http://www.dxnewradio.com/

DDS собран на одной плате и имеет следующие возможности:

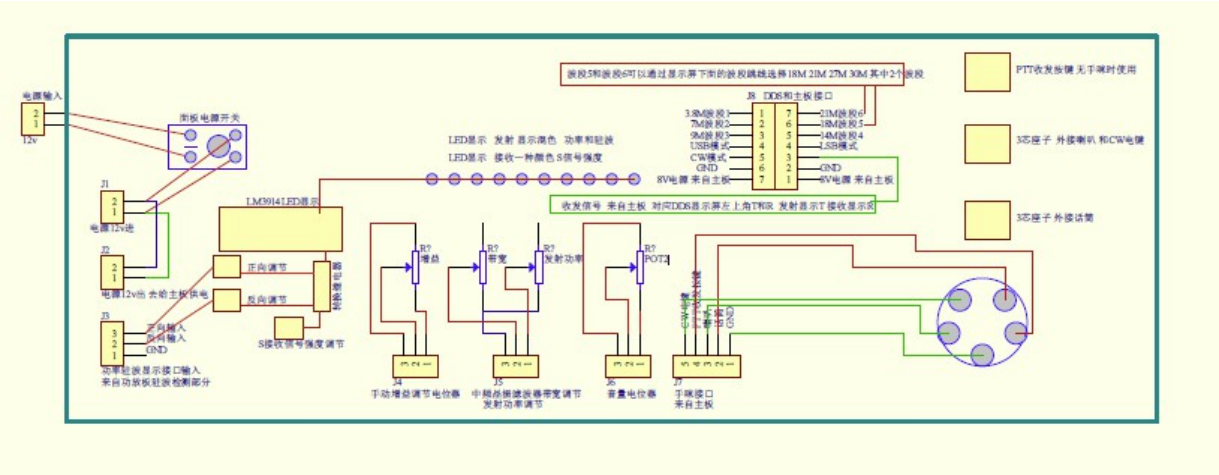
Питание 12В (11-14В) — разъем 1
Выход DDS - SMA
Светодиодная линейка S метра (центр - земля)
Режимы LSB USB CW AM
Режим прямого ввода частоты
VFOA - VFO B - Память
Память — 20 ячеек
RIT расстройка
выбор шага от 10 МГц д**о 1 Гц!**

Регуляторы громкости НЧ -ширины полосы ПЧ-- усиления ПЧ — мощности
Выход на наушники и вход микрофона
Кнопка PTT
Нажатие на валкодер — выбор шага
На плате под кнопками есть надписи — указывающие назначение кнопки

Меню установок
множитель частоты 1 или 6
калибровка и частота мастер осциллятора
DDS максимальное и минимальное значение
Offset + плюс или минус для ПЧ
Offset для режимов SSB CW

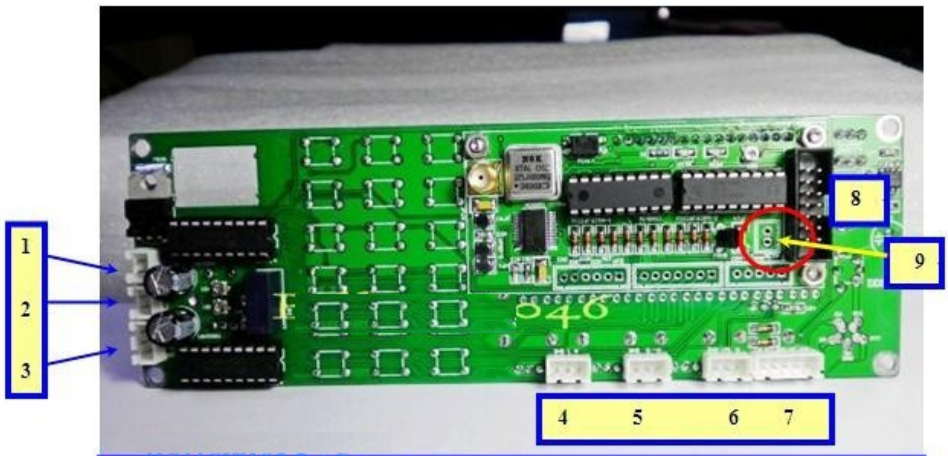
ДЛЯ УСТАНОВОК НАЖМИТЕ КНОПКУ CAL и включите питание.
повторно быстрое нажатие CAL переход к следующему значению и тд
Валкодером изменяем значения
примеры установок ниже

Белые разьемы на плате предназначены для подключения к трансиверу — они адаптированы под RF плату предлагаемую нами, но могут быть использованы и в собственной конструкции.
это 12 В выход потенциометры усиления — PTT и кнопки прием передача — микрофон-наушники
Большой черный разьем это сигналы управления и переключения диапазонов



This is a 0~55MHz DDS Signal Generator. It is based on AD9850 chip and is very easy to operate.

- Supports 0~55MHz continual adjust at 1Hz step.
- Input 12V
- With direct digital input frequency
- With audio volume potentiometer
- With amp. gain potentiometer
- With AGC potentiometer
- S-LED display
- Standing Wave-LED display



1 : 12V Input 2: 12V Output 3: Standing Wave Test Signal Input (Shared GND)

4: Manual Adjust for Gain/increase 5: Bandwidth Power Adjust (Shared GND)

6: Audio Volume Adjust 7. To PTT & CW of mainboard

8: Mode & Band Control for corresponding mainboard

9: DDS test power supply (PLS DON'T CONNECT)

Keys & Connection interfaces:

- ENC: encoder switch
- MEM: switch for memory mode
- VFO: Transfer from VFO A to VFO B, or from VFO B to VFO A.
- SSB: Working mode change: circulate from USB, LSB, AM, CW, and on and on...
- RIT: fine tuning to receiving frequency
- CAL: set functions
- KB-1 and KB-2 have common shared pin, but is not GND.

How to operate:
Press CAL, power on, then we enter setting screen. Let go/release CAL.
A: ENABLE 6XREFCLE: setting chip clock mode, adjust frequency encoding setting. AD9851 set to 6-multiply frequency, AD9850 set to 1multiply frequency. Press CAL then quickly release to enter next step B.
B: DDS-SYSTEM-CLK: Chip working frequency setting.Use encoder switch to adjust value. Operate in accordance with STEP key. AD9851 set at oscillator 6-multiply channel, AD9850 set at actual output ofoscillator. Press CAL then quickly release to enter step C.

C: MIN_RX_DDS_FREQ：Setting minimum working frequency. Use encoder switch to adjust value and in accordance with STEP key.Press CAL then quickly release to enter step D.

D: MAX_RX_DDS_FREQ：Setting maximum working frequency.Use encoder switch to adjust value and in accordance with STEP key. (Smaller than 60MHz would be OK).Press CAL then quickly release to enter step E.

E: SSB_OFFSET：Fine tuning for SSB working mode.Use encoder switch to adjust value and in accordance with STEP key.Press CAL then quickly release to enter step F.

F: CW_OFFSET：Fine tuning for CW working mode.Use encoder switch to adjust value and in accordance with STEP key. Press CAL then quickly release to enter step G.

G: OFFSET_FREQ：Setting of offset Frequency. e.g, set to 9MHz or 10.7MHz, use encoder switch to adjust value and in accordance with STEP key. Press CAL then quickly release to enter step H.
H: MULTIPLIER: multiply setting for frequency. Should be set as 1,press CAL then quickly release to enter step I:

I: Screen displayes word "SAVE", automatically save the above setting, and returns to normal working.

Notes:
1. DDS SYSTEM CLK: can use frequency tester to get 30MHzoscillator, multiply the tested value at 6, then put the multiplied value here. If using AD9851, make initial setting at 180000000.

2. OFFSET FREQ: can be set as + or - . Rotate encoder switch to change value, press STEP key, then rotate encoder switch to adjust step. Minimum working frequency plus (+) offset frequency should be high than 0 (zero).
Frequency display:
RX = MULTIPLIER x (RX_DDS_FREQ + OFFSET_FREQ)

TX = MULTIPLIER x (RX_DDS_FREQ + OFFSET_FREQ + TX_OFFSET_FREQ)

The frequency programmed into the DDS, is calculated as shown below.

RX = ABS(RX_DDS_FREQ)

TX = ABS(RX_DDS_FREQ + TX_OFFSET_FREQ)

RX_DDS_FREQ, MIN_RX_DDS_FREQ, MAX_RX_DDS_FREQ, TX_OFFSET_FREQ & OFFSET_FREQ

Examples:
1. DDS output range 30~40MHz:

MIN_RX_DDS_FREQ MAX_RX_DDS_FREQ OFFSET_FREQ RX Frequency display range.

30 MHZ 40 MHz 100 MHz = 130 MHz to 140 MHz. \ Note 1

30 MHZ 40 MHz -10 MHz = 20 MHz to 30 MHz. /

-40 MHZ -30 MHz 170 MHz = 140 MHz to 130 MHz. \ Note 2

-40 MHZ -30 MHz 60 MHz = 30 MHz to 20 MHz. /

2. setting FT180A with DDS:

ENABLE RPT NO

X6 RECLK X6

DDS SYSTEM CLK 180M

MAX DDS FREQ 65M

MIN RX DDS FREQ 10.701M (Offset frequency + RIT frequency)

MAX RX DDS FREQ 60M

TX OFFSET FREQ 0

MAX RIT OFFSET 1K (RIT frequency)

OFFSET FREQ - 10.700M - (Offset frequency)

MULTIPLIER 1