greenerthumb ICD

- Timestamps are 8-byte unix timestamps.
- Sender is the name of the package who sent the message. Multiple hosts can share a sender. This means the hosts are in the same package.
- Checksums are cyclic sums of all of a message's bytes excluding the checksum.
- Multi-byte fields are big-endian.
- All messages start with the header.

Links

Provided links are: * `broadcast` * `listen` * `pub/sub`

These are described more in `bullhorn`. Each link associates metadata with messages while over the network. `broadcast` and `pub/sub` prefix messages with a 4 byte checksum. `listen` prefixes messages with a 2 byte message-length. This are stripped after being checked at either end of the link.

Header

Byte	Name	Type
1	ID	Byte
2	Timestamp	Long
10	Sender Length (n)	Byte
11	Sender	Byte Sequence

Air Status Message (pub/sub, ID = 0x00)

Byte	Name	Type
1	Temperature	Float

- Temperature is in degrees fahrenheit.

Soil Status Message (pub/sub, ID = 0x01)

Byte	Name	Type
1	Moisture	Float

- Moisture is the ratio of water to soil.

Disclosure Message (Broadcast on port 35053 by default, ID = 0x02)

Byte	Name	Type
1	Host Length (n)	Byte
2	Host	Byte Sequence

- Host is the host the device publishes to.

JSON

JSON is used for internal messaging. Every message has a corresponding JSON format with the structure:

```
{
  "Header": {
    "Name": <message_name>,
    "Timestamp": <timestamp>,
    "Sender": <sender>
  },
  <name>: <value>,...
}
```

IDs are swapped with names for friendlier use in applications. Names and values correspond to the non-ID, non-time, and non-checksum fields in the messages.