📚 MIKE-GEN-LIBS USER GUIDE

Complete Workflows for Rapid Composition

🎯 QUICK START CHECKLIST

- [ ] mike-gen-libs installed at C:\Users\mike\Documents\gml-workspace\mike-gen-libs
- [ ] Export system files in place (src/export/universal_export.js)
- [ ] Rapid Quintet Generator ready (rapid-quintet-generator.html)
- [ ] Your GML apps accessible (RiffGen, TriadGen, Quartet Engine, etc.)

🎻 WORKFLOW 1: RAPID STRING QUINTET (3 Minutes)

Step-by-Step:

1. **Open Rapid Quintet Generator**
2. cd /c/Users/mike/Documents/gml-workspace/mike-gen-libs
3. explorer rapid-quintet-generator.html
4. **Generate Base Quintet**
    - Click GENERATE QUINTET
    - Set Tempo: 120 BPM
    - Set Key: D Major
5. **Export to RiffGen for Melody Enhancement**
    - Click EXPORT OPTIONS
    - Click Export to RiffGen
    - RiffGen opens with Violin 1 melody
    - Add ornaments, trills, variations
6. **Return Enhanced Melody to Quintet**
    - In RiffGen: Click Export to Quintet

- Quintet Composer receives enhanced melody
- Auto-distributes to all 5 string parts

Result: Full string quintet in under 3 minutes!

🎸 WORKFLOW 2: GUITAR + STRING QUARTET FUSION

The Dave Gilmour Section (Atmospheric Lead)

Step 1: Load Guitarist Profile

// In GML-Guitar-Profiles-Library

loadProfile('David_Gilmour_Lead.json')

// Exports: Sustained bends, delay-heavy phrases

Step 2: Generate Complementary Strings

1. **Open TriadGen**
    - Generate Em - G - D - Am progression
    - Export to Quartet Engine
2. **In Quartet Engine**
    - Receive chord progression
    - Auto-arrange for strings:
        - Violin 1: Tremolo on high harmonics
        - Violin 2: Sustained counter-melody
        - Viola: Rhythmic pizzicato
        - Cello: Deep pedal tones
3. **Combine in GML-ACE**
4. // GML-ACE receives both:
5. guitarPart = importFrom('Guitar-Profiles')
6. stringQuartet = importFrom('Quartet-Engine')
7.

8. // Auto-blend:
9. finalArrangement = blend(guitarPart, stringQuartet, {
10. guitarVolume: 0.7,
11. stringsVolume: 0.5,
12. reverb: 'hall'
13. })

Result: Pink Floyd-style atmospheric section with guitar floating over strings

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🎼 WORKFLOW 3: MULTI-COMPOSER COLLABORATION

Section A: Classical Opening (Mozart Profile)

1. **In Composer Profiles Extension**
2. loadComposer('Mozart_Chamber.json')
3. generateSection({
4. instruments: ['violin1', 'violin2', 'viola', 'cello'],
5. measures: 16,
6. style: 'classical_sonata'
7. })
8. **Export to Quintet Composer**
    - Add 5th part (Cello 2) as bass double
    - Export checkpoint: mozart_section_A.json

Section B: Jazz Fusion Bridge (Pat Metheny Profile)

1. **In Guitar Profiles**
2. loadProfile('Pat_Metheny_Jazz.json')
3. generateBridge({
4. chords: ['Gmaj7', 'Em9', 'Am11', 'D13'],
5. measures: 8

6. })
7. **Send to String FX Mapper**
    - Apply: Jazz articulations
    - Techniques: Slides, ghost notes, swing feel
    - Export to Quintet

Section C: Rock Finale (Jimmy Page Profile)

1. **Guitar Profiles → Generate Power Section**
2. loadProfile('Jimmy_Page_Riffs.json')
3. generateFinale({
4. intensity: 'high',
5. techniques: ['power_chords', 'palm_muting', 'harmonics']
6. })
7. **Infinite Riff Machine → Create Variations**
    - Take Page riff
    - Generate 4 variations
    - Export strongest to Quartet Engine
8. **Combine All Sections in GCC**
9. // In Generative Chamber Composer
10. finalPiece = {
11. sectionA: import('mozart_section_A.json'), // 0:00-1:30
12. sectionB: import('metheny_bridge_B.json'), // 1:30-2:15
13. sectionC: import('page_finale_C.json'), // 2:15-3:30
14. coda: generateTransition(sectionC, sectionA) // 3:30-4:00
15. }

Result: 4-minute piece blending Classical→Jazz→Rock with smooth transitions

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🚀 WORKFLOW 4: RAPID 10-PIECE ARRANGEMENT

Goal: Guitar Duo + String Quintet + Rhythm Section

Phase 1: Rhythm Foundation (30 seconds)

1. **Drum Engine**
2. generateGroove({ style: 'fusion', tempo: 110, pattern: '16th_note_funk'})// Export to GML-ACE

Phase 2: Harmonic Structure (45 seconds)

1. **TriadGen → Quick Progression**
    - C - Am - F - G (4 bars each)
    - Export to both Quartet Engine AND Guitar Profiles

Phase 3: String Arrangement (60 seconds)

1. **Quartet Engine receives triads**
    - Auto-voices for 4 parts
    - Export to Quintet Composer
2. **Quintet Composer**
    - Adds 5th voice (Cello 2)
    - Creates contrary motion
    - Export to GML-ACE

Phase 4: Guitar Layers (45 seconds)

1. **Guitar Profile 1: Rhythm (John Mayer style)**
2. loadProfile('John_Mayer_Rhythm.json')
3. generateComping(chordProgression)
4. **Guitar Profile 2: Lead (Eric Clapton style)**
5. loadProfile('Clapton_Blues_Lead.json')
6. generateSolo({
7. scale: 'C_pentatonic',

8. intensity: 'medium'
9. })

Phase 5: Final Assembly (30 seconds)

1. **GML-ACE: Combine Everything**
2. masterArrangement = { drums: importFrom('Drum-Engine'), bass: generateBassFrom(chordProgression), guitarRhythm: importFrom('Guitar-Profile-1'), guitarLead: importFrom('Guitar-Profile-2'), strings: importFrom('Quintet-Composer')}// Auto-mix with proper levelsfinalMix = autoBalance(masterArrangement)exportTo('MIDI_and_MusicXML')

Total Time: ~3 minutes Result: Professional 10-piece arrangement

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💡 WORKFLOW 5: THEME & VARIATIONS

Original Theme Generation

1. **RiffGen: Create 8-bar melody**
2. theme = generateRiff({ length: 8, key: 'G_major', contour: 'arch'})

Variation 1: String Quintet Treatment

1. **Export theme to Quintet Composer**
2. **Auto-harmonize for 5 voices**
3. **Apply baroque counterpoint rules**

Variation 2: Guitar Hero Version

1. **Send theme to Guitar Profiles**
2. **Load 'Steve_Vai_Virtuoso.json'**
3. **Add: Tapping, sweeps, harmonics**

Variation 3: Jazz Reharmonization

1. **Theme → TriadGen**
2. **Convert to jazz changes:**
    - Original: G - C - D

- Jazz: Gmaj7 - Cm9 - D7alt

Variation 4: Orchestral Finale

1. **All variations → GCC**
2. **Layer and combine:**
    - Strings play original theme
    - Guitar plays virtuoso variation
    - Full ensemble on jazz changes

🎯 WORKFLOW 6: QUICK FILM SCORE

Scene: Chase Sequence (90 seconds needed)

0:00-0:30 - Building Tension

1. **Quintet Composer**
    - Generate tremolo strings in minor key
    - Export to GML-ACE

0:30-1:00 - Action Peaks

1. **Drum Engine + Guitar Profiles**
2. // DrumsgeneratePattern('action_chase_drums')// Guitar (Metal profile)loadProfile('Metallica_Rhythm.json')generateRiff('palm_muted_sixteenths')

1:00-1:30 - Resolution

1. **TriadGen → Quartet Engine**
    - Major resolution chords
    - Quartet voices in contrary motion
    - Add Guitar Profile: 'Ambient_Clean.json'

Export complete score in 5 minutes!

📊 ADVANCED WORKFLOW: ALGORITHMIC COMPOSITION

Using Multiple Profiles Simultaneously

```
// In GML-ACE or custom script
function generateMultiStylePiece() {
  // Load 3 guitarist profiles
  const guitarists = [
    loadProfile('Hendrix_Psychedelic.json'),
    loadProfile('Segovia_Classical.json'),
    loadProfile('Pass_Jazz.json')
  ];

  // Load 3 composer profiles
  const composers = [
    loadComposer('Bach_Fugue.json'),
    loadComposer('Debussy_Impressionist.json'),
    loadComposer('Glass_Minimalist.json')
  ];

  // Generate sections
  sections = [];

  // Each guitarist plays with each composer
  guitarists.forEach((guitarist, g) => {
    composers.forEach((composer, c) => {
      const section = {
        guitar: guitarist.generate(8), // 8 bars
        strings: composer.generate({
```

```
            ensemble: 'string_quintet',
            measures: 8,
            harmonicLanguage: composer.style
          })
        };

        // Export each combination
        exportToApp({
          sectionId: `G${g}_C${c}`,
          data: section
        }, 'QuintetComposer');

        sections.push(section);
      });
    });

    // Create final 9-section piece (3x3 grid)
    return assembleFinalPiece(sections);
}
```

Result: 9 unique style combinations in one piece!

🔥 SPEED COMPOSITION CHALLENGES

Challenge 1: "2-Minute Symphony"

1. 0:00-0:30 - Generate quintet (Quintet Composer)
2. 0:30-1:00 - Add guitar lead (Guitar Profiles)
3. 1:00-1:30 - Create variations (Infinite Riff Machine)

4. 1:30-2:00 - Mix and export (GML-ACE)

Challenge 2: "Style Morph"

- Start with Mozart-style string quartet
- Every 30 seconds, blend in new style:
    - 0:30 - Add blues guitar
    - 1:00 - Shift to jazz harmony
    - 1:30 - End with metal power chords
- Use smooth transitions via GCC

Challenge 3: "The Relay"

- RiffGen creates 4-bar melody (20 sec)
- TriadGen harmonizes it (20 sec)
- Quartet Engine arranges it (20 sec)
- Guitar Profiles adds solo (20 sec)
- Quintet Composer adds 5th voice (20 sec)
- GML-ACE final mix (20 sec)
- **Total: 2 minutes for complete piece!**

📝 EXPORT FORMATS REFERENCE

From Any App to Any App:

Small Data (< 2KB) - URL Parameters

```
// Automatic for small transfers
exportToApp(smallData, 'TargetApp')
// Creates: http://localhost:3004?import=...
```

Large Data (> 2KB) - LocalStorage

```
// Automatic for large transfers
exportToApp(largeData, 'TargetApp')
```

// Creates: localStorage key + URL reference

Export Chains

RiffGen → Quintet → GML-ACE → Final Output

TriadGen → Quartet → Quintet → Final Output

Guitar → String FX → Quartet → Final Output

Drum → GCC → GML-ACE → Final Output

🛠️ TROUBLESHOOTING

Issue: "Export button does nothing"

Solution: Check console for errors, verify universal_export.js is loaded

Issue: "Can't find my exported data"

Solution: Check localStorage: localStorage.getItem('gml_export_[timestamp]')

Issue: "Apps won't connect"

Solution: Ensure all apps reference same mike-gen-libs folder

Issue: "Tempo doesn't match"

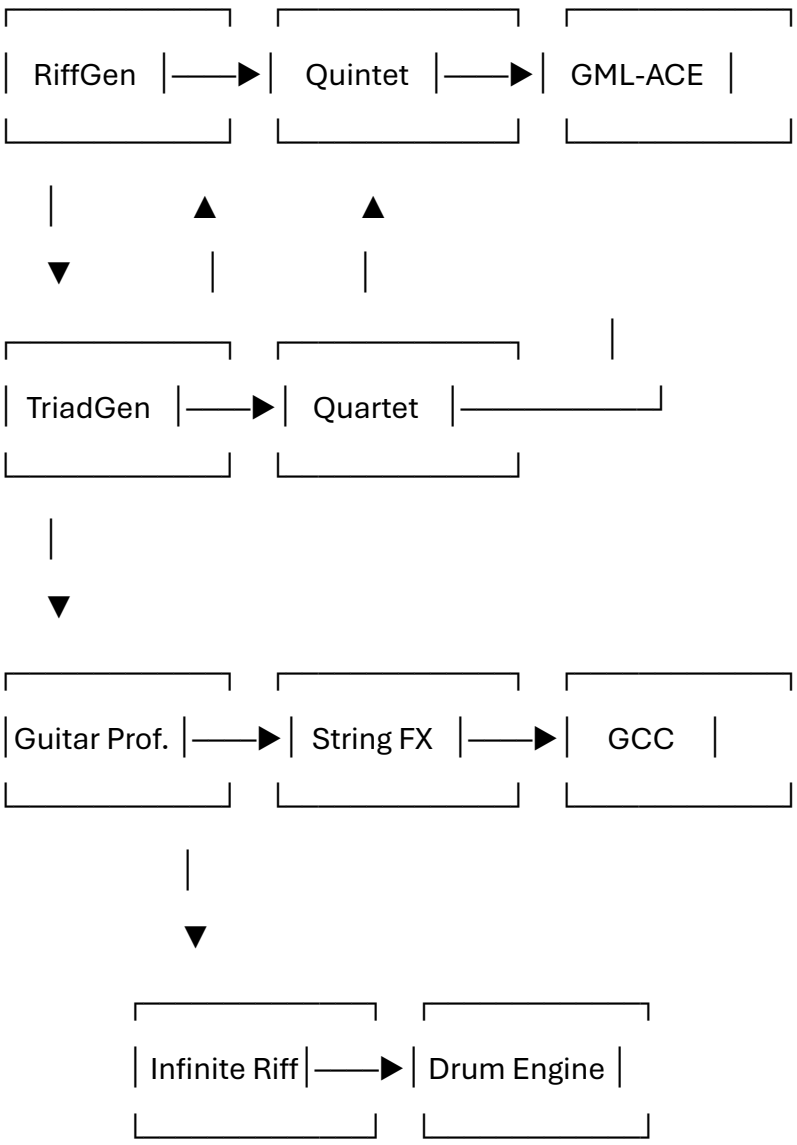
Solution: Standardize in export: data.tempo = 120

🚀 PRODUCTIVITY TIPS

1. **Create Templates**
    - Save favorite progressions in TriadGen
    - Save quintet templates with your preferred voicings
    - Keep guitar profile combinations that work well
2. **Keyboard Shortcuts** (add to your apps)
    - Ctrl+G = Generate
    - Ctrl+E = Export
    - Ctrl+Q = Quick Quintet

3. **Batch Processing**
4. // Generate 10 variations at once
5. for(let i = 0; i < 10; i++) {
6. generateQuintet();
7. exportToApp(currentQuintet, 'RiffGen');
8. }
9. **Chain Reactions**
    - Set up automatic chains:
    - When RiffGen exports → Quintet auto-harmonizes
    - When Quintet exports → GML-ACE auto-mixes

📊 COMPLETE APP NETWORK MAP



✨ **REMEMBER:**

Every app can talk to every other app through mike-gen-libs!

Your Universal Export System makes rapid composition not just possible, but effortless.

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