

```
/***** TradingOps One-Click v4 (Enhanced) - America/New_York *****/
```

```
const TZ = "America/New_York";
```

```
const SH = {
```

```
  CFG: 'Config',
```

```
  WL: 'Watchlist',
```

```
  TICKS: 'Ticks',
```

```
  AL: 'Alerts',
```

```
  HL: 'Health',
```

```
  DASH: 'Dashboard'
```

```
};
```

```
// Cache for configuration values to reduce sheet reads
```

```
const CONFIG_CACHE = {};
```

```
const CACHE_DURATION_MS = 60000; // 1 minute
```

```
/* ----- Utils ----- */
```

```
function ss_() {
```

```
  return SpreadsheetApp.getActive();
```

```
}
```

```
function sh_(n) {
```

```
  return ss_().getSheetByName(n) || ss_().insertSheet(n);
```

```
}
```

```
function now_() {
```

```
  return Utilities.formatDate(new Date(), TZ, "yyyy-MM-dd HH:mm:ss");
```

```
}
```

```
/**
```

```
 * Get configuration value with caching
```

```

* @param {string} k - Configuration key
* @param {boolean} forceRefresh - Force cache refresh
* @return {string} Configuration value
*/

function cfg_(k, forceRefresh = false) {
  const cacheKey = `cfg_${k}`;
  const cached = CONFIG_CACHE[cacheKey];

  if (!forceRefresh && cached && (Date.now() - cached.timestamp < CACHE_DURATION_MS)) {
    return cached.value;
  }

  try {
    const s = sh_(SH.CFG);
    const vals = s.getDataRange().getValues().filter(r => r[0]);
    const m = Object.fromEntries(vals.map(r => [String(r[0]), String(r[1] || "")]));
    const value = m[k] || "";

    CONFIG_CACHE[cacheKey] = { value: value, timestamp: Date.now() };
    return value;
  } catch (err) {
    logError_('cfg_', err, `Failed to get config for key: ${k}`);
    return "";
  }
}

/**
 * Set health metric value
 * @param {string} key - Metric name
 * @param {*} val - Metric value
 */

```

```

function setHL_(key, val) {
  try {
    const s = sh_(SH.HL);
    const last = s.getLastRow();

    if (last === 0) {
      s.appendRow(['Metric', 'Value', 'Updated']);
    }

    let r = -1;
    const data = s.getDataRange().getValues();
    for (let i = 1; i < data.length; i++) {
      if (data[i][0] === key) {
        r = i + 1;
        break;
      }
    }

    const timestamp = now_();
    if (r === -1) {
      s.appendRow([key, val, timestamp]);
    } else {
      s.getRange(r, 2, 1, 2).setValues([[val, timestamp]]);
    }
  } catch (err) {
    logError_('setHL_', err, `Failed to set health metric: ${key}`);
  }
}

```

```

/**

```

```

 * Log errors to Alerts sheet

```

```
* @param {string} func - Function name
* @param {Error} err - Error object
* @param {string} context - Additional context
*/
```

```
function logError_(func, err, context = '') {
  try {
    const al = sh_(SH.AL);
    const msg = `ERROR in ${func}: ${err.message || err}${context ? ' | ' + context : ''}`;
    al.appendRow([now_(), 'ERROR', func, '', msg]);
    console.error(msg);
  } catch (e) {
    console.error('Failed to log error:', e);
  }
}
```

```
/* ----- Bootstrap (tabs, headers, defaults) ----- */
```

```
function Bootstrap_() {
  try {
    // Config
    const cfg = sh_(SH.CFG);
    cfg.clear();
    cfg.appendRow(['Key', 'Value', 'Description']);
    cfg.appendRow(['POLL_INTERVAL_MIN', '1', 'Minutes between price updates (1, 5, 10, 15, or 30)']);
    cfg.appendRow(['WEBHOOK_SECRET', '', 'Optional secret for webhook authentication']);
    cfg.appendRow(['MAX_TICK_ROWS', '10000', 'Maximum rows to keep in Ticks sheet (auto-prune)']);
    cfg.appendRow(['ALERT_ON_ERROR', 'TRUE', 'Send email on critical errors (TRUE/FALSE)']);
    cfg.appendRow(['RETRY_ATTEMPTS', '3', 'Number of retry attempts for API calls']);
    cfg.appendRow(['FMP_API_KEY', '', 'OPTIONAL - Financial Modeling Prep API key (Yahoo Finance used by default)']);

    // Format config sheet
    cfg.getRange(1, 1, 1, 3).setFontWeight('bold').setBackground('#4285f4').setFontSize(12).setFontColor('white');
  }
}
```

```
cfg.setColumnWidths(1, 1, 200);
cfg.setColumnWidths(2, 1, 300);
cfg.setColumnWidths(3, 1, 400);
```

```
// Watchlist
```

```
const wl = sh_(SH.WL);
wl.clear();
wl.appendRow(['Symbol', 'AssetClass', 'Venue', 'Notes', 'Active']);
wl.appendRow(['SPY', 'STOCK', 'YAHOO', 'S&P 500 ETF', 'TRUE']);
wl.appendRow(['QQQ', 'STOCK', 'YAHOO', 'Nasdaq 100 ETF', 'TRUE']);
wl.appendRow(['NVDA', 'STOCK', 'YAHOO', 'NVIDIA Corp', 'TRUE']);
wl.appendRow(['AAPL', 'STOCK', 'YAHOO', 'Apple Inc', 'TRUE']);
wl.appendRow(['BTCUSD', 'CRYPTO', 'BINANCE', 'Bitcoin', 'TRUE']);
wl.appendRow(['ETHUSD', 'CRYPTO', 'BINANCE', 'Ethereum', 'TRUE']);
wl.appendRow(['SOLUSD', 'CRYPTO', 'BINANCE', 'Solana', 'TRUE']);
```

```
// Format watchlist
```

```
wl.getRange(1, 1, 1, 5).setFontWeight('bold').setBackground('#34a853').setFontColor('white');
wl.setColumnWidths(1, 1, 120);
wl.setColumnWidths(2, 1, 100);
wl.setColumnWidths(3, 1, 100);
wl.setColumnWidths(4, 1, 200);
wl.setColumnWidths(5, 1, 80);
```

```
// Ticks
```

```
const t = sh_(SH.TICKS);
t.clear();
t.appendRow(['Timestamp_ET']);
t.getRange(1, 1, 1, 1).setFontWeight('bold').setBackground('#fbbc04').setFontColor('black');
```

```
// Alerts
```

```
const al = sh_(SH.AL);
al.clear();
al.appendRow(['Timestamp_ET', 'Source', 'Symbol', 'Price', 'Payload']);
al.getRange(1, 1, 1, 5).setFontWeight('bold').setBackground('#ea4335').setFontColor('white');
al.setFrozenRows(1);
```

// Health

```
const hl = sh_(SH.HL);
hl.clear();
hl.appendRow(['Metric', 'Value', 'Updated']);
hl.getRange(1, 1, 1, 3).setFontWeight('bold').setBackground('#4285f4').setFontColor('white');
```

```
setHL_('Last Price Poll (ET)', 'Never');
setHL_('Last Alert (ET)', 'Never');
setHL_('Total Ticks Collected', '0');
setHL_('Active Symbols', '0');
setHL_('API Errors (24h)', '0');
setHL_('Web App URL', 'Deploy via Extensions → Apps Script');
setHL_('Data Sources', 'Yahoo Finance (stocks) + Binance (crypto) - 100% FREE');
setHL_('Status', 'Initialized - Run QuickStart');
```

```
BuildDashboard_();
```

```
SpreadsheetApp.getActiveSpreadsheet().toast('Bootstrap complete!', 'Success', 3);
} catch (err) {
  logError_('Bootstrap_', err);
  SpreadsheetApp.getUi().alert('Bootstrap failed: ' + err.message);
}
}
```

```
/* ----- Ensure Tick columns match Watchlist ----- */
```

```

function EnsureTickColumns_() {
  try {
    const w1 = sh_(SH.WL).getDataRange().getValues().slice(1).filter(r => r[0] && r[4] !== 'FALSE');
    const syms = w1.map(r => String(r[0]).toUpperCase());
    const t = sh_(SH.TICKS);

    if (t.getLastRow() === 0) {
      t.appendRow(['Timestamp_ET']);
    }

    const lastCol = Math.max(1, t.getLastColumn());
    const header = t.getRange(1, 1, 1, lastCol).getValues()[0];
    const have = new Set(header.slice(1));

    syms.forEach(sym => {
      if (!have.has(sym)) {
        const newCol = t.getLastColumn() + 1;
        t.getRange(1, newCol).setValue(sym);
        t.getRange(1, newCol).setFontWeight('bold').setBackground('#fbbc04');
      }
    });

    return syms;
  } catch (err) {
    logError_('EnsureTickColumns_', err);
    return [];
  }
}

/* ----- Fetchers ----- */

```

```
/**
```

```
 * Fetch Binance crypto prices using parallel requests
```

```
 * @param {Array<string>} syms - Array of symbols
```

```
 * @return {Object} Map of symbol to price
```

```
 */
```

```
function fetchBinance_(syms) {
```

```
  if (!syms.length) return {};
```

```
  try {
```

```
    // Build all requests upfront
```

```
    const requests = syms.map(sym => ({
```

```
      url: `https://api.binance.com/api/v3/ticker/price?symbol=${encodeURIComponent(sym)}`,
```

```
      muteHttpExceptions: true
```

```
    }));
```

```
    // Fetch all in parallel - MUCH faster!
```

```
    const responses = UrlFetchApp.fetchAll(requests);
```

```
    const priceMap = {};
```

```
    responses.forEach((response, index) => {
```

```
      const sym = syms[index];
```

```
      try {
```

```
        if (response.getResponseCode() === 200) {
```

```
          const data = JSON.parse(response.getContentText());
```

```
          priceMap[sym] = data?.price ? Number(data.price) : null;
```

```
        } else {
```

```
          priceMap[sym] = null;
```

```
        }
```

```
      } catch (err) {
```

```
        console.warn(`Failed to parse ${sym}:`, err.message);
```

```
        priceMap[sym] = null;
```



```

    }
  });

  return priceMap;
} catch (err) {
  logError_('fetchBinance_', err, `Symbols: ${syms.join(',')}`);
  return Object.fromEntries(syms.map(s => [s, null]));
}
}

/**
 * Fetch stock prices from Yahoo Finance (FREE - no API key needed)
 * Uses UrlFetchApp.fetchAll for parallel requests
 * @param {Array<string>} syms - Array of symbols
 * @return {Object} Map of symbol to price
 */
function fetchYahoo_(syms) {
  if (!syms.length) return {};

  try {
    // Build all requests upfront
    const requests = syms.map(sym => ({
      url: `https://query1.finance.yahoo.com/v8/finance/chart/${encodeURIComponent(sym)}?interval=1d&range=1d`,
      muteHttpExceptions: true
    }));

    // Fetch all in parallel - MUCH faster!
    const responses = UrlFetchApp.fetchAll(requests);

    const map = {};
    responses.forEach((response, index) => {

```

```

const sym = syms[index];
try {
  if (response.getResponseCode() === 200) {
    const json = JSON.parse(response.getContentText());
    const result = json?.chart?.result?.[0];
    const price = result?.meta?.regularMarketPrice;

    map[sym] = (price !== null) ? Number(price) : null;
  } else {
    map[sym] = null;
  }
} catch (err) {
  console.warn(`Failed to parse ${sym}:`, err.message);
  map[sym] = null;
}
});

return map;
} catch (err) {
  logError_('fetchYahoo_', err, `Symbols: ${syms.join(',')}`);
  return Object.fromEntries(syms.map(s => [s, null]));
}
}

/* ----- Poller: writes one wide row in TICKS ----- */
function UpdateTicks_() {
  try {
    const wl = sh_(SH.WL).getDataRange().getValues().slice(1).filter(r => r[0] && r[4] !== 'FALSE');

    if (!wl.length) {
      setHL_('Status', 'No active symbols in watchlist');
    }
  }
}

```

```
    return;  
}
```

```
const syms = EnsureTickColumns_();  
const t = sh_(SH.TICKS);  
const header = t.getRange(1, 1, 1, t.getLastColumn()).getValues()[0];
```

```
const stock = w1.filter(r => r[1] === 'STOCK').map(r => String(r[0]).toUpperCase());  
const crypto = w1.filter(r => r[1] === 'CRYPTO').map(r => String(r[0]).toUpperCase());
```

```
// Fetch prices - Yahoo Finance for stocks (FREE), Binance for crypto (FREE)  
const mapS = fetchYahoo_(stock);  
const mapC = fetchBinance_(crypto);
```

```
// Build row  
const row = [now_()];  
header.slice(1).forEach(sym => {  
    row.push((sym in mapS) ? mapS[sym] : ((sym in mapC) ? mapC[sym] : null));  
});
```

```
// Append row  
t.appendRow(row);
```

```
// Auto-prune old data  
const maxRows = parseInt(cfg_('MAX_TICK_ROWS') || '10000', 10);  
const currentRows = t.getLastRow();  
if (currentRows > maxRows + 1) {  
    const deleteCount = currentRows - maxRows - 1;  
    t.deleteRows(2, deleteCount); // Keep header  
}
```

```

// Update health metrics
setHL_('Last Price Poll (ET)', now_());
setHL_('Total Ticks Collected', String(t.getLastRow() - 1));
setHL_('Active Symbols', String(syms.length));
setHL_('Status', 'Running');

    console.log(`Updated ${syms.length} symbols at ${now_()}`);
} catch (err) {
    logError_('UpdateTicks_', err);
    setHL_('Status', 'Error - Check Alerts sheet');

    if (cfg_('ALERT_ON_ERROR') === 'TRUE') {
        sendErrorEmail_(err, 'UpdateTicks_');
    }
}
}

/**
 * Send error notification email
 * @param {Error} err - Error object
 * @param {string} func - Function name
 */
function sendErrorEmail_(err, func) {
    try {
        const email = Session.getActiveUser().getEmail();
        if (email) {
            MailApp.sendEmail({
                to: email,
                subject: `TradingOps Error Alert: ${func}`,
                body: `An error occurred in ${func} at ${now_()}\n\nError: ${err.message}\n\nStack: ${err.stack}`
            });

```

```

    }
} catch (e) {
    console.error('Failed to send error email:', e);
}
}

/* ----- Webhook (TradingView & others) ----- */
function doPost(e) {
    try {
        // Validate secret if configured
        const sec = cfg_('WEBHOOK_SECRET');
        const got = (e?.headers?['X-Webhook-Secret']) ||
            (e?.headers?['x-webhook-secret']) ||
            (e?.parameter?.secret) || "";

        if (sec && String(sec) !== String(got)) {
            sh_(SH.AL).appendRow([now_(), 'DENY', "", 'Invalid webhook secret']);
            return ContentService.createTextOutput('forbidden').setMimeType(ContentService.MimeType.TEXT);
        }

        // Parse payload
        const raw = e?.postData?.contents || '{}';
        let o = {};
        try {
            o = JSON.parse(raw);
        } catch (parseErr) {
            o = { payload: raw };
        }

        const sym = String(o.symbol || o.ticker || "").toUpperCase();
        const px = Number(o.price || o.close || o.last || NaN);
    }
}

```

```
const action = String(o.action || o.signal || "");
```

```
// Enhanced logging
```

```
sh_(SH.AL).appendRow([
    now_(),
    'POST',
    sym,
    isFinite(px) ? px : "",
    JSON.stringify({
        action: action,
        price: px,
        raw: raw.substring(0, 500) // Limit payload size
    })
]);
```

```
setHL_('Last Alert (ET)', now_());
```

```
return ContentService.createTextOutput(JSON.stringify({
    status: 'success',
    timestamp: now_(),
    symbol: sym
})).setMimeType(ContentService.MimeType.JSON);
```

```
} catch (err) {
    logError_('doPost', err);
    sh_(SH.AL).appendRow([now_(), 'ERROR', "", "", String(err)]);
    return ContentService.createTextOutput(JSON.stringify({
        status: 'error',
        message: err.message
    })).setMimeType(ContentService.MimeType.JSON);
}
```

```
}
```

```
function doGet(e) {
```

```
  try {
```

```
    const sym = (e?.parameter?.symbol || "").toUpperCase();
```

```
    const price = e?.parameter?.price || "";
```

```
    const action = e?.parameter?.action || "";
```

```
    sh_(SH.AL).appendRow([
```

```
      now_(),
```

```
      'GET',
```

```
      sym,
```

```
      price,
```

```
      JSON.stringify({ action: action, params: e?.parameter || {} })
```

```
    ]);
```

```
    setHL_('Last Alert (ET)', now_());
```

```
    return ContentService.createTextOutput(JSON.stringify({
```

```
      status: 'success',
```

```
      timestamp: now_()
```

```
    })).setMimeType(ContentService.MimeType.JSON);
```

```
  } catch (err) {
```

```
    logError_('doGet', err);
```

```
    return ContentService.createTextOutput(JSON.stringify({
```

```
      status: 'error',
```

```
      message: err.message
```

```
    })).setMimeType(ContentService.MimeType.JSON);
```

```
  }
```

```
}
```

```
/* ----- Dashboard (charts auto) ----- */
```

```
function BuildDashboard_() {  
  try {  
    const d = sh_(SH.DASH);  
    d.clear();  
  
    // Title and controls  
    d.getRange('A1').setValue('TradingOps — Dashboard').setFontSize(18).setFontWeight('bold');  
    d.getRange('A2').setValue('Rows to display:');  
    d.getRange('B2').setValue(300).setFontWeight('bold');  
    d.getRange('A3').setValue('Total tick rows:');  
    d.getRange('B3').setFormula('=COUNTA(Ticks!A:A)-1').setFontWeight('bold');  
    d.getRange('A4').setValue('Last update:');  
    d.getRange('B4').setFormula('=IF(Ticks!A2="", "Never", Ticks!A2)').setFontWeight('bold');  
  
    // Data section  
    d.getRange('A6').setValue('Recent Price Data (auto-refreshing)').setFontWeight('bold').setFontSize(12);  
    d.getRange('A7').setFormula('=QUERY(Ticks!A:ZZ,"select * order by A desc limit "&$B$2,1)');  
  
    // Format  
    d.setColumnWidth(1, 200);  
    d.setColumnWidth(2, 120);  
  
    // Build charts if we have data  
    const t = sh_(SH.TICKS);  
    const cols = Math.max(2, t.getLastColumn());  
  
    if (t.getLastRow() > 1 && cols > 1) {  
      // Remove existing charts  
      d.getCharts().forEach(chart => d.removeChart(chart));  
    }  
  }  
}
```



```
// Chart 1: First 4 symbols
const chartCols1 = Math.min(5, cols); // Timestamp + 4 symbols
const c1 = d.newChart()
    .setChartType(Charts.ChartType.LINE)
    .addRange(d.getRange(7, 1, 350, chartCols1))
    .setOption('title', 'Primary Symbols - Price Trend')
    .setOption('legend', { position: 'bottom' })
    .setOption('hAxis', { title: 'Time' })
    .setOption('vAxis', { title: 'Price' })
    .setOption('width', 800)
    .setOption('height', 400)
    .setPosition(10, 1, 0, 0)
    .build();
d.insertChart(c1);
```

```
// Chart 2: All symbols
if (cols > 5) {
    const c2 = d.newChart()
        .setChartType(Charts.ChartType.LINE)
        .addRange(d.getRange(7, 1, 350, Math.min(12, cols)))
        .setOption('title', 'All Symbols - Price Trend')
        .setOption('legend', { position: 'bottom' })
        .setOption('hAxis', { title: 'Time' })
        .setOption('vAxis', { title: 'Price' })
        .setOption('width', 800)
        .setOption('height', 400)
        .setPosition(10, 10, 0, 0)
        .build();
    d.insertChart(c2);
}
```

```

    }

    console.log('Dashboard built successfully');
  } catch (err) {
    logError_('BuildDashboard_', err);
  }
}

/* ----- Menu + Triggers ----- */
function onOpen() {
  try {
    SpreadsheetApp.getUi().createMenu('TradingOps')
      .addItem('⚡ QuickStart (First Time Setup)', 'QuickStart')
      .addSeparator()
      .addItem('📊 Update Prices Now', 'UpdateTicks_')
      .addItem('📈 Rebuild Dashboard', 'BuildDashboard_')
      .addItem('🔄 Install Poll Trigger', 'InstallTrigger_')
      .addItem('🛑 Remove Poll Trigger', 'RemoveTrigger_')
      .addSeparator()
      .addItem('🧹 Cleanup Old Data', 'CleanupOldData_')
      .addItem('📄 Export to CSV', 'ExportToCSV_')
      .addItem('❓ Show Help', 'ShowHelp_')
      .addToUi();
  } catch (err) {
    console.error('Error creating menu:', err);
  }
}

function InstallTrigger_() {
  try {
    const mins = Math.max(1, parseInt(cfg_('POLL_INTERVAL_MIN') || '1', 10));

```

```
// Validate interval (Apps Script limits)
const validIntervals = [1, 5, 10, 15, 30];
const interval = validIntervals.includes(mins) ? mins : 1;

// Remove existing triggers
RemoveTrigger_();

// Create new trigger
ScriptApp.newTrigger('UpdateTicks_')
  .timeBased()
  .everyMinutes(interval)
  .create();

SpreadsheetApp.getActiveSpreadsheet().toast(
  `Price polling trigger installed! Updates every ${interval} minute(s).`,
  'Success',
  5
);

setHL_('Polling Interval', `${interval} minute(s)`);
} catch (err) {
  logError_('InstallTrigger_', err);
  SpreadsheetApp.getUi().alert('Failed to install trigger: ' + err.message);
}
}

function RemoveTrigger_() {
  try {
    const triggers = ScriptApp.getProjectTriggers();
    let removed = 0;
```

```
triggers.forEach(t => {  
  if (t.getHandlerFunction() === 'UpdateTicks_') {  
    ScriptApp.deleteTrigger(t);  
    removed++;  
  }  
});
```

```
if (removed > 0) {  
  SpreadsheetApp.getActiveSpreadsheet().toast(  
    `Removed ${removed} polling trigger(s).`,  
    'Success',  
    3  
  );  
}  
} catch (err) {  
  logError_('RemoveTrigger_', err);  
}  
}
```

```
function QuickStart() {  
  try {  
    const ui = SpreadsheetApp.getUi();  
    const response = ui.alert(  
      'TradingOps QuickStart',  
      'This will initialize all sheets and start price polling. Continue?',  
      ui.ButtonSet.YES_NO  
    );  
  
    if (response !== ui.Button.YES) {  
      return;  
    }  
  }  
}
```

```
}

// Show progress
SpreadsheetApp.getActiveSpreadsheet().toast('Setting up...', 'QuickStart', -1);

Bootstrap_();      // Create tabs + defaults
Utilities.sleep(1000); // Brief pause
UpdateTicks_();    // Pull prices immediately
Utilities.sleep(1000);
BuildDashboard_();  // Create charts
Utilities.sleep(1000);
InstallTrigger_();  // Start polling

SpreadsheetApp.getActiveSpreadsheet().toast('Setup complete!', 'Success', 5);

// Show welcome message
ui.alert(
  'Setup Complete!',
  'TradingOps is now running.\n\n' +
  '✓ Sheets initialized\n' +
  '✓ First price update complete\n' +
  '✓ Dashboard created\n' +
  '✓ Auto-polling enabled\n\n' +
  'Check the Dashboard tab to see your charts!',
  ui.ButtonSet.OK
);
} catch (err) {
  logError_('QuickStart', err);
  SpreadsheetApp.getUi().alert('QuickStart failed: ' + err.message);
}
}
```

```
function CleanupOldData_() {
  try {
    const ui = SpreadsheetApp.getUi();
    const response = ui.prompt(
      'Cleanup Old Data',
      'Keep how many recent rows in Ticks sheet? (Enter number)',
      ui.ButtonSet.OK_CANCEL
    );

    if (response.getSelectedButton() !== ui.Button.OK) {
      return;
    }

    const keepRows = parseInt(response.getResponseText(), 10);
    if (isNaN(keepRows) || keepRows < 1) {
      ui.alert('Invalid number entered. ');
      return;
    }

    const t = sh_(SH.TICKS);
    const totalRows = t.getLastRow();

    if (totalRows <= keepRows + 1) {
      ui.alert('No cleanup needed. Current rows: ' + (totalRows - 1));
      return;
    }

    const deleteCount = totalRows - keepRows - 1;
    t.deleteRows(2, deleteCount);
  }
}
```

```
    ui.alert(`Cleanup complete! Removed ${deleteCount} old rows.`);
  } catch (err) {
    logError_('CleanupOldData_', err);
    SpreadsheetApp.getUi().alert('Cleanup failed: ' + err.message);
  }
}
```

```
function ExportToCSV_() {
  try {
    const ui = SpreadsheetApp.getUi();
    ui.alert(
      'Export to CSV',
      'To export data:\n\n' +
      '1. Go to the Ticks sheet\n' +
      '2. Click File → Download → CSV (.csv)\n\n' +
      'This will export the current sheet as CSV.',
      ui.ButtonSet.OK
    );
  } catch (err) {
    logError_('ExportToCSV_', err);
  }
}
```

```
function ShowHelp_() {
  try {
    const ui = SpreadsheetApp.getUi();
    ui.alert(
      'TradingOps Help',
      'SHEETS:\n' +
      '• Config: API keys and settings\n' +
      '• Watchlist: Symbols to track (set Active=FALSE to disable)\n' +
```

```
'• Ticks: Historical price data\\n' +
'• Alerts: Webhook notifications\\n' +
'• Health: System status\\n' +
'• Dashboard: Charts and summaries\\n\\n' +
'MENU ITEMS:\\n' +
'• QuickStart: Initial setup (run once)\\n' +
'• Update Prices Now: Manual price fetch\\n' +
'• Install/Remove Poll Trigger: Auto-updates\\n' +
'• Cleanup Old Data: Remove old ticks\\n\\n' +
'For webhook setup:\\n' +
'1. Deploy as Web App (Extensions → Apps Script)\\n' +
'2. Copy URL to Health sheet\\n' +
'3. Use in TradingView or other platforms',
ui.ButtonSet.OK
);
} catch (err) {
  logError_('ShowHelp_', err);
}
}
```