

01-161, -162, -163, AND -164 GAUGING SETS USER'S GUIDE

1. INTRODUCTION

This user's guide provides a description and instructions on how to use the 01-161, -162, -163, and -164 Gauging Sets to measure pin depths of various types of connectors.

2. DESCRIPTION OF 01-161 GAUGING SET

The 01-161 Gauging Set contains the tools and gauges necessary to measure the pin depth of GPC-7 connectors. The 01-161 components (Figure 1) are described below.

① **Pin-Depth Gauge (ANRITSU Part No. 01-220)** – measures the depth in mils of the male and female center conductors. The gauge reads from 0.001 inch to 0.015 inch (15 mils) in 0.0001-inch increments.

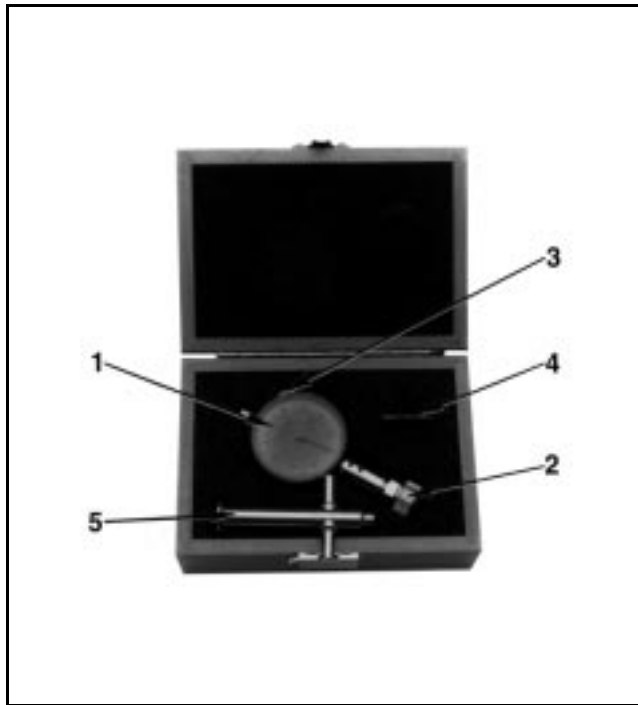


Figure 1. Model 01-161 Gauging Set

② **Gauge Coupling Nut** – Attaches the gauge to the connector.

③ **Side Lock Knob** – prevents the gauge face from moving.

④ **Reference Block (ANRITSU Part No. 01-210)** – provides a smooth surface for setting a zero reference on the pin-depth gauge.

⑤ **Collet Removal Tool (ANRITSU Part No. 783-399)** –removes the spring contact collet from the GPC-7 connector pin.

A. 01-161 Measurement Procedure

To use the 01-161 Gauging Set, do the following.

1. Turn the gauge coupling nut (2) until the threads are fully retracted.
2. Loosen the side lock knob (3).
3. Hold the reference block (4) against the end of the gauge connector and turn the outer ring until the pointer rests on zero.
4. Tighten the side lock knob.
5. Remove the center conductor contact collet from the connector to be measured using the collet removal tool (5).
6. Attach the gauge to the connector and read the pin depth.
7. Remove the gauge and replace the center conductor collet.

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3. DESCRIPTION OF 01-162 GAUGING SET

The 01-162 Gauging Set (Figure 2) contains the tools and gauges necessary to measure the pin depth of male and female K, 3.5 mm, and WSMA connectors. The 01-162 components are described below.

- ① **Pin-Depth Gauge (ANRITSU Part No. 01-222)** – measures the depth in mils of the male and female center conductors. The gauge reads from 0.001 inch to 0.025 inch (25 mils) in 0.0001-inch increments.
- ② **Side Lock Knob** – prevents the gauge face from moving.
- ③ **Reference Block (ANRITSU Part No. 01-210)** – provides a smooth surface for setting a zero reference on the pin-depth gauge.
- ④ **Gauge Coupling Nut** – connects a female connector to the gauge.
- ⑤ **Female Adapter** – attaches the gauge to male connectors.

A. 01-162 Measurement Procedure

To use the 01-162 Gauging Set, do the following.

1. On the pin depth gauge (1), loosen the side lock knob (2).
2. Hold the reference block (3) against the end of the gauge body and turn the gauge outer ring until the pointer rests on zero.
3. Tighten the side lock knob.
4. To measure female connectors, unscrew the gauge coupling nut (4) and slide it forward.
5. To measure male connectors, leave the gauge coupling attached to the gauge body. Screw the female adapter (5) to the coupling nut.

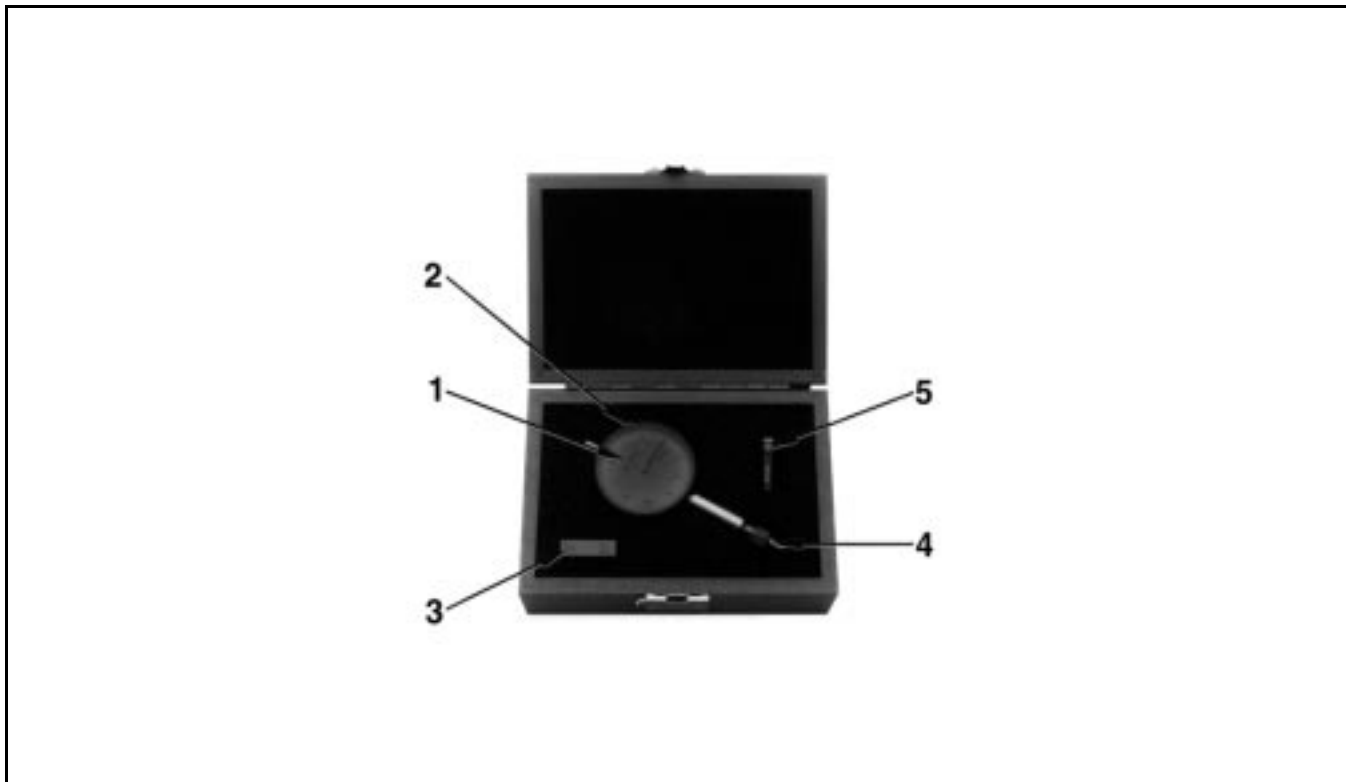


Figure 2. Model 01-162 Gauging Set

4. DESCRIPTION OF 01-163 GAUGING SET

The 01-163 Gauging Set (Figure 3) contains the tools and gauges necessary to measure the pin depth of male and female N connectors. The 01-163 components are described below.

① **Pin-Depth Gauge (ANRITSU Part No. 01-224)** – measures the depth in mils of the male and female center conductors. The gauge reads from 0.001 inch to 0.010 inch (10 mils) in 0.0001-inch increments.

② **Side Lock Knob** – prevents the gauge face from moving.

③ **Reference Block (ANRITSU Part No. 01-213)** – provides a smooth surface for setting a zero reference on the pin-depth gauge.

④ **Female Adapter** – used when measuring female connectors.

A. 01-163 Measurement Procedure

To use the 01-163 Gauging Set, do the following.

1. On the pin depth gauge (1), loosen the side lock knob (2).
2. Hold the reference block (3) against the end of the gauge body and turn the gauge outer ring until the pointer rests on zero.
3. Tighten the side lock knob.

NOTE

The gauge reference length for both male and female measurements is 0.207 inches.

4. To measure female N connectors, screw the female adapter (4) onto the end of the gauge body. To measure male N connectors, remove the female adapter.

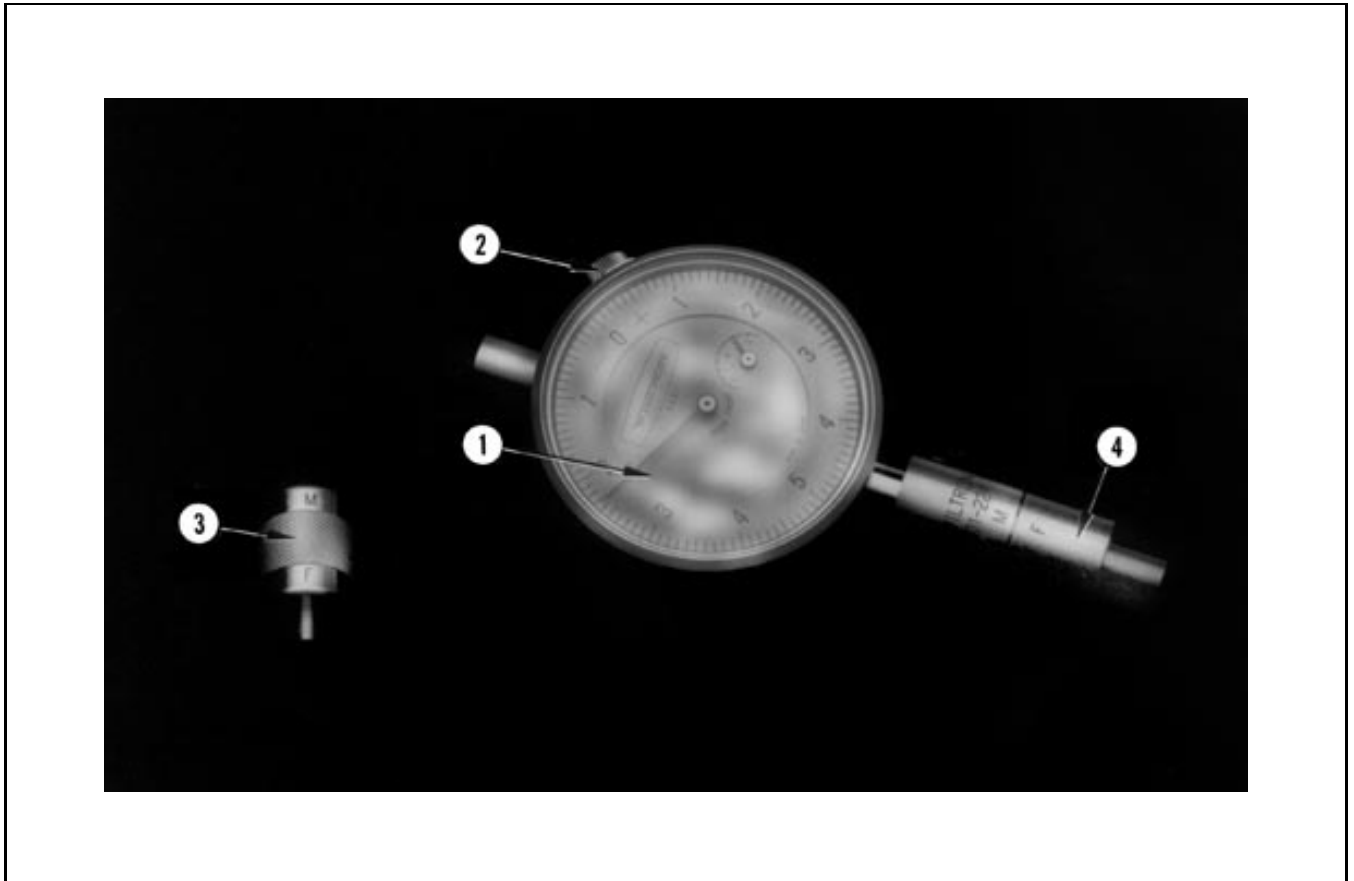


Figure 3. Model 01-163 Gauging Set

5. DESCRIPTION OF 01-164 GAUGING SET

The 01-164 Gauging Set (Figure 4) contains the tools and gauges necessary to measure the pin depth of male and female V connectors. The 01-164 components are described below.

- ① **Pin-Depth Gauge (ANRITSU Part No. 01-322)** – measures the depth in mils of the male and female center conductors. The gauge reads from 0.001 inch to 0.010 inch (10 mils) in 0.0001-inch increments.
- ② **Side Lock Knob** – prevents the gauge face from moving.
- ③ **Female Adapter** – attaches the gauge to male connectors.
- ④ **Reference Block (ANRITSU Part No. 01-210)** – provides a smooth surface for setting a zero reference on the pin-depth gauge.
- ⑤ **Male Adapter** – attaches the gauge to female connectors.

A. 01-164 Measurement Procedure

To use the 01-164 Gauging Set, do the following.

- 1. On the pin depth gauge (1), loosen the side lock knob (2).
- 2. Remove the female adapter (3) from the gauge body coupling nut.
- 3. Hold the reference block (4) against the end of the gauge body.
- 4. Turn the gauge outer ring until the pointer rests on zero.
- 5. Tighten the side lock knob.
- 6. To measure V male connectors, screw the female adapter (3) onto the gauge coupling nut.
- 7. To measure V female connectors, screw the male adapter (5) onto the gauge coupling nut.

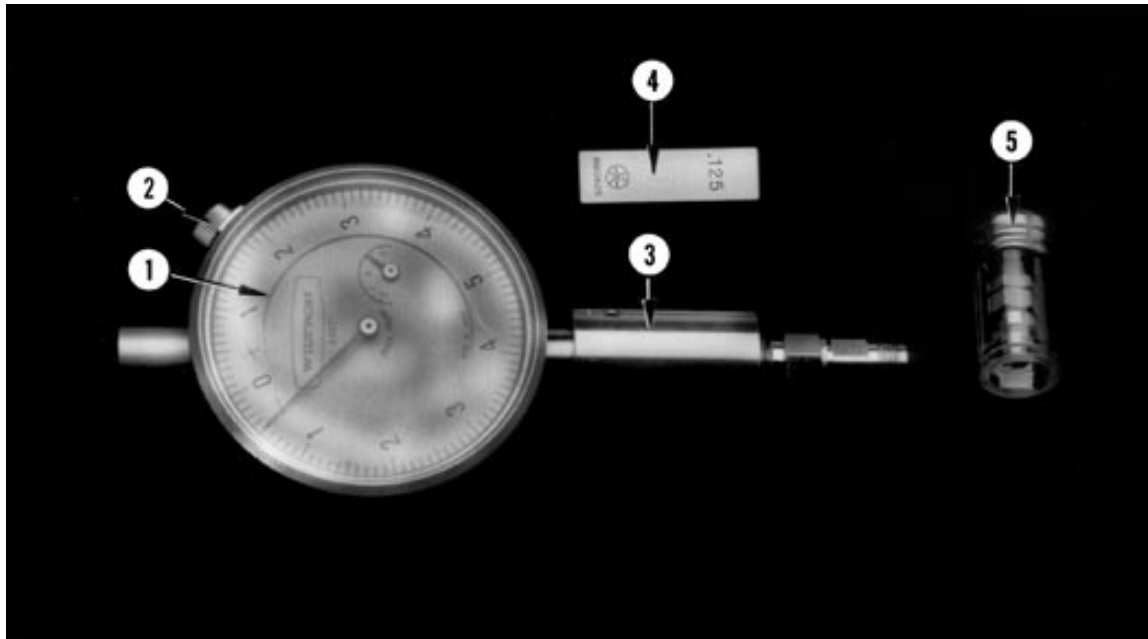


Figure 4. Model 01-164 Gauging Set

6. CLEANING CONNECTORS

Connector interfaces, especially the outer conductors on the GPC-7 and SMA connectors, should be kept clean and free of dirt and other debris.

Denatured alcohol is the recommended cleaning agent, and a damp cotton swab is the recommended applicator. Figure 5 illustrates the cleaning of male and female connectors and Figure 6 illustrates some of the proper and improper methods of cleaning connectors.

NOTE

Most cotton swabs are too large to fit in the smaller connector types. In these cases it is necessary to peel off most of the cotton and then twist the remaining cotton tight. Be sure that the remaining cotton does not get stuck in the connector.

The following are some important tips on cleaning connectors:

- Use only denatured alcohol as a solvent.
- Always use an appropriate size of cotton swab. Never use a cotton swab that is too large.
- Never put lateral pressure on the connector's center pin.
- Verify that no cotton or other foreign material remain in the connector after cleaning it.
- Compressed air can be used to remove foreign particles and to dry the connector.
- Verify that the center pin has not been bent or damaged.

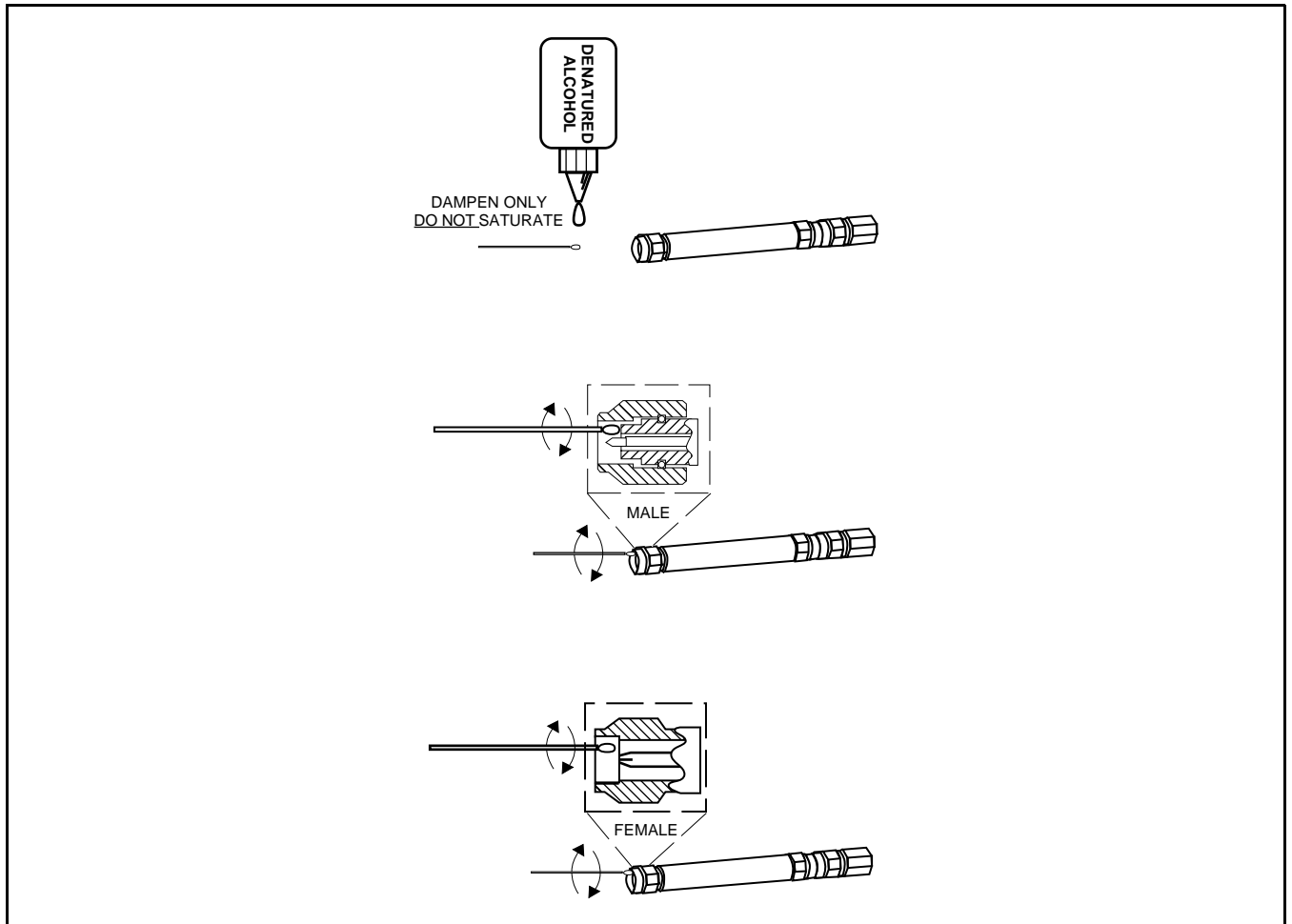
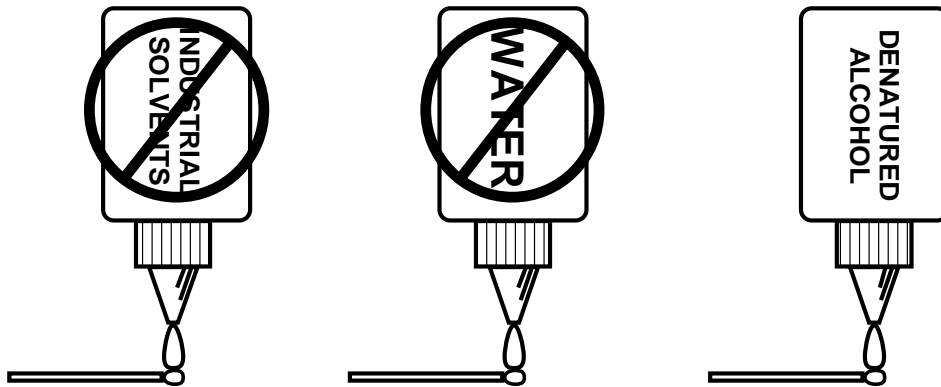
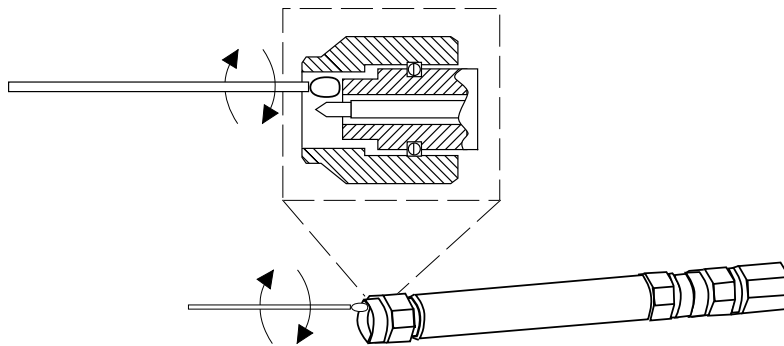


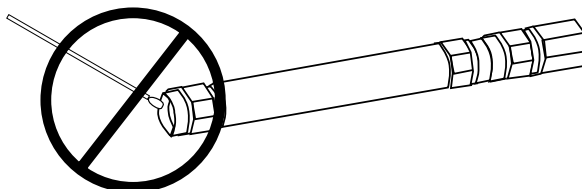
Figure 5. *Cleaning Male and Female Connectors*



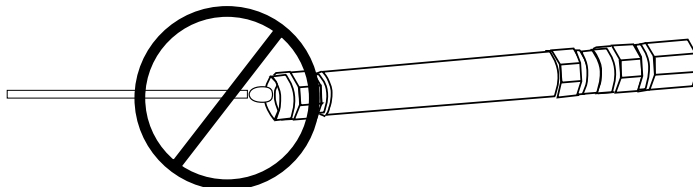
Do NOT use Industrial Solvents or Water on connector. Use only Denatured Alcohol.



Use only denatured alcohol and the proper size of cotton swab. Gently rotate the swab around the center pin being careful not to stress or bend the pin or you will damage the connector.



Do NOT put cotton swabs in at an angle, or you will damage the connectors.



Do NOT use too large of cotton swab, or you will damage the connectors.

Figure 6. Proper and Improper Cleaning Techniques

7. PRECAUTIONS FOR USING CONNECTORS

The following are precautionary notes related to the use of connectors. For specific information about setting pin depths of sliding terminations, see the 360 Operational Manual (360 OM P/N 10410-00022) Table 3-8.

A. Destructive Pin Depths on Mating Connectors

Before mating, measure the pin depth of the connector that mates with the RF component using a ANRITSU Pin Depth Gauge or equivalent. Based on RF components returned for repair, destructive pin depth of mating connectors is the major cause of failure in the field. When an RF component connector is mated with a connector having a destructive pin depth, damage will likely occur to the RF component connector. (A destructive pin depth means a center pin that is too long in respect to the connector's reference plane.)

The center pin of an RF component connector has a precision tolerance measured in mils (1/1000 inch), whereas connectors on test devices that mate with RF components may not be precision types and their pins may not have the proper depth. Consequently, they must be measured before mating to ensure suitability. When gauging pin depth, if the test device connector measures out of tolerance in the + region, the center pin is too long. Mating under this condition will likely damage the RF component connector. On the other hand, if the test device connector measures out of tolerance in the - region, the center pin is too short. While this will not cause any damage, it will result in a poor connection and a consequent degradation in performance.

B. Over-Torquing Connectors

Over-torquing connectors is destructive; it may damage the connector center pin. Finger-tight is usually sufficient, especially on Type N connectors. Use a torque wrench when unsure whether connector is tight enough. Never use pliers to tighten connectors.

C. Teflon Tuning Washers on Connector Center Pins

The center conductor on many RF component connectors contains a small teflon tuning washer near the point of mating (interface). This washer compensates for minor impedance discontinuities

at the interface. The washer's location is critical to the RF component's performance. Do not disturb it.

D. Mechanical Shock

RF components are designed to withstand years of normal bench handling. However, do not drop or otherwise treat them roughly. They are laboratory-quality devices and require careful handling.

Inspection is used to determine the status of an unknown connector and to ensure serviceability of a connector following repair. If the connector fails inspection, return it to ANRITSU for a replacement. Inspect the connectors as follows:

Visual Inspection.

Inspect the connector visually for a broken or recessed center conductor.

Pin Depth Inspection.

As follows, inspect the center conductor for the correct depth. Pin depth limits for ANRITSU components are listed in Table 1.

8. PIN DEPTH VALUES FOR ANRITSU CONNECTORS

Table 1 and 2 provide values for ANRITSU connectors. In Table 1 connectors are listed in alpha-numerical order. In Table 2, they are grouped by product.

When measuring connectors using the ANRITSU or any other gauge, be aware of the following facts that impact on measurement accuracy.

Connector setback dimensions are difficult to measure. This is primarily due to measurement uncertainties in the connector gauge and differences in measurement technique that vary from person to person.

Gauging accuracy involves both the accuracy of the gauge and gauging technique. ANRITSU gauges having 0.0001 inch minor scale divisions can achieve 0.0002 inch accuracy when properly used, making them acceptable for their intended purpose. With proper technique, measurement of a connector that has an actual setback of 0.0005 inch may result in a gauge reading of from 0.0003 to 0.0007 inch. Note that this possible deviation from the actual setback is entirely due to the measurement accuracy of the gauge. However, additional errors may be introduced through poor

gauging technique and result in a significant out-of-tolerance indication.

ANRITSU recommends that the user take the following five actions prior to condemning a connector as out of specification.

1. Do not torque the connector to the gauge. Instead, tighten the connector finger-tight. This technique ensures a light gauging pressure consistent with the hand pressure used during the zeroing of the gauge. The gauge readings will accurately represent the pin depth of measured connectors that are subsequently torqued to specification in application.
2. Clean the connector, the connector gauge, and the gauge block. Re-zero the gauge and repeat the measurement. Out of tolerance indications can be greatly affected by dirt and contamination.
3. Measure the connector several times yourself, then have a second person make some measurements — in order to determine an average reading. This technique will help reduce uncertainties due to differences of technique and random variations in gauge accuracy.

4. Measure the connector using multiple orientations of the gauge within the connector. Averaging several readings, each taken after a quarter-turn rotation of the gauge, reduces measurement variations that result from the gauge or the connector face not being exactly perpendicular to the center axis.
5. Hold the connector gauge by the gauge barrel, below the dial indicator. This offers maximum stability. It also improves measurement accuracy by preventing stresses from being applied to the gauge plunger mechanism through the dial indicator housing. Inaccuracies in measurement often results from such forces when the gauge is cradled in the hand or held by the dial indicator.

Additionally, maintain records over time of the set-back measurements made for each device. Noticeable differences from one set of measurements to the next may indicate errors in measurement technique. Or, they may indicate that the connector is damaged and needs to be replaced.

Table 1. Pin Depth Values for ANRITSU Connectors, Alpha-Numerical Listing (1 of 4)

MODEL	INPUT*	OUTPUT*	TESTPORT*
17A50	0.0000 to -0.0003		
17K50	0.0000 to -0.0003		
17KF50	0.0000 to -0.0003		
17S50	0.0000 to -0.0003		
17SF50	0.0000 to -0.0003		
18A50	0.000 to -0.0035		0.0000 to -0.0006
18N50	A 0.000 to -0.0035		N 0.207 to 0.208
18NF50	A 0.000 to -0.0035		NF 0.206 to 0.207
19K50	0.000 to -0.0035		0.0000 to -0.001
19KF50	0.000 to -0.0035		0.0000 to -0.001
19S50	-0.0023 to -0.0037		-0.0025 to -0.0035
19SF50	-0.0023 to -0.0037		-0.0003 to -0.0008
21A-1			0.000 to -0.002
22K50	0.000 to -0.0015	0.000 to -0.0015	
22KF50	0.000 to -0.0015	0.000 to -0.0015	
22N SERIES	0.207 to 0.211	0.207 to 0.210	
22NF SERIES	0.2035 to 0.207	0.235 to 0.207	
22S50	-0.0023 to -0.0037	-0.0023 to -0.0037	
22SF50	0.000 to -0.001	0.000 to -0.001	
23K50	-0.0000 to -0.0008		
23KF50	-0.0000 to -0.0008		
23N50	0.207 to 0.2085		
23NF50	0.2055 to 0.207		
23S50	-0.0000 to -0.0008		
23SF50	-0.0000 to -0.0008		
24A50	+0.0005 to -0.001		
24K50	-0.0000 to -0.0008		
24KF50	-0.0000 to -0.0008		
24N50	0.207 to 0.2085		
24NF50	0.2055 to 0.207		
24S50	-0.0000 to -0.0008		
24SF50	-0.0000 to -0.0008		
26N SERIES	0.207 to 0.211		
26NF SERIES	0.203 to 0.207		
28A50,-1	0.000 to -0.0035		
28A50-2	-0.0000 to -0.0008		
28K50	0.000 to -0.0015		
28KF50	0.000 to -0.0015		
28N50-2	0.207 to 0.2085		
28NF50-2	0.2055 to 0.207		

* A=GPC 7, N=N Male, NF=N Female, K=Male K Connector, KF=Female K Connector, S=Male SMA, SF=Female SMA, W=WSMA, U=Universal

Table 1. Pin Depth Values for ANRITSU Connectors, Alpha-Numerical Listing (2 of 4)

MODEL	INPUT*	OUTPUT*	TESTPORT*
28S50,-1	-0.0023 to -0.0037		
28S50-2	-0.0000 to -0.0008		
28SF50,-1	0.000 to -0.001		
28SF50-2	-0.0000 to -0.0008		
29A50-20	0.000 to -0.0035		
29K50-15	0.000 to -0.0015		
29KF50-15	0.000 to -0.0015		
29S50-20	-0.0023 to -0.0037		
29SF50-20	0.000 to -0.001		
33KFKF50	-0.0000 to -0.0008	-0.0000 to -0.0008	
33KK50	-0.0000 to -0.0008	-0.0000 to -0.0008	
33KKF50	K -0.0000 to -0.0008	KF -0.0002 to -0.0007	
33SFSF50	-0.0000 to -0.0008	-0.0000 to -0.0008	
33SS50	-0.0000 to -0.0008	-0.0000 to -0.0008	
33SSF50	S -0.0000 to -0.0008	SF -0.0000 to -0.0008	
34AK50	A -0.0000 to -0.0008	K -0.0000 to -0.0008	
34AKF50	A -0.0000 to -0.0008	KF -0.0000 to -0.0008	
34AN50	A 0.000 to -0.0035	N 0.207 to 0.211	
34ANF50	A 0.000 to -0.0035	N 0.2035 to 0.207	
34AN50-2	A -0.0000 to -0.0008	N 0.207 to 0.2085	
34ANF50-2	A -0.0000 to -0.0008	N 0.2055 to 0.207	
34AS50	A 0.000 to -0.0035	S -0.0023 to -0.0037	
34AS50-2	A -0.0000 to -0.0008	S -0.0000 to -0.0008	
34ASF50	A 0.000 to -0.0035	SF -0.0000 to -0.0008	
34ASF50-2	A -0.0000 to -0.0008	SF -0.0000 to -0.0008	
34KFKF50	0.000 to -0.0035	0.000 to -0.0035	
34NFNF50	00.202 to 00.207	0.202 to 0.207	
34NFNF75	0.202 to 0.207	0.202 to 0.207	
34NN SERIES	0.207 to 0.213	0.207 to 0.213	
34SFSF50	0.000 to -0.001	0.000 to -0.001	
34UK50	U 0.266 to 0.269	K -0.0000 to -0.0008	
34UA50	U 0.266 to 0.269	A -0.0000 to -0.0008	
34UN50	U 0.266 to 0.269	N 0.207 to 0.210	
34UNF50	U 0.266 to 0.269	NF 0.2045 to 0.207	
34US50	U 0.266 to 0.269	S -0.0000 to -0.0008	
35KF SERIES	0.000 to -0.0035		
35K SERIES	0.000 to -0.0035		

* A=GPC 7, N=N Male, NF=N Female, K=Male K Connector, KF=Female K Connector, S=Male SMA, SF=Female SMA, W=WSMA, U=Universal

Table 1. Pin Depth Values for ANRITSU Connectors, Alpha-Numerical Listing (3 of 4)

MODEL	INPUT*	OUTPUT*	TESTPORT*
41K SERIES	K 0.000 to -0.0035	KF 0.000 to -0.0035	
42A SERIES	0.000 to -0.0035	0.000 to -0.0035	
42K SERIES	K 0.000 to -0.0035	KF 0.000 to -0.0035	
42S SERIES	S0.000 to -0.0035	SF 0.000 to -0.0035	
43K SERIES	K 0.000 to -0.0035	KF 0.000 to -0.0035	
44K SERIES	K 0.000 to -0.0035	KF 0.000 to -0.0035	
45K SERIES	K 0.000 to -0.003	KF 0.000 to -0.0035	
46K SERIES	K 0.000 to -0.003	KF 0.000 to -0.003	
47K SERIES	K 0.000 to -0.003	KF 0.000 to -0.003	
560-7A50	0.000 to -0.0035		
560-7K50	0.000 to -0.0035		
560-7N50	0.207 to 0.216		
560-7S50	-0.001 to -0.004		
560-97A50,-1	0.197 to 0.207		0.000 to -0.0035
560-97N50,-1	0.197 to 0.207		0.207 to 0.211
560-97NF50	0.197 to 0.207		0.2035 to 0.207
560-97NF50-1	0.197 to 0.207		0.2035 to 0.207
560-98K50	0.000 to -0.0035		0.000 to -0.0015
560-98KF50	0.000 to -0.0035		0.000 to -0.0015
560-98S50	0.000 to -0.0035		-0.0023 to -0.0037
560-98SF50	0.000 to -0.0035		-0.0000 to -0.0008
560-98S50-1	0.000 to -0.0035		-0.0023 to -0.0037
560-98SF50-1	0.000 to -0.0035		-0.0000 to -0.0008
58A50	0.197 to 0.207	0.197 to 0.207	0.000 to -0.0035
59A50	0.197 to 0.207		0.000 to -0.0035
60A50,-1	0.187 to 0.207	0.187 to 0.207	0.000 to -0.0035
60N50,-1	0.187 to 0.207	0.187 to 0.207	0.207 to 0.211
60NF50,-1	0.187 to 0.207	0.187 to 0.207	0.235 to 0.207
63A SERIES	0.187 to 0.207		0.000 to -0.005
63N SERIES	0.187 to 0.207		0.207 to 0.211
63NF SERIES	0.187 to 0.207		0.2035 to 0.207
70K SERIES	0.000 to -0.0035		
73N SERIES	0.207 to 0.216		
74N50	0.207 to 0.216		
74N50B	0.207 to 0.211		
75A50	0.000 to -0.0035		
75K SERIES	0.000 to -0.0035		
75N50	0.207 to 0.216		
75N50B	0.207 to 0.211		

* A=GPC 7, N=N Male, NF=N Female, K=Male K Connector, KF=Female K Connector, S=Male SMA, SF=Female SMA, W=WSMA, U=Universal

Table 1. Pin Depth Values for ANRITSU Connectors, Alpha-Numerical Listing (4 of 4)

MODEL	INPUT*	OUTPUT*	TESTPORT*
87A50,-1	0.207 to 0.197	0.207 to 0.197	0.000 to -0.0035
97A50,-1	0.197 to 0.207		0.000 to -0.0035
97N50,-1	0.197 to 0.207		0.207 to 0.211
97NF50,-1	0.197 to 0.207		0.2035 to 0.207
97S50,-1	0.197 to 0.207		-0.0023 to -0.0037
97SF50,-1	0.197 to 0.207		-0.0000 to -0.0008
K101F or M	0.000 to -0.006		
K102F or M	0.000 to -0.006		
K103F or M	0.000 to -0.006		
K104F or M	0.000 to -0.006		
K210	0.000 to -0.0035		
K220	0.000 to -0.0035	0.000 to -0.0035	
K222	0.000 to -0.0035	0.000 to -0.0035	
K224	K 0.000 to -0.0035	KF 0.000 to -0.003	
K230	0.000 to -0.0035	0.000 to -0.0035	
K232	0.000 to -0.0035	0.000 to -0.0035	
K234	K 0.000 to -0.0035	KF 0.000 to -0.0035	
K240	0.000 to -0.006	0.000 to -0.006	0.000 to -0.006
K250	0.000 to -0.006	0.000 to -0.006	0.000 to -0.006
V101F or M	0.000 to -0.005		
V102F or M	0.000 to -0.005		
V103F or M	0.000 to -0.005		
V104F or M	0.000 to -0.005		
V250	0.000 to -0.0035	0.000 to -0.0035	0.000 to -0.0035

* A=GPC 7, N=N Male, NF=N Female, K=Male K Connector, KF=Female K Connector, S=Male SMA, SF=Female SMA, W=WSMA, U=Universal

Table 2. Pin Depth Values for ANRITSU Connectors, Product Listing (1 of 3)

MODEL	INPUT*	OUTPUT*	TEST PORT*
Adapters			
K210	0.000 to -0.0035		
K220	0.000 to -0.0035	0.000 to -0.0035	
K222	0.000 to -0.0035	0.000 to -0.0035	
K224	K 0.000 to -0.0035	KF 0.000 to -0.003	
K230	0.000 to -0.0035	0.000 to -0.0035	
K232	0.000 to -0.0035	0.000 to -0.0035	
K234	K 0.000 to -0.0035	KF 0.000 to -0.0035	
34AN50	A 0.000 to -0.0035	N 0.207 to 0.211	
34ANF50	A 0.000 to -0.0035	N 0.2035 to 0.207	
34UK50	U 0.266 to 0.269	K -0.0000 to -0.0008	
34UA50	U 0.266 to 0.269	A -0.0000 to -0.0008	
34UN50	U 0.266 to 0.269	N 0.207 to 0.210	
34UNF50	U 0.266 to 0.269	NF 0.2045 to 0.207	
34US50	U 0.266 to 0.269	S -0.0000 to -0.0008	
35KF SERIES	0.000 to -0.0035		
35K SERIES	0.000 to -0.0035		
Air Lines			
18A50	0.000 to -0.0035		0.0000 to -0.0006
18N50	A 0.000 to -0.0035		N 0.207 to 0.208
18NF50	A 0.000 to -0.0035		NF 0.206 to 0.207
19K50	0.000 to -0.0035		0.0000 to -0.001
19KF50	0.000 to -0.0035		0.0000 to -0.001
19S50	-0.0023 to -0.0037		-0.0025 to -0.0035
19SF50	-0.0023 to -0.0037		-0.0003 to -0.0008
Bias Tee			
K250	0.000 to -0.006	0.000 to -0.006	0.000 to -0.006
V250	0.000 to -0.0035	0.000 to -0.0035	0.000 to -0.0035
Coaxial Attenuators			
41K SERIES	K 0.000 to -0.0035	KF 0.000 to -0.0035	
43K SERIES	K 0.000 to -0.0035	KF 0.000 to -0.0035	
Coaxial Terminations			
26N SERIES	0.207 to 0.211		
26NF SERIES	0.203 to 0.207		
28A50,-1	0.000 to -0.0035		
28A50-2	-0.0000 to -0.0008		
28K50	0.000 to -0.0015		
28KF50	0.000 to -0.0015		

* A=GPC 7, N=N Male, NF=N Female, K=Male K Connector, KF=Female K Connector, S=Male SMA, SF=Female SMA, W=WSMA, U=Universal

Table 2. Pin Depth Values for ANRITSU Connectors, Product Listing (2 of 3)

MODEL	INPUT*	OUTPUT*	TEST PORT*
28N50-2	0.207 to 0.2085		
28NF50-2	0.2055 to 0.207		
28S50,-1	-0.0023 to -0.0037		
28SF50-2	-0.0000 to -0.0008		
28SF50,-1	0.000 to -0.001		
28SF50-2	-0.0000 to -0.0008		
29A50-20	0.000 to -0.0035		
29K50-15	0.000 to -0.0015		
29KF50-15	0.000 to -0.0015		
29S50-20	-0.0023 to -0.0037		
29SF50-20	0.000 to -0.001		
K and V Sparkplug and Flange Connectors			
K Series	0.000 to -0.005		
V Series	0.000 to -0.004		
Microwave Detectors			
560-7A50	0.000 to -0.0035		
560-7K50	0.000 to -0.0035		
560-7N50	0.207 to 0.216		
560-7S50	-0.001 to -0.004		
70K SERIES	0.000 to -0.0035		
73N SERIES	0.207 to 0.216		
74N50	0.207 to 0.216		
74N50B	0.207 to 0.211		
75A50	0.000 to -0.0035		
75K SERIES	0.000 to -0.0035		
75N50	0.207 to 0.216		
75N50B	0.207 to 0.211		
Open-Shorts			
21A-1	0.000 to -0.002		
22K50	0.000 to -0.0015	0.000 to -0.0015	
22KF50	0.000 to -0.0015	0.000 to -0.0015	
22N SERIES	0.207 to 0.211	0.207 to 0.210	
22NF SERIES	0.2035 to 0.207	0.235 to 0.207	
22S50	-0.0023 to -0.0037	-0.0023 to -0.0037	
22SF50	0.000 to -0.001	0.000 to -0.001	
Power Dividers			
K240			

* A=GPC 7, N=N Male, NF=N Female, K=Male K Connector, KF=Female K Connector, S=Male SMA, SF=Female SMA, W=WSMA, U=Universal

Table 2. Pin Depth Values for ANRITSU Connectors, Product Listing (3 of 3)

MODEL	INPUT*	OUTPUT*	TEST PORT*
Step Attenuators			
44K SERIES	K 0.000 to -0.0035	KF 0.000 to -0.0035	
45K SERIES	K 0.000 to -0.003	KF 0.000 to -0.0035	
46K SERIES	K 0.000 to -0.003	KF 0.000 to -0.003	
47K SERIES	K 0.000 to -0.003	KF 0.000 to -0.003	
SWR Bridges and Autotesters			
560-97A50,-1	0.197 to 0.207		0.000 to -0.0035
560-97N50,-1	0.197 to 0.207		0.207 to 0.211
560-97NF50	0.197 to 0.207		0.2035 to 0.207
560-97NF50-1	0.197 to 0.207		0.2035 to 0.207
560-98K50	0.000 to -0.0035		0.000 to -0.0015
560-98KF50	0.000 to -0.0035		0.000 to -0.0015
560-98S50	0.000 to -0.0035		-0.0023 to -0.0037
560-98SF50	0.000 to -0.0035		-0.0000 to -0.0008
560-98S50-1	0.000 to -0.0035		-0.0023 to -0.0037
560-98SF50-1	0.000 to -0.0035		-0.0000 to -0.0008
60A50,-1	0.187 to 0.207	0.187 to 0.207	0.000 to -0.0035
60N50,-1	0.187 to 0.207	0.187 to 0.207	0.207 to 0.211
60NF50,-1	0.187 to 0.207	0.187 to 0.207	0.235 to 0.207
63A SERIES	0.187 to 0.207		0.000 to -0.005
63N SERIES	0.187 to 0.207		0.207 to 0.211
63NF SERIES	0.187 to 0.207		0.2035 to 0.207
87A50,-1	0.207 to 0.197	0.207 to 0.197	0.000 to -0.003
87A50,-1	0.207 to 0.197	0.207 to 0.197	0.000 to -0.0035
97A50,-1	0.197 to 0.207		0.000 to -0.0035
97N50,-1	0.197 to 0.207		0.207 to 0.211
97NF50,-1	0.197 to 0.207		0.2035 to 0.207
97S50,-1	0.197 to 0.207		-0.0023 to -0.0037
97SF50,-1	0.197 to 0.207		-0.0000 to -0.0008
<p>* A=GPC 7, N=N Male, NF=N Female, K=Male K Connector, KF=Female K Connector, S=Male SMA, SF=Female SMA, W=WSMA, U=Universal</p>			

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