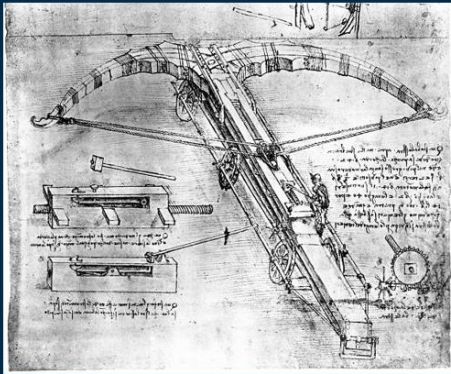


## Unit 1 User manuals and instructions

### a definition of technical communication:

Technical communication is a process of managing technical information in ways that allow people to take action. -- Richard Johnson-Sheehan

### Technical writing is an ancient craft/art... 技术写作是一门古老的技艺...



An illustration by Leonardo da Vinci  
达芬奇的手稿

捣珍：取牛羊麋鹿麇(jun1)之肉必  
胾，每物与牛若一捶，反侧之，去  
其肭，熟出之，去其骹(zhao1)，柔  
其肉。

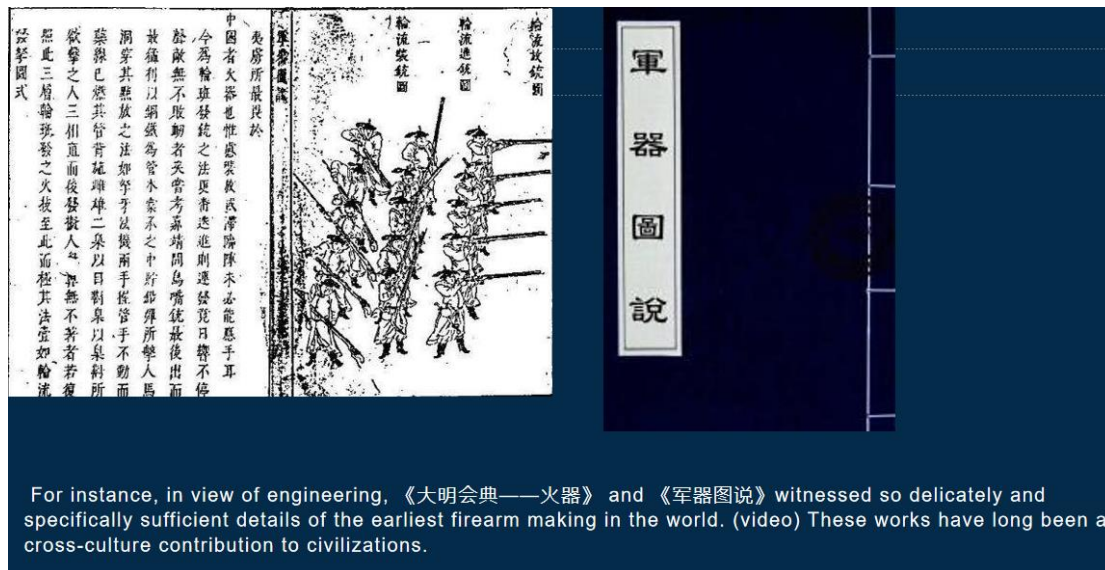
----《礼记·内则》

捣珍是八珍之五，其做法是：以牛肉、羊肉、  
麋肉、鹿肉、麇肉作原料，一定要取其嫩美的  
里脊部分，牛肉一份，羊肉、麋肉、鹿肉、  
麇肉也各取同样的一等份，将它们搅拌在一起，  
反复捶打，去掉筋腱，煮熟以后出锅，去掉肉  
膜，吃时再用醋和肉酱调味就行了。

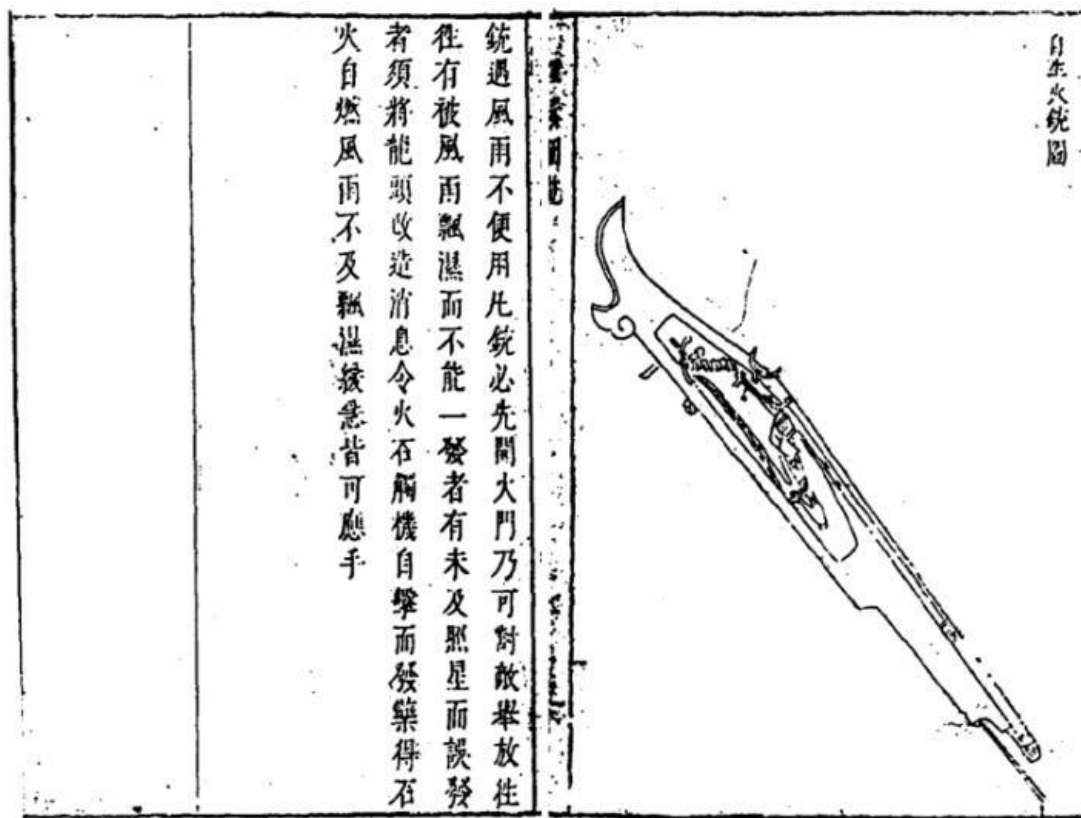
### A reflection on Chinese culture: a rich soil with profound TC tradition

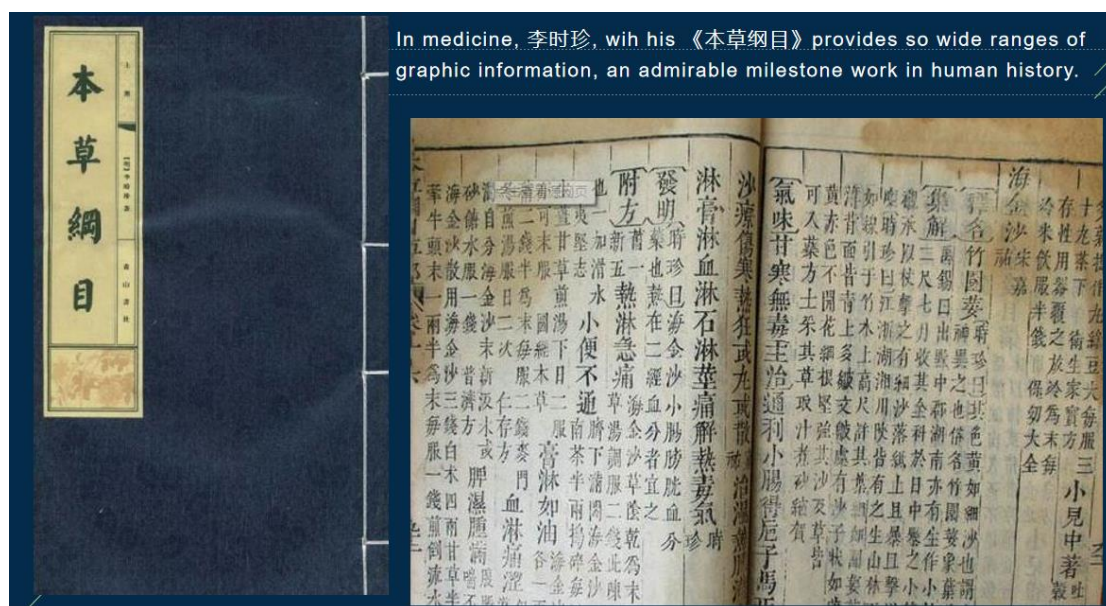
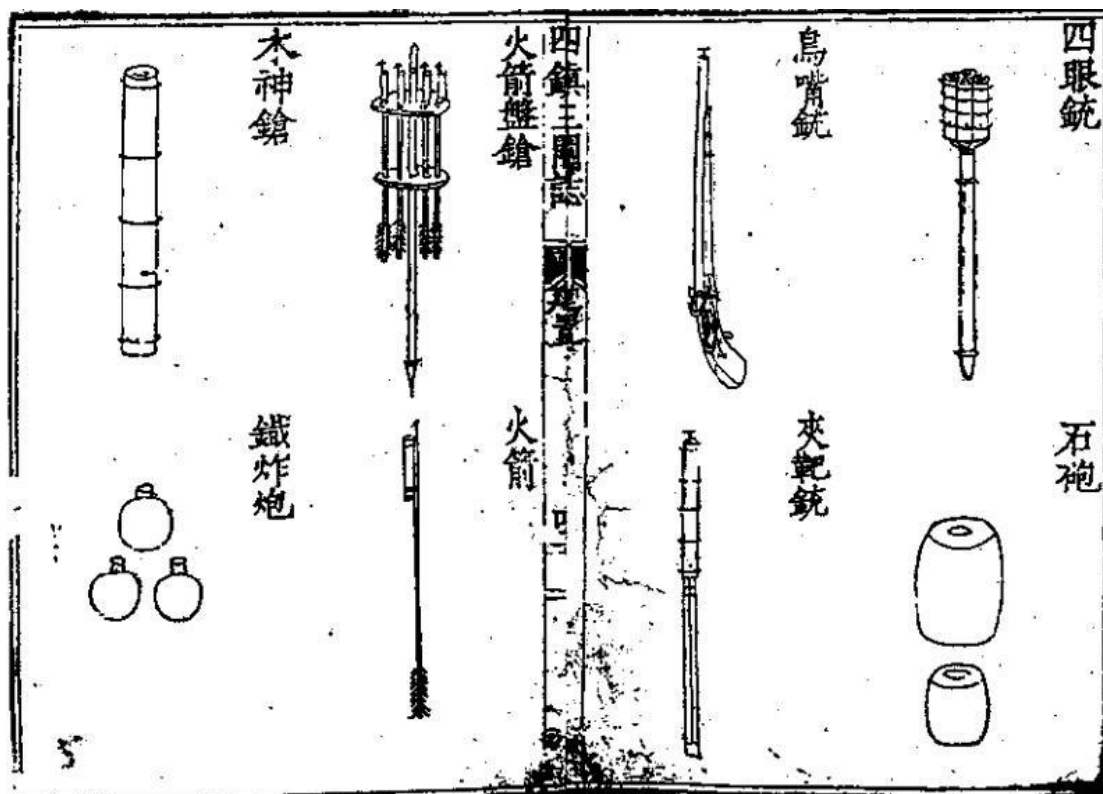
- China does have the corresponding tradition so that we can conveniently and readily accept the notions and practice of technical communication.
- We have abundant evidence and reasons to prove the existence of such long and profound history and tradition. Rich legacy of civilization offers us such pride.



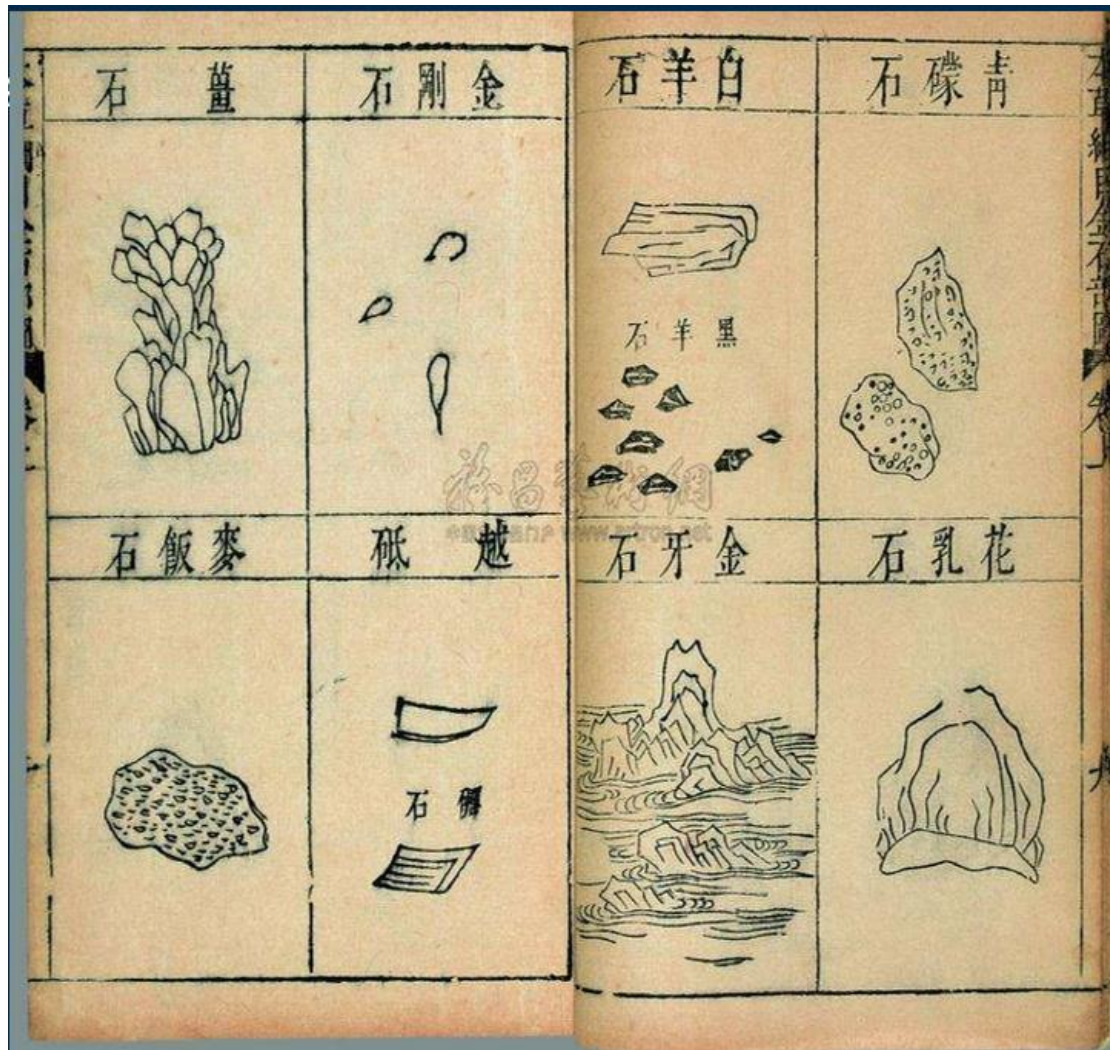


For instance, in view of engineering, 《大明會典——火器》 and 《軍器圖說》 witnessed so delicately and specifically sufficient details of the earliest firearm making in the world. (video) These works have long been a cross-culture contribution to civilizations.

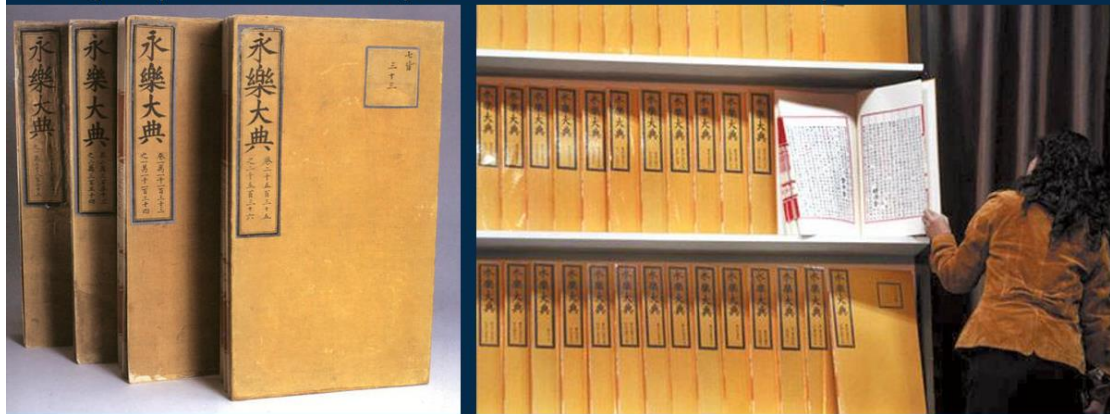








· What about 《永乐大典》? The incredibly composed encyclopeda. An incomparable database on this planet.



## Basic qualities of technical communication

\*\*\*Technical communication is:

- interactive and adaptable
- reader centered
- reliant on teamwork
- visual
- bound ethically, legally and politically
- international and transcultural

\*\*\*For the READER-CENTERED(user-centered/reader-focused) quality we need to know:

- Users don't read. 不咬文嚼字
- Users don't scroll. 无耐心
- Users are easily lost. 易误导
- Users are easily frustrated. 易疲劳
- Users are strangely persistent. 耽于习惯
- Users are different. 人各不同

策略提示： 什么是最好的说明（文案）？

The best instruction is no instruction (invisible & intuitive). 最好的说明，应符合实践规律（贯穿于无形与习惯）

要做的设计可称为：Intuitive design（符合用户直觉（习惯、需要、实际）的设计）

## Writing definitions: three types of definitions

定义术语的概念与作用

--A definition clarifies a description of a new development or a new technology in a technical field.  
e.g. A zoologist who has discovered a new animal species names and defines it.

--Definitions help specialists communicate with less knowledgeable readers.  
e.g. A manual explaining how to tune up a car includes definitions of parts and tools.



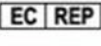







定义术语的写作要求

Please be aware that ...

- For long documents, create a glossary (a list of definitions). 列表
- Use simplified English and easily recognizable terms in definitions. 简明
- Pay close attention to key terms. 关键词
- Use graphics to help readers to understand a term of concept. 图示

定义术语列表如图

# SYMBOLS GLOSSARY

SYMBOL	SYMBOL TITLE	DESCRIPTION	STANDARD TITLE & DESIGNATION NUMBER	REFERENCE NUMBER
	Date of Manufacture	Indicates the date when the medical device was manufactured.	ISO & ANSI/AAMI/ISO 15223-1 Medical devices—Symbols to be used with medical device labels—General requirements.	5.1.3
	Manufacturer	Indicates the medical device manufacturer, as defined in EU Directives 90/385/EEC, 93/42/EEC and 98/79/EC.	ISO & ANSI/AAMI/ISO 15223-1 Medical devices—Symbols to be used with medical device labels—General requirements.	5.1.1
	Authorized representative in the European community	Indicates the Authorized Representative in the European Community.	ISO & ANSI/AAMI/ISO 15223-1 Medical devices—Symbols to be used with medical device labels—General requirements.	5.1.2
	Conformité Européenne (European Conformity)	CE Marking on a product is a manufacturer's declaration that the product complies with the essential requirements of the relevant European health, safety and environmental protection legislation.	Directive 93/68/EEC.	N/A
	Reorder Number	Indicates the manufacturer's catalogue number so that the medical device can be identified.	ISO & ANSI/AAMI/ISO 15223-1 Medical devices—Symbols to be used with medical device labels—General requirements.	5.1.6
	Serial Number	Indicates the manufacturer's serial number so that a specific medical device can be identified.	ISO & ANSI/AAMI/ISO 15223-1 Medical devices—Symbols to be used with medical device labels—General requirements.	5.1.7
	Batch Code	Indicates the manufacturer's batch code so that the batch or lot can be identified.	ISO & ANSI/AAMI/ISO 15223-1 Medical devices—Symbols to be used with medical device labels—General requirements.	5.1.5
	Refer to instruction manual/booklet	To signify that the instruction manual/booklet must be read.	ISO 7010—Graphical Symbols—Safety Colors and Safety Signs—Registered Safety Signs	ISO 7010-M002
	Consult instructions for Use	Indicates the need for the user to consult the instructions for use.	ISO & ANSI/AAMI/ISO 15223-1 Medical devices—Symbols to be used with medical device labels—General requirements.	5.4.3
	General mandatory action sign	To signify a mandatory action	ISO 7010—Graphical Symbols—Safety Colors and Safety Signs—Registered Safety Signs	ISO 7010-M001

## Simplified English (SE) 简明英语

Main characteristics :主要特点

--Simplified grammar and style rules 语法与文体

--A limited set of approved vocabulary with restricted meanings 用语规范、意义明确

--A thesaurus of frequently used terms and suggested alternatives 同义语规范

--Guidelines for adding new technical words to the approved vocabulary 产生新技术用语应遵循规律与规范

注：工程师做工作记录、文档记录时要遵循各个行业的 STE 要求，保证技术资料一致性、可用性。如

英语的技术传播规范之一：ASD Simplified Technical English (a writing standard for aerospace maintenance documentation.)

相关网址：

<http://www.asd-ste100.org/>

<http://www.boeing.com/company/key-orgs/licensing/simplified-english-checker.page>

(图示如下)

For example, SE requires writers to: 写作者的操作要点

--Use the active voice 主动态

--Use articles wherever possible 冠词

--Use simple verb tenses 动词时态的一般式

--Use language consistently 语言的一致性

--Avoid lengthy compound words 用词避免冗长复杂

--Use relatively short sentences 用短句。

对比示例:

Original Version

Before filling the gas tank, it is necessary to turn off the propane line to the refrigerator. Failure to do so significantly increases the risk of explosion.

Simplified English Version

Before you pump gasoline into the gas tank, turn off the propane line to the refrigerator. If you do not turn off the propane line, it could explode.

注意: 简明之要义在表意明确。如例, 改进后采用从句句式, 表达逻辑与步骤更为明晰; 运用第二人称表达, 文体浅近、亲和, 适合用户阅读。

而又可根据情况采用祈使句式, 如以下练习

Rewrite the following steps so that each begins with a verb in active voice and imperative mood.

--If you want to prevent colors from running, you need to separate dark clothes from light clothes.

--It is required that readers should read the passage and locate all nouns, which need to be underlined with a single line.

--The user should press the AUTO DEFROST button if he wants to begin the defrosting process.

Revision Key:

1. Separate dark clothes from light clothes to prevent colors from running.

2. Read the passage and locate all nouns; and then underline the nouns with a single line.

3. Press the AUTO DEFROST button to begin the defrosting process.)

三类定义术语 **THREE types of definitions**

第一类 **Parenthetical definitions** 附注型

( Not meant to be comprehensive.



A quick and convenient way of introducing terms.

)

The computers were infected by a Trojan horse (a destructive program that appears to be benign).  
Before the metal is plated, it is immersed in the pickle: an acid bath that removes scales and oxides from the surface.

## THREE types of definitions 1

### Parenthetical definitions

- The computers were infected by a *Trojan horse* (a destructive program that appears to be benign).
- Before the metal is plated, it is immersed in the pickle: an acid bath that removes scales and oxides from the surface.

Not meant to be comprehensive.  
A quick and convenient way of introducing terms.

## 第二类 Sentence definitions 整句型

(如图)

## THREE types of definitions 2

### Sentence definitions

ITEM	=	CATEGORY	+	DISTINGUISHING CHARACTERISTICS
Cripple ware	is	shareware		in which some features of the program are disabled until the user buys a license to use the program.
Hypnoanalysis	is	a psychoanalytical technique		in which hypnosis is used to elicit information from a patient's unconscious mind.

It usually includes a graphic.

## 第三类 Extended definitions 扩展型

A more detailed explanation of an object, process, or idea.

Usually one or more paragraphs.

(如图)



## THREE types of definitions 3

### An extended definition



#### What is GPS?

The Global Positioning System (GPS) is a U.S.-owned utility that provides users with positioning, navigation, and timing (PNT) services. This system consists of three segments: the space segment, the control segment, and the user segment. The U.S. Air Force develops, maintains, and operates the space and control segments.



#### Space Segment

The space segment consists of a nominal constellation of 24 operating satellites that transmit one-way signals that give the current GPS satellite position and time. [LEARN MORE](#)



#### Control Segment

The control segment consists of worldwide monitor and control stations that maintain the satellites in their proper orbits through occasional command maneuvers, and adjust the satellite clocks. It tracks the GPS satellites, uploads updated navigational data, and maintains health and status of the satellite constellation. [LEARN MORE](#)



#### User Segment

The user segment consists of the GPS receiver equipment, which receives the signals from the GPS satellites and uses the transmitted information to calculate the user's three-dimensional position and time. [LEARN HOW GPS IS USED](#)

A more detailed explanation of an object, process, or idea. Usually one or more paragraphs.

21

## Guidelines for writing descriptions

Technical communication often requires descriptions: verbal and visual representations of the physical or operational features of objects, mechanisms, and process.

mechanism and object descriptions

For mechanism and object descriptions 描述有“机制”与“物件”类，各应采用适当原则 Choose an appropriate organizational principle.

功能型 Functional: How the item works or is used.

空间型 Spatial: based on the physical structure of the item

(e.g. from top to bottom, inside to outside, east to west, and so on)

Use graphics. 图示的使用：照片、制图、分解图

突出外观印象如照片-- **Photographs** to show external surfaces

展示部件规格如机械制图--**Drawings** to emphasize particular items on the surface

解析内部结构及关联机制如分解图 **Cutaways** and **exploded diagrams** to show details beneath the surface.

(图示)

**Photograph** 如下

**TREK**

- BIKES
- ELECTRIC BIKES
- EQUIPMENT
- APPAREL
- CLEARANCE
- BIKE SHOPS

/ Bikes / Adventure & touring bikes / 520 Disc

## Overview

Features Tech specs Sizing & fit Reviews FAQs Buy

2020  
**520 Disc**

★★★★☆ 52 Reviews Write a Review

\$1,679.99 Model 24000

520 is a steel touring bike made for the open road. It's the longest-running model in our lineup, and it's built to carry you and your gear on your longest journeys. Rack and fender mounts, a wide range of gearing for climbing, and a stable touring geometry make it the perfect choice for loaded multi-day trips and comfortable all-day adventures.

Color / Diabolo Red

Size

Please select

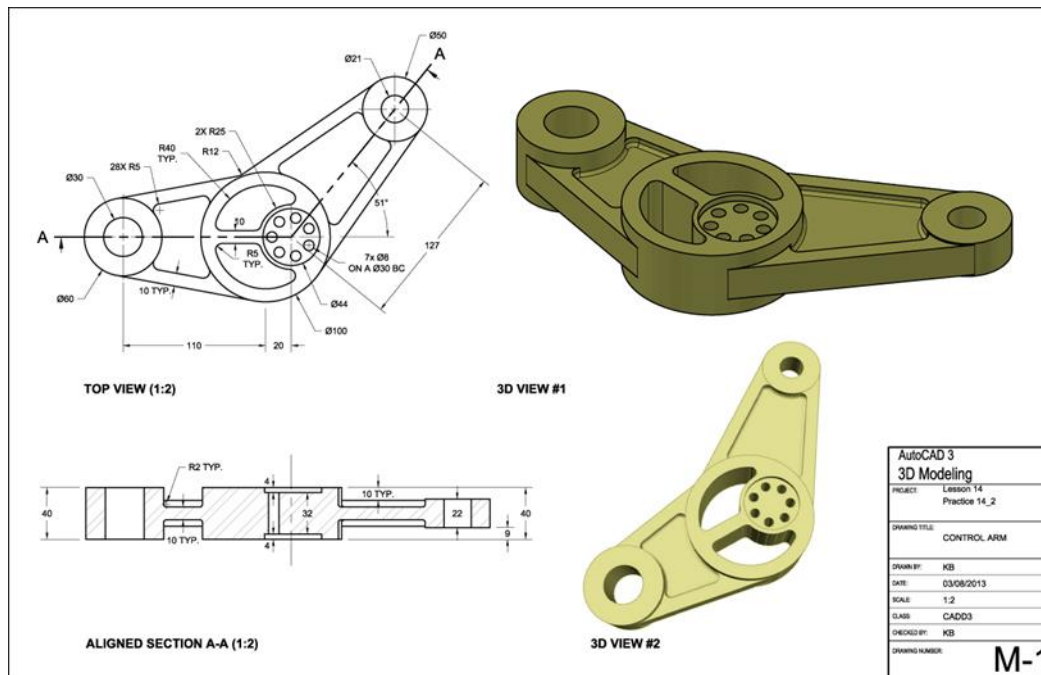
Quantity

- 1 +

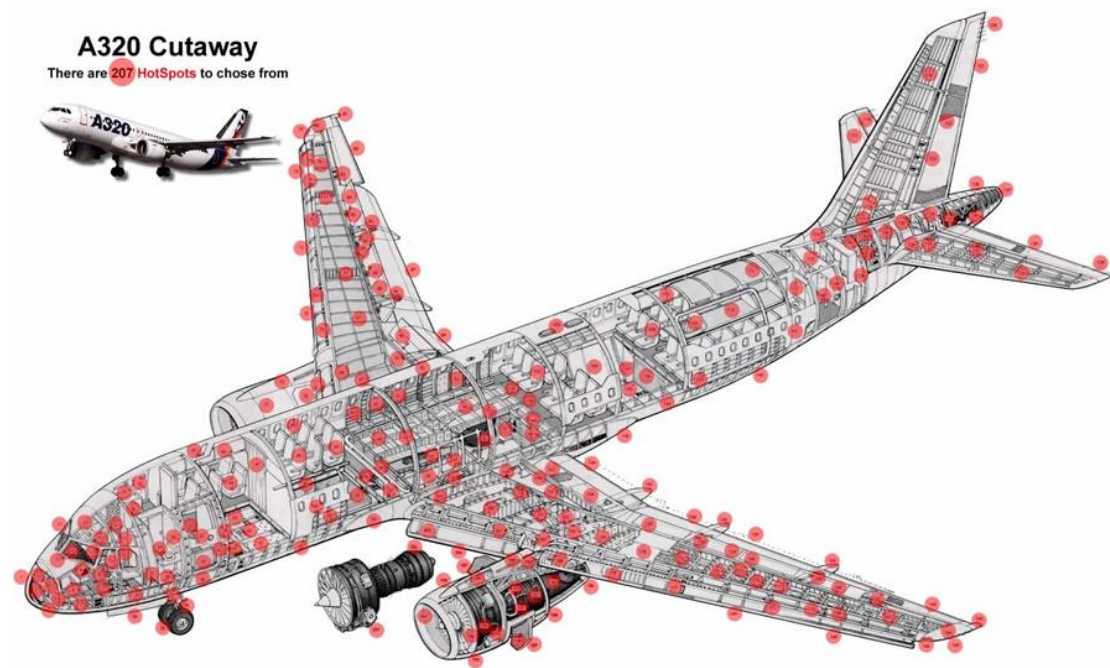
Add to cart

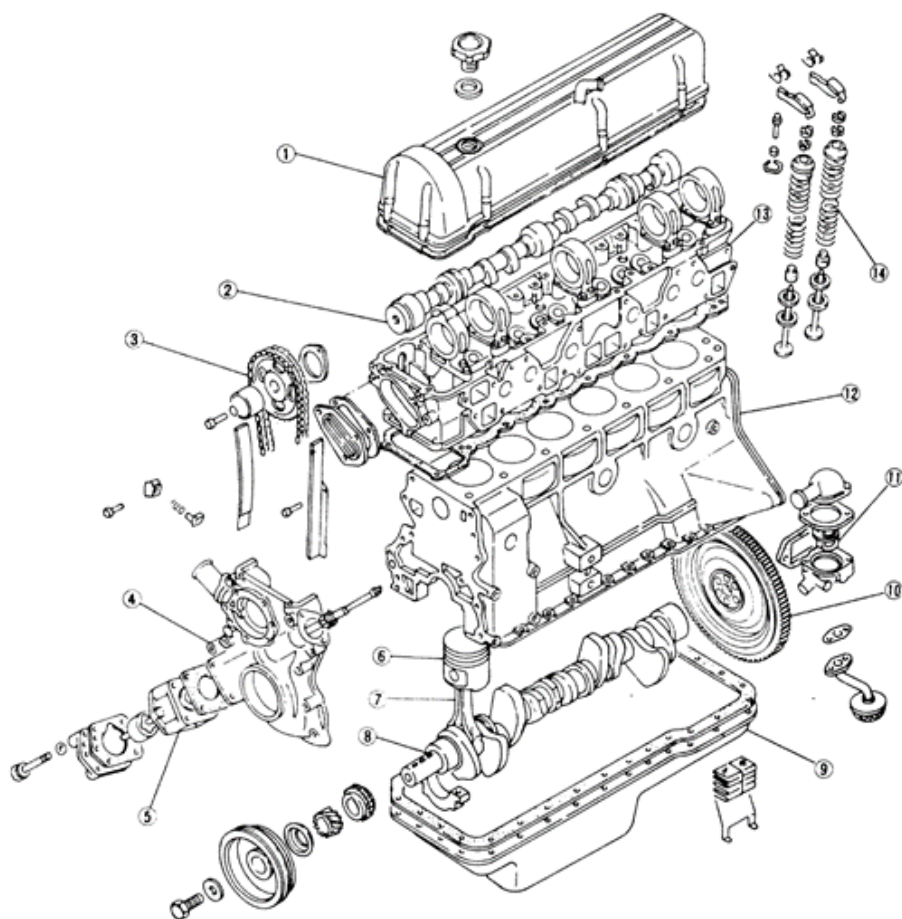
Find a retailer

## Drawing



Cutaway 或 exploded diagrams 如下





- |                 |                   |                     |
|-----------------|-------------------|---------------------|
| 1. Rocker cover | 6. Piston         | 11. Thermostat      |
| 2. Camshaft     | 7. Connecting rod | 12. Cylinder block  |
| 3. Timing gear  | 8. Crankshaft     | 13. Cylinder head   |
| 4. Front cover  | 9. Oil pan        | 14. Valve mechanism |
| 5. Oil pump     | 10. Flywheel      |                     |



### \*\*\*For process descriptions

(图示)

## Guidelines for writing descriptions 2

### For process descriptions

- Structure the step-by-step description chronologically.
- Explain causal relationships among steps.
  - Don't present the steps as if they had nothing to do with one another.
  - In many cases, one step causes another.
- Use the present tense.
- Use graphics.
  - e.g. flow chart



---

## Instructions

Definition:

Instructions are process descriptions written to help readers perform a specific task.

elements contained in instructions

a title

general introduction

step-by-step instructions

a conclusion

---

## Diagrammatic features

图示 1-3

## CHAPTER 1 GETTING STARTED

### Introduction

The DS4308 and DS4308P combine superior 1D and 2D omnidirectional bar code scanning and transfer with a light-weight, hands-free/hand-held design. The digital scanner's gooseneck Intellistand seamlessly accommodates both countertop and hand-held use. Whether in hands-free (presentation) or hand-held mode, the digital scanner ensures comfort and ease of use for extended periods of time.

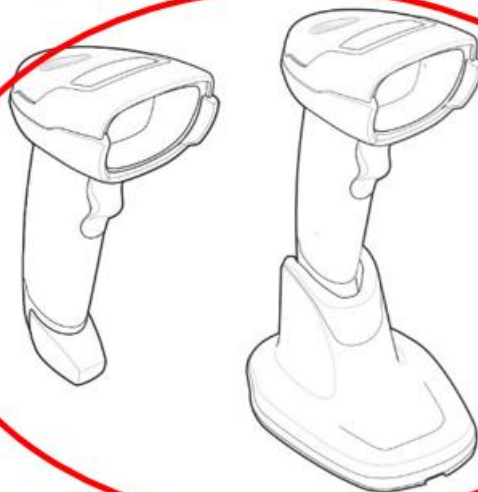


Figure 1-1 DS4308 and DS4308P Digital Scanner

## Interfaces

The DS4308 digital scanner supports:

- ~~USB connection to a host. The digital scanner~~ autodetects a USB host and defaults to the HID keyboard interface type. Select other USB interface types by scanning programming bar code menus. This interface supports the following international keyboards (for Windows® environment): North America, German, French, French Canadian, Spanish, Italian, Swedish, UK English, Portuguese-Brazilian, and Japanese.
- Standard RS-232 connection to a host. Scan bar code menus to set up communication of the digital scanner with the host.
- Connection to IBM 468X/469X hosts. Scan bar code menus to set up communication of the digital scanner with the IBM terminal.
- Keyboard Wedge connection to a host. The host interprets scanned data as keystrokes. Scan bar code menus to set up communication of the digital scanner with the host. This interface supports the following international keyboards (for Windows® environment): North America, German, French International, French Canadian, French Belgian, Spanish, Italian, Swedish, UK English, Brazilian-Portuguese and Japanese.
- Configuration via 123Scan<sup>2</sup>.

✓ **NOTE** For a list of supported scanner functionality by communication protocol, see [Appendix I, Communication Protocol Functionality](#).

## Unpacking

Remove the digital scanner from its packing and inspect it for damage. If the scanner was damaged in transit, contact support. ~~See page xx for information.~~ **KEEP THE PACKING.** It is the approved shipping container; use ~~it~~ to return the equipment for servicing.

## Setting Up the Digital Scanner

### Installing the Interface Cable

1. Insert the interface cable modular connector into the interface cable port on the rear of the digital scanner until you hear a click. For the DS4308P, tip the scanner forward in its base to best access the port. Low/medium/high beeps sound, indicating the scanner is operational.

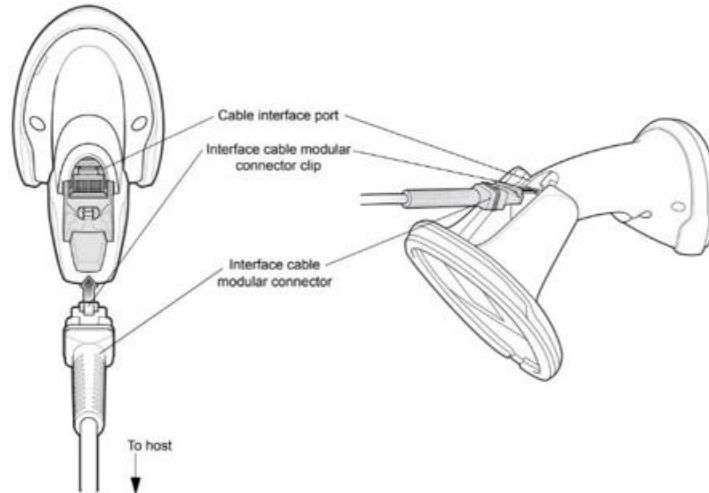


Figure 1-3 Installing the Cable - DS4308 and DS4308P



**IMPORTANT** Insert the cable into the cable interface port until a click sounds.

When connecting the DS4308 using a USB cable, a shielded connector cable is required (e.g., p/n CBA-U21-S01CAR). If upgrading an LS2208 or LS4208 to a DS4308, use the shielded connector cable.

2. Gently tug the cable to ensure the connector is secure.
3. Connect the other end of the interface cable to the host (see the specific host chapter for information on host connections).



**Removing the Interface Cable**

1. Press the cable's modular connector clip through the access slot in the digital scanner's base. For the DS4308P, tip the scanner forward in its base to best access the slot.

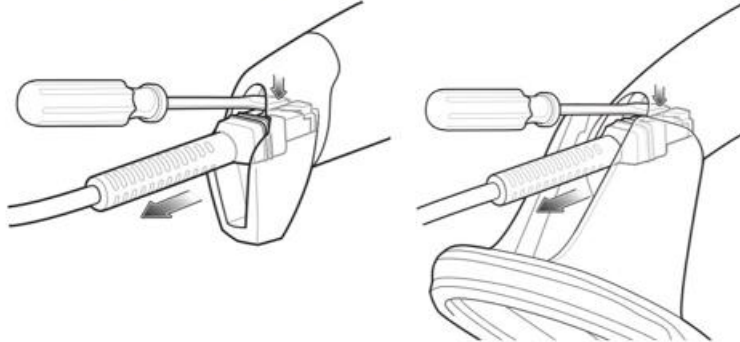


Figure 1-3 Removing the Cable - DS4308 and DS4308P

2. Carefully slide out the cable.
3. Follow the steps for [Installing the Interface Cable](#) to connect a new cable.

**Connecting Power (if required)**

If the host does not provide power to the digital scanner, connect an external power supply.

1. Plug the power supply into the power jack on the interface cable.
2. Plug the other end of the power supply into an AC outlet.

**Configuring the Digital Scanner**

To configure the digital scanner use the bar codes included in this manual, or use the 123Scan<sup>2</sup> configuration program. See [Chapter 4, User Preferences & Miscellaneous Options](#), and [Chapter 11, Symbolologies](#) for information about programming the digital scanner using bar code menus. See [Chapter 15, 123Scan and Software Tools](#) for information on using this configuration program. Also see each host-specific chapter to set up connection to a specific host type.

多媒体说明文案：图示配合视频

## Instructional graphics/video

- Video is particularly useful communicating about physical tasks that call for subtle physical movements or that involve both sight and sound.



## Ways to improve the appearance



Compared to the picture above the following plan for the assembly instructions is well designed, containing an appropriate amount of information (信息量适宜) presented in a simple two-column format (简明两栏格式). Notice the effective use of white space and the horizontal rules separating the steps (适当留白, 横线划分步骤, 效果鲜明).

**So, to achieve Clear and attractive designing we must**

信息空间疏阔、层次分明--Create an open, airy design

### 图示--Use graphics

**图文并茂--Relate graphics to text clearly**

## Assembly Instructions

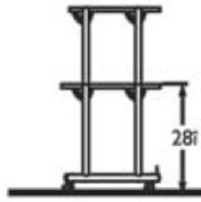
Questions? 1-800-325-3841

### Step 1

Before proceeding, please review the Assembly Instructions of all Anthro Products you purchased and are planning to include in this installation.

Determine the best height for your Space Palis Large Shelf. Generally, a 28" high work surface works well for most people and equipment.

These instructions will place your Large Shelf 28" from the floor.

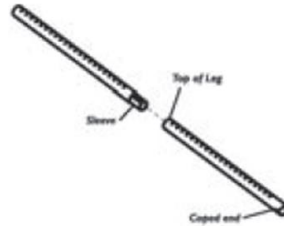


### Step 2

Rub the supplied Wax Stick over the Sleeve of each Extension Tube.

Next, Rotate the Extension Tube until the holes line up with those on the Leg then insert the Sleeve into the top of one of the Legs. Repeat for the remaining four Legs.

**NOTE:** It may be helpful to tap the Extension Tube into the Leg with the Rubber Mallet.

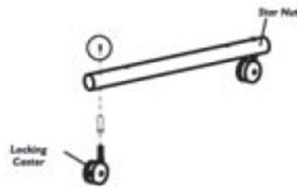


### Step 3

Install two Caster Inserts into each Base Tube and secure with one Caster Screw per Insert.

Insert the Casters, (locking ones in front) into the Caster Inserts.

**NOTE:** Make certain the Base Tube Star Nut is located to the rear as shown.



Anthro® Corporation Technology Furniture® 10450 SW Marhasset Drive Tualatin, Oregon 97062

## Linguistic features

### Drafting Titles

- A good title for instructions is simple and clear.  
Two forms are common:
- *How-to*. This is the simplest: "How to Install the J112 Shock Absorber."
- *Gerund*. The gerund form is the -ing form of the verb: "Installing the J112 Shock Absorber."

## ***Drafting Introductions for Instructions***

- The general introduction provides the preliminary information that readers will need to follow the instructions safely and easily.

*The drafting involves consideration on six aspects:*

- Personnel qualified or certified to perform the task.
- Rationale (reasons) for tasks, such as changing radiator antifreeze in a car.
- Time selection for tasks such as rotating tires or planting crops.
- Safety measures.
- Items of tools, material and equipment.
- The duration of the task.

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## ***Drafting Step-by-Step Instructions***

- The heart of a set of instructions is the step-by-step information.

*Tips for effective drafting:*

- Organize the steps chronologically, in the causal order
- Number your steps
- Use highlighting techniques
- Limit the information within each step
- Include graphics
- Use short words, short sentences and short paragraphs
- Begin your steps with verbs.

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## **Task: Revising overloaded steps in the instructions**

### **Overloaded Steps**

Start the engine and run it to idling speed while opening the radiator cap and inserting the measuring gauge until the red ball within the glass tube floats either to the acceptable green range or to the dangerous red line.

### **Revision plan**

1. Start the engine.
2. Run the engine to idling speed
3. Open the radiator cap.
4. Insert the measuring gauge.
5. Determine whether the red ball within the glass tube floats to the acceptable green range or up to the dangerous red line.

### **Drafting Conclusions**

- Instructions often conclude by stating that the reader has now completed the task or by describing what the reader should do next.
- Example:

*Now that you have replaced the glass and applied the glazing compound, let it sit for at least five days so that the glazing can cure. Then, prime and paint the window.*

## Drafting Conclusions

- Instructions often conclude by stating that the reader has now completed the task or by describing what the reader should do next.
- Example:

*Now that you have replaced the glass and applied the glazing compound, let it sit for at least five days so that the glazing can cure. Then, prime and paint the window.*

- Some conclusions end with maintenance tips or a troubleshooting guide.
- A troubleshooting guide, usually presented as a table, identifies common problems and explains how to solve them.

Problem	Cause	Correction
The mower does not start.	1. The mower is out of gas. 2. The gas is stale. 3. The spark plug wire is disconnected from the spark plug.	1. Fill the gas tank. 2. Drain the tank and refill it with fresh gas. 3. Connect the wire to the plug.
The mower loses power.	1. The grass is too high. 2. The air cleaner is dirty. 3. There is a buildup of grass, leaves, or trash in the underside of the mower housing.	1. Set the mower to a "higher cut" position. See page 10. 2. Replace the air cleaner. See page 11. 3. Disconnect the spark plug wire, attach it to the retainer post, and clean the underside of the mower housing. See page 8.

## Writing instructions

### Planning for safety




#### □ Purpose

- Respect users' rights of knowing
- Protect users' safety

#### □ Writing characteristics

- Clear and **concise**
- Prominent and easy to read
- containing a reasonable amount of repetition

note: Signal words are often used to indicate seriousness of the object/ the procedures.

SIGNAL WORD	EXPLANATION	EXAMPLE
<i>Danger</i> 	<i>Danger</i> is used to alert readers about an immediate and serious hazard that will likely be fatal. Writers often use all uppercase letters for danger statements.	DANGER: EXTREMELY HIGH VOLTAGE. STAND BACK.
<i>Warning</i> 	<i>Warning</i> is used to alert readers about the potential for serious injury or death or serious damage to equipment. Writers often use all uppercase letters for warning statements.	WARNING: TO PREVENT SERIOUS INJURY TO YOUR ARMS AND HANDS, YOU MUST MAKE SURE THE ARM RESTRAINTS ARE IN PLACE BEFORE OPERATING THIS MACHINE.
<i>Caution</i> 	<i>Caution</i> is used to alert readers about the potential for anything from moderate injury to serious equipment damage or destruction.	Caution: Do not use nonrechargeable batteries in this charging unit; they could damage the charging unit.
<i>Note</i>	<i>Note</i> is used for a tip or suggestion to help readers carry out a procedure successfully.	Note: Two kinds of washers are provided—regular washers and locking washers. Be sure to use the locking washers here.

## Effective User Manuals

- There is no absolute distinction between a set of instructions and a manual.
- Typically, the two share a main purpose: to explain how to carry out a task safely, effectively, and efficiently.
- The main difference between the two is that a manual has more elaborate *front matter* and *back matter*.

A set of instructions: 1~20 pages; for easier and simpler tasks, e.g. how to use a bar code scanner.

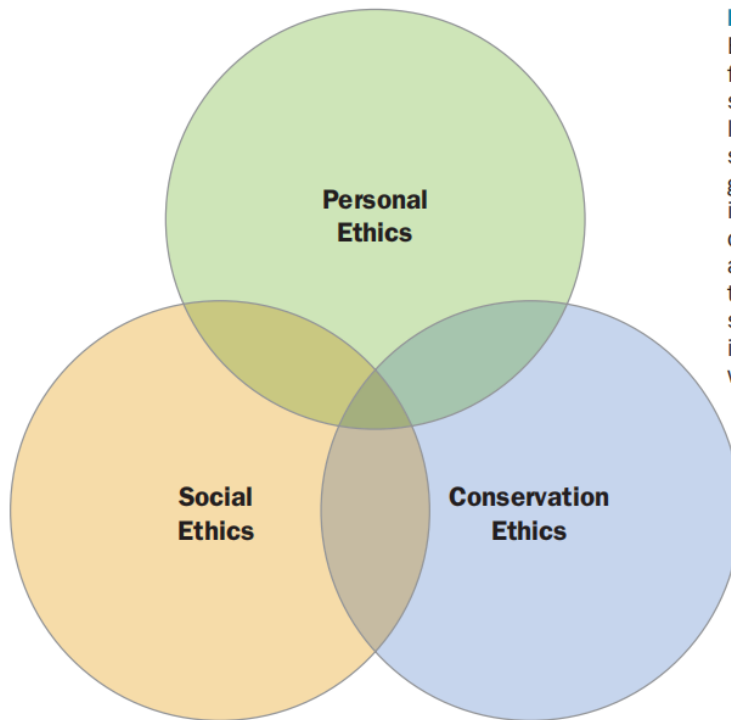
A manual: much longer and complex; for more complicated tasks or products, e.g., Airbus A380 Owners' Workshop Manual

## **Ethical Notes on Technical Communication:**

- What are ethics?
- Ethics are systems of moral, social, or cultural values that govern the conduct of an individual or community.
- Ethical dilemma—a choice among two or more unsatisfactory courses of action
- Personal ethics—Values derived from family, culture, and faith
- Social ethics—Values derived from constitutional, legal, utilitarian, and caring sources
- Conservation ethics—Values that protect and preserve the ecosystem in which we live

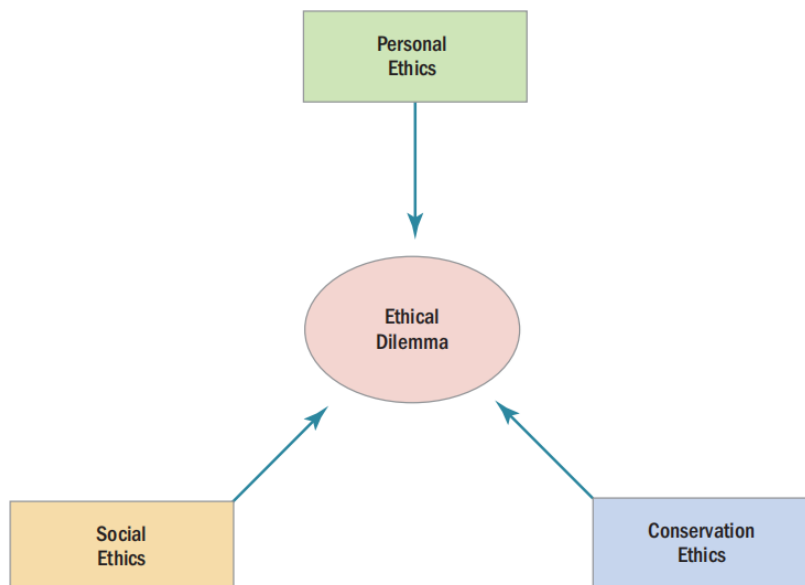


## Intertwined Ethical Systems



**Figure 4.2:** Ethics come from a variety of sources that overlap. Your personal sense of ethics guides the majority of your daily decisions. Social and conservation ethics play significant roles in the technical workplace.

## Balancing the Different Issues in an Ethical Dilemma



**Figure 4.4:** Resolving an ethical dilemma requires you to consider it from various ethical perspectives.