

## Antennas of Pine Gap image gallery



---

### Recommended Citation

Richard Tanter, "Antennas of Pine Gap image gallery", Australian Defence Facilities Pine Gap, February 20, 2016, <https://nautilus.org/briefing-books/australian-defence-facilities/antennas-of-pine-gap-image-gallery/>

---

This gallery holds links to all images reproduced in Desmond Ball, Bill Robinson and Richard Tanter, *The Antennas of Pine Gap*, Nautilus Institute, Special Reports, 18 February 2016.

[Cover - high resolution image.](#)

Details of the antennas are listed in [Table 1 in that paper.](#)

The antennas identification system in Table 1 and in the images below is a year-based identification

---

system.

The antennas are listed in chronological order, with some allowance for uncertainty in particular cases. The antenna identification number in column 2 is based on the year that the antenna was installed (see column 6), with a letter suffix further identifying it within the group installed that year. The first antenna listed, 67-A, was built in 1967, and it was the first (and only) antenna built that year. The second antenna listed, 68-A, was one of four installed in the following year. In cases of uncertainty, the best estimate is noted with a question mark. When an antenna is known to have been installed at some point during a specific period, the identification number is derived from the earliest possible year of construction in that range - e.g. antenna 86-A is known to have been installed between 1986 and 1988.

We are deeply grateful to Felicity Ruby and Kristian Laemmle-Ruff, who very generously gave us permission to reproduce their photographs of Pine Gap.

## NOTE ON ATTRIBUTION

Images in this paper by Kristian Laemmle-Ruff and by Felicity Ruby may be used for non-commercial purposes, subject to attribution and other conditions under Creative Commons Licence Attribution 2.0 Generic (CC BY 2.0): see <http://creativecommons.org/licenses/by/2.0/>.

See [Kristian Laemmle-Ruff Photography](#), and [Felicity Ruby - The Fourth Eye](#).

















The source images by Kristian Laemmle Ruff used for Figures 4, 9, 30, 32, 37, 39, 46, 47, 49, 55 and the cover image are available [here in medium-level resolution](#).

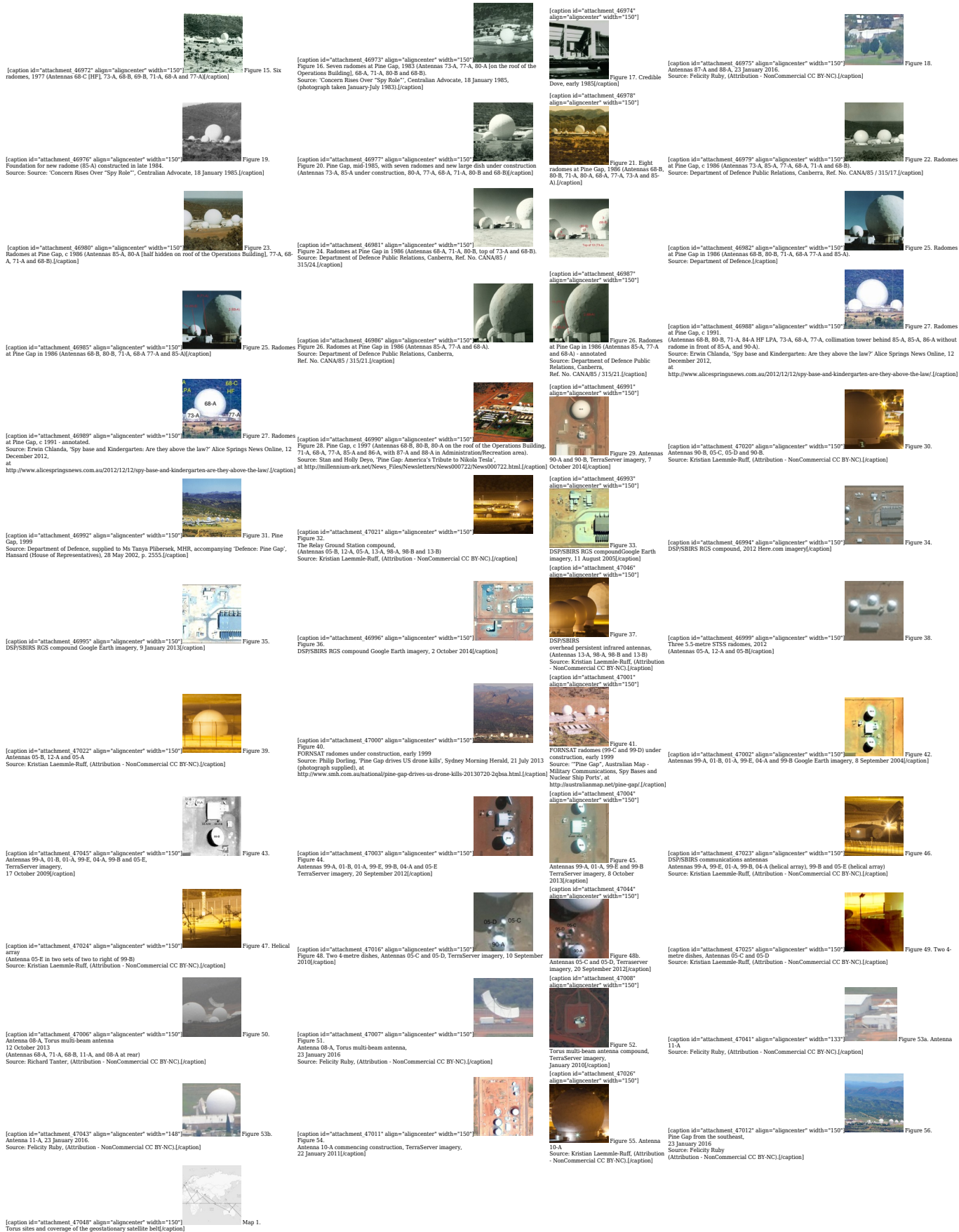
Very large file size versions of Laemmle-Ruff's images are available through his [website](#).

Media requests for reproduction rights should be directed to that website.

Felicity Ruby's photographs are available here and through her [website](#).

*Click on thumbnails for fullsize image*

 <p>[caption id="attachment_46957" align="center" width="150"] Figure 1. Antenna systems at Pine Gap, Google Earth imagery, 6 November 2015. Note: for antenna identification system see Desmond Ball, Bill Robinson and Richard Tanter, The Antennas of Pine Gap, Nautilus Institute, Special Reports, February 2016.(caption)</p>	 <p>[caption id="attachment_47047" align="center" width="150"] Figure 2. Number of antenna systems at Pine Gap, 1970-2015.(caption)</p>	 <p>[caption id="attachment_46959" align="center" width="150"] Figure 3. Pine Gap signals intelligence compound, 2012. annotated.(caption)</p>	 <p>[caption id="attachment_47029" align="center" width="150"] Figure 4. Principal SIGINT and FORNSAT/COMSAT parabolic antennas in radomes (Antennas 90-A, 10-A, 99-D, 99-C, 85-A, 77-A, 68-A, 71-A, 68-B) Source: Kristian Laemmle-Ruff, (Attribution - NonCommercial CC BY-NC).(caption)</p>
 <p>[caption id="attachment_47030" align="center" width="150"] Figure 4. Principal SIGINT and FORNSAT/COMSAT parabolic antennas in radomes (annotated) Source: Kristian Laemmle-Ruff, (Attribution - NonCommercial CC BY-NC).(caption)</p>	 <p>[caption id="attachment_46960" align="center" width="150"] Figure 5. Two radomes at Pine Gap, 1968-69 (Antennas 68-A and 68-B).(caption)</p>	 <p>[caption id="attachment_46961" align="center" width="150"] Figure 6. Five radomes at Pine Gap, 1973-77 (Antennas 68-B, 71-A, 68-A and 73-A; 69-B not visible - collimation tower to left of 68-A).(caption)</p>	 <p>[caption id="attachment_46962" align="center" width="150"] Figure 7. Four radomes at Pine Gap, 1969-71 (Antennas 69-A, 68-A, 69-B and 68-B).(caption)</p>
 <p>[caption id="attachment_46963" align="center" width="150"] Figure 8. Five radomes at Pine Gap, 1971-77 (68-A, 73-A, 71-A, 69-B and 68-B).(caption)</p>	 <p>[caption id="attachment_47031" align="center" width="150"] Figure 9. Antennas 77-A, 69-A, 71-A, 68-B Source: Kristian Laemmle-Ruff, (Attribution - NonCommercial CC BY-NC).(caption)</p>	 <p>[caption id="attachment_46964" align="center" width="150"] Figure 10. Antennas 68-B, 80-A (on Operations Building roof), 80-B, 71-A, 68-C (HF transmitter), 68-B, 77-A and 86-A, 23 January 2016.(caption)</p>	 <p>[caption id="attachment_46967" align="center" width="150"] Figure 10. (annotated) Antennas 68-B, 80-A (on Operations Building roof), 80-B, 71-A, 68-C (HF transmitter), 68-B, 77-A and 86-A, 23 January 2016.(caption)</p>
 <p>[caption id="attachment_46968" align="center" width="150"] Figure 11. HF transmitter (68-C) and receiver (68-B) antennas at Pine Gap, Google Earth imagery, 6 November 2015.(caption)</p>	 <p>[caption id="attachment_46969" align="center" width="150"] Figure 12. Ford Aerospace SCT-35 DSCS antenna system. Source: Ford Aerospace.(caption)</p>	 <p>[caption id="attachment_46970" align="center" width="150"] Figure 13. Ford Aerospace SCT-B DSCS antenna system. Source: Ford Aerospace.(caption)</p>	 <p>[caption id="attachment_46971" align="center" width="150"] Figure 14. Six radomes, 1977 (Antennas 73-A, 68-B, 69-B, 71-A, 68-A and 77-A).(caption)</p>



View this online at: <https://nautilus.org/briefing-books/australian-defence-facilities/antennas-of-pine-gap-image-gallery/>

608 San Miguel Ave., Berkeley, CA 94707-1535 | Phone: (510) 423-0372 | Email:  
[nautilus@nautilus.org](mailto:nautilus@nautilus.org)