Experiments

Models







Name	VoiceFixer	SSR	GSR	Training sets	Testing sets
Unprocessed	X	X	X	/	DENOISE; DEREV; SR; DECLI; ALL-GSR;
Oracle-Mel	X	X	X	/	DENOISE; DEREV; SR; DECLI; ALL-GSR;
Vocoder-TFGAN	X	X	X	VCTK-Train; HQ-TTS; AISHELL-3	DENOISE; DEREV; SR; DECLI; ALL-GSR;
Denoise-UNet	X	✓	X	VCTK-Train; VD-Noise;	DENOISE; ALL-GSR;
Dereverb-UNet	X	✓	X	VCTK-Train; RIR-Train;	DEREV
SR-UNet	X	✓	X	VCTK-Train;	SR
Declip-UNet	X	✓	X	VCTK-Train;	DECLI
NuWave	X	✓	X	VCTK-Train;	SR
SEANet	X	✓	X	VCTK-Train;	SR
SSPADE	X	✓	X	/	DECLI
GSR-UNet	X	X	✓	VCTK-Train; VD-Noise; RIR-Train;	DENOISE; DEREV; SR; DECLI; ALL-GSR;
VF-DNN	✓	X	✓	VCTK-Train; VD-Noise; RIR-Train;	DENOISE; DEREV; SR; DECLI; ALL-GSR;
VF-BiGRU	✓	X	✓	VCTK-Train; VD-Noise; RIR-Train;	DENOISE; DEREV; SR; DECLI; ALL-GSR;
VF-UNet-S	✓	X	✓	VCTK-Train; VD-Noise; RIR-Train;	DENOISE; DEREV; SR; DECLI; ALL-GSR;
VF-UNet	✓	X	✓	VCTK-Train; VD-Noise; RIR-Train;	DENOISE; DEREV; SR; DECLI; ALL-GSR;

Evaluation

Metrics

(SSIM)

distance

Signal

Structural

Log-spectral

Scale

Similarity

(SiSNR)

Noise

Invariant



Spectralgram



Noise

(SiSPNR)