

CZQM Runway Advisor - Compact Card Design

What's New (v4.3)

Final Polish

✓ **Crosswind arrows CORRECTED** - arrows now show wind FLOW/vector direction ✓ **Arrow logic:** → means wind flowing left-to-right, ← means right-to-left ✓ **Think vectors** - arrows show the path of wind travel, not just source

Previous Updates (v4.2)

✓ **Arrow directions fixed** - headwind ↓ (coming at you), tailwind ↑ (pushing from behind) ✓ **Headwind colors improved** - ALL headwinds now green (including 0-4 kts) ✓ **Human factors** - arrows now match pilot's perspective of wind direction

Previous Fixes (v4.1)

✓ **Ceiling colors fixed** - blue for ≥ 1000 ft, amber/red for < 1000 ft ✓ **Adhoc METAR** - now displays raw METAR text only ✓ **Typography** - changed "Ad-hoc" to "Adhoc"

Latest Improvements (v4.0)

✓ **Reciprocal runways grouped** - pairs like 05/23 now on same row ✓ **Smart ceiling color** - blue for high ceilings, amber/red only if < 1000 feet ✓ **Adhoc METAR requests** - lookup any airport ICAO on the fly ✓ **Legend removed** - cleaner interface

Layout Improvements

✓ **More cards per row** - reduced min width to 260px (was 420px originally) ✓ **Ceiling/Vis inline** - now part of wind info row, not separate ✓ **No legend** - removed arrow legend for cleaner look ✓ **Compact everywhere** - fits 5+ cards across on large displays

Visual Design

✓ **Compact card-based layout** - more airports visible at once ✓ **Shows ALL runways** for each airport (not just the best one) ✓ **Arrow indicators** (↑ headwind, ↓ tailwind, ← → crosswind direction) ✓ **SimBrief-inspired** visual style ✓ **Best runway highlighted** with green border ✓ **Responsive design** works on mobile and desktop ✓ **Compressed padding** to fit more on screen ✓ **Auto-refresh** every 15 minutes

Wind Display

- **Compact format:** 298°M/30 (degrees magnetic / knots)
- No more verbose "298°M 30 kts"

Ceiling & Visibility

- **Inline with wind info** - appears on same line as wind and altimeter
- **Smart color coding:**
 - Blue badge: Ceiling ≥ 1000 feet (VFR/MVFR)
 - Amber/red badge: Ceiling < 1000 feet (IMC)
- **Shows ceiling** if present: CIG: 4800 BKN
- **Shows visibility** if IMC (less than 5SM): VIS: 2SM
- Only appears when relevant (IMC conditions)

Runway Layout

- **Reciprocals grouped** - paired runways on same row
- Example: CYHZ shows 05/23 on one line, 14/32 on another
- Makes it easier to see physical runway pairs
- Best runway still highlighted with green border

Wind Component Display

Each runway now shows:

- **Headwind component** with ↓ arrow (wind coming AT you)
 - Green: Any headwind (0+ kts) - all headwinds are good!
- **Tailwind component** with ↑ arrow (wind pushing FROM BEHIND)
 - Orange: Mild tailwind (0-4 kts) - caution!
 - Red: Strong tailwind (≥ 5 kts) - avoid!
- **Crosswind component** with ← → arrows (shows wind FLOW)
 - → wind flowing left to right (FROM left)
 - ← wind flowing right to left (FROM right)
 - Green: Light crosswind (≤ 12 kts)
 - Orange: Moderate crosswind (12-15 kts)
 - Red: Strong crosswind (> 15 kts)

Arrow Convention (Wind Flow/Vector Direction):

- ↓ = Headwind (flowing toward you)

- ↑ = Tailwind (flowing away from you)
- → = Crosswind flowing left to right (FROM left)
- ← = Crosswind flowing right to left (FROM right)

Think of arrows as showing the wind's **path of travel**, not just its source.

Features

- **Auto-refresh** every 15 minutes (set it and forget it!)
- **Manual refresh button** with loading animation
- **UTC timestamp** showing last update
- **Flight rules badges** (VFR/MVFR/IFR/LIFR) with color coding
- **METAR decode** - click to show/hide full METAR text
- **Magnetic wind direction** shown for each airport
- **Best runway choice** automatically highlighted
- **Compact layout** - no legend needed (arrows are self-explanatory!)
- **Adhoc METAR lookup** - enter any 4-letter ICAO to fetch raw METAR text

Files

- `index.html` - Compact page structure
- `styles.css` - Compressed card-based styling
- `script.js` - Updated with ceiling/visibility extraction and auto-refresh

How to Use

1. Open `index.html` in your browser
2. Data loads automatically for all CZQM airports
3. Auto-refreshes every 15 minutes
4. Click "Refresh" for manual update
5. Click "METAR" section to show/hide full METAR text
6. Best runway has green left border
7. Reciprocal runways are grouped on same line (e.g., 05/23)
8. Look for ↓ green arrows (headwind - good!)

9. Avoid ↑ red arrows (tailwind - bad!)
10. Watch for red → ← (strong crosswind)
11. Blue CIG badge = high ceiling (OK), amber/red = low ceiling (<1000 ft)
12. **Adhoc lookup:** Enter any ICAO code at bottom to fetch raw METAR text

Browser Requirements

- Modern browser (Chrome, Firefox, Safari, Edge)
- JavaScript enabled
- Internet connection for live METAR data

Credits

Original concept: Joel Morin (VATSIM ID 810489)

Redesign: Card-based layout with all-runway display