Homework 13: User Manual

Team Code Name: GloveFX   **Group No. 5**

User Manual Outline:
- **Brief (marketing-style) product description**
- **Product illustration annotated with callouts for each control/display**
- **Product setup instructions**
- **Product use instructions**
- **Product troubleshooting instructions**

Evaluation:

SCORE	DESCRIPTION
10	***Excellent*** *– among the best papers submitted for this assignment. Very few corrections needed for version submitted in Final Report.*
9	***Very good*** *– all requirements aptly met. Minor additions/corrections needed for version submitted in Final Report.*
8	***Good*** *– all requirements considered and addressed. Several noteworthy additions/corrections needed for version submitted in Final Report.*
7	***Average*** *– all requirements basically met, but some revisions in content should be made for the version submitted in the Final Report.*
6	***Marginal*** *– all requirements met at a nominal level. Significant revisions in content should be made for the version submitted in the Final Report.*
*	***Below the passing threshold*** *– major revisions required to meet report requirements at a nominal level.* ***Revise and resubmit.***

** Resubmissions are due within **one week** of the date of return, and will be awarded a score of "6" provided all report requirements have been met at a nominal level.*

1.0 Introduction to GloveFX

Thank you!

Thank you for purchasing GloveFX, a revolutionary product that puts musical creativity directly into the hands of the user! With GloveFX, you'll have the power to create, play, and interact with musical instruments in a whole new way. From beginners to the most advanced musicians, GloveFX offers something for everyone. Below are some of the key features you'll enjoy:

- Wireless glove units with a 100 ft. range for easy portability and versatility. (Great for live performances!)

- Standard 3.5 mm headphone jack used to output audio through a pair of headphones, an amplifier, or directly into a computer for use with your favorite recording software.

- SD card interface used to upload a wide variety of preset instrument sounds. You can also upload your own user-generated audio samples for maximum versatility.

- Built-in audio effects that are easily controlled by the angle of your hand.

- Simple and easy-to-learn user interface.

- Battery-operated gloves units with rechargeable lithium-ion battery.

Precautions

- GloveFX is durable, but try to keep product away from water and any hazardous materials.

- Avoid exposing to excessive heat or cold as product may become damaged or inoperable

- Watch the volume! Make sure to wear proper ear protection if playing GloveFX through an amplification system to avoid permanently damaging ears.
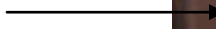
GloveFX Layout and Controls

Sound Hub

LCD

Power Jack

Keypad

Finger Selection Knob

Headphone Jack

SD Card Slot

Gloves

Buttons

Force Sensors

LEDs

Left Glove Box

Right Glove Box

Connector

Connector

Glove Box

On/Off Switch ⟶

2.0 Setting up GloveFX

To set up GloveFX, follow these steps:

- Remove GloveFX from its packaging.
- Attach right-hand glove box to right-hand glove.
- Attach left-hand glove box to left-hand glove.
- Insert right-hand glove box connector to right-hand glove socket.
- Insert left-hand glove box connector to left-hand glove socket.
- Connect the sound hub power supply to the sound hub.
- Connect the other end of the power supply to a power outlet.
- Flip the sound hub power switch to "on".
- If desired, choose different sounds on the sound hub for each finger.
- Slide both of the glove box power switches to "on".
- Begin play.

To charge GloveFX, follow these steps:

- Remove power from the sound hub.
- Turn glove power switch to the on position.
- Connect glove power supply to the glove.
- Connect the other end of the power supply to a power outlet.
- Wait four hours for a full charge.
- Repeat charging procedure for the other glove.

Two power supplies are included – one for charging a glove and one for powering the sound hub. Always check the power supply label to be sure you are using the proper power supply. Fire or explosion could result from using the wrong power supply.

3.0 Using GloveFX

To play with GloveFX, follow these steps:

- Connect the sound hub power supply to the sound hub.
- Connect the other end of the power supply to a power outlet.
- If desired, choose different sounds on the sound hub for each finger.
- Connect speakers or headphones to the headphone jack on the sound hub.
- Turn glove power switches to the on position.
- With gloves on, tap your right-hand fingertips to play a sound, and rotate your left hand to apply a real-time audio effect.
- Use the push buttons on the left-hand fingertips to switch audio effects.

To assign an audio sample to a finger, follow these steps:

- Connect the sound hub power supply to the sound hub.
- Connect the other end of the power supply to a power outlet.
- Choose a finger with the finger selection knob.
- Type in the number that corresponds with the audio sample you would like to map with the keypad.
- Confirm this selection on the keypad and send it to the finger.
- Repeat this procedure for all fingers on the right-hand glove.

To calibrate the left-hand glove accelerometer, follow these steps:

- Turn off the glove box if it is already switched on
- Hold left hand steady and level
- Switch the glove box on with your right hand
- Test the accelerometer by rotating hand
- Repeat this procedure as needed

4.0 Troubleshooting GloveFX

Problem	Possible Solution
Sound hub does not power up	• Ensure that the power cord is properly connected to both the wall and the base station.
Sound hub does not produce any audio	• Check that headphones are connected. • Try a different set of headphones. • Cycle Power on the sound hub.
Right-hand glove LEDs are not lighting up	• Make sure the power switch is on. • Recharge the battery.
Right-hand glove does not respond to sensor pressure	• Cycle power the glove box. • Charge the battery for one hour if this fails.
Left-hand glove is not switching modulations	• Cycle power the glove box. • Charge the battery for one hour if this fails.
If a glove becomes abnormally warm during operation	• Turn off the glove and discontinue use.
Left-hand glove accelerometer does not module audio correctly	• Recalibrate the glove box
Audio sample is not matched to the correct finger	• Reselect the audio sample from the sound hub using the keypad and LCD. • Turn the finger selection knob to the correct finger. • Press the send key to map the selected audio sample to the corresponding finger. • Begin play to test output