DX7 Voice Data Sheet Generator

A Python script that generates human-readable data sheets from Yamaha DX7 32-voice SysEx files (`.syx`). This tool is perfect for archiving, sharing, or manually re-entering patches into a hardware synthesizer or a software editor like Dexed.

📋 Features

- **Auto-detects banks**: Scans the current directory for all available `.syx` files and presents them for selection.
- **Interactive selection**: Lists all 32 patch names from the chosen bank and prompts you to select one.
- **Generates detailed data sheets**: Creates a complete data sheet for the chosen patch.
- **Organized output**: Saves the data sheet as a `.txt` file in an automatically created subfolder named `Sheet`.
- **Authentic formatting**: Formats all parameters to match the DX7's display logic.
- **Print-optimized**: The layout is designed to fit on a single A4 page.

⚙️ Requirements

- Python 3.x

🚀 How to Use

Operation is fully interactive in the console; no command-line arguments are needed.

1. **Prepare Your Files**: Place the script (`dx7sheet.py`), the batch file (`start.bat` for Windows), and your `.syx` bank files all in the same folder.
2. **Run the Script**:
    - **Windows (Recommended):** Simply double-click the `start.bat` file.
    - **Other Systems (or manually):** Open a terminal or command prompt, navigate to the script's folder, and run the command `python dx7sheet.py`.
3. **Select a Bank**: The script will list all found `.syx` files. Enter the number of the file you want to load and press Enter.
4. **Select a Patch**: Next, a list of the 32 voices from the selected bank will be displayed. Enter the number of the patch you want to convert and press Enter.
5. **Done**: The data sheet is displayed in the console and simultaneously saved as a text file in the `Sheet` subfolder.

Example Workflow

Here is what the process looks like in the console:

```
--- DX7 Voice Data Sheet Generator ---
Available SysEx files:
----------------------------------
  01: ROM1A.syx
  02: Soundplantage.syx
----------------------------------
Which file to load? (1-2): 1

Loading file 'Soundplantage.syx'...
Bank 'Soundplantage.syx' loaded. 32 voices found.
-------------------------------------------------
  01: BRASS 1         17: TikTok
  02: STRINGS 1       18: GLOCKEN
  ...                 ...
  16: SYNTH BASS      32: GUITAR 1
-------------------------------------------------
Which patch to convert to a data sheet? (1-32): 17

--- Data sheet generated successfully! ---

============================================================
                    DX7 VOICE DATA SHEET
============================================================
Bank: ROM1A.syx       Voice #11: E.PIANO 2
... (Rest of the data sheet) ...

Saved as: 'Sheet\E.PIANO 2.txt'
```

The Motivation Behind the Script

Many online communities for synthesizer enthusiasts, like subreddits, are fantastic places to share knowledge and sounds. However, a common frustration is that most of these platforms don't allow users to upload files like .syx or .zip directly in their replies. This makes it difficult to share a DX7 patch with someone who is asking for a specific sound.

I wanted a simple, universal solution to this problem. The goal was to find a pure text-based method to share patches that bypasses file upload restrictions entirely.

This script is the result. It converts a binary SysEx file into a clean, human-readable text data sheet. This format is perfect for online forums because:

- **It's just text.** You can copy and paste the entire data sheet directly into a Reddit comment or any other text field.
- **It's safe and accessible.** No one has to download a file, which removes security concerns and extra steps like unzipping.
- **It's universal.** Anyone can read the parameters and manually enter them into their hardware DX7 or a software VST like Dexed to perfectly replicate the sound.

This project was created to provide a simple and effective tool for the DX7 community to easily share patches without barriers.

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