

QC  
Avro  
CF105  
R-  
0022

~~SECRET~~ Classification cancelled / Changed to UNCLASS  
6105-R-0022  
By authority of AVES  
A PROPOSAL FOR CAVES AND  
Date 28 Sept 86  
JUNCTION BOXES IN THE READINESS HANGAR  
Signature CE-105  
Unit / Rank / Appointment AVES S

**FILE IN VAULT**

NRC - CISTI  
J. H. PARKIN  
BRANCH

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ANNEXE  
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AVRO AIRCRAFT LIMITED

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MALTON - ONTARIO

ANALYZED

TECHNICAL DEPARTMENT (Aircraft)

AIRCRAFT: CF-105

REPORT NO. C105-R-0022

FILE NO.

NO OF SHEETS: 11

TITLE:

A PROPOSAL FOR CABLES AND JUNCTION BOXES

IN THE READINESS HANGAR - CF-105

~~SECRET~~

Classification cancelled / Changed to UNCLASS

By authority of ARBS

Date 27 Sept 56

Signature ARBS

Unit / Rank / Appointment ARBSF

PREPARED BY A. Aylesworth DATE Feb. 1957

CHECKED BY K. R. Knowlton DATE Feb. 1957

SUPERVISED BY DATE

APPROVED BY KR Knowlton DATE Feb 19/57

ISSUE NO	REVISION NO	REVISED BY	APPROVED BY	DATE	REMARKS

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TECHNICAL DEPARTMENT

REPORT No. C105-R-0022

SHEET NO. 1

AIRCRAFT:

CF-105

A PROPOSAL FOR CABLES AND  
JUNCTION BOXES IN THE  
READINESS HANGAR

PREPARED BY

DATE

A. Aylesworth

February 1957

CHECKED BY

DATE

K. R. Knowlton

February 1957

SECRET

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		A. Aylesworth	February 1957
SECRET		CHECKED BY	DATE
		K. R. Knowlton	February 1957

1. SUMMARY

- 1.1 At the 11th meeting of the CF-105 Ground Support Equipment Sub-committee held at Avro Aircraft Limited on December 17th, 1956, the RCAF recommended that Avro submit this proposal for a system of electrical cables for use in readiness hangars.
- 1.2 It is proposed that Avro Aircraft Limited provide cables and junction boxes for necessary interconnections in a readiness hangar between:
  - (a) Aircraft and ground starting equipment.
  - (b) Aircraft and ground crew intercom. units.
  - (c) Aircraft and Bell Telephone Company "Telescrabble" terminal boxes.
- 1.3 The cables proposed are for use in conjunction with permanently installed facilities in the readiness hangar. However, in case of failure of this normal hangar equipment, the same cables will be suitable for emergency use of mobile ground starting equipment.

2. EQUIPMENT REQUIRED

2.1 Cables

- 2.1.1 Junction box to Bell Telephone Company terminal box (Figure 4).
- 2.1.2 Aircraft to junction box (Figure 5).
- 2.1.3 Junction box to ground intercom. units (Figure 6).
- 2.1.4 Junction box to starting equipment wiring (Figure 7).
- 2.1.5 Ground starting equipment junction box to wall junction box (Figure 8). Required only if a wall separates the aircraft from the ground starting equipment (see Figure 2).

2.2 Junction Box

For each aircraft, one junction box is required on the ground starting equipment. For each aircraft, under the conditions stated in paragraph 2.1.5, one junction box is required on the wall.



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2. EQUIPMENT REQUIRED

2.2 Continued

For each mobile starting equipment one junction box is required. All these junction boxes are identical, the dimensions being approximately 11 inches by 6 inches by 3 inches, exclusive of the projection of the connectors.

3. ARRANGEMENT OF CABLES

3.1 Figure 1 shows the normal attachments of cables to the junction boxes. However, if a separating wall is provided, (as shown in Figure 2), the wall-mounted junction box is connected to the ground starting equipment junction box by cable 5 (Figure 8).

3.2 AN/AIC-17 ground crew intercommunication equipment may be connected at any junction box through cable 3 (Figure 6).



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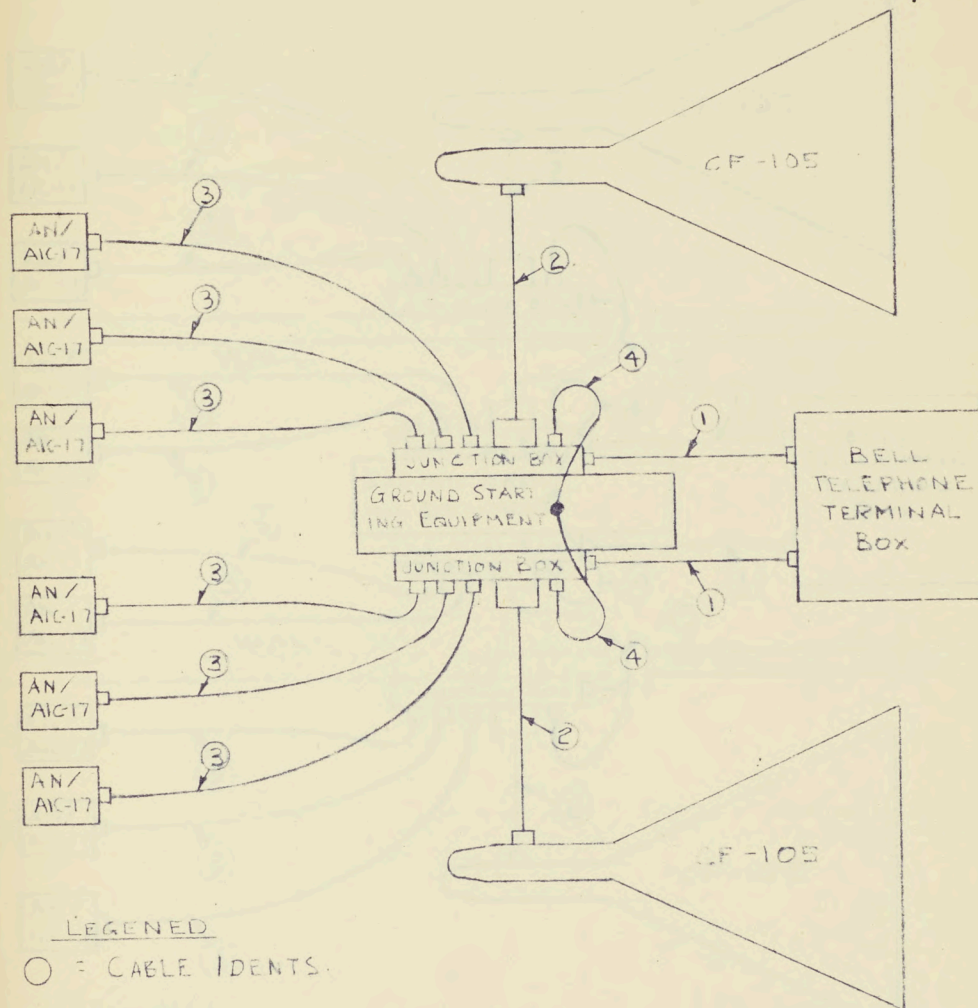
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LEGENED

○ = CABLE IDENT.

BLOCK DIAGRAM - READINESS HANGAR  
WITHOUT INTERNAL WALLS.

FIG. 1.



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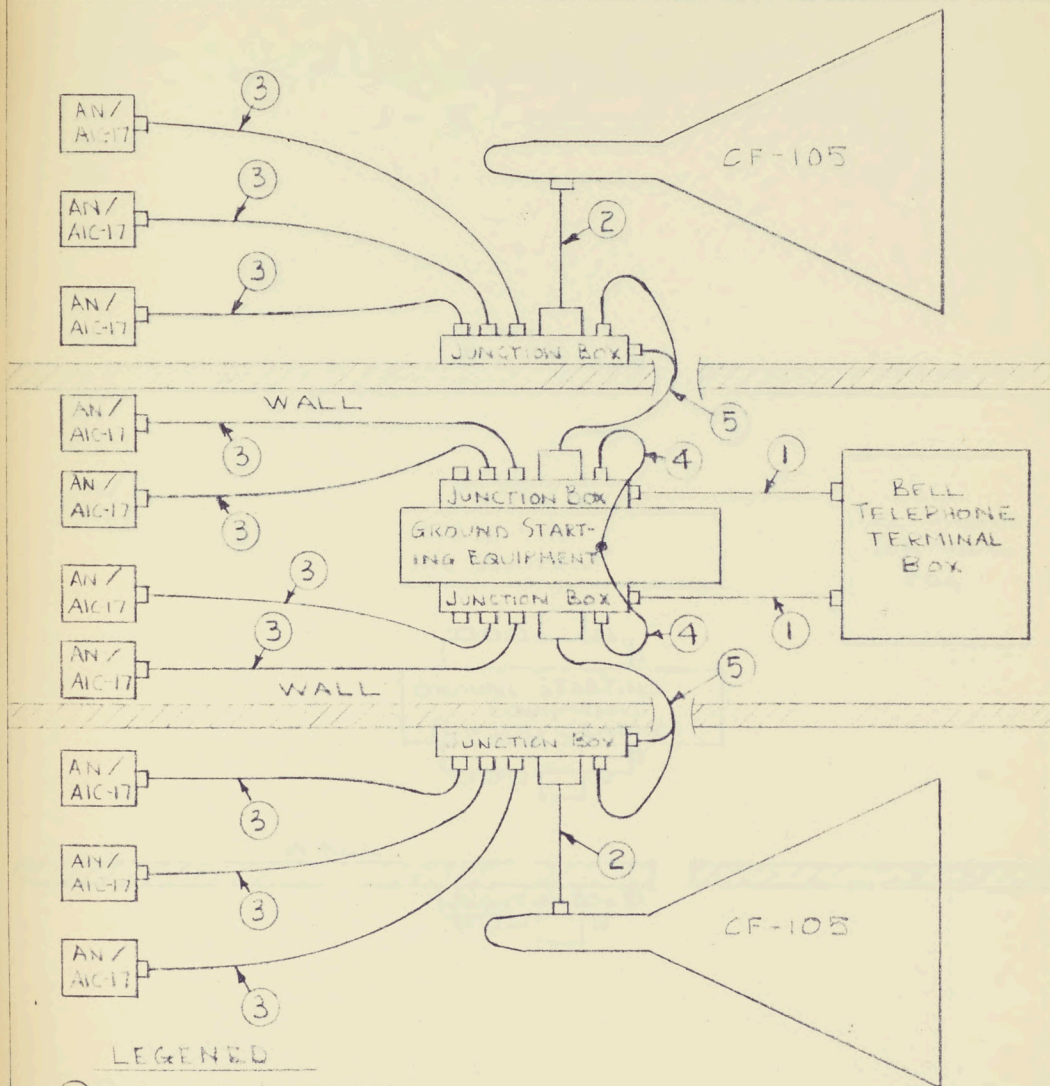
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○ = CABLE IDENTIS.

BLOCK DIAGRAM - READINESS HANGAR  
WITH 2 INTERNAL WALLS.

FIG. 2



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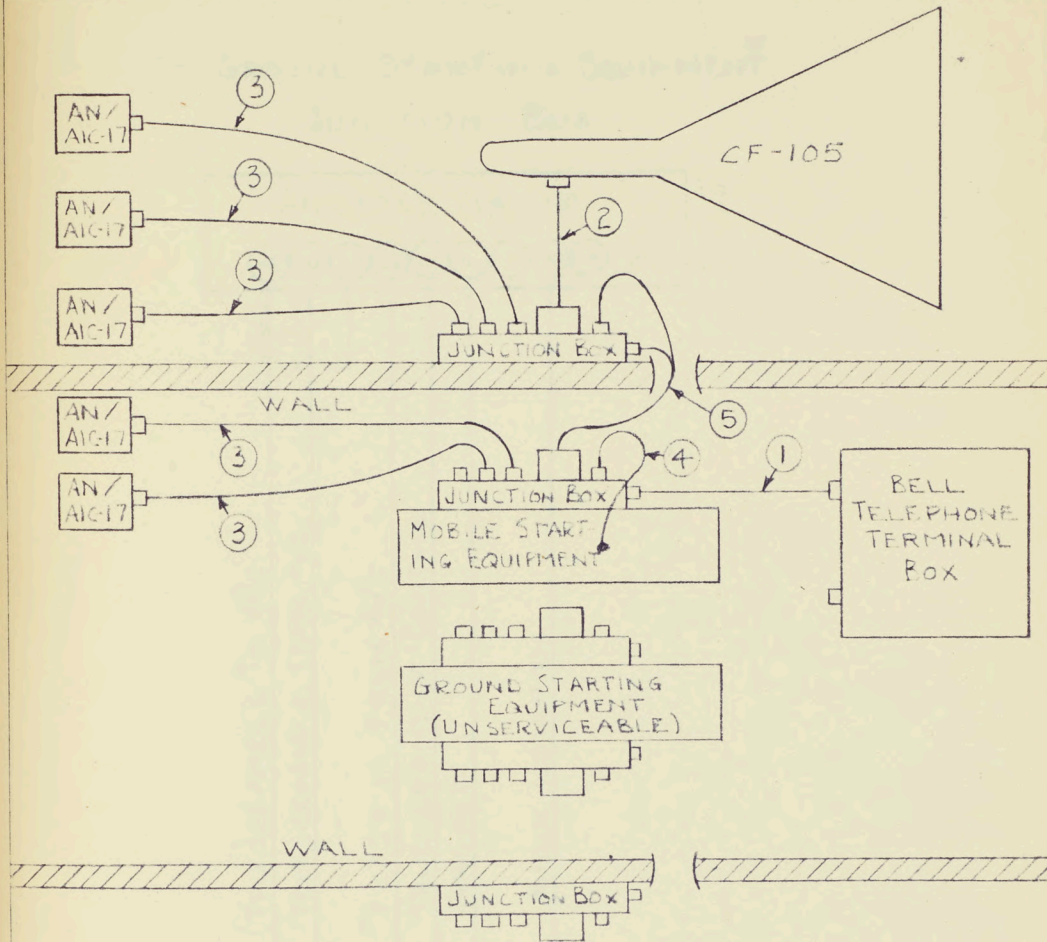
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LEGENDED

○ = CABLE IDENTIS.

BLOCK DIAGRAM - READINESS HANGAR  
WITH MOBILE STARTING EQUIPMENT

FIG. 3



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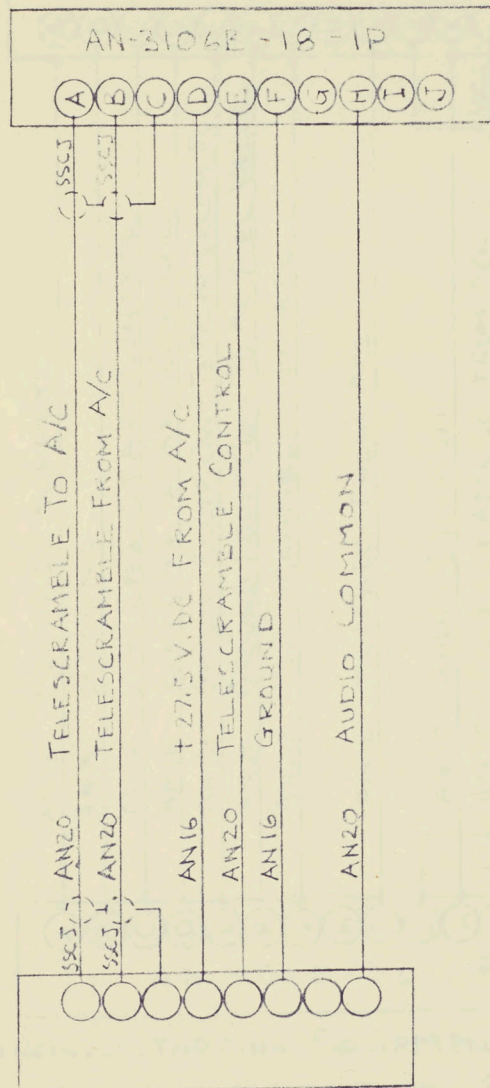
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TO GROUND STARTING EQUIPMENT  
JUNCTION BOX



TO BELL TELEPHONE CO. TERMINAL BOX.

CABLE NO. 1

FIG. 4



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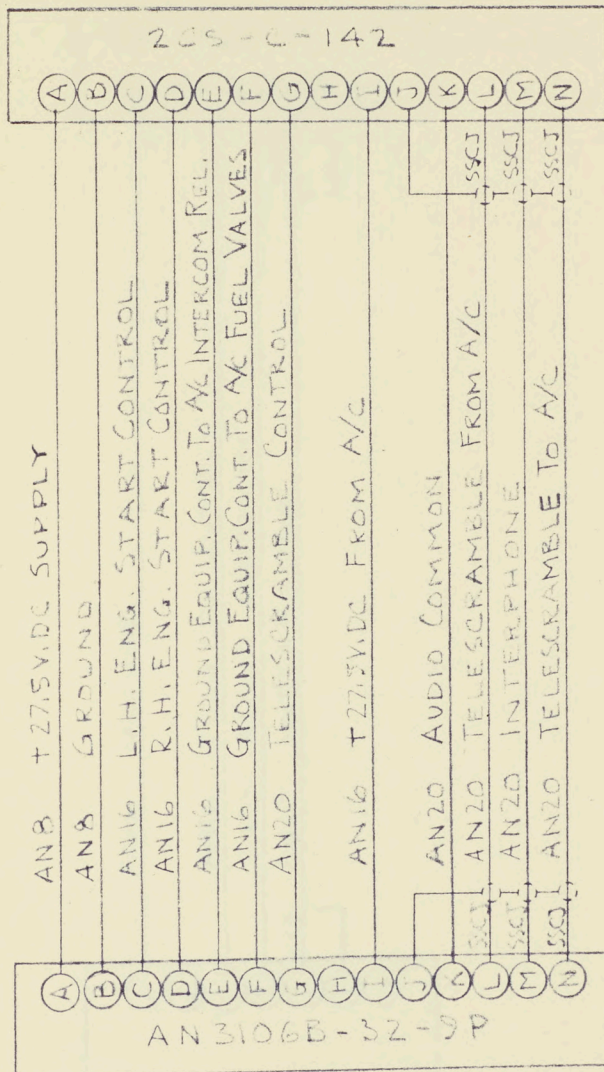
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TO AIRCRAFT NOSEWHEEL CONNECTOR



TO GROUND STARTING EQUIPMENT JUNCTION BOX

CABLE No. 2

FIG. 5



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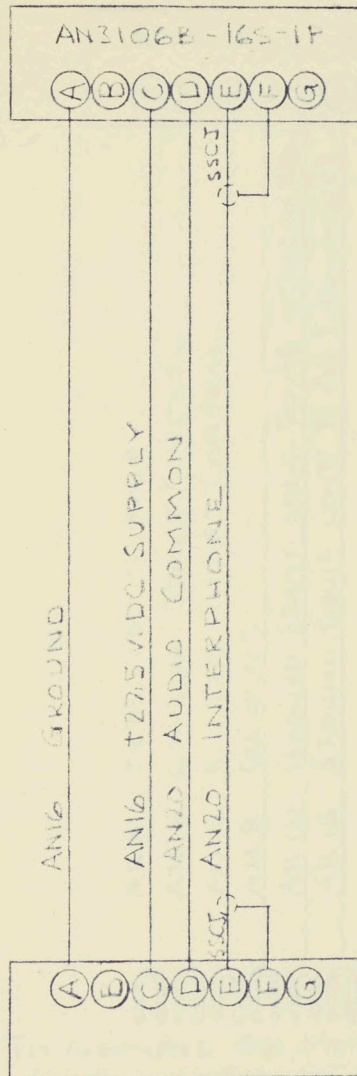
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TO GROUND STARTING EQUIPMENT  
OR WALL MOUNTED JUNCTION BOX



TO AN/AIC-17 EQUIPMENT

CABLE No. 3

FIG. 6



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TO GROUND STARTING EQUIPMENT  
OR MOBILE STARTING EQUIP. JUNC. BOX

AN 3106E-20-85

A B O U D E E

AN 8 +27.5 V. DC SUPPLY  
AN 16 L.H. ENG. START CONTROL  
AN 16 R.H. ENG. START CONTROL  
AN 8 GROUND  
AN 16 GROUND EQUIP. CONT. TO A/C INTERCOM REL.  
AN 16 GROUND EQUIP. CONT. TO A/C FUEL VALVES



TO GROUND OR MOBILE  
STARTING EQUIPMENT

CABLE NO. 4

FIG. 7



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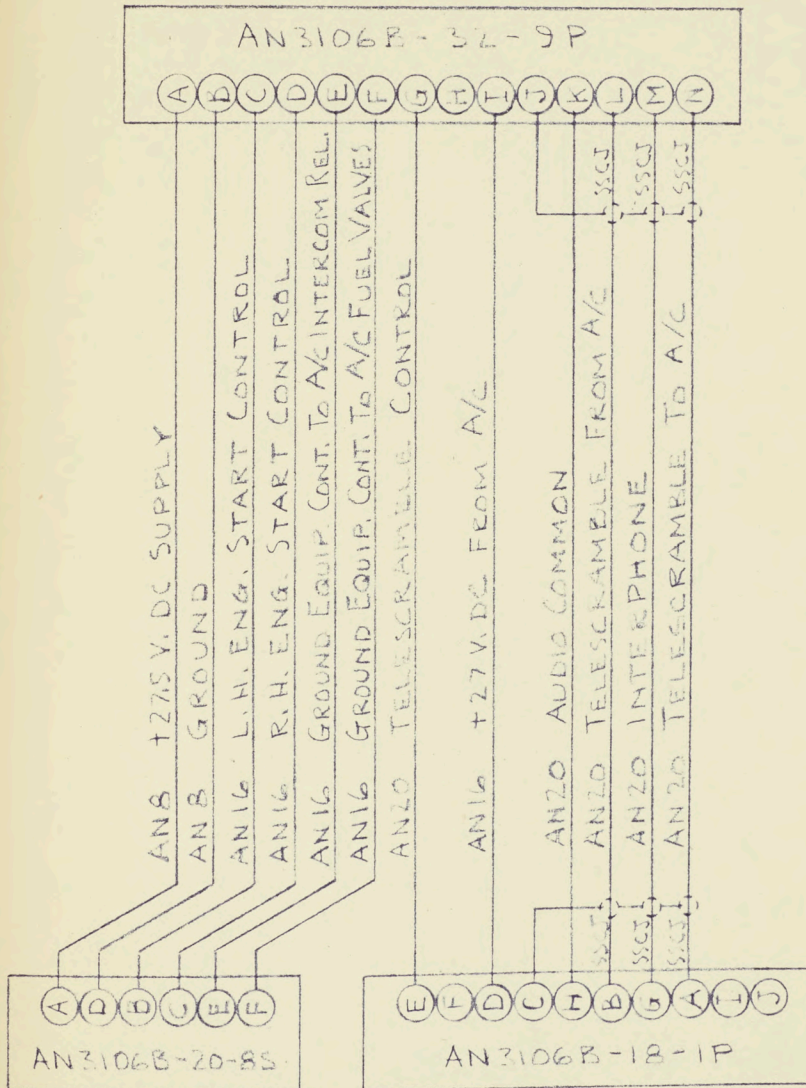
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TO GROUND STARTING EQUIPMENT OR MOBILE  
STARTING EQUIPMENT JUNCTION BOX



TO WALL MOUNTED JUNC. BOX.

CABLE No. 5

FIG. 8

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R.H. ENG. START CONTROL

L.H. ENG. START CONTROL

+27.5V. DC SUPPLY

GROUND

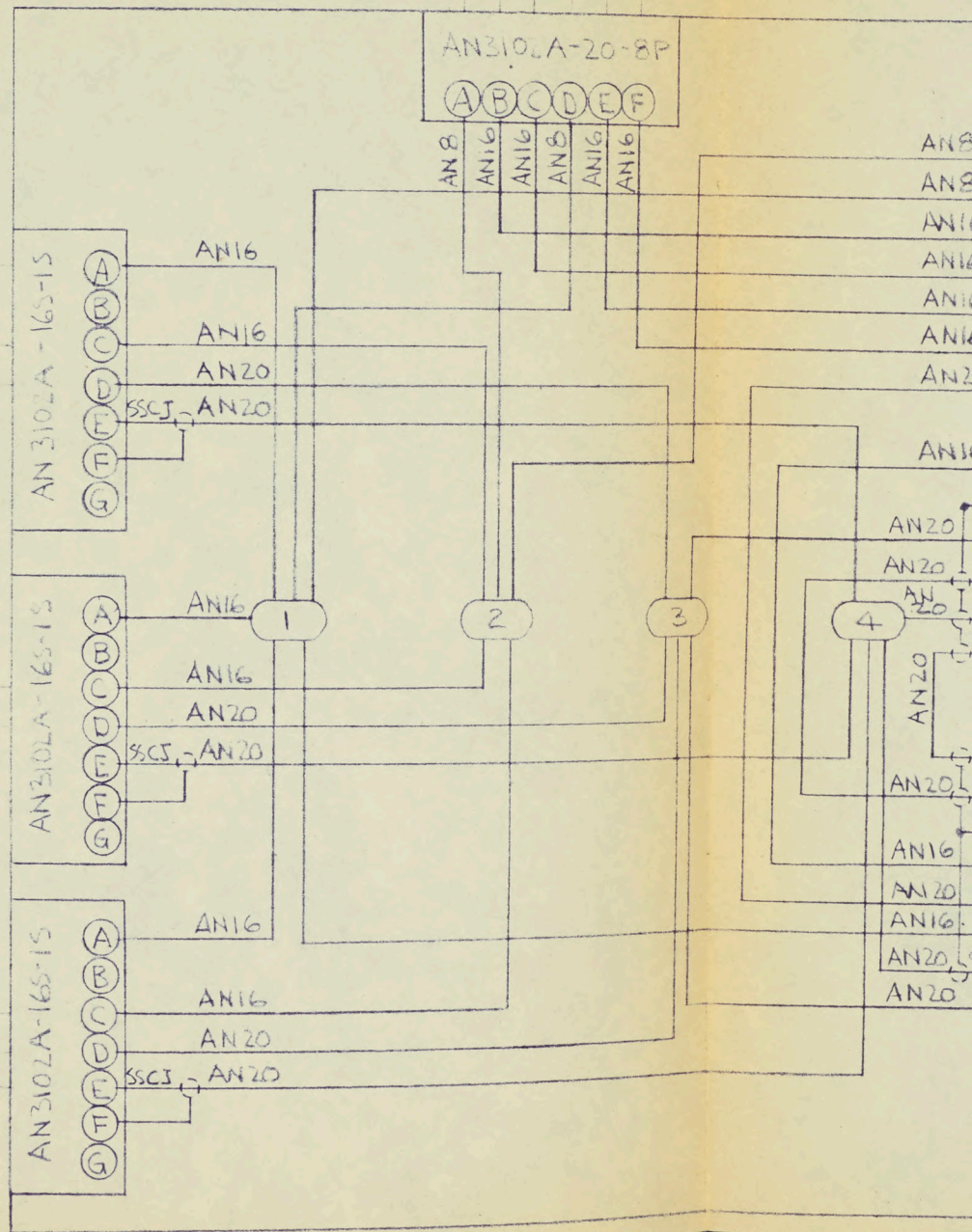
GROUND EQUIP. CONT. T

GROUND EQUIP. CONT.

GROUND  
+27.5V. DC SUPPLY  
AUDIO COMMON  
INTERPHONE

GROUND  
+27.5V. DC SUPPLY  
AUDIO COMMON  
INTERPHONE

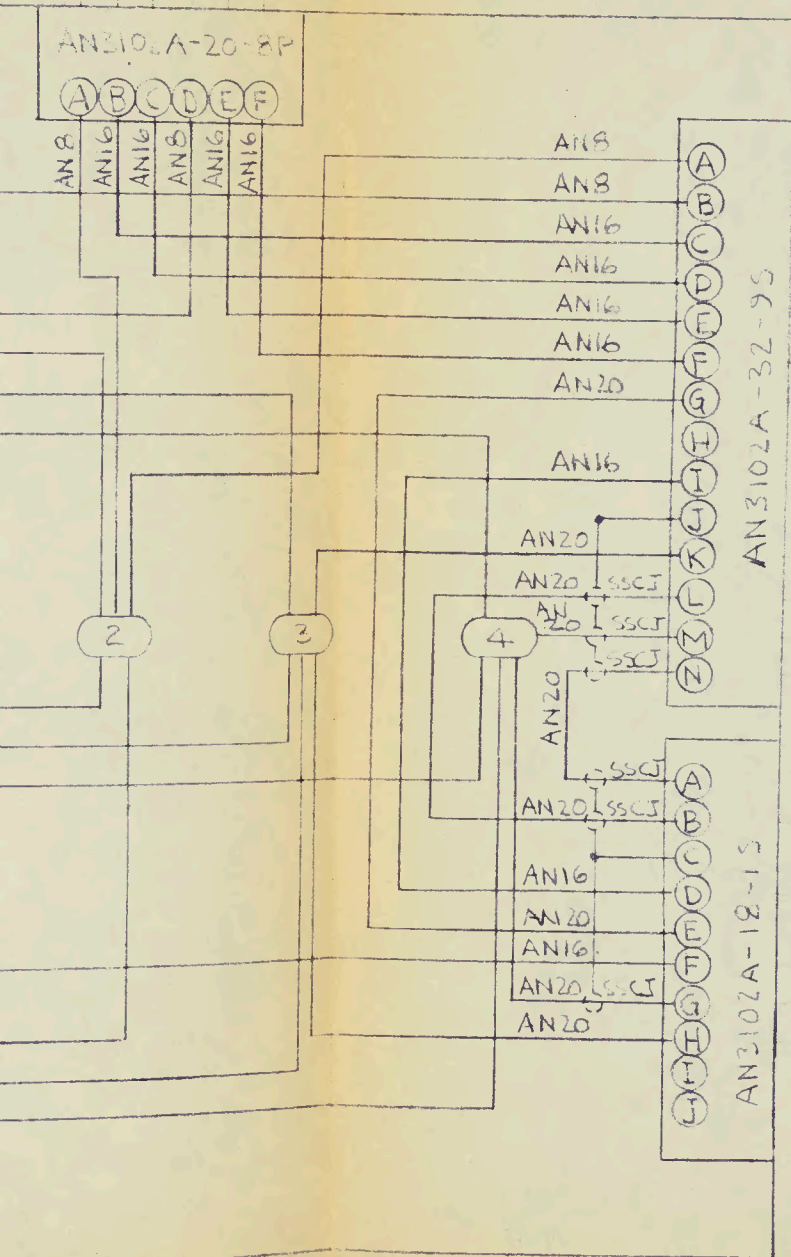
GROUND  
+27.5V. DC SUPPLY  
AUDIO COMMON  
INTERPHONE



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CONTROL  
CONTROL  
GROUND  
GROUND EQUIP. CONT. TO A/C INTERCOM REL.  
GROUND EQUIP. CONT. TO A/C FUEL VALVES



- +27.5 V. DC SUPPLY
- GROUND
- L.H. ENG. START CONTROL
- R.H. ENG. START CONTROL
- GROUND EQUIP. CONT. TO A/C INTERCOM REL.
- GROUND EQUIP. CONT. TO A/C FUEL VALVES
- TELESCRAMBLE CONTROL
- + 27.5V. DC FROM A/C
- AUDIO COMMON
- TELESCRAMBLE FROM A/C
- INTERPHONE
- TELESCRAMBLE TO A/C
- TELESCRAMBLE TO A/C
- TELESCRAMBLE FROM A/C
- +27.5V. DC FROM A/C
- TELESCRAMBLE CONTROL
- GROUND
- INTERPHONE
- AUDIO COMMON

JUNCTION BOX WIRING

FIG. 9

