www.reelschematic.com

FURUNO USA

A3 GMDSS CONSOLE

MODEL: RC18xx Series

www.reelschematic.com

FURUNO USA
IME-GMD-50Z

www.reelschematic.com

TABLE OF CONTENTS

1. INTRODUCTION 1-1

2. MECHANICAL INSTALLATION
- General 2-1
- RC1815/RC1825 Mechanical Layout 2-2
- RC1840 Mechanical Layout 2-3
- A3 GMDSS Console Mechanical Drawing 2-4

3. CONSOLE WIRING
- RC18xx Electrical and NMEA/IEC-61162 Connections 3-1
- RC18xx Battery Requirements 3-3

4. RC1815/RC1825 EQUIPMENT INSTALLATIONS
- 4.1 DMC-5 4-1
- 4.2 Felcom 15 4-2
- 4.3 FM-8800 4-3
- 4.4 FS-1570/FS-2570 4-4
- 4.5 IB-583 4-7

5. RC1815/RC1825 EQUIPMENT SETUP
- 5.1 General 5-1
- 5.2 DMC-5 5-2
- 5.3 Felcom 15 5-4
- 5.4 FM-8800 5-5
- 5.5 FS-1570/FS-2570 5-6
- 5.6 IB-583 5-7

6. RC1840 EQUIPMENT INSTALLATIONS
- 6.1 DMC-5 6-1
- 6.2 DP-6 6-2
- 6.3 DSC-60 6-3
- 6.4 Felcom 15 6-4
- 6.5 FM-8800 6-5
- 6.6 FS-5000 6-6

www.reelschematic.com

TABLE OF CONTENTS

7. RC1840 EQUIPMENT SETUP

7.1 General	7-1
7.2 DMC-5	7-2
7.3 DP-6	7-4
7.4 DSC-60	7-5
7.5 Felcom 15	7-6
7.6 FM-8800	7-7
7.7 FS-5000	7-9

8. RC1815/RC1825 EQUIPMENT LISTS

FM-8800	8-1
FS-1570/FS-2570	8-2
Felcom 15	8-3
IB-583	8-5
GMDSS Installation Materials	8-5
Crate	8-6

9. RC1840 EQUIPMENT LISTS

FS-5000	9-1
DP-6	9-2
Felcom 15	9-3
FM-8800	9-5
DSC-60	9-6
GMDSS Installation Materials	9-7
Crate	9-7

10. RC18xx PARTS LIST 10-1

11. DRAWINGS

RC1815/RC1825 Interconnect Drawing	S-1
RC1840 Interconnect Drawing	S-2
RC1840 Detailed Interconnect Drawing	S-3
Meter Box Assembly RC1815/RC1825	S-4
Meter Box Assembly RC1840	S-5
Felcom 15, IC-315 Junction Box Connections	S-6
RC1815/RC1825, DMC-5 Interconnect Drawing	S-7
RC1840, DMC-5 Interconnect Drawing	S-8

www.reelschematic.com

1. RC18xx Console Introduction

1.1 Introduction

- The FURUNO USA GMDSS Console is an integrated package designed to meet the requirements for Sea Area A3.
  While other configurations are available, and much of the information is similar, this manual was compiled for use with the A3 configuration.
  Much of this information is taken from the manuals provided with this equipment. It has been placed in this format to ease installation and technical service.

- As with the installation of any communications equipment, careful planning is necessary. Some of the most important points are:

  1) Type and Location of Antennas.

  2) Grounding for the Antenna Systems and for all associated equipment.

- These points are repeated in several sections to emphasize their importance. Many installation problems are related to these points, and close attention to the entire installation will lead to years of trouble free service for the customer.

www.reelschematic.com

2. Mechanical Installation

2.1 Mounting of the Console

Refer to **Furuno USA GMDSS Console Drawing**

The RC18xx Console is designed to be mounted in two distinct positions:

- The first is to fasten the unit to a desk or base. Ten 3/8" holes have been provided to ensure a secure mounting to the selected surface.
- The second is bulkhead mounting. Four 3/8" holes are provided through the back panel of the console to facilitate this mounting scheme.

Both are acceptable and are properly reinforced to provide a secure mounting.

2.2 Grounding

Refer to **RC1815/RC1825 and RC1840 Mechanical Layout**

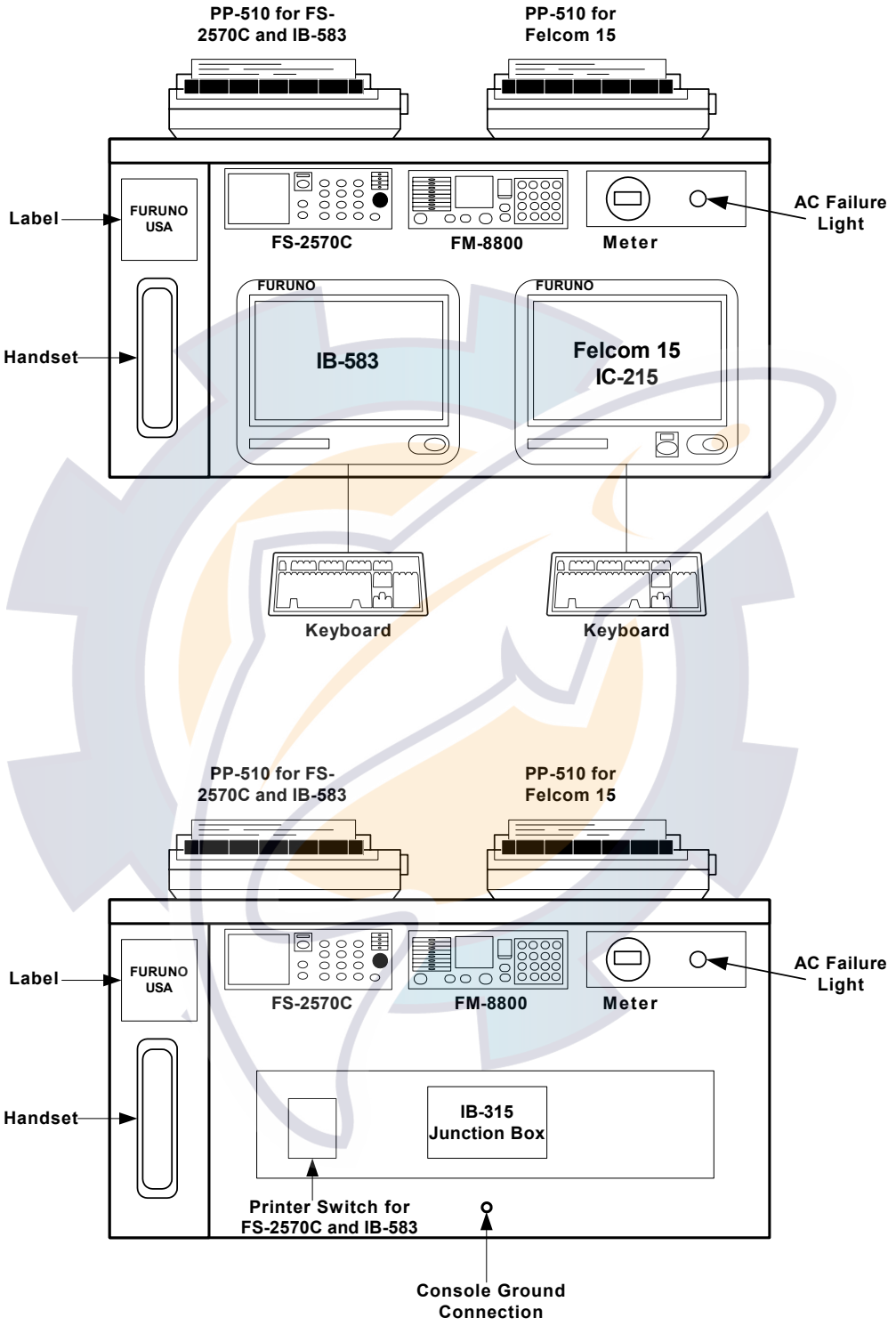
A welded 3/8" stud has been attached to the console for grounding purposes. This grounding stud is located inside the back cover and should not be visible in a completed installation. This is provided to assist in properly grounding the console, and is the console's connection to the electrical and RF grounding of the ship.

The grounding should be a **copper ground strap**, such as used in the antenna grounding system. To produce a good RF ground connection, brazing the ground strap to the steel console is highly recommended. Improper grounding will cause many problems in the system operation.

2.3 Power Supplies, Batteries and Battery Charger

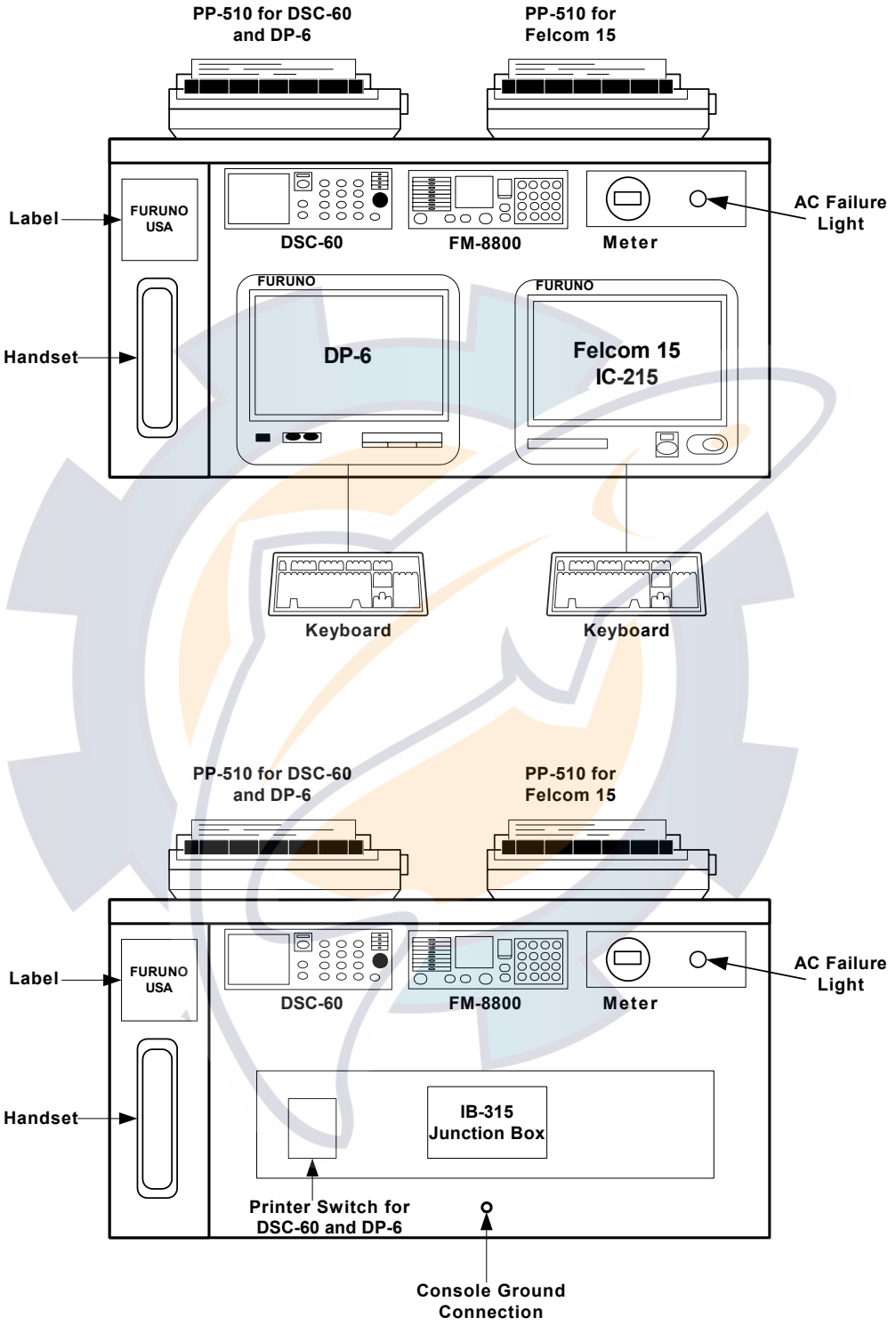
- Mount PR850A and PR300 (if supplied).
- Mount batteries in appropriate container or rack (see manufacturers recommendations). Console current requirements can be found on RC18xx Battery Requirements.
- Mount battery charger (see manufacturers recommendations).

www.reelschematic.com



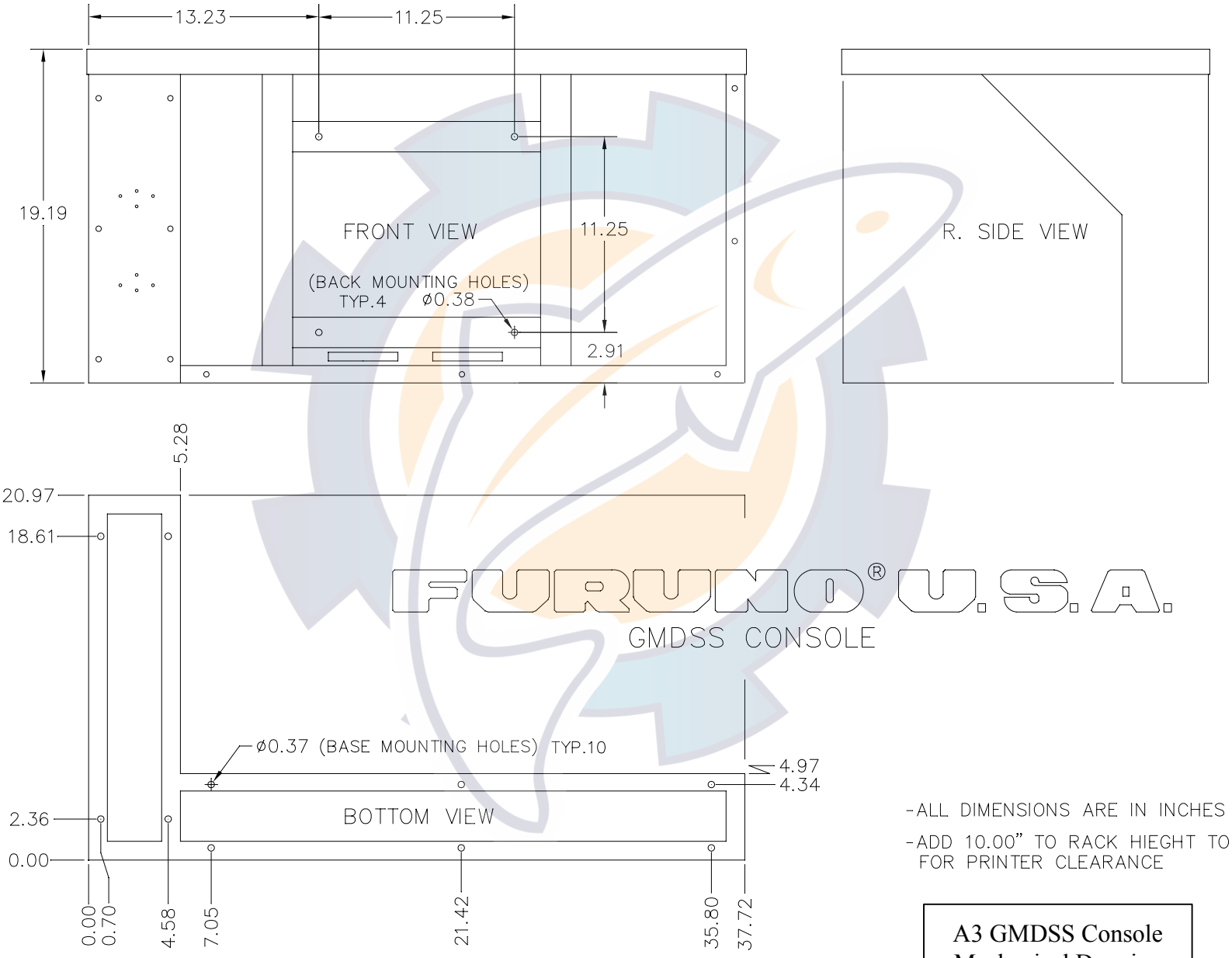
FURUNO USA GMDSS
DESCRIPTION
RC1815 and RC1825 Mechanical Layout

www.reelschematic.com



FURUNO USA GMDSS
DESCRIPTION
RC1840 Mechanical Layout

www.reelschematic.com



A3 GMDSS Console
Mechanical Drawing

www.reelschematic.com

3. RC18xx Console Wiring

3.1 Electrical Connections

Refer to **RC1815/RC1825 and RC1840 Meter Box Assembly Drawing**

3.1.1 Meter Box

All power connections to the RC18xx series console are made to the Meter Box. Access to the Meter Box is made by removing four, countersunk phillips, screws from the bottom and sliding the cover back and down. On the inside of the cover is a mechanical layout of the box, to assist with installation.

3.1.2 Batteries

Connect the battery system using the appropriate wire size to handle the current capacity of the console
(Refer to Pg. 3-3, **RC18xx Battery Requirements**).

Batteries => Meter Box Assembly

1) Battery Negative => TB1-1 in the Meter Box Assembly
2) Battery Positive => TB1-2 in the Meter Box Assembly

3.1.3 Battery Charger

The Battery Charger, which is Dealer supplied, attaches to TB1 in the Meter Box Assembly.

Battery Charger => Meter Box Assembly

1) Negative Output => TB1-3 in the Meter Box Assembly
2) Positive Output => TB1-4 in the Meter Box Assembly

3.1.4 PR-300 Power Supply (RC1840)

Determine the AC Input to be used with the PR-300 (Factory setting is for 220 VAC). Using the diagram supplied with the PR-300, open the supply and set the transformer taps for the correct voltage. Reassemble the supply.

PR-300 (RC1840)

1) AC IN => AC Input from Ships Mains (100 to 220 VAC)
2) DC IN (Negative) => TB1-5 Meter Box Assembly
3) DC IN (Positive) => TB1-6 Meter Box Assembly
4) 24V DC OUT (Negative) => TB1-9 Meter Box Assembly
5) 24V DC OUT (Positive) => TB1-10 Meter Box Assembly

www.reelschematic.com

3. RC18xx Console Wiring

3.1 Electrical Connections (Continued)

Refer to **RC1815/RC1825 and RC1840 Meter Box Assembly Drawing**

3.1.5 PR-850A Power Supply

Determine the AC Input to be used with the PR-850A (Factory setting is for 220 VAC). Using the diagram supplied with the PR-850A, open the supply and set the transformer taps for the correct voltage. Reassemble the supply.

PR-850A => Console and Outside Connections

PR-850A Front Connections

1) AC IN => AC Input from Ships Mains (100 to 240 VAC)
2) 24 VDC Output => Not Used

PR-850A Rear Connections (RC1815 and RC1825)

1) Battery IN (Negative)	=> TB1-5	Meter Box Assembly
2) Battery IN (Positive)	=> TB1-6	Meter Box Assembly
3) AC Fail (Positive)	=> TB1-7	Meter Box Assembly
4) AC Fail (Negative)	=> TB1-8	Meter Box Assembly
5) 24 VDC OUT (Negative)	=> TB1-9	Meter Box Assembly
	=> TB2	FS-1570/ FS-2570 Transceiver
6) 24 VDC OUT (Positive)	=> TB1-10	Meter Box Assembly
	=> TB1	FS-1570/ FS-2570 Transceiver

PR-850A when used with the RC1840

24 VDC OUT (Neg. and Pos.) => To FS-5000 Transceiver.
*** The FS-5000 requires 60 Amps peak current.***

3.1.6 NMEA/IEC-61162 Connections

Refer to Pg. S-6, **Felcom 15, IC-315 Junction Box Connections** drawing.

www.reelschematic.com

RC18xx
Battery Requirements

Equipment	Current / Calculation	RC1815 Amps	RC1825 Amps	RC1840 Amps
PP510	0.4A x 2 =	0.8	0.8	0.8
DSC-60	1.0A =			1
DP-6	1.6A =			1.6
AC Fail Lamp	0.3A =	0.3	0.3	0.3
Emer. Lamp	0.3A =	0.3	0.3	0.3
Felcom 15 RX	0.9A =	0.9	0.9	0.9
Felcom 15 TX	5A/2 =	2.5	2.5	2.5
IB-583	0.6A =	0.6	0.6	
FS-1570 RX	0.8A =	0.8		
FS-1570 TX	20A/2 =	10		
FS-2570 RX	1.5A =		1.5	
FS-2570 TX	35A/2 =		17.5	
FS-5000 RX	3A =			3
FS-5000 TX	60A/2 =			30
FM-8800 RX	1.6A x 2 =	3.2	3.2	3.2
FM-8800 TX	(4.7A/2) x 2 =	4.7	4.7	4.7
Amps Per Hour		24.1	32.3	48.3

*** Method used for calculation: 1/2 of the current consumption necessary for transmission + the current necessary for reception + current consumption of any additional loads**

www.reelschematic.com

4. RC1815/RC1825 Equipment Installations

4.1 DMC-5 (Optional Equipment)

Refer to the **Operator's/Installation Manual, DMC-5 and the RC1815/RC1825, DMC-5 Interconnect Drawing**

4.1.1 Mounting

1) Mount the DMC-5 in an accessible area on the bridge.
   (Refer to the **Operator's/Installation Manual, DMC-5, Section 6**)

4.1.2 Power Connections

1) Connect 24 VDC to the DMC-5 (Junction Board, TB10). The 24-volt supply should be from TB2(-) and TB3(+) in the Meter Box Assembly. This cable should be at least 16 gauge, and the wire size should be increased for cable runs longer than 25 feet. Always install inline fuses in this power cable. A two (2) amp fuse is more than sufficient for these circumstances.

4.1.3 External Equipment Connections

1) Install the dealer supplied control cables from the following equipment to the DMC-5 (Junction Board).
   (Refer to Pg. S-7, the **RC1815/RC1825, DMC-5 Interconnect Drawing**)
   a) VHF #1 (FM-8800)
   b) VHF #2 (FM-8800)
   c) FS-1570/FS-2570
   d) Felcom 15, IC-315 Junction Box

   The FS-1570/FS-2570 requires a cable with two twisted pairs with an overall shield. The Felcom 15 requires a cable with three twisted pairs with an overall shield. These cables should be 18 to 20 gauge, and the wire size should be increased for cable runs longer than 35 feet. This cabling should be equivalent to, or better than, Belden 85164.

2) Connect the VHF's (FM-8800) using the optional IF-8810 (Junction Box) and IF-8820 (DMC I/F). These optional units allow the FM-8800 to connect to the DMC-5. A Furuno 05S0309 cable will be required between the IF-8810 and IF-8820, as well as, the Belden 85164 or equivalent between the IF-8820 and the VHF #1 or VHF #2 port on the DMC-5 (Junction Board).
   (See Installation Manual, FM-8800)

3) Install cabling between the DMC-5 (Junction Board, TB6) and TB in the FS-1570/FS-2570 Transceiver using the recommended cable.

4) Connect the Felcom 15 Junction Box and the DMC-5 (Junction Box, TB5) using the recommended cable. When the DMC-5 is used, a Distress Alert Unit is not needed at the navigation position.

www.reelschematic.com

4. RC1815/RC1825 Equipment Installations

4.2 Felcom 15 Installation

Refer to **Installation Manual, Felcom 15**

4.2.1 IC-215 Communications Unit/Display

1) Mount the IC-215 in the front, desktop area, of the console on the right side. Using the four tapping screws provided.
(Refer to the Pg. 2-2, the **RC1815 and RC1825 Mechanical Layout** and Pg. 8 of the **Installation Manual**)

2) Connect the cables for the **Felcom 15 Printer**, **Keyboard, Felcom 15 Junction Box** and **Felcom 15 Power**. These cables have been installed and labeled within the console.

3) Install the IC-305, Distress Alert/Received Call Unit, on the bridge. Wire this to the IC-315 Junction box using Belden 85164 or equivalent.
(Refer to Pg. S-6, the **Felcom 15, IC-315 Junction Box Connections**)

4) Install the IC-306, Alarm Unit, near the console. Wire this to the IC-315 Junction box using Belden 85164 or equivalent.
(Refer to Pg. S-6, the **Felcom 15, IC-315 Junction Box Connections**)

4.2.2 IC-115 Antenna Unit

1) Install Antenna Unit, IC-115, (refer to the **Installation Manual**). Make sure that the Antenna Unit is properly grounded and that all connections are properly sealed. Route the antenna cable to the IC-215 and connect it to the **ANT** port.
(Refer to Pgs. 1 through 7 in the **Installation Manual, Felcom 15**)

www.reelschematic.com

4. RC1815/RC1825 Equipment Installations

4.3 FM-8800 Installation

Refer to **Installation Manual, FM-8800**

4.3.1 Transceiver

There are two FM-8800's in the standard console configurations. One unit is mounted in the console, and will not require installation of a NMEA cable or power cable. The handset and hanger, for the console mounted FM-8800, must be mounted in a location that is convenient for the user. The second unit is remotely mounted on the bridge, and will require the installation procedure listed below.

1) Mount the transceiver bracket. (Refer to Pg. 1-3 of the **Installation Manual**)

2) Screw the knob bolts with washers into the transceiver unit.

3) Set the transceiver unit into the mounting bracket and tighten the knob bolts.

4) Install the supplied Power Cable (000-151-711), from the transceiver, to TB2(-) and TB3(+) in the Meter Box Assembly.
This power cable is protected by inline fuses (15A), any addition cable added, must also be protected.

5) Make a NMEA cable using the supplied connector (000-145-424) and shell (000-145-423). Connect from the **NMEA/REMOTE** port on the transceiver to the IC-315 Junction Box. Use Belden 8302 or equivalent cable.
(Refer to Pg. S-6, the **Felcom 15, IC-315 Junction Box Connections**)

6) Attach a ground strap from the transceiver ground stud to the ship's hull or ground system.

7) Mount the handset hanger and connect to the **HANDSET** port on the front of the transceiver.

4.3.2 Antennas

Two standard marine VHF antennas are necessary for both FM-8800's. One antenna is the main TX/RX antenna while the second is the Channel 70 RX antenna for the DSC receiver.

1) Mount both VHF antennas. Make sure that they are separated vertically to prevent the TX antenna from interfering with the channel 70 RX antenna.

2) Install the cables and connect the transmit antenna to the **ANT** port and the receive antenna to the **CH 70 ANT** port on the transceiver.

www.reelschematic.com

4. RC1815/RC1825 Equipment Installations

4.4 FS-1570/FS-2570 Installation

Refer to **Installation Manual, FS-1570 (150W) / FS-2570 (250W)**

4.4.1 Control Unit

1) The FS-2570C (Control Unit) and HS2001 (Handset) have been mounted and wired into the console.

4.4.2 Transceiver Unit

1) The Transceiver is designed for bulkhead mounting using six tapping screws or bolts. Select a location that can support the weight of the unit, (FS-1570: 25 lbs., FS-2570: 31 lbs.), under the operating conditions encountered onboard the ship. If necessary, reinforce the mounting location.

2) Connect the 24 VDC, Rear Connections: PR850A, to TB1(+) and TB2(-) of the transceiver, through a set of inline breakers or fuses. When installing the power cable in the transceiver, use a razor knife to cut an opening in the grommet.
The FS-1570, which draws 20 amps, will require an 8-gauge wire for up to 40 feet separation from the PR850A power supply.
The FS-2570, which draws 35 amps, will require a 6-gauge wire for up to 40 feet separation from the PR850A power supply.

3) Connect the cable **Controller 1,** connected to the FS-2570C, to the transceiver port **Controller 1**.

4.4.3 Antenna

1) The antenna is to be provided by the Dealer. This antenna should be 7 to 30 meters in length and be mounted as clear of obstructions as possible. When considering the mounting location of the antenna, be sure to allow space for mounting the antenna coupler.

4.4.4 Antenna Coupler AT-1560-15 or AT-1560-25

1) Mount the antenna coupler as close to the antenna as possible. The provided coupler can be mounted horizontally or vertically depending on the location. (Refer to Pgs. 2-1 through 2-3 of the **Installation Manual**)

2) Connect the antenna wire from the antenna to the insulator at the top of the coupler. Keeping the length as short as possible.

3) Fasten the supplied ground strap to the connection provided at the base of the antenna coupler. Make certain this connection is brazed or welded to the ship's hull or ground system. The exposed ground strap should be painted or coated with a material to prevent rust.

www.reelschematic.com

4. RC1815/RC1825 Equipment Installations

4.4 FS-1570/FS-2570 Installation (Continued)

Refer to **Installation Manual, FS-1570 (150W) / FS-2570 (250W)**

4.4.4 Antenna Coupler AT-1560-15 or AT-1560-25 (Continued)

4) Remove the antenna coupler top housing by removing the 8 housing screws.

5) Install the control cable (000-130-484) from the antenna coupler to the transceiver. Cut the connector from the cable and attach the control cable from TB3, in the antenna coupler, and TB, terminals 1-8, in the transceiver. When installing the coupler cable in the transceiver, use a razor knife to cut an opening in the grommet.
(Refer to Pgs. 2-3 through 2-4 of the **Installation Manual**)

6) Install the coax cable (000-113-360) from the antenna coupler to the transceiver. Attach the coax cable from TB1, in the antenna coupler, and the **T/R ANT** port on the FS-1570/FS-2570 transceiver.
(Refer to Pgs. 2-3 through 2-4 of the **Installation Manual**)

7) Reinstall the antenna coupler housing using only a couple of the provided screws. This will allow easier access when testing the unit later in the installation.

4.4.5 DSC/Watch Receiver Antenna

The DSC/Watch Receiver has been incorporated into the FS-1570/FS-2570. This antenna connection is made to the **D.ANT (W/R 1)** port. The unit is shipped for use with a passive antenna.
(Refer to Pgs. 2-4 and 3-10 of the **Installation Manual**)

Passive Antenna

1) When a passive antenna is used, the impedance must be matched to a 50 ohm cable, for connection to the FS-1570/FS-2570.

Active Antenna

1) Install the preamp (FAX-5 coupler). Connect a 2.6m whip or 2 to 3 meter long wire antenna to the preamp.
(Refer to Pgs. 1-11 and 1-12 of the **Installation Manual**)

2) Ground the preamp to the mounting mast.
(Refer to Pgs. 1-11 and 1-12 of the **Installation Manual**)

3) Open the transceiver and remove the cover from the **W/R** (Watch Receiver). Change **J3** from passive to active.
(Refer to Pg. 3-10 of the **Installation Manual** and the diagram on the inside cover of the Transceiver.)

www.reelschematic.com

4. RC1815/RC1825 Equipment Installations

4.4 FS-1570/FS-2570 Installation (Continued)

Refer to **Installation Manual, FS-1570 (150W) / FS-2570 (250W)**

4.4.5 DSC/Watch Receiver Antenna (Continued)

4) Reassemble the transceiver.

4.4.6 NMEA/IEC-61162 Connection

1) Install a cable, Belden 8302 or equivalent, from the Felcom 15 Junction Box to the FS-1570/FS-2570 transceiver. Connect this cable per the notations on Pg. S-6, the **Felcom 15, IC-315 Junction Box Connections**.
(Refer to Pg. 2-2, the **RC1815 and RC1825 Mechanical Layout** for the location of the IC-315 Junction Box)

www.reelschematic.com

4. RC1815/RC1825 Equipment Installations

4.5 IB-583 NBDP Terminal

Refer to **Installation Manual, FS-1570 (150W) / FS-2570 (250W)**

4.5.1 Mounting

1) Mount the IB-583 in the front, desktop area, of the console on the left side. Using the four tapping screws provided.
(Refer to Pg. 2-2, the **RC1815 and RC1825 Mechanical Layout** and Pg. 4-4 of the **Installation Manual**)

4.5.2 Power Connections

1) Connect power cable, **IB-583 Power,** to the IB-583 display.

4.5.3 Additional Connections

1) Connect the printer cable, **IB-583 Printer**, to the printer port.

2) Connect control cable, **IB-583 DTE**, to the DTE port.

3) Connect the keyboard to the **Keyboard** port on the IB-583.

www.reelschematic.com

5. RC1815/RC1825 Equipment Setup

5.1 General

- When the installations are completed, proceed through the setup procedures.

- The MMSI number and INMARSAT number will be needed to complete the setup and testing procedures.

5.1.1 Powering Up Equipment

1) Power on the PR850A. Power on the battery charger.

2) Install the printer paper and turn on the printers.

3) Turn on all of the following equipment before starting the setup procedures:
   a) FS-1570/FS-2570 (RC1815 and RC1825)
   b) IB-583
   c) Felcom 15
   d) FM-8800's (VHF1 and VHF2)
   e) DMC-5 (optional)

4) Each piece of equipment goes through a self-test on start up and will show any errors discovered during this process. Record any errors for future reference.

5.1.2 E Meter

1) The E Meter should be displaying the battery voltage.
   Press the [**SEL**] key and the battery charge current should be displayed.

2) The battery Amp/Hour rating is set at the factory for 200 Amp/Hour.
   If your batteries are a different rating, this setting must be changed to match your batteries. The Amp/Hour settings are in increments of 20 Amp/Hours.
   Example: A setting of 200 would be sufficient for 210 Amp/Hour.
   Never set the rating higher than the rating of the batteries.
   (Refer to Pg. 21 of the **E Meter Owners Manual**)

www.reelschematic.com

5. RC1815/RC1825 Equipment Setup

5.2 DMC-5 (Optional Equipment)

Refer to the **Operator's/Installation Manual, DMC-5**

5.2.1 General

The setup and testing of the DMC-5 should be completed last. This unit expects all equipment, in the console, to already be operational.

```
*Watch*  Pos: NG    00:00
Manual input ? [ SET UP ] Key
```

1) After powering up the DMC-5 for the first time the screen should be as shown above.

2) Press the **[SET UP]** key, then the **0** key four times.

3) Then press the **[ENT]** key.

5.2.2 VHF Input

```
*Watch*  Pos: manu      00:00
```

1) Press the **[SET UP]** key, then the **4 [VHF]** key.

2) Press the **[SELECT]** to highlight **No.1**, then press the **[ENT]** key.

5.2.3 MF/HF Input

```
*Watch*  Pos: auto      00:00
         VHF
```

1) The display should appear as shown above, if it does continue to step 2. If the **Pos:** still shows **NG**, check the DMC-5 wiring and programming of VHF No.1, which should be mounted in the console.

2) Press the **[SET UP]** key, then the **5 [MF/HF]** key.

3) Press the **[SELECT]** key to highlight **J3E**, then press the **[ENT]** key.

www.reelschematic.com

5. RC1815/RC1825 Equipment Setup

5.2 DMC-5 (Continued)

Refer to the **Operator's/Installation Manual, DMC-5**

5.2.4 SES Input (INMARSAT C Terminal)

```
*Watch*  Pos: auto     00:00
           VHF  MF/HF
```

1) The display should appear as shown above, if it does continue to step 2. If not record the error and check the appropriate equipment.

2) Press the **[SET UP]** key, then the **6 [SES]** key.

3) Press the **[SELECT]** key three times to highlight **SES (EGC)**, then press the **[ENT]** key.

5.2.5 Time and Date

```
*Watch*  Pos: auto     00:00
    VHF  MF/HF  SES(EGC)
```

1) The display should appear as shown above, if it does continue to step 2. If not record the error and check the appropriate equipment.

2) Press the **[SELECT]** key, then the **[ENT]** key.

3) Enter the **Year** and press the **[SELECT]** key.

4) Enter the **Date**, month and day, and press the **[SELECT]** key.

5) Enter the UTC **Time**, and press the **[SELECT]** key.

6) Then the **[ENT]** key.

```
*Watch*  Pos: auto     21:30
    VHF  MF/HF  SES(EGC)
```

7) The display should appear as shown above, if it does the setup is complete. If not record the error and check the appropriate equipment.

www.reelschematic.com

5. RC1815/RC1825 Equipment Setup

5.3 Felcom 15

Refer to the **Installation Manual, Felcom 15**

5.3.1 General

1) Insert a good, formatted, floppy disk into the Terminal.

2) Power up the Felcom 15, the status screen should show OK indications and the GPS should indicate **3D**.

5.3.2 IMN Input

(Refer to Pg. 19 of the **Installation Manual, Felcom 15**)

1) Press the **[F8]** key, using the down arrow key, highlight **IMN** and then press the **[Enter]** key.

2) Type in the IMN and press the **[Enter]** key.

3) Press the **[Esc]** key. The screen will now prompt **Update**. Select **Yes** and press the **[Enter]** key.

4) Press the **[Esc]** key until you return to the status screen.

5.3.3 External Equipment

(Refer to Pg. 20 of the **Installation Manual, Felcom 15**)

The Felcom 15 has been programmed for use with the following remote boxes:

1) IC-305 Distress Alert Unit
2) IC-306 Alarm Unit

Unless a DMC-5 or additional boxes are added no changes are necessary.
To change these settings, refer to Pg. 4 of the **Dealers Manual.**

www.reelschematic.com

5. RC1815/RC1825 Equipment Setup

5.4 FM-8800

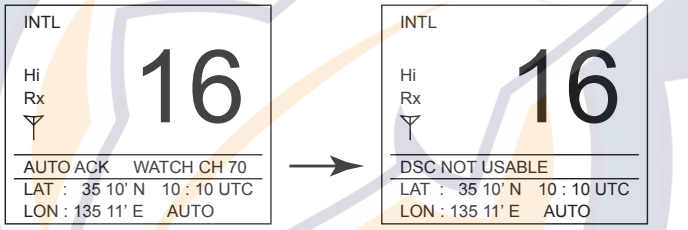
Refer to the **Installation Manual, FM-8800**

5.4.1 General

This setup must be performed on both FM-8800's.

1) Power up the unit.

2) The main display will show Longitude/Latitude and UTC time if the NMEA connection is active. This NMEA information is supplied by the Felcom 15. If it is not displayed check the NMEA cables and connections.
(Refer to Pg. S-6, the **Felcom 15, IC-315 Junction Box Connections**)



MMSI Registered **MMSI Not Registered**

5.4.2 MMSI and System Settings

1) These settings should be completed by an authorized Furuno Agent or Dealer. See pages 5-7 of the A3 GMDSS Console Dealers Manual.

www.reelschematic.com

5. RC1815/RC1825 Equipment Setup

5.5 FS-1570/FS-2570

Refer to the **Installation Manual, FS-1570 (150W) / FS-2570 (250W)**

5.5.1 General

1) Power up the unit and press the **[1/RT]** key.

2) Press the **[3/TEST]**. Allow the test to complete and verify all checks are OK.

5.5.2 RT Operation

1) On each band, verify that the antenna automatically tunes when the **[LOG/TUNE]** key is pressed.

2) If all tests are OK, proceed on to the next section. If the tune fails, verify the antenna, grounding system and the coupler connections.

5.5.3 MMSI

1) To set the MMSI, refer to the **Dealers Manual**, Pg. 4.

5.5.4 Manual 2182 kHz Tuning Preset

1) Press the **[1/RT/2182]** key for 2 seconds.

2) Press the **[LOG/TUNE]** key, **TUNING: OK** will appear when the tuning is complete.

3) Open the coupler and record the status of the LED's CR1-CR22. (Refer to Pgs. 3-1 and 3-2 of the **Installation Manual, FS-1570 (150W) / FS-2570 (250W)**)

4) Set S1 to Manual. Set switches S4, S5 and S6 to match the LED's recorded in step 3.

5) Set S1 to AUTO. The LED's should stay the same as step 4.

6) Secure the antenna coupler cover.

www.reelschematic.com

5. RC1815/RC1825 Equipment Setup

5.6 IB-583 NBDP Terminal

Refer to the **Installation Manual, FS-1570 (150W) / FS-2570 (250W)**

5.6.1 General

1) Power up the unit.

2) Press the **[F6]** key, to enter the **System menu**.

3) Use the arrow keys to select **Change**.

4) Use the down arrow key to highlight **Self Test**.

5) Verify all test are OK and that the self-test prints out.

5.6.2 ID Codes

1) Press the **[F5]** key, to enter the **Station menu**.

2) Press the key to select the **ID** to be entered:
   6: Group ID Entry (4/5 digit)
   7: Group ID Entry (9 digit)
   8: Select ID Entry (4/5 digit)
   9: Select ID Entry (9 digit)
   (If an incorrect entry is made, refer to the **Dealers Manual**, Pg. 9)

5.6.3 Answerback Code

1) Press the **[F5]** key, to enter the **Station menu**.

2) Press the **[5]** key to select **Answerback Code Entry**.

3) Enter the Answerback code in the following format:

   Example: 123456789 FURU X

   This format is the 9 digit MMSI, 4 letters and X.
   (If an incorrect entry is made, refer to the **Dealers Manual**, Pg. 9)

www.reelschematic.com

6. RC1840 Equipment Installations

6.1 DMC-5 (Optional Equipment)

Refer to the **Operator's/Installation Manual, DMC-5 and the RC1840, DMC-5 Interconnect Drawing**

6.1.1 Mounting

1) Mount the DMC-5 in an accessible area on the bridge.
(Refer to the **Operator's/Installation Manual, DMC-5, Section 6**)

6.1.2 Power Connections

1) Connect 24 VDC to the DMC-5 (Junction Board, TB10). The 24-volt supply should be from TB2(-) and TB3(+) in the Meter Box Assembly.
This cable should be at least 16 gauge, and the wire size should be increased for cable runs longer than 25 feet. Always install inline fuses in this power cable. A two (2) amp fuse is more than sufficient for these circumstances.

6.1.3 External Equipment Connections

1) Install the dealer supplied control cables from the following equipment to the DMC-5 (Junction Board).
(Refer to Pg. S-8, the **RC1840, DMC-5 Interconnect Drawing**)
   a) VHF #1 (FM-8800)
   b) VHF #2 (FM-8800)
   c) DSC-60
   d) Felcom 15, IC-315 Junction Box

   The DSC-60 requires a cable with two twisted pairs with an overall shield.
   The Felcom 15 requires a cable with three twisted pairs with an overall shield.
   These cables should be 18 to 20 gauge, and the wire size should be increased for cable runs longer than 35 feet. This cabling should be equivalent to, or better than, Belden 85164.

2) Connect the VHF's (FM-8800) using the optional IF-8810 (Junction Box) and IF-8820 (DMC I/F). These optional units allow the FM-8800 to connect to the DMC-5. A Furuno 05S0309 cable will be required between the IF-8810 and IF-8820, as well as, the Belden 85164 or equivalent between the IF-8820 and the VHF #1 or VHF #2 port on the DMC-5 (Junction Board).
(See Installation Manual, FM-8800)

3) Install cabling between the DMC-5 (Junction Board, TB6) and the DSC-60, (J4) DMC port. Use the supplied connector (000-116-185) and the recommended cable.

4) Connect the Felcom 15 Junction Box and the DMC-5 (Junction Box, TB5) using the recommended cable. When the DMC-5 is used, a Distress Alert Unit is not needed at the navigation position.

www.reelschematic.com

6. RC1840 Equipment Installations

6.2 DP-6 NBDP Terminal

Refer to the **Installation Manual, DP-6**

6.2.1 Main Unit

1) Mount the DP-6 Main Unit. Route the provided cables from the console to the Main Unit. The following cables are provided in the console for the Main Unit (Refer to Pg. 9 of the **Installation Manual, NBDP Terminal DP-6**)

   a) Power cable
   b) NMEA cable
   c) Remote A cable
   d) Remote B cable
   e) Terminal cable
      (This is a DB-9M to DB-9F and is provided in the DP-6 Terminal, IB581/6, box.)

2) Attach the provided ground wire between the rear of the Main Unit and the ship's ground system.

6.2.2 Terminal Unit

1) Install the DP-6 Terminal hanger bracket on the left side of the console.

2) Attach the provided cables to the Terminal.
   (Refer to Pg. 9 of the **Installation Manual, NBDP Terminal DP-6**)

   a) Power Cable
   b) Printer Cable
   c) Terminal Cable-COM1
      (This is the other end of the DB-9M to DB-9F connected to the Main Unit.)
   d) Keyboard

3) Attach the provided ground wire between the rear of the Terminal and the ship's ground system.

4) Set the Terminal into the hanger bracket and secure using the Terminal knobs.

5) Mount the keyboard with the provided velcro fasteners.

www.reelschematic.com

6. RC1840 Equipment Installations

6.3 DSC-60 DSC/Watch Receiver

Refer to the **Installation Manual, DSC-60**

The DSC-60 DSC/Watch Receiver has been mounted and wired into the console. Only the antenna needs to be installed. A label is attached to the DSC-60 front panel to show if the unit is setup for an active or passive antenna. This antenna connection is made to the **D.ANT** port.
(Refer to Pg. 7 of the **Installation Manual** for the correct antenna port location.)

6.3.1 Passive Antenna

1) When a passive antenna is used, the impedance must be matched to the 50 ohm cable, for connection to the DSC-60.

2) If necessary, disassemble the DSC-60 and change the jumper on the RCVR board from active to passive.
(Refer to Pg. 20, **Preamp Settings**, of the **Installation Manual**)

3) When reinstalling the DSC-60 in the console, be sure to attach the cables to the correct ports.
(Refer to Pg. 7 of the **Installation Manual**)

6.3.2 Active Antenna

1) Install the preamp (FAX-5 coupler). Connect a 2.6m whip or 2 to 3 meter long wire to the preamp.
(Refer to Pgs. 3 and 4, **Preamp Unit**, of the **Installation Manual**)

2) Ground the preamp to the mounting mast. (Refer to Pg. 4 of the **Installation Manual**)

3) If necessary disassemble the DSC-60 and change the jumper on the RCVR board from passive to active.
(Refer to Pg. 20, **Preamp Settings**, of the **Installation Manual**)

4) When reinstalling the DSC-60 in the console, be sure to attach the cables to the correct ports.
(Refer to Pg. 7 of the **Installation Manual**)

www.reelschematic.com

6. RC1840 Equipment Installations

6.4 Felcom 15 Installation

Refer to **Installation Manual, Felcom 15**

6.4.1 IC-215 Communications Unit/Display

1) Mount the IC-215 in the front, desktop area, of the console on the right side. Using the four tapping screws provided.
(Refer to Pg. 2-3, the **RC1840 Mechanical Layout** and Pg. 8 of the **Installation Manual**)

2) Connect the cables for the **Felcom 15 Printer**, **Keyboard, Felcom 15 Junction Box** and **Felcom 15 Power**. These cables have been installed and labeled within the console.

3) Install the IC-305, Distress Alert/Received Call Unit, on the bridge. Wire this to the IC-315 Junction box using Belden 85164 or equivalent.
(Refer to Pg. S-6, the **Felcom 15, IC-315 Junction Box Connections**)

4) Install the IC-306, Alarm Unit, near the console.
Wire this to the IC-315 Junction box using Belden 85164 or equivalent.
(Refer to Pg. S-6, the **Felcom 15, IC-315 Junction Box Connections**)

6.4.2 IC-115 Antenna Unit

1) Install Antenna Unit, IC-115, (refer to the **Installation Manual**). Make sure that the Antenna Unit is properly grounded and that all connections are properly sealed. Route the antenna cable to the IC-215 and connect it to the **ANT** port.
(Refer to Pgs. 1 through 7 in the **Installation Manual, Felcom 15**)

www.reelschematic.com

6. RC1840 Equipment Installations

6.5 FM-8800 Installation

Refer to **Installation Manual, FM-8800**

6.5.1 Transceiver

There are two FM-8800's in the standard console configurations. One unit is mounted in the console, and will not require installation of a NMEA cable or power cable. The handset and hanger, for the console mounted FM-8800, must be mounted in a location that is convenient for the user. The second unit is remotely mounted on the bridge, and will require the installation procedure listed below.

1) Mount the transceiver bracket. (Refer to Pg. 1-3 of the **Installation Manual**)

2) Screw the knob bolts with washers into the transceiver unit.

3) Set the transceiver unit into the mounting bracket and tighten the knob bolts.

4) Install the supplied Power Cable (000-151-711), from the transceiver, to TB2(-) and TB3(+) in the Meter Box Assembly.
This power cable is protected by inline fuses (15A), any addition cable added, must also be protected.

5) Make a NMEA cable using the supplied connector (000-145-424) and shell (000-145-423). Connect from the **NMEA/REMOTE** port on the transceiver to the IC-315 Junction Box. Use Belden 8302 or equivalent cable.
(Refer to Pg. S-6, the **Felcom 15, IC-315 Junction Box Connections**)

6) Attach a ground strap from the transceiver ground stud to the ship's hull or ground system.

7) Mount the handset hanger and connect to the **HANDSET** port on the front of the transceiver.

6.5.2 Antennas

Two standard marine VHF antennas are necessary for both FM-8800's. One antenna is the main TX/RX antenna while the second is the Channel 70 RX antenna for the DSC receiver.

1) Mount both VHF antennas. Make sure that they are separated vertically to prevent the TX antenna from interfering with the channel 70 RX antenna.

2) Install the cables and connect the transmit antenna to the **ANT** port and the receive antenna to the **CH 70 ANT** port on the transceiver.

www.reelschematic.com

6. RC1840 Equipment Installations

6.6 FS-5000

Refer to the **Operator's/Installation Manual, FS-5000**

6.6.1 Transceiver Unit

1) Mount the Transceiver Unit. Leave at least 25mm space behind the transceiver. This will allow access for service.
(Refer to Pgs. 3-10 and 3-11 of the **Installation Manual**)

2) Remove the front cover. The cables should feed into the transceiver by way of the cable entry located on the bottom of the transceiver.

3) Connect the 24 VDC, Rear Connections: PR850A, to TB1(+) and TB2(-) of the transceiver, through a set of inline breakers or fuses. The FS-5000, which draws 60 amps, will require a 4-gauge wire for up to 40 feet separation from the PR850A power supply.
(Refer to Pg. 3-12a of the **Installation Manual** and Pg. S-5, the **Meter Box Assembly RC1840**)

4) Loosen the two screws holding the cable clamp. Install a 50mm width copper strap between the cable holder and the ship's hull or ground system.
(Refer to Pg. 3-13 of the **Installation Manual**)

5) Leave the transceiver covers open. There are more connections to be made as the installation progresses.

6.6.2 Control Unit

1) Mount the Control Unit as close as possible to the console. Use of the optional Trunnion Mount (005-931-760) is recommended.
(Refer to Pgs. 3-6, 3-7 and AP2-1 of the **Installation Manual**)

2) Disassemble the control unit.

3) Attach one end of the control cable (000-106-043) to TB1 (MAIN) in the control unit. The free end will be connected to the transceiver later in the installation.

4) Attach the separate RCC-15D-206 supplied with the console from DP-6 Remote A to REM2 port in the control unit.

5) Attach the flying leads, from the RCC-15D-206 cable connected to the DSC-60 (RT), to the REM1 port in the control unit.
(Refer to Pg. S-3, the **RC1540 Detailed Interconnect Drawing** and Pg. S-2 of the **Installation Manual**)

www.reelschematic.com

6. RC1840 Equipment Installations

6.6 FS-5000 (Continued)

Refer to the **Operator's/Installation Manual, FS-5000**

6.6.2 Control Unit (Continued)

6) Mount the handset hanger and connect to the HANDSET port on the control unit.

7) Reassemble the control unit and attach to the mounting bracket.

6.6.3 Antenna

1) The antenna is to be provided by the Dealer. This antenna should be 7 to 30 meters in length and be mounted as clear of obstructions as possible. When considering the mounting location of the antenna, be sure to allow space for mounting the antenna coupler.

6.6.4 Antenna Coupler (AT-5000)

1) Mount the antenna coupler as close to the antenna as possible. The provided coupler can be mounted horizontally or vertically depending on the location. (Refer to Pgs. 3-14 through 3-18 of the **Installation Manual**)

2) Connect the antenna wire from the antenna to the insulator at the top of the coupler. Keeping the length as short as possible.

3) Fasten the supplied ground strap to the connection provided at the base of the antenna coupler. Make certain this connection is brazed or welded to the ship's hull or ground system. The exposed ground strap should be painted or coated with a material to prevent rust.

4) Remove antenna coupler top housing by removing the 12 housing screws.

5) Install the supplied control cable (000-106-043) from the antenna coupler to the transceiver. Attach to TB-3 on the Coupler Board and TB-8 on the Transceiver Interface Board. (Refer to Pgs. 3-13 and 3-17 of the **Installation Manual**)

6) Install two RF cables (RG8 or equivalent, not supplied) from the antenna coupler to the transceiver unit. The first cable is the receive cable and will connect to the RX ANT port in the transceiver and to TB1 on the BK RELAY in the antenna coupler. The second cable is the transmit cable and will connect to the TX ANT port in the transceiver and to TB1, TX ANT on the antenna coupler board.

7) Reinstall antenna coupler housing using only a couple of the provided screws. This will allow easier access when testing the unit later in the install.
Fasten the cable clamps in the transceiver, but do not install the covers until testing is completed.

www.reelschematic.com

7. RC1840 Equipment Setup

7.1 General

- When the installations are completed, proceed through the setup procedures.

- The MMSI number and INMARSAT number will be needed to complete the setup and testing procedures.

7.1.1 Powering Up Equipment

1) Power on the PR850A and PR300. Power on the battery charger.

2) Install the printer paper and turn on the printers.

3) Turn on all of the following equipment before starting the setup procedures:
   a) FS-5000
   b) DSC-60
   c) DP-6 Main and Terminal Units
   d) Felcom 15
   e) FM-8800's (VHF1 and VHF2)
   f) DMC-5 (optional)

4) Each piece of equipment goes through a self-test on start up and will show any errors discovered during this process. Record any errors for future reference.

7.1.2 E Meter

1) The E Meter should be displaying the battery voltage.
   Press the [**SEL**] key and the battery charge current should be displayed.

2) The battery Amp/Hour rating is set at the factory for 200 Amp/Hour.
   If your batteries are a different rating, this setting must be changed to match your batteries. The Amp/Hour settings are in increments of 20 Amp/Hours.
   Example: A setting of 200 would be sufficient for 210 Amp/Hour.
   Never set the rating higher than the rating of the batteries.
   (Refer to Pg. 21 of the **E Meter Owners Manual**)

www.reelschematic.com

7. RC1840 Equipment Setup

7.2 DMC-5 (Optional Equipment)

Refer to the **Operator's/Installation Manual, DMC-5**

7.2.1 General

The setup and testing of the DMC-5 should be completed last. This unit expects all equipment, in the console, to already be operational.

```
*Watch*  Pos: NG    00:00
Manual input ? [ SET UP ] Key
```

1) After powering up the DMC-5 for the first time the screen should be as shown above.

2) Press the **[SET UP]** key, then the **0** key four times.

3) Then press the **[ENT]** key.

7.2.2 VHF Input

```
*Watch*  Pos: manu      00:00
```

1) Press the **[SET UP]** key, then the **4 [VHF]** key.

2) Press the **[SELECT]** to highlight **No.1**, then press the **[ENT]** key.

7.2.3 MF/HF Input

```
*Watch*  Pos: auto      00:00
         VHF
```

1) The display should appear as shown above, if it does continue to step 2. If the **Pos:** still shows **NG**, check the DMC-5 wiring and programming of VHF No.1, which should be mounted in the console.

2) Press the **[SET UP]** key, then the **5 [MF/HF]** key.

3) Press the **[SELECT]** key to highlight **J3E**, then press the **[ENT]** key.

www.reelschematic.com

7. RC1840 Equipment Setup

7.2 DMC-5 (Continued)

Refer to the **Operator's/Installation Manual, DMC-5**)

7.2.4 SES Input (INMARSAT C Terminal)

```
*Watch*  Pos: auto     00:00
          VHF  MF/HF
```

1) The display should appear as shown above, if it does continue to step 2. If not record the error and check the appropriate equipment.

2) Press the **[SET UP]** key, then the **6 [SES]** key.

3) Press the **[SELECT]** key three times to highlight **SES (EGC)**, then press the **[ENT]** key.

7.2.5 Time and Date

```
*Watch*  Pos: auto     00:00
    VHF  MF/HF  SES(EGC)
```

1) The display should appear as shown above, if it does continue to step 2. If not record the error and check the appropriate equipment.

2) Press the **[SELECT]** key, then the **[ENT]** key.

3) Enter the **Year** and press the **[SELECT]** key.

4) Enter the **Date**, month and day, and press the **[SELECT]** key.

5) Enter the UTC **Time**, and press the **[SELECT]** key.

6) Then the **[ENT]** key.

```
*Watch*  Pos: auto     21:30
    VHF  MF/HF  SES(EGC)
```

7) The display should appear as shown above, if it does the setup is complete. If not record the error and check the appropriate equipment.

www.reelschematic.com

7. RC1840 Equipment Setup

7.3 DP-6 NBDP Terminal

Refer to the **Installation Manual, DP-6**

7.3.1 General

1) Power up the Terminal and main Units.

2) Press the **[F6]** key, to enter the **System menu**.

3) Use the arrow keys to select **Change**.

4) Use the down arrow key to highlight **Self Test**.

5) Verify all test are OK and that the self-test prints out.

7.3.2 ID Codes

1) Press the **[F5]** key, to enter the **Station menu**.

2) Press the key to select the **ID** to be entered:
   6: Group ID Entry (4/5 digit)
   7: Group ID Entry (9 digit)
   8: Select ID Entry (4/5 digit)
   9: Select ID Entry (9 digit)
   (If an incorrect entry is made, refer to the **Dealers Manual**, Pg. 1)

7.3.3 Answerback Code

1) Press the **[F5]** key, to enter the **Station menu**.

2) Press the **[5]** key to select **Answerback Code Entry**.

3) Enter the Answerback code in the following format:

   Example: 123456789 FURU X

   This format is the 9 digit MMSI, 4 letters and X.
   (If an incorrect entry is made, refer to the **Dealers Manual**, Pg. 1)

www.reelschematic.com

7. RC1840 Equipment Setup

7.4 DSC-60 DSC/Watch Receiver

Refer to the **Installation Manual, DSC-60**

7.4.1 General

1) Power up the unit.

2) Press the **[3/TEST]** key, to start the self-test.

3) The test will run automatically and print the results.

4) Verify all test are OK and press the **[CANCEL]** key to return to normal operation.

7.4.2 MMSI

1) To set the MMSI, refer to the **Dealers Manual**, Pg. 2.

www.reelschematic.com

7. RC1840 Equipment Setup

7.5 Felcom 15

Refer to the **Installation Manual, Felcom 15**

7.5.1 General

1) Insert a good, formatted, floppy disk into the Terminal.

2) Power up the Felcom 15, the status screen should show OK indications and the GPS should indicate **3D**.

7.5.2 IMN Input

(Refer to Pg. 19 of the **Installation Manual, Felcom 15**)

1) Press the **[F8]** key, using the down arrow key, highlight **IMN** and then press the **[Enter]** key.

2) Type in the IMN and press the **[Enter]** key.

3) Press the **[Esc]** key. The screen will now prompt **Update**. Select **Yes** and press the **[Enter]** key.

4) Press the **[Esc]** key until you return to the status screen.

7.5.3 External Equipment

(Refer to Pg. 20 of the **Installation Manual, Felcom 15**)

The Felcom 15 has been programmed for use with the following remote boxes:

1) IC-305 Distress Alert Unit
2) IC-306 Alarm Unit

Unless a DMC-5 or additional boxes are added no changes are necessary.
To change these settings, refer to Pg. 4 of the **Dealers Manual.**

www.reelschematic.com

7. RC1840 Equipment Setup

7.6 FM-8800

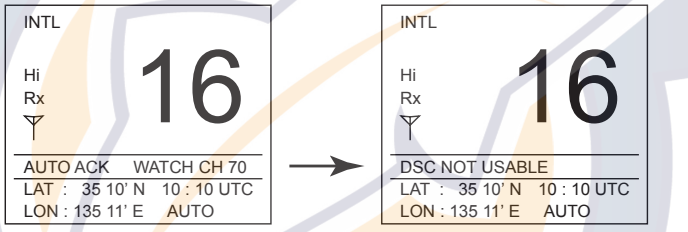
Refer to the **Installation Manual, FM-8800**

7.6.1 General

This setup must be performed on both FM-8800's.

1) Power up the unit.

2) The main display will show Longitude/Latitude and UTC time if the NMEA connection is active. This NMEA information is supplied by the Felcom 15. If it is not displayed check the NMEA cables and connections.
(Refer to Pg. S-6, the **Felcom 15, IC-315 Junction Box Connections**)



MMSI Registered **MMSI Not Registered**

7.6.2 MMSI and System Settings

1) These settings should be completed by an authorized Furuno Agent or Dealer. See pages 5-7 of the A3 GMDSS Console Dealers Manual.

www.reelschematic.com

7. RC1840 Equipment Setup

7.7 FS-5000

Refer to the **Operator's/Installation Manual, FS-5000**

7.7.1 General

1) Power up the Transceiver and Control Head.

2) Start the self-test by pressing the **[RCL]** key, enter **9900** and then press the **[ENT]** key. This test should show OK. If an error code appears, record it. (Refer to Pg. 2-3 in the **Installation Manual**)

7.7.2 GMDSS Settings

1) After all self-tests are OK, change the following settings to meet GMDSS requirements:
   a) Power reduction on both 2182 and 2187.5 is disabled.
      [STO] 9927 [ENT] 1 [ENT]
   b) Minimum output power is 60W or more.
      [STO] 9928 [ENT] 1 [ENT]
   c) Enable BK RELAY. This is not enabled when a separate receive antenna is used.
      [STO] 9982 [ENT] 1 [ENT]
   d) TX delay time.
      [STO] 9913 [ENT] 10 [ENT]
   e) Enable dummy load (default setting).
      [STO] 9981 [ENT] 1 [ENT]

7.7.3 RT Operation

1) On each band, verify that the antenna automatically tunes when the **[TX TUNE]** key is pressed.

2) If all tests are OK, proceed on to the next section. If the tune fails, verify the antenna, grounding system and coupler connections.

www.reelschematic.com

7. RC1840 Equipment Setup

7.7 FS-5000 (Continued)

Refer to the **Operator's/Installation Manual, FS-5000**

7.7.4 Manual 2182 kHz Tuning Preset

1) Press the **[2182]** key.

2) Press the **[TX TUNE]** key, **TX TUNING: OK** will appear when the tuning is complete.

3) Open the coupler and record the status of the LED's CR1-CR23. (Refer to Pgs. 3-23 and 3-24 of the **Operator's/Installation Manual, FS-5000**)

4) Set S1 to Manual. Set switches S4, S5 and S6 to match the LED's recorded in step 3.

5) Set S1 to AUTO. The LED's should stay the same as step 4.

6) Secure the antenna coupler cover.

www.reelschematic.com

8. RC1815/RC1825 Equipment Lists

FM-8800 (Installed Unit)
Included in GMDSS Installation Materials

Item No.	Name	Part No.	Qty.
1	Operator's Manual		1
2	Operator's Guide		1
3	Installation Manual		1
4	Procedure for Distress Transmission on VHF FM-8800		1
5	Cable Assy.	000-151-748	1
6	Spare Parts	005-377-820	1
7	Accessories- Handset	005-951-920	1
8	Handset	000-054-223	1
9	Handset Bracket	005-951-790	1
10	Self Tapping Screws	000-802-084	4

FM-8800 (Boxed Unit)

Item No.	Name	Part No.	Qty.
1	Marine VHF Radiotelephone	FM-8800	1
2	Operator's Manual		1
3	Operator's Guide		1
4	Installation Manual		1
5	Procedure for Distress Transmission on VHF FM-8800		1
6	Installation Materials	005-377-800	1
7	Spare Parts	005-377-820	1
8	Accessories- Handset	005-951-920	1
9	Handset	000-054-223	1
10	Handset Bracket	005-951-790	1
11	Power Cable	000-151-711	1

www.reelschematic.com

8. RC1815/RC1825 Equipment Lists

FS-1570/FS-2570 (Installed Unit)
FS1570 TR/AT or FS2570 TR/AT

Item No.	Name	Part No.	Qty.
1	Operator's Manual		1
2	Operator's Guide		1
3	Installation Manual		1
4	Procedure for Distress Transmission on VHF and HF		2
5	Antenna Coupler AT-1560/15 or AT-1560/25		1
6	Transciever FS-1570 or FS-2570		1
7	Copper Strap	000-572-187	1
8	Rubber Sleeve	000-130-472	1
9	Tapping Screw	000-805-494	4
10	Blind Plug	100-164-380	1

FS2570CBLS

Item No.	Name	Part No.	Qty.
1	RF Cable, 10M	000-113-360	1
2	Coupler Cable, 10M	000-130-484	1

www.reelschematic.com

8. RC1815/RC1825 Equipment Lists

Felcom 15
IC-215 Communications Unit

Item No.	Name	Part No.	Qty.
1	Operator's Manual		1
2	Registration Form (INMARSAT)		1
3	Installation Manual		1
4	Distress Communications Guide		1
5	IC-215 Terminal Unit		1
6	Mini Keyboard	004-442-400	1
7	Floppy Disk	004-439-400	1
8	7 Amp Fuse	000-549-013	1
9	15 Amp Fuse	000-549-014	1
10	Tapping Screw	000-802-081	4
11	Copper Strap, 1.2M	590-300-310	1
12	Label (C.S.D)	100-248-060	1
13	Label	100-248-051	1
14	Velcro, 60mm	100-237-680	4
15	Velcro, 30mm	100-237-670	4

IC-115 Antenna

Item No.	Name	Part No.	Qty.
1	IC-115 Antenna		1
2	Antenna Cable, 30M	000-146-250	1
3	Shrink Tubing	000-147-037	1
4	Sealant	000-854-118	1
5	Cable Protector	100-298-111	1
6	Self-Bonding Tape	000-835-526	1
7	Grounding Wire	000-566-000	1

www.reelschematic.com

8. RC1815/RC1825 Equipment Lists

IC-305 Distress Unit

Item No.	Name	Part No.	Qty.
1	IC-305 Distress Unit		1
2	Tapping Screw	000-802-079	4
3	Crimp-on Lug	000-538-113	4
4	Crimp-on Lug	000-108-424	1

IC-306 Alarm Unit

Item No.	Name	Part No.	Qty.
1	IC-306 Alarm Unit		1
2	Tapping Screw	000-802-079	4
3	Crimp-on Lug	000-538-113	4
4	Crimp-on Lug	000-108-424	1

IC-315 Installation Materials

Item No.	Name	Part No.	Qty.
1	Cable Clamp	100-301-101	1
2	Tapping Screw	000-802-080	4

www.reelschematic.com

8. RC1815/RC1825 Equipment Lists

IB-583 NBDP Terminal

Item No.	Name	Part No.	Qty.
1	IB-583 Terminal Unit		1
2	Mini Keyboard	004-442-400	1
3	Floppy Disk	004-439-400	1
4	3 Amp Fuse	000-549-013	1
5	Tapping Screw	000-802-081	4
6	Grounding Wire, 2M	000-108-138	1
7	Label (C.S.D)	100-248-060	1
8	Label	100-248-051	1
9	Velcro, 60mm	100-237-680	4
10	Velcro, 30mm	100-237-670	4

GMDSS Installation Materials

Item No.	Name	Part No.	Qty.
1	28 v Bulb	RC1-800-020	1
2	2 Amp Fuse, Mini ATM	RC1-800-026	3
3	PL259 Connector	RC1-500-060	4
4	Printer Paper	000-134-903	2
5	PP-510 Printer Operator's Manual		2
6	Shore Based Maintenance Certificate		1
7	Warranty Registration Form		1
8	E Meter Owners Manual		1
9	Installation Manual	IME-GMD-50Z	1
10	Dealers Manual	OSE-GMD-30Z	1
11	Daily Test Manual	TSE-GMD-30Z	1
12	Protection Key (FM-8800)	RC1-800-034	1

www.reelschematic.com

8. RC1815/RC1825 Equipment Lists

Crate

Item No.	Name	Part No.	Qty.
1	RC1800 Rack	FUSA1800	1
2	FS-2570C Control Head		1
3	FM-8800 VHF w/DSC		1
4	PP-510 Printer		2

www.reelschematic.com

9. RC1840 Equipment Lists

FS-5000 - Transceiver

Item No.	Name	Part No.	Qty.
1	Operator & Installation Manual		1
2	FS-5000 Transceiver	000-056-738	1

FS-5000 - Cables

Item No.	Name	Part No.	Qty.
1	Control Cable	000-106-043	2

FS-5000 - Control Unit

Item No.	Name	Part No.	Qty.
1	Control Unit	000-056-731	1
2	Antenna Coupler	000-056-874	1
3	Handset	000-112-623	1
4	Handset Hanger	005-011-950	1
5	Frequency Table	005-925-890	1
6	Crimp-on Lug - FV1.25-3	000-538-113	4
7	Crimp-on Lug - FV1.25-4	000-538-114	1
8	Hex Bolt	000-800-054	4
9	Hex Nut	000-863-109	4
10	Flat Washer - M5	000-864-128	10
11	Flat Washer - M6	000-864-129	8
12	Connector - MP-7	000-500-512	3
13	Tapping Screw - 5 x 20	000-800-488	10
14	US Plug	000-110-961	3
15	Cable Gland	000-116-434	2
16	Inline Jack	000-121-824	2
17	Nylon Washer	000-864-971	4
18	Blind Cap	100-164-380	1

www.reelschematic.com

9. RC1840 Equipment Lists

DP-6 - Main Unit

Item No.	Name	Part No.	Qty.
1	Main Unit - DP-6		1
2	Operator's Manual		1
3	Operator's Guide		1
4	Installation Manual		1
5	Copper Strap	590-300-310	1
6	Tapping Screw	000-867-553	4
7	Flat Washer	000-864-128	4
8	DB25	000-120-946	2

DP-6 - Terminal Unit

Item No.	Name	Part No.	Qty.
1	Grounding Wire	000-108-138	1
2	Cable	000-127-108	1
3	Tapping Screw - 6 x 20	000-802-084	4
4	Label (Inmar)	100-217-010	1
5	Velcro Fastener - 30 x 25.4	100-237-670	4
6	Velcro Fastener - 60 x 25.4	100-237-680	4
7	Label	100-248-051	1
8	Label (C. S. D.)	100-248-060	1
9	Terminal Unit	IB581/6	1
10	Floppy Disk	000-115-862	1
11	Mini Keyboard	000-138-599	1
12	Program Floppy Disk	004-447-090	1

www.reelschematic.com

9. RC1840 Equipment Lists

Felcom 15
IC-215 Communications Unit

Item No.	Name	Part No.	Qty.
1	Operator's Manual		1
2	Registration Form (INMARSAT)		1
3	Installation Manual		1
4	Distress Communications Guide		1
5	IC-215 Terminal Unit		1
6	Mini Keyboard	004-442-400	1
7	Floppy Disk	004-439-400	1
8	7 Amp Fuse	000-549-013	1
9	15 Amp Fuse	000-549-014	1
10	Tapping Screw	000-802-081	4
11	Copper Strap, 1.2M	590-300-310	1
12	Label (C.S.D)	100-248-060	1
13	Label	100-248-051	1
14	Velcro, 60mm	100-237-680	4
15	Velcro, 30mm	100-237-670	4

IC-115 Antenna

Item No.	Name	Part No.	Qty.
1	IC-115 Antenna		1
2	Antenna Cable, 30M	000-146-250	1
3	Shrink Tubing	000-147-037	1
4	Sealant	000-854-118	1
5	Cable Protector	100-298-111	1
6	Self-Bonding Tape	000-835-526	1
7	Grounding Wire	000-566-000	1

www.reelschematic.com

9. RC1840 Equipment Lists

IC-305 Distress Unit

Item No.	Name	Part No.	Qty.
1	IC-305 Distress Unit		1
2	Tapping Screw	000-802-079	4
3	Crimp-on Lug	000-538-113	4
4	Crimp-on Lug	000-108-424	1

IC-306 Alarm Unit

Item No.	Name	Part No.	Qty.
1	IC-306 Alarm Unit		1
2	Tapping Screw	000-802-079	4
3	Crimp-on Lug	000-538-113	4
4	Crimp-on Lug	000-108-424	1

IC-315 Installation Materials

Item No.	Name	Part No.	Qty.
1	Cable Clamp	100-301-101	1
2	Tapping Screw	000-802-080	4

www.reelschematic.com

9. RC1840 Equipment Lists

FM-8800 (Installed Unit)
Included in GMDSS Installation Materials

Item No.	Name	Part No.	Qty.
1	Operator's Manual		1
2	Operator's Guide		1
3	Installation Manual		1
4	Procedure for Distress Transmission on VHF FM-8800		1
5	Cable Assy.	000-151-748	1
6	Spare Parts	005-377-820	1
7	Accessories- Handset	005-951-920	1
8	Handset	000-054-223	1
9	Handset Bracket	005-951-790	1
10	Self Tapping Screws	000-802-084	4

FM-8800 (Boxed Unit)

Item No.	Name	Part No.	Qty.
1	Marine VHF Radiotelephone	FM-8800	1
2	Operator's Manual		1
3	Operator's Guide		1
4	Installation Manual		1
5	Procedure for Distress Transmission on VHF FM-8800		1
6	Installation Materials	005-377-800	1
7	Spare Parts	005-377-820	1
8	Accessories- Handset	005-951-920	1
9	Handset	000-054-223	1
10	Handset Bracket	005-951-790	1
11	Power Cable	000-151-711	1

www.reelschematic.com

9. RC1840 Equipment Lists

DSC-60
Included in GMDSS Installation Materials

Item No.	Name	Part No.	Qty.
1	Connector - FM-14 - 6 Pin	000-116-185	1
2	Connector - FM-14 - 7 Pin	000-113-345	1
3	Connector - FM-MP-7	000-108-859	1
4	Reducer - MP-7 - MP-M3A	000-108-860	1
5	Reducer - MP-7 - MP-M5A	000-108-861	1
6	Installation Manual		1
7	Operator's Manual		1
8	Distress Communications Procedure		1
9	GMDSS Operating Guidance for Ship Master in Distress Situations		1

www.reelschematic.com

9. RC1840 Equipment Lists

GMDSS Installation Materials

Item No.	Name	Part No.	Qty.
1	28 v Bulb	RC1-800-020	1
2	2 Amp Fuse, Mini ATM	RC1-800-026	3
3	PL259 Connector	RC1-500-060	4
4	Printer Paper	000-134-903	2
5	PP-510 Printer Operator's Manual		2
6	Shore Based Maintenance Certificate		1
7	Warranty Registration Form		1
8	E Meter Owners Manual		1
9	Installation Manual	IME-GMD-50Z	1
10	Dealers Manual	OSE-GMD-30Z	1
11	Daily Test Manual	TSE-GMD-30Z	1
12	Protection Key (FM-8800)	RC1-800-034	1

Crate

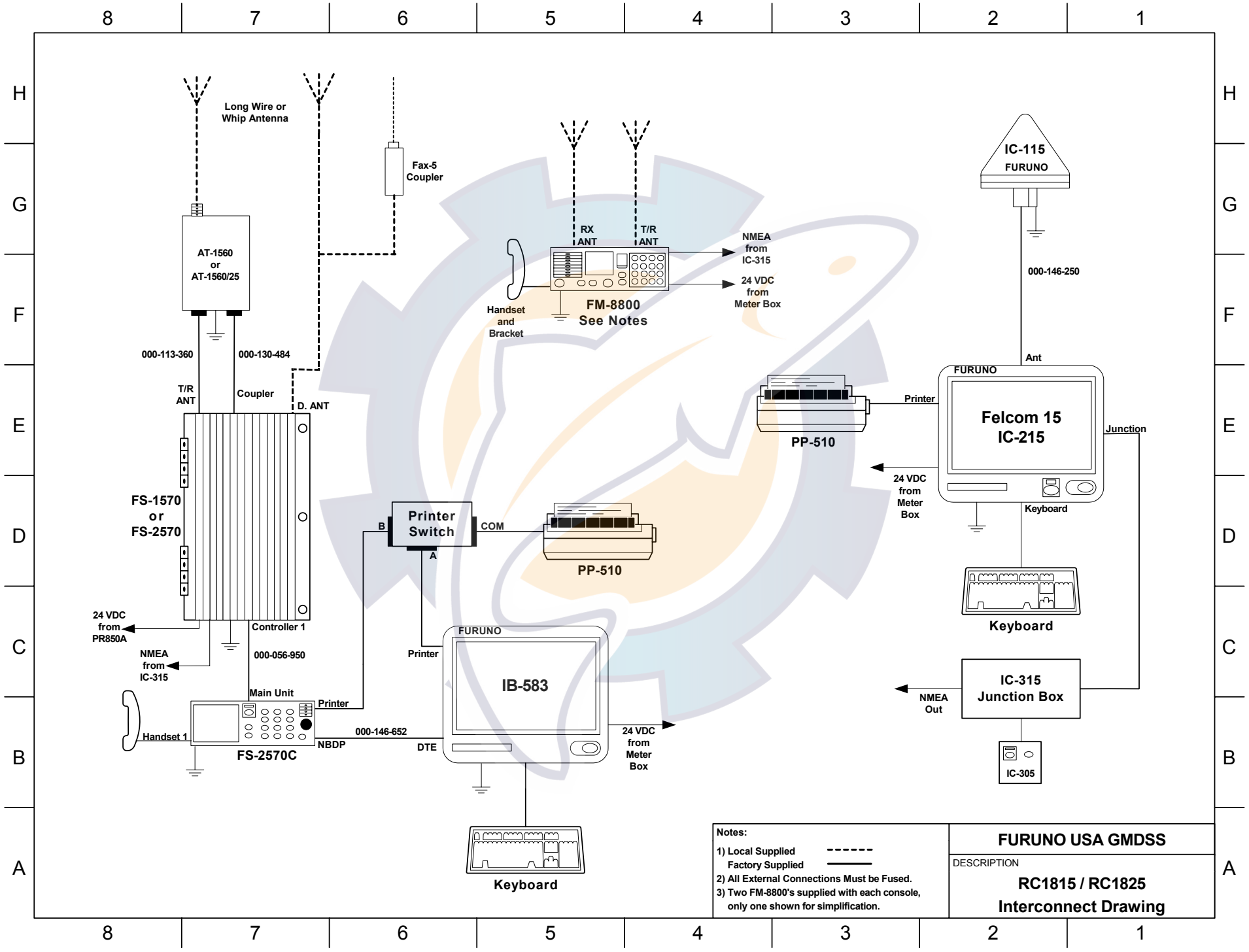
Item No.	Name	Part No.	Qty.
1	RC1800 Rack	FUSA1800	1
2	DSC-60 DSC/Watch Receiver		1
3	FM-8800 VHF w/DSC		1
4	PP-510 Printer		2

www.reelschematic.com

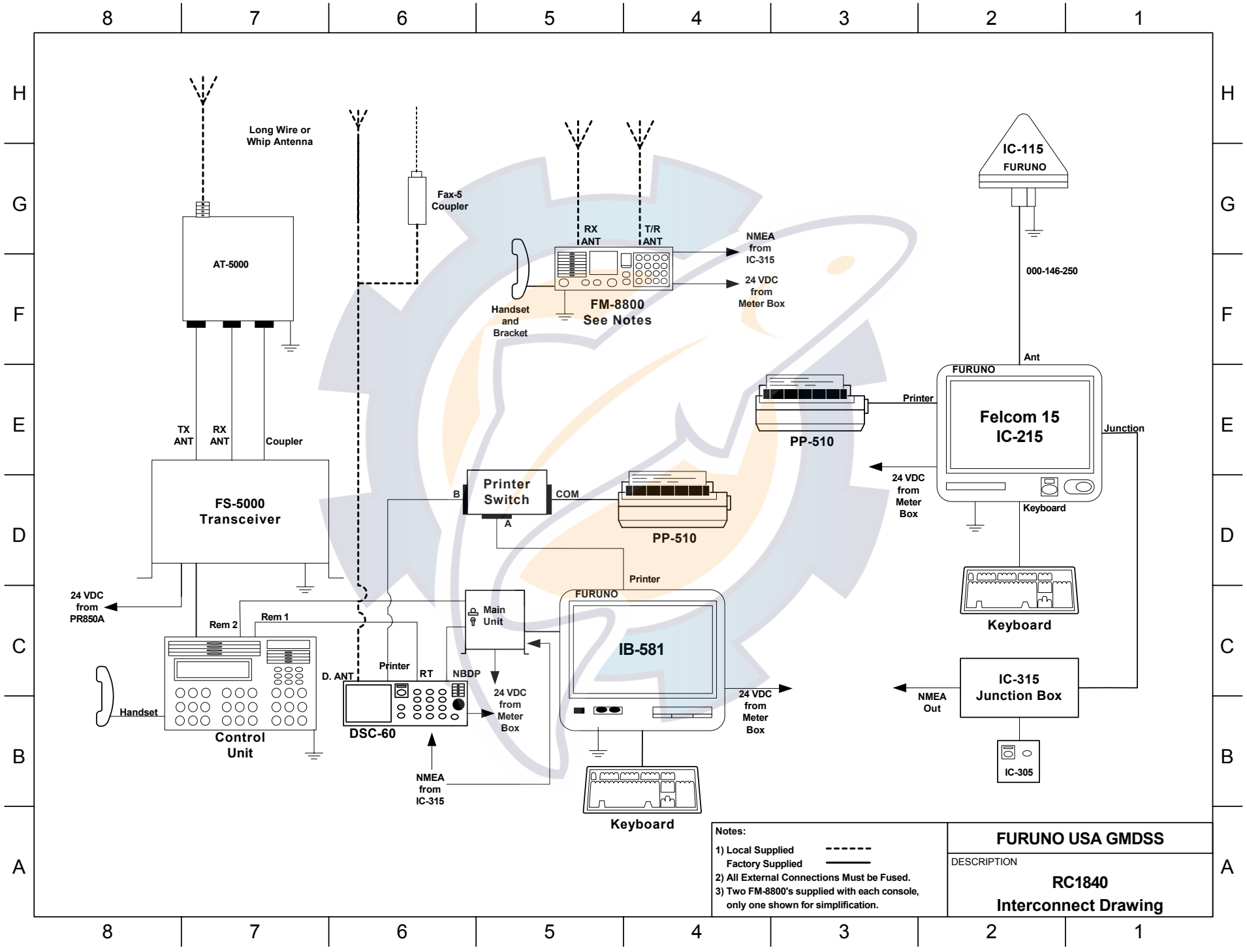
10. RC18xx Parts List

Item No.	Description	Part No.
1	Printer Switch	RC1-800-018
2	Printer Cable (6 ft.)	RC1-800-019
3	Emergency Light Assy.	RC1-800-011
4	Meter	RC1-500-067
5	AC Failure Light Assy.	RC1-500-069
6	AC Failure Light Label	RC1-500-068
7	Furuno USA GMDSS Label	RC1-800-034
8	Bulb, 3w, 24v (equiv. to 1820)	RC1-800-020
9	Fuses, 2 Amp, Mini ATM Type	RC1-800-026
10	PP-510 Roll Paper (Single Ply)	AYT214
11	PP-510 Printer Ribbon	000-133-029

www.reelschematic.com



www.reelschematic.com



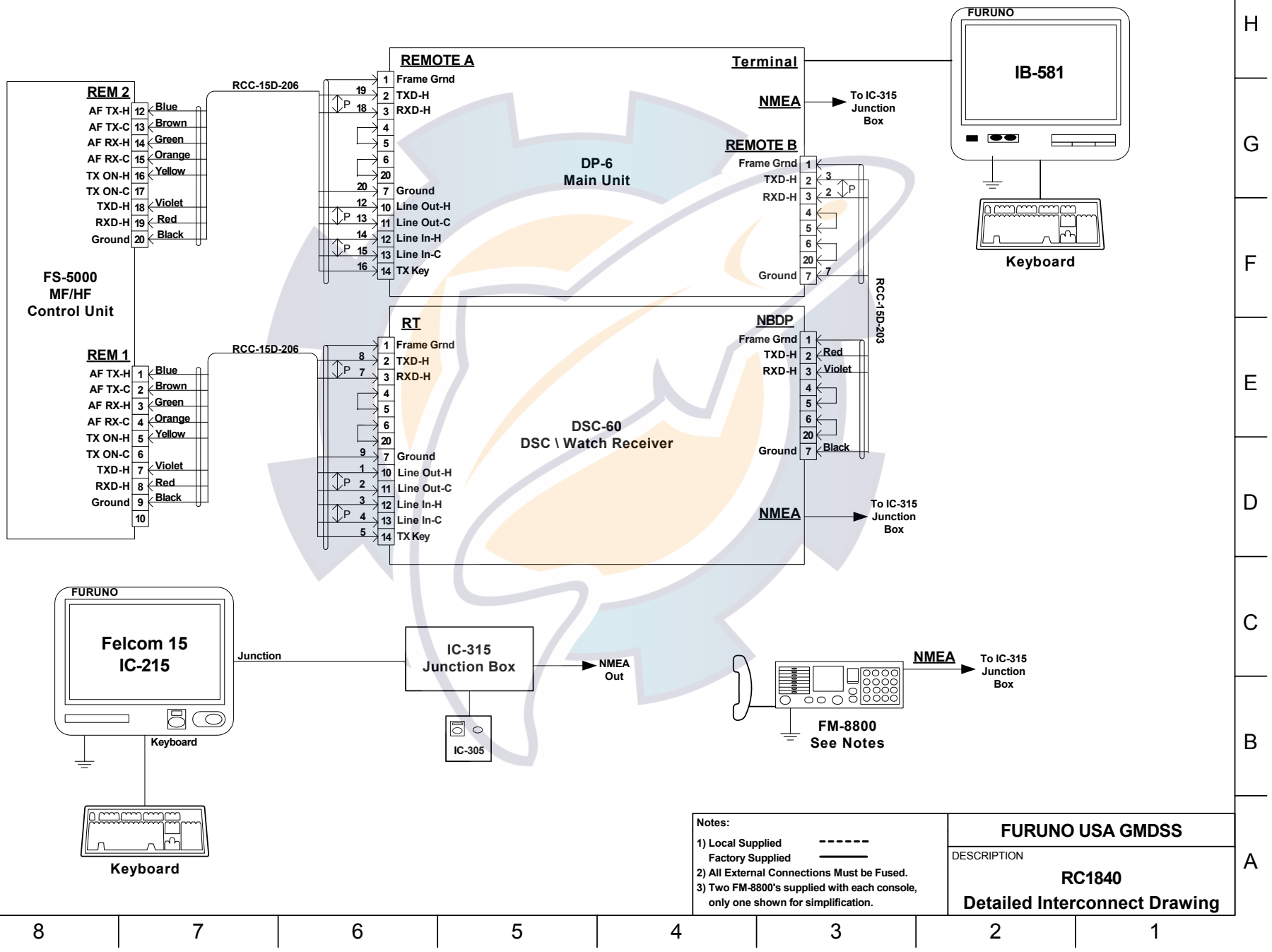
Notes:
1) Local Supplied ------
Factory Supplied ——
2) All External Connections Must be Fused.
3) Two FM-8800's supplied with each console, only one shown for simplification.

FURUNO USA GMDSS

DESCRIPTION

RC1840
Interconnect Drawing

www.reelschematic.com



Notes:
1) Local Supplied ------
Factory Supplied ——
2) All External Connections Must be Fused.
3) Two FM-8800's supplied with each console, only one shown for simplification.

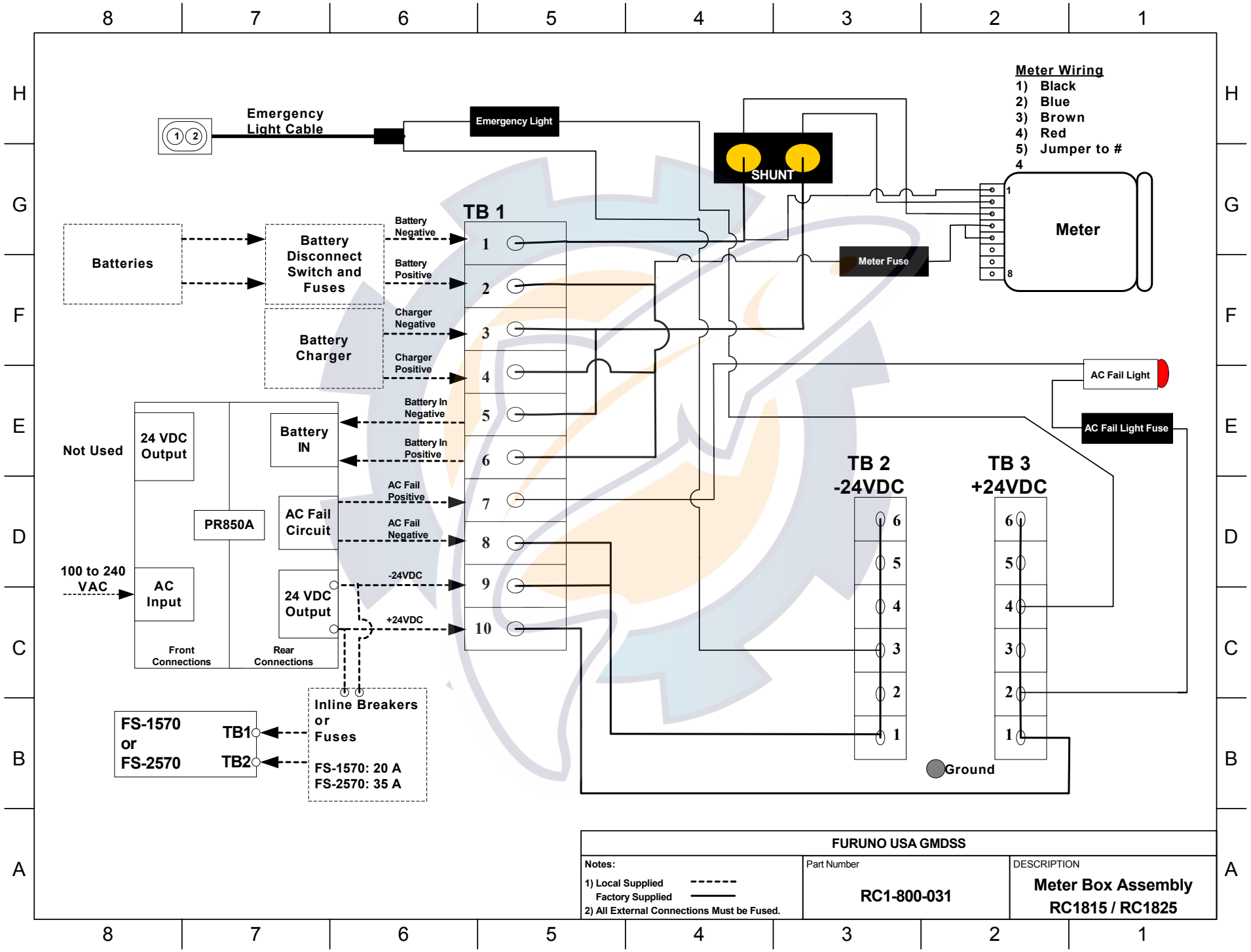
FURUNO USA GMDSS

DESCRIPTION

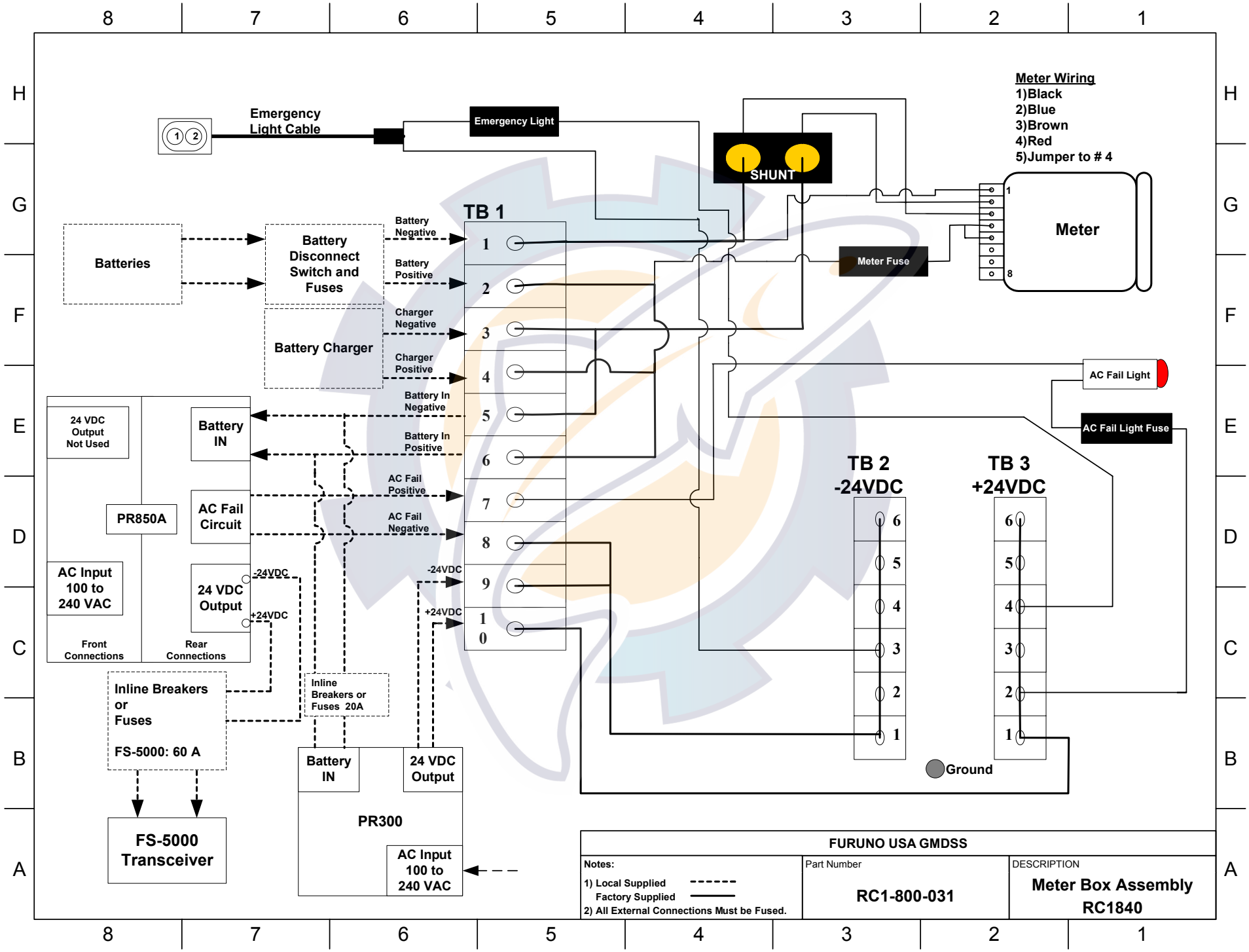
RC1840

Detailed Interconnect Drawing

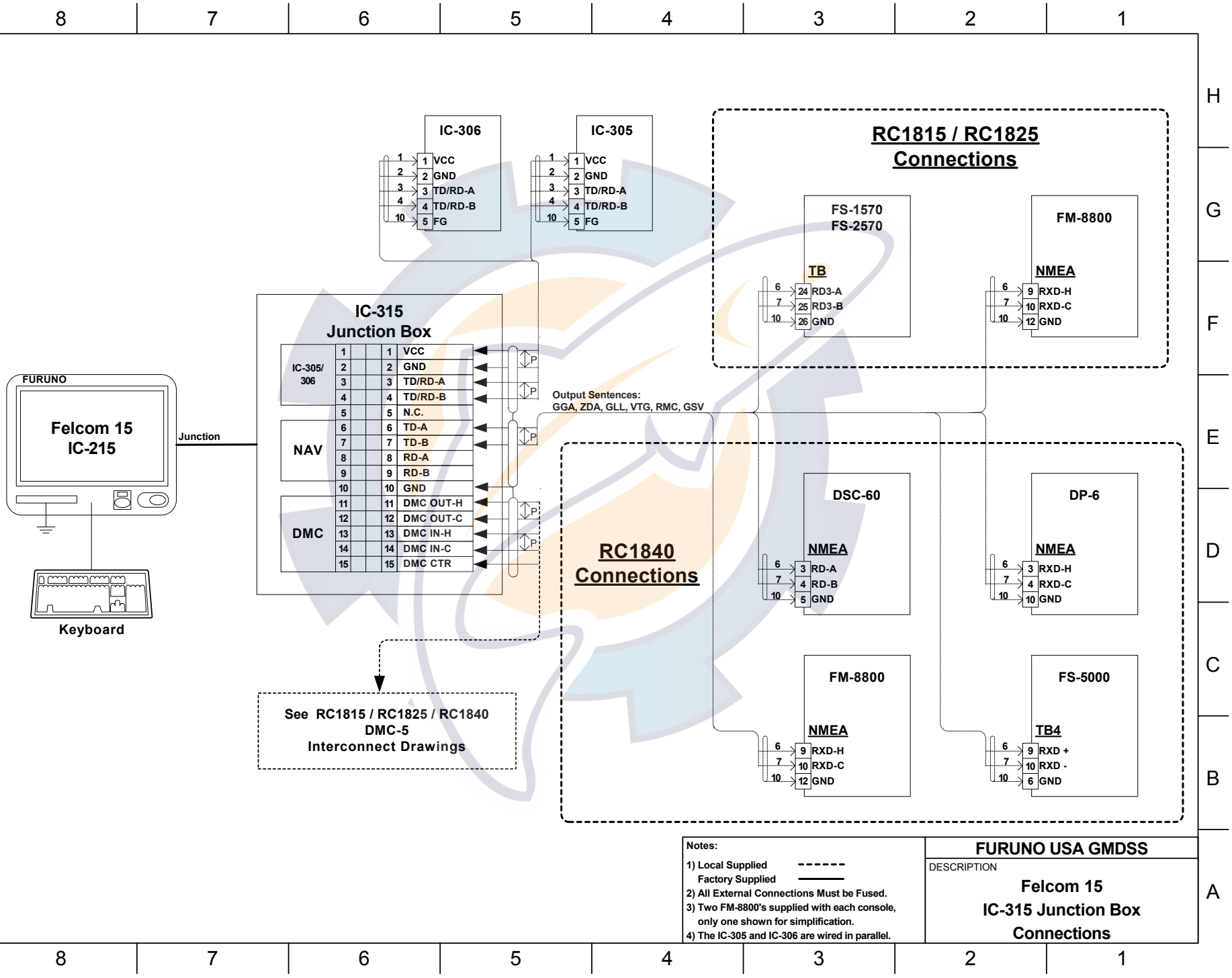
www.reelschematic.com



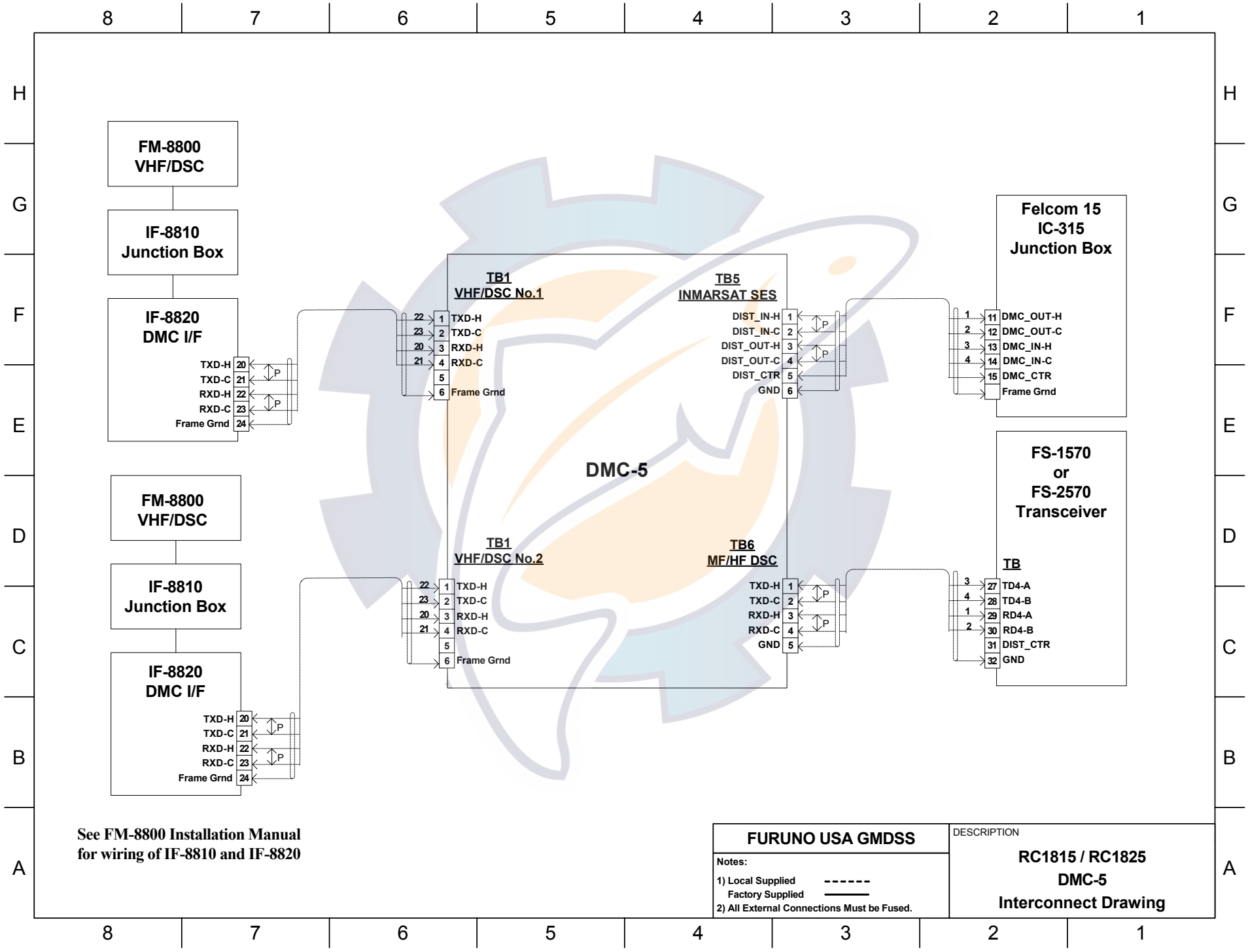
www.reelschematic.com



www.reelschematic.com



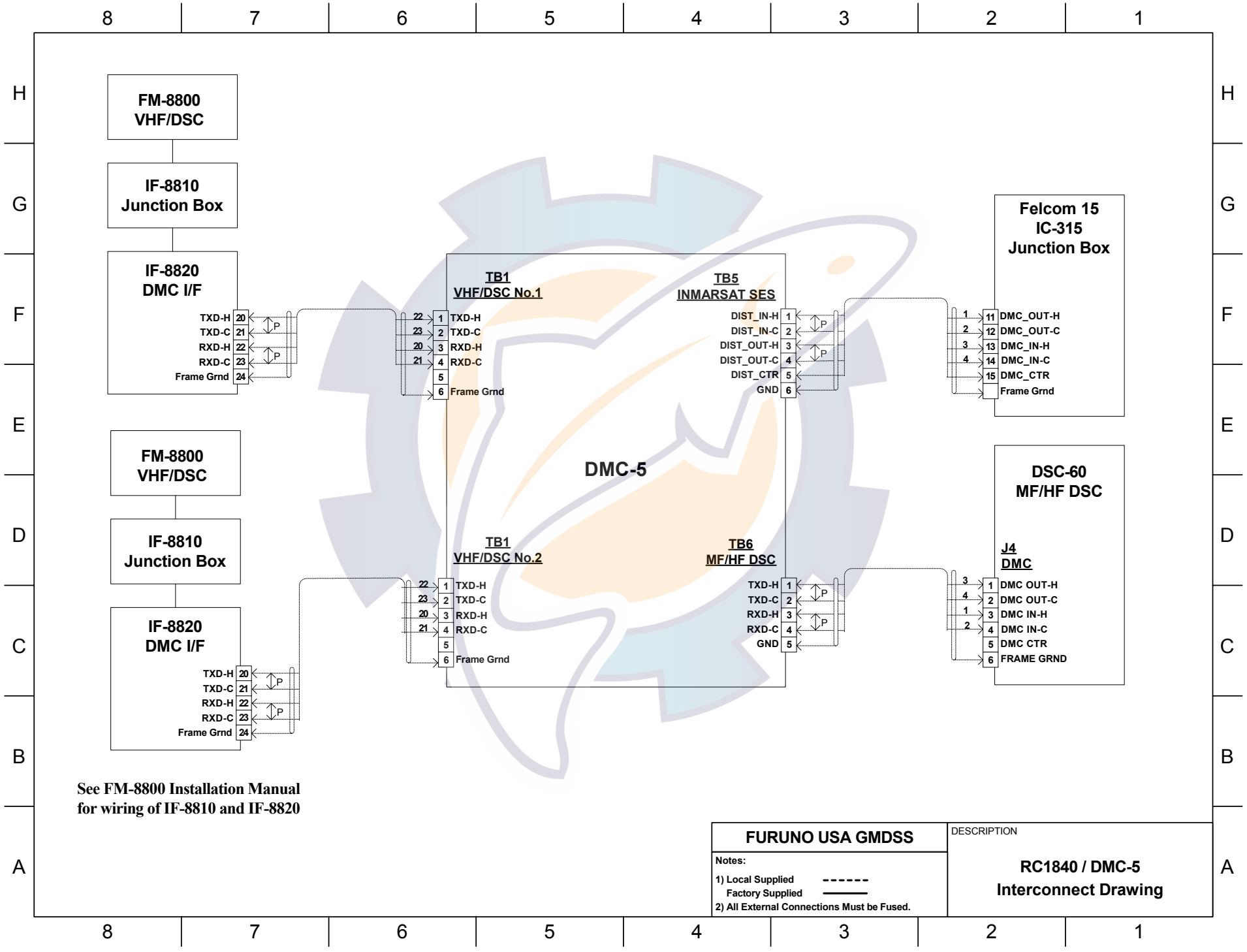
www.reelschematic.com



See FM-8800 Installation Manual for wiring of IF-8810 and IF-8820

FURUNO USA GMDSS	DESCRIPTION
Notes: 1) Local Supplied ------ Factory Supplied —— 2) All External Connections Must be Fused.	RC1815 / RC1825 DMC-5 Interconnect Drawing

www.reelschematic.com



See FM-8800 Installation Manual for wiring of IF-8810 and IF-8820

FURUNO USA GMDSS	DESCRIPTION
Notes: 1) Local Supplied ------ Factory Supplied —— 2) All External Connections Must be Fused.	RC1840 / DMC-5 Interconnect Drawing