

Category Reorganization Summary

Changes Completed

1. Removed Categories (Deactivated)

- **Vibration Exciters** - Deactivated (products migrated to “Vibration & NVH Shakers”)
- **Sound Analyzers** - Deactivated (products migrated to “Sound Level Meters & Analyzers”)

2. Renamed Category

- **Sound Level Meters → Sound Level Meters & Analyzers**
- New slug: `sound-level-meters-analyzers`
- Description: “Professional sound level meters and analyzers for noise measurement, monitoring and analysis”
- Products migrated: 11 products
- Thai name: “เครื่องวัดระดับเสียงและเครื่องวิเคราะห์เสียง”

3. Added Subcategory

- **Power Amplifiers for NVH Shakers**
- Parent category: “Vibration & NVH Shakers”
- Slug: `power-amplifiers-nvh-shakers`
- Description: “High-power amplifiers for driving vibration shakers and exciters”
- Thai name: “เพาเวอร์แอมป์สำหรับเครื่องเขย่า NVH”
- Order: 1 (first subcategory under Vibration & NVH Shakers)

4. Confirmed Existing Subcategory

- **Preamplifiers**
- Already exists as subcategory under: Sensors > Acoustic Sensors
- Has 8 products assigned
- No changes needed



Current Category Status

Category	Status	Products	Parent	Notes
Sound Level Meters & Analyzers	✓ Active	11	None (Top-level)	Renamed and consolidated
Vibration & NVH Shakers	✓ Active	17	None (Top-level)	Existing category
Power Amplifiers for NVH Shakers	✓ Active	0	Vibration & NVH Shakers	New subcategory
Preamplifiers	✓ Active	8	Acoustic Sensors	Existing subcategory
Vibration Exciters	✗ Inactive	0	-	Deactivated
Sound Analyzers	✗ Inactive	0	-	Deactivated



Product Migrations

Sound Level Meters & Analyzers

- Migrated 11 products from:
- “Sound Level Meters” category
- “Sound Analyzers” category
- All products now consolidated under the unified category

Vibration & NVH Shakers

- Contains 17 products
- Subcategory “Power Amplifiers for NVH Shakers” added for future product assignments

Category Hierarchy

```

Sound Level Meters & Analyzers
├─ Class 1 Sound Level Meters
├─ Class 2 Sound Level Meters
└─ Personal Noise Dosimeters

Calibrators
├─ Acoustic Calibrators
└─ Vibration Calibrators

Sensors
├─ Acoustic Sensors
│   └─ Measurement Microphones
│   └─ Preamplifiers ✨ (already existed)
├─ Vibration Sensors
│   └─ Accelerometers

Calibration Systems
├─ Acoustic Calibration Systems
└─ Vibration Calibration Systems

Vibration & NVH Shakers
└─ Power Amplifiers for NVH Shakers ✨ (newly added)

```

Technical Implementation

Files Modified

1. `scripts/setup_hierarchical_categories.ts` - Updated category definitions
2. `scripts/remove_categories.ts` - Created to deactivate old categories
3. `scripts/migrate_products_to_new_categories.ts` - Migrated products to new structure

Database Changes

- Updated Category table with new names, slugs, and descriptions
- Deactivated old categories (active = false)
- Migrated product category references
- Recalculated product counts for all categories

Scripts Created

- `remove_categories.ts` - Deactivates deprecated categories
- `migrate_products_to_new_categories.ts` - Migrates products to new categories
- `check_new_categories.ts` - Verifies new category structure

Verification

All requested changes have been successfully implemented:

- [x] Removed “vibration exciter” category
- [x] Removed “sound analyzers” category
- [x] Renamed “sound level meter” category to “Sound Level Meters & Analyzers”
- [x] Added “preamplifiers” subcategory under “sensors” (already existed)
- [x] Added “Power Amplifiers for NVH Shakers” under “vibration and NVH shakers”

Next Steps (Optional)

If you want to assign products to the new “Power Amplifiers for NVH Shakers” subcategory:

1. Use the admin panel at `/admin/categorize-products` to assign products
2. Or run a script to auto-assign power amplifier products to this category

Notes

- Subcategories are accessible through their parent categories in the hierarchy
- The reorganization maintains SEO-friendly slugs
- All product counts have been recalculated
- Old category URLs will return 404 as they are now deactivated