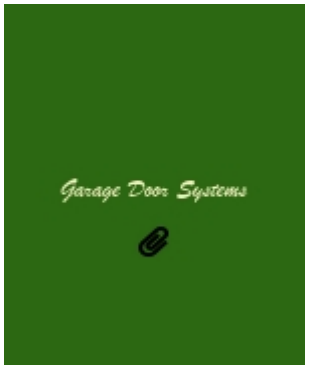


- Creating an Annual Garage Door Maintenance Calendar

  Creating an Annual Garage Door Maintenance Calendar Visual Inspection Points for Door Hardware Lubrication Guide for Rollers Hinges and Springs Testing Door Balance Without Removing Hardware Checking Safety Reverse Function for Compliance Tightening Hardware to Reduce Door Noise Cleaning Tracks for Smooth Door Travel Seasonal Adjustments for Garage Door Operation Logging Cycle Counts to Predict Part Replacement Evaluating Weather Seals During Routine Service Documenting Maintenance for Warranty Protection Preparing Your Garage Door for Winter Conditions

- Decoding UL 325 Requirements for Garage Door Systems

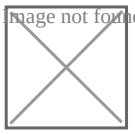
  Decoding UL 325 Requirements for Garage Door Systems Understanding ANSI DASMA Standards for Safe Operation Key Points of EN 13241 in Residential Door Installations Importance of Auto Reverse in Preventing Injuries Manual Release Functions Every Owner Should Know Sensor Alignment Procedures for Reliable Safety Conducting Monthly Safety Tests on Garage Doors Training Technicians on Lockout Tagout Procedures Compliance Checklist for Commercial Garage Door Projects Impact of New Regulations on Smart Door Upgrades Documenting Safety Inspections for Insurance Claims Educating Homeowners on Everyday Door Safety Practices

- About Us

Checking Safety Reverse Function for Compliance

In the realm of modern technology, ensuring safety and compliance is paramount. One critical aspect of this is the "Checking Safety Reverse Function for Compliance." This term encompasses a series of procedures and protocols designed to verify that systems, processes, or products adhere to established safety standards and regulatory requirements.

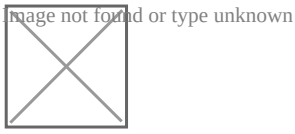
The concept of reverse engineering plays a significant role in this context. Reverse engineering involves taking apart a system or product to understand its workings, which can then be used to ensure it meets safety criteria. This process is essential in industries where safety is non-negotiable, such as aerospace, automotive, and healthcare.



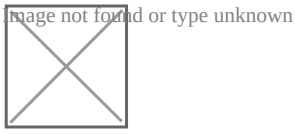
When checking the safety reverse function for compliance, several key steps are typically involved:

1.

Data Collection: The first step is gathering all relevant data about the system or product. This includes design specifications, manufacturing processes, user manuals, and any available documentation.



2. **Analysis**: Once the data is collected, it undergoes thorough analysis. This involves breaking down the system into its components and understanding how each part interacts with others.



3. **Simulation**: Advanced simulation tools are often used to model the systems behavior under various conditions. This helps identify potential failure points and assess their impact on overall safety.

4. **Testing**: Physical testing may also be conducted to validate the findings from the analysis and simulations. This could include stress tests, environmental tests, and usability tests.

5. **Compliance Verification**: Finally, all findings are compared against applicable regulations and standards. Any deviations are documented and addressed accordingly.

The importance of this process cannot be overstated. In industries where human life is at stake-such as medical devices or transportation-the consequences of non-compliance can be catastrophic. Therefore, rigorous checks ensure that products not only function as intended but also do so safely.

Moreover, reverse engineering for compliance extends beyond just physical systems; it also applies to software and digital systems. Ensuring that software code adheres to safety standards involves similar steps: code review, vulnerability assessment, and compliance checks against industry-specific guidelines.

In conclusion, checking the safety reverse function for compliance is a meticulous process that combines technical expertise with regulatory knowledge. It ensures that systems meet stringent safety standards, thereby protecting users and stakeholders alike from potential hazards. As technology continues to evolve rapidly we must remain vigilant in our efforts to maintain high levels of safety through continuous monitoring .

Testing Door Balance Without Removing Hardware

About Garage (residential)

"Garage (house)" redirects here. For the music style, see Garage house.

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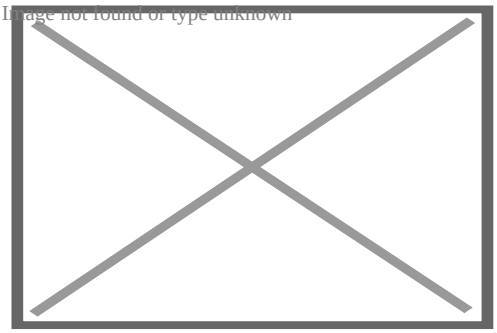

The Hermitage garage by Nicholas II in The State Hermitage, Saint Petersburg, Russia

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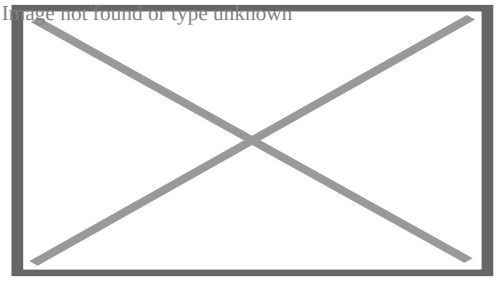

Garage - in the style of the new objectivity - Frankfurt am Main

A 1901 newspaper article discussing a name for a private collection of automobiles

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A 1901 newspaper article discussing a name for a private collection of automobiles, which mentions the word "garage" as being a possible choice except that that word was already in use in the broader sense of a place to store and repair them. Today the word *garage* has both senses; for example, *Jay Leno's Garage* is a series about his collection and other interesting collections, not merely the buildings that contain them.

A residential **garage** (UK: /ËˆÉ¡ærÉ‘ËÎ’, -rÉ‘ËÐÊ’, -rÉªdÊ’/ *GARR-ahzh*, *-â• ahj*, *-â•,ij*

US: /É¡É™ËˆrÉ‘ËÎ’, -rÉ‘ËÐÊ’/ *gÉ™-RAHZH*, *-â•RAHJ*) is a walled, roofed structure with a door for storing a vehicle or vehicles that may be part of or attached to a home ("attached garage"), or

a separate outbuilding or shed ("detached garage"). Residential garages typically have space for one or two cars, although three-car garages are used. When a garage is attached to a house, the garage typically has an entry door into the house, called the *person door* or *man door*, in contrast with the wider and taller door for vehicles, called the garage door, which can be opened to permit the entry and exit of a vehicle and then closed to secure the vehicle. A garage protects a vehicle from precipitation, and, if it is equipped with a locking garage door, it also protects the vehicle(s) from theft and vandalism. Most garages also serve multifunction duty as workshops for a variety of projects, including painting, woodworking, and assembly. Garages also may be used for other purposes as well, such as storage or entertainment.

Some garages have an electrical mechanism to automatically open or close the garage door when the homeowner presses a button on a small remote control, along with a detector that stops the movement of the garage if something is in the way of closing. Some garages have enough space, even with cars inside, for the storage of items such as bicycles or a lawnmower; in some cases, there may even be enough space for a workshop or a man cave. Garages that are attached to a house may be built with the same external materials and roofing as the house. Garages that are not connected to the home may use a different style of construction from the house. Often in the Southern and rural United States garages not attached to the home and made from a timber frame with sheet metal coverings are known as "pole barns", but usually serve the same purpose as what is called a garage elsewhere. In some places, the term is used synonymously with "carport", though that term normally describes a structure that, while roofed, is not completely enclosed. A carport protects the vehicle to some degree from inclement weather, but it does not protect the vehicle from theft or vandalism.

The word *garage*, introduced to English in 1902, originates from the French word *garer*, meaning shelter.[1] By 1908 the architect Charles Harrison Townsend was commenting in *The Builder* magazine that "for the home of the car, we very largely use the French word 'garage', alternatively with what I think the more desirable English equivalent of 'motor house'".[2] Today the word is polysemic because it can refer to a collection of vehicles as well as the building that contains them.

Residential garage insulation

[edit]

In northern climates, temperatures inside an uninsulated attached residential garage can decrease to freezing levels during the winter. Temperatures inside an uninsulated attached garage in temperate climates can reach uncomfortable levels during summer months. Extreme temperatures can be a source of energy waste and discomfort in adjoining living areas, due to heat transfer between the garage and those areas. Homes with an attached garage often experience this "interface" problem. Insulating the outside of the building against the elements without extending the insulation to the wall separating the garage from the house, and/or the other garage walls and roof, can be a costly mistake.[3]

In Australia

[edit]

Australian homes typically have a two, one and a half or double car garage, with some newer houses having a triple garage, with one double door and one single door. Prior to the 1970s most of them were detached from the house, usually set further back with the driveway leading up past the side of the house, common with old fibreboard houses, but not uncommon with earlier brick houses. The most common doors on these garages were either two wooden barn style doors with a standard sized access door on the side of the garage or the B&D Rolla Door, which is described below.

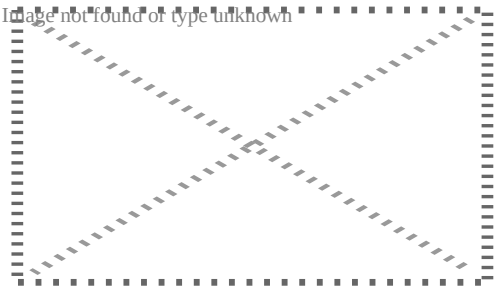
The most common garage door to date in Australia is the B&D Rolla Door, having been around since 1956 and still in heavy use today. They are a corrugated flexible but strong sheet steel door, sliding up tracks and rolling around a drum mounted above the door opening on the inside of the garage. These come in manual and remote controlled electric (known as the Control-a-Door), with conversion kits available. Locking is provided by a key lock in the centre of the door moving two square sliding lock bars in and out of holes in the door tracks, locking and unlocking it, or by the solenoid lock in the automatic motor.

Newer homes feature more American styled tilting panel lift doors which slide up onto a track on the ceiling via a motor and chain drive. Since the late 1970s most if not all garages are attached, and throughout the 80's it became more common to have an access door into the home from the garage where design permitted, whereas it is commonplace now. Most older unit (apartment) blocks in Australia have garages on the ground floor accessible through a common hallway and access doors, all leading into a common driveway. Newer ones now have underground parking.

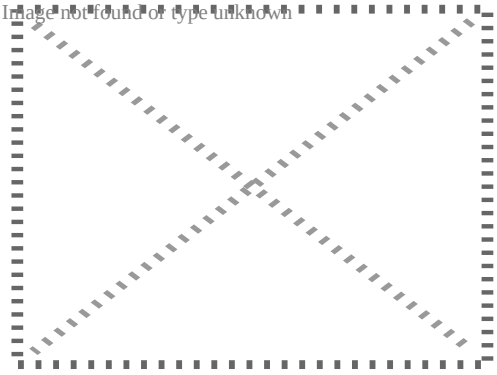
Australia has strict guidelines in place when building a home and the garage size must conform to the Australian Standards. The minimum size for a single garage is 3.0 m × 5.4 m (9.8 ft × 17.7 ft) and a double is 5.4 m × 5.4 m (17.7 ft × 17.7 ft). However, to comfortably fit two cars in a double garage it is typical to have a size of 6.0 m × 6.0 m (19.7 ft × 19.7 ft).[4]

In the United Kingdom

[edit]



Up-and-over garage door



Insulation of sectional garage door

British homes featuring a garage typically have a single or double garage either built into the main building, detached within the grounds (often in the back garden), or in a communal area.

Traditionally, garage doors were wooden, opening either as two leaves or sliding horizontally. Newer garages are fitted with metal up-and-over doors. Increasingly, in new homes, such doors are electrically operated.

Typically, a small British single garage is 8 by 16 feet (2.4 m × 4.9 m), a medium single garage is 9 by 18 feet (2.7 m × 5.5 m), and a large single garage is 10 by 20 feet (3.0 m × 6.1 m). Family sedans have become bigger than they were in the past, so the larger size has become a preferred option. A typical large family car like the Ford Mondeo is about 15 by 6 feet (4.6 m × 1.8 m), meaning that even with the larger size garage, it is necessary to park to one side to be able to open the driver's door wide enough to enter or exit the vehicle.

In the early days of the motor car, a garage played an important role in protecting the vehicle from the weather (particularly so as to reduce rust). It was also the case that early motor cars started more easily when they were warm,[5] so that keeping them in a garage rather than outside made it easier to get the engine going in the morning. Modern motor cars, however, are very well protected against rust, and modern engines start with no difficulty even in very cold conditions.

Early history

[edit]

The common term for these structures in the first decades of the 20th century was motor house. Many garages from before 1914 were pre-fabricated, typically by companies such as Norwich manufacturer Boulton & Paul Ltd. The style was usually in keeping with that of the house and its locale, however, they were mainly of timber construction and few have survived.[6]

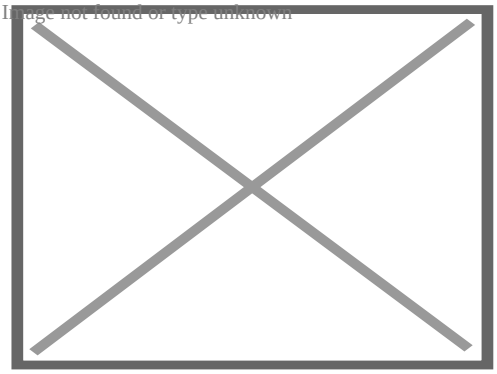
E. Keynes Purchase, "honorary architect" to what was to become the Royal Automobile Club, did a lot of work on them and recommended in *The Car Illustrated* in 1902, that they be of brick construction with cement floor, an inspection pit, good electric lighting and a pulley system for removing parts of the car (in the early days of motoring many car owners were mechanical and engineering enthusiasts).[7]

The architecture of garages was ignored in the architectural journals despite famous architects such as Edwin Lutyens, Richard Barry Parker and Edgar Wood all designing garages for their wealthy clients. Charles Harrison Townsend was one of the few architects who put pen to paper (in *The Builder* in 1908) on the subject and recommended that the walls be glazed brick for ease of washing, air gratings to be low (petrol fumes are heavier than air), and drains half open to avoid build-up of gases.[8]

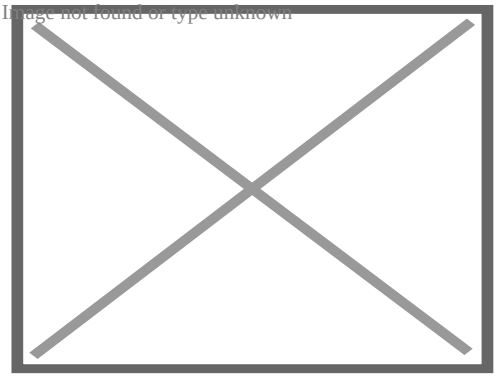
By 1910 corrugated iron and asbestos were being used instead of wood and garages became less imposing. From 1912 speculatively built houses in London were being built with motor houses.[9]

In North America

[edit]



Mobile homes with detached single car garages



Circa 1955 detached residential garage seen in Toledo, Ohio

Many garage doors open upward using an electric chain drive, which can often be automatically controlled from inside the resident's vehicle with a small radio transmitter.[10]

Garages are connected to the nearest road with a driveway. Interior space for one or two cars is normal, and garages built after 1950 usually have a door that connects the garage directly to the interior of the house (an "attached garage"). Earlier garages were often detached and located in the back yard of the house, accessed either via a long driveway or from an alley.

In the past, garages were often separate buildings from the house ("detached garage"). On occasion, a garage would be built with an apartment above it, which could be rented out. As automobiles became more popular, the concept of attaching the garage directly to the home grew into a common practice. While a person with a separate garage must walk outdoors in every type of weather, a person with an attached garage has a much shorter walk inside a building.

Around the start of the 21st century, companies began offering "portable garages" in the United States. Typically, these garages are made of metal, wood or vinyl and do not connect to the house or other structure, much like the garage built before 1950. This portable garages usually have a strongly reinforced floor to hold a heavy vehicle. Garages are also produced as composite fabric garages with metal frames that are lightweight and portable garage compared to traditional brick-and-mortar or metal garage structures.[11]

Over the past fifteen years, the portable garage has further evolved into a modular garage or a partially prefabricated structure. The modular garage comes from a factory that assembles the garage in two sections and combines the two sections on location. Partially prefabricated garages are often larger and might even include an attic space or a second floor. Sections of the garage are preassembled and then setup on site over a few days time.[12] The Amish have become popular builders of portable, modular and partially prefabricated garages.

Common Garage Sizes in the United States

[edit]

Garage sizes in the United States vary depending on the number of vehicles they are designed to accommodate. While dimensions can differ based on specific needs and local building codes, typical sizes are as follows:

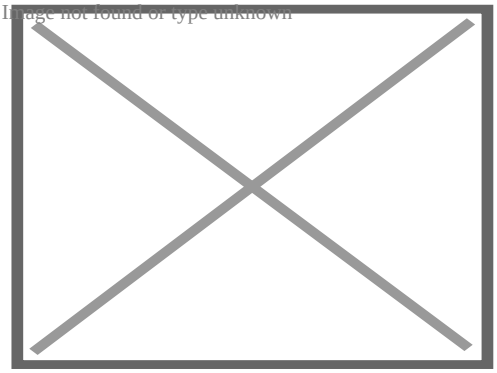
- One-car garage: Usually 12 to 18 feet wide and 20 to 30 feet deep, with a total area of 240 to 540 square feet.
- Two-car garage: Commonly 20 to 24 feet wide, maintaining the same depth, and covering 360 to 660 square feet.
- Three-car garage: Typically 30 to 36 feet wide, providing 600 to 1,260 square feet of space.
- Four-car garage: The largest standard size, ranging from 40 to 48 feet wide, with a total area of 800 to 1,600 square feet.

These dimensions offer enough space not only for vehicles but also for storage and accessibility. Garage sizes may vary depending on design preferences, vehicle types, and additional space requirements.[13]

Post frame garages

[edit]

See also: Barndominium



Post frame garage attached to traditional frame house

Often in more rural settings, detached post-frame garages are used to store farm and workshop equipment and can either be cold storage[14] or insulated for warm storage.[15][16]

Notable garages

[edit]

The first planned private garages appeared long before 1900. Early examples of planned public garages appeared at the same time. The first recorded public parking garage in the US (*Electric Vehicle Company Garage*,[17] Chicago) was built in 1898, in the UK (*Christal Palace Garage*,[18] London) in 1900 and in Germany (*Großgarage der Automüller G.m.b.H.*,[19] Berlin-Wilmersdorf) in 1901.

Possibly the oldest existing garage in the United Kingdom is in Southport Lancashire. It was the first motor house or garage to be depicted in an English motoring journal and was in The Autocar of 7 October 1899. It was owned by Dr W.W. Barratt, a local doctor and motoring pioneer and specially designed for his house at 29 Park Crescent Hesketh Park. A two-storey building that matched the style of the house; the ground floor garage having a concrete floor, heating, electric lighting, an engine pit and was fully equipped. The motor house is now in residential use.[20]

One of the oldest surviving private garages in Germany today is the 1903 finished *Automobil-Remise* (automobile carriage house) of Villa Esche by Henry van de Velde in Chemnitz. Carl Benz, the inventor of the automobile, had a tower built for himself in 1910, on the first floor a room for studying, on the ground floor car parking space. It still exists in Ladenburg, Germany.

Gallery of notable garages

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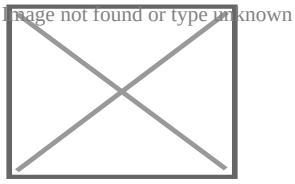
- 

1919

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1919
1938

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1938
Garage of HÃ´tel Brion (1904)

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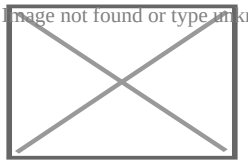
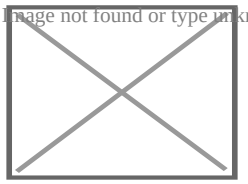
Garage of Hôtel
Brion (1904)

- Image not found or type unknown 

- Image not found or type unknown 

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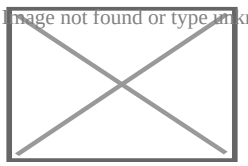

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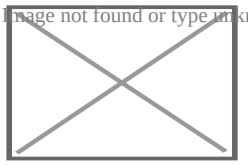

Garages in Nizhny Novgorod

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Garages in Nizhny Novgorod
Old garages in Mannheim

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Old garages in Mannheim

Carhouses

[edit]

Garages in the United States and Canada used to store streetcars and buses are often referred to as carhouses or car barns. These storage facilities are either metal or brick structures used to store streetcars or buses away from the elements. In Britain they are referred to as bus depots or depots.

See also

[edit]

- Carport
- Carriage house
- Parking
- Proof-of-parking

References

[edit]

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2. **^** Minnis 2010, p. 74.
3. **^** "How to make your home energy efficient"; Howstuffworks.com
4. **^** *Berenice O. (17 August 2018). "Single & Double Garage Size (How Much Do You Need?)". BuildSearch. Retrieved 2018-12-13.*
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6. **^** Minnis 2010, pp. 77–78.
7. **^** Minnis 2010, p. 80.
8. **^** Minnis 2010, pp. 81–83.
9. **^** Minnis 2010, p. 86.
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20. **^** Minnis 2010, pp. 75–76.

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External links

[edit]

- Image not found or type unknown The dictionary definition of *garage* at Wiktionary
- Image not found or type unknown Media related to Garages at Wikimedia Commons

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Rooms and spaces of a house

Shared rooms

- Bonus room
- Common room
- Den
- Dining room
- Family room
- Garret
- Great room
- Home cinema
- Keeping room
- Kitchen
  - dirty kitchen
  - kitchenette
- Living room
- Gynaeceum
  - harem
- Andron
  - man cave
- Recreation room
  - billiard room
- Shrine
- Study
- Sunroom

Private rooms

- Bathroom
  - toilet
- Bedroom / Guest room
  - closet
- Bedsit / Miniflat
- Boudoir
- Cabinet
- Nursery

Spaces

- Atrium
- Balcony
- Breezeway
- Conversation pit
- Cubby-hole
- Deck
- Elevator
    - dumbwaiter
- Entryway/Genkan
- Fireplace
    - hearth
- Foyer
- Hall
- Hallway
- Inglenook
- Lanai
- Loft
- Loggia
- Overhang
- Patio
- Porch
    - screened
    - sleeping
- Ramp
- Secret passage
- Stairs/Staircase
- Terrace
- Veranda
- Vestibule

Technical, utility and storage	○ Attic ○ Basement ○ Carport ○ Cloakroom ○ Closet ○ Crawl space ○ Electrical room ○ Equipment room ○ Furnace room / Boiler room ○ Garage ○ Janitorial closet ○ Larder ○ Laundry room / Utility room / Storage room ○ Mechanical room / floor ○ Pantry ○ Root cellar ○ Semi-basement ○ Storm cellar / Safe room ○ Studio ○ Wardrobe ○ Wine cellar ○ Wiring closet ○ Workshop

Great house areas

- Antechamber
- Ballroom
- Kitchen-related
  - butler's pantry
  - buttery
  - saucery
  - scullery
  - spicery
  - still room
- Conservatory / Orangery
- Courtyard
- Drawing room
- Great chamber
- Great hall
- Library
- Long gallery
- Lumber room
- Parlour
- Sauna
- Servants' hall
- Servants' quarters
- Smoking room
- Solar
- State room
- Swimming pool
- Turret
- Undercroft

Other	○ Furniture
	○ Hidden room
	○ House
	  ○ house plan
	  ○ styles
	  ○ types
	○ Multi-family residential
	○ Secondary suite
	○ Duplex
	○ Terraced
	○ Detached
	○ Semi-detached
	○ Townhouse
	○ Studio apartment

Architectural elements	○ Arch
	○ Balconet
	○ Baluster
	○ Belt course
	○ Bressummer
	○ Ceiling
	○ Chimney
	○ Colonnade / Portico
	○ Column
	○ Cornice / Eaves
	○ Dome
	○ Door
	○ Ell
	○ Floor
	○ Foundation
	○ Gable
	○ Gate
	  ○ Portal
	○ Lighting
	○ Molding
	○ Ornament
	○ Plumbing
	○ Quoins
	○ Roof
	  ○ shingles
	○ Roof lantern
	○ Sill plate
	○ Style
	  ○ list
	○ Skylight
	○ Threshold
	○ Transom
	○ Vault
	○ Wall
	○ Window

- Backyard
- Driveway
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About Keypad

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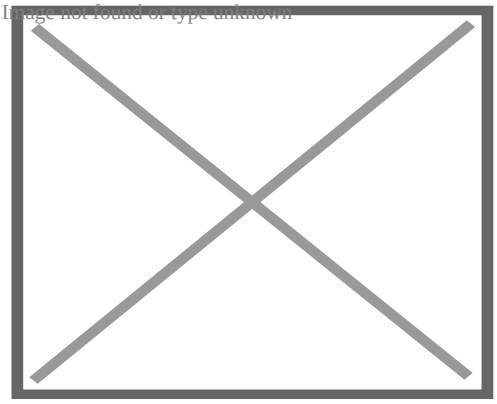

A telephone keypad using the ITU E.161 standard.

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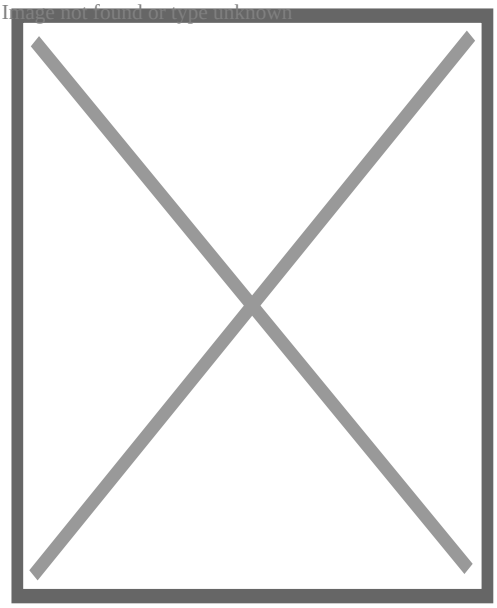

Numeric keypad, integrated with a computer keyboard

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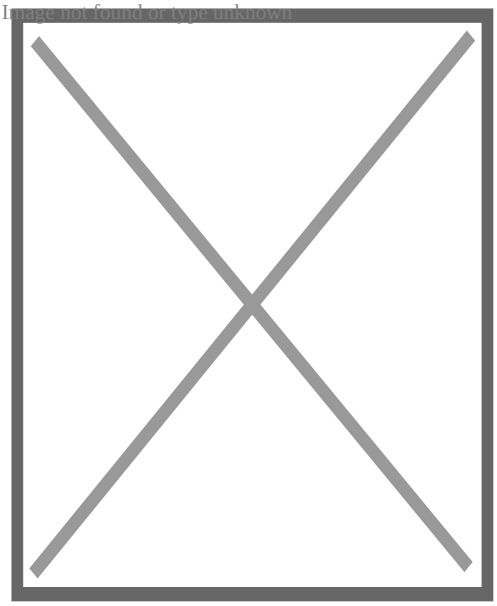

A calculator

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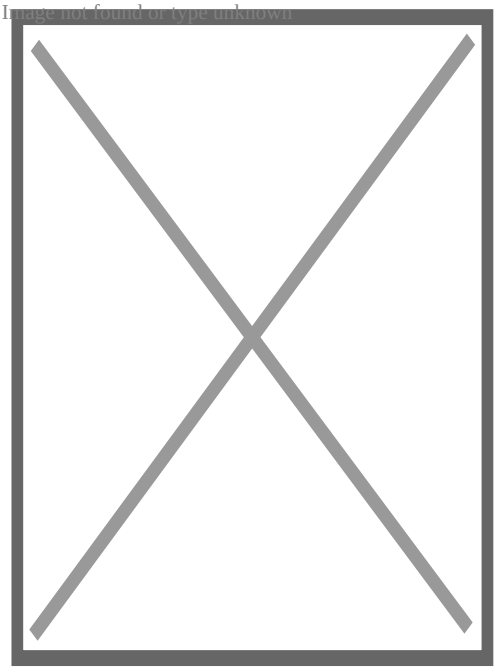

1984 flier for projected capacitance keypad

A **keypad** is a block or pad of buttons set with an arrangement of digits, symbols, or alphabetical letters. Pads mostly containing numbers and used with computers are numeric keypads. Keypads are found on devices which require mainly numeric input such as calculators, television remotes, push-button telephones, vending machines, ATMs, point of sale terminals, combination locks, safes, and digital door locks. Many devices follow the E.161 standard for their arrangement.

Uses and functions

[edit]

A computer keyboard usually has a small numeric keypad on the side, in addition to the other number keys on the top, but with a calculator-style arrangement of buttons that allow more efficient entry of numerical data. This number pad (commonly abbreviated to *numpad*) is usually positioned on the right side of the keyboard because most people are right-handed.

Many laptop computers have special function keys that turn part of the alphabetical keyboard into a numerical keypad as there is insufficient space to allow a separate keypad to be built into the laptop's chassis. Separate external plug-in keypads can be purchased.

Keypads for the entry of PINs and for product selection appear on many devices including ATMs, vending machines, point of sale payment devices, time clocks, combination locks and digital door locks.

Keypad technologies

[edit]

Apart from mechanical keypads,[1][2][3] there are a wide range of technologies that can be used as keypads, each with distinctive advantages and disadvantages. These include Resistive,[4] Capacitive,[5] Inductive,[6] Piezoelectric,[7] and Optical.[8]

Key layout

[edit]
Further information: Telephone keypad § Layout

The first key-activated mechanical calculators and many cash registers used "parallel" keys with one column of 0 to 9 for each position the machine could use. A smaller, 10-key input first started on the Standard Adding Machine in 1901.[9] The calculator had the digit keys arranged in one row, with zero on the left, and 9 on the right. The modern four-row arrangement debuted with the Sundstrand Adding Machine in 1911.[10]

There is no standard for the layout of the four arithmetic operations, the decimal point, equal sign or other more advanced mathematical functions on the keypad of a calculator.

The invention of the push-button telephone keypad is attributed to John E. Karlin, an industrial psychologist at Bell Labs in Murray Hill, New Jersey.[11][12] On a telephone keypad, the numbers 1 through 9 are arranged from left to right, top to bottom with 0 in a row below 789 and in the center. Telephone keypads also have the special buttons labelled * (star) and # (octothorpe, number sign, "pound", "hex" or "hash") on either side of the zero key. The keys on a telephone may also bear letters which have had several auxiliary uses, such as remembering area codes or whole telephone numbers.

The layout of calculators and telephone number pads diverged because they developed at around the same time. The phone layout was determined to be fastest by Bell Labs testing for that application, and at the time it controlled all the publicly connected telephones in the United States.

Origin of the order difference

[edit]

Although calculator keypads pre-date telephone keypads by nearly thirty years, the top-to-bottom order for telephones was the result of research studies conducted by a Bell Labs Human Factors group led by John Karlin. They tested a variety of layouts including a Facit like the two-row arrangement, buttons in a circle, buttons in an arc, and rows of three buttons.[11] The definitive study was published in 1960: "Human Factor Engineering Studies of the Design and Use of Pushbutton Telephone Sets" by R. L. Deininger.[13][14] This study concluded that the adopted layout was best, and that the calculator layout was about 3% slower than the adopted telephone keypad.

Despite the conclusions obtained in the study, there are several popular theories and folk histories explaining the inverse order of telephone and calculator keypads.

- One popular theory suggests that the reason is similar to that given for the QWERTY layout, the unfamiliar ordering slowed users to accommodate the slow switches of the late 1950s and early 1960s.[15]

- Another explanation proposed is that at the time of the introduction of the telephone keypad, telephone numbers in the United States were commonly given out using alphabetical characters for the first two digits. Thus 555-1234 would be given out as KL5-1234. These alpha sequences were mapped to words. "27" was given out as "CRestview", "28" as "ATwood", etc. By placing the "1" key in the upper left, the alphabet was arranged in the normal left-to-right descending order for English characters. Additionally, on a rotary telephone, the "1" hole was at the top, albeit at the top right.

Keypad track design

[edit]

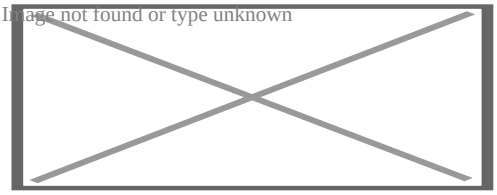

Figure 1. Keypad wiring methods: separate connections (left), x/y multiplexing (center), Charlieplexing (right).

Separate connections

[edit]

A mechanically-switched 16-key keypad can be connected to a host through 16 separate connecting leads, plus a ground lead (Figure 1, left). Pressing a key will short to ground, which is detected by the host. This design allows any number or combination of keys can be pressed simultaneously. Parallel-in serial-out shift registers may be used to save I/O pins.

X/Y multiplexing

[edit]
See also: Keyboard matrix circuit

These 16 + 1 leads can be reduced to just 8 by using x/y multiplexing (Figure 1, center). A 16-key keypad uses a 4 × 4 array of 4 I/O lines as outputs and 4 as inputs. A circuit is completed

between an output and an input when a key is pressed. Each individual keypress creates a unique signal for the host. If required, and if the processor allows, two keys can be pressed at the same time without ambiguity. Adding diodes in series with each key prevents key ghosting, allowing multiple simultaneous presses.

Charlieplexing

[edit]
Main article: Charlieplexing

8 leads can detect many more keys if tri-state multiplexing (Figure 1, right) is used instead, which enables (n-1) × (n/2) keys to be detected with just n I/O lines. 8 I/O can detect 28 individual keys without ambiguity. Issues can occur with some combinations if two keys are pressed simultaneously. If diodes are used, then the number of unique keys detectable is doubled.[16]

See also

[edit]

- Arrow keys
- Charlieplexing
- Digital door lock
- Keyboard (computing)
- Keyboard matrix circuit
- Keyboard technology
- Key rollover
- Mobile phone
- Numeric keypad
- Push-button telephone
- Rotary dial
- Silicone rubber keypad
- Telephone keypad

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External links

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Look up ***keypad*** in Wiktionary, the free dictionary.

- Interfacing Matrix Keypad to 8051 Controller

About Garage door opener

A garage door opener is a motorized device that opens and closes a garage door controlled by turn on the garage wall. Most likewise consist of a handheld radio remote lugged by the proprietor, which can be utilized to open and close the door from a short range.

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About Lake County

Driving Directions in Lake County

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Frequently Asked Questions

Does the garage door opener have a reverse function?

Yes, it does. The reverse function is activated when the door encounters an obstacle.

Is the safety feature of the garage door opener functioning correctly?

Yes, it is. The safety sensors are properly aligned and there are no obstructions detected.

Has the reverse function been tested recently to ensure it operates as intended?

Yes, it has. The last test was conducted two weeks ago and the reverse function worked without any issues.

Higgins Overhead Door

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