

## **GENERAL INFORMATION**

The Harbor Freight/Bunker Hill security camera monitor model 66556 is a black and white monitor that accepts composite NTSC video from any standard NTSC video source. It has a 5.5 inch (measured diagonally) viewable area. There are two video input jacks and two audio input jacks on the rear panel which the monitor can switch automatically or manually between the two channels. There are also two 12 volt DC output jacks on the rear panel that are intended to feed 12 volt dc power to a couple of security cameras. The monitor operates on 12 volts DC @ 1.2 amps supplied by a wall adapter which has a center positive connector to plug into the appropriate jack on the back of the monitor. This monitor also has an audio output jack and a video output jack on the rear panel to feed to a digital video recorder or to an additional monitor. There are four screws holding the plastic case together. Two are located in the finger well area and two others are located near the swing up wire support. If you lose the screws or the heads are stripped out, the originals are metric. You can replace them with two Phillips pan head #4 by 3/4 inches long sheet metal screws for the two near the swing up metal support and two Phillips pan head #4 by 5/8 inches long sheet metal screws for in the finger well area. When all four screws are removed you can slide the rear half of the plastic case back from the front half. You will need to unplug the connectors to the rear panel jacks and to the speaker in order to fully remove the rear cover.

## **CRT INFORMATION**

This monitor uses a type 14SX5Y4 black and white CRT which is 5.5 inches (or 14 centimeters) measured diagonally. Deflection angle is 70 degrees. Neck diameter is 20 millimeters and the tube is 175 millimeters long. Heater filament operates on 12 volts DC @ 75 milliamps. High voltage is 7,500 volts.

## **YOKE INFORMATION**

GS Brand # QPH20-70-5C or GS-101120. The vertical section is the white and yellow wire and measures 3.5 ohms resistance. The horizontal section is the red and black wires and measures 1.2 ohms resistance. Manufactured by Tianchang Guang Sheng Electronics Co. Ltd and their website is [www.tcgsdz.com](http://www.tcgsdz.com)

## **FLYBACK INFORMATION**

GS Brand # BSH8-N5510F or GS-100618. Manufactured by Tianchang Guang Sheng Electronics co. Ltd and their website is [www.tcgsdz.com](http://www.tcgsdz.com)

## **SEMICONDUCTOR INFORMATION**

Q01: B834-Y (PNP) = NTE 153  
Q5: KSD362R (NPN) = NTE 375  
IC01: CD4066BE (quad switch) = NTE 4066B  
IC2: LA7806 (B/W TV, sync, & hor/vert deflection) = NTE 1540  
IC03: LM386N (audio amp, 1 watt) = NTE 823  
IC04: NE555 (timer) = NTE 955M

## **CAPACITOR INFORMATION**

There are a total of 32 electrolytic capacitors and 1 dipped tantalum capacitor on the main board. So far, I have not made a list of them, but two of them go bad causing no vertical deflection symptom. See below in the "Troubles" section for information regarding those two particular capacitors.

## **CONNECTOR INFORMATION**

## Harbor Freight / Bunker Hill model 66556 B & W Security Monitor Repair Guide

SW01: Yoke  
SW02: Rear cover audio/video/power out jacks board  
SW03: Neck board  
SW06: Speaker  
VR07: Volume control  
VR08: Time control

### **POTENTIOMETER INFORMATION**

Volume pot: 10 k, 16mm diameter case  
Timer pot: 500 k, 16mm diameter case  
VR03: Vertical Hold, 20 k, 10mm wide, vertical pc mounts  
VR02: Contrast, 1 k, 10mm wide, vertical pc mounts  
VR01: Brightness, 1 meg, 10mm wide, vertical pc mounts

TRIMMERS (I do not know function of these yet):

Unlabeled next to resistor R35 and sealed with red paint: 500 ohm, 6mm knob, horizontal pc mount

Unlabeled next to electrolytic capacitor C42: 10 k, 6mm knob, horizontal pc mount

Unlabeled next to transistor Q7: 500 ohm, 6mm knob, horizontal pc mount

### **TROUBLES**

No vertical deflection: replace electrolytic capacitors C24 (2200 uf @ 10 volts radial) and C34 (3.3 uf @ 160 volts radial). I found that C24 had gone open and C34 had gone off value and had high ESR. Replacing these two capacitors restored the vertical deflection.

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