you have the basic amp sound very close, start working with the "FX" menus.

This may take several sittings at first. As you become more familiar with the G-Dec's sounds and menus and train your ear to listen, the process will go much faster. Your ears do get tired over time. To get a perfect match with one particular band's tone, its normal to take more than one sitting. Don't forget, you still have the pickup selector and the guitar's volume and tone controls to work with.

As a technique, save to a different preset often. This will allow you to go back to a previous point or idea without having to write down all your changes. I try to use sequential presets to facilitate comparing different ideas.

When you are finished, make sure you write everything down. All your work will be lost if you accidently copied another patch or move the wrong control.

Practice Tool

This is the greatest part of this amp. It is a tremendous learning tool. Trying to explain all of the possibilities would fill an entire book alone. In fact, I wouldn't be surprised if someone wrote a lesson book based on the G-Dec. Rather than fill pages with all the possible uses for this amp in learning and practicing, these few paragraphs will only touch on the basic ideas. Let your imagination carry you the rest of the distance trying to find all the uses of the tools available.

To begin with, there is a second guitar in on this amp. You can play with your student/teacher. You can even loop the other player. The second guitar input could be a keyboard or microphone. The problem is; it will play through the same patch as your guitar.

The looping tool is underrated. It's difficult to press stop at the right time when trying to loop yourself. If you elect to use the full 14 seconds, setting the drum tempo to 70 bpm for 4 measures, 140 bpm for 8 measures, 110 bpm for 4 measures in 3/4 time. You can use similar techniques for the G-Dec 30 except you have 28 seconds of recording time. The same tempo settings as the G-Dec will give you twice the number of measures in the -30.

Don't feel you are limited to only recording the guitar part. The G-Dec reproduces a full musical range. This means you can record your own bass lines on the phrase sampler. Then, practice playing over the base line. If you have a electric keyboard, you can use the headset or line out on the keyboard to the RCA/AUX in on the G-Dec and record Keys with the phrase sampler.

You don't have to use the accompaniment with the drum tracks. The backing tracks have several volumes: overall, drums, bass and accompaniment. You can turn off the volume on the bass and the extra instrument, normally a keyboard. Then just use the drums and add your own chords to the loop.

The RCA jacks are fantastic. You can play tape, cassette, CD, or any line level audio source for copying songs or sounds. You can record short portions of the song with the phrase sampler, then play them back either full speed or half time. Then you can play along with the recorded loop. The utility menu offers the option of gating the voice from the auxiliary input.

The MIDI play through gives you, essentially, additional 'drum tracks.' You can play the track through real time, loop the track, etc. The advantage of the MIDI play through feature is the tremendous number of MIDI songs on the internet to down load free. Unfortunately, the G-Dec will not hold the MIDI files in memory. The G-Dec 30 will. Be careful, the sound quality and accuracy to the original song is sometimes questionable on the free down loads.

Exercises

Because practice is very close to self teaching, the remaining discussion is from a practicing or self-teaching point of view. Detailed explanations of music theory could fill several volumes. Detailed, fully developed exercises are available in many places from books to the intranet. In this discussion, we only introduce the subject, outline methods of practice and briefly look at how they work. For more details concerning the theory or mechanics of the exercises, please consult a local music teacher or your local library.

Basic Skills

There are a large number of basic skills to improve a player's technique. Basic skills are often monotonous exercises and are typically dropped as a person begins to play songs. Unfortunately, the speed and dexterity needed to play complicated pieces at speed are developed through these basic exercises. Although the use of a metronome is not required for many basic exercises, the development of timing and rhythm by listening to and practicing with drums or metronome will clearly stand out when you play with others.

Be careful to avoid making the exercise so complicated you lose the original purpose. You need to practice using fingers in common sequences, skipping strings, starting phrases on and up pick or a down pick and starting phrases on any finger.

Using a drum track with the bass volume off will teach you to listen to and follow the rhythm. Start slow and build speed over time. These types of exercises work best by doing single exercise for a full 3 to 5 minutes. A good technique is to begin practicing with one basic exercise per practice session. Then, move on to something more entertaining. It is good to have 7 or more different exercises so you can rotate through the set with a different exercise each day and not get burned out on a single practice pattern.

Rhythm Playing

Rhythm playing is an often over looked skill. The glory of solo playing typically over shadows the work and precision of the rhythm player. The G-Dec provides a drummer and a bass player. So, how do we take advantage of this?

In the beginning, I recommend practicing changing between chords. From this point there are several directions to develop these exercises into something more complicated. The first development is playing chord fragments. You can add pentatonic scale notes to the chord tones to help smooth the movement between chords. The next form of development is chord substitution. This could be as simple as chord inversions, or changing the lowest note of the chord to a different

note. Try playing the chords over the top of each other. For example, if you use only open chords in the key of A, you can play the A with a root on the 5th string, D with a root on the 4th string and E with a root on the 6th string. Use the open chord shapes and move them up the neck. In this example, we used the A shape for the I chord. There are three positions where these over-lapping chords will occur. The other two use the E shape and the D shape for the I chord.

Another method of altering chords is adding notes. For example, rather than play a C chord for the I, play a Cmaj7, Cmaj9 or C6. This is most common in Chicago blues and Jazz. There is one caution. The larger, more extended the chords, the cleaner the tone should be. The heavier, dirtier the voice you choose, the fewer notes you should play.

An additional method of chord substitution is actually substituting chords. There are some basic substitutions common in music. The first is placing a VI chord for the I chord. This should be easily recognized as the minor sound of All Along the Watchtower or the dark sound of Pink Floyd. Their progressions look like: VI-V-IV or VI-V-IV-III. This is also the typical surf sound and Do-Wop sound of the 50's and 60's using I-VI-IV-V and I-IV-II-V progressions.

The next most common is placing a II chord for the IV chord. This changes the pop sound to the jazz standard VI-II-V-I progression. Last and least common is placing the III chord for the V chord giving a III-VI-II-V-I progression. If you noticed, all of these are replacing the major chord with it's relative minor.

The last rhythm exercise you can try is modal exercises. Yes, modes are really part of rhythm playing. We began with a normal major scale and songs using the I, IV and V chord. This makes up most of popular music. Modes are the same major scale starting and ending on a different note. For example, in the key of C you could play the same scale notes, but begin and end on A. This is the sixth mode. If we build a song in this mode, the I chord is the Am. The V chord is Em. Often the V chord is a dominate 7th so the progression would be Am-E7. Solo over this progression using the C major scale, the same notes as A minor. In all, this is a tremendous learning or teaching tool. You can do all of the things discussed above. You can also do any combination of the things listed above. The only limitations are your imagination.

Use of Pedals

There have been many questions and comments on the on line forums about using the G-Dec with external pedals. For the most part, they work. There are some things to think about to increase your success finding the sound you are looking for.

The biggest thing to keep in mind is the G-Dec is not a guitar amplifier. The G-Dec takes MIDI files, recorded music adds a digital guitar amplifier emulator with effects and a full range speaker and combines them into a useful, fun tool. With this thought, external effects pedals meant to color the sound work well. Wah pedals, volume pedals, equalizers, chorus, delay, etc. work very well. All of these type effects will sound and operate just as they would in front of a regular amplifier.

Effects that are meant to alter the way the amp works, don't sound the way you would expect. A tube screamer, for example, was designed to push the input stages of a reasonably clean tube amplifier to get a slightly over-driven, blues sound. It sounds great this way. It's the classic rock and blues sound. The G-Dec won't be happy with this type of treatment. You will get ugly clipping distortion from the AD converter. You can use the tube screamer, but not at the signal strength you are used to and it won't sound the same. Fortunately, the G-Dec has a tube screamer emulation called "Overdrive." It acts like the real tube screamer and sounds great. There are some distortion units that are meant to produce a distorted sound by themselves, a fuzz unit is an example. These units work well.

Floorboards, Pods and other modeling processor don't work well. The G-Dec doesn't have a "bypass" channel to amplify a preprocessed signal. If you really want to use a Pod or similar device; feed the guitar to your modeler and run modeler's line out to the G-Dec's RCA in jacks. You would be better off with a small clean amplifier or small power amp than using the G-Dec this way. Also, the G-Dec is more responsive to your instrument and playing style than any other product on the market today. You get more of your sound from the G-Dec than from the other products.

When using an external effect, make sure you control the signal strength going into the G-Dec. It is very sensitive to much signal. In fact, putting an EQ pedal between the guitar and the G-Dec's input is an excellent way to control the input level and prevent over driving the G-Dec.

Recording & PA Use

Any amplifier can be miced. They all work about the same. It does take a little time to find the perfect placement for the microphone. If you want primarily the amp sound, start with the microphone near the center of the speaker at a slight angle. Keep the microphone within 8 inches of the amp to reduce the amount of outside noise recorded. Some people place the microphone near the center of the speaker. Some people set the microphone closer to the edge. There is a difference in tone, so you need to experiment. Moving the microphone within 3 inches will enhance the lower frequencies, particularly with SM57 and SM58 mics, adding body or fullness to the sound.

To add more of the room's feel, place the microphone about 6 feet in front of the amp. In both cases, experimentation will give the best results. If the tracks are available at the mixing board, record with two mics. Set one close and one far. Then, mix the two together at the board. Experiment with the spacing of the microphones to prevent phase cancellations when the signals are added together.

There are other ambiance effects to try if you are imaginative. Set the amplifier at one end of a hallway. Place the microphone at the other to capture the echos and reflections of the long skinny space. Placing the amp in a bathroom with a microphone will have a similar, but stronger effect. You can go outside and place the amplifier in the grass and microphone from a few feet away to get a perfectly clean, open sound with no effects added. These techniques apply to any amplifier.

To record direct with the base G-Dec you have to keep a few things in mind. First, the only available output is the headset out. It is stereo and compensated for speaker emulation. Also, some bass is added to adjust for the typical headset's bias. Depending on how it sounds, you may want to make small adjustments at the mixing board or with the amp tone knob.

Most equipment is designed for line level input. The headset out could be more or less than line level depending on the volume setting with the amp volume knob. Watch the signal strength to prevent over-driving the mixing board. Once you find a good setting, use the same setting on the amp volume knob and remembering the mixing/recording equipment settings. I use a volume of 3.

If you have a G-Dec 30, you have line outs. Run them direct to the mixing board. Make sure you record both channels. If you are going to a computer, you will need a cable with an 1/8 inch stereo jack on one end and 2 mono 1/4 inch jacks on the other. It may actually be easier to record to a computer from the headset out.

If you are running very long cables, I recommend running a balanced line. Join the right and left channel's line outs on the -30, with a ¼ inch "Y" cord to have a single input for the direct box. Some direct boxes have two inputs. Feed both sides of the direct box with the two line outs and make the long cable run with balanced lines. You can run both sides of the amp's stereo to the same direct box for mono or to two separate boxes for stereo at the mixing board.

If you use the -30's line outs the world opens up. There are independent controls for the level of the line outs and the speaker volume. You can also divide the signal; guitar or guitar and backing track to the speaker and backing track or guitar and backing track to the line outs.

When using the headset out as your line out, the speaker is muted. You will need to either listen through the monitor speakers or a headset at the board. Recording on the computer is more simple. Many sound card microphone inputs are stereo. All you need is a ¼ inch to ⅛ inch conversion. Again, try to keep the cables as short as possible.

Notice, with direct recording, we are using two channels. The G-Dec doesn't have a 'summed mono' out. There is only one, stereo headset out. Even the -30's line outs are two separate channels. If you use only one side of the signal you will lose much of your sound. Record both right and left channels to get the full sound of the amp and its effects.

Stage Use

The base G-Dec and the Junior have some definite handicaps for use on stage. Like recording, you could use a microphone or go direct to the PA system. The advantage of having a microphone at the amplifier is using the amp as your personal monitor. The disadvantage is picking up other stage noises.

If you use the headset out, you are using a stereo signal and turning off the G-Dec's speaker. Most places may not be too excited about a guitar player using up two channels on the mixing board. If you are feeding only one channel, stay away from the stereo effects like the delay, chorus and flange. I have a direct box that mixes two inputs into a single balanced line out.

With the speaker muted you are dependant on the house speakers or stage monitors to hear yourself. This is not very different from other setups, but you need to be aware of how the house system will color your sound. The signal you send to the PA mixing board, hear from the stage monitors and hear from the house speakers are 3 different things. You must believe your patches will sound close to what they did at home and just listen for the notes, ignoring the tone. If

you play the same venue often, a church or neighborhood club, you can get to know the sound system and make adjustments to the patches to fine tune your sound.

If you want to play direct, there may be a loud 60 cycle hum as soon as you plug the amp in. If the wiring for the stage is not set up correctly to be on the same circuit with the same ground and common line as the PA system, you will generate noise from electric power flowing through the amplifier. Most of the time, micing the amp will cure the grounding problem. Running the line out through a direct box with a ground lift will also work.

The next problem is changing you patch during the set. The base G-Dec doesn't have a foot switch. There is a way around the foot switch problem. You must think through the set and determine the order of your patches. Also, think carefully about the places in the music you have time to reach the amp to make the change. With the intended changes worked out in advance, save the patches you expect to use in sequential order. This way one click and you are on the next desired patch. Practice the set at playing speed to make sure there is time to make the changes without noticeably affecting the music. I highly recommend not changing patches during a song without a foot-switch. It has been my experience; it takes a few measures to get back into the song.

The display is very small and doesn't have much contrast. This makes it very difficult to see which patch is selected, particularly on a dark stage or at a distance. I would recommend having the G-Dec on a chair or box rather than on the floor. This makes it easier to see and reach to change patches. For the original G-Dec, playing live, on stage is clearly outside the design concept.

For small venues needing a quite stage, like churches, the G-Dec operates very nicely provided you think about your handicaps in advance. Actually, if you could talk the church sound person into letting you use two channels, you would sound great.

The G-Dec 30 has line outs. You can use the line outs and still have the amp as a monitor. The -30 has an optional foot-switch for patch selection in addition to other things. Many of the handicaps of the base amp are eliminated. The G-Dec 30 should work fine on stage; especially if using a PA system.

MIDI

Fender produces a very good MIDI guide. From Fender.com, go to products and then G-Dec. Select the down load menu. You will find "The G-Dec Family MIDI Guide." It addresses most of the MIDI problems and questions. There is also a list of MIDI cables and software that works and a list of what doesn't work.

One of the upgrades in the G-Dec 30 is the ability to cerate and record your own MIDI loops. The G-Dec 30 has 100mb of memory for MIDI storage. There really isn't a number of songs. It depends on how long or how short the songs are.