

Patent Public Search - Search overview



Quick Reference Guide 2022

In Patent Public Search, you can execute simple or complex search queries. This Quick Reference Guide introduces concepts that will enhance your search experience.

Search databases

1. You can query three **Databases**: US-PGPUB (U.S. pre-grant applications to 3/2001), USPAT (full-text U.S. patents to 1970, classification and patent number searching to 1790) and USOCR (OCR scanned pre-1970 U.S. patents). By default, all three databases are selected. Use the “Databases” button (red rectangle in **Figure 1**) to show or hide the menu options.

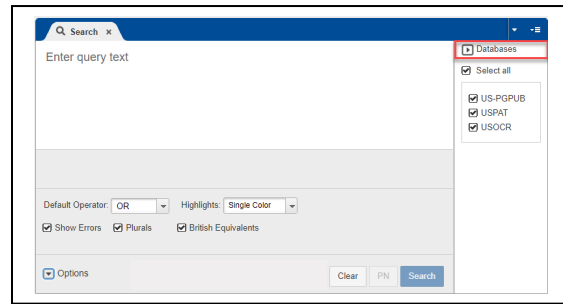


Figure 1. Databases option

Search queries

Enter your query in the text box on the Search pane. Select the “Search” button to produce a listing of results in the Search Results pane.

2. A search statement that does not use any search index (field label) will search through the entire document for that term.
3. Search indices can focus a search to designated areas of a search record (e.g., “radar.ti.”) to create a result list of only documents with “radar” in the title; see **Figure 2**. Periods or brackets on either side of the search index inform the database that a specific search index (e.g., titles) is being searched (e.g., “radar.ti.” or “radar[ti]”).

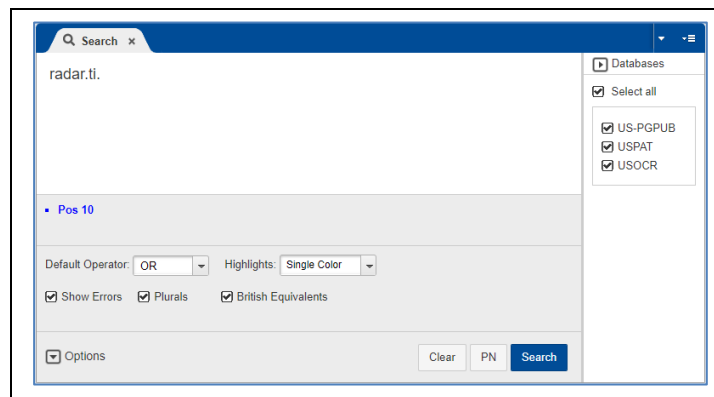


Figure 2. Search query in search pane

Search queries (continued)

4. Here is a list of commonly used search indices found in **Help** under Field Specific Searches.

| Suffix | Description | Example |
|--------|---|--|
| AB | Searches the abstract text of the patent. | amethyst.ab. |
| AD | Searches the application filing date of the patent. | 20120616.ad. |
| APP | Searches the application number of the patent (must use with slash). | 10/501576.app. or (12/123456).app. |
| AS | Searches the assignee name text of the patent. | microsoft.as. |
| AY | Searches the application filing year of the patent. | 2006.ay. |
| BSUM | Searches the Brief Summary section of the patent. | medicinal.bsum. |
| CCLS | Searches against the US Patent classification and subclass . | 138/\$.ccls. |
| CLAS | Searches the USPC Classification text of the patent. | 435.clas. |
| CLM | Searches the claims section of the patent. | tube.clm. |
| CLMS | Searches the claims section of the patent. | computer.clms. |
| CPC | Searches the Cooperative Patent Classification . | F16L11/00.cpc. |
| CPCA | Searches the Cooperative Patent Classification . | B32B2307/50.cpca. |
| CPCI | Searches the Cooperative Patent Classification . | A61M5/385.cpci. |
| DCLM | Searches the claims section of the patent. | program.dclm. |
| DETD | Searches the detailed description section of the patent. | sheepdog.detd. |
| DID | Searches for a specific Document ID . | US-2418590-A.did. or US- 2418590.did. must include the hyphens |
| FD | Searches the application filing date of the patent. | 20110811.fd. |
| FY | Searches the application filing year of the patent. | 2016.fy. |
| IN | Searches the inventor name text of the patent. | black.in. |
| INV | Searches the inventor name text of the patent. | sontag.inv. |
| IPC | Searches the international patent classification of the patent. | G06F17/00.ipc. |
| PD | Searches the publication date of the patent. | 20150216.pd. |
| PN | Searches for a specific patent number . | 7557042.pn. |
| SPEC | Searches the Specification section of the patent. | sheltie.spec. |
| TI | Searches the title text of the patent. | concrete.ti. |
| URPN | Searches the references cited patent number of the patent. | 8025263.urpn. |
| XA | Searches the assistant examiner's name of the patent. | smith.xa. |
| XP | Searches the primary examiner's name of the patent. | hook.xp. |

Figure 3. Commonly used search indices

Search queries (continued)

5. Patent Public Search provides **Options** in the **Search** pane as shown in **Figure 4**:
- **Default Operator:** You can select a default Boolean operator for search statements where no Boolean operator is specified. For instance, if "OR" is the default Boolean operator, then the search "Cars Automobiles Vehicles" would apply OR to each term in the search. It would have the same search results as the search statement "Cars OR Automobiles OR Vehicles."
 - **Highlights:** You can select search terms to appear highlighted in the full-text search records with a single color, multiple colors for each search term (and its variants), or no highlighting.
 - **Show Errors:** If the Show Errors box is checked, errors in search queries will appear below the query box.
 - **Plurals:** If the Plurals box is checked, both plural and singular forms of search terms will be searched.
 - **British Equivalents:** If the British Equivalents box is checked, a search of British equivalents of American English words will also be performed (e.g., "tyre" and "tire," "colour" and "color.")

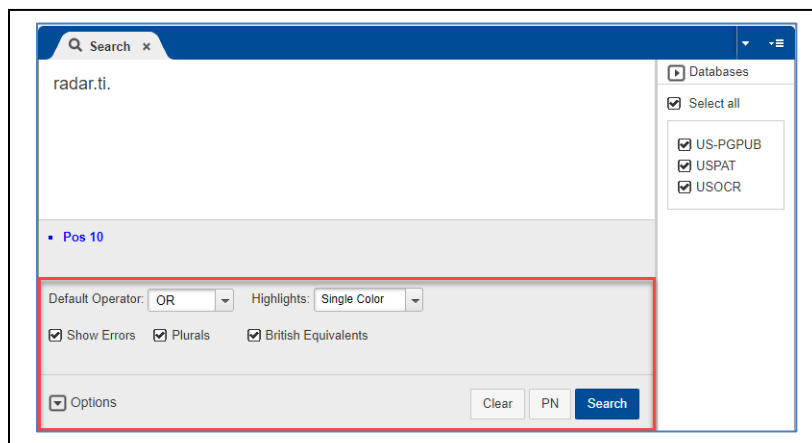


Figure 4. Options in search pane

Search queries (continued)

| Operator | Description | Example | Behavior |
|----------|---|----------------------------|--|
| AND | Two terms, joined by "AND" must occur within the same document. | photographic AND noodle | Returns all documents that contain both the terms "photographic" and "noodle" somewhere in the document-regardless of their order. |
| OR | Two terms, joined by "OR" means at least one of the terms must occur in the document. | dog OR cat | One of these two terms must occur in the document. |
| NOT | The first term must occur, the second term must not. | cardboard NOT box | Returns documents where the term "cardboard" does occur in the document, and the term "box" never occurs in the document. |
| XOR | Two terms, joined by "XOR" means at least one of the terms must occur in the document, but not both terms | pipe XOR ptf | One of these two terms must occur in the document, but not both terms. |

Figure 5: Boolean operators

6. Users can combine search terms in queries using Boolean operators; see **Figure 5**.
7. Variant spellings of words (including variant beginning or endings of words) may be searched using wildcard or truncation symbols; see **Figure 6**.

| Wildcard | Description | Example | Behavior |
|----------|--|----------------------|--|
| ? | Matches any single character, can occur at the beginning, middle or end of a word. | m?cro | Returns all documents that contain the word "micro" or the word "macro" anywhere in the text of the document. You will see different highlighting for each term. |
| #[#] | Matches up to the given number of characters. | micro\$3 | The \$3 here matches up to 3 characters. Hits would include terms like "microvia", "microbio", "microsec", "microgel". |
| * or \$ | Matches any number of characters. | micro* or micro\$ | Hits would include anything matching the first 5 letters of "micro". For example, "microencapsulated" "Microelectronic" and "microelectromechanical". |

Figure 6: Wildcard and truncation symbols

Search queries (continued)

8. You can use proximity operators in search queries. These can be especially valuable in full-text searching; see **Figure 7**.

| Operator | Description | Example | Behavior |
|----------|---|------------------------------|--|
| ADJ | Two terms must occur directly next to each other, and in order. ADJ is the only ordered operator. | oxidizing ADJ bacteria | Returns documents where these two terms occur adjacent to each other and in the same order. This is the default operator, and is applied when no operators are given. |
| ADJ[n] | Two terms must occur within [n] terms of each other, in order, and within the same sentence. | wet adj4 silicon | The term "silicon" must occur within the 4 words that follow the term "wet" - so the following "wet oxidized, polysilazane-based silicon oxide" would be considered a hit. Maximum value of N is 450. |
| NEAR | Similar to ADJ but order is not relevant. | electrospray NEAR ion | Returns documents where the terms "electrospray" and "ion" are next to each other and in the same sentence, but in any order. So unlike ADJ, this search would return a hit for "negative ion electrospray" |
| NEAR[n] | Again, similar to ADJ[n], but order is not relevant. | cyclotron NEAR7 magnetic | Finds documents where the term cyclotron is within 7 words or the term magnetic - regardless of order. This would hit the following "a magnetic sector mass analyzer, or an ion cyclotron." Maximum value of N is 450. |
| WITH | Terms joined with WITH must occur within the same sentence. | detect WITH light | Finds documents where the terms "Light" and "detect" occur within the same sentence. |
| WITH[n] | Terms joined with WITH must occur within n sentences of each other. | detect WITH10 light | Finds documents where the terms "Light" and "detect" occur within 10 sentences of each other. Maximum value of N is 25. |
| SAME | Term joined with SAME must occur within the same paragraph. | synthesizing SAME tomography | Very similar to WITH but the searches occur over paragraphs rather than sentences. |
| SAME[n] | Two term just occur within n paragraphs of each other. | wheel SAME3 wood | Very similar to WITH[n] but the searches occur over n paragraphs rather than sentences. Maximum value of N is 25. |

Figure 7: Proximity operators

9. Search statements are saved by Patent Public Search within a session as **L numbers**. Rather than retyping a search statement, you can use the generated L number for the search to save time and have greater flexibility in searching.

For example: "(lidar OR radar) ADJ4 sensor" is L1; "automobile OR car OR vehicle" is L2; the user can enter "L1 AND L2" as a search statement.

The search interface allows the use of the number itself without the L to indicate a search statement. "1 AND 2" would produce the same results. To search for a number used as a search term, and not indicating an L number, put quotation marks around the number in your search.

10. **Stopwords** are words that are not indexed for text paragraphs in Patent Public Search. They give little meaning to a document since they occur so frequently. When a stopword is used in a search query, the term is only searched in certain metadata fields, such as assignee name and PCT data. No results are returned if the stopword is found in the text fields or body of the document (e.g., in the Title, Abstract, or Claims.)

| | | | |
|-----------------------------------|-----------------------------|------------------------|-------|
| a* (Upper/mixed case, "a" or "A") | for | of | these |
| an | if | on | they |
| and* (Upper, "AND") | in* (Mixed case, "In.m/c.") | or* (Upper case, "OR") | this |
| are | into | such | was |
| as* (Mixed case, "As.m/c.") | is | that | will |
| at* (Mixed case, "At.m/c.") | it* (Upper case, "IT") | the | |
| be* (Mixed case, "Be.m/c.") | no | their | |
| by | not | then | |

However, some stopwords can be searched if they are uppercase or mixed case in the metadata or body of a document. These are **searchable stopwords** and indicated by an asterisk (*) in the chart. For example, the searchable stopword "AND" will be found and highlighted in the document body. Searchable stopwords will be found in any case within the metadata. "AND" and "OR" are searchable stopwords that are also Boolean operators and should be searched inside quotation marks, written in uppercase letters, to transform the operator into a searchable stopword. "As" (arsenic), "At" (astatine), "Be" (beryllium), "In" (indium) are chemical symbols that can only be searched inside quotation marks using the mixed-case index label .m/c. Patent Public Search does not count stopwords when figuring word proximity. This is vital to consider when determining search strategy that uses proximity operators.

(analog ADJ digital ADJ computer)

Retrieves "...a single microcomputer analog to digital computer"
 ["to" is a stopword, so analog is considered adjacent to digital]

Retrieves "...determines the rate of communication between an analog and a digital computer or as a master oscillator for equipment testing at various frequencies"
 ["and" and "a" are stopwords, so analog is considered adjacent to digital]

(DNA ADJ3 Computer)

Retrieves "...the digital-DNA, then storing it on the computer's non-transitory computer storage medium"
 ["then," "it," "on," and "the" are stopwords, so DNA is considered adjacent to computer within three terms]

Retrieves "...a target DNA in a sample, for example, computer-implemented methods...."
 ["in," "a," and "for" are stopwords, so DNA is considered adjacent to computer within three terms]

11. **Patent number searching** is one of the most common searches employed in Patent Public Search. The searchable index abbreviation is **.pn.**, as seen on page 2. The format used depends on the type of patent being searched. Do not use commas inside a number.

- "1234567".pn.** For utility patents at least 7 digits are required.
- "0000009".pn.** Depending on the length of the utility patent number, fill with leading zeroes if needed.
- "11000000".pn.** More recently issued utility patents (since 6/19/2018) will accept 8 digits.
- "D123456".pn.** For design patents "D" plus 6 digits, fill with leading zeroes if needed.
- "PP12345".pn.** For plant patents "PP" plus 5 digits, fill with leading zeroes if needed.

Or, as a time-saving alternative you can use the **PN button** (see Figure 8 below) to the left of the Search button. Enter the patent/published patent application number(s) you wish to search with **a space between each one**, as in this example:

("20180093696" "6707006" "6392195")

Select the "PN" button:



The search will execute with the .PN. searchable index applied to each item in the entire search string.

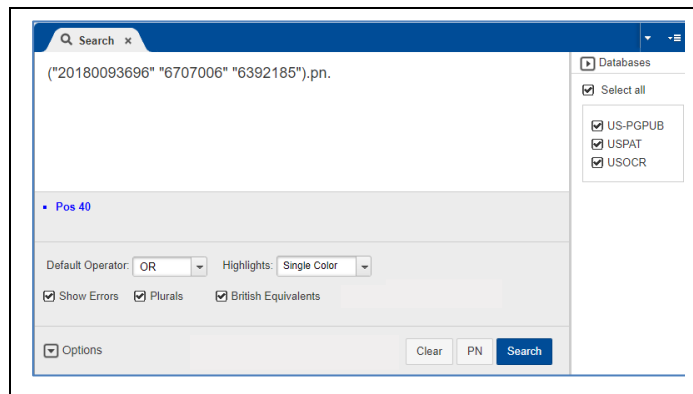


Figure 8: PN button

You may also search patent numbers using the document ID searchable index abbreviation **.did.**

"US-10906080-B2".did. Requires use of Country Code, Kind Code and hyphens.