

# The Last Word—and Numbers—on Your CD

## The artist's guide to coded information

Digital download sales, royalties for new media play, even royalties from the sale of blank CD-Rs, in addition to physical retail and online retail sales of CDs all hinge on coded information. It's important that artists use every means available to establish their connection to their recording, and to incorporate into their project all of the now-essential tools for selling their recordings.

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## UPC, ISRC, CD Text, CDDB®

A lot of information on a music CD isn't music. Digital delivery and online CD sales are important to almost every artist, and they can't happen without some of these codes. Listeners' use of all kinds of players to hear their music gives artists new opportunities to share information about their music, too.

In this guide, we tell you what each code does, what it looks like, and where to get it.

UPC, a numeric code, and ISRC, an alphanumeric code, support the conduct of the music business by tracking sales of CDs and individual tracks. CD Text and CDDB® are two sources of text information that enrich the listening experience.

## UPC (Universal Product Code)

### What Is It?

A UPC is the "bar code" attached to nearly every packaged product available in retail stores. Each product has a unique 12-digit number, encoded in the bars, which are scanned upon purchase and allow for the tracking of inventory and sales.



For a CD, the UPC's 12 digits are assigned as follows: the first 6 digits (the prefix) represent the record label or other releasing entity (more on this later), and the last 6 digits (the suffix) represent the artist and the release.

### What Is It Used For?

In addition to indicating the purchase price at cash registers, the UPC is used for two main purposes: managing inventory and tracking sales. Each product has a unique string of digits and bars, and thus is an essential tool for tracking inventory. For example, a distribution company uses UPC data to track the number of CDs sent to stores.

In addition, Nielsen SoundScan collects UPC sales data from 14,000 outlets in the U.S. and Canada to compile its weekly list of music sales, which are published online ([www.soundscan.com](http://www.soundscan.com)) and in the Billboard charts. Nielsen SoundScan's charts are the only ones based on actual record sales. For a recording to be tracked by SoundScan, its title must be submitted to SoundScan using a [submission form](#). In a nod to the independent music community, Nielsen has authorized other parties to upload the submission; Oasis CD Manufacturing, for example, will do this for their customers, with very little additional effort on the artist's part.

### Where Does It Come From?

The Uniform Code Council (UCC) is the organization in charge of maintaining the UPC standard [www.uc-council.org](http://www.uc-council.org). To receive bar codes, a company must become a member of the organization. The membership fee varies according to the number of unique products and gross sales revenue, but it is a minimum of \$750 annually. Member companies receive the first six digits of their code and the right to use the rest of the sequence.

### How Does It Work?

UPCs are scanned with an optical reader device, which decodes the bars, displaying the product name on an enabled cash register or inventory system. For recordings registered with SoundScan, when the bar code information is scanned by a retailer, it is also sent to the sales database.

### AARC – free money?

In 1992, Congress imposed a compulsory royalty on the sale of blank recording media (CDs and digital cassettes), to be awarded to artists, composers, and labels to compensate them for the home recording of their works by consumers. Artists and labels are represented by Alliance of Artists and Recording Companies ([www.aarcroyalties.com](http://www.aarcroyalties.com)) in the annual negotiation and distribution of the funds collected. SoundScan sales data are used to determine who gets paid what.

## Why Independent Artists Get UPCs

Many artists sell most of their releases at gigs, and SoundScan is not venue friendly. However, to sell in any of the major online retail sites, like Amazon.com, an artist needs a bar code.

## How Independent Artists Get UPCs

Whereas record labels purchase and own their sequence of UPCs, independent artists generally do not need the hundreds of codes UCC membership grants. This is why independent artists often obtain their UPC codes from their manufacturer or distributor, or from membership organizations (e.g., the Washington Area Music Association and the Colorado Music Association both include a UPC code as a membership benefit).

Software is needed to print UPC bar codes; it is readily available. However, there are restrictions on truncating, shrinking and scaling the bars, so if you receive your UPC numbers from your disc manufacturer, you may as well have them generate the actual “bars,” to ensure that it is done properly.

## Where Is It On My CD?

The UPC is only attached to the CD package. Generally, the UPC is located on the backside of the CD jewel case artwork in any of the four corners.

## ISRC (International Standard Recording Code)

### What Is It?

The ISRC is an alphanumeric code attached to each track of a recording. Composed of four subcodes, the ISRC gives

an accurate description of the following:

US-Z04-99-32243

(1) (2) (3) (4)

- 1) The country of origin for the sound recording copyright owner.
- 2) The code for the registrant or copyright owner, which is unique the sound recording copyright owner, whether artist or record label.
- 3) The year the ISRC was embedded in the sound recording track. The year strictly refers to when the ISRC was applied to the track, not when the track was first released.
- 4) The designation code, also known as the code assigned to each track.

The ISRC is always tied to the track, not the delivery medium. So, for example, a track from a Super Audio CD release that is later released on a CD compilation would have the same ISRC in each case. However, a revised release of the same tune, for example, with a different tempo, would be considered a new track and would require a different ISRC.

### What Is It Used For?

The ISRC code is used to track the usage of the sound recording. The code helps trace the royalty owner who is owed royalties when a sound recording is used by outlets including Internet radio and satellite radio stations.

The ISRC is also the tool used to track sales in

### Aggregators: strength in numbers for indies

Aggregators are the portal by which independent artists and labels can enter the online digital download arena. Apple’s iTunes and its competitors are set up to deal with large catalog owners, like major record labels. Aggregators contract with independent artists and labels, collect their releases, compile all associated information, and forward audio files to the various online stores. The stores make payment for all sales to the aggregators, who, for a share of revenue, in turn pay the artist or label. The ISRC is the code that enables this series of transactions. Artists have a choice of aggregators. It’s important to make sure the aggregator not only pays a fair rate to musicians, but also has a strong history of making good on its payment obligations to artists. This is an accounting-intensive industry, and the paperwork in itself is enough to shake out the weak companies, however well-intentioned they may be. CD Baby is a popular aggregator: for more information about aggregation for digital download sales, please visit [www.cdbaby.net/dd](http://www.cdbaby.net/dd).

electronic stores, such as MSN Music and iTunes. Because the ISRC remains attached to a track even after it is extracted from the original medium (such as an audio CD) and encoded for download as mp3, aac, etc, it is a reliable information source.

### Where Does It Come From

The ISRC was created by the International Standard Organization (ISO) in order to provide an electronic label to sound recordings. Appointed by the ISO, the International Federation of Phonographic Industry (IFPI) maintains the ISRC standard. Because the ISRC includes a recording's country of origin, every country has its own national agency, designated by the IFPI. For more information on the ISRC standard and appointed national agencies releasing ISRC codes, visit [www.ifpi.org](http://www.ifpi.org). In the U.S., the national administrative agency is the Recording Industry Association of America (RIAA): [www.riaa.com](http://www.riaa.com).

### How Does It Work?

The ISRC code is an electronic tag that tells a story about the track to which it is attached. The ISRC standard presents 100% reliability for identification of the sound recording for a specific track.

As with UPC, record labels (and other music business entities) apply for status with the administering agency (the RIAA) to obtain its own 3-digit code (the "Z04" in our example, above). The label then assigns the remaining digits in the code sequence. With one letter and two digits to work with, it's clear that the ISRC was put in place for a finite number of record labels, not for today's music environment. Distributors and online music "aggregators" are permitted by the RIAA to assign ISRC codes to sound recordings, which means independent artists do not have to request codes from the appointed national agency.

### Where Is It Put On My CD?

Typically, a record label furnishes its sequence of ISRC codes to the mastering lab, where the information is

compiled on a subchannel of the master. If you plan to release your tunes as digital downloads, the same codes assigned by the aggregator can be applied to the audio CD recording. Plan ahead: get your ISRC codes in advance and have them added to your CD release as well.

## CD Text

### What Is It?

CD Text is information about the release that can be encoded as a separate file on an audio CD.

### What Is It Used For?

CD Text stores such information as the artist's name, the album title and song titles. When playing back an audio CD containing CD Text information on a CD Text-enabled CD player, the listener will be able to read this information on the display panel. *It's displayed only on CD or DVD players, not on the desktop of most computers.* (Computer display of text information comes from an entirely different source; see the section on CDDDB below.) In addition, specifications for CD Text will eventually allow the inclusion of additional data, such as JPEG coded images.

### Where Does It Come From?

CD Text has been around since the advent of CD in the '80s. CD Text is part of the original *Red Book Audio* standard, which defines the CD audio medium that we use every day. There is renewed interest in CD Text now because DVD players and more car stereos include text-enabled displays.

### Where Is It On My CD?

CD Text is stored on a CD in a way that it does not interfere with playback of the audio portion. CD Text information is encoded in a subchannel. (Other subchannels are available on a CD.) There are two ways to

### Internet and satellite radio - Income for the recording artist

When a tune is played on an over-the-air broadcast station, the station pays royalties to the composer of the music only, not to the label or the recording artist. When the same tune is played on an Internet radio service, a satellite radio station, or a music service like Muzak, the rules are different: both the composer and the performer are paid a statutory royalty. The recordkeeping for these transactions includes several fields of information, including the reliable ISRC. Sound Exchange is the nonprofit organization formed to facilitate this business, with estimated royalty payments in 2005 of \$30 million. Artists may join Sound Exchange for free: [www.soundexchange.com](http://www.soundexchange.com).

get CD Text encoded onto a CD master. The first way is for the mastering engineer to key in the artist, release title, song titles, etc., as part of the information that becomes part of the disc's "table of contents" and also the log furnished to the manufacturer. Some mastering software takes that information from the log and reformats it into a CD Text file and creates the subchannel.

The second way is for the artist/producer to use a CD Text editor, software which presents a series of frames into which you may enter this information. The resulting file is furnished to the manufacturer, who applies

it at their "mastering" stage, an early stage of manufacturing. A copy of the Sony Text Editor for PCs is available at [www.sonydad.com/thankyou.go?download=file/cdtext.zip](http://www.sonydad.com/thankyou.go?download=file/cdtext.zip)

The popular Toast software enables a user to add CD Text when

burning a disc from a CD. The fields are more limited than those in the Sony text editor; its advantage is that it is available for Mac or PC

### Should I Add CD Text to my CD?

Your fans who play CDs in their CD/DVD home theater player will be able to read it. And if that includes your mom, it's a must!

## CDDB® (CD Database)

### What Is It?

CDDB is an Internet-based service, licensed by the technology company Gracenote® to the developers of playback software and applications, who use it to display for listeners all kinds of music information, retrieved from the company's enormous database. For example, when a CD is inserted in a computer's CD player and accessed by one of a number of media player applications, the album, artist, and track information is retrieved from the CDDB database and displayed on the computer screen. CDDB allows for easy identification of CD Audio and digitally distributed music in file format. CDDB is one of a number of such database services; Freedb ([www.freedb.org](http://www.freedb.org)) and MUZE are other popular database services ([www.muze.com](http://www.muze.com)).

### What Is It Used For?

A CDDB entry provides a wealth of information about the CD, divided into two categories, album data and track data.

Album data includes album title, artist name, record label, year of released CD, genre, such credits as musicians involved and producers, ISRC, and weblink to the URL of the artist's Internet site.

Track data include track title, artist name, record label, year of album-released song (critical for compilation and anthology projects), credits such as musicians and producers, genre, subgenre, and segment (used to identify classical pieces that are more than one track long).

### Where Does It Come From?

Surprising though it may sound, the information in the CDDB and similar databases can come from anyone: a record label may be the first to enter and upload information to the online database, an artist may mail a CD to Gracenote for information upload, or any fan, using iTunes or other media player, can enter the pertinent information on their own screen and send it to the online database. To maintain the integrity of the information in its database, Gracenote enforces certain naming conventions and also gives priority to information submitted by its "content partners," typically record labels. To learn more about Gracenote content partners, please visit [www.gracenote.com/contentpartner](http://www.gracenote.com/contentpartner).

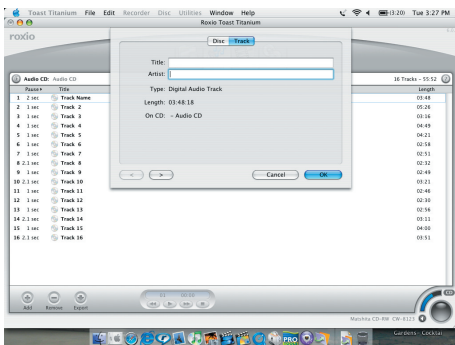
### How Does It Work?

Information regarding a specific CD is submitted through software compatible with Mac, Windows, and Linux operating systems. Alternatively, the same information can be entered via an online form accessed through a login and password provided by Gracenote upon request.

After the data-submission process is completed, the information is available to anyone who inserts the CD Audio on a computer CD-ROM drive. Software applications such as iTunes connect to the Gracenote database, and the CD's information appears on screen.

### Where Is It On My CD?

*CDDB information is not physically attached to CD.* It is linked to the CD: stored and accessed from Gracenote's proprietary database over the Internet. How does the correct information get retrieved? That's the proprietary part. Disc recognition appears to work by the statistical improbability of two CDs having tunes of exactly the same



length appearing in exactly the same sequence on a disc: the very first time a CD is inserted into a computer drive and the CDDDB database is accessed, the database reads the (generally) unique sequence of tunes and their lengths, and stores that unique sequence. (When the statistically improbable happens, the listener may see album and content information displayed that is unrelated to the CD in the drive.) For recognition of individual tracks, Gracenote has other software that generates a “fingerprint” of some portion of the content of the music file, and thereafter associates the information about the track with that fingerprint.

For more information on a complete list of software applications complying with the CDDDB service visit <http://www.gracenote.com/partners/software>

### Should I use CDDDB?

By all means. As the party with the most to gain or lose by the correct data being in the online database, be sure to upload your album information when you receive your discs from manufacturing. If you work with a record label, check to be sure the label takes responsibility for entering the information, preferably as a “content partner.”

### In Conclusion

Artists may feel that their CD project is complete when the CD is mastered and the artwork is approved. But that is no longer the case. With digital download sales, royalties for new media play, even royalties from the sale of blank CD-Rs, in addition to physical retail and online retail sales of CDs, it is imperative that artists use every means available to establish their connection to their recording, and to incorporate into their project all of the now-essential tools for selling their recordings.

### ACT!

Independent-oriented mastering labs (us!), manufacturers and retailers can provide access to the entire suite of information tools available to record labels. Get your ISRCs early and have them appended to your disc by your mastering lab. Be sure to use a bar code. When you get your discs back from manufacturing, be sure that accurate information is uploaded to the online databases.

Information for this report was compiled by Emiliano Ferragosto, Jason McDaniel, and Ann Blonston, with help from our friends at [OasisCD.com](http://OasisCD.com) and [CDBaby.net](http://CDBaby.net).

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We’d usually say, “for more information, contact us,” but this is all the information we have on these topics – and now you have it, too!

For mastering information, please contact us!

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