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POCKET GUIDE TO RECOGNISING PIRATE MUSIC PRODUCTS

INTRODUCTION

Piracy is the greatest threat facing the music industry today. IFPI and the international recording industry are responding proactively and aggressively to this US\$4.3 billion worldwide problem.

Piracy is sometimes and mistakenly called a "victimless crime". It is not. The economic losses due to piracy are enormous and are felt throughout the music value chain. The victims include the artists whose creativity gets no reward; governments who lose hundreds of millions of tax revenues; economies that are deprived of new investment; consumers who get less diversity and less choice; and record producers who are forced to reduce their artist rosters because it is impossible to compete against theft.

But crucially we depend on the support of governments and public authorities such as police, customs, prosecutors and the judiciary. This booklet is intended to assist those investigating piracy.

THE NATURE OF PIRACY

1. Criminal groups exploit the massive market for music recording by producing illegal/unauthorised copies of the work of popular artists. They have none of the music industry's costs for development, marketing, distribution support or artists' royalties. Huge profits can be earned from the illicit production of vinyl records, tape cassettes, CDs, CDRs, VCD and DVD, collectively termed 'music carriers'. It is important to be able to identify pirate and counterfeit product. Although expert and forensic science examination will provide legal proof, the investigator must be able to make an informed judgement on the spot. There are a number of key indicators and they are explained below. Firstly, however, it is appropriate to explain the terminology used about pirate product.

DIFFERENT TYPES OF PIRACY

The term piracy is generally used to describe the deliberate infringement of copyright on a commercial scale. In relation to the music industry it refers to unauthorised copying and, in this context, falls into 4 categories:

- **Simple piracy** is the unauthorised duplication of an original recording for commercial gain without the consent of the rights owner. The packaging of pirate copies is different from the original. Pirate copies are often compilations, such as the "greatest hits" of a specific artist, or a collection of a specific genre, such as dance tracks.

- **Bootlegs** - these are the unauthorised recordings of live or broadcast performances. They are duplicated and sold - often at a premium price - without the permission of the artist, composer or record company.

- **Counterfeits** are copied and packaged to resemble the original as closely as possible. The original producer's trademarks and logos are often reproduced in order to mislead the consumer into believing that they are buying a legitimate product.

- **Internet Piracy** - music being compressed, posted and transmitted globally via the internet without payment to those who invested in the creation.

VINYL

In recent years initially the tape cassette and subsequently the CD/CDR/VCD/DVD largely replaced the vinyl record. However, there is a thriving market for the vinyl product with reports of renewed retail growth in vinyl records. Vinyl record sales are never likely to return to their former popularity, a niche` market is surfacing in the retail sector to meet a customer based demand that seeks to collect distinguished and quality reproductions of past and current releases. Of course, recognizing the opportunity for illicit gains, unlicensed reproductions are being manufactured and distributed by criminal groups. The identification features - indicators that distinguish legal from illicit music - are common to other music carriers. Price, quality, poor artwork, inferior printing, cheap packaging (all referred to in detail later at 3.34 onwards) point to the likelihood that pirated or counterfeited goods are being offered, replacing the legitimate product on the market stall or within any retail outlet.



CASSETTE

Piracy is not restricted to any particular form of media and the cassette tape continues to be heavily pirated, particularly in Africa, Latin America, Middle East, and Southwest Asia. Many of the identifying features that distinguish legitimate CDs from pirate CDs, are considered equally relevant to illicit cassette production.



FOUR TYPES OF CD

The CD standards cover discs in four formats:

- I. CDs** are manufactured to contain pre-recorded music or data, which cannot be subsequently altered or deleted from the disc.
- II. CD-R** discs contain essentially no data at the time of manufacture, data being subsequently recorded onto the blank disc by a CD recorder device. Once finalised, data on the disc cannot be altered or erased. Hence CD-R is often referred to as WORM (Write Once Read Many).
- III. CD-R/W** discs, like CD-R, are manufactured blank with data being subsequently recorded to the disc using a CD recorder device. But CD-R/W discs are erasable and re-writable. R/W blank discs are more expensive than CD-R blanks, and do not play in the majority of

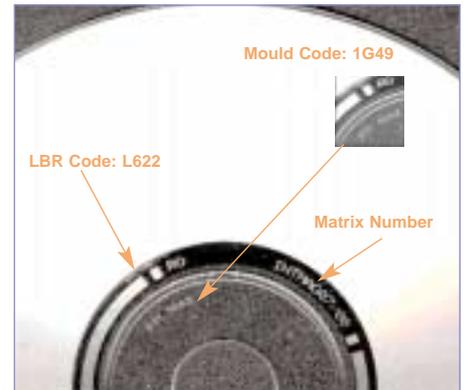
current CD players. Therefore CD-R/W discs are seldom used for music piracy.

IV. Video Compact Disc (VCD) - A CD-R or CD with video images and audio track combined. Often depicting a live performance, pop video performance or TV formatted video presentation (e.g. a recording of MTV or other popular music television channel). A VCD can be played on a VCD player or through software applications on a computer monitor. VCD players are common to the South East Asian region.

CD

The more frequently discovered `indicators` that give rise to the suspicion that the CD under examination is likely to be from illegal manufacture, distribution and retail are identified in the following graphic examples. The indicators can be discovered singly or as a combination and enable a reasonable determination to be made which may justify action on the part of Law Enforcement Agencies such as search, seizure or suspension from free circulation. In such cases further assistance is available from National Group representatives, who should be the first point of contact, or the IFPI Secretariat, Enforcement section in other instances. Details of contact names are shown in the contact section at the rear of this manual.

IFPI, in collaboration with Philips Consumer Electronics, developed the Source Identification Code - more commonly known as SID - to



enhance the security of CD manufacturing at both the mastering and replication stages. Since not all plants have both mastering and replication facilities, there are two codes: a Laser Beam Recorder (LBR) Code, which identifies the plant which manufactured the master; and a Mould Code, which identifies the plant where the disc was replicated. The advantage of this programme is that every disc carrying the SID Code can be traced back to the point of manufacture or replication. Instances have been reported where counterfeit SID codes were discovered. Investigators should be aware of this possibility.

CD-R

What is CD-R?

Storage Capacity

The CD-R is simply a storage medium, like a hard drive or floppy disk, upon which digital information can be stored. Two 'sizes' of CD-R blanks are available, having storage capacity of:

- 650MB or playing time of 74 mins
- 700MB or playing time of 80 mins

By way of comparison a floppy disk can only store 1.44MBs of information. CD-Rs can be used to store any type of digital information including music, software, games and audio-visual products. Non-standard CD-R blanks are being developed to store up to 1GB of data, however these are not yet in common use.

Cost

CD-R blank discs are available at very low cost. Typical spindle-packs containing 100 blank discs are available at retail for between \$15 and \$20. The unit cost of a blank disc is therefore less than 20 cents at retail. The unit cost of jewel-boxes bought in bulk is in the order of a few cents.

Label

CD-R blank discs are supplied either unprinted or printed with a blank background. Manufacturer and/or supplier brand information would typically be included on discs sold at retail in low-volumes for home use. High volume bulk packs, typically spindle-packs of 100, are often sold unprinted, and would typically have a label applied after data is burned to the disc. Labelling options include:

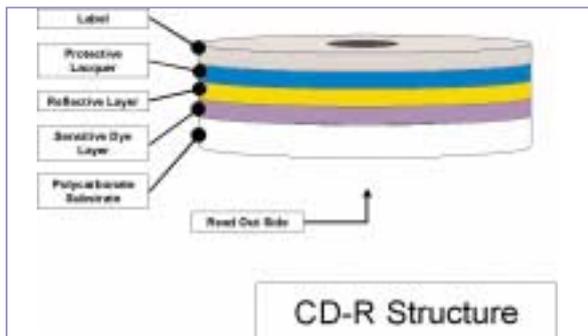
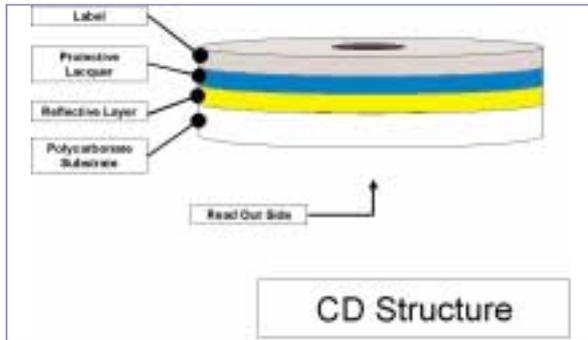
- Paper/plastic self-adhesive label (may be printed using a laser-printer etc. prior to being applied to the CD-R)
- Colour-printer. Special-purpose printers are available, based on bubble-jet or laser printer technology, but which print directly onto the CD-R.
- Screen-printing. CD-Rs may be screen-printed similar to a pressed CD.

Where good quality printing processes have been used to counterfeit original CD artwork, then to the untutored eye there may be little difference between the original CD containing music and the counterfeit version of the same music recorded onto a CD-R. However close examination reveals several noticeable differences that will enable investigators to readily distinguish between the two items.

Structure of a CD-R

Blank CD-R discs and industrial CDs are manufactured by a similar moulding process. The chief difference between a CD and a CD-R is that whereas a CD contains pre-recorded information in the form of a layer of 'pits' the CD-R contains a 'dye-layer' upon which pits can subsequently be 'burned' during the recording process.

The reflective layer of CD and CD-R is commonly coloured silver, although gold reflective material may be used in either format (more commonly with CD-R). The dye layer of CD-R is usually blue, green, or gold. Dyes that are completely translucent to the human eye have been developed, and if used in conjunction with a silver reflective layer, the resulting CD-R may be confused with a CD unless examined with care.



CD-R Recognition Features

There are a number of key recognition features by which CD-R can be distinguished from CD product:

Artwork

Often the CD-R pirate will work from small premises and will not have access to sophisticated printing processes. CD-R disks may be identified by means of an adhesive label. Generally the artwork is of poor quality and contains little information about either the artist or the producers of the music. (See examples below)



CD-R with adhesive label artist identified by photo



CD-R with poor quality print. No information.

Inner-Band Features

The matrix-band of a CD-R will typically be devoid of features, or may carry an alphanumeric code. The matrix-band cannot carry features such as a record-company logo or catalogue number.

LBR Code

CD-Rs do not bear LBR codes because they have not been subject to the mastering process of industrial CDs.

Mould Code

CD-Rs do not normally have Mould codes. However, in certain territories it is mandatory for mould codes to be applied to all moulds and hence CD-R moulds may be coded. CD-R discs manufactured in these moulds would then carry the code assigned to the CD-R manufacturer where the CD-R is pressed.

Dye Layer

As noted previously, all CD-R discs incorporate a dye layer, which is commonly a distinctive blue or green colour. Any disc with a blue or green colour visible on the reflective coating will be a CD-R. The gold dyes are a little more difficult to recognise, sometimes having a hazy appearance (from the readout side) somewhat similar to DVD discs. Clear dyes are not visible to the human eye.

Dot Codes

CD-R manufacturers usually apply printed 'dot codes' to the area between the stacker-ring and the centre hole. These codes carry product batch numbers and may encode the date of manufacture and details of the manufacturing line, which produced the disc. Manufacturers use these codes for quality-control purposes. The codes are distinctive, being applied and printed with black dots of ink. Such codes are not applied to CD product.



Example of numbering used by CD-R manufacturer

M and P codes

So-called blank CD-R discs are not entirely blank. In fact they carry hidden codes, which are accessible with special software tools used in conjunction with a CD-R drive in a computer. These codes typically identify where the CD-R was manufactured.

Visible Ring

As described in Chapter 4.19 the process of recording the information upon the CD-R involves burning pits into the dye-layer using a laser. This process leaves a visible image in the form of a concentric circle upon the readable surface of the disk. Although in certain cases pressed CD can contain visible circles on the disc, the appearance is usually quite distinctive of a burned CD-R, and may provide a useful indication.



Example of the visible ring

The presence of a visible ring on a CD-R indicates that the CD-R has received data. In the case of audio or audio/video content it then leads to a further enquiry as to whether the recording contained on the CD-R is legitimate. This is particularly important if an investigator is faced with the need to determine whether the CD-R is a blank, for example where a declaration has been made to Customs Authorities that a consignment is one of blank CD-R, whereas the suspicion is that each disk contains illicit recordings. It is not unknown for blank discs to be tactically placed at the top and bottom of a spindle of discs, masking other discs that contain pirated material.

Playability

CD-R, unlike CD-R/W, will play in the majority of CD players. However if recorded with MP3 songs or computer data, a computer drive may be needed to read the disk contents.

The music industry majors do not currently commercially manufacture, distribute or sell their products in CD-R format. Some small manufacturers producing national repertoire are known to produce music in CD-R format. The advent of high-speed CD-R burners able to produce many thousand disks per day may lead to changes in production

methods. Future technical developments may lead to 'legal kiosk' production of CD-R compilations, but these would be able to be recognised as such - in particular these would be produced 'on demand' for specific consumers and would not be shipped or sold in bulk.

CDRW - CD rewritable

A CDR/W enables re-writing of audio tracks by way of a CD-Writer.

The process of burning the information onto a virgin CD-R gives rise to a possibility of identifying the particular burner upon which it was made. Most CD-Writers have an identity number known as the Read Identity or 'RID' code. When the CD writer is used to burn a disk this code is also burnt onto the disk being used. The code is unique to each individual CD-R burner.

Investigation

The RID code would enable investigators searching premises in which a CD-R burner is located to positively link that burner with any product found.

MP3 Compilations

Often CD-Rs will be encountered which contain music in the MP3 format. This format signifies that the music has been digitally compressed using special software enabling it to be stored in very much reduced files, usually for transmission on the Internet. This compression facility enables a pirate producer to record many hours of music onto one CD-R. An MP3 compilation CD-R could carry over 150 tracks (equal to around 11 albums). Examples seen have included the complete works of a particular artist or band. To date no record label has released any authorised compilation of MP3 songs, either on CD or on CD-R.



Example of MP3 product each containing many hours of music.



VCD - Video Compact Discs

VCDs are commonly available in S.E Asian market places and combine audio and video productions. The audio content of the VCD is protected in exactly the same way as standard audio CDs. The source material for illegal replication can vary with often poor quality reproductions of pop videos, television pop programmes and recorded live performances. The inlay card often indicates that the disc content is a VCD - to distinguish it from a standard audio CD/CDR - but otherwise the artwork is similar (and frequently counterfeit). Playing a VCD requires a dedicated VCD player and these are not so common outside SE Asia. Playing a VCD on a computer monitor requires a software application that recognises the digital format of the VCD content - for example XingMPEG™layer, capable of playing a DAT file.



Frame capture: opening frame - note the spelling errors

Popular pirated VCD product of international repertoire



DVD

Becoming increasingly available to the consumer is the DVD format of music carrier. Manufacturing processes are similar to that of the CD (optical disc /injection moulding processes), enabling DVDs to be manufactured in hundreds of thousands, relatively cheaply. Obviously, the huge profit to be gained from illegal production of counterfeit and pirated copies, attracts the criminal element and organised crime. Furthermore, the capacity of a DVD accommodates not merely the illegal replication of an artists work on a number of albums - often found in CDR/MP3 format - but many if not all the albums of any number of artists. 50 hours of illicit music has been discovered on a single DVD and this figure is bound to grow.

DVD-R

In much the same way that CD-R burners allow the duplication of the CD-R so a DVD - Recordable and Re Writer is now becoming increasingly available as the price per unit falls. Technology will increasingly allow for the mass production of DVDs facilitating a similar local production capability recognised with the growth of CDR piracy.

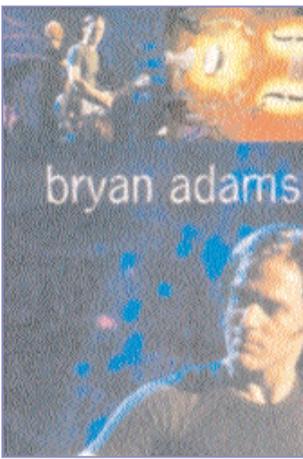
INSPECTING THE PRODUCT

The easiest ways to distinguish between genuine and pirate product are the circumstances of the discovery and by conducting a visual check. The circumstances themselves will often point to the products being illegal. One of the most obvious clues is the price of the product. Most of us will know the market price for recorded work in our area, and where it is sold. Pirated product is generally sold at well below market price from casual retail points.

This section will concentrate on the immediate visual checks to be undertaken. If possible obtain a genuine copy of the music carrier to compare against the pirate product. Most pirate copies are detectable by their external appearance.

The Music Industry is particularly conscious of, and concerned with, quality presentation of their product; criminals are not, they do as little as possible.

GENUINE PRODUCT (Example)

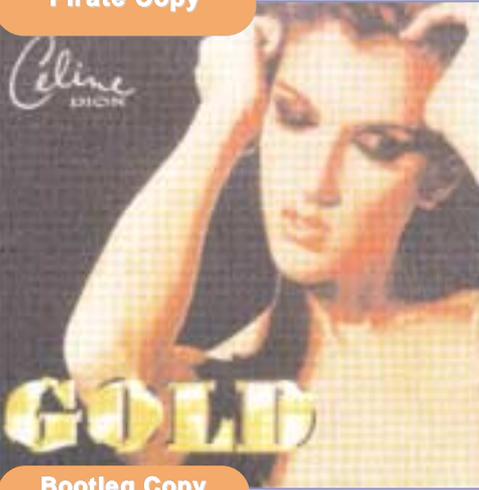


PIRATE PRODUCT (Example)



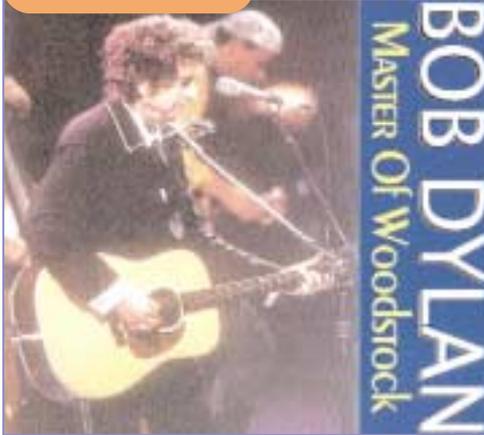
'50 albums (50 hours) of music'

Pirate Copy



Compilation disc of unauthorised duplicated music. Packing different from original.

Bootleg Copy

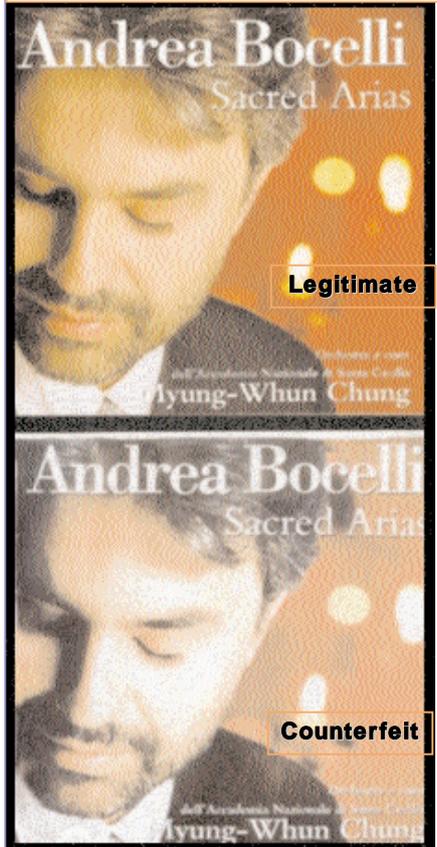


Unauthorised recording duplicated and sold without permission.

Counterfeit Copy

Examine the cover for the following:

Counterfeits are copied and packaged to resemble the original.



▼
The Sharpness of the Images

Contrast of the colours

Quality of paper

Photocopies on coloured paper

Printing only one side of the paper

Logo removed

No catalogue number

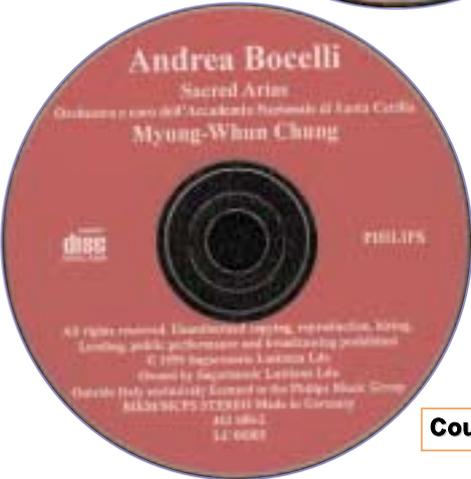
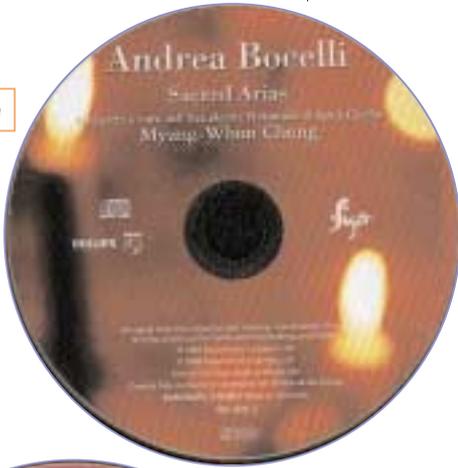
Trim or cut of insert

Famous artist unknown recording label

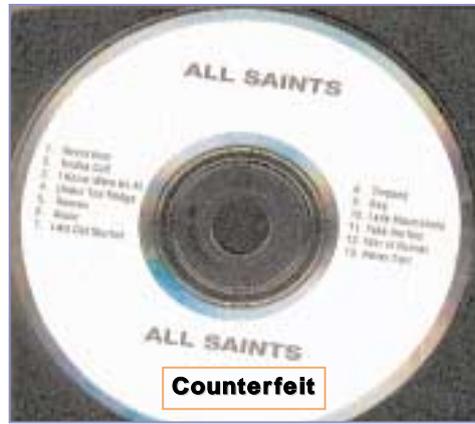
Frequently of high quality reproduction

Note also the differences on the actual discs. ▼

Legitimate



Counterfeit



Counterfeit

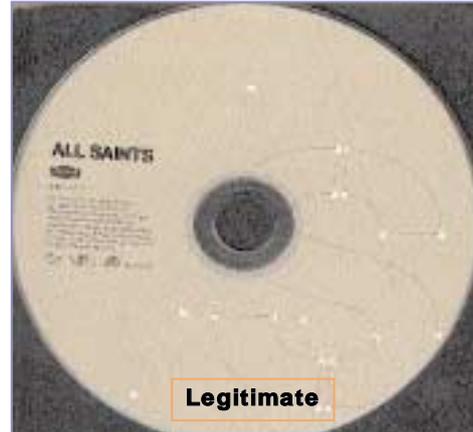
Pasted label (stick-on)

No artwork

No record company

No trademarks or logos

The quality of counterfeits varies greatly. Close comparison with a confirmed legitimate copy often assists in determining the counterfeit from the legitimate.



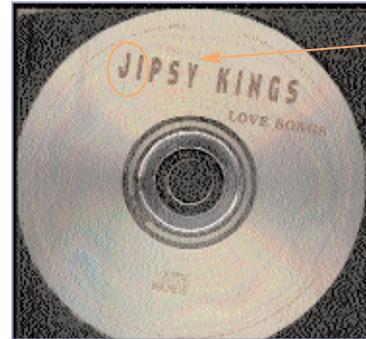
Legitimate

Quality printing

Fashionable artwork

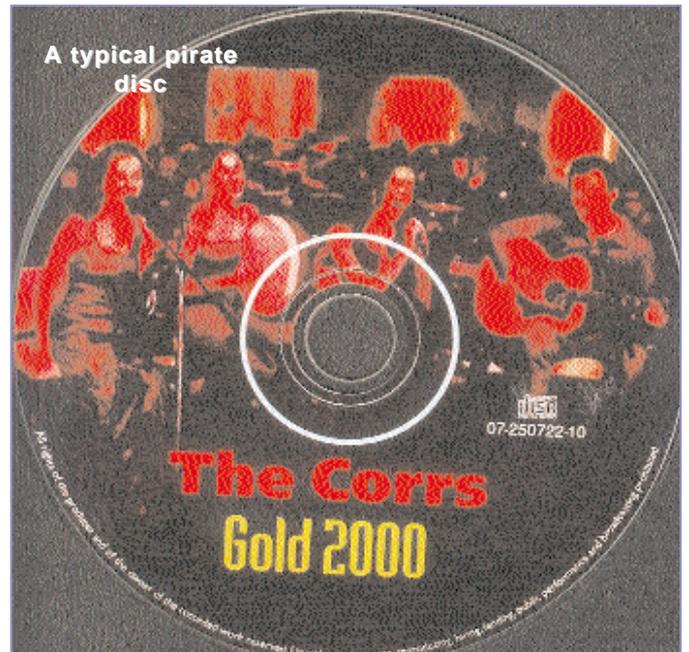
Record company indicated

Trademarks and logos shown clearly



Look out for Spelling errors

Counterfeit compilation



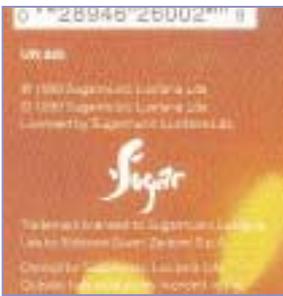
A typical pirate disc

Indicators that the disc is possibly illegal:

No record label, logo or trademark

No title or graphics on CD

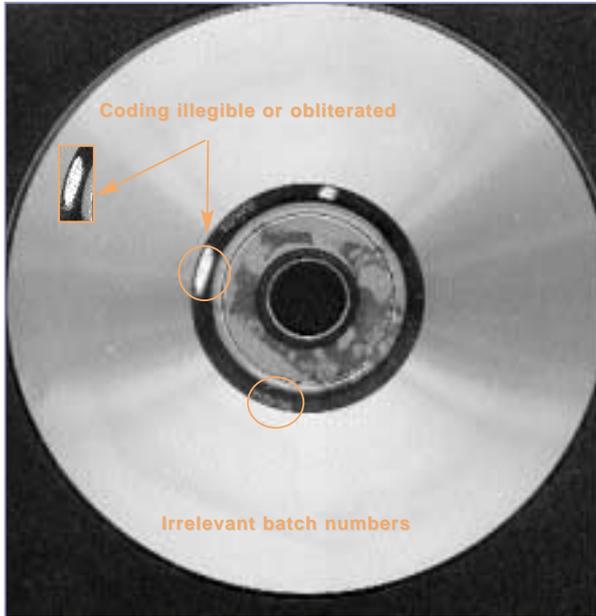
No SID Codes (see subsequent paragraph)



False or non-existent
and P notices

© Copyright - denotes ownership of copyright in the sound recordings at the specified date

P Publication - denotes date of publication of sound recordings



The overarching principle is LOOK OUT FOR POOR QUALITY