# TELEPRINTER

23audio

TYPE IT. PLAY IT.

USER GUIDE

Guide · version 1.1.0

TELEPRINTER is an instrument that plays the text you type. Every character is its own small sound: capitals blip, lower case beeps, numbers and symbols tick. Play a note and a ripple spreads out from the key, reading the characters it reaches in time with your song. Six robots can also read your words out, or sing them, on the notes you play.

It's made for sci-fi computers, interfaces, robots, alarms and data sounds for film and games, and for musical arps, riffs and glassy patterns with the machine ticking through them. This guide gets you playing in a few minutes, then explains every control.

## 1 Install

**Mac**

Quit your DAW, open the **.pkg** and follow the steps. Click **Customise** to leave out any part you don't need: Audio Unit (Logic, GarageBand), VST3 (most other DAWs), AAX (Pro Tools) and the TELEPRINTER app, which you can play on its own from a MIDI keyboard.

Needs macOS 11 or later, on Apple Silicon or Intel.

**Windows**

Quit your DAW and run the **.exe**. If Windows says "Windows protected your PC", that's only because the installer is new: click **More info**, then **Run anyway**. It installs VST3, AAX (Pro Tools) and the TELEPRINTER app.

Needs Windows 10 or 11, 64-bit.

## 2 Unlock it

Open TELEPRINTER and either **drag your licence file onto the TELEPRINTER window**, or copy your licence code (it starts `TP1-`), click the round `i` at the top right, paste it into the box and click `INSTALL`. You only do this once: every DAW on that computer then sees it. There's no account to make.

Without a licence TELEPRINTER runs as a demo: everything works, but every minute or so the sound fades away for a few seconds, then fades back. An amber `DEMO` badge sits in the top strip while it's unlicensed (it reads `DEMO: PAUSED` while the sound is away); click it to open the licence card.

## 3 Find it in your DAW

TELEPRINTER is an instrument, so it goes on an instrument track, not as an effect.

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| **Logic Pro** | Make a Software Instrument track, click the instrument slot, then AU Instruments › 23audio › TELEPRINTER. |
| **Pro Tools** | Make an Instrument track and pick TELEPRINTER from the instrument plug-ins. |
| **Ableton Live, Cubase, Reaper, Studio One and others** | Look for TELEPRINTER under 23audio in the instruments list. If it isn't there, rescan your plugins (in the DAW's plugin settings). |

Middle C is **C3**, as in Logic. The keys go from A0 to C8.

## 4 The window




Glass Letters, with a chord held. The four panels across the top; then the printout, your text and the switches; then the field over the keys.

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| **The field** | Your text, repeated across the screen. Each note sends a ripple up from just above its key (low notes left, high right) and reads the characters it reaches, one step at a time. Each lights up as its sound plays. Click or drag in the field to play; lower down plays louder. |
| **The printout** | What each note is reading as you hear it: a line of tape per note, the newest character at the green print head. The colours show each character's sound. A dot is a space, which is a rest. On the right: the last character's byte, sound and note. What's printed stays there, so a melody prints as one message. |
| **Your text** | Type anything in the box. What you type is what you play. Each space is a rest, so two spaces make two rests. `Aa` at its right end picks the lettering: Terminal or Digital. That's your own choice for every project, not saved in the song. |
| **FIT** | Next to `Aa`. Click it and your text is re-spaced so it loops in 1, 2, 4 or 8 whole bars, in time with the song at the current SPEED and time signature. **To the bar** (the usual) keeps your spacing and adds rests to fill the bar; **On the beat** starts every word on a beat, with a breath after a full stop or comma. Pick between them with the arrow. A long line gets its rests shared out, most at full stops. Changed SPEED? Click FIT again. Cmd+Z (Ctrl+Z) takes it back. |
| **The keys** | The whole piano, A0 to C8, under the field. Click or drag to play; lower on a key plays louder. Keys light while their notes play. |
| **Presets** | The name at the top. Click it for the list, or step through with the arrows. A `*` means you've changed something since you loaded it. |
| **KEY and LOCK** | Your song's key, at the top right. More in **Playing**, section 9. |

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| **Knobs** | Drag up and down to turn; hold Shift for fine moves. Double-click a knob to put it back to its starting point. The arrows either side of a choice step through it. |
| **Help as you go** | Point at any control and the strip along the bottom says what it does in one line. The `?` at the bottom left switches the help on and off; while it's on, each panel's heading shows a few words in green too. |
| **Window size** | `SIZE` at the bottom right makes the window bigger or smaller. TELEPRINTER remembers it. |

## 5 A first sound in a minute

1. **Pick a preset.** Click the preset name and try **Glass Letters** (Music: Glass & Bells) or **Ship Computer** (Sound Design: Computers).
2. **Hold a note.** Play and hold a key around C3. The ripple reads your text out, step by step, in time with the song.
3. **Type your own words.** Click the text box, type a line and play again. A word in the text becomes a riff you can repeat.
4. **Hold a chord.** Each note gets its own ripple and its own line on the printout.
5. **Move the mod wheel.** Out of the box it scrambles the characters, a few at a time. Bring it back down and they come back.
6. **Try a robot.** Load **Mayday Bazza** from Robot Voices and play a few notes.

## 6 Panel 1: Reading

How your text is read: in what order, how fast and in what time.

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| **READ** | **Nearest first**: the characters closest to the key, as the ripple spreads, so each note reads a different part of the text. **As typed**: your text in order, so a word becomes a riff you can repeat. While a robot says Words or Letters on the beat or naturally, it always reads as typed, so the words come out whole. |
| **SPEED** | How fast the characters are read: one a step, as a note length at the song's tempo, from 1 bar down to 1/64, with triplets. |
| **LOOP** | How many characters a held note reads before it goes round again: 4 to 64. **Endless** keeps reading outward and never repeats. |
| **TIMING** | **Lock to beat** (the usual): every character lands on the song's grid, starting on the next step. **Lock, play at once**: the first character sounds the moment you play, so chords played just ahead of the beat are heard straight away; the rest land on the grid. **Free**: starts the moment you play and keeps its own time, best for playing leads live. |
| **SCATTER** | Breaks up the even rhythm. Locked to the beat: more gaps and quick double-time clusters the higher it goes, always on the song's grid. Free: characters sound as the ripple reaches them, so they bunch and scatter like rain. |
| **FOLLOW SONG** | On: the text is read at the song's tempo. Off: at TEMPO. |
| **TEMPO** | The reading speed when FOLLOW SONG is off, 60 to 180 bpm. |
| **KEY UP STOPS** | On: letting go of a key stops its reading, like a normal instrument (the sound already playing rings on). Off: a quick tap still reads its whole loop, for bursts of data. |

## 7 Panel 2: Sound

What each character plays.

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| **VOICE** | What the letters play: **Digital**, Glass, Pluck, Warm, Soft, Felt piano, Music box, Harp, Hum, Saw bass or Metal bass. Numbers, symbols and the shade blocks stay digital ticks and chirps, so the machine runs through the notes. Lower case plays softer than capitals. |
| **SCALE** | The notes the characters can land on, counted up from the key you play: Minor or Major pentatonic, Minor, Major, Machine (5ths and octaves), One note (every character plays the key itself) or Alien. |
| **OCTAVES** | Lets some characters jump up an octave (**Up**), or up and down. **None** keeps them all in one octave. |
| **PAD SOUND** | The tone of the pad under each note. **From the text** builds it from the characters being read, so it shifts as they change. **Warm** is a soft, steady held key. |
| **DECAY** | How long each character's sound lasts, from short clicks to ringing tails. |
| **DRIVE** | Distortion, from a warm push to a fuzzy roar, at about the same level. Made for the basses, and it roughens the ticks too. |
| **BITS** | Crushes the sound. 16 is clean; low settings get gritty fast. |
| **VELOCITY** | How much playing harder matters: louder, and brighter on the instrument voices. Off: every note plays the same. |
| **PAD** | A soft held tone under each note, an octave down. Its tone is PAD SOUND. |

## 8 Panel 3: Your text and the robots

### What your text turns into

Every character is read as a number (its byte). The number picks the kind of sound and the note in the scale:

- **Capitals** blip, **lower case** beeps, **numbers and symbols** tick, the shade blocks  chirp, and a **space** is a rest.
- The last bits of each character pick its note, so `A` and `B` play different notes of the scale.
- The list in this panel shows which of your characters make which sound, as the controls are now. Its colours match the printout's.

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| **FLIP** | Flips bits inside every character, which moves them to other sounds and notes. Watch the list change. |
| **SHIFT** | Rolls the bits round inside each character: another way to move them between sounds. FLIP and SHIFT never change your text, so turning them back to off brings back the sound you had. |
| **MUTATE** | Characters swap on their own for others from your text, so a held note keeps changing: gently low down, a fifth of the field a second at the top. Turn it back to off and the field heals to your text within a moment. |

### The robots

Pick a robot with `ROBOT` and it reads your text out on the notes you play. Letters and numbers are spoken; symbols keep their ticks. Chords make a robot choir.

The robots speak English. Words in other languages are read with an English robot accent, which can be fun in itself.

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| **Doris** | Soft and polite: the friendliest voice. |
| **Bazza** | Metal, in tune with the note. |
| **Clive** | Metal with the classic robot wobble. |
| **Reginald** | Metal with a slower, rougher wobble. |
| **Little Kevin** | An old talking toy. |
| **Big Norman** | Deep. Play him low. |




Mayday Bazza (Robot Voices): the word being said lights up in the field as one piece.

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| **SAYS** | **Words**: says each word as its first letter is read. **Letters**: spells it out, one letter name a step (with a British zed). **Babble**: a made-up syllable for every character, the same character always the same syllable. Robot chatter, no words. |
| **TALKS** | **On the beat**: each word lasts as many steps as it has letters, locked to the song.<br>**Natural**: each word at its own pace, as someone talking.<br>**Sing**: play a melody. Each new note sings the next syllable of your text, held as long as the key. Notes played together sing the same syllable.<br>**Arp**: hold a chord. Every step (SPEED) sings the next syllable on the next note up, round and round.<br>**Sing early**: as Sing, but each vowel lands exactly on the note, as a singer's does. To do that TELEPRINTER asks your DAW for 120 ms of latency: the DAW plays your recorded notes that much early, so playback is in time, but playing live feels 120 ms late. Record with Sing, then switch to Sing early for playback.<br>In Sing and Arp, SAYS still chooses: syllables, letter names or babble. |
| **INTONATION** | Shows while the robot talks (On the beat or Natural). How much the voice rises and falls through each word: up into the stressed syllable and down after it. A full stop falls, a question mark rises, a comma lifts. Off is a flat monotone. |
| **AUTO VIBRATO** | Shows in its place while the robot sings (Sing, Arp or Sing early). A sung note held longer than a beat grows a gentle vibrato, as a singer's does. Short notes stay straight. |
| **ROBOT LEVEL** | How loud the robot is. |
| **RESTART** | Beside INTONATION. In Sing and Sing early each new note carries on to the next syllable; RESTART makes the next note sing the first syllable of your text again. It's dimmed while there's nothing to restart. |

> **Starting from the top.** The words start again by themselves when the song starts playing, when it jumps back (a cycle going round), and when you change the text. A key **below A0** (MIDI notes 0 to 20) also starts them again without playing anything: put one at the start of a region as a key switch. Clips that loop on their own, such as Logic's Live Loops or Ableton Live's Session view, don't tell TELEPRINTER they've looped, so they need that key switch at the clip's start.

The robots work best with plain words. Numbers are read one digit at a time. A stretched word is tidied up for the robot: `nooooo` is said as "no", `pleeease` as "please". While a word is said or sung, its letters stay lit in the field.

## 9 Playing

### KEY and LOCK

A DAW can't tell a plugin its key, so set your song's key once at the top right: click it, pick a note, then a scale (Major, Minor, Dorian, Phrygian, Lydian, Mixolydian, Harmonic minor, or Major or Minor pentatonic).

`LOCK` moves every note into the key, whatever you play: best for the musical presets. The key is saved with the project, and presets leave it alone.



The key card.

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| **HOLD** | A key keeps playing after you let go, until you play it again. Latch a few keys for a chord of ripples, then change the controls while it plays. Turning HOLD off lets them all go. |
| **READ ON** | Each new note carries on reading your text where the last one stopped, at its own pitch, instead of starting from the top. Change note mid-word and the robot carries on with the word, gliding to the new note at the next syllable. Notes played together start at the same place. It starts from the top again when you change the text, the song starts or loops back, you press RESTART or play a key below A0. |
| **CHORD** | One key plays a whole chord: Minor, Major, Sus, Power, Minor 7 or Major 7, each note with its own ripple and reading. With LOCK on, the chord is built from the key's own notes, so it always fits the song. |
| **KEEP TEXT** | Beside the text box. On: presets change the sound only, and your text stays. Off: each preset brings its own text. |
| **Sustain pedal** | Holds notes, as on a piano. |

### The mod wheel

Choose its job in `MOD WHEEL`. No controller? Drag the little wheel beside it.

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| **Scramble** | The usual job. Turns characters into random ones, each on its own: a little wheel scrambles a few, all the way up scrambles them all, and back down puts them back. A robot word with a scrambled letter turns to babble. |
| **Mutate** | Turns MUTATE up from where the knob is to full. Bring the wheel down and the changed characters heal back. |
| **Scatter** | Turns SCATTER up, breaking up the rhythm. |

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| **Tone** | Darkens the sound. |
| **Vibrato** | Gives the robots a singer's wobble. |
| **Off** | The wheel does nothing. |




Hacker Terminal with the mod wheel 60% up on Scramble: the scrambled characters show what they play as now.

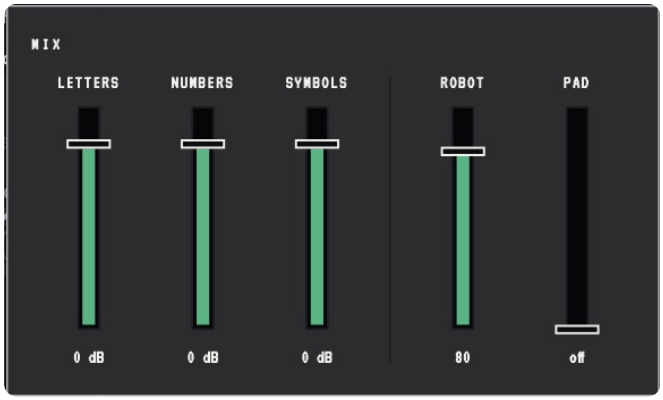
## 10 Panel 4: Effects and MIX

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| **TONE** | Softens the top end as you turn it down. |
| **REVERB** | How much reverb. SIZE and SHIMMER shape it. |
| **SIZE** | The reverb's size, from a small room to a huge hall. |
| **SHIMMER** | The reverb's tail pitched up an octave and fed back, so it rises and glitters. |
| **ECHO** | A ping-pong echo, left then right, three steps apart. |
| **WIDTH** | Spreads the characters across the speakers by where they sit in the field. The basses stay in the middle. |
| **OUTPUT** | The level out. Presets leave it alone. |
| **LOW** | The weight under it all: a shelf at 120 Hz, up or down. |
| **MUD** | Clears the boxy, muddy middle (about 150 Hz to 1 kHz) that builds up in chords and the warmer voices. |
| **BRIGHT** | Presence and sparkle: a shelf from about 2 kHz up, up or down. |

### MIX

The `MIX` button at the right of the EFFECTS heading opens a small mixer: **LETTERS**, **NUMBERS** and **SYMBOLS** (by the character you typed, whatever FLIP and SHIFT make it play), plus **ROBOT** and **PAD** (the same as their knobs). All the way down is off.

Use it to tame the ticks under a melody, or to keep only the robot. Your MIX stays as it is when you change presets, as OUTPUT does.



The MIX card.

## 11 Presets

Over 150 ready-made sounds, each with its own text, in two families:

- **Sound Design**: Computers, UI & Interfaces, Beeps & Signals, Alien & Creature, Machines & Weapons, Steam & Clockwork, Alarms & Glitch.
- **Music**: Leads, Glass & Bells, Plucks & Keys, Arps & Riffs, Bass & Drive, Beds & Lullabies.
- **Robot Voices**: the six robots talking and singing. **Showcase**: the sounds from the TELEPRINTER web page.

A preset is the sound, not your song. It leaves how you play alone: TIMING, FOLLOW SONG, KEY UP STOPS, HOLD, READ ON, CHORD, VELOCITY, the mod wheel's job, AUTO VIBRATO, the key and LOCK, MIX and OUTPUT. A new preset starts clean: the sound stops and any held notes are let go, so play again to hear it.

### Your own presets

Click the preset name and choose **Save As...**, type a name and click **Save**. It keeps the sound and the text you have now. Your presets are listed under **Your presets** in the same menu, where you can also delete the one loaded and **Show Presets Folder**.

Unlike a factory preset, one of yours brings back everything you saved, CHORD, HOLD, the mod wheel and the key too, because that's usually why you saved it. Only OUTPUT stays as it is. Each is a **.teleprinterpreset** file, kept apart from the factory presets so an update never touches them:

| | |
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| **Mac** | ~/Library/Application Support/23audio/TELEPRINTER/Presets |
| **Windows** | %APPDATA%\23audio\TELEPRINTER\Presets |

Your text and settings are also saved with your project, and with your DAW's own presets.

## 12 Tips for Logic and other DAWs

- **Timing.** Leave TIMING on Lock to beat and FOLLOW SONG on, and everything lands on the song's grid, even notes you play a little late. For live leads, try Free.
- **Writing music.** Pick SPEED 1/4, 1/2 or 1 bar for slow, spacious lines; 1/16 and faster for arps and data.
- **Cycle and loops.** When Logic's cycle goes round, the robots' words start again from the top, and so does READ ON. Live Loops and Ableton Live's Session view clips don't say when they loop: put a note below A0 at the clip's start.
- **Sing early.** DAWs make up for a plugin's latency in playback, so TELEPRINTER's 120 ms is taken care of when the song plays. Record your part with Sing, then switch to Sing early.
- **Soft notes.** Velocity really counts: a note at half velocity is about 7 dB down. Turn VELOCITY down if you want every note the same.

- **In a mix.** The robots sit about level with the letters. If they get lost, raise ROBOT LEVEL, or pull the letters down in MIX. MUD and BRIGHT clean up a busy chord.
- **Sound design.** Print the text you need, hold one note with KEY UP STOPS off, and bounce. Try SCALE One note and VOICE Digital for clean computer readouts.




Harp Rain after a chord and a melody: a line of tape per note, and what was read stays printed.

## 13 About and credits

The round `i` at the top right shows the version, your licence, and the box to paste a licence code. The robots' words come from the **CMU Pronouncing Dictionary**, © 1993-2015 Carnegie Mellon University. Its licence, and the fonts' (SIL Open Font License), are in **Third-party notices.txt**, installed with TELEPRINTER.

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