Heuristic Evaluation of [Lovestep]

1. Problem

Lovestep is a mobile application that aims to provide an easy way for people to create collaborative music in real-time on the go.

2. Violations Found

1. **[H2-10 Help and Documentation] [Severity 2] (found by A, B, and C)**

While I enjoy the simplicity and humor behind the options "make love," "load love," and "spread love," I also struggled to understand what those options meant as a new user of the interface. When I first looked at the UI, I also didn't know what the app was supposed to do –I don't know if you want that to be apparent to users who don't know what the app is going into it. Once I knew that you worked on an app to facilitate music collaboration, it was a bit easier to infer what your button options meant. I would suggest keeping those names, but add a little information button in the corner of each one (an "i" that the user can tap on) or just write a brief parenthetical description in small font under each option. For example, under "Load Love," you could add "(previous projects)."

2. **[H2-5 Error Prevention] [Severity 2] (found by A and B)**

When I clicked "Make Love," I noticed that there's an option at the top left to invite someone immediately. I'm assuming that the user has to first enter a BPM value and a key, so maybe the options to "Invite" and "Add" should be greyed out until the user fills out those fields.

3. **[H2-5 Error Prevention] [Severity 3] (found by A)**

Beginning musicians might not know what key is best, so maybe you should have a default. Start in the key of C, for example, and list it as "C (default)." Then you can name the option "Change key" instead of "key."

4. **[H2-9 Help users recognize, diagnose, and recover from errors] [Severity 2] (found by A)**

I also wanted to mention that if the user enters a number or a symbol for a key, you'll need an error message to pop up. If that error is made, perhaps the user is unsure of what a key is. I would suggest having a short message pop up explaining what a key is and suggesting some commonly used ones.

5. **[H2-10 Help and Documentation] [Severity 3] (found by A)**

In your report, you talked about wanting this app to be accessible to people without musical backgrounds. I've never heard of a step sequencer before, so this in and of itself could be a confusing options for users – of course, a user could click on the button and figure out how it works, but that shouldn't be necessary. Even once I *had* clicked on that option, I wasn't exactly how the blue and gray squares worked. Does highlighting a square in a certain row make that note play? Are the blue squares played chronologically? Will two squares simultaneously play a chord? How long is each note played? What if I want eighth notes? If the "x-axis"/ horizontal direction does represent time, and the notes are played chronologically, I would suggest adding a time line. To explain what the step sequencer is, maybe add a small icon of the step sequencer itself next to it (you can also add a small icon of a piano to the keys so that both options have illustration). You could also consider a very brief description of the step sequencer on or near that button, but I would strongly suggest the illustration over actual words.

6.   [H2-3 User control and freedom] [Severity 3] (found by A, B, and C)
If a user presses clear in the step sequencer by accident or out of curiosity, he will lose all of his work! Add an undo button to avoid any disasters. Also if a user wants to experiment with an existing track and decides he doesn't like it, he may not remember what he added and what was already there. An undo button would prevent this from happening.

7.   [H2-6 Recognition rather than recall] [Severity 3] (found by A and C)
In the step sequencer, it could be a bit confusing to not be able to see piano, drums, bass, etc. all at once when you're trying to create music that has various tracks in harmony with one another. What if the user can't remember what she had from one tab to the next? She would probably have to keep switching back and forth between instruments to make sure that different instruments made sense with each other. If the user can hear the music at that point and add to it by ear, then this may not be an issue. It's ambiguous whether you can add multiple instruments to the first track.

While editing or adding a track, the other tracks that are playing cannot be seen. A user should be able to determine which track out of many is complementing the track he or she is currently working on. Add an option to show other tracks on a track's creation page.

8.   [H2-10 Help and Documentation] [Severity 2] (found by A and B)
I'm not sure what the "solo" button on the step sequencer page is intended for. More context/information is required. Consider renaming the option or including instructions.

9.   [H2-10 Help and Documentation] [Severity 1] (found by A and B)
I like that the page with the loop circle and the list of tracks says who made the track underneath and color-codes the tracks, but it's not immediately apparent what the number underneath the name represents. After adding three loops, I realized that it denotes the number of times that track is played in a given loop. Consider adding the word "loops" or something to that effect after the number to make it clearer to the user.

10.   [H2-3 User control and freedom] [Severity 3] (found by A)
I really like the way that the loop circle looks with the different tracks at 4, 8, and 16 – it seems like it would make for an interesting song/piece. What if the user wanted to align the different tracks so that the "8" loop started halfway through the "4" loop? What if the user wanted the "4" loop to play 8 times during one loop circle? Could you speed that track up and play it 8 times? Give the user as much freedom as autonomy as possible. Maybe use the list of tracks you have at the bottom as an interface for the user to adjust these options (make the number of loops be a text field that can edited, for example). I would also allow users to drag the tracks around the circle to align them as desired.

11.   [H2-3 User control and freedom] [Severity 3] (found by A, B, C)
There's not a menu button or a way to get back to the original home screen. Although the app's functionality is pretty simple, users might feel frustrated by the feeling of being trapped on a page or a certain sequence of pages. My suggestion: add a menu or home screen button.

12.   [H2-3 User control and freedom] [Severity 3] (found by A,B,C)
After pressing the "Make Love" button, there is no way to go back. There should be a back button, an escape unless they pressed the wrong button.

13.   [H2-7 Flexibility and efficiency of use] [Severity 1] (found by B)
On the step sequencer page, the "add" button should probably not be all the way at the bottom. It seems like a pretty important button, but is not in an obvious position. Maybe move it to the top of the column.

14.   [H2-4 Consistency and standards] [Severity 2] (found by B)
On the screen with the ticker circle, I thought the "export" button was more clear than the new square with an arrow. The square with an arrow isn't quite as clear, but it also doesn't seem to fit in with color/design scheme of the rest of app.

15.   [H2-7 Flexibility and efficiency of use] [Severity 1] (found B, A)
Is it possible to rename the track after I've created it? I think it would be great to be able to do that, that way it can be more descriptive, especially when more people are coming to collaborate so they can know what each track is.

16.   [H2-8 Aesthetic and minimalist design] [Severity 2] (found by B, A, C)
On the ticker circle screen, how does the user control the playback of the loops they have so far? I don't see any play or pause buttons. This sort of interaction may become more intuitive when the app is a higher fidelity, but for now I suggest having some generic play, pause, etc. buttons.

17.   [H2-3 User control and freedom] [Severity 3] (found by B)
After I've added a track, what do I do if I suddenly decide I hate it, or it's not good enough? I believe there should be an option for the user to delete a track.

18.   [H2-1 Visibility of system status] [Severity 3] (found by B, C, A)
For the piano keys page, its violations are mostly the same ones as on the step sequencer page, but I also wonder if there are ways to edit and playback what has so far already been keyed in. The users should have a progress bar and a way to edit what they've played on the piano before adding the loop to the song.

19.   [H2-8 Aesthetic and minimalist design] [Severity 1] (found by B,C)
The invite page has a familiar set up, which is good, but it isn't particularly attractive. Maybe spruce it up a bit to match the rest of your aesthetics.

20.   [H2-4 Consistency and standards] [Severity 1] (found by B)
What does the "add" button do on the invite page? I feel that it should probably be removed.

21.   [H2-2 Match between system and the real world] [Severity 2] (found by B,C)
After attempting to invite someone, I got an alert that he wanted to make love with me. It seems odd that *I* invited *him* but got an alert that *he* wanted to make love with *me*. Make sure that the social interactions and alerts all make sense.

22.   [H2-1 Visibility of system status] [Severity 3] (found by C)
It is unclear how to edit the music written on a "piano keys" track (in comparison to the step sequencer, where the user can see the layout of the notes). Provide feedback on what notes are being played on "piano keys" tracks.

23.   [H2-2 Match between system and the real world] [Severity 3] (found by C)
On the "piano keys" creation track, it may be confusing for novices that choosing another instrument (such as guitar or bass) still shows a piano roll rather than the actual instrument. For drums especially, a user would be unable to predict the mapping of keys to sounds. Provide logical representations of the instruments or inform the user that the selected instrument has actually been selected.

24.   [H2-3 User control and freedom] [Severity 2] (found by C)
It is currently not possible for a user to edit the tempo and key of the track once they have been decided at the beginning. Add options to change these if a user decides to do so later on.

25.   [H2-4 Consistency and standards] [Severity 2] (found by C)
There is ambiguity between the "share" (export) and "invite" (collaboration) options. Users might mistake the "share" option as a way to share a song to collaborate on, rather than an export option. Clarify the wording of the two options.

26.   [H2-4 Consistency and standards] [Severity 2] (found by C)
From a first glance of the "share" screen, the "text" option can be mistaken to mean export to a text file and the "mail" to mean physically mail the song. In addition, it is unclear what exactly is being sent in these options (a link to a web page hosting the song, the actual mp3 file, etc). Also, if the user wants to save the file to his phone, it's unclear what he should do. Is that what the "iPod" option is for? If that's just saving to your phone, maybe it shouldn't be under "sharing." Will the "iPod" button also save to my phone? Change wording to clearly indicate what is being sent and how it's being sent.

27.   [H2-6 Recognition rather than recall] [Severity 3] (found by C)
If a user mutes or solos a track from the track's screen, there is no information displayed on the overview screen about which tracks are muted or soloed. Place mute and solo options next to each track on the overview screen.

28.   [H2-1 Visibility of system status] [Severity 2] (found by C)
There is no way to see an overview of all the users collaborating on a song. Add an option to view a compiled list of collaborators.

29.   [H2-7 Flexibility and efficiency of use] [Severity 3] (found by C)
Novices may be intimidated by the need to pick the "right" tempo and key, especially if they have little musical experience. Having users simply type in a random number for BPM may not be the best approach. Change the selection screen to be more approachable, such as with sample tempos and keys for a range of "moods." This is a concept that you explained well in your writeup but wasn't really implemented in the prototype (help novices understand that lower bpm may correlate to a sad song)

3. Summary of Violations

Category	# Viol. (sev 0)	# Viol. (sev 1)	# Viol. (sev 2)	# Viol. (sev 3)	# Viol. (sev 4)	# Viol. (total)
[H2-1: Visibility of Status]			1	2		**3**
[H2-2: Match Sys & World]			1	1		**2**
[H2-3: User Control]			1	5		**6**
[H2-4: Consistency]		1	3			**4**
[H2-5: Error Prevention]			1	1		**2**
[H2-6: Recognition not Recall]				2		**2**
[H2-7: Efficiency of Use]		2		1		**3**
[H2-8: Minimalist Design]		1	1			**2**
[H2-9: Help Users with Errors]			1			**1**
[H2-10: Documentation]		1	2	1		**4**

Total Violations by Severity		5	11	13		29
Note: check your answer for the green box by making sure the sum of the last column is equal to the sum of the last row (not including the green box)						

4 Evaluation Statistics

severity\evaluator		evaluator A	evaluator B	evaluator C
level 0				
level 1		40%	100%	20%
level 2		45%	50%	64%
level 3		62%	40%	62%
level 4				
total (levels 3 & 4)		62%	40%	62%
total (all levels)		52%		55%

evaluator # Ex. C	# problems found Ex. 7	# problems remaining & problem IDs Ex: 5 (1, 7, 11, 13, 17)
C	17	
B	16	8 (2,8,9,13,14,15,17, and 20)
A	15	4 (3, 4, 5, and 10)