

## [RF-2b]\_DD-Functions.md

### ⚙️ Producer.ai Function Inventory

This inventory is derived from the API payload structure and represents the full boundary of the AI chat agent's control.

#### Audio Generation Core

Function Name	Description	Key Parameters
riff_create_custom	Create a new song from scratch using structured sound prompts and lyrics.	lyrics_id , sound_prompts[] , seed , weirdness
riff_create_cover	Transform an existing song or audio into a new style (Remix).	audio_input , cover_strength , sound_prompt , lyrics_id
riff_replace_audio	Re-generate specific time regions of a song while keeping the rest identical (regional mask).	audio_input , clips_to_replace[] , sound_prompt , weirdness
riff_extend_audio	Continue a song from a specific timestamp or the end.	audio_input , start_s , extend_duration_s , lyrics_id
riff_stem_swap	Isolate one stem (vocal/inst) and regenerate the other.	audio_input , swap_type ('vocals' or 'instrumentals') , sound_prompt
riff_create_vibe	Create a 10s stylistic audio reference ('Vibe') from a song for later injection.	audio_input , start_s

#### Audio Processing and Analysis

Function Name	Description	Key Parameters
riff_split_stems_v2	Separate a track into 4 distinct stems: Vocals, Drums, Bass, Other.	id (source audio UUID)
apply_audio_effect	Apply a node graph of deterministic DSP effects (EQ, Reverb, Compression, etc.).	graph[] (array of node objects), output_title
listen_to_audio_from_url	AI listens to audio and describes it textually (useful for analysis).	audio_url , prompt (what to listen for)
riff_identify_musical_key	Detect the musical key of a track.	audio_input

#### Lyrics Engine

Function Name	Description	Key Parameters
write_lyrics	Generate lyrics using the Ghostwriter agent.	prompt (context, genre, topic)
register_lyrics	Save user-written text as a lyrics object (generates a UUID).	lyrics (string)

## Visuals and Video

Function Name	Description	Key Parameters
music_video__create	Generate a full music video.	song_id , style_image_url , user_message
image_tools__generate_image	Create an image from text (for cover art).	prompt , aspect_ratio
video_tools__generate_video	Generate a short video clip (4-8s) from text or image.	inputs (Text or Image based)

## Data Retrieval

Function Name	Description	Key Parameters
riffusion_data_songs__fetch_user_songs	Get a list of the user's generated songs.	num_songs , sort_order
riffusion_data_songs__fetch_trending	Get trending songs from the platform.	type ('daily', 'weekly', etc.)