

# After 50+ Years, Carl's Baby Is Still a Radiant Beauty

*How Mr. Mosley Brought His First Trap-Master TA-33 Tri-Band Beam West in 1959 – And How It's Still Flying High Today*

**By Don Thomas, W6LRG**

“I met Carl Mosley in Albuquerque, New Mexico in 1959 getting gas,” recalled Grady Williams, K6IXA, of Atwater, California. “He had a brown Dodge station wagon with a crank-up tower and a beam on the luggage rack.” Mosley told Williams he was on his way to California to demonstrate a new antenna at various amateur radio stores. He ended up at Custom Electronics on Fifth Street in Modesto.

Mosley, WØFQY (SK), was an engineer for Southwest Bell Telephone Co., in the 1940s when he and another engineer – Barney St. Varind – jointly came up with the TA-33 tri-band antenna design. The two of them started a company to make the antenna.

In the November 1958 copy of *QST* magazine the Mosley Co. of St. Louis Missouri < <http://bit.ly/gSXFb> > had eight separate advertisements for its new Trap-Master TA-33 Tri-band antenna. The price was \$99.75 with a one-year warranty.

The Mosley beams used aircraft-drawn seamless tubing and stainless steel and brass hardware. As described in the advertisements, it was a well-made and durable antenna.

Edwin Ed Hill, K6MDX (SK), owned the electronics store in Modesto that, among other things, did two-way radio work. He also had a large amateur radio station in his garage at home and

had previously talked to Mosley on his HF (high frequency) radio. When he learned Mosley was coming west from St. Louis to demonstrate his new antenna in central California, Hill invited him to use the space and power at his store.

“Mosley set up the tower and antenna and used an Art Collins KWM-1 transceiver for a week of demonstrations,” Williams recalled. Hill’s store was the only place Mosley planned to go.

Mosley sold the beam to Bill Bates, W6CF (SK), < <http://bit.ly/hR2GQs> > who was the owner of radio station KTRB in Modesto. Bates used it several years at the radio station until the Pappas brothers – Pete, Mike and Harry, who amassed a fortune in the broadcast radio business in northern California – bought him out in 1973.

“I bought the beam and sold it to Bob Blyth, K6GM (SK), who put it up on Wallace Road in Winton, California,” Williams said. “Due to his failing health, his amateur radio equipment, beam, and tower ended up in the annual Turlock Amateur Radio Club auction. The high bidder was Richard Burns, KE6RGB, of Merced.”

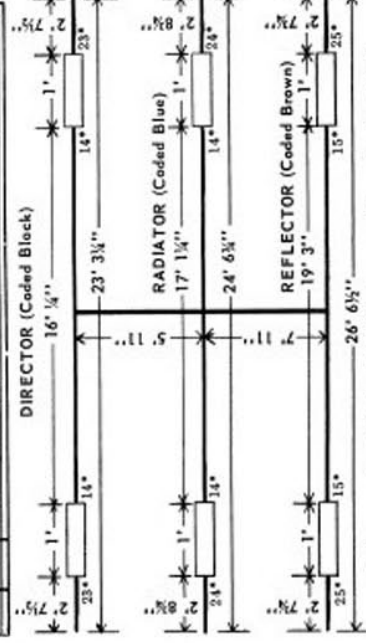
“Grady had seen it and I knew a little bit about the historical significance of the antenna,” Burns recalled. “I paid about \$380 for the beam, a rotor and other parts.”



**Richard Burns, KE6RGB, at his operating position in Merced, where – just feet away in his back yard – stands the first TA-33 tri-band antenna Carl Mosley brought to California in 1959. (Photographs courtesy of KE6RGB)**

**PARTS LIST**

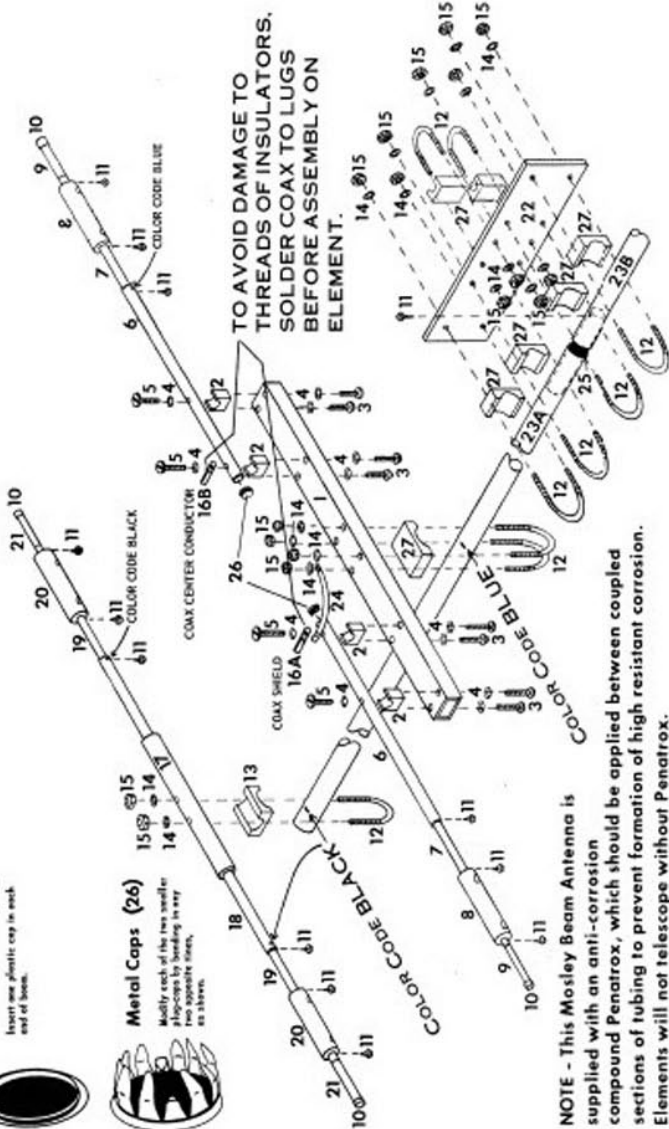
| PART NO. | QUAN. | DESCRIPTION   |
|----------|-------|---|
| 1        | 1     | Element Support   |
| 2        | 4     | Insulators  |
| 3        | 8     | 10-32 x 1 1/2" Screws                                       |
| 4        | 12    | No. 10 Lock washers   |
| 5        | 4     | 10-32 x 1 3/4" Screws                                       |
| 6        | 2     | 1" OD x .058 wall, Element (coded BLUE)                     |
| 7        | 2     | 7/8" OD x .058 wall, Element (coded BLUE)                   |
| 8        | 2     | Trap Assemblies (coded BLUE)                                |
| 9        | 2     | 5/8" OD x .035 wall, Element (coded BLUE)                   |
| 10       | 6     | 5/8" Coplugs  |
| 11       | 19    | No. 7 Sheet Metal Screws                                    |
| 12       | 10    | U-Bolts   |
| 13       | 2     | No. 40 Clamping Blocks                                      |
| 14       | 20    | 1/4" Lock washers   |
| 15       | 20    | 3/20 Nuts   |
| 16       | 2     | Solder Lugs   |
| 17       | 2     | 1-1/8" OD x .058 wall, Elements (coded 1 BLACK and 1 BROWN) |
| 18       | 2     | 1" OD x .058 wall, Elements (coded 1 BLACK and 1 BROWN)     |
| 19       | 4     | 7/8" OD x .058 wall, Elements (coded 2 BLACK and 2 BROWN)   |
| 20       | 4     | Trap Assemblies (coded 2 BLACK and 2 BROWN)                 |
| 21       | 4     | 5/8" OD x .035 wall, Elements (coded 2 BLACK and 2 BROWN)   |
| 22       | 1     | Moist Plate   |
| 23       | 1     | Boom  |
| 24       | 1     | Ground Strap  |
| 25       | 1     | Boom Splice   |
| 26       | -     | 2 Metal Caps and 2 Plastic Coplugs                          |
| 27       | 7     | No. 43 Clamping Blocks                                      |



Settings are for Code 11, add 10 1/2" to center Dimension for Code 1.  
 \* Indicates number of coil turns.

**Plastic Caps (26)**  
 Insert one plastic cap in each end of boom.

**Metal Caps (26)**  
 Mutilate each of the two ends of the boom by filing to a sharp edge.



**NOTE - This Mosley Beam Antenna is supplied with an anti-corrosion compound Penatrox, which should be applied between coupled sections of tubing to prevent formation of high resistant corrosion. Elements will not telescope without Penatrox.**

**ASSEMBLY**

**CAUTION:** Coil Assemblies are color coded on one end only; this color should ALWAYS be nearest the boom. Reversal of traps will cause high SWR and other mal-function of beam.

**Read Directions Carefully!**  
 Begin assembly by grouping all element and coil sections according to color code.  
 For proper matching use 52 ohm coax. RG-8/U is recommended.

**RADIATOR ASSEMBLY - Color coded BLUE**  
 Loosely install insulators (part 2) to Element Support (part 1) with Screws and Lock washers (parts 3 and 4). Place Element Section (part 6) into 'V' of Insulator (part 2) so that screw hole on Blue color coded end of Element (part 6) is facing DOWN. This is important to assure proper position of coil assemblies that are provided with breather holes and should face down.  
 Place Screws (part 5) through Lock washers (part 4) and secure to outermost Insulator (part 2). Place Screw (part 5) through Lock washer (part 4), Solder Lug (part 16A), Ground Strap (part 24), Element (part 6) and secure to

Insulator (part 2). Insert Screw (part 5) through Lock washer (part 4), Solder Lug (part 16B), Element (part 6) and secure all insulators. Insert Blue color coded end of Element Section (part 7) into corresponding color coded end of Element (part 6).  
 Align holes according to frequency chart and secure with Screw (part 11). Insert Blue color coded end of Trap Assembly (part 8) into Element Section (part 7) and secure with Screw (part 11).  
 Insert Blue color coded end of Element Section (part 9) into end of Trap Assembly (part 8) and secure with Screw (part 11). Place Coplug (part 10) over outer ends of Element Sections (part 9) and press Metal Cap (part 26) into inboard ends of radiator elements (part 6).  
**ATTACHING RADIATOR TO BOOM:**  
 Loosely install two U-Bolts (part 12) to Element Support (part 1) with Lock washers and Nuts (parts 14 and 15). At this time attach Ground Strap (part 24) to one of the U-Bolts. Place Support (part 1) directly over Blue color code on Boom (part 23A). Install Clamping Block (part 27) between Element Support (part 1) and Boom (part 23A). Secure with Nuts and Lock washers.

Assembly instructions posted on the Internet show the detail of how the TA-33 goes together – and comes apart.

The auction, Burns said, “was in 1999 or 2000.” After bringing the antenna home, it was ultimately pulled apart. “We used a green scrubber pad to clean the metal,” polishing all connections and applying non-seizing conductive compound to the joints.

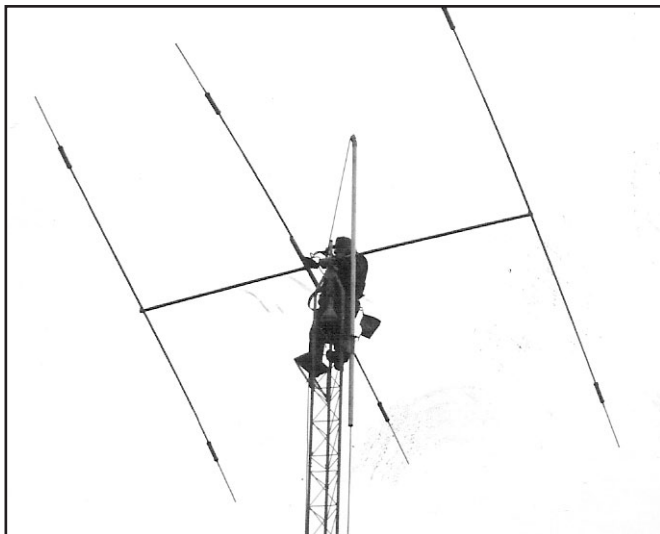
Burns contacted the Mosley Co., and ordered a set of trap seals. After all these years, the company still supports the TA-series of antennas. *Durable* the antenna and the company are.

A volunteer crew of local radio amateurs – including Vaughn Wilson, K6IMN; Kent Le Barts, K6IN; Don Thomas, W6LRG; and Burns, KE6RGB – put up the classic TA-33 in January 2004.

“First we balanced the antenna on six-foot ladders to see what was going on,” Burns said, adding that field strength measurements looked good. “It passed the test.”

Mosley’s TA-33 was hoisted to the top of a 62-foot tower, the coax and antenna control cables temporarily pushed through an open window in a hurry and hooked to Burns’ Kenwood TS440SAT/Heathkit SB200 station. *He was ready to go.*

With a big smile on his face, KE6RGB made his first contact with a station in the Midwest.



Vaughn Wilson, K6IMN, towers above ground as the classic TA-33 beam is fixed in position at KE6RGB in 2004.



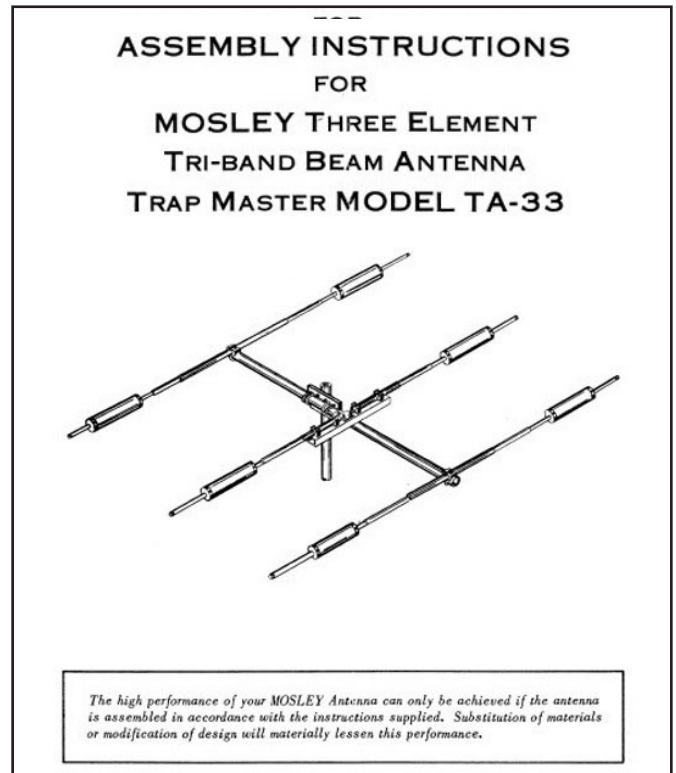
Hoisting the beam its last several feet to the top of the 62-foot tower, K6IMN gently moves the Mosley TA-33 into place.

Now, 11 years and hundreds of QSOs after coming to Burns’ Merced home, Carl Mosley’s 52-year-old TA-33 tri-band beam is still going strong at KE6RGB.

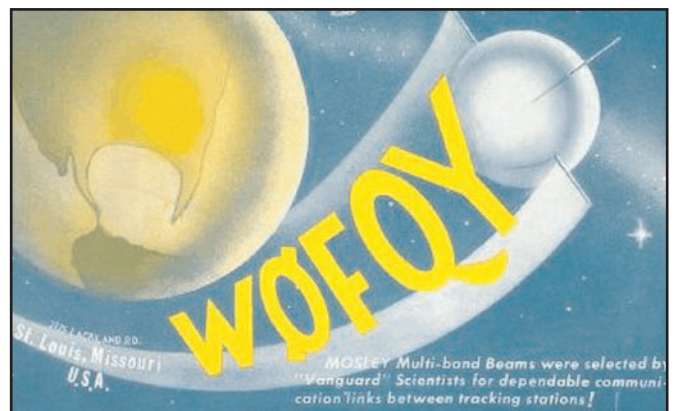
When Burns tells the other station he’s using an original TA-33 beam brought to California more than 50 years ago by Mosley himself, the reaction is usually, “Wow, wee! Many of them tell me what a good signal it’s still putting out.” Burns is amazed, as well. “That beam is older than I am.”

KE6RGB has Carl Mosley’s Trap-Master TA-33 Tri-band antenna ready to last another fifty years – *at least!*

*(The WRO staff contributed to this story – Ed.)*



A graphic illustration on the cover of the Mosley Trap-Master TA-33 Tri-band antenna manual shows the classic beam’s configuration.



Carl Mosley, WØFQY’s, QSL card from the 1960s featured a celestial display with the notation: “Mosley Multi-Band Beams were selected by *Vanguard* scientists for dependable communications between tracking stations,” harkening to the early days of the U.S. space program.