

OPERATIONS REFERENCE

IONTB Dashboard Matching Guide

Wildcards, field prefixes, ranges, voice triggers,
Pushover rules, and property lookup

*A practical guide to what each expression means, where it works,
and how existing saved rules remain compatible.*

PRODUCTION BEHAVIOR

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Prepared for IONTB dashboard administration and alert configuration

1. Quick Start

The matching system has two broad modes. Alert expressions are structured rules used for Pushover and dashboard voice/tone alerts. Ordinary search boxes are simpler filters that generally perform case-insensitive contains searches. Knowing which mode you are in prevents most surprises.

The one rule to remember

Use * on both sides when you mean “contains.” Example: *CRASH* matches text that has CRASH anywhere. CRASH* means “starts with CRASH.”

Symbol summary

Symb ol	Meaning	Example	Result
*	Zero or more characters	E*	E, E1, E31, E301
?	Exactly one character	E?1	E31 matches; E301 does not
, or new line	OR: any item may match	E31, E32	E31 or E32
&	AND: every term must match	UNIT:E31 & TYPE:*CRASH*	Both unit and type required
:	Scopes a term to one field	GRID:121-123	Only the grid is tested
-	Inclusive range in supported fields	STATION:4-9	Stations 4 through 9
\	Escapes a wildcard symbol	A\?B	Matches a literal question mark

Five-step rule-building method

1. **Choose the context.** Is this an alert rule, a normal search, or Property Lookup?
2. **Choose exact or pattern matching.** Use an exact value when possible; add * or ? only when variation is intentional.
3. **Add a field prefix when useful.** UNIT:, TYPE:, GRID:, and others remove ambiguity.
4. **Combine conditions.** Use commas/new lines for OR and & for AND.
5. **Test both sides.** Write down one incident that should match and one that must not match.

2. Wildcards and Boolean Logic

Asterisk (*) — zero or more characters

An asterisk can appear at the beginning, middle, or end of a pattern. In structured matching, the pattern is evaluated against the whole field, so the position of the asterisk changes the meaning.

Pattern	Meaning	Matches	Does not match
E*	Starts with E	E, E31, E301	T31
*31	Ends in unit family 31	E31, T31	E32; E131 (legacy rule)
31	Contains 31	E31, E131, E310	E42
E*1	Starts E, ends 1	E1, E31, E301	T31; E32
CRASH	Contains CRASH	TRAFFIC CRASH	MEDICAL

Question mark (?) — exactly one character

A question mark is a single-character placeholder. It is useful when the length is known but one character varies.

EXAMPLES

E?1 → matches E31 and E41; does not match E301

E?? → matches E31 and E54; does not match E301

CR?SH → matches CRASH; does not match CRRASH

OR and AND

OR: Separate alternatives with a comma or put each alternative on its own line. E31, E32 matches either unit.

AND: Join required terms with &. UNIT:E31 & TYPE:*COLLISION* requires both conditions on the same incident.

Combined: STATION:4,7,9 & TYPE:MEDICAL means station 4, 7, or 9, and the incident type must be MEDICAL. The station list remains grouped as the station side of the AND rule.

Plain text is not always a glob

In normal search boxes, CRASH usually means “contains CRASH.” In a structured alert field, use *CRASH* when you explicitly want contains behavior. This makes the rule’s intent obvious.

3. Field Prefixes (Scopes)

Prefixes are optional for compatibility, but they are recommended for new rules. They tell the matcher exactly which incident field to evaluate and prevent a value from being interpreted as something else.

Prefix	Tests	Examples	Important note
UNIT:	Responding units	UNIT:E31; UNIT:E?1	Use for exact 3-digit Sunstar units
TYPE:	Incident type/title	TYPE:*CRASH*	Clearer than unprefixed text
CODE:	Incident code	CODE:TA; CODE:RI	Exact or wildcard pattern
GRID:	Grid identifier	GRID:180A; GRID:121-123	Numeric and lettered grids
STATION:	Resolved station IDs	STATION:4,7,9; STATION:4-9	List and range forms supported
TAX:	Tax district	TAX:LARGO	Pushover only; not dashboard voice
TEXT:	Combined searchable incident text	TEXT:*SKYWAY*	Useful for broad text conditions
ADDRESS:	Incident location/address	ADDRESS:12100-12300 94TH WAY	Prefix required in alert rules

Why prefixes matter for numbers

For legacy compatibility, a bare one- to three-digit numeric alert term is treated as a grid. Therefore, a bare 354 may be interpreted as GRID:354 rather than the Sunstar unit 354.

AVOID NUMERIC AMBIGUITY

UNIT:354 → exact Sunstar unit 354
 354 → legacy interpretation: grid 354
 GRID:354 → explicit grid 354

Exact matching versus explicit patterns

Intent	Recommended expression	Why
One exact unit	UNIT:E31	No unintended unit variation
Any E unit	UNIT:E*	Prefix fixes the field; * allows any suffix
Type contains crash	TYPE:*CRASH*	Explicit contains behavior
Exact code	CODE:TA	Does not depend on title wording
Any of three stations	STATION:4,7,9	Compact OR list

4. Unit Matching and Safety Rules

Unit matching retains the older behavior while adding ? and internal * patterns. Two safeguards are intentionally preserved: the special numeric-suffix rule and the three-digit Sunstar wildcard exclusion.

Legacy numeric-suffix behavior

*54 is treated as a unit-family suffix. It matches E54 and T54, but it does not match E154. This behavior was preserved so existing saved rules do not suddenly become broader.

Rule	E54	T54	E154	354
*54	YES	YES	NO	NO
UNIT:*54*	YES	YES	YES	NO
UNIT:?54	YES	YES	NO	NO
UNIT:354	NO	NO	NO	YES

Three-digit Sunstar exclusion

Wildcard unit patterns do not match three-digit Sunstar units beginning with 3, 4, or 9. Examples include 354, 454, and 954. This prevents broad wildcard rules from accidentally alerting on the high-volume three-digit fleet.

- **Wildcarded:** ?54 and *54 do not match unit 354.
- **Exact:** UNIT:354 does match unit 354.
- **Recommendation:** Use the UNIT: prefix whenever targeting an exact all-numeric unit.

Additional Pushover eligibility exclusions

For 911 Pushover trigger evaluation, units with DE, PD, TROP, or ECSR prefixes are excluded from triggering. Station resolution also excludes EK, ARST, and DLT mappings. If an incident also has an eligible unit, that eligible unit can still satisfy the rule.

Compatibility note

Existing exact units, E*, *31, comma-separated alternatives, and ampersand AND rules continue to work. Saved trigger text is not rewritten.

5. Ranges

Ranges are inclusive: both endpoints count. They are supported for stations, grids, and house-number address ranges. Always use a field prefix in alert expressions so the matcher knows which range logic to use.

Station ranges and lists

Expression	Meaning	Matches	Does not match
STATION:4,7,9	A compact OR list	4, 7, or 9	5, 6, 8
STATION:4-9	Every station from 4 through 9	4, 5, 6, 7, 8, 9	3 or 10
STATION:06	Exact station with normalized leading zero	6	7

With AND: STATION:4,7,9 & TYPE:MEDICAL matches a MEDICAL incident assigned to station 4, 7, or 9.

Grid ranges

A numeric grid range includes lettered subdivisions inside that numeric span. GRID:121-123 therefore includes 121, 121A, 122A, 123C, and other subdivisions whose numeric portion is between 121 and 123.

Expression	Included examples	Excluded examples
GRID:121-123	121, 121A, 122A, 123C	120A, 124A
GRID:121A-123C	121A through 123C	121 (before start), 123D (after end)

Address ranges in alert rules

An address range combines an inclusive house-number range with a required street name. Directional or suffix information after the requested street may still be present in the incident location.

INCLUSIVE ADDRESS RANGE

ADDRESS:12100-12300 94TH WAY

✓ 12100 94TH WAY

✓ 12225 94TH WAY N

✗ 12301 94TH WAY (outside range)

✗ 12225 95TH WAY (wrong street)

Do not reverse endpoints

Use the lower house number first. 12100-12300 is valid; 12300-12100 is not interpreted as a range.

6. Where Each Feature Works

The site now uses a shared matching style where the workflows are comparable, but not every screen is an alert-rule editor. The matrix below shows the important differences.

Area	* / ?	OR / AND	Ranges / scopes	Notes
911 Pushover	YES	YES / YES	YES	Full unit/type/code/grid/station/tax/text/address rules
Dashboard voice/tone	YES	YES / YES	YES	Unit, type, code, grid, station, text, address; TAX unavailable
Dashboard Filter Incidents	YES	Comma OR	No field ranges	Plain text is case-insensitive contains across visible incident data
PCSO Pushover	YES	Configured rules	UNIT / ADDRESS	Unprefixed terms retain contains behavior
FHP Pushover	YES	Configured rules	TYPE / CODE / TEXT / ADDRESS	No dashboard voice channel
History unit search	YES	Search filter	Optional UNIT:	Old E* and *31 continue to work
General record searches	No special glob	Screen-specific	No ranges	Ordinary case-insensitive contains; % and _ are literal
Property Lookup	Not needed	No alert logic	Direct address range	Enter 12100-12300 94TH WAY without ADDRESS:
FDLE / Weather / FAA / NHC	No	Structured controls	No	Selection-based workflows; wildcard syntax is unnecessary

Voice/tone compared with Pushover

- **Shared behavior:** The dashboard voice/tone evaluator supports the same *, ?, OR, AND, station/grid/address range, and field-scope concepts for 911 incidents.
- **Station support:** Station IDs are included in the live incident payload so STATION:4,7,9 and STATION:4-9 can drive voice/tone alerts.
- **Tax district exception:** TAX: remains Pushover-only because tax district information comes from later property enrichment and is not reliable when the browser first evaluates an alert.
- **Agency channel exception:** PCSO and FHP support their configured Pushover matching, but they do not have the dashboard 911 voice-trigger channel.

Alert Rule Builder output

Builder choice	Generated pattern
Equals	UNIT:E31 or TYPE:MOTOR VEHICLE COLLISION
Contains	TYPE:*CRASH*
Starts With	TYPE:TRAFFIC*
Ends With	UNIT:*31

7. Search Boxes and Property Lookup

Dashboard “Filter Incidents”

Comma-separated entries act as OR alternatives. Plain entries are case-insensitive substring searches across the incident title, description, and incident number. Wildcard patterns can be used when a specific shape is needed; unit wildcard matching still observes the three-digit Sunstar exclusion.

DASHBOARD FILTER EXAMPLES

crash	→ contains CRASH in visible incident text
CRASH	→ explicit contains pattern
E?1	→ E31/E41-style unit pattern
crash, structure fire	→ either phrase

History searches

- **Unit search:** accepts exact values or wildcard patterns, including ?, internal *, and optional UNIT:.
- **Legacy rules:** E* and *31 continue to behave as before.
- **Record fields:** other history searches remain ordinary contains searches. SQL symbols % and _ are treated literally instead of acting as hidden wildcards.
- **Location search:** continues to use its existing word/group behavior; do not assume alert-rule ranges apply there.

Property Lookup

Property Lookup accepts an exact address, a close-address search, or a direct address range. It is not an alert expression field, so do not include ADDRESS: before a range.

What you enter	What happens
10207 THURSTON GROVES	Shows close address options, including the full BLVD form when available
10207 THURSTON GROVES BLVD	Performs an exact/full address lookup
12100-12300 94TH WAY	Lists properties on 94TH WAY in the inclusive house-number range

Property range limits

The lookup returns up to the first 100 matching properties, and a requested range cannot span more than 1,000 house numbers. Narrow a large range into smaller segments when needed.

Same range, different entry format: Alert Trigger = ADDRESS:12100-12300 94TH WAY; Property Lookup = 12100-12300 94TH WAY.

8. Practical Rule Recipes

These examples are intended as starting points. Replace the values with the exact units, stations, grids, types, or streets you need.

Goal	Rule	Explanation
One exact unit	UNIT:E31	Only E31
Unit with one variable digit	UNIT:E?1	E31/E41-style unit IDs; exactly one character
Any eligible unit ending 54	*54	Legacy family suffix; excludes E154 and wildcarded Sunstar 354
Type contains collision	TYPE:*COLLISION*	COLLISION anywhere in the type
Unit plus type	UNIT:E?1 & TYPE:*COLLISION*	Both must match the incident
Three stations	STATION:4,7,9	Station 4, 7, or 9
Station span	STATION:4-9	Every station 4 through 9
Grid span	GRID:121-123	Numeric grids 121–123 and their lettered subdivisions
Street-number span	ADDRESS:12100-12300 94TH WAY	House number in range and street matches
Text plus type	TEXT:*SKYWAY* & TYPE:*CRASH*	SKYWAY in incident text and CRASH in type
Exact Sunstar unit	UNIT:354	Explicit exact match; avoids numeric-as-grid ambiguity
All eligible incidents	ALL	Retains the existing all-alert behavior for that context

Readable formatting for complex rules

New lines may be used instead of commas for OR alternatives. This is often easier to review in the expanded Alert Triggers field.

FOUR OR ALTERNATIVES, ONE PER LINE

STATION:4,7,9 & TYPE:MEDICAL

UNIT:E?1 & TYPE:*COLLISION*

ADDRESS:12100-12300 94TH WAY

CODE:TA

The first and second lines are AND groups. The complete rule alerts when any one line/group matches.

Choosing between list, range, and wildcard

Use a comma list for a few nonconsecutive values (STATION:4,7,9); use a range for every value between endpoints (STATION:4-9); use * or ? for variable identifier characters (UNIT:E?1); and surround a phrase with * when it may appear anywhere in text (TYPE:*CRASH*).

9. Compatibility and Common Mistakes

What continues to work

Existing form	Status	Comment
E31	Works	Unprefixed exact unit behavior retained
E*	Works	Existing unit prefix wildcard retained
*31	Works	Existing numeric family-suffix behavior retained
CRASH	Works	Unprefixed incident-type/text wildcard remains usable
E31, E32	Works	Comma-separated OR retained
E31 & MEDICAL	Works	AND grouping retained
STATION:4,7,9	Works	Compact station list remains OR

Field prefixes are an addition, not a migration requirement. Existing saved rules are not rewritten and do not need TYPE: or UNIT: added merely to keep functioning.

Mistakes to watch for

Mistake	Use instead	Reason
CRASH* when you mean contains	*CRASH*	CRASH* means starts with CRASH
Bare 354 for a unit	UNIT:354	Bare short numbers retain grid interpretation
STATION:4-9 for only 4, 7, 9	STATION:4,7,9	A hyphen includes every station between endpoints
ADDRESS: in Property Lookup	12100-12300 94TH WAY	ADDRESS: belongs in alert expressions only
TAX: in voice/tone	Use Pushover for TAX:	Tax enrichment arrives too late for reliable browser evaluation
Expecting *54 to match E154	UNIT:*54*	*54 retains the narrow legacy family-suffix rule
Expecting ? to match any length	Use * for variable length	? represents exactly one character
Using % or _ as SQL wildcards	Use ordinary text search	Those characters are now literal in record searches

Troubleshooting a rule that did not fire

- **Confirm the channel.** Was the rule evaluated by 911 Pushover, dashboard voice/tone, PCSO/FHP Pushover, or a search box?
- **Confirm the source field.** Use TYPE:, CODE:, UNIT:, GRID:, STATION:, TEXT:, or ADDRESS: to remove ambiguity.
- **Check wildcard position.** Contains requires * on both sides.
- **Check exclusions.** Wildcard unit rules exclude three-digit Sunstar units, and some Pushover unit prefixes are ineligible.
- **Check range endpoints and street.** Ranges are inclusive, lower-to-higher, and address ranges still require the correct street.
- **Reduce the rule.** Test each side of an AND group independently, then recombine it.

10. Pre-Save Checklist and Cheat Sheet

Before saving a trigger

- I know whether this is a Pushover rule, dashboard voice/tone rule, normal search, or Property Lookup request.
- I used a field prefix for any value that could be ambiguous—especially all-numeric units.
- I used `*value*` for contains, `value*` for starts with, and `*value` for ends with.
- Every `?` is intended to represent exactly one character.
- Comma/new-line alternatives are OR; terms joined with `&` are all required.
- A station list uses commas; a continuous station span uses a hyphen.
- Grid and address range endpoints are in increasing order and should be inclusive.
- If targeting a three-digit Sunstar unit, I used an exact `UNIT:` rule rather than a wildcard.
- I did not use `TAX:` for a dashboard voice/tone trigger.
- I can name one incident that should match and one similar incident that must not match.

One-page expression cheat sheet

Expression	Meaning
<code>UNIT:E31</code>	Exact unit E31
<code>UNIT:E?1</code>	E + one character + 1
<code>UNIT:E*1</code>	Starts E and ends 1, with any number of characters between
<code>*54</code>	Legacy eligible unit family ending 54; not E154 or wildcarded Sunstar 354
<code>TYPE:*CRASH*</code>	Incident type contains CRASH
<code>CODE:TA</code>	Exact TA code
<code>GRID:121-123</code>	Grid numeric span 121 through 123, including subdivisions
<code>STATION:4,7,9</code>	Station 4, 7, or 9
<code>STATION:4-9</code>	Every station 4 through 9
<code>ADDRESS:12100-12300 94TH WAY</code>	Alert location within house-number range on the street
<code>TEXT:*SKYWAY* & TYPE:*CRASH*</code>	Both a text condition and a type condition
<code>UNIT:354</code>	Exact three-digit Sunstar unit

Recommended style for new rules

Prefer explicit field prefixes and write contains patterns with `*` on both sides. Keep each OR alternative on its own line when a rule has several branches. This makes future review and troubleshooting much easier.

Document scope

This guide reflects the matching and property-lookup behavior deployed for the IONTB dashboard as of August 7, 2026. It documents current application behavior, including preserved legacy compatibility rules and channel-specific exceptions.